Initial Study
Fargo Village Project

August 2024



Prepared By:

4CREEKS

4Creeks, Inc.
324 S Santa Fe, Suite A
Visalia, CA 93292

Prepared For:

City of Hanford
317 N Douty Street
Hanford, CA 93230

TABLE OF CONTENTS

Initial Study **1**
1.1 Purpose 1
1.2 Initial Study 3
1.3 Evaluation of Environmental Impacts 14
1.4 Environmental Factors Potentially Affected 16
1.5 Environmental Analysis 17
I. Aesthetics 17
II. Agriculture and Forest Resources 23
III. Air Quality 31
IV. Biological Resources 61
V. Cultural Resources 73
VI. Energy 82
VII. Geology and Soils 92
VIII. Greenhouse Gas Emissions 102
IX. Hazards and Hazardous Materials 113
X. Hydrology and Water Quality 121
XI. Land Use and Planning 132
XII. Mineral Resources 141
XIII. Noise 143
XIV. Population and Housing 149
XV. Public Services 152
XVI. Recreation 158
XVII. Transportation 162
XVIII. Tribal Cultural Resources 171
XIX. Utilities and Service Systems 180
XX. Wildfire 185
XX. Mandatory Findings of Significance 187
1.6 Mitigation Monitoring and Reporting Program 190
1.7 References 202

List of Figures

Figure 1 – Vicinity Map 9
Figure 2 – Site Plan Southern Portion 10
Figure 3 - Site Plan Northern Portion 11
Figure 4 – Tentative Phasing Map 12
Figure 5 – Demolition Site Map 13
Figure 6 – Important Farmlands Map 27
Figure 7 – National Wetlands Inventory Map 65
Figure 8 – Soils Map 95
Figure 9 - Distance to Schools & Airports Map 116

Figure 10 – General Plan Land Use Designation 137
Figure 11 – Zoning Map 138

List of Tables

Table 1 – Phasing Plan 4
Table 2 – Surrounding Land Uses 5
Table 3 – Important Farmland in the Hanford Planning Area 28
Table 4 – San Joaquin Valley Attainment Status 32
Table 5 - SJVAPCD Thresholds of Significance for Criteria Pollutants 41
Table 6 – Ambient Air Quality Standards 43
Table 7 – Projected Construction Emissions With & Without Mitigation 56
Table 8 – Projected Operational Emissions With & Without Mitigation 57
Table 9 – Special Status Species Summary 66
Table 10 – Construction Related Energy Use 86
Table 11 – Operational Energy Use 87
Table 12 – Total Project Construction Petroleum Demand 89
Table 13 – Greenhouse Gases 103
Table 14 – Projected Operational GHG Emissions Compared to 2005 BAU 110
Table 15 – Consistency with the Kings County Regional CAP 110
Table 16 – Stormwater Runoff Estimates 128
Table 17 – Land Use Policy Consistency Analysis with Hanford General Plan (2035) 139
Table 18 – Noise Levels of Noise-Generating Construction Equipment at 50' 146
Table 19 – Vibration Levels Generated by Construction Equipment 147
Table 20 – Student Generation Rates 156
Table 21 – KCAG RTA/SCS Consistency Analysis 165
Table 22 – Intersection Improvements 167
Table 23 – Base Year Regional VMT and Project VMT Metrics 170

Appendices

Appendix A1: Air Quality/Greenhouse Gas Study
Appendix A2: CalEEMod 2005 Business-As-Usual
Appendix B: Biological Resources Assessment
Appendix C: Cultural Resources Assessment
Appendix D: Energy Calculations
Appendix E1: Traffic Study
Appendix E2: VMT Analysis
Appendix F: Water Supply Assessment
Appendix G: Phase I Environmental Site Assessment

City of Hanford
317 North Douty Street
Hanford, CA, 93230

Project Title: Fargo Village

1 INITIAL STUDY

This document is the Initial Study for the proposed construction and operation of 1,146 units of Low, Medium, and High-Density residential development, a Neighborhood Commercial zone, a school site, and a community park on approximately 304 gross acres in the City of Hanford. The City of Hanford will act as the Lead Agency for this Project pursuant to the California Environmental Quality Act (CEQA) and the CEQA Guidelines.

1.1 PURPOSE

The purpose of this environmental document is to implement the California Environmental Quality Act (CEQA). Section 15002(a) of the CEQA Guidelines describes the basic purposes of CEQA as follows.

(1) Inform governmental decision-makers and the public about the potential significant environmental effects of proposed activities.
(2) Identify the ways that environmental damage can be avoided or significantly reduced.
(3) Prevent significant, avoidable damage to the environment by requiring changes in Projects through the use of alternatives or mitigation measures when the governmental agency finds the changes to be feasible.
(4) Disclose to the public the reasons why a governmental agency approved the Project in the manner the agency chose if significant environmental effects are involved.

This Initial Study of environmental impacts has been prepared to conform to the requirements of the California Environmental Quality Act (CEQA) (Public Resources Code Section 21000 et seq.) and the State CEQA Guidelines (California Code of Regulations Section 15000 et seq.). According to Section 15070, a public agency shall prepare or have prepared a proposed negative declaration or mitigated negative declaration for a Project subject to CEQA when:

(a) The initial study shows that there is no substantial evidence, in light of the whole record before the agency, that the Project may have a significant effect on the environment, or
(b) The initial study identifies potentially significant effects, but:

(1) Revisions in the Project plans or proposals made by, or agreed to by the applicant before a proposed mitigated negative declaration and initial study are released for public review would avoid the effects or mitigate the effects to a point where clearly no significant effects would occur, and

(2) There is no substantial evidence, in light of the whole record before the agency, that the Project as revised may have a significant effect on the environment.

1.2 INITIAL STUDY

1. **Project Title:** Fargo Village

2. **Lead Agency:** City of Hanford, Community Development Department
Gabrielle de Silva Myers, Senior Planner
317 North Douty Street
Hanford, CA 93230
Phone Number: (559) 585-2578

3. **Applicant:** Paul Singh Family Limited Partnership
P.O. Box 250
Caruthers, CA 93609
Phone Number: (559) 451-1180

4. **Project Location:** The proposed Project is located on approximately 304 acres in the northern portion of the City of Hanford, California. The Site is generally bound by Fargo Avenue to the south, 12th Avenue to the west, the BNSF Railway to the east, and Flint Avenue to the north (See Figure 1). The site is comprised of two parcels: APN 007-010-031- 000 and 007-360-016-000. APN 007-010-031-000 is 151.96 acres consisting of agricultural uses; mainly walnut orchards and vineyards. An agricultural irrigation canal, irrigation equipment, dirt access roads, and a storage building currently exist in this parcel. APN 007-360-016-000 is 150.08 acres consisting of agricultural uses, mainly walnut orchards, vineyards, and field crops. Irrigation equipment and dirt access roads currently exist in this parcel. The entire site is within the City of Hanford limits. The site is currently used for agricultural uses, however, the site has been designated by the City's General Plan for Low, Medium, and High-Density Residential, as well as Neighborhood Commercial.

5. **General Plan Designation:** The proposed Project site is designated as Low-Density Residential, Medium-Density Residential, High-Density Residential, and Neighborhood Commercial by the City of Hanford 2035 General Plan. The General Plan also designates approximately 20 acres for educational facilities and 20 acres for open space on the site without a specific location.

6. **Zoning Designation:** The site is zoned R-L-5 Low Density Residential, R-M Medium Density Residential, R-H High Density Residential, and C-N Neighborhood Commercial by the City of Hanford.

7. **Project Description:** The Project proposes 1,146 units of Low, Medium, and High-Density residential development and Neighborhood Commercial land uses. The Project will also feature 27.59 acres of park space, a 14.99-acre school zone, and a 6.18-acre stormwater retention basin (See Figure 2: Site Plan). The Project would have 697 Single Family Homes,

235 Townhomes, and 214 Apartment Units. The Maximum Floor Area Ratio (FAR) for the neighborhood commercial zone is 0.5, so the 6.73-acre area will accommodate a maximum of 146,579 square-feet of commercial development with 488 parking spaces. The proposed uses include two retail stores, a gas station, a restaurant, a drive-thru restaurant, and an outdoor food court. However, the Project may also include other uses that are permitted or conditionally permitted within the C-N Neighborhood Commercial Zone. The central community park will include soccer/football fields, basketball courts, and playgrounds, but these details have not been finalized.

Additional Project features include marked pedestrian crossings, a high density of intersections, sidewalks throughout the Project site, a trailway that connects all Project components, 2.5 miles of bike lanes along the Project frontage, and enhanced pedestrian crossings with easily identifiable signage for pedestrian/bike crossings at the intersections between the trailway and the roadway. Drought-tolerant landscaping will also be incorporated throughout the site and will be designed in accordance with the landscaping standards provided in the Hanford Municipal Code.

The Project is planned to be built in seven phases, starting in 2025 and ending in 2045, for a total site development and construction period of 20 years. See the phasing plan in Table 1, below.

Table 1. Phasing Plan

Phase Number	Construction Dates (Year)	Acres Developed (Gross)
1	2025-2029	44.8
2	2029-2032	31
3	2032-2034	24
4	2034-2036	23
5	2036-2037	15.2
6	2037-2042	102
7	2042-2045	64

The Project would result in onsite and offsite infrastructure improvements including new and relocated utilities, new residential streets, and a stormwater basin. The Project would improve Fargo Avenue, Flint Avenue, and 12th Avenue bordering the site. The Project would require the demolition of one 650-square-foot storage building.

8. **Surrounding Land Uses and Settings:**

   The proposed Project site is in the northwest portion of the City of Hanford and is located in an area that has not undergone urban development and is largely characterized by agricultural and rural residential land uses. To the north of the site are row crops and Hanford Christian School, which borders the northwest corner of the Project site boundary. To the west of the Project site are orchards and rural residential land uses. Low-density residential and vacant lands exist to the south. To the east are mainly low-density residential, parks/recreational land uses and the BNSF Railway. The surrounding land uses are shown in Table 2, below.

Table 2. Surrounding Land Uses

Direction	Current Land Use	Planned Land Use
North	Agricultural Uses, School	Agricultural Uses, School
South	Agricultural Uses, Single-Family Homes	Neighborhood Mixed-Use, Single-Family Homes
East	Agricultural Uses, Rural Residential Homes	Agricultural Uses, Rural Residential Homes
West	Single-Family Homes, Railroad	Single-Family Homes, Railroad

9. **Required Approvals:** The following discretionary approvals are required for the proposed Project:
   - Planned Unit Development Plan Approval to blend the densities, permit the non-standard alleyway widths, implement private drives and to build townhomes with zero setbacks
   - Tentative Parcel Map Approval
   - Tentative Tract Map Approval
   - City of Hanford Building and Encroachment Permits
   - San Joaquin Valley Air Pollution Control District (SJVAPCD). The proposed Project is within the jurisdiction of the SJVAPCD and will be required to comply with Rule VIII, 2010, 3135, 4101, 4002, 4102, 4601, 4641, and 9510
   - Central Valley Regional Water Quality Control Board, SWPPP. The proposed Project site is within the jurisdiction of the Central Valley Regional Water Quality Control Board (RWQCB). The Central Valley RWQCB will require a Storm Water Pollution Prevention Plan (SWPPP) to prevent impacts related to stormwater because of Project construction

10. **Native American Consultation:** The State requires lead agencies to consider the potential effects of proposed Projects and consult with California Native American tribes during the local planning process to protect Traditional Tribal Cultural Resources through the California Environmental Quality Act (CEQA) Guidelines. According to PRC Section 21080.3.1,

the lead agency shall begin consultation with the California Native American tribe that is traditionally and culturally affiliated with the geographical area of the proposed Project. Such significant cultural resources are either sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a tribe that is either on or eligible for inclusion in the California Historic Register or local historic register, or, the lead agency, at its discretion, and support by substantial evidence, choose to treat the resources as a Tribal Cultural Resources (PRC Section 21074(a) (1-2)). The nearest Rancheria to the Project Site is the Santa Rosa Rancheria Tachi Yokut Tribe, approximately 9.5 miles southwest.

11. **Parking and access:** Vehicular access to the Project is available via Fargo Avenue, Flint Avenue, and 12th Avenue. The site will have an access point from the south on Fargo Ave, from the west on 12th Ave, and two access points from the north on Flint Ave. Two smaller access points into the commercial area will be available on 12th and Fargo Avenues. The Project includes new streets, courts, roundabouts, and pathways that provide full access to the Project site. A street will loop around the Project Site to connect all parts of the development. A series of pedestrian sidewalks and trails would be provided throughout the site. The single-family homes will each contain a driveway for parking, as well as available parking on the street (See Figure 2). In accordance with provisions provided in the City of Hanford Municipal Code Section 17.54.040, the townhomes would contain at least a minimum of 470 off-street parking spaces, with at least half of the spaces covered. In accordance with the same requirements, the apartments will provide at least the minimum of 428 off-street parking spaces, with at least half being covered and the commercial area will contain 1,005 parking spaces. The commercial parking space requirement that was used assumed the most conservative estimate for parking under the Municipal Code, which is 1 parking space per 150 square feet.

    During construction, workers will utilize existing parking areas and/or temporary construction staging areas for parking vehicles and equipment. The Project will be responsible for the construction of internal roadways as well as for potential improvements to surrounding roadways to accommodate the Project. The Project includes sidewalks, a center median, and landscaping along the frontage roads and within the site itself, per City standards.

12. **Landscaping and Design:** The Project will provide 38.5 acres of park and open space. A large park within walking proximity of the other uses will occupy the center of the Project site. Potential park amenities could include a soccer/football field, basketball courts, and playgrounds. The Project will include landscaped walkways connecting to other sections of the site. The final landscape and design plans will be required during the building permit submittal.

13. **Utilities and Electrical Services:** The Project will result in onsite and offsite infrastructure improvements including new and relocated utilities. Water, sewer, and storm drain services

will be provided by the City of Hanford via existing lines on Fargo Avenue. A temporary stormwater basin will be located near the commercial area, in the northwest corner of the site. Electricity will be provided by Southern California Edison, and natural gas will be provided by Southern California Gas Company.

Acronyms

BMP	Best Management Practices
BAU	Business as Usual
CAA	Clean Air Act
CBC	California Building Code
CCAP	Climate Change Action Plan
CCR	California Code of Regulation
CDFG	California Department of Fish and Game
CEQA	California Environmental Quality Act
CRHR	California Register of Historic Places
CWA	California Water Act
DHS	Department of Health Services
FEIR	Final Environmental Impact Report
FMMP	Important Farmland Mapping and Monitoring Program
IS	Initial Study
ISR	Indirect Source Review
MCL	Maximum Contaminant Level
MEIR	Master Environmental Impact Report
NOI	Notice of Intent
ND	Negative Declaration
NAC	Noise Abatement Criteria
RCRA	Resource Conservation and Recovery Act of 1976
ROW	Right-of-Way
RWQCB	Regional Water Quality Control Board
SCE	Southern California Edison
SHPO	State Historic Preservation Office
SJVAPCD	San Joaquin Valley Air Pollution Control District
SSJVIC	Southern San Joaquin Information Center
SWPPP	Storm Water Pollution Prevention Plan
TCR	Tribal Cultural Resource
UWMP	Urban Water Management Plan

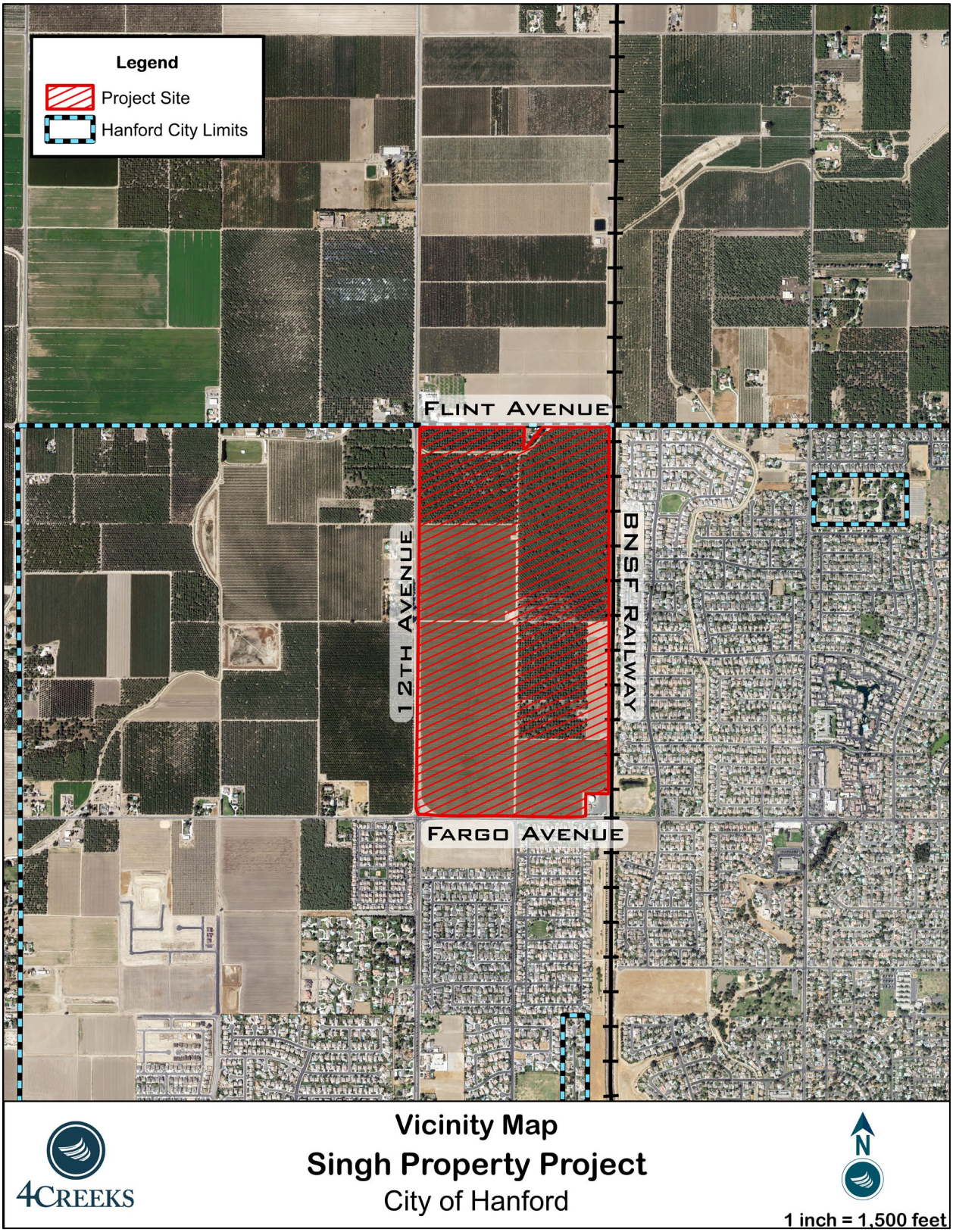


Figure 1: Vicinity Map

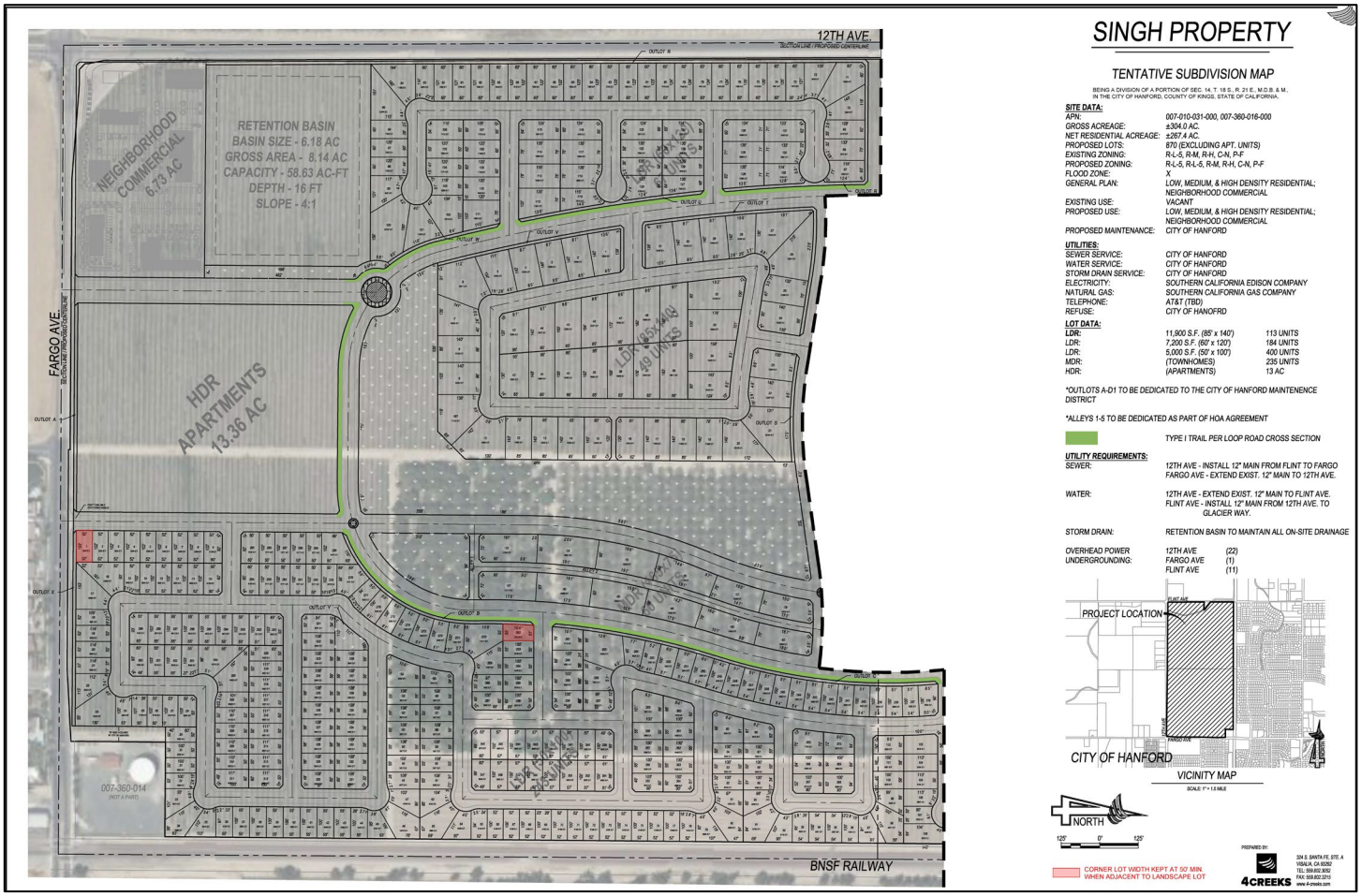


Figure 2: Site Plan Southern Portion

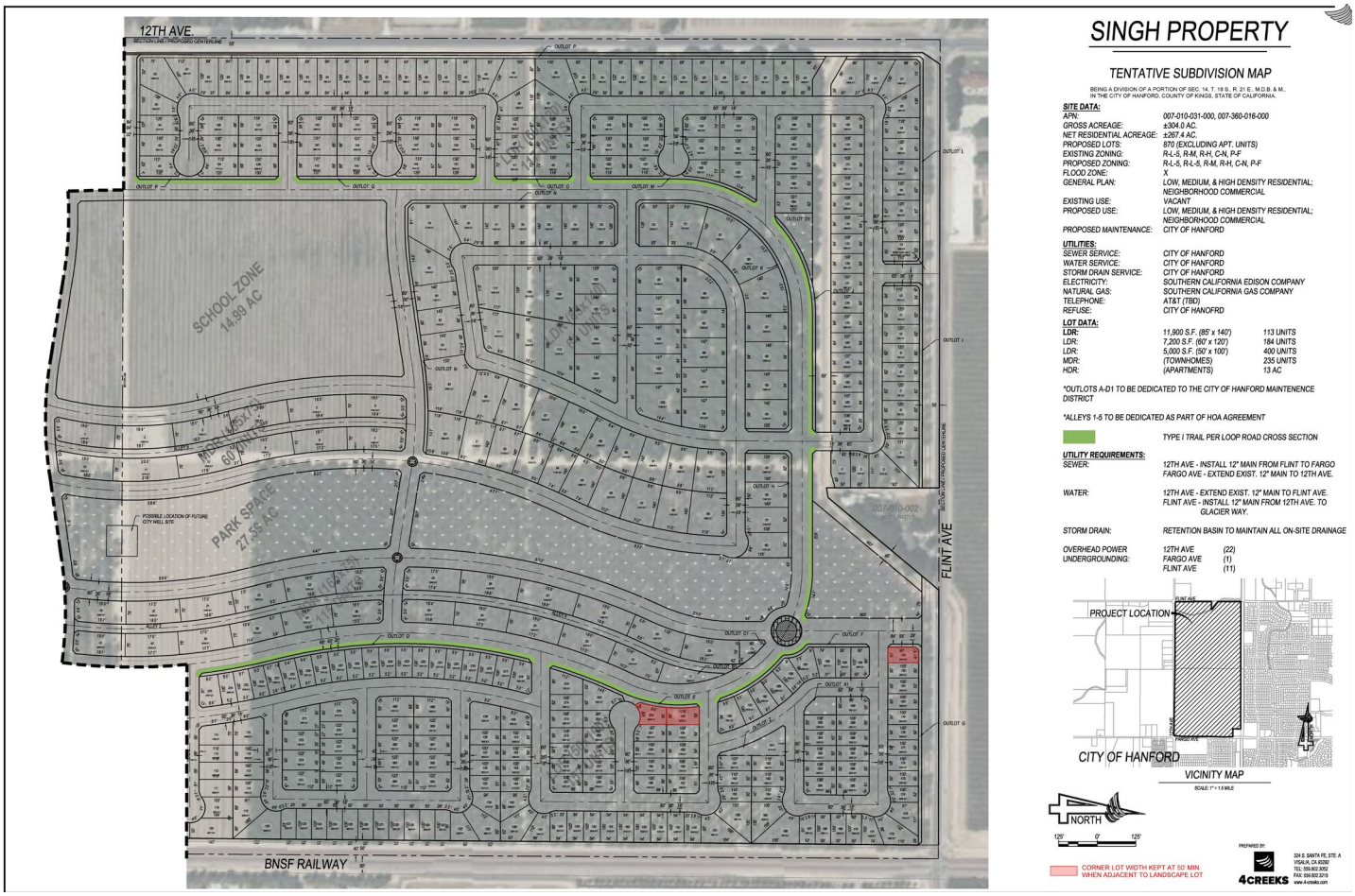


Figure 3: Site Plan Northern Portion

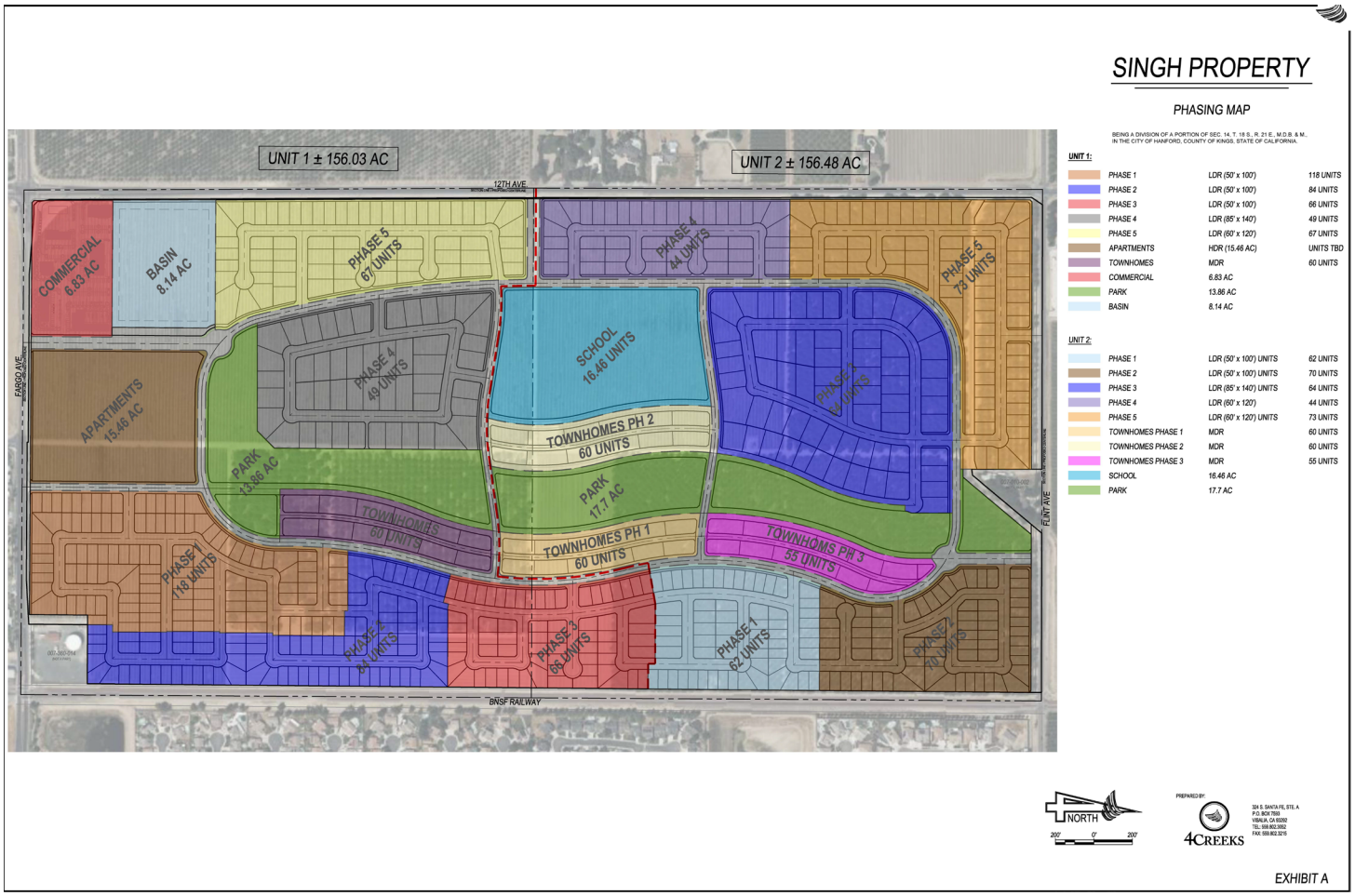


Figure 4: Tentative Phasing Map



Figure 5: Demolition Site Map

1.3 EVALUATION OF ENVIRONMENTAL IMPACTS

1. A brief explanation is required for all answers except "no Impact" answers that are adequately supported by the information sources a lead agency cites, in the parentheses following each question. A "No Impact" answer is adequately supported if the reference information sources show that the impact simply does not apply to Projects like the one involved (e.g., the Project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on Project-specific factors as well as general standards (e.g., the Project will not expose sensitive receptors to pollutants, based on a Project-specific screening analysis).

2. All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as Project-level, indirect as well as direct, and construction as well as operational impacts.

3. Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR if required.

4. "Negative Declaration: Less Than Significant With Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact." The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level (mitigation measures from "Earlier Analyses," as described in (5) below, may be cross-referenced).

5. Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. Section 15063(c) (3)(D). In this case, a brief discussion should identify the following.

    - Earlier Analysis Used. Identify and state where they are available for review.
    - Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.
    - Mitigation Measures. For effects that are "Less than Significant with Mitigation Measures Incorporated." Describe and mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the Project.

6. Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.

1.4 ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would be potentially affected by this Project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

☐ Aesthetics	☐ Greenhouse Gas Emissions	☐ Public Services
☐ Agriculture and Forest Resources	☐ Hazards & Hazardous Materials	☐ Recreation
☑ Air Quality	☑ Hydrology and Water Quality	☐ Transportation
☑ Biological Resources	☐ Land Use and Planning	☑ Tribal Cultural
☑ Cultural Resources	☐ Mineral Resources	☐ Utilities and Service Systems
☐ Energy	☐ Noise	☐ Wildfire
☑ Geology and soils	☐ Population	☑ Mandatory Findings of Significance

DETERMINATION: (To be completed by the Lead Agency) Where potential impacts are anticipated to be significant, mitigation measures will be required, so that impacts may be avoided or reduced to insignificant levels.

On the basis of this initial evaluation:

☐ I find that the proposed Project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION WILL BE PREPARED.

☐ I find that although the proposed Project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the Project have been made by or agreed to by the Project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

☐ I find that the proposed Project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

☐ I find that the proposed Project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. A Negative Declaration is required, but it must analyze only the effects that remain to be addressed.

☐ I find that although the proposed Project could have a significant effect on the environment because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed Project, nothing further is requested.

_____ _____

SIGNATURE DATE

_____ City of Hanford

PRINTED NAME AGENCY

1.5 ENVIRONMENTAL ANALYSIS

The following section provides an evaluation of the impact categories and questions contained in the checklist and identify mitigation measures, if applicable.

I. AESTHETICS

Except as provided in Public Resource Code Section 210999, would the Project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
a) Have a substantial adverse effect on a scenic vista?	☐	☐	☑	☐
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within state scenic highway?	☐	☐	☐	☑
c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from a publicly accessible vantage point). If the Project is in an urbanized area, would the Project conflict with applicable zoning and other regulations governing scenic quality?	☐	☐	☑	☐
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☑	☐

Environmental Setting

Scenic Resources

Scenic resources include landscapes and features that are visually or aesthetically pleasing. They contribute positively to a distinct community or region. These resources produce a visual benefit to communities. The City of Hanford has a visual character of a mix of rural and built environments. Hanford is surrounded by natural open space agricultural land, characterized by uses such as grazing, open space, and cultivated agriculture. Downtown Hanford, characterized by brick, wood frame, and stucco structures, is the physical, cultural, and economic center. Downtown Hanford has many historical sites throughout downtown. The large, open vistas create a small-town feeling in Hanford. The goal of Hanford's General Plan

regarding visual resources is to preserve and re-establish natural and manmade aesthetics to positively contribute to the city's identity.

The City of Hanford General Plan and the County of Kings has not designated any specific scenic resources within the City's planning area. All designated scenic lands are located in the southwest and long the Kings River in northern and western portions of Kings County.

Scenic Vistas

The Hanford General Plan has not designated any scenic vistas in the planning area.

Existing Visual Character

The following photos demonstrate the aesthetic character of the Project area. As shown in Photos 1 - 4, the proposed Project site area is in a relatively flat area characterized by agricultural uses.



Photo 1: Southwest Site Boundary (View Northeast) Source: Google Maps 2021



Photo 2: South Site Boundary (View North) Source: Google Maps 2021

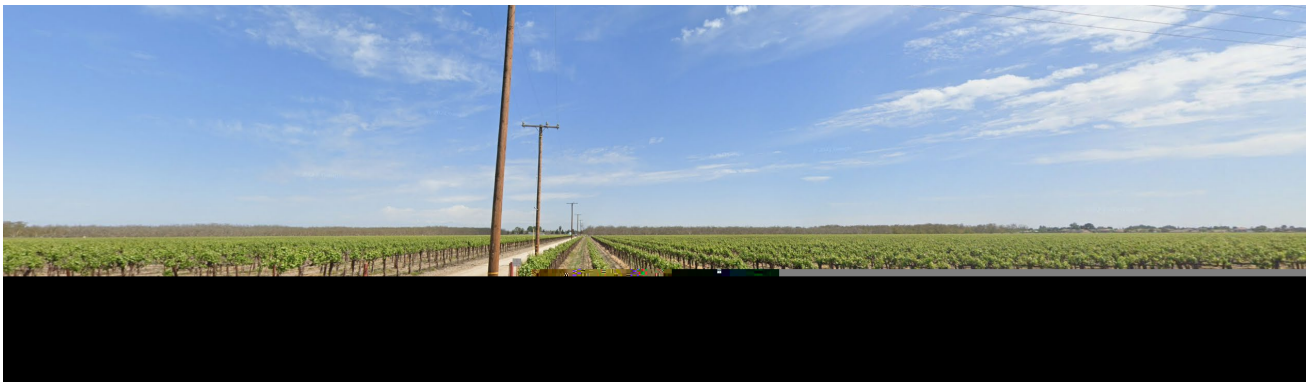


Photo 3: East Site Boundary (View West) Source: Google Maps 2021



Photo 4: Northeast Site Boundary (View Southwest) Source: Google Maps 2021

Regulatory Setting

Scenic Roadways

The California Scenic Highway Program was established in 1963 by the State Legislature to protect and enhance the natural beauty of California highways and adjacent corridors through conservation strategies. The State Scenic Highway System includes a list of highways that have either been officially designated or are eligible for designation. State laws affiliated with governing the scenic highway program can be found in Sections 260-263 in The Street and Highways Code.

State Scenic Highways

According to the California Department of Transportation mapping of State Scenic Highways, the City of Hanford does not have officially designated State Scenic Highways. However, the City has one eligible State Scenic Highway. Highway 198, from Highway 101 to Sequoia National Park, runs through the center of Hanford. Highway 198 is approximately 2.5 miles South of the proposed site.

City of Hanford General Plan

The 2035 General Plan includes the goals and policies related to aesthetic resources that correlate to the proposed Project:

- *Policy L36. Design of the Medium Residential Land Use Designation Develop*: and enforce design policies and/or ordinances for Medium Density Residential developments that ensure high quality construction, design, open space amenities, safety and security, and overall compatibility with the rest of the neighborhood.
- *Policy L40. Design of the High-Density Residential Land Use Designation*: Develop and enforce design policies and/or ordinances for High Density Residential developments that ensure high quality construction, design, open space amenities, safety and security, overall compatibility with the rest of the neighborhood.
- *Policy L44. Design of Neighborhood Commercial Land Use Designation*: Require that new development Projects and major site reconfigurations in the Neighborhood Commercial land use designation lay out buildings and parking as a single, integrated shopping center with shared driveway access and parking, with walkways connecting buildings to each other and the street so as to promote pedestrian accessibility from nearby residential neighborhoods.
- *Policy L106. Residential Design Policies*: Develop policies and ordinances that require design elements for residential land uses that facilitate neighborhood interaction, such as front porches, front yards along streets, and entryways facing public walkways.
- *Policy L107. Revitalization and Redevelopment*: Encourage property owners to revitalize or redevelop abandoned, obsolete, or underutilized properties to accommodate growth.
- *Policy L113. Infill Development in Neighborhoods*: Protect the pattern and character of existing neighborhoods by requiring new infill developments to have complimentary building forms and site features.
- *Policy T41. Streetscape Enhancements Strive*: to improve the visual character of roadway corridors by improving streetscapes with amenities such as street trees, pedestrian-scaled lighting, underground utilities, water-efficient landscaping, and streetscape furniture.

City of Hanford Zoning Ordinance

The Hanford Zoning Ordinance governs the distribution and intensity of land uses, sets the principles for evaluating development, and guides the development and growth of the City. The Zoning Ordinance establishes specific development criteria for each zoning district (i.e. parking requirements, walls, fencing, setbacks, building height, etc.).

Hanford Municipal Code

Hanford Municipal Code (HMC) *Section 17.50.140 – Outdoor Lighting Standards* contains specific, enforceable requirements and/or restrictions for all new development, including the proposed development, intended to prevent light and glare impacts:

D. General Outdoor Lighting Standards. The following requirements and standards shall apply in all zone districts for the installation and use of outdoor lighting fixtures.

1. All lights and light fixtures, except public streetlights, shall be located, aimed, or shielded so as to minimize light trespassing across property boundaries or skyward.
2. No lights or light fixtures shall flash, revolve, blink, or otherwise resemble a traffic control signal or operate in such a fashion to create a hazard for passing traffic.
3. Building mounted lighting fixtures shall be attached only to the walls of the building. The top of a light fixture attached to a building wall shall not be higher than the top of the building parapet or the top of the roof eave, whichever is lower.
4. Canopy ceiling light fixtures shall be recessed, or the sides of the lens area shall be shielded in order to eliminate emission of horizontal light.
5. The height of freestanding light fixtures including freestanding parking lot fixtures shall be measured from the top of a light fixture to the adjacent grade at the base of the support for that light fixture and shall not exceed the following:
    a. Eighteen (18) feet in height, when located within fifty (50) feet of any residential zone district; and
    b. Twenty-five (25) feet in height when located within fifty-one (51) to one hundred fifty (150) feet of any residential zone district; and
    c. Thirty (30) feet in height when located more than one hundred fifty (150) feet from any residential zone district; and
    d. Fifty (50) feet in height when located in the RC regional commercial zone or freestanding light fixtures for public outdoor recreational facilities.

Discussion

a) Would the Project have a substantial adverse effect on a scenic vista?

Less than Significant Impact: A scenic vista is defined as a viewpoint that provides expansive views of a highly valued landscape for the benefit of the general public. The Hanford General Plan does not identify or designate scenic vistas within the City or Sphere of Influence. In addition, the Project site does not contain any visual features or historic resources as identified in the General Plan. The Project would not alter the views of the surrounding community. There is *a less than significant impact.*

b) Would the Project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within state scenic highway?

No Impact: There are no officially designated State Scenic Highways located in the City of Hanford or near the site. The proposed Project would not damage any scenic resources within a state scenic highway and there is *no impact.*

c) In non-urbanized areas, would the Project substantially degrade the existing visual character or quality of the site and its surroundings? (Public views are those that are experienced from a publicly accessible vantage point). If the Project is in an urbanized area, would the Project conflict with applicable zoning and other regulations governing scenic quality?

Less than Significant Impact: The proposed Project site is in an urbanized area within the City of Hanford. The materials, signage, fencing, landscaping, and building materials used in the construction of the Project will be selected based on their ability to improve the overall visual character of the area. The proposed Project will comply with all applicable zoning and other regulations governing scenic quality. There is *a less than significant impact.*

d) Would the Project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

Less than Significant Impact: The proposed Project would result in new lighting sources on the Project site consistent with adjacent residential development. New lighting sources would include interior lighting from residences and commercial uses, street lighting, and security lighting. All street and landscape lighting will be consistent with the City's lighting standards, which are developed to minimize impacts related to excessive light and glare. In addition, the Project would be required to comply with Title 24 lighting requirements which would also reduce and mitigate impacts related to nighttime light. The Title 24 lighting requirements cover outdoor spaces including regulations for mounted luminaires (i.e., high efficacy, motion sensor controlled, time clocks, energy management control systems, etc.) Although the Project will introduce new light sources to the area, all lighting will be consistent with adjacent residential land uses and the City's lighting standards. The impacts are *less than significant.*

II. AGRICULTURE AND FOREST RESOURCES:

In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment Project; and forest carbon measurement methodology provided in the Forest Protocols adopted by the California Air Resources Board. Would the Project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☑	☐	☐
b) Conflict with existing zoning for agricultural use, or a Williamson Act Contract?	☐	☐	☑	☐
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned timberland Production (as defined by Government Code section 51104(g)?	☐	☐	☐	☑

d) Result in the loss of forestland or conversion of forest land to non-forest use?	☐	☐	☐	☑
e) Involve other changes in the existing environment, which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forestland to non-forest use?	☐	☐	☑	☐

Environmental Setting

Central California is one of the world's premier growing regions. According to the 2035 Kings County General Plan, agriculture is an important aspect of the County's economy, and occupies 91% of the County's 1,391 square miles. The General Plan also states that in 2008, the gross value of agricultural crops and products was $1,760,168,000 and represents a major component of the County's economy. Kings County consistently ranks among the top counties in the state and nation for the production of cotton, barley, and alfalfa seed (California Department of Food and Agriculture 2008).

The proposed Project site is located within the City of Hanford. The proposed Project site is not under a Williamson Act Contract or a Farmland Security Zone contract. As shown in Figure 6, the proposed site is designated as Prime Farmland under the Important Farmland Mapping and Monitoring Program (FMMP). Nearby to the north and west are currently Prime Farmland. To the south and east are built single-family homes.

Regulatory Setting

California Land Conservation Act of 1965

The California Land Conservation Act of 1965, commonly referred to as the Williamson Act, allows local governments to enter into contracts with private landowners to restrict the activities on specific parcels of land to agricultural or open space uses. The landowners benefit from the contract by receiving greatly reduced property tax assessments. The California Land Conservation Act is overseen by the California Department of Conservation; however local governments are responsible for determining specific allowed uses and enforcing the contract.

Right to Farm Ordinance

Kings County adopted a "Right to Farm Ordinance", to protect the rights of commercial farming operations while promoting a "good neighbor policy" between these uses. Under this ordinance, property owners and residents are made aware that they may experience inconveniences due to commercial agricultural operations.

California Farmland Mapping and Monitoring Program (FMMP)

The FMMP is implemented by the California Department of Conservation (DOC) to conserve and protect agricultural lands within the State. The land is included in this program based on soil type, annual crop yields, and other factors that influence the quality of farmland. The FMMP mapping categories for the most important statewide farmland are as follows:

- ***Prime Farmland*** has the ideal physical and chemical composition for crop production. It has been used for irrigated production in the four years prior to classification and can produce sustained yields. 15% of Kings County is classified as Prime Farmland.
- ***Farmland of Statewide Importance*** has also been used for irrigated production in the four years prior to classification and is only slightly poorer quality than Prime Farmland. 44% of Kings County is classified as Farmland of Statewide Importance.
- ***Unique Farmland*** has been cropped in the four years prior to classification and does not meet the criteria for Prime Farmland or Farmland of Statewide Importance but has produced specific crops with high economic value. 2% of Kings County is classified as Unique Farmland.
- ***Farmland of Local Importance*** encompasses farmland that does not meet the criteria for the previous three categories. These may lack irrigation, produce major crops, be zoned as agricultural, and/or support dairy. 1% of Kings County is classified as Farmland of Local Importance.

City of Hanford General Plan

The 2035 General Plan includes the policies related to agricultural resources that correlate to the proposed Project:

- *Policy E23. Economic Development of Agriculture*: Value and support agriculture as an industry and make it a key component of Hanford's economic development strategy.
- *Policy E26. Protection of Agricultural Lands from Urban Encroachment*: Utilize the Planned Area Boundary to delineate a long-term boundary between agricultural and urban land uses, and strongly support long term agricultural operations outside the Planned Area Boundary that can be free from the threat of urban land use encroachment.
- *Policy L6. Agriculture and the Urban Fringe*: Recognize and protect the right of agricultural uses within the growth boundary to exist and continue to operate in proximity to new development on the fringes of the City.
- *Policy L29. Agriculture*: Recognize the right of agriculture to exist and continue to operate in proximity to the new residential development on the fringes of the city. Deed restrictions may be required which inform future residents of the right of agriculture to continue within the limits of the law without interference or protest from nearby property owners.

- *Policy O2. Agricultural Buffer*: Coordinate land use policies and designations with Kings County to provide for a buffer between the urban area of Hanford and the surrounding unincorporated communities.

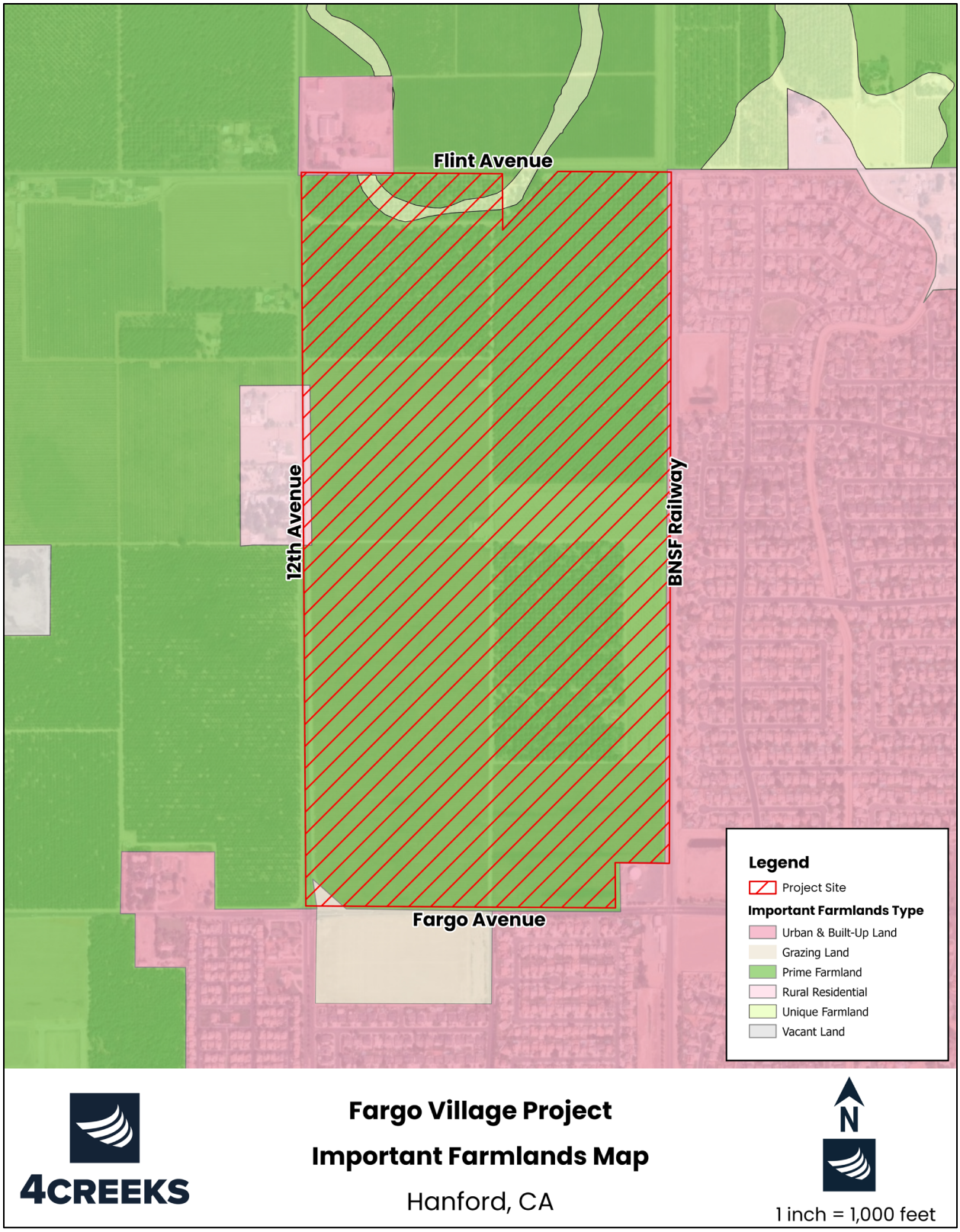


Figure 6: Important Farmlands Map

Discussion

a) Would the Project convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?

Less Than Significant Impact with Mitigation Incorporated: The Project site is currently occupied by agricultural uses, mainly vineyards and orchards. Implementation of the proposed Project would result in the permanent conversion of approximately 304 acres of Prime Farmland to non-agricultural uses.

The loss of Prime Farmland on the Project site would result in the decrease of Important Farmland inventory in the City of Hanford. According to the City's General Plan Background Report (2014), the City of Hanford Planning Area currently has an Important Farmland inventory of 7,107 acres, 3,947 acres of which were categorized as Prime Farmland. Implementation of the Project would convert 304 acres of Prime Farmland, which would result in a 4 percent decrease in the Important Farmland inventory of the City of Hanford and an 8 percent decrease in the Prime Farmland inventory.

Table 3: Important Farmland in the Hanford Planning Area. Source: City of Hanford General Plan

FMMP Designation	Existing Planning Area Total (Acres)
Prime Farmland	3,947
Farmland of Statewide Importance	3,088
Unique Farmland	72
Important Farmland Total	**7,107**

At full buildout, the Hanford 2035 General Plan will develop 2,706 total acres of Important Farmland. The majority of this farmland is Prime Farmland located in the northwest corner of the City of Hanford Planning Area (City of Hanford General Plan, 2014). Most of the growth is planned to be adjacent to urbanized areas, which is less disruptive to other agricultural uses countywide because it discourages the development of new rural neighborhoods or communities that would require the extension of infrastructure that would create growth-inducing impacts and potentially greater impacts to agricultural resources.

The Project proposes the conversion of 304 acres of Prime Farmland into non-agricultural uses. However, the General Plan EIR for the City of Hanford (SCH Number: 2015041024) has designated the site for Low, Medium, and High-Density Residential, Open Space, Educational Facilities, and Neighborhood Commercial land uses. This EIR analyzed the impacts of urban growth on this portion of agricultural land, particularly the conversion of

the Project site to Low-Density Residential, Public Facilities and Parks/Recreational land uses, and found impacts to be significant and unavoidable.

Based on this finding, the City issued and adopted a Statement of Overriding Considerations. Because the Project would result in the conversion of farmland within (1)-mile of the city limits, the Project would be subject to comply with Mitigation Measure (MM) AG-1 from the Hanford General Plan EIR to reduce potential impacts related to the conversion of agricultural lands. The Project would not result in impacts beyond those analyzed in the General Plan EIR. The impact is considered *less than significant with mitigation incorporated.*

b) Would the Project conflict with existing zoning for agricultural use, or a Williamson Act Contract?

Less than Significant Impact: The site is not zoned for agriculture by the City of Hanford, and is zoned as Low, Medium, and High-Density Residential (R-L-5, R-M, and R-H) and Neighborhood Commercial (NC). It currently has a General Plan designation of Low, Medium, and High-Density Residential, Open Space, Educational Facilities, and Neighborhood Commercial that would suit the proposed Project. The Project site is not under a Williamson Act Contract. There is *a less than significant impact.*

c) Would the Project conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned timberland Production (as defined by Government Code section 51104(g)?

No Impact: The Project site is not zoned for forest or timberland production but is zoned by the City of Hanford for Low, Medium, and High-Density Residential (R-L-5, R-M, R-H) and Neighborhood Commercial (NC) land uses. Therefore, *no impacts* would occur.

d) Would the Project result in the loss of forestland or conversion of forest land to non-forest use?

No Impact: No conversion of forestland, as defined under the Public Resource Code or General Code, will occur as a result of the Project and there would be *no impacts*.

e) Would the Project involve other changes in the existing environment, which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forestland to non-forest use?

Less Than Significant Impact: As discussed in question "a" of this section, new development including the proposed Project, would be focused in and around existing

communities. This would prevent new infrastructure from interfering with surrounding farmland. Since there is no forestland on site, the Project does not include any features which could result in the conversion of forestland to non-forest use. Additionally, the City of Hanford has designated the site for urban development in the latest General Plan (2014) and municipal code, so the proposed conversion of agricultural land to non-agricultural uses has been previously analyzed in the City's latest General Plan Update (2016) (SCH Number: 2015041024). There is a *less than significant impact.*

Mitigation Measures for Agricultural Resources

Mitigation Measure AG-1: The Project shall comply with HMC Section 16.40.110 Right to Farm, sub-section (E) Disclosure and Recordation Requirements, "all approvals for improvement or development of property including without limitation application for rezonings, land divisions, zoning permits, and residential building permits, on property in the city of Hanford within one (1) mile of the city's urban limit line, shall include a condition that notice and disclosure of this agricultural land use policy be given by the applicant, or the owner if different from the applicant. The applicant, or owner if different from the applicant, shall also acknowledge the contents of the notice and disclosure, which includes a description of the property the notice and disclosure pertains to, in the Official Records of the Kings County Recorder, and recorded at the applicant's own expense." The Hanford Community Development Department is responsible for carrying out the notice, disclosure, and recordation required by the HMC.

III. AIR QUALITY

Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the following determinations. Would the Project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☑	☐	☐
b) Result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is non-attainment under an applicable federal or state ambient air quality standard?	☐	☑	☐	☐
c) Expose sensitive receptors to substantial pollutant concentrations?	☐	☑	☐	☐
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	☐	☑	☐	☐

An Air Quality and Greenhouse Gas Assessment was prepared by 4Creeks Inc. to analyze air quality impacts from the proposed Project and can be found in Appendix C of the Focused Environmental Impact Report (EIR) prepared for the Project. The following section describes the existing air quality conditions of the Project site and vicinity, identifies associated regulatory requirements, evaluates potential impacts, and identifies mitigation measures related to the implementation of the proposed Project.

Environmental Setting

Topography

Air pollution is directly related to regional topography. Topographic features can either stimulate the movement of air or restrict air movement. California is divided into regional air basins based on topographic air drainage features. The proposed Project site is within the San Joaquin Valley Air Basin (SJVAB), which is bordered by the Sierra Nevada Mountains to the East, Coastal Ranges to the West, and the Tehachapi Mountains to the South. The San Joaquin Valley consists of eight counties and is spread across 25,000 square miles of Central California. The region's topographic features restrict air movement through and out of the SJVAB and as a result, is highly susceptible to pollutant accumulation over time (SJVAPCD 2015).

As shown in Table 4, the SJVAB is in nonattainment for several pollutant standards. The primary pollutants of concern in the San Joaquin Valley are ozone (O3) and PM10.

Table 4. San Joaquin Valley Attainment Status; Source: "San Joaquin Valley Attainment Status" webpage on the San Joaquin Valley Air Pollution Control District (SJVAPCD) website.

Pollutant	Designation/Classification	
	Federal Standards	State Standards
Ozone – One hour	No Federal Standard[f]	Nonattainment/Severe
Ozone – Eight hour	Nonattainment/Extreme[e]	Nonattainment
PM 10	Attainment[c]	Nonattainment
PM 2.5	Nonattainment[d]	Nonattainment
Carbon Monoxide	Attainment/Unclassified	Attainment/Unclassified
Nitrogen Dioxide	Attainment/Unclassified	Attainment
Sulfur Dioxide	Attainment/Unclassified	Attainment
Lead (Particulate)	No Designation/Classification	Attainment
Hydrogen Sulfide	No Federal Standard	Unclassified
Sulfates	No Federal Standard	Attainment
Visibility Reducing Particles	No Federal Standard	Unclassified
Vinyl Chloride	No Federal Standard	Attainment

[a] See 40 CFR Part 81
[b] See CCR Title 17 Sections 60200-60210
[c] On September 25, 2008, EPA redesignated the San Joaquin Valley to attainment for the PM10 National Ambient Air Quality Standard (NAAQS) and approved the PM10 Maintenance Plan.
[d] The Valley is designated nonattainment for the 1997 PM2.5 NAAQS. EPA designated the Valley as nonattainment for the 2006 PM2.5 NAAQS on November 13, 2009 (effective December 14, 2009).
[e] Though the Valley was initially classified as serious nonattainment for the 1997 8-hour ozone standard, EPA approved Valley reclassification to extreme nonattainment in the Federal Register on May 5, 2010 (effective June 4, 2010).
[f] Effective June 15, 2005, the U.S. Environmental Protection Agency (EPA) revoked the federal 1-hour ozone standard, including associated designations and classifications. EPA had previously classified the SJVAB as extreme nonattainment for this standard. EPA approved the 2004 Extreme Ozone Attainment Demonstration Plan on March 8, 2010 (effective April 7, 2010). Many applicable requirements for extreme 1-hour ozone nonattainment areas continue to apply to the SJVAB.

Climate

The San Joaquin Valley is in a Mediterranean Climate Zone, influenced by a subtropical high-pressure cell most of the year and characterized by warm, dry summers and cooler winters. Mediterranean climates are characterized by sparse rainfall, which occurs mainly in winter. Summertime maximum temperatures in San Joaquin Valley often exceed 100°F.

The vertical dispersion of air pollutants in the San Joaquin Valley can be limited by the presence of persistent temperature inversions. Air temperatures usually decrease with an increase in altitude in the troposphere. A reversal of this atmospheric state, where the air temperature increases with height, is termed an inversion. A temperature inversion can act like a lid, restricting vertical mixing of air above and below an inversion because of differences in air density and thereby trapping air pollutants below the inversion. The subtropical high-pressure cell is strongest during spring, summer, and fall and produces subsiding air, which can result in temperature inversions. Most of the surrounding mountains are above the normal height of summer inversions (1,500–3,000 feet). Wintertime high-pressure events can often last many weeks, with surface temperatures often lowering into the 30's °F. During these events, fog can be present, and inversions are extremely strong. These wintertime inversions can inhibit vertical mixing of pollutants to a few hundred feet (SJVAPCD 2015).

Urban Heat Island Effect

The "urban heat island" refers to the effect of urbanized areas on surface and air temperature compared to their rural surroundings. Buildings, roads, and other "hardscape" create an island of higher temperatures within the regional landscape. As described by the U.S. Environmental Protection Agency (EPA), "'urban heat islands' occur when cities replace natural land cover with dense concentrations of pavement, buildings, and other surfaces that absorb and retain heat" (EPA 2024). The term is generally used to refer to community-wide effects, particularly for large metropolitan cities.

The potential adverse effects of the urban heat island effect include increased energy consumption, elevated emissions of air pollutants and greenhouse gases (GHGs), compromised human health and comfort, and impaired water quality. Increased temperatures due to the urban heat island effect may also lead to increased energy consumption, which has implications for air quality and GHG emissions. In addition to energy-related increases in air emissions, elevated air temperatures increase the rate of ground-level O3 formation. Communities have adopted various strategies to deal with these environmental impacts, such as increasing vegetation and using more energy-efficient building materials. These strategies are often part of more general energy savings or "sustainability" practices and are not identified as "urban heat island effect" mitigation, but nevertheless they provide the benefits of reducing surface and atmospheric heat islands.

Pollutants and Effects of Pollutants

Criteria Air Pollutants

Criteria air pollutants are defined as pollutants for which the federal and state governments have established ambient air quality standards, or criteria, for outdoor concentrations to protect public health. The federal and state standards have been set, with an adequate margin of safety, at levels above which concentrations could be harmful to human health and welfare. These standards are designed to protect the most sensitive persons from illness or discomfort. Pollutants of concern include O3, NO2, carbon monoxide (CO), sulfur dioxide (SO2), particulate matter with an aerodynamic diameter less than or equal to 10 microns (PM10), particulate matter with an aerodynamic diameter less than or equal to 2.5 microns (PM2.5), and lead. ROGs (also referred to as volatile organic compounds [VOCs]1 and NOx are also important because they are precursors to O3. These pollutants, as well as toxic air contaminants (TACs), are discussed in the following paragraphs. In California, sulfates, vinyl chloride, hydrogen sulfide, and visibility-reducing particles are also regulated as criteria air pollutants.

Ozone. O3 in the troposphere causes numerous adverse health effects; short-term exposures (lasting for a few hours) to levels of O3 typically observed in the region can result in effects including breathing pattern changes, reduction of breathing capacity, respiratory symptoms, worsening of lung disease leading to premature death, increased susceptibility to infections, inflammation of and damage to the lung tissue, and some immunological changes (CARB 2020; EPA 2024). These health problems are particularly acute in sensitive receptors such as the sick, older adults, and young children.

Inhalation of O3 causes inflammation and irritation of the tissues lining human airways, causing, and worsening a variety of symptoms. Exposure to O3 can reduce the volume of air that the lungs breathe in and cause shortness of breath. O3 in sufficient doses increases the permeability of lung cells, rendering them more susceptible to toxins and microorganisms. The occurrence and severity of health effects from O3 exposure vary widely among individuals, even when the dose and the duration of exposure are the same. Research shows adults and children who spend more time outdoors participating in vigorous physical activities are at greater risk from the harmful health effects of O3 exposure. Although there are relatively few studies of O3's effects on children, the available studies show that children are no more or less likely to suffer harmful effects than adults. However, there are a number of reasons why children may be more susceptible to O3 and other pollutants. Children and teens spend nearly twice as much time outdoors and engaged in vigorous activities as adults. Children breathe more rapidly than adults and inhale more pollution per pound of their body weight than adults. Also, children are less likely than adults to notice their own symptoms and avoid harmful exposures. Further research may be able to better distinguish between health effects in children and adults. Children, adolescents, and adults who exercise or work outdoors, where O3 concentrations are the highest, are at the greatest risk of harm from this pollutant (CARB 2020).

A number of population groups are potentially at increased risk for O3 exposure effects. In the ongoing review of O3, the EPA has identified populations as having increased risk from O3 exposures: individuals with asthma, younger and older age groups, individuals with reduced intake of certain nutrients such as Vitamins C and E, and outdoor workers. There is suggestive evidence for other potential factors, such as variations in genes related to oxidative metabolism or inflammation, gender, socioeconomic status, and obesity. However further evidence is needed (SCAQMD 2022).

The adverse effects reported with short-term O3 exposure are greater with increased activity because activity increases the breathing rate and the volume of air reaching the lungs, resulting in an increased amount of O3 reaching the lungs (SCAQMD 2022).

Nitrogen Dioxide. A large body of health science literature indicates that exposure to NO2 can induce adverse health effects. The strongest health evidence, and the health basis for the ambient air quality standards for NO2, results from controlled human exposure studies that show that NO2 can intensify responses to allergens in allergic asthmatics. In addition, a number of epidemiological studies have demonstrated associations between NO2 exposure and premature death, cardiopulmonary effects, decreased lung function growth in children, respiratory symptoms, emergency room visits for asthma, and intensified allergic responses. Infants and children are particularly at risk because they have disproportionately higher exposure to NO2 than adults due to their greater breathing rate for their body weight and their typically greater outdoor exposure duration. Several studies have shown that long-term NO2 exposure during childhood, the period of rapid lung growth, can lead to smaller lungs at maturity in children compared to lower levels of exposure. In addition, children with asthma have a greater degree of airway responsiveness compared with adult asthmatics. In adults, the greatest risk is to people who have chronic respiratory diseases, such as asthma and chronic obstructive pulmonary disease (CARB 2019b).

Carbon Monoxide. Carbon monoxide is harmful because it binds to hemoglobin in the blood, reducing the ability of blood to carry oxygen. This interferes with oxygen delivery to the body's organs. The most common effects of CO exposure are fatigue, headaches, confusion and reduced mental alertness, and light-headedness and dizziness due to inadequate oxygen delivery to the brain. For people with cardiovascular disease, short-term CO exposure can further reduce their body's already compromised ability to respond to the increased oxygen demands of exercise, exertion, or stress. Inadequate oxygen delivery to the heart muscle leads to chest pain and decreased exercise tolerance. Unborn babies whose mothers experience high levels of CO exposure during pregnancy are at risk of adverse developmental effects. Unborn babies, infants, older adults, and people with anemia or with a history of heart or respiratory disease are most likely to experience health effects with exposure to elevated levels of CO (CARB 2019c).

Sulfur Dioxide. SO2 is an irritant gas that attacks the throat and lungs and can cause acute respiratory symptoms and diminished ventilator function in children. When combined with particulate matter (PM), SO2 can injure lung tissue and reduce visibility and the level of sunlight. SO2 can worsen asthma resulting in increased symptoms, increased medication usage, and emergency room visits.

Controlled human exposure and epidemiological studies show that children and adults with asthma are more likely to experience adverse responses with SO2 exposure compared with the non-asthmatic population. Effects at levels near the 1-hour standard are those of asthma exacerbation, including bronchoconstriction accompanied by symptoms of respiratory irritation such as wheezing, shortness of breath, and chest tightness, especially during physical activity. Also, exposure at elevated levels of SO2 (above 1 parts per million [ppm]) results in increased incidence of pulmonary symptoms and disease, decreased pulmonary function, and increased risk of mortality. Older adults and people with cardiovascular disease or chronic lung disease (such as bronchitis or emphysema) are most likely to experience these adverse effects (CARB 2019d). SO2 is of concern because it is a direct respiratory irritant and because it contributes to the formation of sulfate and sulfuric acid in PM (NRC 2005). People with asthma are of particular concern because they have increased baseline airflow resistance and because their SO2-induced increase in resistance is greater than in healthy people and it increases with the severity of their asthma (NRC 2005). SO2 is thought to induce airway constriction via neural reflexes involving irritant receptors in the airways (NRC 2005).

Particulate Matter. A number of adverse health effects have been associated with exposure to PM2.5 and PM10. For PM2.5, short-term exposures (up to 24-hour duration) have been associated with premature mortality, increased hospital admissions for heart or lung causes, acute and chronic bronchitis, asthma attacks, emergency room visits, respiratory symptoms, and restricted activity days. These adverse health effects have been reported primarily in infants, children, and older adults with preexisting heart or lung diseases. In addition, of all of the common air pollutants, PM2.5 is associated with the greatest proportion of adverse health effects related to air pollution, both in the United States and world-wide based on the World Health Organization's Global Burden of Disease Project (WHO 2018). Short-term exposures to PM10 have been associated primarily with worsening of respiratory diseases, including asthma and chronic obstructive pulmonary disease, leading to hospitalization and emergency department visits (CARB 2017).

Long-term (months to years) exposure to PM2.5 has been linked to premature death, particularly in people who have chronic heart or lung diseases, and reduced lung function growth in children. The effects of long-term exposure to PM10 are less clear, although several studies suggest a link between long-term PM10 exposure and respiratory mortality. The International Agency for Research on Cancer published a review in 2015 that concluded that PM in outdoor air pollution causes lung cancer (CARB 2017).

People with influenza, people with chronic respiratory and cardiovascular diseases, and older adults may suffer worsening illness and premature death as a result of breathing PM. People with bronchitis can expect aggravated symptoms from breathing PM. Children may experience a decline in lung function due to breathing in PM10 and PM2.5 (EPA 2009).

PM encompasses a physically and chemically diverse class of ambient air pollutants of both anthropogenic and biological origin. The PM standard is the only National Ambient Air Quality Standard (NAAQS) that does not target a specific chemical or family of chemical species (NRC 2005). The range of human health effects associated with ambient PM levels or demonstrated in laboratory studies has expanded from earlier concerns for total mortality and respiratory morbidity to include cardiac mortality and morbidity, blood vessel constriction, stroke, premature birth, low birth weight, retarded lung growth, enhancement of allergic responses, reduced resistance to infection, degenerative lesions in the brain, and lung cancer (EPA 2004).

Lead. Lead in the atmosphere occurs as particulate matter. Sources of lead include leaded gasoline; the manufacturing of batteries, paints, ink, ceramics, and ammunition; and secondary lead smelters. Prior to 1978, mobile emissions were the primary source of atmospheric lead. Between 1978 and 1987, the phaseout of leaded gasoline reduced the overall inventory of airborne lead by nearly 95%. With the phaseout of leaded gasoline, secondary lead smelters, battery recycling, and manufacturing facilities are becoming lead-emissions sources of greater concern. Prolonged exposure to atmospheric lead poses a serious threat to human health. Health effects associated with exposure to lead include gastrointestinal disturbances, anemia, kidney disease, and, in severe cases, neuromuscular and neurological dysfunction. Of particular concern are low-level lead exposures during infancy and childhood. Such exposures are associated with decrements in neurobehavioral performance, including intelligence quotient performance, psychomotor performance, reaction time, and growth. Children are highly susceptible to the effects of lead.

Reactive Organic Gases (VOC). Hydrocarbons are organic gases that are formed from hydrogen and carbon and sometimes other elements. Hydrocarbons that contribute to formation of O3 are referred to and regulated as ROGs (also referred to as VOCs). Combustion engine exhaust, oil refineries, and fossil-fueled power plants are the sources of hydrocarbons. Other sources of hydrocarbons include evaporation from petroleum fuels, solvents, dry cleaning solutions, and paint. The primary health effects of ROGs result from the formation of O3 and its related health effects. High levels of ROGs in the atmosphere can interfere with oxygen intake by reducing the amount of available oxygen through displacement. Carcinogenic forms of hydrocarbons, such as benzene, are considered TACs. There are no separate health standards for ROGs as a group.

Non-Criteria Air Pollutants

Toxic Air Contaminants (TACs). A substance is considered toxic if it has the potential to cause adverse health effects in humans, including increasing the risk of cancer upon exposure, or acute and/or chronic noncancerous health effects. A toxic substance released into the air is considered a TAC. TACs are identified by federal and state agencies based on a review of available scientific evidence. In California, TACs are identified through a two-step process that was established in 1983 under the Toxic Air Contaminant Identification and Control Act. This two-step process of risk identification and risk management and reduction was designed to protect residents from the health effects of toxic substances in the air. In addition, the California Air Toxics "Hot Spots" Information and Assessment Act, Assembly Bill (AB) 2588, was enacted by the legislature in 1987 to address public concern over the release of TACs into the atmosphere. The law requires facilities emitting toxic substances to provide local air pollution control districts with information that will allow an assessment of the air toxics problem, identification of air toxics emissions sources, location of resulting hotspots, notification of the public exposed to significant risk, and development of effective strategies to reduce potential risks to the public over 5 years.

Examples of TACs include certain aromatic and chlorinated hydrocarbons, certain metals, and asbestos. TACs are generated by a number of sources, including stationary sources such as dry cleaners, gas stations, combustion sources, and laboratories; mobile sources such as automobiles; and area sources such as landfills. Adverse health effects associated with exposure to TACs may include carcinogenic (i.e., cancer-causing) and noncarcinogenic effects. Noncarcinogenic effects typically affect one or more target organ systems and may be experienced on either short-term (acute) or long-term (chronic) exposure to a given TAC.

Diesel Particulate Matter. Diesel particulate matter (DPM) is part of a complex mixture that makes up diesel exhaust. Diesel exhaust is composed of two phases, gas, and particle, both of which contribute to health risks. More than 90% of DPM is less than 1 micrometer in diameter (about 1/70th the diameter of a human hair), and thus is a subset of PM2.5 (CARB 2016b). DPM is typically composed of carbon particles ("soot," also called black carbon) and numerous organic compounds, including over 40 known cancer-causing organic substances. Examples of these chemicals include polycyclic aromatic hydrocarbons, benzene, formaldehyde, acetaldehyde, acrolein, and 1,3-butadiene (CARB 2016b). The California Air Resources Board (CARB) classified "particulate emissions from diesel-fueled engines" (i.e., DPM; 17 CCR 93000) as a TAC in August 1998. DPM is emitted from a broad range of diesel engines: on-road diesel engines of trucks, buses, and cars, and off-road diesel engines, including locomotives, marine vessels, and heavy-duty construction equipment, among others. Approximately 70% of all airborne cancer risk in California is associated with DPM (CARB 2000). To reduce the cancer risk associated with DPM, CARB adopted a diesel risk reduction plan in 2000 (CARB 2000). Because it is part of PM2.5, DPM also contributes to the same noncancerous health effects as PM2.5 exposure. These effects include premature death; hospitalizations and emergency department

visits for exacerbated chronic heart and lung disease, including asthma; increased respiratory symptoms; and decreased lung function in children. Several studies suggest that exposure to DPM may also facilitate development of new allergies (CARB 2016b). Those most vulnerable to noncancerous health effects are children whose lungs are still developing and older adults who often have chronic health problems.

Odorous Compounds. Odors are generally regarded as an annoyance rather than a health hazard. Manifestations of a person's reaction to odors can range from psychological (e.g., irritation, anger, or anxiety) to physiological (e.g., circulatory, and respiratory effects, nausea, vomiting, and headache). The ability to detect odors varies considerably among the population and overall is subjective. People may have different reactions to the same odor. An odor that is offensive to one person may be perfectly acceptable to another (e.g., coffee roaster). An unfamiliar odor is more easily detected and is more likely to cause complaints than a familiar one. Known as odor fatigue, a person can become desensitized to almost any odor, and recognition may only occur with an alteration in the intensity. The occurrence and severity of odor impacts depend on the nature, frequency, and intensity of the source; wind speed and direction; and the sensitivity of receptors.

Valley Fever. Valley Fever is an illness caused by a fungus (*Coccidioides spp.)* that lives in the soil and dirt in certain areas of California and the southwestern United States. Valley fever is contracted from breathing in the fungus from dust in the air, causing symptoms such as cough, fever, chest pain, or tiredness. Valley fever can progress to severe disease, which can require hospitalization. Since 2000, the number of reported Valley fever cases has increased from less than 1,000 cases per year to more than 9,000 cases in 2019. Favorable conditions for the Valley Fever fungus include low rainfall, high summer temperatures, and moderate winter temperatures. In California, the counties with the highest incidence of Valley Fever are Kings, Merced, Monterey, Kern, Tulare, Fresno, and San Luis Obispo counties. In fact, over 65% of cases are reported in people who live in the Central Valley and the Central Coast regions. When soils are disturbed by wind or activities like construction and farming, Valley Fever fungal spores can become airborne. The spores present a potential health hazard when inhaled. Individuals in occupations such as construction, agriculture, and archaeology have a higher risk of exposure due to working in areas of disturbed soils which may have the Valley Fever fungus. (California Department of Public Health, 2021)

Sensitive Receptors. Some land uses are considered more sensitive to changes in air quality than others, depending on the population groups and the activities involved. People most likely to be affected by air pollution include children, older adults, athletes, and people with cardiovascular and chronic respiratory diseases. Facilities and structures where these air-pollution-sensitive people live or spend considerable amounts of time are known as sensitive receptors. Land uses where air-pollution-sensitive individuals are most likely to spend time include schools and schoolyards, parks and playgrounds, daycare centers, nursing homes, hospitals, and residential communities (sensitive sites or sensitive land uses) (CARB 2005). The

SJVAPCD identifies sensitive receptors as facilities that house or attract children, older adults, people with illnesses, hospitals, schools, convalescent facilities, and residential areas (SJVAPCD 2015a). The closest off-site sensitive receptor to the Project site is Hanford Christian School, which is adjacent to the northern boundary of the Project site along Flint Avenue. Other close sensitive receptors include residential neighborhoods along the southern and eastern borders of the Project site.

Regulatory Setting

Local

City of Hanford Air Quality Element

The City of Hanford provides a separate Air Quality Element that outlines goals, objectives, and policies for addressing air quality. The following objectives and policies are listed below:

Objective AQ 4: Accurately assess and mitigate potentially significant local and regional air quality and climate change impacts from proposed Projects within the City. Where possible and financially feasible, retrofit existing uses and activities to reduce emissions and climate change impacts.

- *Policy AQ 4.1*: Assess and mitigate Project air quality impacts using analysis methods and significance thresholds recommended by the San Joaquin Valley Air Pollution Control District.
- *Policy AQ 4.3*: Ensure that air quality and climate change impacts identified during California Environmental Quality Act review are minimized and consistently and fairly mitigated to the greatest extent feasible.
- *Policy AQ 4.6*: Work with the San Joaquin Valley Air Pollution Control District and developers to ensure that funds collected under Rule 9510 – Indirect Source Review mitigation fees are used in Hanford and Kings County whenever possible to maximize local benefits to air quality and the economy.
- *Policy AQ 4.7*: Work with the San Joaquin Valley Air Pollution Control District to ensure implementation of particulate emission controls required by Regulation VIII – Fugitive PM10 for construction and grading activities.

Objective AQ 7: Increase the use of energy conservation features, renewable sources of energy and low-emission equipment in new and existing development Projects within the City.

- *Policy AQ 7.6*: Encourage the use of solar-ready roofs in residential and commercial development. New residential development should include proper solar orientation (south facing roof area sloped at 20° to 55° from the horizontal), clear access on the south sloped roof (no chimneys, heating vents, plumbing vents, etc.), electrical conduit installed for solar electric system wiring, plumbing installed for solar hot water systems,

and space provided for a solar hot water storage tank. Roofs for commercial development should be designed to maximize potential area available for solar panels and provide electrical conduit to support future installation.

- *Policy AQ 7.7*: Promote urban forestry Projects that shade buildings, homes, streets, pedestrian walkways, and urban core areas to reduce surface and ambient temperatures and reduce energy required for cooling.

***Objective AQ 9*:** Reduce emissions of PM10, PM2.5 and other particulates from sources with local control potential or under the jurisdiction of the City.

- *Policy AQ 9.1*: Coordinate with the San Joaquin Valley Air Pollution Control District to ensure that construction, grading, excavation, and demolition activities within City's jurisdiction are regulated and controlled to reduce particulate emissions to the maximum extent feasible.
- *Policy AQ 9.2*: Require all access roads, driveways, and parking areas serving new commercial and industrial development are constructed with materials that minimize particulate emissions and are appropriate to the scale and intensity of use.
- *Policy AQ 9.3*: Develop a street cleaning and soil track out cleanup program to reduce PM10 emissions from City maintained roads to the maximum extent feasible.

San Joaquin Valley Air Pollution Control District (SJVAPCD)

The SJVAPCD is responsible for enforcing air quality standards in the Project area. To meet state and federal air quality objectives, the SJVAPCD adopted the following thresholds of significance for Projects:

Table 5. SJVAPCD Thresholds of Significance for Criteria Pollutants

Pollutant/Precursor	Construction Emissions	Operational Emissions	
		Permitted Equipment and Activities	Non-Permitted Equipment and Activities
	Emissions (tpy)	Emissions (tpy)	Emissions (tpy)
CO	100	100	100
NOx	10	10	10
ROG	10	10	10
SOx	27	27	27
PM10	15	15	15
PM2.5	15	15	15

Source: SJVAPCD

The following SJVAPCD rules and regulations may apply to the proposed Project:

- **Rule 2010:** Permits Required. The purpose of this rule is to require any person constructing, altering, replacing, or operating any source operation which emits, may

emit, or may reduce emissions to obtain an Authority to Construct or a Permit to Operate. This rule also explains the posting requirements for a Permit to Operate and the illegality of a person willfully altering, defacing, forging, counterfeiting, or falsifying any Permit to Operate.

- **Rule 3135:** Dust Control Plan Fee. All Projects which include construction, demolition, excavation, extraction, and/or other earth moving activities as defined by Regulation VIII (Described below) are required to submit a Dust Control Plan and required fees to mitigate impacts related to dust.
- **Rule 4101:** Visible Emissions. District Rule 4101 prohibits visible emissions of air contaminants that are dark in color and/or have the potential to obstruct visibility.
- **Rule 4002:** National Emission Standards for Hazardous Air Pollutants. This rule incorporates the National Emission Standards for Hazardous Air Pollutants from Part 61, Chapter I, Subchapter C, Title 40, Code of Federal Regulations (CFR) and the National Emission Standards for Hazardous Air Pollutants for Source Categories from Part 63, Chapter I, Subchapter C, Title 40, Code of Federal Regulations (CFR).
- **Rule 4102:** Nuisance. The purpose of this rule is to protect the health and safety of the public.
- **Rule 4601:** Architectural Coatings. The purpose of this rule is to limit VOC emissions from architectural coatings. This rule specifies architectural coatings storage, cleanup, and labeling requirements.
- **Rule 4641:** Cutback, Slow Cure, and Emulsified Asphalt, Paving and Maintenance Operations. The purpose of this rule is to limit VOC emissions from asphalt paving and maintenance operations. This rule applies to the manufacture and use of cutback asphalt, slow cure asphalt and emulsified asphalt for paving and maintenance operations.
- **Rule 9510:** Indirect Source Review (ISR). This rule reduces the impact PM10 and NOX emissions from growth on the SJVB. This rule places application and emission reduction requirements on applicable development Projects in order to reduce emissions through onsite mitigation, offsite SJVAPCD administered Projects, or a combination of the two. This Project will submit an Air Impact Assessment (AIA) application in accordance with Rule 9510's requirements.
- **Regulation VIII:** Fugitive PM10 Prohibitions. Regulation VIII is composed of eight rules which together aim to limit PM10 emissions by reducing fugitive dust. These rules contain required management practices to limit PM10 emissions during construction, demolition, excavation, extraction, and/or other earth moving activities.

Furthermore, the SJVAPCD website has provided the Ambient Air Quality Standards for a variety of pollutants, which includes standards on the state and federal level (ppm) as well as the method of measuring the concentration of each pollutant. See Table 6 for the state and federal standard for each pollutant.

Table 6. Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards[1]		National Standards[2]		
		Concentration[3]	Method[4]	Primary[3,5]	Secondary[3,6]	Method[7]
Ozone (03)	1 Hour	0.09 ppm (180 µg/m³)	Ultraviolet Photometry	--	Same as Primary Standard	Ultraviolet 8 Hour Photometry
	8 Hour	0.07 ppm (137 µg/m³)		0.075 ppm (147 µg/m³)		
Respirable Particulate Matter (PM_{10})	24 Hour	50 µg/m	Gravimetric or Beta Attenuation	150 µg/m³	Same as Primary Standard	Inertial Separation and Gravimetric Annual Analysis
	Annual Arithmetic Mean	20 µg/m3		--		
Fine Particulate Matter ($PM_{2.5}$)	24 Hour		Gravimetric or Beta Attenuation	35 µg/m³	Same as Primary Standard	Inertial Separation and Gravimetric Annual Analysis
	Annual Arithmetic Mean	12 µg/m³		15 µg/m³		
Carbon Monoxide (CO)	1 Hour	20 ppm (23 mg/m³)	Non-Dispersive Infrared Photometry (NDIR)	35 ppm (40 mg/m³)	--	Non-Dispersive Infrared Photometry (NDIR)
	8 Hour	9.0 ppm (10 mg/m³)		9 ppm (10 mg/m³)	--	
	8 Hour (Lake Tahoe)	6 ppm (7 mg/m³)		--	--	
Nitrogen Dioxide (NO_2) [8]	1 Hour	0.18 ppm (339 µg/m³)	Gas Phase Chemiluminescence	100 ppb (188 µg/m³)	--	Gas Phase Annual Chemiluminescence
	Arithmetic Mean	0.030 ppm (57 µg/m³)		53 ppb (100 µg/m³)	Same as Primary Standard	
Sulfur Dioxide	1 Hour	0.25 ppm (655 µg/m³)	Ultraviolet Fluorescence	75 ppb (196 µg/m³)	--	Ultraviolet Fluorescence; Spectrophotometry (Pararosaniline Method)
	3 Hour	--		--	0.5 ppm (1300 µg/m³)	
	24 Hour	0.04 ppm (105 µg/m³)		0.14 ppm (for certain areas)9	--	

Pollutant	Averaging Time	California Standards[1]		National Standards[2]		
		Concentration[3]	Method[4]	Primary[3,5]	Secondary[3,6]	Method[7]
	Annual Arithmetic Mean	--		0.030 ppm (for certain areas)9	--	
Lead[10,11]	30 Day Average	1.5 µg/m^3	Atomic Absorption	--	--	High Volume Sampler and Atomic Absorption
	Calendar Quarter	--		1.5 µg/m3 (for certain areas)11	Same as Primary Standard	
	Rolling 3-Month Average	--		0.15 µg/m^3		
Visibility Reducing Particles[12]	8 Hour	See footnote 12	Beta Attenuation and Transmittance through Filter Tape	No National Standard		
Sulfates	24 Hour	25 µg/m^3	Ion Chromatography			
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m^3)	Ultraviolet Fluorescence			
Vinyl Chloride[10]	24 Hour	0.01ppm (26 µg/m^3)	Gas Chromatography			

1. California standards for ozone, carbon monoxide (except 8-hour Lake Tahoe), sulfur dioxide (1 and 24 hour), nitrogen dioxide, and particulate matter (PM10, PM2.5, and visibility reducing particles), are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.
2. National standards (other than ozone, particulate matter, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over three years, is equal to or less than the standard. For PM10, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m3 is equal to or less than one. For PM2.5, the 24-hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard. Contact the U.S. EPA for further clarification and current national policies.
3. Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.
4. Any equivalent measurement method which can be shown to the satisfaction of the ARB to give equivalent results at or near the level of the air quality standard may be used.

Pollutant	Averaging Time	California Standards[1]		National Standards[2]		
		Concentration[3]	Method[4]	Primary[3,5]	Secondary[3,6]	Method[7]

5. National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect public health.
6. National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.
7. Reference method as described by the U.S. EPA. An "equivalent method" of measurement may be used but must have a "consistent relationship to the reference method" and must be approved by the U.S. EPA.
8. To attain the 1-hour national standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 ppb. Note that the national standards are in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the national standards to the California standards the units can be converted from ppb to ppm. In this case, the national standards of 53 ppb and 100 ppb are identical to 0.053 ppm and 0.100 ppm, respectively.
9. On June 2, 2010, a new 1-hour SO2 standard was established, and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO2 national standards (24-hour and annual) remain in effect until one year after an area is designated for the 2010 standard, except that in areas designated nonattainment for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved. Note that the 1-hour national standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the 1-hour national standard to the California standard the units can be converted to ppm. In this case, the national standard of 75 ppb is identical to 0.075 ppm.
10. The ARB has identified lead and vinyl chloride as 'toxic air contaminants' with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.
11. The national standard for lead was revised on October 15, 2008, to a rolling 3-month average. The 1978 lead standard (1.5 μg/m3 as a quarterly average) remains in effect until one year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.
12. In 1989, the ARB converted both the general statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are "extinction of 0.23 per kilometer" and "extinction of 0.07 per kilometer" for the statewide and Lake Tahoe Air Basin standards, respectively.

Source: "Ambient Air Quality Standards & Attainment Status" Webpage on SJVAPCD Website

Air Quality Plans

The SJVAPCD has prepared several air quality attainment plans to achieve the O3 and PM standards, the most recent of which include the 2020 Reasonably Available Control Technology Demonstration for the 2015 8-Hour Ozone Standard (SJVAPCD 2020a); 2016 Plan for the 2008 8-Hour Ozone Standard (SJVAPCD 2016a); 2014 Reasonably Available Control Technology Demonstration for the 8-Hour Ozone State Implementation Plan (SJVAPCD 2014a); 2013 Plan for the Revoked 1-Hour Ozone Standard (SJVAPCD 2013); 2007 PM10 Maintenance Plan and Request

for Redesignation (SJVAPCD 2007a); 2012 PM2.5 Plan (SJVAPCD 2012); 2015 Plan for the 1997 PM2.5 Standard (SJVAPCD 2015b); 2016 Moderate Area Plan for the 2012 PM2.5 Standard (SJVAPCD 2016b); and the 2018 Plan for the 1997, 2006, and 2012 PM2.5 Standards (SJVAPCD 2020b). The following sections summarize key elements of these and other recent air quality attainment plans.

Extreme 1-Hour Ozone Attainment Demonstration Plan

The Extreme 1-Hour Ozone Attainment Demonstration Plan, adopted by the SJVAPCD Governing Board October 8, 2004, sets forth measures and emission-reduction strategies designed to attain the federal 1-hour O3 standard by November 15, 2010, as well as an emissions inventory, outreach, and rate of progress demonstration. This plan was approved by the EPA on March 8, 2010; however, the EPA's approval was subsequently withdrawn effective November 26, 2012, in response to a decision issued by the U.S. Court of Appeals for the Ninth Circuit (Sierra Club v. EPA, 671 F.3d 955) remanding EPA's approval of these SIP revisions. Concurrent with the EPA's final rule, CARB withdrew the 2004 plan. The SJVAPCD developed a new plan for the 1-hour O3 standard, the 2013 Plan for the Revoked 1-Hour Ozone Standard, which it adopted in September 2013.

2007 8-Hour Ozone Plan

The 2007 8-Hour Ozone Plan, adopted by the Governing Board on April 30, 2007, sets forth measures and a "dual path" strategy to attain the federal 1997 8-hour O3 standard by 2023 for the SJVAB by reducing emissions of O3 and PM precursors (SJVAPCD 2007b). The plan also includes provisions for improved pollution control technologies for mobile and stationary sources, as well as an increase in state and federal funding for incentive-based measures to reduce emissions. All local measures would have been adopted by the SJVAPCD before 2012. This plan was approved by the EPA on April 30, 2012. On November 26, 2012, however, the EPA withdrew its determination that the plan satisfied the federal Clean Air Act requirements regarding emissions growth caused by growth in vehicle miles traveled. All other determinations in the EPA's March 1, 2012, rule approving the plan remain unchanged and in effect. The SJVAPCD is currently in the process of developing an O3 plan to address EPA's 2008 8-hour O3 standard, with attainment required by 2032.

2009 Reasonable Available Control Technology State Implementation Plan

On April 16, 2009, the Governing Board adopted the Reasonably Available Control Technology Demonstration for Ozone State Implementation Plans (2009 RACT SIP) (SJVAPCD 2009). In part, the 2009 RACT SIP satisfied the commitment by the SJVAPCD for a new RACT analysis for the 1-hour O3 plan (see discussion of the EPA withdrawal of approval in the Extreme 1-Hour Ozone Attainment Demonstration Plan summary above) and was intended to prevent all sanctions that could be imposed by the EPA for failure to submit a required SIP revision for the 1-hour O3 standard. With respect to the 8-hour standard, the plan also assesses the SJVAPCD's rules based on the adjusted major source definition of 10 tons per year (due to the SJVAB's designation as an extreme O3 nonattainment area), evaluates SJVAPCD rules against new

Control Techniques Guidelines promulgated since August 2006, and reviews additional rules and rule amendments that had been adopted by the Governing Board since August 17, 2006, for RACT consistency.

2013 Plan for the Revoked 1-Hour Ozone Standard

The SJVAPCD developed a plan for EPA's revoked 1-hour O3 standard after the EPA withdrew its approval of the 2004 Extreme 1-Hour Ozone Attainment Demonstration Plan as a result of litigation. As a result of the litigation, the EPA reinstated previously revoked requirements for 1-hour O3 attainment plans. The 2013 plan addresses those requirements, including a demonstration of implementation of reasonably available control measures and a demonstration of a rate of progress averaging 3% annual reductions of ROG or NOx emissions every 3 years. The 2013 Plan for the Revoked 1-Hour Ozone Standard was approved by the Governing Board on September 19, 2013 (SJVAPCD 2013).

2014 RACT SIP

On June 19, 2014, the Governing Board adopted the 2014 Reasonably Available Control Technology Demonstration for the 8-Hour Ozone State Implementation Plan (2014 RACT SIP) (SJVAPCD 2014a). The 2014 RACT SIP includes a demonstration that the SJVAPCD rules implement RACT. The plan reviews each of the NOx reduction rules and concludes that they satisfy requirements for stringency, applicability, and enforceability, and meet or exceed RACT. The plan's analysis of further ROG reductions through modeling and technical analyses demonstrates that added ROG reductions will not advance SJVAB's O3 attainment. Each ROG (i.e., VOC) rule evaluated in the 2009 RACT SIP, however, has been subsequently approved by the EPA as meeting RACT within the last 2 years. The O3 attainment strategy, therefore, focuses on further NOx reductions.

SJVAPCD 2016 Plan for the 2008 8-Hour Ozone Standard

The SJVAPCD adopted the 2016 Plan for the 2008 8-Hour Ozone Standard in June 2016. This plan demonstrates the practicable and expeditious attainment of the 75 parts per billion 8-hour O3 standard (SJVAPCD 2016a).

SJVAPCD 2016 Moderate Area Plan for the 2012 PM2.5 Standard

The SJVAPCD adopted the 2016 Moderate Area Plan for the 2012 PM2.5 Standard on September 15, 2016. This plan addresses the EPA federal annual PM2.5 standard of 12 micrograms per cubic meter (µg/m3), established in 2012. This plan includes an attainment impracticability demonstration and request for reclassification of the SJVAB from Moderate nonattainment to Serious nonattainment (SJVAPCD 2016b).

SJVAPCD 2018 Plan for the 1997, 2006, and 2012 PM2.5 Standards

The SJVAPCD adopted the 2018 Plan for the 1997, 2006, and 2012 PM2.5 Standards on November 15, 2018. This plan addresses the EPA federal 1997 annual PM2.5 standard of 15 μg/m³ and 24-hour PM2.5 standard of 65 μg/m³, the 2006 24-hour PM2.5 standard of 35 μg/m³, and the 2012 annual PM2.5 standard of 12 μg/m³. This plan demonstrates attainment of the federal PM2.5 standards as expeditiously as practicable (SJVAPCD 2018).

2020 RACT Demonstration

The SJVAPCD adopted the 2020 RACT Demonstration for the 2015 8-Hour Ozone Standard on June 18, 2020. San Joaquin Valley is classified as an Extreme nonattainment area for the 2015 O3 standard. The 2020 RACT Demonstration includes a comprehensive evaluation of all NOx and ROG SJVAPCD rules to ensure that each rule meets or exceeds RACT. The 2020 RACT Demonstration fulfills Clean Air Act requirements and demonstrates that all federal RACT requirements continue to be satisfied in San Joaquin Valley (SJVAPCD 2020a).

Particulate Matter Attainment Plans

2007 PM10 Maintenance Plan and Request for Redesignation

On September 20, 2007, the Governing Board approved the 2007 PM10 Maintenance Plan and Request for Redesignation (SJVAPCD 2007a). After achieving compliance with the annual and 24-hour NAAQS for PM10 during the period from 2003 to 2006,3 the SJVAPCD prepared the 2007 PM10 Maintenance Plan and Request for Redesignation. The plan includes future emission estimates through 2020 and, based on modeling, Projects that SJVAB will continue to attain the PM10 NAAQS through 2020. The plan does not call for the adoption of new control measures. Measures called for in the 2007 8-Hour Ozone Plan and 2008 PM2.5 Plan (discussed below) will also produce PM10 benefits; however, the plan does include a contingency plan if future PM10 levels were to exceed the NAAQS. It also includes a request that the EPA redesignate the SJVAB to attainment status for the PM10 NAAQS. On October 25, 2007, CARB approved the SJVAPCD's plan with modifications to the transportation conformity budgets. On September 25, 2008, the EPA redesignated the SJVAB to attainment for the PM10 NAAQS and approved the PM10 maintenance plan.

2008 PM2.5 Plan

The SJVAPCD Governing Board adopted the 2008 PM2.5 Plan on April 30, 2008 (SJVAPCD 2008). This plan is designed to assist the SJVAB in attaining all PM2.5 standards, including the 1997 federal standards, the 2006 federal standards, and the state standard, as soon as possible. On July 13, 2011, the EPA issued a proposed rule partially approving and disapproving the 2008 PM2.5 Plan. Subsequently, on November 9, 2011, the EPA issued a final rule approving most of the plan with an effective date of January 9, 2012. However, the EPA disapproved the plan's contingency measures because they would not provide sufficient emissions reductions.

2012 PM2.5 Plan

Approved by the Governing Board on December 20, 2012, the 2012 PM2.5 Plan addresses attainment of EPA's 24-hour PM2.5 standard of 35 µg/m³ established in 2006. In addition to reducing direct emissions of PM2.5, this plan focuses on reducing emissions of NOx, which is a predominant pollutant in the formation of PM2.5 in the SJVAB. The plan relies on a multilevel approach to reducing emissions through SJVAPCD efforts (industry, the general public, employers, and small businesses) and state/federal efforts (passenger vehicles, heavy-duty trucks, and offroad sources), as well as SJVAPCD and state/federal incentive programs to accelerate replacement of on- and offroad vehicles and equipment (SJVAPCD 2012).

2015 Plan for the 1997 PM2.5 Standard

The Governing Board adopted the 2015 Plan for the 1997 PM2.5 Standard on April 16, 2015 (SJVAPCD 2015b). This plan addresses the EPA's annual PM2.5 standard of 15 µg/m3 and 24-hour PM2.5 standard of 65 µg/m3 established in 1997. Although nearly achieving the 1997 standards, the SJVAB experienced higher PM2.5 levels in winter 2013–2014 due to the extreme drought, stagnation, strong inversions, and historically dry conditions; thus, the SJVAPCD was unable to meet the attainment date of December 31, 2015. Accordingly, this plan also contains a request for a one-time extension of the attainment deadline for the 24-hour standard to 2018 and the annual standard to 2020. The plan builds on past development and implementation of effective control strategies. Consistent with EPA regulations for PM2.5 plans to achieve the 1997 standards, the plan contains Most Stringent Measures, Best Available Control Measures, and additional enforceable commitments for further reductions in emissions, and ensures expeditious attainment of the 1997 standard.

2016 Moderate Area Plan for the 2012 PM2.5 Standard

On September 15, 2016, the Governing Board adopted the 2016 Moderate Area Plan for the 2012 PM2.5 Standard (SJVAPCD 2016b). This plan addresses the federal mandates for areas classified as "moderate nonattainment" for the 2012 PM2.5 NAAQS of 12 µg/m3. Consistent with EPA's PM2.5 Implementation Rule, the plan satisfies the mandate to submit a moderate nonattainment plan to EPA by October 2016, demonstrates impracticability of attaining the 2012 PM2.5 standard by the moderate nonattainment deadline of 2021, includes a request to reclassify San Joaquin Valley to a "serious nonattainment" area for the 2012 PM2.5 standard, satisfies all federal Clean Air Act requirements for moderate nonattainment areas, and demonstrates that emissions are continuing to be reduced in San Joaquin Valley.

2017 Particulate Matter Plans

The SJVAPCD is in the process of developing an attainment strategy to address the 1997, 2006, and 2012 PM2.5 standards and a plan to demonstrate maintenance of the 1987 PM10 standard, as required under the federal Clean Air Act.

Senate Bill 656 Particulate Matter Control Measure Implementation Schedule
Senate Bill (SB) 656 was enacted in 2003 and codified as California Health and Safety Code Section 39614. SB 656 seeks to reduce exposure to PM10 and PM2.5 and to make further progress toward attainment of the NAAQS and CAAQS for PM10 and PM2.5. SB 656 required CARB, in consultation with local air districts, to develop and adopt lists of "the most readily available, feasible, and cost-effective" PM control measures. Subsequently, the air districts were required to adopt implementation schedules for the relevant control measures in their districts. In June 2005, the SJVAPCD adopted its SB 656 Particulate Matter Control Measure Implementation Schedule. The SJVAPCD analysis of the CARB list concluded that all but one of the measures that apply to SJVAPCD sources had been implemented or were in one of the SJVAPCD's attainment plans for adoption within the next 2 years. The remaining measure pertains to a future amendment of a rule for gasoline transfer into stationary storage containers, delivery vessels, and bulk plants.

State

California Clean Air Act
California Air Resources Board coordinates and oversees both state and federal air pollution control programs in California. As part of this responsibility, the California Air Resources Board monitors existing air quality, establishes California Ambient Air Quality Standards, and limits allowable emissions from vehicular sources. Regulatory authority within established air basins is provided by air pollution control and management districts, which control stationary-source and most categories of area-source emissions and develop regional air quality plans. The Project is located within the jurisdiction of the San Joaquin Valley Air Pollution Control District.

The state and federal standards for the criteria pollutants are presented in Section 8.4 of The San Joaquin Valley Unified Air Pollution Control District's 2015 "Guidance for Assessing and Mitigating Air Quality Impacts". These standards are designed to protect public health and welfare. The "primary" standards have been established to protect public health. The "secondary" standards are intended to protect the nation's welfare and account for air pollutant effects on soils, water, visibility, materials, vegetation, and other aspects of the general welfare. The U.S. EPA revoked the national 1-hour ozone standard on June 15, 2005, and the annual PM_{10} standard on September 21, 2006, when a new $PM_{2.5}$ 24-hour standard was established.

Air Toxics Program
The state Air Toxics Program was established in 1983 under AB 1807 (Tanner). The California TAC list identifies more than 700 pollutants, of which carcinogenic and noncarcinogenic toxicity criteria have been established for a subset of these pollutants pursuant to the California Health and Safety Code. In accordance with AB 2728, the state list includes the federal HAPs. In 1987, the Legislature enacted the Air Toxics "Hot Spots" Information and Assessment Act of 1987 (AB

2588) to address public concern over the release of TACs into the atmosphere. AB 2588 requires facilities emitting toxic substances to provide local air pollution control districts with information that will allow an assessment of the air toxics problem, identification of air toxics emissions sources, location of resulting hotspots, notification of the public exposed to significant risk, and development of effective strategies to reduce potential risks to the public over 5 years. TAC emissions from individual facilities are quantified and prioritized. "High priority" facilities are required to perform a health risk assessment (HRA), and if specific thresholds are exceeded, the facility operator is required to communicate the results to the public in the form of notices and public meetings.

In 2000, CARB approved a comprehensive Diesel Risk Reduction Plan to reduce diesel emissions from both new and existing diesel-fueled vehicles and engines (CARB 2000). The regulation is anticipated to result in an 80% decrease in statewide diesel health risk in 2020 compared with the diesel risk in 2000. Additional regulations apply to new trucks and diesel fuel, including the On-Road Heavy Duty Diesel Vehicle (In-Use) Regulation, the On-Road Heavy Duty (New) Vehicle Program, the In-Use Off-Road Diesel Vehicle Regulation, and the New Off-Road Compression-Ignition (Diesel) Engines and Equipment program. These regulations and programs have timetables by which manufacturers must comply and existing operators must upgrade their diesel-powered equipment. There are several Airborne Toxic Control Measures that reduce diesel emissions, including In-Use Off-Road Diesel-Fueled Fleets (13 CCR 2449 et seq.) and In-Use On-Road Diesel-Fueled Vehicles (13 CCR 2025).

California Health and Safety Code Section 41700

Section 41700 of the Health and Safety Code states that a person must not discharge from any source whatsoever quantities of air contaminants or other material that cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public; or that endanger the comfort, repose, health, or safety of any of those persons or the public; or that cause, or have a natural tendency to cause, injury or damage to business or property. This section also applies to sources of objectionable odors.

Safety Training on Valley Fever Assembly Bill 203

AB 203 adds Section 6709 to the Labor Code and requires employers to provide effective Valley Fever awareness and prevention training for all construction employees at risk of prolonged exposure to dust in Fresno, Kern, Kings, Madera, Merced, Monterey, San Joaquin, San Luis Obispo, Santa Barbara, Tulare, and Ventura Counties annually and again before an employee begins work that is reasonably anticipated to cause exposure to substantial dust disturbance.

Federal

Federal Clean Air Act

The 1977 Federal Clean Air Act (CAA) authorized the establishment of the National Ambient Air Quality Standards (NAAQS) and set deadlines for their attainment. The Clean Air Act identifies

specific emission reduction goals, requires both a demonstration of reasonable further progress and an attainment demonstration, and incorporates more stringent sanctions for failure to meet interim milestones. The U.S. EPA is the federal agency charged with administering the Act and other air quality-related legislation. EPA's principal functions include setting NAAQS; establishing minimum national emission limits for major sources of pollution; and promulgating regulations. Under CAA, the NCCAB is identified as an attainment area for all pollutants.

Hazardous Air Pollutants

The 1977 federal Clean Air Act amendments required the EPA to identify national emission standards for HAPs to protect public health and welfare. HAPs include certain VOCs, pesticides, herbicides, and radionuclides that present a tangible hazard, based on scientific studies of exposure to humans and other mammals. Under the 1990 federal Clean Air Act Amendments, which expanded the control program for HAPs, 187 substances and chemical families were identified as HAPs.

Discussion

a) Would the Project conflict with or obstruct implementation of the applicable air quality plan?

Less than Significant with Mitigation Incorporation: An Air Quality and Greenhouse Gas Assessment (Appendix A1) for this Project was developed to determine the impacts on Air Quality. Projected emissions from the Project were estimated using CalEEMod, Version 2020.4.0.

A Project is non-conforming with an air quality plan if it conflicts with or delays implementation of any applicable attainment or maintenance plan. The SJVAPCD has prepared plans to attain federal and state O3 and PM ambient air quality standards as required under the federal and California Clean Air Act, as detailed in Section 4.3.2, Relevant Plans, Policies, and Ordinances. The SJVAPCD has established thresholds of significance for criteria pollutant emissions, which are based on SJVAPCD New Source Review offset requirements for stationary sources. Stationary sources in the SJVAPCD jurisdiction are subject to some of the toughest regulatory requirements in the nation. Emissions reductions achieved through implementation of the SJVAPCD offset requirements are a major component of SJVAPCD's air quality plans. Thus, Projects with emissions below the thresholds of significance for criteria pollutants would not conflict or obstruct implementation of the SJVAPCD's air quality plan (SJVAPCD 2015a).

As discussed for Threshold b, below, the Project would not exceed any SJVAPCD thresholds during construction but would exceed the SJVAPCD's operational thresholds for ROG and PM10 without mitigation measures implemented. Therefore,

implementation of Mitigation Measures (MM)-AQ-1, MM-AQ-3 and MM-AQ-5 would reduce the Project's impacts to a less than significant level. Therefore, the Project would not conflict with or delay implementation of the SJVAPCD attainment plans and impacts would remain *less than significant with mitigation incorporated.*

b) Would the Project result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is non-attainment under an applicable federal or state ambient air quality standard?

Less Than Significant Impact with Mitigation Incorporation: Past, present, and future development Projects may contribute to adverse air quality impacts in the SJVAB on a cumulative basis. By its nature, air pollution is largely a cumulative impact. The nonattainment status of regional pollutants is a result of past and present development, and the SJVAPCD develops and implements plans for future attainment of ambient air quality standards. Based on these considerations, Project-level thresholds of significance for criteria pollutants are used in the determination of whether a Project's individual emissions would have a cumulatively considerable contribution on air quality. If a Project's emissions exceed the applied significance thresholds, it would have a cumulatively considerable contribution. Conversely, Projects that do not exceed the Project-specific thresholds are generally not considered to be cumulatively significant.

Construction and operation of the Project would result in emissions of criteria air pollutants that may result in a cumulatively considerable net increase in emissions of criteria air pollutants for which the SJVAB is designated as nonattainment under the NAAQS or CAAQS. As discussed in Table 3, the SJVAB has been designated as a nonattainment area for O3, PM10, and PM2.5 under national and/or California standards. The following discussion quantitatively evaluates potential short-term construction and long-term operational impacts that would result from implementation of the Project.

Approach and Methodology - CalEEMod

The California Emissions Estimator Model (CalEEMod) Version 2020.4.0 was utilized to estimate the Project's emissions for both construction and operation. Two different models were conducted: one for the residential, park, and school facility portion, and another for the commercial portion. This allowed for greater nuance and facilitated the implementation of different fleet mixes that would more accurately demonstrate trips associated with the operational phases of each type of development. For the residential portion, the San Joaquin Valley Air Pollution Control District approved alternative fleet mix was used (See Referenced Sources).

For the commercial portion, an alternative commercial fleet mix was estimated using data from the Riverpark Truck Trip Survey conducted in 2013. This survey measured the total number of truck trips for an operational shopping center in Fresno, California, and determined the proportions of Light-Heavy Duty (LHD), Medium Heavy-Duty (MHD), and Heavy Heavy-Duty (HHD) truck trips relative to the total trips (See Appendix A1 or Appendix C for Fleet Calculations). These proportions were then applied to the proposed retail commercial fleet mix for the proposed Project. The following paragraphs will describe the parameters and assumptions associated with construction and operational phases included in both models that were ran.

Construction Phase Modeling Parameters. Construction schedule assumptions, lot sizes, maximum floor area ratios (FAR), and parking space counts were based on the approved site plan for the Project and the standards set forth in the City of Hanford Municipal Code. Architectural coatings were set to follow Rule 4601, which limits the VOC emissions from architectural coatings. For construction this value was set to the established limit for the SJVAPCD, which is 50 g/L for each product.

Default values provided in CalEEMod were used where detailed Project information was not available. The construction phases for the residential, park and school portion included demolition, site preparation, grading, building construction, paving and architectural coating and total construction is expected to occur over the span of 22 years (2025-2047). The construction phases for the 6.7-acre commercial portion included site preparation, grading, building construction, paving and architectural coating and is expected to last approximately one year (2025-2026). It is assumed that construction of the residential (park & school included) and commercial portions would occur simultaneously.

Operational Phase Modeling Parameters. Vehicle trips were based on the Traffic Study prepared by LSA Associates, Inc. (Appendix E1). As mentioned previously in "Approach and Methodology" the fleet mix that was used for the residential portion was the "District Accepted Fleet Mix for Residential Projects", which was established by CARB (See Referenced Materials). For the commercial portion, data from the Riverpark Truck Trip Survey conducted in 2013 was utilized to estimate the fleet mix. This survey measured the total number of truck trips for an operational shopping center in Fresno, California, and determined the proportions of Light-Heavy Duty (LHD), Medium Heavy-Duty (MHD), and Heavy Heavy-Duty (HHD) truck trips relative to the total trips (See Appendix A1 or Appendix C).

For areawide operational emissions, adjustments were made to Consumer Products and Area Architectural Coatings. For Consumer Products that produce VOCs, the emission factors were adjusted to reflect the most recent VOC emissions inventory ("Updated Temporal Profiles for Consumer Products", 2021). Therefore, the Statewide

total emissions were updated to 225.6 tons ROG/day, degreaser emissions were 0.2 tons ROG/day and pesticides/fertilizers were 0.19 tons ROG/day. The same calculation utilized by CalEEMod defaults were used, but the updated amounts were altered in the calculation to reflect current levels. For Area Architectural Coatings, the emission factor in grams per liter was updated to reflect the current standards set by Rule 4601, which was adopted by the SJVAPCD. The levels of each architectural coating product was set to 50 g/L. ("Rule 4601: Architectural Coatings", 2020)

Construction Emissions

Implementation of the Project would generate air pollutant emissions from entrained dust, off-road equipment, vehicle emissions, architectural coatings, and asphalt pavement application. Entrained dust results from the exposure of earth surfaces to wind from the direct disturbance and movement of soil, resulting in PM10 and PM2.5 emissions. The Project would implement various dust control strategies (AQ-1) and would be required to comply with SJVAPCD Regulation VIII to control dust emissions generated during the grading activities. Proposed construction practices that would be employed to reduce fugitive dust emissions include watering of the active sites and unpaved roads two times per day depending on weather conditions. Internal combustion engines used by construction equipment, vendor trucks (i.e., delivery trucks), and worker vehicles would result in emissions of ROGs, NOx, CO, PM10, and PM2.5.

The application of architectural coatings, such as exterior application/interior paint and other finishes, and of asphalt pavement would also produce ROG emissions; however, the contractor is required to procure architectural coatings from a supplier in compliance with the requirements of SJVAPCD's Rule 4601 (Architectural Coatings) and limit the amount of ROG emissions from cutback asphalt in compliance with the requirements of SJVAPCD's Rule 4641 (Cutback, Slow Cure, and Emulsified Asphalt, Paving and Maintenance Operations). Pursuant to Regulation VIII, Rule 8021, Section 6.3, the Project would be required to develop, prepare, submit, obtain approval of, and implement a dust control plan, which would reduce fugitive dust impacts to less than significant for Project construction. Table 7 presents the maximum annual emissions estimated to be generated during construction of the Project. Criteria pollutant emissions for both construction and operational emissions are expressed in tons per year (tpy). Details of the emissions calculations are provided in Appendix A1.

Table 7. Projected Construction Emissions With & Without Mitigation

	CO (tpy)*	ROG (tpy)	SOx (tpy)**	NOx (tpy)	PM10 (tpy)	PM2.5 (tpy)
CalEEMod Mitigation Measures Included						
Maximum Annual Emissions Generated from Project Construction	**7.68**	**3.89**	**0.02**	**5.65**	**1.79**	**0.62**
SJVAPCD Thresholds of Significance	**100**	**10**	**27**	**10**	**15**	**15**
CalEEMod Mitigation Measures Not Included						
Maximum Annual Emissions Generated from Project Construction	**7.65**	**3.89**	**0.02**	**5.65**	**3.29**	**1.44**
SJVAPCD Thresholds of Significance	**100**	**10**	**27**	**10**	**15**	**15**

*Emissions expressed in tons per year (tpy)
**Threshold established by SJVAPCD for SOx, however, emissions are reported as SO2 by CalEEMod.

Source: SJVAPCD, CalEEMod (v. 2020.4.0) Analysis (Appendix A1)

As shown in Table 7, annual construction emissions would not exceed the SJVAPCD significance thresholds for construction. Thus, the impacts would be *less than significant.*

Operational Emissions

The Project would involve construction of low-, medium-, and high-density residences, a commercial center, a park space, and a school. Operation of the Project would generate ROG, NOx, CO, SOx, PM10, and PM2.5 emissions from mobile sources, including vehicle trips from passenger vehicles; area sources, including the use of consumer products, architectural coatings for repainting, and landscape maintenance equipment; and energy sources, including combustion of fuels used for space and water heating. As discussed previously, pollutant emissions associated with long-term operations were quantified using CalEEMod for area, energy, and mobile sources, and were primarily based on CalEEMod default values. Project-generated mobile source emissions were based on the trip rates provided in the Traffic Study prepared by LSA Associates, Inc. (Appendix E1). Table 8 presents the maximum annual area, energy, mobile, off-road, and stationary source emissions associated with operation (year 2047) of the Project. Details of the emissions calculations are provided in Appendix A1.

Table 8. Projected Operational Emissions With & Without Mitigation

	CO (tpy)	ROG (tpy)	SOx (tpy)*	NOx (tpy)	PM10 (tpy)	PM2.5 (tpy)
CalEEMod Mitigation Measures Included						
Maximum Annual Emissions Generated from Project Operation	**30.29**	**9.94**	**0.046**	**4.47**	**5.04**	**1.46**
SJVAPCD Thresholds of Significance	**100**	**10**	**27**	**10**	**15**	**15**
CalEEMod Mitigation Measures Not Included						
Maximum Annual Emissions Generated from Project Operation	**48.8**	**10.99**	**0.12**	**7.51**	**14.93**	**4.15**
SJVAPCD Thresholds of Significance	**100**	**10**	**27**	**10**	**15**	**15**
*Threshold established by SJVAPCD for SOx, however, emissions are reported as SO2 by CalEEMod.						

Source: SJVAPCD, CalEEMod (v. 2020.4.0) Analysis (Appendix A1)

As shown in Table 8, the combined maximum annual area, energy, and mobile source emissions would not exceed the SJVAPCD's operational thresholds for all criteria pollutants when mitigation is incorporated. However, the Project would exceed the SJVAPCD's operational threshold for ROG without mitigation implemented, mainly due to the release of ROGs from architectural coatings and vehicle emissions. MM-AQ-1, MM-AQ-3 and MM-AQ-5 would be implemented to reduce Project-generated operational criterial air pollutant emissions to levels that do not exceed the SJVAPCD's operational threshold for ROGs. The impact is *less than significant with mitigation incorporated.*

c) Would the Project expose sensitive receptors to substantial pollutant concentrations?

Potentially Significant: A Health Risk Assessment was prepared by Core Environmental Consulting in July 2024, which was used as the basis for the assessment of toxic air contaminants (TAC) and health impacts as a result of the proposed Project. The full HRA can be found in Appendix E of the Focused EIR prepared for the Project.

Sensitive receptors are defined as areas where young children, chronically ill individuals, the elderly, or people who are more sensitive than the general population reside, such as schools, hospitals, nursing homes, and daycare centers. Hanford Christian School is the nearest sensitive receptor and is located near the northern boundary of the Project site. The single-family homes located to the south and east may also be considered sensitive receptors that may be affected by pollutants produced during the Project's construction and operation. Based on a preliminary screening by Core Environmental Consulting, the Project would produce diesel particulate matter (DPM) emissions during the construction phase, which has been

classified as a carcinogen. Additionally, the Project's operational phase includes a gas dispensing facility (GDF), which would release toxic air contaminants. In order to assess relevant TAC's and impacts to sensitive receptors, an HRA has been prepared for inclusion in the EIR analysis. The release of DPM and other toxic air contaminants may have a *potentially significant* impact on sensitive receptors near the Project site and will be further discussed in the forthcoming EIR

d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

Potentially Significant: Some typical construction-related odors would be generated during Project construction and operation of the proposed gas station would produce emissions that would lead to odors. The Project is adjacent to sensitive receptors to the north, south and east, which may be affected by such odors. Although construction would be temporary, the length of construction and close proximity to sensitive receptors may lead to potentially significant impacts related to odors. Additionally, operation of a gas station would produce odors that may have an adverse impact on a substantial number of people throughout its Project life. The proposed Project would not include any potential odor sources identified in Table 6 of the SJVAPCD's Guidance for Assessing and Mitigating Air Quality Impacts (GAMAQI).

To address emissions leading to odors and other health impacts on sensitive receptors, a Health Risk Assessment (HRA) has been prepared and is included in Appendix D of the Focused EIR. The Focused EIR prepared for the Project will include a detailed analysis of TAC's, odors, and impacts on sensitive receptors.

The Project may create objectionable odors affecting a substantial number of people during construction and operation; therefore, the impacts would be *potentially significant.*

Mitigation Measures:

To reduce potentially significant impacts under Thresholds a, b, and c, MM-AQ-1 through MM-AQ-2 are identified to reduce Project-generated construction air pollutant emissions. MM-AQ-3 through MM-AQ-5 have been identified to reduce emissions associated with operation of the proposed Project.

Implementation of MM-AQ-1 and MM-AQ-2 are quantified in Threshold b and c for the construction Health Risk Assessment, while implementation of MM-AQ-3 and MM-AQ-5 were not quantified.

MM-AQ-1 **Zero VOC Architectural Coating Requirement and VOC Educational Program.** Prior to the occupancy of any on-site development, the Project Applicant or its designee shall provide evidence to the City of Hanford that the applicant/phase developer has implemented the use of Zero VOC Architectural Coating (Paint) products for use on all interior and exterior surfaces excluding parking lots. The products used must contain 5 grams/liter or less for VOC content to remain in compliance with this mitigation measure. For parking lot paint, products with a VOC content less than or equal to 50 grams/liter may be used.

Additionally, the Project Application or its designee must provide evidence to the City of Hanford that the applicant/phase developer has developed a Green Cleaning Product and Architectural Coating (Paint) education program to be made available at rental offices, leasing spaces, and/or on websites.

MM-AQ-2 **Tier 4 Final Equipment.** For heavy-duty diesel equipment with engines of 75 horsepower or greater, use equipment equipped with Tier 4 Final engines. Prior to the commencement of construction activities for the Project, the Project Applicant shall require its construction contractor to demonstrate that all 75-horsepower or greater diesel-powered equipment is powered with California Air Resources Board (CARB)-certified Tier 4 Final engines.

An exemption from this requirement may be granted if (a) the Project Applicant documents equipment with Tier 4 Final engines are not reasonably available, and (b) the required corresponding reductions in criteria air pollutant emissions can be achieved from other combinations of construction equipment. Before an exemption may be granted, the Project Applicant's construction contractor shall: (1) demonstrate that at least two construction fleet owners/operators in Tulare County were contacted and that those owners/operators confirmed Tier 4 Final equipment could not be located within Tulare County during the desired construction schedule; and (2) the proposed replacement equipment has been evaluated using California Emissions Estimator Model (CalEEMod) or other industry standard emission estimation method and documentation provided to the City to confirm that Project-generated emissions do not exceed applicable San Joaquin Valley Air Pollution Control District (SJVAPCD) carcinogenic (cancer) risk threshold.

MM-AQ-3 **Multi-Family Residential Parking.** Applications for building permits submitted to City by the Project proponent/developer shall include plans and specifications demonstrating that the following features have been incorporated into the building designs or specifications for multifamily residential buildings:

- Visitor parking shall include preferentially located parking spaces for electric vehicles.
- Bicycle parking shall be provided as specified in Section A4.106.9, Residential Voluntary Measures, of the California Green Building Standards (CALGreen) Code.

MM-AQ-4 **Multi-Family Residential and Park/Trail Parking.** Applications for a tentative tract map, parcel map (excluding financing map), or commercial site plan review, that include parking structures, parking lots with 20 or more parking spaces that serve uses other than residential or nonresidential buildings (e.g., trailhead, park), and parking structures and parking lots that serve multifamily residential buildings with 15 or more multifamily units, shall include a minimum of 5% of preferentially located parking spaces shall be reserved for electric and ride-share vehicles.

MM-AQ-5 **Preferential Parking and Electric Vehicle Charging for Nonresidential Buildings.** Applications for commercial site plan review and building permits for nonresidential buildings shall include preferential parking for electric cars, low emission vehicles, and carpools/vanpools to encourage use of such vehicles. Proof of compliance shall be provided to the City prior to the issuance of occupancy permits. Preferential parking for such vehicles shall include two spaces for nonresidential lots containing 10 to 25 spaces; four spaces for 26 to 50 space lots; six spaces for 51 to 75 space lots; nine spaces for 76 to 100 space lots; eleven spaces for 101 to 150 space lots; 18 spaces for 151 to 200 space lots; and at least 10% of total spaces for lots with more than 200 spaces.

IV. BIOLOGICAL RESOURCES

Would the Project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish & Game or U.S. fish and Wildlife Service?	☐	☑	☐	☐
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?	☐	☐	☐	☑
c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through director removal, filling, hydrological interruption, or other means?	☐	☑	☐	☐
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☐	☑	☐
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☑	☐	☐
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☑	☐

Discussion for this section originates from the Biological Assessment Report that was prepared by Argonaut Ecological Consulting, Inc. in February 2022 to identify the potential biological resources on the Project site. The purpose of the Report was to assess the potential for significant impacts to biological resources pursuant to the California Environmental Quality Act (CEQA), the Federal Clean Water Act (CWA), the state and federal endangered species acts (FESA and CESA respectively), the California Fish and Game Code, and the California Water Code.

The research included a database search of the California Natural Diversity Database/RareFind Tool (CNDDB), the Natural Resources Conservation Service Web Soil Survey Mapping tool, the U.S. Fish and Wildlife Service National Wetland Inventory Online Map, and the U.S. Geological Survey, and the National Geologic Database (Topo View). Additionally, a field survey was conducted on January 15, 2022, to assess soils, vegetation, drainage patterns, potential wildlife, and the presence of suitable habitat for species of concern.

The full Biological Resources Assessment can be found in Appendix B.

Environmental Setting

The Project site is in the northern portion of the City of Hanford within the lower San Joaquin Valley, in the Central Valley of California. The Central Valley is bordered by the Sierra Nevada Mountain Ranges to the east and the Coast Ranges to the west. Like most of California, Hanford is considered a Mediterranean climate. Warm, dry summers are followed by cool, moist winters. Summer temperatures often reach above 90 degrees Fahrenheit, and the humidity is relatively low. Winter temperatures are often below 60 degrees Fahrenheit during the day and rarely exceed 70 degrees. On average, the Central Valley receives approximately 10 inches of precipitation in the form of rainfall yearly, most of which occurs between October and March.

The proposed Project site is in a residential and agricultural interface environment. The proposed Project site is bounded mainly by agricultural fields to the north and west, and mainly single-family homes to the east and south. A canal runs through the northern portion of the site. The canal is surrounded by agricultural fields. No other natural water features occur in the vicinity of the proposed Project site. The topography of the area is flat. The soil on the proposed Project site is highly compact.

Regulatory Setting

Federal Endangered Species Act (FESA): defines an *endangered species* as "any species or subspecies that is in danger of extinction throughout all or a significant portion of its range." A threatened species is defined as "any species or subspecies that is likely to become an

endangered species within the foreseeable future throughout all or a significant portion of its range."

The Federal Migratory Bird Treaty Act (FMBTA: 16 USC 703-712): FMBTA prohibits killing, possessing, or trading in any bird species covered in one of four international conventions to which the United States is a party, except in accordance with regulations prescribed by the Secretary of the Interior. The name of the act is misleading, as it covers almost all birds native to the United States, even those that are non-migratory. The FMBTA encompasses whole birds, parts of birds, and bird nests and eggs. Although the USFWS and its parent administration, the U.S. Department of the Interior, have traditionally interpreted the FMBTA as prohibiting incidental as well as intentional "take" of birds, a January 2018 legal opinion issued by the Department of the Interior now states that incidental take of migratory birds while engaging in otherwise lawful activities is permissible under the FMBTA. However, the California Fish and Game Code makes it unlawful to take or possess any non-game bird covered by the FMBTA (Section 3513), as well as any other native non-game bird (Section 3800), even if incidental to lawful activities.

Birds of Prey (CA Fish and Game Code Section 3503.5): Birds of prey are protected in California under provisions of the Fish and Game Code (Section 3503.5), which states that it is unlawful to take, possess, or destroy any birds in the order Falconiformes (hawks and eagles) or Strigiformes (owls), as well as their nests and eggs. The bald eagle and golden eagle are afforded additional protection under the federal Bald and Golden Eagle Protection Act (16 USC 668), which makes it unlawful to kill birds or their eggs.

Clean Water Act: Section 404 of the Clean Water Act of (1972) is to maintain, restore, and enhance the physical, chemical, and biological integrity of the nation's waters. Under Section 404 of the Clean Water Act, the US Army Corps of Engineers (USACE) regulates discharges of dredged and fill materials into "waters of the United States" (jurisdictional waters). Waters of the US including navigable waters of the United States, interstate waters, tidally influenced waters, and all other waters where the use, degradation, or destruction of the waters could affect interstate or foreign commerce, tributaries to any of these waters, and wetlands that meet any of these criteria or that are adjacent to any of these waters or their tributaries.

California Endangered Species Act (CESA): prohibits the take of any state-listed threatened and endangered species. CESA defines *take* as "any action or attempt to hunt, pursue, catch, capture, or kill any listed species." If the proposed Project results in a take of a listed species, a permit according to Section 2080 of CESA is required from the CDFG.

City of Hanford Heritage Trees Ordinance: Section 12.12.310 of Hanford's municipal code outlines regulations related to "heritage trees", such as native Oak Trees. The ordinance seeks to maintain and preserve all heritage trees. Before any Project approval, the property owner or applicant must disclose whether any heritage trees exist on the property and describe the

plans associated with the application, the location of each such tree, its species, trunk size, and drip line area. If construction may affect a heritage tree, a tree protection plan shall be prepared by a certified arborist.

City of Hanford General Plan: The City of Hanford General Plan contains the following policies related to the preservation of biological resources that may be considered relevant to the proposed Project's environmental review:

Goal O4: Protection of natural habitat and other biological resources.

- *Policy O34*: *Recreation and Sensitive Habitat.* Avoid the potential negative impacts of increased human activity on sensitive habitat areas when establishing new recreational facilities or programs.
- *Policy O35*: *Impacts from Development*. Ensure that potential impacts to biological resources and sensitive habitat are carefully evaluated when considering development Projects.
- *Policy O37*: *Mature Trees.* Promote the preservation of existing mature trees and encourage the planting of appropriate shade trees in new developments.
- *Policy O38*: *Native Tree Species and Drought Tolerant Vegetation.* Encourage the planting of native tree species and drought-tolerant vegetation.

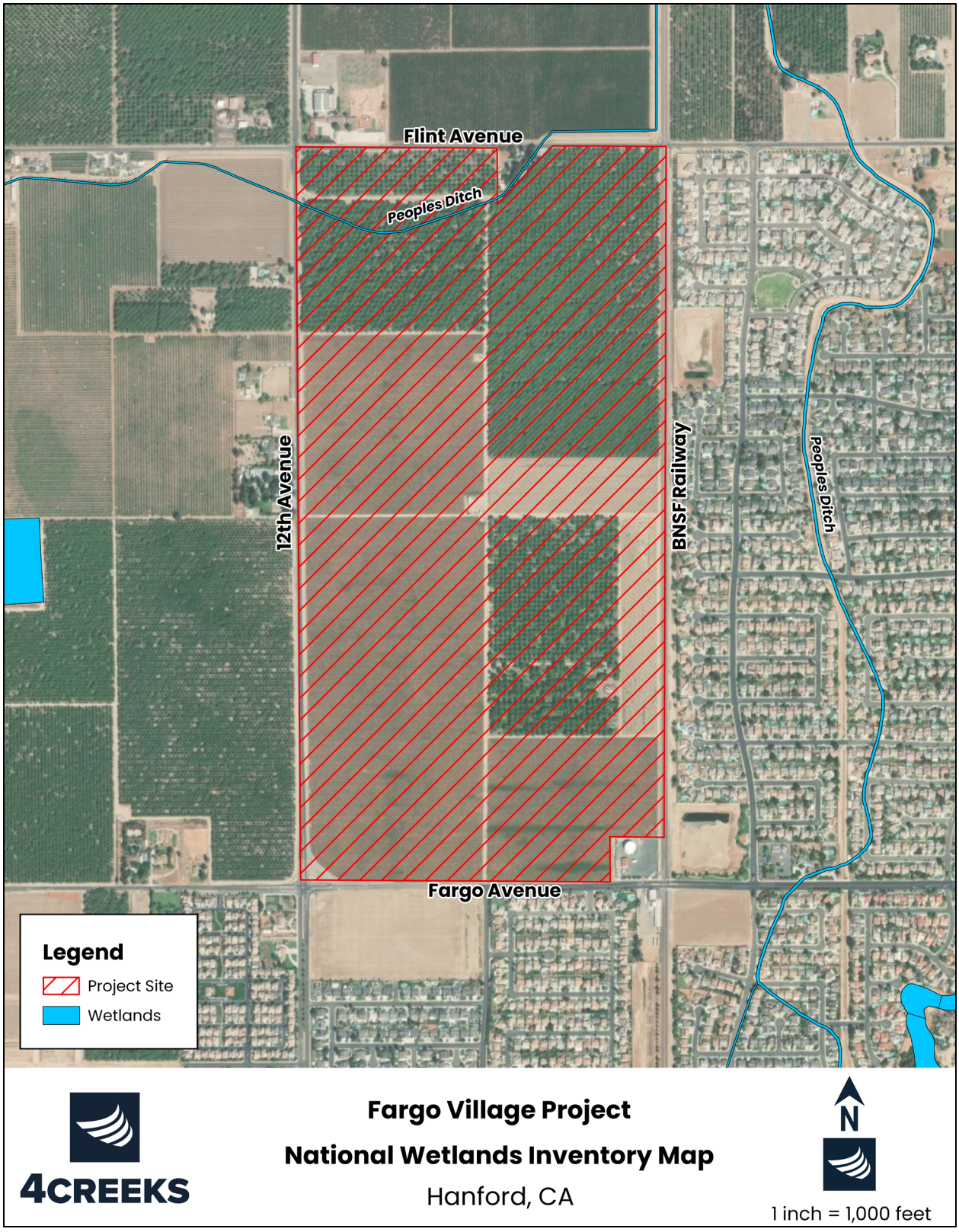


Figure 7. National Wetlands Inventory Map

Discussion

a) Would the Project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish & Game or U.S. fish and Wildlife Service?

Less Than Significant Impact with Mitigation: Argonaut Ecological Consulting conducted a search of the California Natural Diversity Database/RareFind (CNDDB) to determine which special status species could be present within the Study Area. The original CNDDB query took place on January 1st, 2022, and included only the Hanford quadrangle. A total of 3 species were included (one record for the hoary bat, four records for the San Joaquin Kit Fox, and one record for the California alkali grass). This encompassed roughly a 6.7-mile search radius from the Study Area. Another CNDDB query (4 quads) was performed in 2022, which resulting in a total of 13 species records. Of those 13 species, 5 are strictly aquatic species and eight of those species had the potential to occur and are included in Table X.

The Study Area was defined as the Project site and extends to a four quad search which includes the Hanford quadrangle and its surrounding areas. The record search identified the following five special status species with known occurrences within 4.5 miles of the Project site (see Table 9). The other three species (San Joaquin tiger beetle, recurved larkspur, blunt-nosed leopard lizard) from the record search were not included in the analysis due to the lack of suitable habitat near the site. The San Joaquin tiger beetle has never been found in agricultural habitat (there are only 3 known extant populations); recurved larkspur is a plant that is only found on alkaline soils, often in valley saltbush or valley chenopod scrub, and the only known record in within Kings County (from a 1911 record). Blunt-nosed leopard lizard is found in sparsely vegetated alkali and desert scrub habitats with shrubs and a burrowing mammal population. See Table 9 for a special status species summary for those species that may potentially occur on the Project site.

Table 9. Special Status Species Summary

Special Status Species Summary				
Common Name	*Scientific Name*	*Status*	*Effects*	*Occurrence in the Study Area*
Birds				
Swainson's hawk	*Buteo swainsoni*	CT	ME	**Absent.** Nests in mature trees. No unoccupied nests observed. Unlikely to nest in orchards.
Mammals				
Hoary bat	*Lasiurus cinereus*	--	NE	**Absent:** Occurs in open areas or habitat mosaics. Roosts in dense foliage of medium to large trees.

				Feeds primarily on moths. Habitats: broadleaf upland forest, Cismontane woodland, lower montane coniferous forest, north coast forest. Suitable habitat not present within Study Area
San Joaquin kit fox	*Vulpes macrotis mutica*	--	NE	**Absent:** Hunts and dens within annual grassland and grassland open stages with scattered shrubby vegetation. No suitable habitat present within the Study Area. No dens found within the Study Area and no evidence of potential occupation.
Tipton kangaroo rat	*Depodomys nitratoides nitratoides*	FE/SE	NE	**Absent:** Occurs in saltbrush scrub and sink scrub communities in the Tulare Lake Basin. Study Area within northern range for the species within an area of low-quality habitat. Based on CDFW habitat suitability model, agricultural land rarely supports this species because of recurring disturbance of ground burrows.
Plants				
California alkali grass	*Puccinellia simplex*	1B.2	NE	**Absent.** Chenopod scrub, Valley, and foothill grassland. No suitable habitat within Study Area.

1. Status= Listing of special status species, unless otherwise indicated

CE: California listed as Endangered
CT: California listed as Threatened
FE: Federally listed as Endangered
FT: Federally listed as Threatened
1B.1, 1B.2, 2B.2, 2B.3: California Native Plant Society Ranking

2. Effects = Effect determination

NE: No Effect
ME: May Effect, not likely to adversely effect

3. Definition of Occurrence Indicators

a. **Present/Potentially:** Species recorded in the area and some habitat elements present within Study Area similar to known occurrences.
b. **Absent/Likely Absent:** Species not recorded in Study Area and/or suitable habitat or critical habitat components not present.

The on-site field investigation characterized the habitat type, identified potential unique habitats (e.g. aquatic habitat, grasslands), characterized adjacent land uses, and identified the likelihood of the habitat to support species of special concern. The investigation also identified and photographed the portion of the People's ditch that runs through the northern portion of the Project site (See Appendix B). Although no unique habitats, wetlands, or suitable habitat for special status species were identified during the field survey, special

status species may use the Project site as foraging habitat. Both common and special status species can use agricultural habitats as foraging habitats, especially birds and raptors. The site was in orchard production, and the remaining land in vineyard production, so the site is intensively managed. This reduces the likelihood of suitable nesting and foraging habitat, but it still may occur. As of 2024, more of the site has been cleared of orchards and vineyards, so the likelihood of nesting and foraging habitat is even lower. At the time of the survey, no evidence of raptor nesting was observed. However, the field work was performed outside of the nesting season, so no nesting was observed for migratory birds or raptors, and no unoccupied raptor nests were observed.

Swainson's hawk: The Swainson's hawk nests in mature trees and can be found in orchards, but that is generally unlikely due to a high level of human disturbance in such environments. However, based on the intensity of agricultural uses on the proposed Project site, the likelihood of Swainson's hawk nests are low. Additionally, no unoccupied or occupied nests were found at the time of the field survey, according to the Biological Assessment prepared Argonaut Ecological Consulting, Inc. However, since mature trees are proposed to be removed prior to construction, Mitigation Measure BIO-1 is proposed to render impacts to the Swainson's hawk *less than significant with mitigation incorporated.*

Hoary bat: No observations of the hoary bat or its habitat were recorded during the field survey performed in January 2022. The hoary bat's habitat is broadleaf upland forest, cismontane woodland, lower montane coniferous forest, and north coast forest. None of these habitat types are present on or near the Project site (within a 4.5-mile radius), so the presence of this species is highly unlikely. No mitigation measures are proposed for this special status species.

San Joaquin Kit Fox: The San Joaquin Kit Fox and its habitat was not found on the Project site at the time of the field survey in January 2022. No dens or evidence of potential occupation were found. Typical habitats for the San Joaquin kit fox are annual grassland, scrubland, wetland communities, and shrubby desert habitat. None of these habitat types are present on the Project site. The high level of disturbance due to decades of intensive agricultural land use, recent orchard clearings, and proximity to urban areas make occurrences of this species highly unlikely. No mitigation measures are proposed for this species.

Tipton Kangaroo Rat: The Tipton kangaroo rat is found in saltbush scrub and sink scrub within the Tulare Lake Basin. Agricultural land rarely supports this species because of the recurring disturbance of ground burrows. The site does not support this habitat type and has undergone disturbance due to the recent clearing of orchards. Therefore, the Project site is a low-quality habitat for the Tipton kangaroo rat and its occurrence is highly unlikely. No mitigation measures are proposed for this species.

California alkali grass: The California alkali grass is found in Chenopod scrub, Valley, and foothill grassland. There is no suitable habitat within the Project area due to decades of heavy agricultural disturbance and occurrence is highly unlikely. No mitigation measures are proposed.

Nesting Birds & Raptors (MBTA): Nesting birds and raptors may utilize the orchard trees present on the Project site during the nesting season. This is unlikely due to the high level of disturbance occurring on the site during agricultural operations, but the presence of such species is still possible. Construction activities such as land clearing may destroy nests if construction occurs during the nesting season. Trees on the site that are not planned to be removed would still be subject to protections, as noise impacts may also disrupt nesting activities of birds and raptors protected under the MBTA. The protections proposed in Mitigation Measure BIO-2 will ensure that impacts to birds and raptors protected by the MBTA remain *less than significant with mitigation incorporated.*

Due to the level of agricultural activity, urban development of the surrounding area, lack of suitable habitat, and the distance of other known occurrences from the site, the occurrence of these special-status species within the vicinity of the proposed Project site are very unlikely, and the proposed Project would be unlikely to adversely affect populations of this species. However, there is a possibility that special status species may be present within the Project site, particularly nests belonging to the Swainson's hawk as well as birds and raptors protected under the Migratory Bird Treaty Act. Therefore, mitigations BIO-1 and BIO-2 would reduce potential impacts to *less than significant with mitigation incorporated.*

b) Would the Project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?

No Impact: There are no CNDDB-designated "natural communities of special concern" recorded within the proposed Project area or surrounding lands. The Hanford General Plan identifies Riparian Woodlands and Valley Oak Woodlands as communities to protect. The nearest community is approximately 4.6 miles south. The proposed Project site consists of agricultural uses and vacant land. There would be *no impact.*

c) Would the Project have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through director removal, filling, hydrological interruption, or other means?

Less than Significant Impact: According to the National Wetland Inventory Map (See Figure 7), there is one surface water/wetland within the Study Area. The mapped surface water/wetland is classified as "RSUBFx", which is known as "Riverine, unknown perennial, unconsolidated bottom, semi-permanently flooded, excavated". The National Wetlands

Inventory delineates wetlands based on high altitude imagery, and a margin of error is inherent in the use of imagery (USFWS n.d.). Therefore, detailed on-the-ground inspection of a potential wetland site is necessary to confirm the presence of such resources. A reconnaissance level inspection was provided by Argonaut Ecological Consulting, Inc. during California's wet season (January 2022).

According to the Biological Assessment prepared by Argonaut Ecological Consulting, Inc., this drainage historically flowed from a lateral ditch from the Peoples Canal (located northeast of the Study Area), southwest toward Grangeville. The surface water feature is shown in the NWI map along the historic drainage alignment. However, sometime in the early 1990s, a segment of the ditch was filled in and a new ditch alignment was excavated immediately north. The ditch is owned/operated by the People Canal Company for irrigation water delivery. The ditch is roughly 16 feet in width and was dry at the time of the field review. The bottom of the ditch showed recent growth of grass/forbs, likely as a result of recent rainfall, but does not support any wetland habitat (lacked wetland habitat). The ditch appears periodically maintained (scrapped). The walls of the ditch are vegetated with dry grass. As indicated previously, the ditch features lie within a non-historic alignment. It appears the historic alignment was removed/filled in sometime around 1990. It is unknown whether the removal/filling of the previous alignment required any agency permits/authorizations. Any proposed modifications to the existing alignment would likely not require any permits/authorization because the new ditch was excavated in the upland habitat and is operated and maintained as an irrigation ditch.

Based on field observations indicating a lack of wetland vegetation and habitat and the high degree of modification of the ditch, the site is not classified as a wetland. Furthermore, the site would not be considered Waters of the United States since it has been excavated in upland habitat. Only a small portion of the ditch occurs on the Project site, and it is planned to be diverted underground. Since there are no state/federal wetlands present on the site, the impact is *less than significant.*

d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

Less than Significant Impact: The proposed Project area is currently under agricultural use and contains large vacant areas, and is largely surrounded by cultivated agricultural lands, residential development, and paved roads. Therefore, the proposed Project area does not contain features that would be likely to function as a wildlife movement corridor. Additionally, the Project site is not within any Essential Connectivity Areas or Natural Landscape Blocks, according to the data collected by the California Department of Fish and Wildlife (CDFW 2020). The nearest Essential Connectivity Area (ECA) is approximately 0.38 miles south of the southeast corner of the Project site. This ECA is roughly 42.01 acres and is

located at Hidden Valley Park, which is centrally located within a single-family residential block. Although there is an ECA relatively close to the Project site, the Project will not interfere with the maintenance or functioning of the site. The 42-acre ECA is located in a community park surrounded by single-family homes, indicating that city parks may provide habitat and additional foraging areas for some species. Therefore, the 27.59-acre park that is planned for the proposed Project may serve the same purpose and may provide some habitat or foraging grounds for some common species known to occur in the area. The Project will not interfere with the movement of species, wildlife corridors or native wildlife nurseries, as the Project site is not within an ECA or Natural Landscape Block and does not propose any changes to any ECA's or Natural Landscape blocks. There is a *less than significant impact.*

e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

Less than Significant Impact: The proposed Project would comply with the goals and policies of the Hanford General Plan. There are no heritage trees on the site of Project construction. All trees on the site are part of the agricultural orchard operation, or are excluded from Project construction altogether, as they are located on the residential properties that are planned to be excluded from Project construction. There are no known heritage trees on the Project site. There would be *a less than significant impact.*

f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

No Impact: There are no known Natural Community Conservation Plans, but there is the PG&E San Joaquin Valley Operation and Maintenance Habitat Conservation Plan that applies to the region in which the proposed Project would take place. The PG&E San Joaquin Valley Operation and Maintenance Habitat Conservation Plan was developed to enable PG&E to continue to conduct current and future operation and maintenance activities in the San Joaquin Valley while minimizing, avoiding, and compensating for possible direct, indirect, and cumulative adverse effects on threatened and endangered species that could result from such management activities. This HCP is unique because, unlike standard development-oriented HCPs, which address permanent land conversion and loss of habitat, it primarily addresses small-scale temporary effects dispersed over a large geographic area. Buildout of the Study Area will not conflict with PG&E's HCP due to the lack of suitable habitat for special status species within the Study Area. There is *no impact.*

Mitigation Measures for Biological Resources:

Mitigation Measure BIO-1: Avoid and Minimize Impacts to Swainson's Hawk
If construction, grading, or Project-related improvements are to commence between February 1st and August 31st, a focused survey for Swainson's hawk nests on the site and within 1/2 mile of the construction area shall be conducted by a qualified biologist no later than 30 days prior to the start of construction work (including clearing and grubbing). If active nests are found, a 0.5-mile no disturbance buffer will be established, and the CDFW will be contacted to determine other protective measures that should be taken. If no active nests are found during the focused survey, no further mitigation will be required.

Mitigation Measure BIO-1a: Nesting Bird and Raptor Survey
If Project-related activities are scheduled between February 1st to September 1st (the typical nesting/breeding season), a focused survey for nests shall be conducted by a qualified biologist within fourteen (14) calendar days prior to the beginning of Project-related activities. The qualified biologist shall survey: a minimum 0.5-mile radius of the construction area for non-listed raptors and a 1,000-foot radius for birds protected by the MBTA. If no active nests are found, Project activities may proceed as scheduled.

Mitigation Measure BIO-1b: Active Nests
If an active nest is located, then it should be avoided, and a minimum no-disturbance or destruction buffer of 500-feet shall be established for non-listed raptors and a minimum of 250-feet for birds protected by the MBTA unless a qualified biologist determines that smaller buffers would be sufficient to avoid impacts to nesting birds and raptors. The extent of these buffers will depend on the species present, the level of noise or construction disturbance, line of sight between the nest and the disturbance, ambient levels of noise and other disturbances, and other topographical or artificial barriers. The buffer shall be kept in place until after the qualified biologist has determined that the young have fledged and are no longer reliant upon the nest or parental care for survival.

V. CULTURAL RESOURCES

Would the Project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
a) Cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5?	☐	☑	☐	☐
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?	☐	☑	☐	☐
c) Disturb any human remains, including those interred outside of formal cemeteries?	☐	☑	☐	☐

Peak and Associates performed a Cultural Resources Assessment for the Project in the City of Hanford, Tulare County, California (Appendix C), which is the basis for this analysis. The Project is subject to the California Environmental Quality Act (CEQA).

Environmental Setting

The Southern Valley Yokuts were members of the Penutian language family which held all of the Central Valley, San Francisco Bay Area, and the Pacific Coast from Marin County to near Point Sur. The Yokuts differed from other ethnographic groups in California as they had true tribal divisions with group names. The Project area was occupied by the Tachi. Trade was well developed, with mutually beneficial interchange of needed or desired goods. Obsidian, rare in the San Joaquin Valley, was obtained by trade with Paiute and Shoshoni groups on the eastern side of the Sierra Nevada, where numerous sources of this material are located, and to some extent from the Napa Valley to the north. Shell beads, obtained by the Yokuts from coastal people, and acorns, rare in the Great Basin, were among many items exported to the east by Yokuts traders. Settlements were oriented along the waterways, with their village sites normally placed adjacent to these features for their nearby water and food resources. House structures varied in size and shape. The Yokuts experienced severe depopulation after contact with the Spanish and subsequent explorers. The most devastating impacts of the Spanish colonization effort were not the result of military conflicts but came from Old World diseases newly introduced to the native people.

An increasing number of Euro-Americans entered the region after 1824, accelerating cultural change and the loss of cultural integrity by the native peoples. Although cultural retention was

apparent until the early 1900s, there was a gradual weakening of Appendix to the old lifeways and greater adoption of white styles. Although the immediate effects of the Gold Rush overleapt the Southern Central Valley, the decline of mining was accompanied by a shift of white attention to the rich agricultural promise of the valley. The remaining Valley Yokuts were pressured from the lands they held, usually those with the highest farming potential, and driven into the mountains. White newcomers quickly recognized the agricultural promise of the valley and began an intensive alteration of the area that made it increasingly suitable for cultivation. Farmers and ranchers drained the marshes and lakes and established irrigation systems. Today, the valley floor, for the most part, bears little resemblance to its pre-contact condition. The oak groves are gone, and the lakes are dry. The vast marshes, once the refuge for enormous flocks of waterfowl, no longer exist. The grazing lands of the elk and antelope have become cultivated fields, producing a wide variety of crops. The native faunal community, except burrowing mammals, has been replaced by domestic livestock.

The early interior route was used by the Spanish to travel from El Pueblo de Los Angeles to the San Francisco Bay Area, following the routes of earlier antelope and Indian trails. The roadway, known to the early Hispanic inhabitants of the San Joaquin Valley as El Camino Viejo á Los Angeles, was traversed by oxcart, with individuals stopping their teams at the various watering holes along the west side. Later, portions of the trail were turned into wagon roads. The extension of a branch line of the Southern Pacific railroad in 1877 brought about the formation of the town of Hanford, named for a Southern Pacific official, and incorporated in 1891. In 1877, Hanford was established as a post office in Tulare County. Kings County was organized from the lands of Tulare County in 1893, with Hanford becoming the County seat. A second railroad was built through Hanford in 1897. This line serves as the main north-south line of the BNSF Railway through the San Joaquin Valley. In 1880, a dispute over land titles between settlers and the Southern Pacific Railroad resulted in a bloody gun battle on a farm about six miles northwest of Hanford. This event became famous as the Mussel Slough Tragedy. The city continues to serve as the commercial and cultural center for the widespread agricultural region.

On January 24th, 2022, a records search was conducted from the SSJVIC of the CHRIS at California State University in Bakersfield, California, provided to 4Creeks. The records search included the Project area and surrounding land within a 0.5-mile radius of the Project. Sources consulted included archaeological site and survey base maps, historical USGS topographic maps, reports of previous investigations, cultural resource records (DPR forms) as well as listings of the Historic Properties Directory of the Office of Historic Preservation, General Land Office Maps, Archaeological Determinations of Eligibility, and the California Inventory of Historic Resources. According to the SSJVIC records search, there have been no previous cultural resource investigations within the Project area. There has only been one cultural resource study conducted within a 0.5-mile radius of the Project. The search resulted in the following potential cultural resources:

- A segment of the People's Ditch lies within the northern portion of the site. The ditch was designed in 1875 to bring water from the Kings River to the Hanford area. Many changes have occurred to the ditch since the 1926 mapping by the USGS of the region, including the straightening of segments allowing suburban development. In 2019, one recorder of a segment of the Ditch went further and looked at the entire system. An archeologist with the firm of ASM Affiliates evaluated the entire resource as not significant for the recordation of a segment of the Ditch, based on a lack of many aspects of integrity.
- The USGS topographic map shows a building in the southern portion of the Project. The building is no longer present.
- To the east, paralleling the eastern Project boundary is the line of the Atchinson, Topeka, and Santa Fe Railroad.

In addition, a Field Assessment was conducted in January 2022 for a complete inspection of the site. The ground visibility is very good in most areas due to vegetation removal and active farming. The survey strategy included parallel transects with no more than ten meters spacing in historically lower elevation areas and five-meter intervals where historical maps show increased elevation. One meter, overlapping transects were used near the southern boundary where an older map shows a building. Close inspection of ground occurred where farming activities excavated or cut into the soil. No prehistoric resources were observed. The only historical resource observed is the section of the Peoples Ditch irrigation ditch located in the northernmost part of the Project area. No materials from the previous building in the southern part of the parcel were observed.

Regulatory Setting

State historic preservation regulations affecting this Project include the statutes and guidelines contained in the California Environmental Quality Act (CEQA; Public Resources Code sections 21083.2 and 21084.1 and sections 15064.5 and 15126.4 (b) of the CEQA Guidelines). CEQA Section 15064.5 requires that lead agencies determine whether Projects may have a significant effect on archaeological and historical resources. Public Resources Code Section 21098.1 cites further: A Project that may cause a substantial adverse change in the significance of a historical resource is a Project that may have a significant effect on the environment.

A "historical resource" includes, but is not limited to, any object, building, structure, site, area, place, record, or manuscript that is historically or archaeologically significant (Public Resources Code section 5020.1).

Advice on procedures to identify such resources, evaluate their importance, and estimate potential effects is given in several agency publications such as the series produced by the Governor's Office of Planning and Research (OPR), CEQA and Archaeological Resources, 1994. The technical advice series produced by OPR strongly recommends that Native American concerns and the concerns of other interested persons and corporate entities, including, but

not limited to, museums, historical commissions, associations, and societies be solicited as part of the process of cultural resources inventory. In addition, California law protects Native American burials, skeletal remains, and associated grave goods regardless of the antiquity and provides for the sensitive treatment and disposition of those remains (California Health and Safety Code Section 7050.5, California Public Resources Codes Sections 5097.94 et al).

National Historic Preservation Act

The National Historic Preservation Act was adopted in 1966 to preserve historic and archeological sites in the United States. The Act created the National Register of Historic Places, the list of National Historic Landmarks, and the State Historic Preservation offices.

California Historic Register

The State Historic Preservation Office (SHPO) maintains the California Register of Historical Resources (CRHR). Properties listed, or formally designated as eligible for listing, on the National Register of Historic Places are automatically listed on the CRHR, as are State Landmarks and Points of Interest. The CRHR also includes properties designated under local ordinances or identified through local historical resource surveys.

For the purposes of CEQA, a historical resource is a resource listed in, or determined eligible for listing in the California Register of Historical Resources. When a Project impacts a site, it needs to be determined whether the site is a historical resource. The criteria are set forth in Section 15064.5(a) (3) of the CEQA Guidelines, and are defined as any resource that does any of the following:

1. Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
2. Is associated with the lives of people important in our past;
3. Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values;
4. Has yielded, or may be likely to yield, information important in prehistory or history.

In addition, the CEQA Guidelines, Section 15064.5(a) (4) states: *The fact that a resource is not listed in, or determined to be eligible for listing in the California Register of Historical Resources, not included in a local register of historical resources (pursuant to section 5020.1(k) of the Public Resources Code), or identified in an historical resources survey (meeting the criteria in section 5024.1(g) of the Public Resources Code) does not preclude a lead agency from determining that the resource may be an historical resource as defined in Public Resources Code section 5020.1(j) or 5024.1.*

Native American Heritage Commission
The Native American Heritage Commission (NAHC) is an organization has the power to develop agreements between landowners and appropriate Native American groups for the treatment and disposal of any burial remains found on a site. The NAHC has the authority to refer enforcement actions to the Attorney General pursuant to PRC Section 5097.99 to ensure that remains or artifacts associated with burial sites are returned to the appropriate Native American groups.

City of Hanford General Plan
The 2035 General Plan includes the policies related to cultural resources that correlate to the proposed Project:

- *Policy O46*: *Archaeological Site Consultation.* Consult with appropriate Native American associations about potential archaeological sites in the beginning stages of the development review process.
- *Policy O47*: *Archaeological Site Study.* Require archaeological studies by a certified archeologist in areas of archeological potential significance prior to approval of development Projects.
- *Policy O48*: *Cultural Site Consultation.* Consult with the California Archaeological Inventory Southern San Joaquin Valley at California State University, Bakersfield about potential cultural sites on Projects that could have an impact on cultural resources.
- *Policy O49*: *Cultural Site Discovery.* Halt construction at a development site if cultural resources are encountered unexpectedly during construction.

Discussion

a) Would the Project cause a substantial adverse change in the significance of a historical resource pursuant to in Section 15064.5?

Less Than Significant Impact with Mitigation: A records search was conducted on behalf of the Applicant from the SSJVIC of the CHRIS at California State University in Bakersfield, California, to determine if historical or archaeological sites had previously been recorded within the study area if the Project area had been systematically surveyed by archaeologists before the initial study, and/or whether the region of the field Project was known to contain archaeological sites and to thereby be archaeologically sensitive. In addition, a Field Assessment was conducted in January 2022 for a complete inspection of the site.

According to the SSJVIC records search, there have been no previous cultural resource investigations within the Project area. There has only been one cultural resource study conducted within a 0.5-mile radius of the Project. There have been no cultural resources previously recorded within the Project area or the 0.5-mile radius. Additionally, no cultural

resources have been recorded within the Project area or within a 0.5-mile radius that are listed in the National Register of Historic Places, the California Register of Historical Resources, the California Points of Interest, the California Inventory of Historic Resources, or the California State Historic Landmarks.

The only known potential cultural resource on the Project site is the Peoples Ditch, but it was later determined to not be a historic resource under CEQA due to significant alterations to the original structure. The ditch was recorded and evaluated for the National Register of Historic Places (NRHP) and California Register of Historic Places (CRHR) eligibility as a historical resource in 2019 by an archaeologist at ASM Affiliates. The archaeologist evaluated the entire system and found that the entire irrigation ditch system was not a historic resource or eligible under NRHP and CRHR due to the number of changes that the channel has undergone through the years.

The current version of the Peoples Ditch is an earthen excavation with no lining. It is about 16 feet wide on average at the surface, narrowing to about 8 feet at the bottom. Within this segment, there are the ends of the two culverts carrying the ditch under public roads, but it is aboveground within the Project site. These employ corrugated metal pipes encased in concrete. The only other feature is a single crossing for farm equipment consisting of a concrete slab supported in the middle by a concrete pier. This is located just west of the point where the straight east-west section of the ditch turns to the northeast. Other than these three crossings this segment consists entirely of an open earthen ditch about 1,900 feet in length. This segment of the Peoples Ditch is realigned and straightened and has, therefore, lost all historic integrity, and would not be considered as a historic resource due to significant alterations. However, the presence of subsurface resources on the Project site is still possible, as previously unknown cultural resources may be discovered upon excavation.

Although no cultural resources were identified, the presence of remains or unanticipated cultural resources under the ground surface is possible. Implementation of Mitigation Measures CUL-1 and CUL-2 will ensure that impacts to this checklist item will be *less than significant with mitigation* incorporation.

b) Would the Project cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?

Less Than Significant Impact with Mitigation: There are no known archaeological resources located within the Project area based on the SSJVIC archival records search and field survey conducted by Peak & Associates, Inc. in January 2022. However, Project activities may unearth previously unknown archaeological resources, resulting in potential impacts to archaeological resources pursuant to Section 15064.5. Therefore, implementation of Mitigation Measures CUL-1 and CUL-2 will ensure that the potential

impact on unknown archeological resources will be *less than significant with mitigation* incorporation.

c) Would the Project disturb any human remains, including those interred outside of formal cemeteries?

Less Than Significant Impact with Mitigation: There are no known human remains buried in the Project vicinity based on the SSJVIC Archival Records Search and the field survey conducted by Peak & Associates, Inc in January 2022. However, it is still possible for previously unknown human remains to be unearthed during Project construction. If human remains are unearthed during Project construction, there is a potential for a significant impact. If the human remains are of Native American origin, the Most Likely Descendant (MLD) may preserve the remains in place or carry out a reburial. The decision to preserve in place or reburial is dependent upon the situation and consultation with representatives of the Tachi Yokut Tribe or tribe associated with the MLD. As such, implementation of Mitigation Measures CUL-1 and CUL-2 will ensure that impacts remain *less than significant with mitigation incorporation.*

Mitigation Measures for Impacts to Cultural Resources

Mitigation Measure CUL-1: Protection of Cultural Resources. In order to avoid the potential for impacts to historic and prehistoric archaeological resources, the following measures shall be implemented, as necessary, in conjunction with the construction of the Project:

a. Cultural Resources Alert on Project Plans: The Project proponent shall note on any plans that require ground disturbing excavation that there is a potential for exposing buried cultural resources.
b. Pre-Construction Briefing: The Project proponent shall retain Santa Rosa Rancheria Cultural Staff to provide a pre-construction Cultural Sensitivity Training to construction staff regarding the discovery of cultural resources and the potential for discovery during ground disturbing activities, which will include information on potential cultural material finds and, on the procedures, to be enacted if resources are found.
c. Stop Work Near any Discovered Cultural Resources: The Project proponent shall retain a professional archaeologist on an "on-call" basis during ground disturbing construction for the Project to review, identify and evaluate cultural resources that may be inadvertently exposed during construction. Should previously unidentified cultural resources be discovered during construction of the Project, the Project proponent shall cease work within 100 feet of the resources, and Kings County Community Development Agency (CDA) shall be notified immediately. The archaeologist shall review and evaluate any discoveries to determine if they are historical resource(s) and/or unique archaeological resources under CEQA.
d. Mitigation for Discovered Cultural Resources: If the professional archaeologist determines that any cultural resources exposed during construction constitute a

historical resource and/or unique archaeological resource, he/she shall notify the Project proponent and other appropriate parties of the evaluation and recommended mitigation measures to mitigate the impact to a less-than-significant level. Mitigation measures may include avoidance, preservation in place, recordation, additional archaeological testing, and data recovery, among other options. Treatment of any significant cultural resources shall be undertaken with the approval of the Kings County CDA. The archaeologist shall document the resources using DPR 523 forms and file said forms with the California Historical Resources Information System, Southern San Joaquin Valley Information Center. The resources shall be photo-documented and collected by the archaeologist for submittal to the Santa Rosa Rancheria's Cultural and Historical Preservation Department. The archaeologist shall be required to submit to the County for review and approval a report of the findings and method of curation or protection of the resources. Further grading or sitework within the area of discovery shall not be allowed until the preceding steps have been taken.

e. Native American Monitoring: Prior to any ground disturbance, the Project proponent shall offer the Santa Rosa Rancheria Tachi Yokut Tribe the opportunity to provide a Native American Monitor during ground disturbing activities during both construction and decommissioning. Tribal participation would be dependent upon the availability and interest of the Tribe.
f. Disposition of Cultural Resources: Upon coordination with the Kings County Community Development Agency, any prehistoric archaeological artifacts recovered shall be donated to an appropriate Tribal custodian or a qualified scientific institution where they would be afforded applicable cultural resources laws and guidelines.

Mitigation Measure CUL-2: Protection of Buried Human Remains. In order to avoid the potential for impacts to buried human remains, the following measures shall be implemented, as necessary, in conjunction with the construction of the Project:

a. Pursuant to State Health and Safety Code Section 7050.5(e) and Public Resources Code Section 5097.98, if human bone or bone of unknown origin is found at any time during on- or off-site construction, all work shall stop within 25 feet of the discovery and the Kings County Coroner shall be notified immediately and the resource shall be protected in compliance with applicable state and federal laws. If the remains are determined to be Native American, the Coroner shall notify the California State Native American Heritage Commission (NAHC), who shall identify the person believed to be the Most Likely Descendant (MLD) pursuant to Public Resources Code Section 5097.98. The Project proponent and MLD, with the assistance of the archaeologist, shall make all reasonable efforts to develop an agreement for the treatment of human remains and associated or unassociated funerary objects with appropriate dignity (CEQA Guidelines Sec. 15064.5(d)). The agreed upon treatment shall address the appropriate excavation, removal, recordation, analysis, custodianship, curation, and final disposition of the human remains and associated or unassociated funerary objects. California Public Resources Code

allows 48 hours for the MLD to make their wishes known to the landowner after being granted access to the site. If the MLD and the other parties do not agree on the reburial method, the Project will follow Public Resources Code Section 5097.98(b) which states that "…. the landowner or his or her authorized representative shall reinter the human remains and items associated with Native American burials with appropriate dignity on the property in a location not subject to further subsurface disturbance."

b. Any findings shall be submitted by the archaeologist in a professional report submitted to the Project applicant, the MLD, the Kings County Community Development Agency, and the California Historical Resources Information System, Southern San Joaquin Valley Information Center.

VI. ENERGY

Would the Project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during Project construction or operation?	☐	☐	☑	☐
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	☐	☐	☑	☐

This section describes the existing energy conditions of the Project site and vicinity, identifies associated regulatory requirements, and evaluates the potential impacts of the proposed Project. This section assesses the potential effects on energy that could result from implementation of the proposed Project. The findings of this section are based on the CalEEMod results for the Project, EMFAC2021 Energy Calculations and the Air quality & Greenhouse Gas Study, all of which were prepared by 4Creeks, Inc. The CalEEMod results can be found in Appendix A1 of this Initial Study. The Air Quality & Greenhouse Gas Study can be found in Appendix C of the EIR, and the Energy Calculations can be found in Appendix D.

Environmental Setting

Electricity

According to the U.S. Energy Information Administration, California used approximately 189 million Btu's of electricity in 2021 (EIA 2024a). By sector in 2021, commercial uses utilized 17.1% of the state's electricity, followed by 18% for residential uses and 23.6% for industrial uses (EIA 2024a). Electricity usage in California for different land uses varies substantially by the types of uses in a building, type of construction materials used in a building, and the efficiency of all electricity-consuming devices within a building. Due to the state's energy efficiency building standards and efficiency and conservation programs, California's electricity use per capita in the residential sector is lower than any other state except Hawaii (EIA 2024a).

Southern California Edison (SCE) provides electricity services to the City of Hanford. SCE serves approximately 15 million people in a 50,000 square-mile area of Central, Coastal, and Southern California. (SCE 2022). SCE supplies electricity to its customers through a variety of renewable and nonrenewable sources. Table 9 below shows the proportion of each energy resource sold to California consumers by SCE in 2019 as compared to the statewide average.

Table 9. 2022 Power Content Label

Fuel Type		SCE Power Mix	California Power Mix
Coal		0%	2.1%
Large Hydroelectric		3.4%	9.2%
Natural Gas		24.7%	36.4%
Nuclear		8.3%	9.2%
Other (Oil/Petroleum Coke/Waste Heat)		0.1%	0.1%
Unspecified Sources of Power[1]		30.3%	7.1%
Eligible Renewables	Biomass	0.1%	2.1%
	Geothermal	5.7%	4.7%
	Eligible Hydroelectric	0.5%	1.1%
	Solar	17.1%	17.0%
	Wind	9.8%	10.8%
	Total Eligible Renewable	**33.2%**	**35.7%**
1. "Unspecified power" is electricity that has been purchased through open market transactions and is not traceable to a specific generation source.			

Source: Southern California Edison, California Energy Commission, www.sce.com

SCE also offers Green Rate Options, which allow consumers to indirectly purchase up to 100% of their energy from renewable sources. To accomplish this, SCE purchases the renewable energy necessary to meet the needs of Green Rate participants from solar renewable developers.

Natural Gas

According to the U.S. Energy Information Administration, California used approximately 2,056,267 million cubic feet of natural gas in 2022 (EIA 2024b). Natural gas is used for cooking, space heating, generating electricity, and as an alternative transportation fuel. The majority of California's natural gas customers are residential and small commercial customers (core customers), which accounted for approximately 35% of the natural gas delivered by California utilities in 2018 (CPUC 2020). Large consumers, such as electric generators and industrial customers (noncore customers), accounted for approximately 65% of the natural gas delivered by California utilities (CPUC 2020). The CPUC regulates California natural gas rates and natural gas services, including in-state transmission and distribution pipeline systems, storage, procurement, metering, and billing. Most of the natural gas used in California comes from out-of-state natural gas basins. Biogas (e.g., from wastewater treatment facilities or dairy farms) is just beginning to be delivered into the gas utility pipeline systems, and the state has

been encouraging its development (CPUC 2020). In 2019, PG&E delivered approximately 4.9 billion therms of natural gas to the region, with 3 billion therms for non-residential use and 1.9 billion therms for residential use (CEC 2020a, 2020b).

Southern California Gas (SoCalGas) Company provides natural gas services to the Project area. Natural gas is an energy source developed from fossil fuels composed primarily of methane (CH4). Approximately 45% of the natural gas burned in California is used for electricity generation, while 21% is consumed by the residential sector, 25% is consumed by the industrial sector, and 9% is consumed by the commercial sector ("Supply and Demand of Natural Gas in California" n.d.).

Petroleum

According to the U.S. Energy Information Administration, California used approximately 605 million barrels of petroleum in 2021 (EIA, 2024c). This total annual consumption equates to a daily use of approximately 1.6 million barrels of petroleum. There are 42 U.S. gallons in a barrel, so California consumes approximately 69.6 million gallons of petroleum per day, adding up to an annual consumption of 25.4 billion gallons of petroleum. Petroleum usage in California includes petroleum products such as motor gasoline, distillate fuel, liquefied petroleum gases, and jet fuel.

Regulatory Setting

California Code of Regulations, Title 20

Title 20 of the California Code of Regulations establishes standards and requirements for appliance energy efficiency. The standards apply to a broad range of appliances sold in California.

California Code of Regulations, Title 24

Title 24 of the California Code of Regulations is a broad set of standards designed to address the energy efficiency of new and altered homes and commercial buildings. These standards regulate energy consumed for heating, cooling, ventilation, water heating, and lighting. Title 24 requirements are enforced locally by the City of Hanford Building Department.

California Green Building Standards Code (CALGreen)

CalGreen is a mandatory green building code that sets minimum environmental standards for new buildings. It includes standards for volatile organic compound (VOC) emitting materials, water conservation, and construction waste recycling.

SB 100

SB 100, passed in 2018, set a deadline in 2045 for 100% of energy to be renewable. Additionally, by 2035, 60% of all energy must be renewable. California is targeting this goal through solar and other renewable sources.

AB 178

For California to meet its renewable goals, AB 178 was passed in 2018. AB 178 states that starting in 2020 all-new low-rise residential buildings must be built with solar power.

SB 1389

In 2002, the State Legislature passed Senate Bill 1389, which required the California Energy Commission (CEC) to develop an integrated energy plan every two years for electricity, natural gas, and transportation fuels, for the California Energy Policy Report. The plan calls for the State to assist in the transformation of the transportation system to improve air quality, reduce congestion, and increase the efficient use of fuel supplies with the least environmental and energy costs. To further this policy, the plan identifies a number of strategies, including assistance to public agencies and fleet operators in implementing incentive programs for zero emission (ZE) vehicles and their infrastructure needs, and encouragement of urban designs that reduce vehicle miles traveled (VMT) and accommodate pedestrian and bicycle access. (CEC 2016)

City of Hanford General Plan

The 2035 General Plan includes the policies related to energy resources that correlate to the proposed Project:

Objective AQ 7: Increase the use of energy conservation features, renewable sources of energy and low-emission equipment in new and existing development Projects within the City.

- *Policy AQ 7.1*: Actively promote the location of industries within the City which are labor intensive, utilize co-generation or renewable sources of energy, support and enhance agricultural activities, and are consistent with other policies of the General Plan.
- *Policy AQ 7.2*: Initiate and sustain ongoing efforts with local water and energy utilities and developers to establish and implement voluntary incentive-based programs to encourage the use of energy efficient designs and equipment in new and existing development Projects within the City.
- *Policy AQ 7.3*: Support and recognize developers proposing Projects that comply with the state's Green Building Standards voluntary tier levels or other enhanced energy conservation and sustainable rating systems such as LEED certification, Greenpoint Rating, and Energy Star.
- *Policy AQ 7.6*: Encourage the use of solar-ready roofs in residential and commercial development. New residential development should include proper solar orientation (south facing roof area sloped at 20° to 55° from the horizontal), clear access on the south sloped roof (no chimneys, heating vents, plumbing vents, etc.), electrical conduit installed for solar electric system wiring, plumbing installed for solar hot water systems, and space provided for a solar hot water storage tank. Roofs for commercial

development should be designed to maximize potential area available for solar panels and provide electrical conduit to support future installation.

Goal O2: Conservation of non-renewable energy resources and maximization of the use of renewable energy resources.

- *Policy O13*: *Solar Power Generation.* Support and encourage solar generation facilities that support residential, commercial, and industrial uses.
- *Policy O14*: *Alternative Fuels and Renewable Energy*. Promote and encourage the use of alternative fuels and renewable energy.
- *Policy O15*: *Energy-efficient Design Features.* Require that new development incorporate energy efficient design features for HVAC, lighting systems, and insulation that meet or exceed California Code of Regulations Title 24.
- *Policy O16*: *Vegetation to Conserve Energy.* Encourage the use of native and drought tolerant shade trees and vines on southern and western exposure building walls as an energy conservation technique.

Discussion

a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during Project construction or operation?

Less than Significant Impact: The Project would consume energy resources during construction and operation, as discussed below.

Electricity

Construction Energy Usage

Temporary electric power for as-necessary lighting and electronic equipment, such as computers inside temporary construction trailers, would be provided by SCE. The electricity used for such activities would be temporary, would be substantially less than that required for Project operation, and would therefore have a negligible contribution to the Project's overall energy consumption.

Table 10. Construction Related Energy Use.

Construction Energy Use						
Off-Road Equipment Fuel (Diesel)		On-Road Vehicle Fuel				Total MMBTU
		Diesel		Gasoline		
Gallons	MMBTU	Gallons	MMBTU	Gallons	MMBTU	
824,932	114,665	1,513,434	210,366	2,263175	262,716	587,747
					Total Construction Energy Use	587,747

Average Annual Construction Energy Use	390,055

Source: CalEEMod (v. 2020.4.0) and EMFAC2017 (See Appendix D)

Operational Energy Usage

The operational phase would require electricity for multiple purposes, including building heating and cooling, lighting, and electronics. CalEEMod was used to estimate Project emissions from electricity uses (see Appendix D for calculations). Default electricity generation rates in CalEEMod were used based on the proposed land use and climate zone and were adjusted to reflect compliance with 2022 Title 24 standards. Water consumption estimates for both indoor and outdoor water use were estimated using CalEEMod default values. Electricity use for water supply were based on the electric pump rating, pump flowrate, electricity intensity factors from CalEEMod for Kings County, and the indoor and outdoor water use default values in CalEEMod (CAPCOA 2021). According to these estimations, the Project would consume approximately 9,155,608 kilowatt-hours per year (Appendix D). For disclosure, in comparison, approximately 2.01 billion kilowatt-hours of electricity were used in Kings County in 2022 (CEC 2022). In summary, although electricity consumption would increase at the Project site due to implementation of the Project, the Project would comply with the applicable energy standards and regulations. Construction electricity usage would be minimal relative to the Project's overall energy consumption. For these reasons, electricity consumption of the Project would not be considered inefficient, wasteful, or unnecessary, and impacts would be less than significant.

Table 11. Operational Energy Use

Operational Energy Use		
	Gal/Year	**MMBTU**
On-Road Fuel Use (Gasoline)	518,455	62,363
On-Road Fuel Use (Diesel)	53,409	7,337
Electricity Use		
	kWh/Year	**MMBTU**
Fargo Village	9,155,608	31,239
Natural Gas Use		
	kBTU/Year	**MMBTU**
Fargo Village	26,382,860	26,383
		MMBTU
Total Operational Energy Use		**127,322**

Source CalEEMod (v.2020.4.0), EMFAC2017 (Appendix D)

Natural Gas

Construction Energy Usage

Natural gas is not anticipated to be required during construction of the Project. Fuels used for construction would primarily consist of diesel and gasoline, which are discussed below under the "petroleum" subsection. Any minor amounts of natural gas that may be consumed as a result of Project construction would be substantially less than that required for Project operation and would have a negligible contribution to the Project's overall energy consumption.

Operational Energy Usage

Default natural gas usage rates in CalEEMod for the proposed land use and climate zone were used and adjusted based on compliance with 2019 Title 24 standards. According to these estimations, the Project would consume approximately 26,382,860 kBTU per year (Appendix D). This amount of natural gas is equivalent to 263,828 therms. For disclosure, in comparison, Kings County consumed approximately 64,031,169 therms of natural gas in 2022 (CEC 2022).

In summary, although natural gas usage would increase due to implementation of the Project, the Project would comply with the applicable energy standards and regulations, and usage would be decreased through green building standards. For these reasons, the natural gas consumption of the Project would not be considered inefficient or wasteful, and impacts would be less than significant.

Petroleum

Construction Energy Use

Heavy-duty construction equipment of various types would be used during each phase of Project construction. The CalEEMod analysis discussed in the Air Quality section, and included in Appendix D lists the assumed equipment usage for each phase of construction. Fuel consumption from construction equipment was estimated by converting the total CO2 emissions from each construction phase, as estimated using CalEEMod, to gallons using the conversion factors for CO2 to gallons of gasoline or diesel. Construction is estimated to occur in the years 2025-2047 based on the construction phasing schedule; all details for construction criteria air pollutants discussed in the Air Quality section of this report, the Air Quality & Greenhouse Gas Study prepared by 4Creeks, and Appendix D is also applicable for the estimation of construction related GHG emissions. The conversion factor for gasoline is 8.78 kilograms per metric ton CO2 per gallon, and the conversion factor for diesel is 10.21 kilograms per metric ton CO2 per gallon (The Climate Registry 2023). The estimated diesel

fuel usage from construction equipment, haul trucks, and vendor trucks, as well as estimated gasoline fuel usage from worker vehicles, is shown in Table 12.

Table 12. Total Project Construction Petroleum Demand

Haul Trucks (Diesel)	Vendor Trucks (Diesel)	Worker Vehicles (Gasoline)	Construction Equipment (Diesel)
Gallons			
8	1,513,434	2,263,175	824,932

Source: See Appendix D for outputs.

In summary, construction associated with the potential future development facilitated by the Project over the construction period is anticipated to consume 2,263,175 gallons of gasoline from worker vehicles and 2,338,374 gallons of diesel from off-road equipment, haul trucks, and vendor trucks. In Kings County in 2023, it is estimated that approximately 240 million gallons of petroleum would be consumed by on-road vehicles, and approximately 7.8 million gallons of petroleum would be consumed by off-road equipment (CARB 2022). Approximately 28.7 billion gallons of petroleum are consumed in California annually (EIA 2020d).

The Project would be required to comply with CARB's Airborne Toxics Control Measure, which restricts heavy-duty diesel vehicle idling time to 5 minutes, which would minimize fuel consumption. Although construction activities would consume petroleum-based fuels, consumption of such resources would be temporary and would cease upon the completion of construction. Further, the petroleum consumed related to Project construction would be typical of construction Projects of similar types and sizes and would not necessitate new petroleum resources beyond what are typically consumed in California. Therefore, because petroleum use during construction would be temporary and relatively minimal, and would not be wasteful or inefficient, impacts would be less than significant.

Operational Energy Usage

During operations, the majority of fuel consumption resulting from the Project would involve the use of motor vehicles traveling to and from the Project site. Petroleum fuel consumption associated with motor vehicles traveling to and from the Project site is a function of the vehicle miles traveled (VMT) as a result of Project operation. The annual VMT attributable to the Project is expected to be 13,037,925 VMT (Appendix D). The Project would consume an estimated 518,455 gallons of gasoline per year and 53,409 gallons of diesel per year from operation of vehicle trips traveling to and from the Project site. For disclosure, by comparison, approximately 28.7 billion gallons of petroleum are consumed in California annually (EIA 2020d). Over the lifetime of the Project, the fuel efficiency of the vehicles being used by the Project is expected to increase.

As such, the amount of petroleum consumed as a result of vehicular trips to and from the Project site during operation would decrease over time. Numerous regulations are in place that require and encourage increased fuel efficiency. For example, CARB has adopted a new approach to passenger vehicles by combining the control of smog-causing pollutants and GHG emissions into a single coordinated package of standards. The new approach also includes efforts to support and accelerate the numbers of plug-in hybrids and ZEVs in California (CARB 2017). The Project would be required to comply with CARB's Airborne Toxics Control Measure, which restricts heavy-duty diesel vehicle idling time to 5 minutes, which would minimize fuel consumption. The operation of the Project is expected to use decreasing amounts of petroleum over time due to advances in fuel economy. Reducing air quality emissions during operation would help reduce construction-related fuel usage.

In summary, although Project implementation would result in an increase in petroleum use during construction and operation, over time vehicles would use less petroleum due to advances in fuel economy. Additionally, the Project would include a variety of features that would encourage electric and zero-emissions technology, facilities that promote bike and pedestrian travel, and reduced vehicle miles traveling to and from the site during operation. Given these considerations, petroleum consumption associated with the Project would not be considered inefficient or wasteful, and impacts would be *less than significant*.

b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

Less than Significant: The Project would be subject to and would comply with, at a minimum, the California Building Energy Efficiency Standards (24 CCR, Part 6). Part 6 of Title 24 establishes energy efficiency standards for residential and non-residential buildings constructed in California in order to reduce energy demand and consumption.

In 2002, the Legislature passed Senate Bill 1389, which required the California Energy Commission (CEC) to develop an integrated energy plan every two years for electricity, natural gas, and transportation fuels, for the California Energy Policy Report. The plan calls for the State to assist in the transformation of the transportation system to improve air quality, reduce congestion, and increase the efficient use of fuel supplies with the least environmental and energy costs. To further this policy, the plan identifies a number of strategies, including assistance to public agencies and fleet operators in implementing incentive programs for zero emission (ZE) vehicles and their infrastructure needs, and encouragement of urban designs that reduce vehicle miles traveled (VMT) and accommodate pedestrian and bicycle access. The Project proposes to implement MM-AQ-1 through MM-AQ-5 to facilitate opportunities for bicycling and pedestrian travel, encourages electric vehicles, and proposes Project features that reduce VMT to and from the site during operation, which aligns with the goals of the CEC's latest Integrated Energy Policy Report (2022). In addition, the Project proposes pedestrian and bicycle trails

throughout the site that would connect the schools, parks, and the commercial center to the residential areas.

Because the Project would comply with the applicable energy standards and regulations, the Project would result in a *less-than-significant impact* associated with the potential to conflict with energy standards and regulations.

Mitigation Measures

No mitigation measures are required.

VII. GEOLOGY AND SOILS

Would the Project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:	☐	☐	☐	☐
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☑	☐
ii) Strong seismic ground shaking?	☐	☐	☑	☐
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☑	☐
iv) Landslides?	☐	☐	☑	☐
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☑	☐
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the Project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	☐	☐	☑	☐
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct and indirect risks to life or property?	☐	☐	☑	☐
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	☐	☐	☐	☑

f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☑	☐	☐

Environmental Setting

Geologic Stability and Seismic Activity

Seismicity

Neither the City of Hanford nor Kings County has any known major fault systems within their boundaries. There are small faults in the Southern San Joaquin Valley, approximately 30 miles South, though none of them are known to be active. According to the Kings County Multi-Jurisdictional Local Hazard Mitigation Plan, there is no history of earthquakes in the city of Hanford and the peak ground acceleration is low. The greatest potential for seismic activity in the City of Hanford is posed by the San Andreas Fault, approximately 45 miles West of the site, or the White Wolf Fault, located over 100 miles South of the site. (Kings County Local Hazard Mitigation Plan 2012)

Liquefaction

Liquefaction is a phenomenon whereby unconsolidated and/or near-saturated soils lose cohesion and are converted to a fluid state as a result of severe vibratory motion. The relatively rapid loss of soil shear strength during strong earthquake shaking results in temporary, fluid-like behavior of the soil, which can result in landslides and lateral spreading. Liquefaction potential is highest in areas underlain by Bay fills, Bay mud, and unconsolidated alluvium. Soil liquefaction causes ground failure that can damage roads, pipelines, underground cables, and buildings with shallow foundations. ("VI. Geology and Soils" n.d.) Liquefaction hazards may exist in and around wetland areas and creeks, though soil types in Hanford are generally too coarse or too high in clay content. The Hanford General Plan states that there is minimal liquefaction potential due to a stable geological formation (City of Hanford General Plan 2014). Further, the Seismic Safety Map from the 2035 Kings County General Plan states that liquefication is rare in the County due to the nature of the underlying soils, relatively deep-water table, and a history of low ground shaking potential (Kings County General Plan 2010).

Landslides

Landslides can refer to a wide variety of processes that result in the perceptible downward and outward movement of soil, rock, and vegetation under gravitational influence. Common names for landslide types include slump, rockslide, debris slide, lateral spreading, debris avalanche, earth flow, and soil creep. Although landslides are primarily associated with steep slopes (i.e., greater than 15 percent), they may also occur in areas of generally low relief and occur as cut-and-fill failures, river bluff failures, lateral spreading landslides, collapse of mine-waste piles, and failures associated with quarries and open-pit mines. Debris flows are another type of landslide, which generally occur in the immediate vicinity of existing drainage swales

or steep ravines. Debris flows occur when near-surface soil in or near steeply sloping drainage swales becomes saturated during unusually heavy precipitation and begins to flow downslope at a rapid rate. Due to very few elevation changes throughout the planning area, including the proposed Project site, it is considered a low landslide hazard area (Kings County Local Hazard Mitigation Plan 2012).

Subsidence

Land Subsidence refers to the gradual settling or sudden vertical sinking of the Earth's surface due to the subsurface movement of earth materials (U.S. Geological Survey n.d.). Subsidence has occurred throughout the Central Valley because of groundwater, oil, and gas withdrawal. According to the Kings County Multi-Jurisdictional Hazard Mitigation Plan, land subsidence in the region rarely occurs and its impacts are not significant (Kings County Local Hazard Mitigation Plan 2012)

Soils Involved in Project

The proposed Project involves the construction of two soil types. The properties of the soil are described briefly below:

- **Nord Complex:** The Nord series consists of very deep, well-drained soils that formed in mixed alluvium dominantly from granitic and sedimentary rocks. Nord soils occur on alluvial fans and flood plains. Slopes are 0 to 2 percent. They are well-drained and have negligible to low runoff, and moderate permeability, but have moderately slow permeability in saline-sodic phases. There is available water storage of 11.21 cm.

- **Nord Fine Sandy Loam:** The Nord series consists of very deep, well-drained soils that formed in mixed alluvium dominantly from granitic and sedimentary rocks. Nord soils occur on alluvial fans and flood plains. Slopes are 0 to 2 percent. They are well-drained, have negligible to very low runoff, and moderately rapid permeability, but have moderately slow permeability in saline-sodic phases. There is available water storage of 12.54 cm.

- **Whitewolf Coarse Sandy Loam:** The Whitewolf series consists of deep, somewhat excessively drained soils that formed in mixed alluvium. Whitewolf soils are on flood plains and alluvial fans. Slopes are 0 to 5 percent. They are somewhat excessively drained, have a slow runoff, and have rapid permeability. There is available water storage of 7 cm.

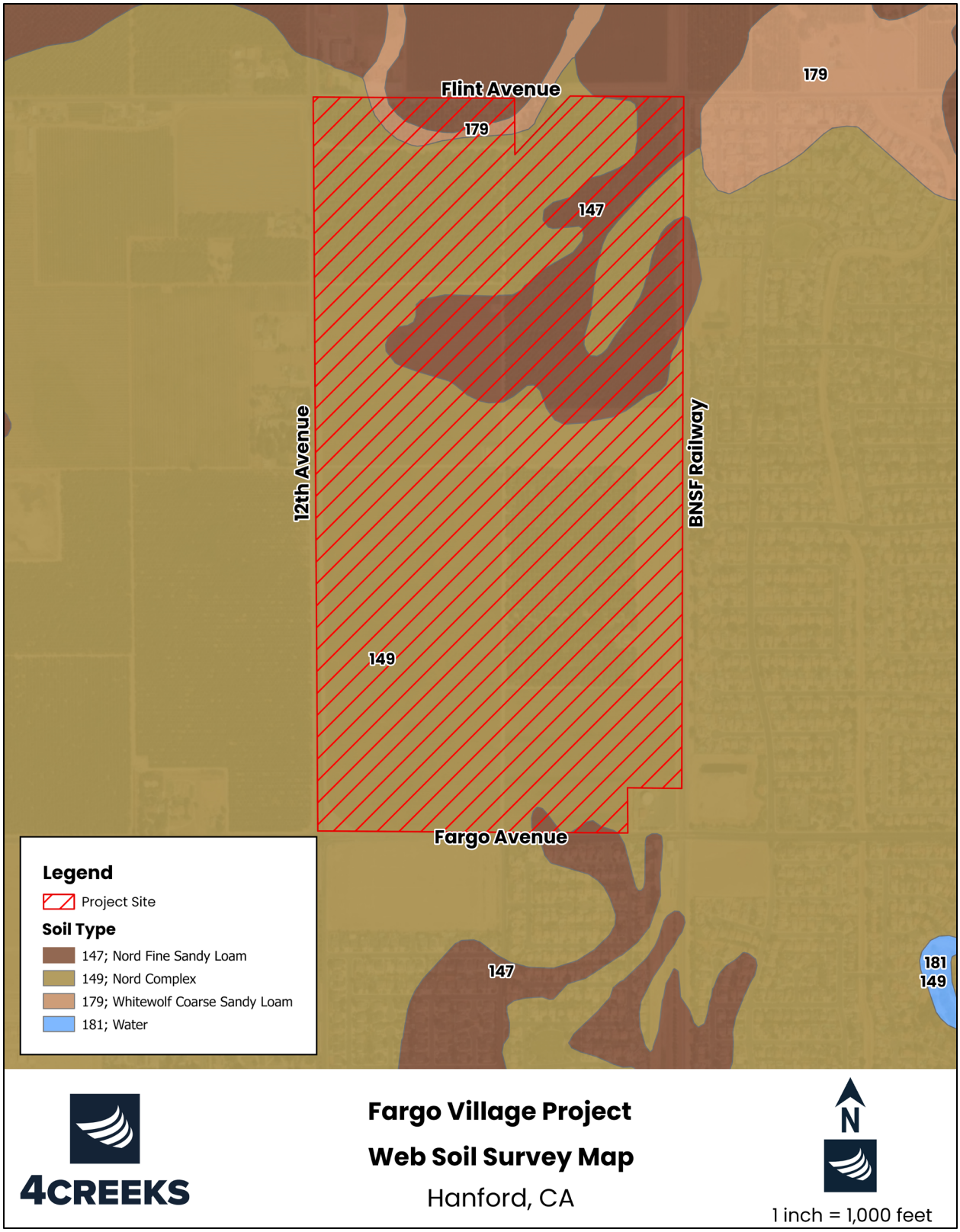


Figure 8: Soils Map

Regulatory Setting

California Building Code

The California Building Code (CBC) contains general building design and construction requirements relating to fire and life safety, structural safety, and access compliance. CBC provisions provide minimum standards to safeguard life or limb, health, property, and public welfare by regulating and controlling the design, construction, quality of materials, use and occupancy, location, and maintenance of all buildings and structures, and certain equipment.

City of Hanford Municipal Code (California Building Code)

The City of Hanford Municipal Code has incorporated and adopted the CBC, 2016 Edition, as promulgated by the California Building Standards Commission, which incorporates the adoption of the 2015 edition the of the International Building Code, as amended with necessary California amendments and the 2015 International Building Code of the International Code Council.

City of Hanford General Plan

The 2035 General Plan includes the policies related to geology and soils that correlate to the proposed Project:

- *Policy H15. Building Codes and Standards for Earthquakes*: Maintain and enforce current buildings codes and standards to reduce the potential for structural failure caused by ground shaking and other geologic hazards.
- *Policy H17. Geologic and Soils Studies*: Require geologic and soils studies to identify potential hazards as part of the approval process for all new development prior to grading activities where questionable conditions exist.

Discussion

a) Would the Project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:

i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.

Less than Significant Impact: There are no designated Alquist-Priolo zones in the City according to the General Plan. Although the Project is located in an area of relatively low seismic activity, the Project site has a low chance of being affected by ground shaking from distant faults. The potential for strong seismic ground shaking on the Project site is not a significant environmental concern due to the infrequent seismic

activity of the area and the distance to the faults. The Project does not propose any components which could cause substantial adverse effects in the event of an earthquake. Additionally, the Project has no potential to cause the rupture of an earthquake fault indirectly or directly. Therefore, there is *a less than significant impact* related to the risk of loss, injury, or death involving a rupture of a known earthquake fault.

ii. Strong seismic ground shaking?

Less than Significant Impact: The Project site is in an area of low seismic activity. The proposed Project does not include any activities or components which could expose people or structures to the adverse effects of strong seismic ground shaking, either directly or indirectly. The Project's building construction will comply with the latest California Building Code (CBC), which includes requirements to ensure that new development would not cause or exacerbate geological and soil hazards. There is *a less than significant impact.*

iii. Seismic-related ground failure, including liquefaction?

Less than Significant Impact: According to the City of Hanford General Plan, the risk of liquefaction within the City is low because it has a stable geologic formation (City of Hanford General Plan 2014). The area's low potential for seismic activity would further reduce the likelihood of liquefaction occurrence. Because the Project site is within an area of low seismic activity, and there is a stable geologic formation, there is *a less than significant impact.*

iv. Landslides?

Less than Significant Impact: The City of Hanford is considered to have a low risk for landslides (City of Hanford General Plan 2014). Additionally, the Project site is generally flat and there are no hill slopes in the area. No geologic landforms exist on or near the site that would result in a landslide event. As a result, there is a very low potential for landslides. There would be *a less than significant impact.*

b) Would the Project result in substantial soil erosion or the loss of topsoil?

Less Than Significant Impact: Because the Project site is relatively flat, the potential for erosion is low. However, construction-related activities and increased impermeable surfaces can increase the probability of erosion to occur. Construction-related impacts related to erosion will be temporary and subject to best management practices (BMPs) required by SWPPP, which are developed to prevent significant impacts related to erosion from construction. Because impacts related to erosion would be temporary and limited to

construction, and because required best management practices would prevent significant impacts related to erosion, the impact will remain *less than significant.*

c) Would the Project be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the Project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?

Less than Significant Impact:

The soil types on the site include the Nord Complex, Nord Fine Sandy Loam, and Whitewolf Coarse Sandy Loam (See Figure 8). According to the data available on the Web Soil Survey, there is low potential for soil slippage for all soils in the Project area, which indicates a low potential for landslides, lateral spreading, liquefaction, or collapse. Additionally, the Web Soil Survey also classifies all soil types on the site as having low susceptibility to subsidence (Natural Resources Conservation Service n.d.). Therefore, the soil types associated with the Project site are considered stable and have a low capacity for landslides, lateral spreading, subsidence, liquefaction, or collapse. Because the Project area is stable, and this Project would not result in a substantial grade change to the topography to the point that it would increase the risk of landslides, lateral spreading, subsidence, liquefaction, or collapse, there is *a less than significant impact.*

d) Would the Project be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?

Less than Significant Impact: The proposed Project site is not in an area with expansive soils. According to the Official Series Description for both the Nord soil series (NRCS 1999) and the Whitewolf soil series (NRCS 1996), there are no clays with shrink/swell characteristics present in the representative samples taken for each type, nor are there significant clay percentages within these soils to have such characteristics. Because the soils associated with the Project do not exhibit shrink-swell behavior, implementation of the Project will pose no risk to life or property caused by expansive soils and there is *a less than significant impact.*

e) Would the Project have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?

No Impact: The proposed Project would not include the use of septic tanks or any other alternative wastewater disposal systems. The proposed buildings will tie into Hanford's existing sewer services. Therefore, there would be *no impact.*

f) Would the Project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Less Than Significant Impact with Mitigation: There are no unique geologic features and no known paleontological resources located within the Project area. However, there is always the possibility that paleontological resources may exist below the ground surface. Implementation of Mitigation Measures CUL-1 and CUL-2 will ensure that any impacts resulting from Project implementation remain *less than significant with mitigation incorporation*.

Mitigation Measures

Mitigation Measure CUL-1: Protection of Cultural Resources. In order to avoid the potential for impacts to historic and prehistoric archaeological resources, the following measures shall be implemented, as necessary, in conjunction with the construction of the Project:

a. Cultural Resources Alert on Project Plans: The Project proponent shall note on any plans that require ground disturbing excavation that there is a potential for exposing buried cultural resources.
b. Pre-Construction Briefing: The Project proponent shall retain Santa Rosa Rancheria Cultural Staff to provide a pre-construction Cultural Sensitivity Training to construction staff regarding the discovery of cultural resources and the potential for discovery during ground disturbing activities, which will include information on potential cultural material finds and, on the procedures, to be enacted if resources are found.
c. Stop Work Near any Discovered Cultural Resources: The Project proponent shall retain a professional archaeologist on an "on-call" basis during ground disturbing construction for the Project to review, identify and evaluate cultural resources that may be inadvertently exposed during construction. Should previously unidentified cultural resources be discovered during construction of the Project, the Project proponent shall cease work within 100 feet of the resources, and Kings County Community Development Agency (CDA) shall be notified immediately. The archaeologist shall review and evaluate any discoveries to determine if they are historical resource(s) and/or unique archaeological resources under CEQA.
d. Mitigation for Discovered Cultural Resources: If the professional archaeologist determines that any cultural resources exposed during construction constitute a historical resource and/or unique archaeological resource, he/she shall notify the Project proponent and other appropriate parties of the evaluation and recommended mitigation measures to mitigate the impact to a less-than-significant level. Mitigation measures may include avoidance, preservation in place, recordation, additional archaeological testing, and data recovery, among other options. Treatment of any significant cultural resources shall be undertaken with the approval of the Kings County CDA. The archaeologist shall document the resources using DPR 523 forms and file said forms with the California Historical Resources Information System, Southern San

Joaquin Valley Information Center. The resources shall be photo-documented and collected by the archaeologist for submittal to the Santa Rosa Rancheria's Cultural and Historical Preservation Department. The archaeologist shall be required to submit to the County for review and approval a report of the findings and method of curation or protection of the resources. Further grading or sitework within the area of discovery shall not be allowed until the preceding steps have been taken.

e. Native American Monitoring: Prior to any ground disturbance, the Project proponent shall offer the Santa Rosa Rancheria Tachi Yokut Tribe the opportunity to provide a Native American Monitor during ground disturbing activities during both construction and decommissioning. Tribal participation would be dependent upon the availability and interest of the Tribe.
f. Disposition of Cultural Resources: Upon coordination with the Kings County Community Development Agency, any prehistoric archaeological artifacts recovered shall be donated to an appropriate Tribal custodian or a qualified scientific institution where they would be afforded applicable cultural resources laws and guidelines.

Mitigation Measure CUL-2: Protection of Buried Human Remains. In order to avoid the potential for impacts to buried human remains, the following measures shall be implemented, as necessary, in conjunction with the construction of the Project:

a. Pursuant to State Health and Safety Code Section 7050.5(e) and Public Resources Code Section 5097.98, if human bone or bone of unknown origin is found at any time during on- or off-site construction, all work shall stop within 25 feet of the discovery and the Kings County Coroner shall be notified immediately and the resource shall be protected in compliance with applicable state and federal laws. If the remains are determined to be Native American, the Coroner shall notify the California State Native American Heritage Commission (NAHC), who shall identify the person believed to be the Most Likely Descendant (MLD) pursuant to Public Resources Code Section 5097.98. The Project proponent and MLD, with the assistance of the archaeologist, shall make all reasonable efforts to develop an agreement for the treatment of human remains and associated or unassociated funerary objects with appropriate dignity (CEQA Guidelines Sec. 15064.5(d)). The agreed upon treatment shall address the appropriate excavation, removal, recordation, analysis, custodianship, curation, and final disposition of the human remains and associated or unassociated funerary objects. California Public Resources Code allows 48 hours for the MLD to make their wishes known to the landowner after being granted access to the site. If the MLD and the other parties do not agree on the reburial method, the Project will follow Public Resources Code Section 5097.98(b) which states that "…. the landowner or his or her authorized representative shall reinter the human remains and items associated with Native American burials with appropriate dignity on the property in a location not subject to further subsurface disturbance."
b. Any findings shall be submitted by the archaeologist in a professional report submitted to the Project applicant, the MLD, the Kings County Community Development Agency, and the

California Historical Resources Information System, Southern San Joaquin Valley Information Center.

VIII. GREENHOUSE GAS EMISSIONS

Would the Project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.	☐	☐	☑	☐
a) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☑	☐

Environmental Setting

Natural processes and human activities emit greenhouse gases. The presence of GHGs in the atmosphere affects the earth's temperature. Without the natural heat-trapping effect of GHGs, the earth's surface would be about 33°C cooler. However, it is believed that emissions from human activities, such as electricity production and vehicle use, have elevated the concentration of these gases in the atmosphere beyond the level of naturally occurring concentrations. (Costa et al. 2023)

The effect of greenhouse gases on the earth's temperature is equivalent to the way a greenhouse retains heat. Common GHGs include carbon dioxide, methane, nitrogen dioxide, and fluorinated gases, also known as chlorofluorocarbons (CFC's) (Costa et al. 2023). Some gases are more effective than others. The Global Warming Potential (GWP) has been calculated for each greenhouse gas to reflect how long it remains in the atmosphere, on average, and how strongly it absorbs energy. Gases with a higher GWP absorb more energy, per pound, than gases with a lower GWP, and thus contribute more to global warming (EPA 2016). For example, one pound of methane is equivalent to twenty-one pounds of carbon dioxide.

GHGs as defined by AB 32 includes the following gases: carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. GHGs as defined by AB 32 are summarized in Table 13. Each gas's effect on climate change depends on three main factors. The first is the quantity of these gases are in the atmosphere, followed by how long they stay in the atmosphere, and finally how strongly they impact global temperatures.

Table 13. Greenhouse Gases

Greenhouse Gas	Description and Physical Properties	Lifetime	GWP	Sources
Methane (CH4)	Is a flammable gas and is the main component of natural gas	12 years	21	Emitted during the production and transport of coal, natural gas, and oil. Methane emissions also result from livestock and other agricultural practices and from the decay of organic waste in municipal solid waste landfills.
Carbon dioxide (CO2)	An odorless, colorless, natural greenhouse gas.	30-95 years	1	Enters the atmosphere through burning fossil fuels (coal, natural gas, and oil), solid waste, trees, and wood products, and also as a result of certain chemical reactions (e.g., manufacture of cement). Carbon dioxide is removed from the atmosphere (or "sequestered") when it is absorbed by plants as part of the biological carbon cycle.

Greenhouse Gas	Description and Physical Properties	Lifetime	GWP	Sources
Chloro-fluorocarbons	Gases formed synthetically by replacing all hydrogen atoms in methane or ethane with chlorine and/or fluorine atoms. They are non-toxic nonflammable, insoluble and chemically unreactive in the troposphere (the level of air at the earth's surface).	55-140 years	3,800 to 8,100	Were synthesized in 1928 for use as refrigerants, aerosol propellants, and cleaning solvents. They destroy stratospheric ozone.
Hydrofluorocarbons	A man-made greenhouse gasses. It was developed to replace ozone-depleting gases found in a variety of appliances. Composed of a group of greenhouse gases containing carbon, chlorine an at least one hydrogen atom.	14 years	140 to 11,700	Powerful greenhouse gases that are emitted from a variety of industrial processes. Fluorinated gases are sometimes used as substitutes for stratospheric ozone-depleting substances. These gases are typically emitted in smaller quantities, but because they are potent greenhouse gases.

Greenhouse Gas	Description and Physical Properties	Lifetime	GWP	Sources
Nitrous oxide (N2O)	Commonly known as laughing gas, is a chemical compound with the formula N2O. It is an oxide of nitrogen. At room temperature, it is a colorless, non-flammable gas, with a slightly sweet odor and taste. It is used in surgery and dentistry for its anesthetic and analgesic effects.	120 years	310	Emitted during agricultural and industrial activities, as well as during combustion of fossil fuels and solid waste.
Pre-fluorocarbons	Has a stable molecular structure and only breaks down by ultraviolet rays about 60 kilometers above Earth's surface.	50,000 years	6,500 to 9,200	Two main sources of pre-fluorocarbons are primary aluminum production and semiconductor manufacturing.
Sulfur hexafluoride	An inorganic, odorless, colorless, and nontoxic nonflammable gas.	3,200 years	23,900	This gas is manmade and used for insulation in electric power transmission equipment, in the magnesium industry, in semiconductor manufacturing and as a tracer gas.

Source: *EPA, Intergovernmental Panel on Climate Change*

Regarding the quantity of these gases in the atmosphere, we first must establish the amount of the particular gas in the air, known as concentration, or abundance, which is measured in parts per million, parts per billion, and even parts per trillion**.** To put these measurements in more relatable terms, one part per million is equivalent to one drop of water diluted into about 13 gallons of water, roughly a full tank of gas in a compact car. Therefore, it can be assumed larger emissions of greenhouse gases lead to a higher concentration in the atmosphere.

Each of the designated gases described above can reside in the atmosphere for different amounts of time, ranging from a few years to thousands of years. All these gases remain in the atmosphere long enough to become well mixed, meaning that the amount that is measured

in the atmosphere is roughly the same all over the world regardless of the source of the emission.

Regulatory Setting

SB 375

SB 375 (Steinberg September 2008) addresses GHG emissions associated with the transportation sector through regional transportation and sustainability plans. SB 375 requires CARB to adopt regional GHG reduction targets for the automobile and light-truck sector for 2020 and 2035. and to update those targets every 8 years. SB 375 requires the state's 18 regional Metropolitan Planning Organizations (MPOs) to prepare a Sustainable Communities Strategy (SCS) as part of their Regional Transportation Plan (RTP) that will achieve the GHG reduction targets set by CARB. If a MPO is unable to devise an SCS to achieve the GHG reduction target, the MPO must prepare an Alternative Planning Strategy demonstrating how the GHG reduction target would be achieved through alternative development patterns, infrastructure, or additional transportation measures or policies.

Pursuant to Government Code Section 65080(b)(2)(K), an SCS does not regulate the use of land; supersede the land use authority of cities and counties; or require that a city or county's land use policies and regulations, including those in a general plan, be consistent with it. Nonetheless, SB 375 makes regional and local planning agencies responsible for developing those strategies as part of the federally required metropolitan transportation planning process and the state-mandated housing element process.

In September 2010, CARB adopted the first SB 375 targets for the regional MPOs. The targets for the Tulare County Association of Governments (TCAG) are a 13% reduction in emissions per capita by 2020 and a 16% reduction by 2035 below a 2005 baseline. Achieving these goals through adoption of an SCS is the responsibility of the MPOs. TCAG adopted its first RTP/SCS on June 30, 2014. More recently, the TCAG Board adopted the 2022 RTP/SCS, which builds on the progress made in the 2014 RTP/SCS (TCAG 2022).

AB 1493 (Pavley Regulations and Fuel Efficiency Standards)

AB 1493 (Pavley July 2002) was enacted in response to the transportation sector accounting for more than half of California's CO2 emissions. AB 1493 required CARB to set GHG emission standards for passenger vehicles, light-duty trucks, and other vehicles determined by the state board to be vehicles that are primarily used for noncommercial personal transportation in the state. The bill required that CARB set GHG emission standards for motor vehicles manufactured in 2009 and all subsequent model years. CARB adopted the standards in September 2004. The first phase (2009–2012) standards were estimated to result in a reduction of approximately 22% of GHG emissions compared to the emissions from the 2002 fleet, and the mid-term (2013–2016) standards were estimated to result in a reduction of approximately 30%.

SB 1368 (Emission Performance Standards)
SB 1368 (September 2006) required the CEC to develop and adopt regulations for GHG emission performance standards for the long-term procurement of electricity by local publicly owned utilities. These standards must be consistent with the standards adopted by the CPUC.

SB 350
SB 350 (October 2015) further expanded the RPS by establishing a goal of 50% of the total electricity sold to retail customers in California per year by December 31, 2030. In addition, SB 350 included the goal to double the energy efficiency savings in electricity and natural gas final end uses (e.g., heating, cooling, lighting, or class of energy uses on which an energy-efficiency program is focused) of retail customers through energy conservation and efficiency. The bill also requires the CPUC, in consultation with the CEC, to establish efficiency targets for electrical and gas corporations consistent with this goal.

SB 100
SB 100 (2018) increased the standards set forth in SB 350, establishing that 44% of the total electricity sold to retail customers in California per year by December 31, 2024, 52% by December 31, 2027, and 60% by December 31, 2030, be secured from qualifying renewable energy sources. SB 100 states that it is the policy of the state that eligible renewable energy resources and zero-carbon resources supply 100% of the retail sales of electricity to California. This bill requires that the achievement of 100% zero-carbon electricity resources do not increase the carbon emissions elsewhere in the western grid and that the achievement not be achieved through resource shuffling.

AB 32
In furtherance of the goals established in EO S-3-05, the Legislature enacted Assembly Bill (AB) 32 (Núñez and Pavley). The bill is referred to as the California Global Warming Solutions Act of 2006 (September 27, 2006). AB 32 provided initial direction on creating a comprehensive multiyear program to limit California's GHG emissions to 1990 levels by 2020 and initiate the transformations required to achieve the state's long-range climate objectives.

SB 1078, SB 107, and Executive Order S-14-08
SB 1078, SB 107, and Executive Order S-14-08 require California to generate 20% of its electricity from renewable energy by 2017. SB 107 then changes the 2017 deadline to 2010. Executive Order S-14-08 required that all retail sellers of electricity serve 33 percent of their load with renewable energy by 2020.

Executive Order S-3-05
EO S-3-05 (June 2005) established California's GHG emissions reduction targets and laid out responsibilities among the state agencies for implementing the EO and for reporting on progress toward the targets. This EO established the following targets:

- By 2010, reduce GHG emissions to 2000 levels

- By 2020, reduce GHG emissions to 1990 levels
- By 2050, reduce GHG emissions to 80% below 1990 levels

EO S-3-05 also directed the California EPA to report biannually on progress made toward meeting the GHG targets and the impacts to California due to global warming, including impacts to water supply, public health, agriculture, the coastline, and forestry. The Climate Action Team was formed, which subsequently issued reports from 2006 to 2010 (CAT 2006, 2010).

San Joaquin Valley Air Pollution Control District
SJVAPCD adopted a Climate Change Action Plan (CCAP) in August 2008. While the plan does not have regulatory powers, it directs SJVAPCD to develop guidance to assist District staff, valley businesses, land-use agencies, and other permitting agencies in addressing GHG emissions as part of the CEQA process.

California's 2017 Climate Change Scoping Plan
CARB developed a Plan to reduce GHG emissions. The main goal is to identify policies and actions to meet the State's 2030 GHG goals. This Plan builds on the efforts and plans from the initial scoping plan.

Kings County Association of Governments (KCAG) 2019 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS)
The RTP/SCS was developed to target a ten percent decrease in GHGs from 2005 levels by 2035. This target was provided by CARB. The KCAG Projects that the County will meet this target. Projects within the County will need to achieve this target level.

City of Hanford General Plan
The 2035 General Plan includes the policies related to greenhouse gases that correlate to the proposed Project:

***Objective AQ 10*:** Identify and achieve greenhouse gas emission reduction targets consistent with the City's proportionate fair share as may be allocated by the California Air Resources Board and Kings County Association of Governments.

- *Policy AQ 10.1:* As recommended in the San Joaquin Valley Air Pollution Control District's Guidance for Valley Land-use Agencies in Addressing GHG Emission Impacts for New Projects under CEQA (December 2009), the City establishes an initial goal of reducing greenhouse gas emissions from development Projects within its authority by 29 percent below the year 2020 business as usual emissions. The City will also work with the Kings County Association of Governments to ensure that it achieves its proportionate fair share reduction in greenhouse gas emissions as may be identified under the provisions

of SB 375 (2008 Chapter 728) for any Projects or activities requiring approval of Kings County Association of Governments.

Discussion

a) Would the Project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.

Less Than Significant Impact: The SJVAPCD does not provide numeric thresholds to assess the significance of greenhouse gas emissions. Instead, the SJVAPCD "Guidance for Valley Land Use Agencies in Addressing GHG Emission Impacts for New Projects under CEQA" states that Projects which achieve a 29% GHG emission reduction compared to Business as Usual (BAU) would be determined to have a less than significant individual and cumulative impact for GHG. "Business as usual" (BAU) conditions are defined based on the year 2005 building energy efficiency, average vehicle emissions, and electricity energy conditions. The BAU conditions assume no improvements in energy efficiency, fuel efficiency, or renewable energy generation beyond that existing today. Policy *AQ 10.1* from the Hanford General Plan establishes this goal for Hanford. The 2005 Business-as-Usual (BAU) conditions were estimated using CalEEMod in the Air Quality and GHG Assessment (Appendix A1 and Appendix C). In order to simulate 2005 BAU conditions in CalEEMod, the construction dates began in 2005, and the system will automatically use historical emissions data to calculate emissions based on the equipment standards and technology available at that time.

Implementation of the proposed Project would result in long-term greenhouse gas emissions associated with area sources, such as natural gas consumption, landscaping, applications of architectural coatings, and consumer products, as well as mobile emissions to and from the Project Site. The GHG emissions were estimated using CalEEMod (Appendix A1). Total Project emissions, as shown in Table 14, include operational emissions resulting from the Project and construction emissions, which were amortized over a 20-year period. CalEEMod provided the maximum yearly emissions resulting from construction, so this value was used as a conservative estimate. To calculate total Project emissions, the annual amortized construction emissions were added to the operational emissions, each representing total megatons (MT) of GHG emissions per year.

Table 14: Projected Operational GHG Emissions Compared to 2005 BAU

	C02 (MT/Year)	CH4 (MT/Year)	N20 (MT/Year)	CO2e (MT/Year)
Total Project Emissions	6,411	17.62	0.36	6,960
2005 BAU	21,044	18.35	1.32	21,859
% Reduction From BAU	70%	3.9%	72%	**68%**

Source: (CalEEMod, V.2020.4.0)

The Project's operational emissions are estimated to be 14,899 CO2e MT lower than the 2005 BAU. This is a reduction of 68%, more than the 29% threshold. Therefore, the impact is considered *less than significant.*

b) Would the Project conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

Less than Significant: The Project will be consistent with all applicable plans, policies, and regulations, including the Regional Climate Action Plan for Kings County.

Consistency with the Regional Climate Action Plan

The Regional Climate Action Plan (CAP) for Kings County identifies various goals and policies that promote the use of clean and renewable energy sources, reduce GHG emissions, conserve water, and promote the efficient and sustainable use of energy. The document also identifies cost-effective measures that can be taken by local governments to reduce GHG emissions from activities within Kings County consistent with California State Assembly Bill (AB) 32. These measures will not only reduce emissions but also support local economic development and improve public health and quality of life.

Table 15. Consistency with the Kings County Regional CAP

CAP Policies	Project Consistency
Goal E-4: On-Site Small-Scale Solar Energy	
E-4.2: Work with the building industry to incorporate designs improving solar readiness into building plans through voluntary green building guidelines.	*Consistent.* The Project buildings would be designed with solar panels and would be compliant with Title 24 requirements for building efficiency.
Goal TL-1: Infill and Mixed-Use Development	
TL-1.1: Support and encourage mixed-use and medium- and high-density land use categories located within ¼ mile of a transit stop, park and ride facility, or existing developed areas, by allowing flexible zoning	*Consistent.* The Project proposes a variety of uses on one site which will include low, medium, and high-density residential housing, commercial, parks/recreation, and

and/or density bonuses for applicable Projects.	educational land uses. The Project is located within ¼ mile of existing developed areas.
Goal TL-2: Bicycle and Pedestrian Environment	
TL-2.2: Incorporate multi-modal improvements into pavement resurfacing, restriping, and signalization operations where safety and convenience of users can be improved within the scope of work.	*Consistent.* The planned internal roads will incorporate a Class I Bike Path alongside the roadway, which will promote multimodal transportation within the community connect the residential, educational, commercial and park land uses.
TL-2.4: Encourage the installation of adequate and secure bicycle parking at all multi-family residential, commercial, governmental, and recreational locations throughout the region.	*Consistent.* Bike racks will be implemented in the neighborhood commercial center, apartment complex and community park.
TL-2.5: Support land use planning that will promote pedestrian and bicyclist access to and from new development by encouraging land use and subdivision designs that provide safe bicycle and pedestrian circulation, including bicycle parking facilities and internal bicycle and pedestrian routes, where feasible.	*Consistent.* The Project includes an internal Class I Bike/Pedestrian Path which will form a loop, connecting all land uses to the multimodal circulation system. As previously mentioned, bike racks will be included as part of the Project design.
Goal T-1: Trees, Parks, and Open Space	
T-1.1: Provide tree planting guidelines that address the types of trees appropriate to plant in the region, with emphasis placed on native, drought-tolerant trees.	*Consistent.* The Project's landscaping will comply with the provisions set forth in the City of Hanford's landscape ordinance (Section 12.08.090). Therefore, the Project will plant native species where feasible and select trees based on applicable local tree ordinances, with an emphasis on drought tolerant species.
T-1.3: Identify and secure undeveloped land that could be vegetated and converted to parkland or open space.	*Consistent.* The Project site is currently undeveloped and includes the construction of a 27.59-acre park.
Goal TL-5: Parking Supply Management	
TL.5.1: Conduct an assessment of existing parking requirements and identify opportunities to reduce them as a means of facilitating alternative transportation.	*Consistent.* The Project proposes approximately 488 parking spaces in the neighborhood commercial zone, which abides by the provisions in the City's municipal code (Table 17.54.040) for "Integrated Shopping Center", which allows 1 space per 300 square feet. The maximum

	parking density allowed is 1 space per 150 square feet. Reducing the parking spaces may facilitate alternative transportation near the Project site.

As shown in Table 15, the Project is generally consistent with the goals and objectives set forth in the Regional Climate Action Plan. The Project does not conflict with any other plans, policies or regulations aimed at reducing GHG emissions. The Project overall increases the accessibility of resources to nearby residents and therefore reduces vehicle trips. The impact is *less than significant.*

IX. HAZARDS AND HAZARDOUS MATERIALS

Would the Project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☑	☐	☐	☐
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☐	☑	☐
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☑	☐	☐	☐
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard or excessive noise to the public or the environment?	☐	☐	☐	☑
e) For a Project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the Project result in a safety hazard for people residing or working in the Project area?	☐	☐	☐	☑
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☑
g) Expose people or structures, either directly or indirectly, to significant risk of	☐	☐	☐	☑

loss, injury or death involving wildland fires?				

Environmental Setting

As shown in Figure 9, the proposed Project site is located across Flint Avenue, about 50 feet from the nearest school (Hanford Christian School) and is proposing a school on the Project site. The Project Site is approximately 3.1 miles northwest of the nearest public airport (Hanford Municipal Airport).

The Department of Toxic Substances Control's (DTSC's) Envirostor was used to identify any sites known to be associated with releases of hazardous materials or wastes within the Project area. This research confirmed that the Project would not be located on or near a site that is included on a list of hazardous materials sites compiled according to Government Code Section 65962.5.

Regulatory Setting

Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (42 U.S. Code [U.S.C.] §9601 et seq.).

The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA, or the Superfund Act) authorizes the President to respond to releases or threatened releases of hazardous substances into the environment.

Occupational Safety and Health Administration

The Occupational Safety and Health Administration (OSHA) sets and enforces Occupational Safety and Health Standards to assure safe working conditions. OSHA provides training, outreach, education, and compliance assistance to promote safe workplaces. The proposed Project would be subject to OSHA requirements during construction, operation, and maintenance.

Toxic Substances Control Act of 1976 (15 U.S.C. §2601 et seq.).

The Toxic Substance Control Act was enacted by Congress in 1976 and authorizes the EPA to regulate any chemical substances determined to cause an unreasonable risk to public health or the environment.

Hazardous Waste Control Law, Title 26.

The Hazardous Waste Control Law creates hazardous waste management program requirements. The law is implemented by regulations contained in Title 26 of the California Code of Regulations (CCR), which contains requirements for the following aspects of hazardous waste management:

- Identification and classification;

- Generation and transportation;
- Design and permitting of recycling, treatment, storage, and disposal facilities;
- Treatment standards;
- Operation of facilities and staff training; and
- Closure of facilities and liability requirements.

California Code of Regulations, Title 22, Chapter 11.
Title 22 of the California Code of Regulations contains regulations for the identification and classification of hazardous wastes. The CCR defines waste as hazardous if it has any of the following characteristics: ignitability, corrosivity, reactivity, and/or toxicity.

California Emergency Services Act
The California Emergency Services Act created a multi-agency emergency response plan for the state of California. The Act coordinates various agencies, including CalEPA, Caltrans, the California Highway Patrol, regional water quality control boards, air quality management districts, and county disaster response offices.

City of Hanford General Plan

The 2035 General Plan includes policies related to hazards and hazardous materials that correlate to the proposed Project:

***Goal H6*:** Avoidance of properties contaminated by toxic or hazardous materials.

- *Policy H30. Industrial Hazardous Materials*: Require industrial uses that rely extensively on the use of hazardous materials to adopt an acceptable use, storage, disposal, and emergency response program that has been approved by appropriate agencies.
- *Policy H31. Adequate Separation from Sensitive Uses*: Require adequate separation between industrial areas where hazardous materials are present and sensitive uses such as schools, residential areas, parks, and public facilities.
- *Policy H32. Project Review Evaluation*: Evaluate the risks involving the disposal, transport, manufacture, storage, and handling of hazardous material in Hanford in the Project review process.
- *Policy H34. Sensitive Receptors*: Avoid sitting uses with new sensitive receptors near existing industrial facilities that use or produce hazardous material or may emit toxic air contaminants.

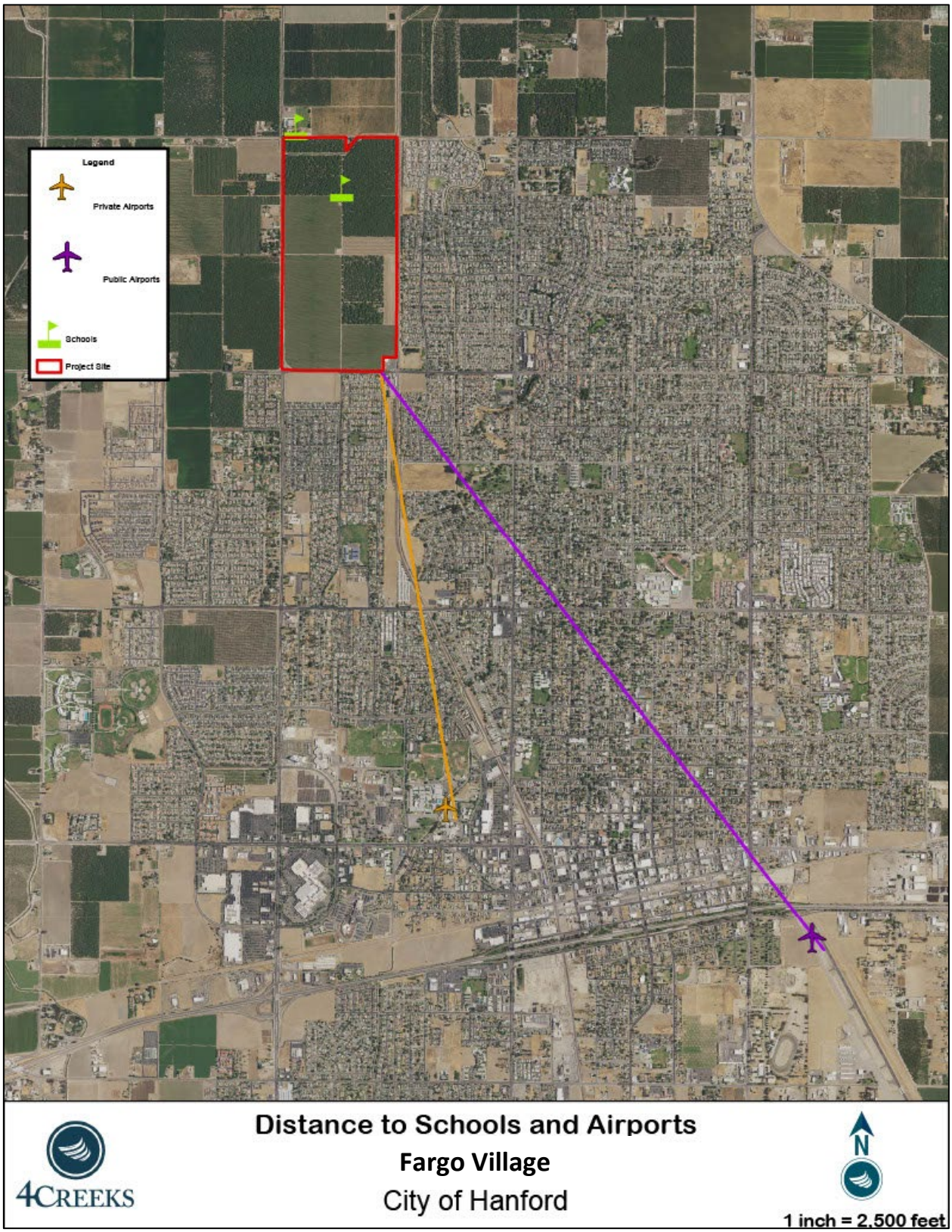


Figure 9: Distance to Schools & Airports Map

Discussion

a) Would the Project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

Potentially Significant: Project construction activities may involve the use, storage, and transport of hazardous materials. During construction, the contractor will use fuel trucks to refuel onsite equipment and may use paints and solvents to a limited degree. The storage, transport, and use of these materials will comply with Local, State, and Federal regulatory requirements. There is the potential for small leaks due to refueling of construction equipment, however, standard construction Best Management Practices (BMPs) included in the SWPPP will reduce the potential for the release of construction-related fuels and other hazardous materials by controlling runoff from the site and requiring proper disposal or recycling of hazardous materials.

In operation, the Project will consist of residential and commercial uses, including a gas station. The type of hazardous materials that would be associated with the residential component of the Project would include household cleaners, landscape maintenance, soaps, pesticides for pest control, etc. Hazardous materials associated with small commercial developments include commercial cleaners, motor oil, solvents, and waste expected from small commercial operations. The hazardous materials associated with the residential and small commercial portion would not be of the type and quantity that would pose a significant hazard to the public. The gas station, however, would contain hazardous materials including waste fuel (gasoline or kerosene), spent spill cleanup absorbents, spent filters, and catchment basin waste. Gas stations are considered hazardous waste generators and have the potential to be released, causing harm to the environment and human health. Because of the gas station, the Project would routinely transport, use, or dispose of hazardous materials that could pose a significant hazard to the public if released or improperly stored.

In order to assess the potential hazards to the public associated with the gas station, a Health Risk Assessment (HRA) has been prepared by Core Environmental Consulting for the Project and is included in Appendix D of the EIR. The HRA assesses potential toxic air contaminants (TACs) resulting from the gas station and the hazards posed to nearby sensitive receptors, which is analyzed in greater detail in the EIR. The impact is *potentially significant.*

b) Would the Project create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

Less than Significant Impact: The Project's construction would involve the use of diesel fuel to power construction equipment, gasoline, solvents, architectural coatings, and equipment lubricants. Additionally, there will be frequent transportation of gas and diesel fuel due to the proposed gas station. These materials, however, are strictly controlled and regulated and in the event of any spill, cleanup activities would be required to adhere to all pertinent protocols in the Hanford municipal code. Should an accidental hazardous release occur, or should the Project encounter hazardous soils, existing regulations for handling hazardous materials require coordination with the California Department of Toxic Substances Control for an appropriate plan of action, which can include studies or testing to determine the nature and extent of contamination, as well as handling and proper disposal. Therefore, potential impacts are *less than significant*.

c) Would the Project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

PotentiallySignificant Impact: The Project is located across Flint Avenue from an existing school and proposes a school on the Project Site. The Project would involve the use or storage of hazardous substances such as small amounts of pesticides, fertilizers, cleaning agents required for the normal maintenance of structures and landscaping as well as the gasoline and fuel waste associated with gas stations. The Project could potentially emit hazardous emissions or involve the handling of hazardous materials or waste associated with the proposed gas station and is within one-quarter mile of an existing school and a proposed school. The gas station would involve emissions that may be hazardous to the sensitive receptors surrounding the Project site to the north, south and east.

Potential toxic air contaminants (TACs) that may be released include benzene, toluene, ethylbenzene, xylenes, naphthalene, propylene, and n-Hexane, which pose risks to human health. The HRA prepared by Core Environmental Consulting will characterize potential cancer and noncancer health impacts to the public as part of the SJVAPCD's air toxics program. These hazardous emissions will be analyzed in greater detail in the Focused EIR for the Project, and the HRA can be found in Appendix D of the EIR. As such, impacts are *potentially significant.*

d) Would the Project be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

No Impact: The Project site is not listed as a hazardous materials site according to the Cortese List compiled under Government Code Section 65962.5 for hazardous waste facilities (CalEPA, n.d.). There would be *no impact.*

e) For a Project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the Project result in a safety hazard or excessive noise for people residing or working in the Project area?

No Impact: The proposed Project is located approximately 3.1 miles northwest of the nearest public airport (Hanford Municipal Airport) and is not located in an airport land use plan, according to the Airport Master Plan (City of Hanford 2010). Implementation of the proposed Project would not result in a safety hazard for people residing or working in the Project area. There is *no impact.*

f) Would the Project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

No Impact: The City's design and environmental review procedures shall ensure compliance with emergency response and evacuation plans. In addition, the site plan will be reviewed by the Fire Department per standard City procedure to ensure consistency with emergency response and evacuation needs. Therefore, the proposed Project would have *no impact* on emergency evacuation.

g) Would the Project expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?

No Impact: The land surrounding the Project site is developed with urban uses and farmlands which are not considered to be wildlands. Additionally, the City of Hanford General Plan finds that fire hazards within the Planning Area (Hanford's Sphere of Influence), including the proposed Project site, have low frequency, limited extent, limited magnitude, and low significance. The proposed Project would not expose people or structures to a significant risk of loss, injury, or death involving wildland fires and there is *no impact.*

X. HYDROLOGY AND WATER QUALITY

Would the Project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
a) Violate any water quality standards or waste discharge requirements or otherwise sustainably degrade surface or ground water quality?	☐	☑	☐	☐
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the Project may impede sustainable groundwater management of the basin?	☐	☐	☑	☐
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner, which would:				
(i) result in substantial erosion or siltation on- or off-site?	☐	☑	☐	☐
(ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite?	☐	☑	☐	☐
(iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or	☐	☑	☐	☐
(iv) impede or redirect flood flows?	☐	☑	☐	☐
d) In flood hazard, tsunami, or seiche zones risk the release of pollutants due to Project inundation?	☐	☐	☐	☑
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater movement plan?	☐	☐	☑	☐

Environmental Setting

Surface Water

Hanford is in the Tulare Lake Hydrologic Study Area (TLHSA). Most surface water in the TLHSA originates from the Sierra Nevada Mountain Range. There are no significant surface water features in Hanford outside of natural and manmade drainage ways and canals. The Kings River is about four miles North of Hanford. No surface water is used in Hanford's Water System.

Groundwater

Hanford is located in the Tulare Lake Hydrologic Region and is within the Tulare Lake Groundwater Subbasin which transmits filters, and stores water from the main San Joaquin Valley Groundwater Basin. Groundwater is recharged by rain and snowfall in addition to percolation from stormwater basins, local waterways, and agricultural irrigation. The City of Hanford also recharges the groundwater table through the disposal of treated disinfected wastewater from its wastewater treatment facility. Each day approximately 5 million gallons of water are processed through the facility and discharged as irrigation water for specific types of crops on land owned outside the City. The quality of groundwater within Hanford is acceptable. The City of Hanford's water supply system is a groundwater system. The system consists of 14 groundwater wells, three storage reservoirs, distribution mains, and fire hydrants.

Stormwater Drainage

The existing drainage infrastructure within the City of Hanford's Stormwater Management Program includes natural drainage channels, retention basins, natural vegetation, piping, and pump stations. There are some areas where storm drainage is controlled by drainage inlets and underground structures. The system consists of 30 pump stations, 57 miles of pipeline, and 568 acre-feet of drainage basins and drainage ditches. Additionally, the City is planning to add approximately 317 acre-feet of drainage basins. The Project includes a 7.12-acre, on-site basin that can hold up to 51.23 acre-feet of stormwater. The stormwater will percolate and allow for groundwater recharge.

Regulatory Setting

Clean Water Act

The Clean Water Act (CWA) is enforced by the U.S. EPA and was developed in 1972 to regulate discharges of pollutants into the waters of the United States. The Act made it unlawful to discharge any pollutant from a point source into navigable waters unless a National Pollution Discharge Elimination System (NPDES) Permit is obtained.

National Flood Insurance Act

The Federal Emergency Management Agency (FEMA) is tasked with responding to, planning for, recovering from, and mitigating disasters. The Federal Insurance and Mitigation Administration within FEMA is responsible for administering the National Flood Insurance

Program (NFIP) and administering programs that aid with mitigating future damages from natural hazards.

Sustainable Groundwater Management Act (SGMA)

In September 2014, the Sustainable Groundwater Management Act (SGMA) was passed as a three-bill legislative package composed of AB 1739 (Dickinson), SB 1168 (Pavley), and SB 1319 (Pavley). The legislation provides a framework for sustainable management of groundwater supplies by local authorities, with a limited role for state intervention when necessary to protect the resource. The legislation lays out a process and a timeline for local authorities to achieve sustainable management of groundwater basins. It also provides tools, authorities, and deadlines to take necessary steps to achieve the goal. In general, to comply and implement SGMA, agencies must:

1. Form local Groundwater Sustainability Agencies (GSA) (deadline by 6/30/2017);
2. GSAs must adopt Groundwater Sustainability Plans (GSPs) within five to seven years, depending on whether a basin is in critical overdraft (deadline 1/31/2020 for critically over drafted basins or 1/31/2022 for high and medium priority basins not currently in overdraft); and,
3. Once GSPs are in place, local agencies have 20 years to fully implement and achieve the sustainability goal.

The Kaweah Groundwater Subbasin is collectively managed by three GSAs consisting of the East Kaweah GSA, the Mid-Kaweah GSA (MKGSA), and the Greater Kaweah GSA (GKGSA). Although the Project site is currently within the boundaries of the MKGSA. The GKGSA and the MKGSA GSPs were submitted to DWR on January 31, 2020.

California Water Quality Porter-Cologne Act

California's primary statute leading water quality and water pollution concerns concerning both surface waters and groundwater is the Porter-Cologne Water Quality Control Act of 1970 (Porter-Cologne Act). The Porter-Cologne Act grants the State Water Resource Control Board (SWRCB) and each of the nine Regional Water Quality Boards (RWQCB) power to protect water quality and further develop the Clean Water Act within California. The applicable RWQCB for the proposed Project is the Central Valley RWQCB.

Central Valley RWQCB

The proposed Project site is within the jurisdiction of the Central Valley RWQCB. The Central Valley RWQCB requires a National Pollution Discharge Elimination System (NPDES) Permit and Stormwater Pollution Prevention Plan (SWPPP) for Projects disturbing more than one acre of the total land area. Because the Project is greater than one acre, an NPDES Permit and SWPPP will be required.

City of Hanford General Plan

The 2035 General Plan includes the policies related to hydrology and water quality that correlate to the proposed Project:

- *Policy O24. Drought Tolerant Vegetation*: Promote the use of drought-tolerant vegetation to minimize water consumption by providing information to developers, designers, and homebuyers.
- *Policy O25. Recharge Basins*: Protect existing groundwater recharge basins and natural and manmade sloughs and seek the establishment of new basins within and around Hanford.
- *Policy O29. Water Conservation Measures for New Development*: Encourage new development Projects to include water conservation measures, including use of graywater, reclaimed, or recycled water for landscaping, water-conserving plumbing fixtures and appliances, and water-efficient landscapes.
- *Policy O30. Storm Water Pollution Prevention*: Implement the NPDES Stormwater Permit and for those properties exempt from the Permit, require a storm water pollution prevention plan, including use of best management practices, to control erosion and sedimentation during construction.
- *Policy P3. Water Supply and Fire Flow Availability*: Condition approval of new development Projects and water service extensions on the availability of adequate water supply and the ability to meet domestic and fire flow needs of the area.
- *Policy P7. New Water Infrastructure*: Require developers to fund and install new water distribution facilities to service their new developments.
- *Policy P19. Multi-use Storm Water Basins*: Where appropriate, support dual-purpose storm water detention basins for multiple use as parks.
- *Policy P21. New Storm Water Drainage Infrastructure*: Require developers to fund and install new storm water drainage facilities to service their new developments.
- *Policy P24. New Development Run-Off Volumes*: Require new development to discharge storm water runoff at volumes no greater than the capacity of any portion of the existing downstream system by utilizing detention or retention or other approved methods, unless the Project is providing drainage infrastructure in accordance with an adopted drainage plan.
- *Policy H20. New Development Requirements for Flood Protection*: Require new development to provide onsite drainage or contribute towards their fair share cost of off-site drainage facilities to handle surface runoff.

Discussion

a) Would the Project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?

Less than Significant with Mitigation: The Project will result in less than significant impacts on water quality due to potentially polluted runoff generated during construction activities. Construction may include excavation, grading, and other types of earthworks across most of the 304-acre Project site. During storm events, exposed construction areas across the Project site may cause runoff to carry pollutants, such as chemicals, oils, sediment, and debris. The RWQCB requires all Projects over one acre in size implement at a Stormwater Pollution Prevention Plan (SWPPP) A SWPPP identifies all potential sources of pollution that could affect stormwater discharges from the Project site and identifies best management practices (BMPs) related to stormwater runoff. In addition, runoff resulting from the Project would be managed by the City in compliance with the Storm Drainage Master Plan in addition to approved grading and drainage plans.

Mitigation measures HYD-1 and HYD-2 will be implemented, which address concerns related to surface and groundwater quality. Mitigation measure HYD-1 requires a notice of intent (NOI) for discharge to be filed with the California SWRCB Storm Water Permit Unit prior to the issuance of any permits, as well as inspection of the site during construction for compliance. HYD-2 requires the preparation of a Stormwater Pollution Prevention Plan (SWPPP), which implements various best management practices (BMPs) to control the discharge of material from the site.

The proposed Project would not violate any water quality standards or waste discharge requirements or other substantially degrade surface or groundwater quality with the implementation of Mitigation Measures HYD- 1 and HYD-2. The impacts remain *less than significant with mitigation.*

b) Would the Project substantially decrease groundwater supplies or interfere with groundwater recharge such that the Project may impede sustainable groundwater management of the basin?

Less than Significant Impact: A Water Supply Assessment was developed for this Project and can be found in Appendix F.

The Project area is located within the Tulare Lake Subbasin of the San Joaquin Groundwater Basin. The Tulare Lake Subbasin is considered by DWR to be a high priority basin according to SGMA and in critical overdraft condition (Appendix F). The subbasin is collectively managed by three GSAs consisting of the East Kaweah GSA, the Mid-Kaweah GSA (MKGSA),

and the Greater Kaweah GSA (GKGSA). The Project site is currently within the boundaries of the MKGSA. Each of the GSAs within the subbasin have developed a Groundwater Sustainability Plan (GSP) but collectively have determined a subbasin-wide sustainable yield of 660,000 acre-feet per year (AFY) (Appendix F).

The water supply for the proposed Project would primarily be provided by the City although some irrigation of landscaping and the park may come from existing on-site wells. According to the City of Hanford Urban Water Management Plan (2020) and the City's website, the City sources its water supply from groundwater through a network of 15 wells, 3.5 million gallons of storage tanks, and 203 miles of main lines, serving over 15,600 individual connections to the system. The estimated water demand for the proposed Project is 671.5 AFY.

According to the Land Use/Water Supply Handbook prepared for the Northern California Water Association in 2007, orchards demand 3.5 acre-feet of water per acre, per year. Therefore, the existing use of the on-site wells for the orchard irrigation totals 1064 AFY (See Appendix F). Therefore, the proposed Project would represent a decline in the total groundwater demand for the Project site and would not decrease groundwater supplies or impede with sustainable groundwater management of the basin.

The proposed Project would create new impervious surfaces that would reduce the amount of on-site infiltration that occurs under existing conditions. However, as mentioned above, the proposed Project would be required to include post-construction BMPs in accordance with the City's Stormwater Management Plan. Post-construction BMPs would include stormwater drainage features that encourage on-site infiltration of stormwater runoff including vegetated swales, porous pavement, landscaped areas, detention basins and/or similar improvements. The proposed residential areas would include natural areas that would be graded to also serve for stormwater detention. As a result, the amount of runoff that is discharged offsite would be minimized.

Therefore, the proposed Project would require decreases in water demands compared to existing agricultural land use and while there would be an increase in impervious surfaces compared to existing conditions, the adherence to drainage control requirements would minimize the effect on groundwater recharge. As such, the potential impacts related to groundwater supplies would be considered *less than significant.*

c) Would the Project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner, which would:

i. Result in substantial erosion or siltation on- or off-site?

Less than Significant with Mitigation: The proposed Project would result in the addition of impervious surfaces and alter existing drainage patterns on the 304-acre Project site which would have the potential to result in erosion or siltation on- or off-site. The disturbance of soils during construction could cause erosion, resulting in temporary construction impacts. However, this impact would be appropriately reduced through the implementation of a Stormwater Pollution Prevention Plan (SWPPP) which includes mandated erosion control measures and are developed to prevent significant impacts related to erosion caused by runoff during construction (Mitigation Measure HYD-1). The Project proponent will also be required to prepare drainage plans (Mitigation Measure HYD-2) and a Development Maintenance Manual (Mitigation Measure HYD-3) to ensure that existing drainage patterns are maintained during Project operations and that that the Project would not result in substantial erosion or siltation on- or off-site. The impact is *less than significant with the implementation of these mitigation measures.*

ii. Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite?

Less than Significant with Mitigation: The proposed Project would result in the addition of impervious surfaces on the 304-acre Project site which would have the potential to increase surface runoff resulting in flooding on or off-site. This impact would be appropriately mitigated through the implementation of Mitigation Measure HYD-2, which requires the Project to submit drainage plans to the City Engineer before the issuance of grading permits. The drainage plans will include BMPs to ensure runoff from the Project will not result in flooding on- or off-site. Therefore, impacts are *less than significant with mitigation.*

iii. Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?

Less than Significant with Mitigation: The proposed Project would result in the addition of impervious surfaces and alter existing drainage patterns on the 304-acre Project site which would have the potential to impact existing stormwater drainage systems or provide additional sources of polluted runoff. The Project proposes a 6.18-acre stormwater retention basin to collect all runoff from the site. According to the City-approved site plan prepared by 4Creeks, Inc., the stormwater retention basin has the capacity to hold 58.63 acre-feet of

stormwater. The rational formula was used to calculate the approximate stormwater runoff in cubic feet per second resulting from the proposed Project. The formula is shown below:

$$Q = C \times I \times A$$

Where:

C = runoff coefficient, which represents the fraction of rainfall that will appear as runoff (0.85 for impervious surfaces)
I = Rainfall intensity (in inches per hour) for a storm of a specified return period and duration
A = Drainage area (in acres)

The rainfall intensity was determined using rainfall data from the NOAA Atlas 14 database, and a return period of 100-years was selected for a rainfall duration of one hour. This represents a rainfall intensity event that has a 1% chance of occurring each year, as conservative estimate. An acreage of 276.41 was assumed, which takes into account the 27.59-acre park which is not an impervious surface. The results of the rational method calculations are shown below in Table 16.

Table 16. Stormwater Runoff Estimates

Storm Duration	Runoff Volume	Basin Capacity?
1 - hour	655,200	yes
2-hour	1,310,400	yes
3-hour	1,965,600	yes
4-hour	2,620,800	no

The disturbance of the soil during construction could cause erosion, resulting in temporary construction impacts regarding polluted runoff. However, this impact would be appropriately reduced through the implementation of a Stormwater Pollution Prevention Plan (SWPPP) which includes mandated erosion control measures, which are developed to prevent significant impacts related to erosion caused by runoff during construction (Mitigation Measure HYD-1). During Project operations, the additional impervious surfaces, including roads, building pads, and parking areas, would collect automobile-derived pollutants such as oils, greases, rubber, and heavy metals. This could contribute to point source and non-point source pollution if these pollutants were transported into waterways during storm events.

The Project proponent will be required to prepare drainage plans (Mitigation Measure HYD-2) and a Development Maintenance Manual (Mitigation Measure HYD-3) to ensure that the Project would not overwhelm the planned stormwater drainage basin or result in discharges of polluted runoff into local waterways. Additionally, the on-site stormwater retention basin has more than enough capacity to accommodate expected stormwater flows resulting from the Project. The impact is *less than significant with mitigation.*

iv. Impede or redirect flood flows?

Less than Significant with Mitigation: The Project site is generally flat and no significant grading or leveling will be required. The proposed Project site is not in proximity to a stream or river and will not alter the course of a stream or river. An irrigation canal is in the northern portion of the site. According to National Flood Hazard mapping by the Federal Emergency Management Agency, the proposed Project is in the X flood zone, which has a 0.2 percent chance of flooding per year. The proposed Project would result in the addition of impervious surfaces on the 304-acre Project site which could affect drainage and flood patterns. This impact would be appropriately mitigated through the implementation of Mitigation Measure HYD-2, which requires the Project to submit drainage plans to the City Engineer before the issuance of grading permits. The drainage plans will include BMPs to ensure the Project would not impede or redirect flood flows. Therefore, impacts are *less than significant with mitigation.*

d) Would the Project, in flood hazard, tsunami, or seiche zones, risk the release of pollutants due to Project inundation?

No Impact: The proposed Project is located inland and not near an ocean or large body of water, therefore, would not be affected by a tsunami. The proposed Project is in a relatively flat area and would not be impacted by inundation related to mudflow. Since the Project is in an area that is not susceptible to inundation, the Project would not risk the release of pollutants due to Project inundation. As such, there is *no impact.*

e) Would the Project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

Less than Significant: According to the City's Urban Water Management Plan (2020), the City is Projected to demand a total of 13,982 AFY by 2045. The proposed Project is estimated to demand approximately 671.5 acre-feet/year (AFY) and will be fully operational by the year 2045. The Project's expected water demand when combined with the current water demand will not exceed the amount Projected for the year 2045, so the Project is not expected to conflict with the City's Urban Water Management Plan. Additionally, there would still be approximately 4,428 AFY available within the City's supplies after considering the demand in the year 2045, so modest increases in water demand beyond what is

expected for the Project would not exhaust the City's current water resources. The proposed Project is consistent with the Central Valley RWQCB. The Project will comply with all applicable rules and regulations regarding water quality and groundwater management, *there is a less than significant impact.*

Mitigation Measures for Hydrology and Water Quality

Mitigation Measure HYD-1: Prior to the issuance of any construction/grading permit and/or the commencement of any clearing, grading, or excavation, the Applicant shall submit a Notice of Intent (NOI) for discharge from the Project site to the California SWRCB Storm Water Permit Unit.

- Prior to issuance of grading permits for Phase 1 the Applicant shall submit a copy of the NOI to the City.
- The City shall review noticing documentation prior to approval of the grading permit. City monitoring staff will inspect the site during construction for compliance.

Mitigation Measure HYD-2: The Applicant shall require the building contractor to prepare and submit a Storm Water Pollution Prevention Plan (SWPPP) to the City 45 days prior to the start of work for approval. The contractor is responsible for understanding the State General Permit and instituting the SWPPP during construction. A SWPPP for site construction shall be developed prior to the initiation of grading and implemented for all construction activity on the Project site in excess of one (1) acre, or where the area of disturbance is less than one acre but is part of the Project's plan of development that in total disturbs one or more acres. The SWPPP shall identify potential pollutant sources that may affect the quality of discharges to storm water and shall include specific BMPs to control the discharge of material from the site. The following BMP methods shall include, but would not be limited to:

- Dust control measures will be implemented to ensure success of all onsite activities to control fugitive dust;
- A routine monitoring plan will be implemented to ensure success of all onsite erosion and sedimentation control measures;
- Provisional detention basins, straw bales, erosion control blankets, mulching, silt fencing, sand bagging, and soil stabilizers will be used;
- Soil stockpiles and graded slopes will be covered after two weeks of inactivity and 24 hours prior to and during extreme weather conditions; and,
- BMPs will be strictly followed to prevent spills and discharges of pollutants onsite, such as material storage, trash disposal, construction entrances, etc.

Mitigation Measure HYD-3: A Development Maintenance Manual for the Project shall include comprehensive procedures for maintenance and operations of any stormwater facilities to ensure long term operation and maintenance of post-construction stormwater controls. The maintenance manual shall require that stormwater BMP devices be inspected, cleaned, and maintained in accordance with the manufacturer's maintenance conditions. The manual shall

require that devices be cleaned prior to the onset of the rainy season (i.e., mid-October) and immediately after the end of the rainy season (i.e., mid-May). The manual shall also require that all devices be checked after major storm events. The Development Maintenance Manual shall include the following:

- Runoff shall be directed away from trash and loading dock areas;
- Bins shall be lined or otherwise constructed to reduce leaking of liquid wastes;
- Trash and loading dock areas shall be screened or walled to minimize offsite transport of trash;
- Impervious berms, trench catch basin, drop inlets, or overflow containment structures nearby docks and trash areas shall be installed to minimize the potential for leaks, spills or wash down water to enter the drainage system.

XI. LAND USE AND PLANNING

Would the Project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
a) Physically divide an established community?	☐	☐	☐	☑
b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☑	☐

Environmental Setting

The proposed Project site is in the northwest corner of the City of Hanford. The site is approximately 2.5 miles northwest of the Hanford downtown. The site is currently designated as Low, Medium, and High Density Residential, Neighborhood Commercial, Educational Facilities and Open Space by the City of Hanford General Plan (See Figures 10 &11). The circular demarcation of the Educational and Open Space Facilities on the General Plan Land Use Map (Figure 10) represents a permitted use within the zone that can be applied as soon as the land is purchased by the public agency, and they are referred to as "floating designations" by the City of Hanford. The zoning for the site includes Low, Medium, and High Density Residential (R-L-5, R-M, R-H) and Neighborhood Commercial (C-N) designations (See Figure 11). The proposed Project is in compliance with the General Plan Land Use designations; however, a Planned Unit Development will be required in order to blend the densities, permit the non-standard alleyway widths, implement private drives and to build townhomes with zero setbacks.

The site currently contains agriculture uses with a small storage building and irrigation equipment. The site is topographically flat and is bounded by agricultural uses and a school to the north, agricultural uses and single-family homes to the south, agricultural uses and rural residential homes to the east, and single-family homes and a railroad to the west. The General Plan designates the vacant area to the south as neighborhood mixed-use and single-family homes.

Regulatory Setting

SB 330 (Housing Crisis Act)

The goals of SB 330 are to increase residential unit development, protect existing housing inventory, and expedite permit processing to address the housing crisis in California. Under this new legislation, municipal and county agencies are restricted in what prohibitive regulations can be applied to eligible housing development Projects, in order to streamline housing development.

Hanford General Plan

The 2035 General Plan includes the policies related to land use that correlate to the proposed Project:

- *Policy L18. Compatibility with Surrounding Neighborhoods*: Ensure that new development is compatible with existing and surrounding neighborhoods.
- *Policy L21. Planned Unit Developments and Density Bonuses*: Adopt planned unit development and density bonus ordinances to provide and allow density increases in accordance with State Law.
- *Policy L24. Availability of Infrastructure*: Ensure that new residential developments have sufficient urban infrastructure and public facilities to accommodate the number and type of development being proposed.
- *Policy L25. Maintenance Districts*: Require new residential subdivisions to form maintenance districts to maintain shared public improvements, such as landscaping, lighting, walls, streets, and other improvements as determined by the City Council.
- *Policy L26. Residential Parking*: Residential developments shall provide adequate on-site parking for the specific use.
- *Policy L27. Mix of Densities in Neighborhoods*: *Encourage mixing of residential densities and lot sizes within neighborhoods.*
- *Policy L28. Street Trees and Landscaping*: *Encourage all new residential developments to include shade trees along the street and install landscaping and irrigation systems that meet State requirements for low water use.*
- *Policy L29. Agriculture*: Recognize the right of agriculture to exist and continue to operate in proximity to the new residential development on the fringes of the city. Deed restrictions may be required which inform future residents of the right of agriculture to continue within the limits of the law without interference or protest from nearby property owners.

Low Density Residential

- *Policy L31. Purpose of the Low-Density Residential Land Use Designation*: Establish the Low-Density Residential land use designation to provide mainly single-family development on lot sizes typically found in urban settings.

- *Policy L32. Typical Uses in the Low-Density Residential Land Use Designation*: Define the uses allowed in the Low-Density Residential land use designation to include residential uses in a variety of single-family lot types. Duplexes, second dwelling units, and home occupations can also be allowed when made compatible with the residential nature of the neighborhood.
- *Policy L33. Size of Lots in the Low-Density Residential Land Use Designation:* While it is recognized that existing lot sizes of 10,000 to 40,000 square feet are included in this designation, new individual lot sizes shall range from 5,000 to 10,000 square feet in size. Under Planned Unit Development provisions, smaller lot sizes at higher densities may be permitted when clustered around shared open space amenities or through density bonus policies.

Medium Density Residential

- *Policy L34. Purpose of the Medium Density Residential Land Use Designation*: Establish the Medium Density Residential land use designation to include residential uses such as duplexes, triplexes, fourplexes, townhomes, and lower density apartment complexes, as well as non-traditional, smaller single-family lots with designs such as zero lot lines, patio homes, and townhomes with lot sizes ranging from 4,500 to 7,500 square feet for single family developments. It is intended that development be conveniently serviced by neighborhood commercial and recreational facilities and have access to major collector or arterial streets.
- *Policy L35. Typical Uses in the Medium Density Residential Land Use Designation*: Define the uses allowed in the Medium Density Residential land use designation to include residential uses such as duplexes, triplexes, fourplexes, townhomes, and lower density apartment complexes, as well as non-traditional, smaller single-family lots. It is intended that development be conveniently serviced by neighborhood commercial and recreational facilities and have access to major collector or arterial streets.
- *Policy L36. Design of the Medium Residential Land Use Designation*: Develop and enforce design policies and/or ordinances for Medium Density Residential developments that ensure high quality construction, design, open space amenities, safety and security, and overall compatibility with the rest of the neighborhood.
- *Policy L37. Location and Size of the Medium Density Residential Land Use Designation*: Locate the Medium Density Residential land use designation in and around the residential portions of Hanford's original townsite and in existing and new neighborhoods where there is direct access to major streets. The minimum area designated in a single location shall be three (3) acres.

High Density Residential

- *Policy L38. Purpose of the High-Density Residential Land Use Designation*: Establish the High-Density Residential land use designation primarily for multi-family apartment and condominium development in proximity to Arterial streets, commercial and recreational facilities, and employment centers.

- *Policy L39. Typical Uses in the High-Density Residential Land Use Designation*: Define the uses allowed in the High-Density Residential land use designation to include multi-family residential dwellings in apartment buildings complexes.
- *Policy L40. Design of the High-Density Residential Land Use Designation*: Develop and enforce design policies and/or ordinances for High Density Residential developments that ensure high quality construction, design, open space amenities, safety and security, overall compatibility with the rest of the neighborhood.
- *Policy L41. Location and Size of the High-Density Residential Land Use Designation*: Locate High Density Residential land use designations in close proximity to Arterial streets, commercial centers, recreational facilities, and employment centers.

Neighborhood Commercial

- *Policy L42. Purpose of Neighborhood Commercial Land Use Designation*: Establish the Neighborhood Commercial land use designation to provide convenience commercial and neighborhood shopping centers serving a localized market that provide a range of necessary day-to-day retail goods and services.
- *Policy L43. Typical Uses in Neighborhood Commercial Land Use Designation*: Define the uses allowed in the Neighborhood Commercial land use designation to include businesses providing day-to-day goods and services for the surrounding and nearby residential neighborhood. Uses that would primarily serve a citywide or regional market area shall not be allowed. Typical uses include markets, small retail shops, eating establishments, service stations, convenience stores, dry cleaning and laundry services, beauty salons, and other similar uses.
- *Policy L44. Design of Neighborhood Commercial Land Use Designation*: Require that new development Projects and major site reconfigurations in the Neighborhood Commercial land use designation lay out buildings and parking as a single, integrated shopping center with shared driveway access and parking, with walkways connecting buildings to each other and the street so as to promote pedestrian accessibility from nearby residential neighborhoods.
- *Policy L45. Location and Size of Neighborhood Commercial Land Use Designation*: Locate Neighborhood Commercial land use designations on 3 to 10 acres at roughly one-mile intervals on one corner of an intersection of an arterial street and an arterial or collector street.
- *Policy L46. Anchor Tenants in Neighborhood Commercial Land Use Designation*: Limit the total gross building square footage of the anchor tenant, such as a supermarket, in the Neighborhood Commercial land use designation to not exceed 55,000 square feet, and also to not exceed 50% of the shopping center's gross building square footage.

City of Hanford Zoning Ordinance

The proposed Project site does not need rezoning from the designated R-L, R-M, R-H, C-N, and P-F zones. The Hanford Zoning ordinance lists the size and design of each zone. The R-L is intended to provide living area within the city where development is limited to low density concentrations of one-family dwellings with a minimum lot size of 5,000 square feet. The R-M

zone provides housing types such as duplexes, triplexes, fourplexes, townhomes, and lower density apartment complexes with a minimum of 3,000 square feet per housing unit. The R-H zone provides multi-family apartments and condominiums with a minimum of 1,500 square feet per dwelling unit. The C-N zone provides businesses that provide day-to-day goods and services for nearby residences. The P-F zone provides space for municipal facilities and government operations.

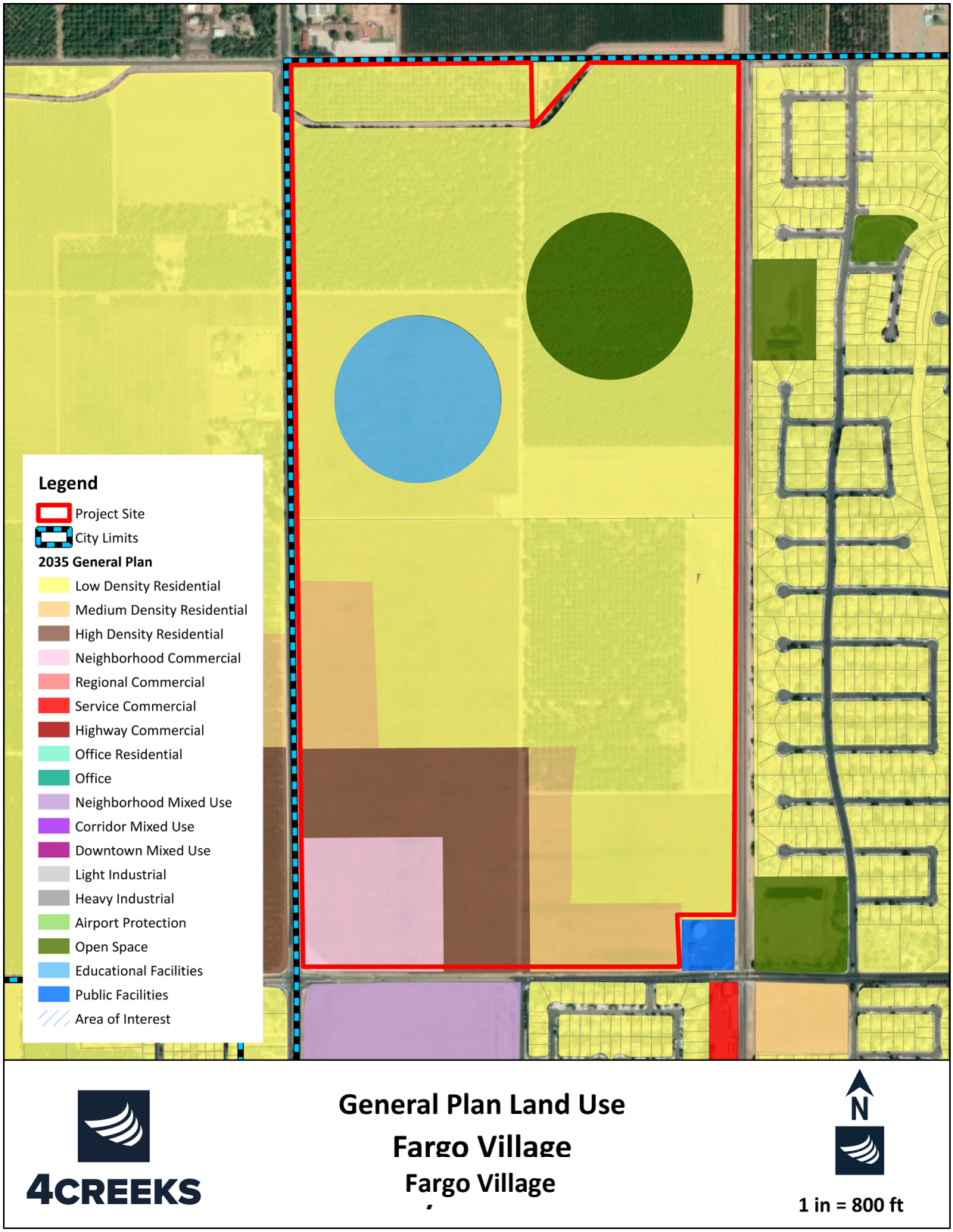


Figure 10: General Plan Land Use Designation

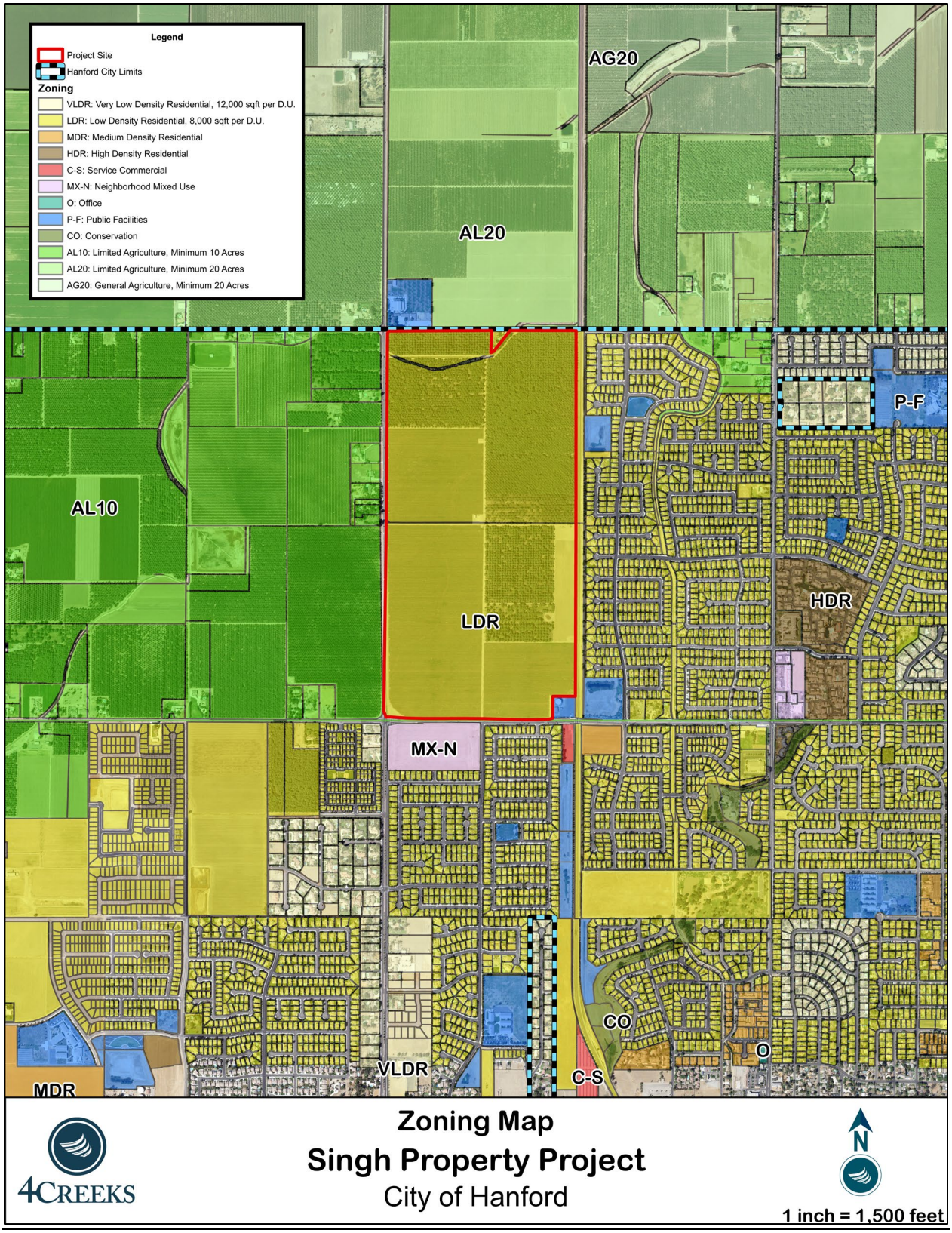


Figure 11: Zoning Map

Discussion

a) Would the Project physically divide an established community?

No Impact: The proposed Project will not physically divide an established community. The proposed Project site is designated for Neighborhood Commercial and Low, Medium, and High-Density Residential by the Hanford General Plan and the Project is consistent with this land use designation. The Project would continue to operate under the same designation following Project implementation. There is *no impact.*

b) Would the Project cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

Less than Significant: The Project site is located on land designated for residential and commercial use, but there are specific design features that necessitate the creation of a Planned Unit Development on the Project site in order to blend the various densities on the same site, permit non-standard alley widths, build townhomes with zero setbacks, and build private drives.

As described in Table 17, the goals and policies of the Land Use Element of the 2035 Hanford General Plan encourage new development with a variety of land uses and densities to create more compact development and meet expected future housing demands. As stated in Policy L21, Planned Unit Developments are encouraged to allow density increases in accordance with State law. Therefore, the Project's designation as a Planned Unit Development for non-standard design does not conflict with the City's General Plan because it promotes compact development, which is aligned with the City's development goals. With the implementation of a Planned Unit Development for the site, there will be no conflicts with a land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect, there is *a less than significant impact.*

Table 17. Land Use Policy Consistency Analysis with Hanford General Plan (2035)

Land Use Goals (2035 Hanford General Plan)	Consistency
Goal L4: Adequate land available to meet housing needs for all citizens through the year 2035.	*Consistent.* The proposed Project will add 1,046 residential units and will take place on 304 acres within the Hanford city limits. The Project would greatly increase housing supply within the planned Urban Development Boundary.
Goal L5: Stable, high-quality neighborhoods with housing integrated with schools, parks, and availability of everyday commercial goods and services	*Consistent.* The Project is a mixed-use development with a school, park and commercial shopping center, integrated with a diverse housing community.

Goal L6: A wide range of housing choices that insure opportunities for a variety of age groups, lifestyles, and income levels.	*Consistent.* The Project proposes low, medium, and high-density housing to support a diverse range of occupants.
Goal L7: Residential densities that encourage both compact and infill development.	*Consistent.* The proposed Project would take place adjacent to existing residential areas, and proposes a compact network of housing, parks, educational and commercial uses.
Goal L8: A range of residential building types suitable for a variety of lifestyles, ages, affordability levels, and design options. • Policy L21 Planned Unit Developments and Density Bonuses: Adopt planned unit development and density bonus ordinances to provide and allow density increases in accordance with State Law	*Consistent.* A design report was prepared in September 2023 (Fargo Village Development Design Guidelines 2023) for the Project by 4Creeks, Inc. The plan proposes a variety of architectural styles, elevations, materials, and color palettes within each housing density category (low, medium, high-density). The architectural styles include contemporary farmhouse and craftsman. • Policy L21: The Project would be a Planned Unit Development to blend a variety of densities, permit non-standard alley widths, setbacks and to build private drives on medium-density housing.
Goal L9: Distinctive neighborhoods that preserve and enhance the quality of life for residents. • Policy L27 Mix of Densities in Neighborhoods: Encourage mixing of residential densities and lot sizes within neighborhoods. • Policy L28 Street Trees and Landscaping: Encourage all new residential developments to include shade trees along the street and install landscaping and irrigation systems that meet State requirements for low water use.	*Consistent.* The Design Guidelines for the proposed Project indicate visually and structurally distinct neighborhood that support the quality of life for residents by including pedestrian and biker-friendly paths and landscaping to visually enhance the neighborhood. • Policy L27: The Project proposes a mix of densities and lot sizes within and across each housing category. • Policy L28: The Design Guidelines include a landscaping plan that will include shade trees and drought-friendly landscaping in alignment with the Hanford Municipal Code.

XII. MINERAL RESOURCES

Would the Project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	☑
b) Result in the loss of availability of a locally - important mineral resource recovery site delineated on a local general plan, specific plan or other lands use plan?	☐	☐	☐	☑

Environmental Setting

The California Geological Survey (CGS) classifies and designates areas within California that contain or potentially contain significant mineral resources. Lands are classified into Aggregate and Mineral Resource Zones (MRZs), which identify known or inferred significant mineral resources. According to the California Department of Conservation, CGS's Surface Mining and Reclamation Act (SMARA) Mineral Lands Classification (MLC) data portal, the city of Hanford is not within a mineral resource study area. In addition, according to the General Plan, the city of Hanford is not within a Division of Oil, Gas, and Geothermal Resources recognized oil field. Rather, the General Plan identifies sand and gravel for road and building construction as the only likely mineral resources in the area. Lastly, according to the Kings County General Plan, there are no oil fields or areas designated for mineral recovery in the city of Hanford.

Regulatory Setting

California State Surface Mining and Reclamation Act

The California State Surface Mining and Reclamation Act was adopted in 1975 to regulate surface mining to prevent adverse environmental impacts and to preserve the state's mineral resources. The Act is enforced by the California Department of Conservation's Division of Mine Reclamation.

Discussion

a) Would the Project result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?

No Impact: The Project site has no known mineral resources that would be of a value to the region and the residents of the state, therefore the proposed Project would not result in the loss of impede the mining of regionally or locally important mineral resources. There is *no impact.*

b) Would the Project result in the loss of availability of a locally - important mineral resource recovery site delineated on a local general plan, specific plan or other lands use plan?

No Impact: There are no known mineral resources of importance to the region and the Project site is not designated under the City's or County's General Plan as an important mineral resource recovery site. For that reason, the proposed Project would not result in the loss of availability of known regionally or locally important mineral resources. There is *no impact.*

XIII. NOISE

Would the Project result in:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
a) Generation of a substantial temporary or permeant increase in ambient noise levels in the vicinity of the Project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☑	☐	☐
b) Generation of excessive ground-borne vibration or groundborne noise levels?	☐	☐	☑	☐
c) For a Project located within the vicinity of a private airstrip or, an airport land use plan or, where such a plan has not been adopted, within two miles of public airport or public use airport, would the Project expose people residing or working in the Project area to excessive noise levels?	☐	☐	☐	☑

Environmental Setting

Noise is often described as an unwanted sound. Sound is the variation in air pressure that the human ear can detect. If the pressure variations occur at least 20 times per second, they can be detected by the human ear. The number of pressure variations per second is called the frequency of sound and is expressed as cycles per second, called Hertz (Hz).

Ambient noise is the "background" noise of an environment. Ambient noise levels on the proposed Project sites are primarily due to agricultural activities and traffic. Construction activities usually result in an increase in sound above ambient noise levels.

Vibration is seismic waves that radiate along the surface of the earth and downward into the earth. The operation of heavy construction equipment, particularly pile driving and other impact devices such as pavement breakers create this vibration.

Sensitive Receptors

Noise level allowances for various types of land use reflect the varying noise sensitivities associated with those uses. Residences, hotels/motels, hospitals, schools, and libraries are some of the most sensitive lands uses to noise intrusion and therefore have more stringent noise level allowances than most commercial or agricultural uses that are not subject to impacts such as sleep disturbance. The nearest sensitive receptor is Hanford Christian School across Flint Avenue north of the site.

Regulatory Setting

City of Hanford Noise Ordinance

The City of Hanford Noise Ordinance provides several types of noise that are prohibited. Relevant to this Project is regarding Construction and Commercial Establishments Adjacent to Residential Property. Section 9.10.060.10 of the Hanford Municipal Code States: *Construction or Repair of Buildings, Excavation of Streets and Highways. The construction, demolition, alteration or repair of any building or the excavation of streets and highways other than between the hours of 7:00 a.m. and 8:00 p.m. In cases of emergency, construction or repair noises are exempt from this provision. In non-emergency situations, the city manager, or designee, may issue a permit, upon application, if the city manager, or designee, determines that the public health and safety, is affected by loud and raucous noise caused by construction or repair of buildings or excavation of streets and highways between the hours of 8:00 p.m. and 7:00 a.m. will not be impaired, and if the city manager, or designee, further determines that loss or inconvenience would otherwise result. The permit shall grant permission in non-emergency cases for a period of not more than three (3) days. The permit may be renewed once for a period of three (3) days or less.*

Section 9.10.060.13 states: *Commercial Establishments Adjacent to Residential Property. Unreasonably loud and raucous noise from the premises of any commercial establishment, including any outdoor area which is part of or under the control of the establishment, between the hours of 10:00 p.m. and 7:00 a.m., which is plainly audible at any residential property or noise sensitive institution and which is not exempt per Section 9.10.070(K).*

City of Hanford General Plan

The current noise element of the City's General Plan establishes goals and policies intended to limit community exposure to excessive noise levels.

- *Policy H41: Interior Noise Exposure.* Adopt State Noise Insulation Standards (California Code of Regulations, Title 24) and Chapter 35 of the Uniform Building Code (UBC) concerning interior noise exposure for new single, multi-family housing, hotels, and motels.

- *Policy H42*: *Noise Evaluation for New Development.* Evaluate proposed development proposals against existing and future noise levels from ground transportation noise sources.
- *Policy H43*: *Non-Transportation Noise.* Mitigate noise created by non-transportation noise sources so as not to exceed the maximum allowable interior and exterior noise level standards.
- *Policy H45*: *Minimizing Noise for Residences in Mixed-use Developments.* Require mixed-use Projects to minimize noise exposure within the indoor areas of residential areas through design and construction techniques such as separating residential space from mechanical equipment, loading bays, and parking lots, and through management and operating procedures.
- *Policy H48*: *Noise Mitigation for Construction Activities.* Require all development Projects to mitigate noise impacts associated with construction activities.
- *Policy H50*: *Sound Walls.* Utilize sound walls at the perimeter of new residential developments to protect from noise generated by transportation corridors.
- *Policy H51 Noise from Trains.* Limit the effects of excessive train noise to existing and future noise sensitive land uses within proximity to railroad corridors.

Discussion

a) Would the Project result in generation of a substantial temporary or permeant increase in ambient noise levels in the vicinity of the Project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Less than Significant Impact with Mitigation: Project construction is anticipated to be divided into seven phases (see Project Description) and will involve temporary noise sources in the vicinity of the Project site. The average noise levels generated by construction equipment that will likely be used in the proposed Project are provided in Table 18.

The nearest sensitive receptor is Hanford Christian School across Flint Avenue north of the site or the single-family homes south of the site across Fargo Avenue. Both are approximately 100 feet away from where construction would take place.

With the Project bordering other existing residential communities and Hanford Christian School, noise disturbance is unavoidable. However, Project construction would comply with Hanford Municipal Code Section 9.10.060.10, which prohibits construction outside of the hours of 7:00 a.m. to 8:00 p.m. Municipal Code Section 9.10.060.10 also prohibits unreasonably loud and raucous noise in proximity to “noise sensitive institutions” while in use if the noise interferes the workings of the institution. Hanford Christian School may be considered a “noise sensitive institution” that could be disturbed by construction activities. In order to prevent adverse noise impacts on Hanford Christian School, Mitigation Measure (MM) NS-1 will be implemented. MM NS-1 involves maintaining minimum setback distances

between construction equipment and receptors and implementing noise barriers to avoid significant construction noise impacts.

Long-term noise levels resulting from the Project would be produced by residential and neighborhood commercial, which are not normally associated with high operational noise levels. The primary noise will be from vehicles traveling to and from the site, especially with the addition of the school site in the Project area, which will increase the number of vehicle trips in and around the Project area. However, the increase of 23,442 gross daily trips will not significantly increase the ambient noise levels, as the area is already active with vehicles due to nearby residential and commercial uses. Therefore, the proposed Project will not introduce a new significant source of noise that isn't already occurring in the area. The Commercial uses will follow the Hanford Municipal Code and limit outdoor or loud noise from 10 P.M. to 7 A.M.

The noise generated by the proposed Project would be intermittent and temporary, and Mitigation Measure NS-1 would be implemented to reduce impacts on "noise sensitive institutions" and sensitive receptors near the Project site. The impact is *less than significant with mitigation incorporated.*

Table 18. Noise Levels of Noise-Generating Construction Equipment at 50'

Type of Equipment	Exterior Lmax at 50 feet (dBA)
Tractors	84
Loaders	80
Backhoes	80
Excavators	85
Generator Sets	82
Air Compressors	80
Rubber Tired Dozers	85
Forklifts	75
Welders	73
Graders	85
Scrapers	85
Cranes	85
Paving Equipment	85
Rollers	85

Source: Federal Highway Administration Construction Noise Handbook (dBA at 50 feet).

b) Would the Project result in generation of excessive ground-borne vibration or groundborne noise levels?

Less than Significant Impact: Although Project operations would not include uses or activities that typically generate excessive groundborne vibration or groundborne noise levels, Project construction could introduce temporary groundborne vibration to the Project site and the surrounding area. Sources that may produce perceptible vibrations are provided in Table 19.

Table 19. Vibration Levels Generated by Construction Equipment

Equipment	Peak Particle Velocity (inches/second) at 25 feet	Approximate Vibration Level (LV) at 25 feet
Pile driver (impact)	1.518 (upper range) 0.644 (typical)	112 104
Pile driver (sonic)	0.734 upper range 0.170 typical	105 93
Clam shovel drop (slurry wall)	0.202	94
Hydromill (slurry wall)	0.008 in soil 0.017 in rock	66 75
Vibratory Roller	0.210	94
Hoe Ram	0.089	87
Large bulldozer	0.089	87
Caisson drill	0.089	87
Loaded trucks	0.076	86
Jackhammer	0.035	79
Small bulldozer	0.003	58

Source: Transit Noise and Vibration Impact Assessment, Federal Transit Administration, September 2018.

The primary source of vibration during Project construction would likely be from a bulldozer (tractor), which would generate 0.089 inches per second PPV at 25 feet with an approximate vibration level of 87 VdB. Vibration from the bulldozer would be intermittent and not a source of continual vibration. There are no adopted City standards or thresholds of significance for vibration. The evaluation of potential impacts related to construction vibration levels is based on the published data in the 2018 FTA Guidelines. At 25 feet, the buildings most susceptible to vibration could be impacted at .12 inches/second. Because vibrations generated by Project construction would not exceed 0.12 inch/second, the impact is *less than significant.*

c) For a Project located within the vicinity of a private airstrip or, an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the Project expose people residing or working in the Project area to excessive noise levels?

No Impact: The proposed Project is not located within an airport land use plan, within the vicinity of a private airstrip, or two miles from a public airport. There is *no impact*.

Mitigation Measures

NS-1: A temporary noise barrier of a minimum 12-foot height (as measured from the ground surface) shall be erected along any portions of the northern, eastern and southern boundaries for construction activities that would take place within 300 feet of a given section of this boundary and maintained in place for the duration of construction activities taking place within 300 feet of a given portion of the boundary.

XIV. POPULATION AND HOUSING

Would the Project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
a) Induce substantial unplanned population growth in an area, either directly (for example, by new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☑	☐
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☑

Environmental Setting

The United States Census Bureau stated the population in the City of Hanford to be 58,470 as of July 1st, 2022. This is an increase of 4,503 from the 2010 census, which counted the population in the City of Hanford to be 53,967. During the past 25 years, Hanford has seen the largest population increase out of all the unincorporated and incorporated communities in Kings County and has accounted for 57% of the County's total population growth (Kings County General Plan 2016). According to the Department of Finance, Kings County's housing population is expected to reach approximately 167,000 by the year 2030, a gain of about 25% over the 2015 household population levels.

Regulatory Setting

The City of Hanford's population size is controlled by the development code and Housing Element of the 2035 Hanford General Plan. These documents regulate the number of dwelling units per acre allowed on various land uses and establish minimum and maximum lot sizes, which has a direct impact on the City's population size.

2035 Hanford General Plan - Housing Element (2016)

The 2016-2024 adopted Housing Element for Hanford outlines several goals and policies to improve housing and residential neighborhoods within Hanford and other communities in Kings County:

- **Goal 1. Improve and maintain the quality of housing and residential neighborhoods.**

  - Policy 1.1. Promote and improve the quality of residential properties by ensuring compliance with housing and property maintenance standards.
  - Policy 1.2. Assist in the repair, rehabilitation, and improvement of residential structures; demolish and replace structures which are dilapidated and beyond repair.
  - Policy 1.3. Invest in infrastructure and public facilities to ensure that adequate water, sewer, roads, parks, and other needed services are in place to serve existing and future residential developments.
  - Policy 1.4. Preserve assisted rental housing for long-term occupancy by low- and moderate-income households.
- **Goal 2. Facilitate and encourage the provision of a range of housing types and prices to meet the diverse needs of residents**.
  - Policy 2.1. Provide adequate sites for housing through appropriate land use, zoning and development standards to accommodate the regional housing needs for the current planning period.
  - Policy 2.2. Work collaboratively with nonprofit and for-profit developers to seek state and federal grants to support the production of affordable housing.
  - Policy 2.3. Ensure the adequate provision of water, sewer, roads, public facilities, and other infrastructure necessary to serve new housing.
  - Policy 2.4. Support the construction of high-quality single- and multi-family housing which is well designed and energy efficient.

Discussion

a) Would the Project induce substantial unplanned population growth in an area, either directly (for example, by new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

Less than Significant: The United States Census Bureau stated the population in the City of Hanford to be 58,470 as of July 2022. The Project proposes to construct 697 new single-family residential units, 235 townhomes, and 214 apartments for a total of 1,146 residential units. The US Census Bureau states that the City's average household size is 3.0 persons. Based on this average household size, the anticipated population increase because of the proposed Project is 3,438 people. The construction of housing at this location would not be unplanned, as the Hanford General Plan designated the proposed Project site for low, medium, and high-density residential, as well as neighborhood commercial. Additionally, the city is planning for more businesses, services, and infrastructure to accommodate the new population. Overall, the Project will substantially increase the population, but will not constitute an unplanned increase in growth and population. There is *a less than significant impact.*

b) Would the Project displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

No Impact: The Project could potentially displace one existing residence on Flint Avenue. However, this Project will increase the amount of available housing in the community by 1,146 units. Therefore, the substantial addition in housing outweighs the potential displacement of the one single-family home on Flint Avenue, and the Project would not necessitate the construction or replacement of housing elsewhere. There is *no impact.*

XV. PUBLIC SERVICES

Would the Project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
a) Would the Project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable serve ratios, response times of other performance objectives for any of the public services:				
a. Fire protection?	☐	☐	☑	☐
b. Police protection?	☐	☐	☑	☐
c. Schools?	☐	☐	☑	☐
d. Parks?	☐	☐	☑	☐
e. Other public facilities?	☐	☐	☑	☐

Environmental Setting

Parks/Recreational Facilities

The City of Hanford currently has 21 parks and 5 City-operated indoor recreational facilities. Most of the City's parks are located in the northern area of the City in new residential developments north of Grangeville Road. Most of the older residential areas in the central and western portions of the City do not contain community parks for nearby residents. The current total acreage of parks and indoor facilities within the City is 172.5 acres. The Project proposes the addition of 27.59 acres of outdoor park facilities.

Fire

Hanford and the Project site are served by The Hanford Fire Department (HFD), which operates 3 fire stations within the City of Hanford. The HFD will continue to provide fire protection services to the proposed Project site following Project implementation. The nearest fire station is approximately 1.25 miles southeast of the Project site. The Hazards Management Element of the Hanford General Plan (2002) states that two additional fire stations are needed to maintain

acceptable standards based on population and area of growth. Since that determination was made, one additional fire station was added to the City, so there is still a shortage of one fire station to accommodate the City's needs.

Police

Law enforcement services are provided to the Project site via The Hanford Police Department (HPD) located at a single station at 425 North Irwin Street. The HPD will continue to provide police protection services to the proposed Project site following Project implementation. The HPD headquarters are located approximately 2.15 miles Southeast of the proposed Project site. The 2035 Hanford General Plan determined that additional support staff will be required to accommodate the increasing population in Hanford.

Schools

The proposed Project site is located within Pioneer Elementary School District (PESD) and Hanford Joint Union High School District (HJUHSD). The PESD includes 2 elementary schools and one middle school. The HJUHSD has three high schools, with the Project site zoned for Sierra Pacific High School. Hanford also contains four private schools. The proposed Project site is located across Flint Avenue, about 50 feet from the nearest school (Hanford Christian School).

Regulatory Setting

California Fire Code

The California Fire Code (Title 24, Part 9 of the California Code of Regulations) establishes regulations to safeguard against hazards of fire, explosion, or dangerous conditions in new and existing buildings, structures, and premises. The provisions of the Fire Code apply to the construction, alteration, movement, enlargement, replacement, repair, equipment, use and occupancy, location, maintenance, removal, and demolition of every building or structure throughout the State of California. The Fire Code includes regulations regarding fire-resistance-rated construction, fire protection systems such as alarm and sprinkler systems, fire services features such as fire apparatus access roads, means of egress, fire safety during construction and demolition, and wildland-urban interface areas.

City of Hanford General Plan

The 2035 General Plan includes the policies related to public services that correlate to the proposed Project:

- *Policy P37. Impact Fees for Police Facilities*: Require new development to provide funding to meet the cost of providing vehicles, equipment, and structures, to meet the needs of new population growth.
- *Policy P46. Building Design for Safety:* Encourage building designs that help to reduce crime and improve resident safety.
- *Policy P47. Lighting for Safety*: Facilitate public safety through the placement and design of outdoor lighting, while respecting the privacy of surrounding properties.

- *Policy P48. CPTED Principles for Safety*: Create building and neighborhood design standards that are consistent with Crime Prevention through Environmental Design (CPTED) principles.
- *Policy P52. Impact Fees for Fire Facilities*: Require developers to contribute impact fees to fund the cost of providing fire facilities needed to support new population growth and development.
- *Policy P59. Fire and Building Codes*: Continue to enforce the California Fire Code, California Building Code, and Hanford Municipal Code to mitigate threats to safety and property.
- *Policy P79. Impact Fees for General Government Facilities*: Require developers to contribute impact fees to fund the cost of providing expanded general government facilities needed to support new population growth and development.

Discussion

a) Would the Project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable serve ratios, response times of other performance objectives for any of the public services:

a. Fire protection?

Less than Significant Impact: The HFD will provide fire protection services to the proposed development. The nearest fire station to the site is approximately 1.25 miles to the Southeast. The Fire Department follows the International City/County Management Association (ICMA) Yearbook for guidelines. The Yearbook recommends 1.02 firefighters per 1,000 residents. In 2013, the department had 27 fire suppression personnel for 55,470 residents, a ratio of .49. The station would currently need 58 fire suppression personnel to meet the standard. The addition of 1,146 residential units and commercial space will increase the demand for fire protection services. The existing fire stations are placed to provide optimum service; however, new stations will be needed to support the expanding city. The demand for additional personnel and equipment will be compensated by the development impact fee of $546.39 per unit of Low-Density Housing, $307.14 per unit of Medium-Density Housing, $154.32 per unit of High-Density Housing, and $0.4584 per square foot of Neighborhood Commercial. To support the expansion of fire services, the total development impact fee is $2,002. The total development impact fee for fire services would be $506,664.21.

The timing of when new fire service facilities would be required or details about size and location cannot be known until such facilities are planned and proposed, and any attempt to analyze impacts on a potential future facility would be speculative. As new or expanded fire service facilities become necessary, construction or expansion

Projects would be subject to their own separate CEQA review to identify and mitigate any potential environmental impacts. However, payment of Fire Impact Fees will mitigate impacts associated with new and altered governmental facilities. Therefore, the impact is *less than significant.*

b. Police protection?

Less than Significant Impact: The HPD will provide services to the proposed development. The HPD headquarters are located approximately 3.24 miles Southeast of the proposed Project site. HPD Substation District 1 is located approximately 2.15 miles Southeast of the Project site. The development would increase the demand for police service with the addition of 1,266 residential units and commercial space. The HPD seeks a service standard of 1.1 to 1.2 sworn officers per 1,000 residents. In 2013, the Department had 55 sworn officers for 55,470 residents, a ratio of .99. The Department seeks at least 10 new officers for the growing city. The demand for additional officers and equipment will be compensated by the development impact fee of $296.50 per unit of Low-Density Housing, $438.42 per unit of Medium-Density Housing, $142.19 per unit of High-Density Housing, and $0.6106 per square foot of Neighborhood Commercial. The total development impact fee for police protection services would be $397,594.86.

The timing of when new police service facilities would be required or details about size and location cannot be known until such facilities are planned and proposed, and any attempt to analyze impacts on a potential future facility would be speculative. As new or expanded police service facilities become necessary, construction or expansion Projects would be subject to their own separate CEQA review to identify and mitigate any potential environmental impacts. Additionally, the impact will be reduced by paying Police Impact Fees to account for the increased demand for police services caused by the Project. Therefore, the impact is *less than significant*.

c. Schools?

Less than Significant Impact: The proposed Project is within Pioneer Elementary School District (PESD) and Hanford Joint Union High School District (HJUHSD). The PESD includes 2 elementary schools and one middle school. The HJUHSD has three high schools, with the Project site zoned for Sierra Pacific High School. Hanford also contains four private schools. The City of Hanford predicts the generation rates per unit shown below in Table 20.

Table 20: Student Generation Rates

School Type	Single Family Generation Rate	Multi-Family Generation Rate
Elementary and Middle School	0.443	.171
High School	.183	.056

Source: City of Hanford General Plan, 2014

Since the proposed Project includes the addition of 697 single-family homes and 449 multi-family residential units, the number of students will increase by approximately 535. The proposed Project site is located within the Planning Area's limits and therefore, growth associated with the Project has been planned and expected. In addition to the goals and policies of the City's General Plan, future development is required to pay development impact fees to the school districts at the time of building permit issuance. The City of Hanford charges $4.08 per square foot of residential development and $0.66 per square foot of commercial development. The exact square footage for the housing has yet to be determined, however, the Project will pay its fair share in fees for schools. The Project has approximately 17.57 acres dedicated to a new school, which will accommodate the Projected increase in enrollment resulting from Project development. Additionally, the Project developer will be required to pay school impacts fees. Therefore, the impact is *less than significant.*

d. Parks?

Less than Significant Impact: The addition of 1,146 new residential units would result in increased use of the City's existing parks. Parks within a half-mile to one-mile radius that would service the proposed development include Quail Run Park, Glacier Way Park, and Vineyards People's Park. The Project plans to include 27.59 acres of parkland for residents. The City's General Plan Policy Document requires a ratio of 3.5 acres per 1,000 residents. The Project is expected to add a population of 3,687 residents or 1,296 households (LSA 2022). Therefore, this ratio of 1 acre of park space per 285 residents suggests that the Project must provide at least 12.9 acres of park space to accommodate the additional population produced by the Project.

The Project would provide 27.59 acres of park space, which provides 14.69 acres more than what the City's General Plan requires for the population size resulting from the Project. The Project's park space will adequately accommodate the population growth

resulting from the Project and will not impact existing parks within the City, there is a *less than significant impact.*

e. Other public facilities?

Less than Significant Impact: Additional development fees will be paid to offset the increased demand for public services related to transportation, water, wastewater, groundwater recharge, storm drainage, and general governmental services. Fees for transportation, water, wastewater, storm drainage, and general government are based on building square footage or units and will be calculated before the issuance of building permits.

While the payment of development fees could result in the construction of new or altered public service facilities, no specific Projects have been identified at this time. As new or expanded public service facilities become necessary, construction or expansion Projects would be subject to their own separate CEQA review to identify and mitigate any potential environmental impacts. Therefore, the impact is *less than significant*.

XVI. RECREATION

Would the Project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
a) Would the Project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☑	☐
b) Does the Project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☐	☑	☐

Environmental Setting

There are 26 park facilities totaling 172.5 acres within the City of Hanford. The City of Hanford provides different types of parks and open space facilities, or park types, to meet the park and open space recreation needs of the community. Park types include:

- Mini-Park or Pocket Parks: A Mini-Park is typically under two acres in size and intended to serve the needs of a specific neighborhood within a quarter-mile radius. The recommended size is 0.25 acres per 1,000 population. Pocket parks are usually fully landscaped with trees and turf. More urban-style parks include hardscapes. Besides residential neighborhoods, they can also be found in downtown areas to serve the needs of shoppers or employees as places to rest or eat. There are currently 9 mini-parks in Hanford.
- Neighborhood Parks: This type of park is primarily for children and families. The Neighborhood Park is usually 5 to 7.5 acres in size. A neighborhood park serves a half-mile radius, and the recommended size is 1.00 acres per 1,000 population. There are currently 3 neighborhood parks in Hanford.
- Community Parks: A Community Park is intended to serve the needs of the entire city, especially those living within about a 2-mile radius of the park. Being larger, it provides outdoor and indoor facilities that accommodate a much wider range of recreational interests than a Neighborhood Park. Facilities usually include fields and courts for

various adult sports. A community park's recommended size is 5.0 acres per 1,000 population. There are currently 5 community parks in Hanford.

- Regional Parks: A regional park is a large open space facility designed for active and passive uses. It can be a large natural open space area or an improved area with fields and courts that usually include lighting. A regional park serves the entire community and often draws people from outside the community, especially for special events.
- Special Use Parks: Special-use parks provide a specific type of recreational activity and are meant to serve the entire community. The BMX Track, Harris Street Ball Park, and The Plunge/Skate Park site are examples that provide special programmed park spaces. There are currently 5 special use parks in Hanford.
- Dual-Purpose Storm Basin Parks: Some neighborhood, community, and regional parks include stormwater detention basins to use the land more efficiently. This allows the site to be used to control urban flooding, recharge groundwater systems, and provide recreational use. Careful design can allow the storm basin to be used for recreation when not filled with water.
- Indoor Recreation Facilitates: Indoor recreation facilities allow for public gathering places for a variety of social and recreational activities. Larger facilities serve the entire community while smaller facilities may serve a large neighborhood or a certain portion of the community. The Civic Center Auditorium, Coe Hall, Longfield Center, St. Brigid's Teen Center, and the Veterans-Senior Center, are examples of indoor recreational facilities. There are currently 5 indoor recreation facilities in Hanford.
- School Parks: All school sites have limited public access since their primary purpose is to support the educational mission of the school districts that control their use. There are 16 school sites within Hanford. These facilities are sometimes accessible to the public during school hours in some cases.

The Hanford General Plan and Municipal Code states a goal of 3.5 acres of city parkland per 1,000 residents. According to the 2020 Parks and Recreation Master Plan, the City currently offers 172.5 acres of parkland. The Project may also be subject to the requirements of the Quimby Act, including parkland dedication and/or payment of fees in lieu thereof (or a combination of both).

Regulatory Setting

Quimby Act

The 1975 Quimby Act (California Government Code section 66477) authorized cities and counties to pass ordinances requiring that developers set aside land, donate conservation easements, or pay fees for park improvements. The Act states that the dedication requirement of parkland can be a minimum of three acres per thousand residents or more and up to five acres per thousand residents if the existing ratio is greater than the minimum standard. Revenues generated through in-lieu fees collected and the Quimby Act cannot be used for the operation and maintenance of park facilities. In 1982, the Act was substantially amended. The

amendments further defined acceptable uses of or restrictions on Quimby funds, provided acreage/population standards and formulas for determining the exaction, and indicated that the exactions must be closely tied (nexus) to a Project's impacts as identified through studies required by the California Environmental Quality Act (CEQA).

City of Hanford General Plan

The 2035 General Plan includes the policies related to parks and recreation that correlate to the proposed Project:

- *Policy O55. Mini-Parks*: Allow mini-parks between 0.25 acres to 1.0 acres in size to be built at locations that are easily accessed by the residents of the neighborhood. Mini parks do not contribute to the citywide park ratio goal and are considered an optional addition, and not an alternative to neighborhood and community parks.
- *Policy O54. Multi-use Storm Water Basins*: Where appropriate, support dual-purpose storm water detention basins for multiple use as parks.
- *Policy O57. Neighborhood Parks*: Establish neighborhood parks generally between 2 and 5 acres in size at locations easily accessed by residents of the neighborhood.
- *Policy O58. Neighborhood Parks Service Area:* Neighborhood parks shall have a general service area of approximately 1/2-mile radius and situated to avoid patrons having to cross arterial streets, railroad lines and major waterways.
- *Policy O64. Park Visibility*: Parks shall be designed to promote a safe and clean environment for recreation. New neighborhoods shall be designed so that common side and rear residential property lines with parks are minimized and visibility of parks from public streets is maximized.

Discussion

a) Would the Project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

Less than Significant Impact: The proposed Project is anticipated to increase the Hanford population by approximately 3,687 residents. Based on the desired parkland ratio of 3.5 acres per 1000 residents identified in the Hanford General Plan and Municipal Code, the Project would need to provide approximately 12.9 acres of parkland/open space. The Project will provide 27.59 acres of parkland for the residents. Additionally, it may be required to pay in-lieu fees to offset the increased use of existing parks and recreational facilities resulting from the Project. There is *a less than significant impact.*

b) Does the Project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

Less than Significant Impact: The environmental impacts associated with the construction and operation of the proposed future parks and recreational facilities included in the Project are included within the environmental evaluation within this Initial Study. As discussed previously, the total park and recreational space requirements at full Project buildout would total at least 27.59 acres for approximately 3,687 residents. This ratio satisfies the City's requirement of 3.5 acres per 1000 residents. As such, the Project will provide sufficient park and recreational facilities per the City's requirements and will not require the construction or expansion of additional facilities. Impacts are *less than significant*.

XVII. TRANSPORTATION

Would the Project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
a) Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	☐	☐	☑	☐
b) Conflict or be inconsistent with the CEQA guidelines Section 15064.3, Subdivision (b)?	☑	☐	☐	☐
d) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☑	☐
e) Result in inadequate emergency access?	☐	☐	☐	☑

A Traffic Study and a Vehicle Miles Traveled (VMT) Analysis was prepared by LSA Associates Inc. in May and September 2023 and was used as a basis for all findings in this section. The full Traffic Study can be found in Appendix E1 and the full VMT Analysis can be found in Appendix E2.

Environmental Setting

Vehicular Access

Vehicular access to the Project is available via Fargo Avenue, Flint Avenue, and 12th Avenue. In total, there will be eight vehicle access points. The site will have five main entrances into the Project. Two of the main entrances are from the south via Fargo Ave, two from the north via Flint Avenue, and one main entrance from the west via 12th Avenue. The commercial portion will have three smaller driveways. Two will be from the south via Fargo Avenue, and one from the west via 12th Avenue. The Project includes new streets, courts, roundabouts, and pathways that provide full access to the Project site. All five main entrance points will connect to a center street that will loop around the Project Site to connect all parts of the development. A series of pedestrian sidewalks and trails would be provided throughout the site.

Parking

The single-family homes will each contain a driveway and a garage for parking. The townhomes would contain at least a minimum of 470 off-street parking spaces. These will be provided by alley-loaded garages to avoid the garage being the dominant feature of the street. The apartments will provide at least the minimum of 428 off-street parking spaces, with at least half being covered. The commercial area will contain 169 parking spaces. During construction, workers will utilize existing parking areas and/or temporary construction staging areas for parking vehicles and equipment.

Regulatory Setting

CEQA Guidelines Section 15064.3, Subdivision (b): Criteria for Analyzing Transportation Impacts

(1) Land Use Projects. Vehicle miles traveled exceeding an applicable threshold of significance may indicate a significant impact. Generally, Projects within one-half mile of either an existing major transit stop or a stop along an existing high-quality transit corridor should be presumed to cause a less than significant transportation impact. Projects that decrease vehicle miles traveled in the Project area compared to existing conditions should be considered to have a less than significant transportation impact.

(2) Transportation Projects. Transportation Projects that reduce, or have no impact on, vehicle miles traveled should be presumed to cause a less than significant transportation impact. For roadway capacity Projects, agencies have discretion to determine the appropriate measure of transportation impact consistent with CEQA and other applicable requirements. To the extent that such impacts have already been adequately addressed at a programmatic level, a lead agency may tier from that analysis as provided in Section 15152.

(3) Qualitative Analysis. If existing models or methods are not available to estimate the vehicle miles traveled for the particular Project being considered, a lead agency may analyze the Project's vehicle miles traveled qualitatively. Such a qualitative analysis would evaluate factors such as the availability of transit, proximity to other destinations, etc. For many Projects, a qualitative analysis of construction traffic may be appropriate.

(4) Methodology. A lead agency has discretion to choose the most appropriate methodology to evaluate a Project's vehicle miles traveled, including whether to express the change in absolute terms, per capita, per household or in any other measure. A lead agency may use models to estimate a Project's vehicle miles traveled and may revise those estimates to reflect professional judgment based on substantial evidence. Any assumptions used to estimate vehicle miles traveled and any revisions to model outputs should be documented and explained in the environmental document prepared for the Project. The standard of adequacy in Section 15151 shall apply to the analysis described in this section.

2035 City of Hanford General Plan – Transportation & Circulation Element

- **Goal T1:** A comprehensive, multi-modal motorized and non-motorized transportation system that improves the quality of life and facilitates the efficient movement of people and goods.
- **Goal T3:** City streets that meet the needs of bicyclists, pedestrians, children, motorists, persons with disabilities, the elderly, users of public transportation, and commercial goods movers.
    - **Policy T1 Coordination of Circulation and Land Use:** Develop a circulation network that reinforces the desired land use pattern for Hanford, as identified in the land use element.
    - **Policy T29 Maximum Level of Service**: Maintain a peak hour Level of Service E on streets and intersections within the area bounded by Highway 198, 10th Avenue, 11th Avenue, and Florinda Avenue, inclusive of these streets. Maintain a peak hour Level of Service D on all other streets and intersections with the Planned Growth Boundary.
    - **Policy T39 Accommodating All Modes of Traffic**: Plan, design, and construct new transportation improvement Projects to safely accommodate the needs of pedestrians, bicyclists, transit riders, motorists and persons of all abilities.
    - **Policy T40 Pedestrian and Bicycle Placemaking**: Promote pedestrian and bicycle improvements that improve connectivity between neighborhoods, provide opportunities for distinctive neighborhood features, and foster a greater sense of community.
    - **Policy T41 Streetscape Enhancements**: Strive to improve the visual character of roadway corridors by improving streetscapes with amenities such as street trees, pedestrian-scaled lighting, underground utilities, water-efficient landscaping, and streetscape furniture.
    - **Policy T48 Traffic Calming**: Consider the use of traffic calming designs such as roundabouts, bulb-outs, and other traffic calming designs, where they will improve the operation or LOS of a street.
    - **Policy T49 Subdivision Connectivity**: Design subdivisions to maximize connectivity both internally and with other surrounding development.
    - **Policy T51 Alternative Design Standards**: Consider alternative roadway design standards for new residential and mixed-use development for future streets that may include:
        - Narrower street widths on local roadways. Smaller turning radii geometrics on street intersections to improve safety for pedestrians.
        - Tree lined streets in parkways between the curb and sidewalk.
        - Roundabouts in lieu of traffic signals where appropriate conditions exist to maximize intersection efficiency, maintain continuous traffic flow, and reduce accident severity

City of Hanford VMT Guidelines (2022)

The City of Hanford VMT Thresholds and Implementation Guidelines establishes the City's VMT thresholds of significance for use in CEQA transportation studies and provides substantial evidence to support those thresholds. The report defines the geographic scope for analysis purposes, defines screening criteria to identify potentially exempt projects, identifies the VMT thresholds of significance, provides guidance and substantial evidence to support the City's treatment of land use plants, and provides VMT mitigation strategies for use by lead agencies and consultants within the City of Hanford's Sphere of Influence. The VMT Analysis prepared by LSA Associates, Inc. in September 2023 for the proposed Project was conducted using the methodology and significant threshold criteria identified in the Hanford VMT Guidelines.

Discussion

a) Would the Project conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?

Less than Significant Impact: The Project would not conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities, as discussed below. Impacts would be *less than significant.*

KCAG Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS)
The Project would be consistent with the goals and objectives outlined in the 2022 KCAG Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) as analyzed in Table 21, below. Some of the pedestrian and bicyclist-oriented features are marked pedestrian crossings, a high density of intersections, sidewalks throughout the Project site, a trailway that connects all Project components, and 2.5 miles of bike lanes along the Project frontage. At the intersections between the vehicular street network and the trail loop, the Project proposes to include enhanced pedestrian crossings with easily identifiable signage for pedestrian/bike crossings.

Table 21. KCAG RTA/SCS Consistency Analysis

Program Goal or Policy	Consistency of Proposed Project
Overall Goal of Program	
To develop a transportation system that encourages and promotes the safe and efficient development, management, and operation of surface transportation systems to equitably and safely serve the mobility and accessibility needs of people and freight (including meeting the	*Consistent.* The Project will foster economic growth by providing new development while maintaining a pedestrian and bicycle-friendly community that allows for greater accessibility to commercial goods due to a variety of land uses on the site.

Americans with Disabilities Act requirements, accessible pedestrian walkways, and bicycle transportation facilities) and foster economic growth and development, while minimizing transportation-related fuel consumption, air pollution, and greenhouse gas emissions.	
Maintenance Objectives	
Objective 1: Shorten the travel time required to move people and goods on the existing system.	*Consistent.* The Project proposes low, medium, and high-density residential, commercial, educational and park land uses on the site, with a continuous pedestrian network connecting all land uses. The diversity of land uses on the site effectively shortens travel time for nearby residents.
Objective 3: Increase the safety of the existing system.	*Consistent.* As mentioned previously, the Project proposes a variety of features that promote safety for bicyclists, pedestrians and motorists. These include marked pedestrian crossings, a high density of intersections, sidewalks throughout the Project site, a trailway that connects all Project components, and 2.5 miles of bike lanes along the Project frontage. At the intersections between the vehicular street network and the trail loop, the Project proposes to include enhanced pedestrian crossings with easily identifiable signage for pedestrian/bike crossings.
System Improvement Objectives	
Objective 3: Facilitate pedestrian and bicycle travel.	*Consistent.* See Objective 3 under "Maintenance Objectives", above.
Societal Impacts Objectives	
Objective 4: Complement the long-range land-use policies of local general plans.	*Consistent.* There will be no conflicts with the long-range land use policies outlined by the City of Hanford General Plan. The Project's proposed land uses do not conflict with the City designated land use and zoning for the site.

City of Hanford General Plan – Transportation & Circulation Element

The Project would be consistent with the applicable goals and policies of the City's General Plan Transportation and Circulation Element. The Project would not hinder the City's ability to develop a safe, efficient, and affordable transportation system throughout the community. The Project also provides improved pedestrian and bicycle facilities in addition to roadway improvements that meets the City's goals of creating streets that meet the needs of bicyclists, pedestrians, children, and motorists.

The Project would include on and off-site roadway improvements to serve internal circulation needs, as well as to reduce impacts to ensure a safe and efficient level of service that meet the City's established standards. Although LOS analysis is no longer a determinant of CEQA impacts, consistency with the City's General Plan goals and policies is still required. The Traffic Study prepared by LSA Associates Inc. in May 2023 determined that all intersections are estimated to operate satisfactorily with implementation of the proposed improvements (see Table 22, below). Without implementation of the proposed improvements, some intersections are expected to operate below an acceptable level of service. Due to the feasibility of the improvements, they have been implemented into the Project's design and will not be classified as a mitigation measure. Therefore, no potentially significant impacts are anticipated as a result of LOS standards.

Table 22. Intersection Improvements

Intersection	Funding Mechanism	Project Responsibility
12th Avenue/Fargo Avenue	Project Responsibility/Fair Share	Optimize signal timings
Fitzgerald Lane/Fargo Avenue	Project Responsibility	Install two-way left turn lane (TWLTL) median with provision of merging lane for northbound left (NBL) traffic from Fitzgerald Lane
12th Avenue/Project Driveway 1	Project Responsibility	Install traffic signal
Project Driveway 4/Fargo Avenue	Project Responsibility	Install traffic signal

Source: Traffic Study prepared by LS Associates, Inc. in May 2023

Based on the analysis provided above, the Project would not conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities, and its impact to the transportation plans and programs would be *less than significant.*

b) Would the Project conflict or be inconsistent with CEQA Guidelines Section 15064.3, Subdivision (b)?

Potentially Significant Impact: On December 28, 2018, the California Office of Administrative Law cleared the revised California Environmental Quality Act (CEQA) guidelines for use. Among the changes to the guidelines was the removal of vehicle delay and level of service (LOS) from consideration under CEQA. Although LOS analysis is no longer a determinant of CEQA impacts, consistency with the City's General Plan goals and policies is still required. As mentioned in Threshold a, there will be no significant impacts related to the LOS standards determined by the City of Hanford General Plan. With the adopted guidelines, transportation impacts are to be evaluated based on a Project's effect on vehicle miles traveled (VMT).

The City of Hanford has adopted its own VMT Guidelines. Therefore, the Project VMT analysis was conducted using the methodology and significant threshold criteria identified in the guidelines. Therefore, for the purposes of this analysis, the *City of Hanford VMT Thresholds and Implementation Guidelines* has been followed to prepare the VMT analysis for this Project.

The *City of Hanford VMT Thresholds and Implementation Guidelines* (VMT Guidelines) provides guidance for determining a Project's transportation impacts based on vehicle miles traveled (VMT). The City of Hanford has adopted the new VMT thresholds and guidelines to address the shift from delay-based LOS CEQA traffic analyses to VMT CEQA traffic analyses.

Screening

In addition to VMT metrics for evaluation, the VMT Guidelines also provides multiple screening criteria for land use Projects that are estimated to have less than significant VMT impact. Therefore, individual components of the Project were compared with the screening criteria established in the VMT Guidelines.

Retail Projects

As recommended in the VMT Guidelines, retail Projects with an area of 55,000 Square Feet (SF) or less could be considered as local serving retail and could be screened out from a detailed VMT analysis. As previously mentioned, the retail component of the Project will have an area less than the VMT Guidelines threshold of 55,000 SF. Therefore, the retail component of the Project could be considered as a local-serving retail with an area less than the screening threshold of 55,000 SF. As such, the retail component of the Project would be screened out from a detailed VMT analysis.

Residential Projects

The VMT Guidelines also recommend screening out Projects that are estimated to generate less than 500 daily trips or having a high percentage of affordable housing.

However, given the size of the residential component of the Project, the Project will generate 14,740 net daily trips (LSA 2023). Additionally, the Project does not propose inclusion of affordable housing units. Therefore, the residential component of the Project could not be screened out and a detailed VMT analysis would be required.

Definition of Region

The Office of Planning and Research *Technical Advisory on Evaluating Transportation Impacts in CEQA* (OPR TA) recommends that the definition of region should be at the discretion of local jurisdictions. However, it does recommend defining a region based on the area within which most of the Project trips would origin from or are destined to.

To identify the region for Projects within the City, LSA Associates, Inc. used the Kings County Association of Governments (KCAG) travel demand model to examine the trips in and out of the City. As such, consistent with the OPR TA, only trips having origins or destinations or both within the City were considered. External pass-through trips were not considered. As observed from the KCAG model, out of the total trips, about 78 percent of trips are contained within the City of Hanford. Another 17 percent of trips originate or are destined within other jurisdictions in Kings County (including Unincorporated Kings County). The remaining 5 percent of trips either originate or are destined outside Kings County. Since most of the trips (95 percent) are contained within Kings County, the County was used as the region for VMT analysis purposes.

Thresholds of Significance

For evaluating land use Projects using VMT efficiency metrics (VMT per capita, VMT per employee or other metrics) the City of Hanford VMT Guidelines recommends a threshold of 13 percent below the baseline VMT efficiency metric for the region. As such, if the VMT per capita for the residential component of the Project is 13 percent below the regional VMT per capita, the Project could be considered to have a less than significant VMT impact. To establish a numerical threshold, VMT per capita for the entire Kings County was calculated using the KCAG no Project model run. The VMT per capita for the entire County under baseline scenario was determined as 10.33. As such, the VMT per capita threshold was determined to be 8.99, which is 13 percent below the regional VMT per capita under the baseline scenario of the KCAG model. Consistent to the VMT Guidelines, the residential component of the Project will have a significant VMT impact if it exceeds the VMT per capita threshold of 8.99. Therefore, the Project's VMT analysis has been prepared using the KCAG model and further refined implementing Project design features. The above defined region and threshold has been utilized to prepare the VMT analysis.

VMT Analysis

The full VMT Analysis can be found in Appendix E2. Table 23, below, summarizes the base year regional threshold and Project's residential VMT per capita metrics. As shown in Table 23, the Project's VMT per capita is higher than the corresponding regional threshold by 4.2%. Therefore, the residential component of the Project may have a potentially significant VMT Impact.

Table 23: Base Year Regional VMT and Project VMT Metrics

2020	Regional Threshold	Project (Residential Component)	Difference	% Difference	Significant Impact?
VMT Per Capita	8.99	9.36	0.38	4.2%	Yes

Source: VMT Analysis prepared by LSA Associates, Inc. in September 2023

As shown above, the Project's VMT per capita is higher than the regional threshold and therefore has a *potentially significant impact*. Additional analysis is required and will be provided in the forthcoming EIR.

c) Would the Project substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

Less than Significant: The Project does not propose any incompatible uses or include any design features that could increase traffic hazards. The Project includes new vehicle access points via Fargo Avenue, Flint Avenue, and 12th Avenue. These improvements will be subject to review by the City's engineer, as the new access point may pose a safety risk due to the Project design. The proposed Project would not substantially increase hazards in or around the Project area with incorporation of conditions from the Engineering Division and compliance with City standards. The impact is *less than significant.*

d) Would the Project result in inadequate emergency access?

No Impact This Project would not result in inadequate emergency access. Emergency access to the site would be via Fargo Avenue, Flint Avenue, and 12th Avenue. A network of local roads within the proposed Project property provides full access to all buildings within the development. The Project would have *no impact* on emergency access.

XVIII. TRIBAL CULTURAL RESOURCES

Would the Project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
a) Would the Project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
i) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or	☐	☑	☐	☐
ii) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	☐	☑	☐	☐

Environmental Setting

The Southern Valley Yokuts were members of the Penutian language family which held all of the Central Valley, San Francisco Bay Area, and the Pacific Coast from Marin County to near Point Sur. The Yokuts differed from other ethnographic groups in California as they had true tribal divisions with group names (Kroeber 1925; Wallace 1978). The Project area was occupied by the Tachi. Trade was well developed, with mutually beneficial interchange of needed or

desired goods. Obsidian, rare in the San Joaquin Valley, was obtained by trade with Paiute and Shoshoni groups on the eastern side of the Sierra Nevada, where numerous sources of this material are located, and to some extent from the Napa Valley to the north. Shell beads, obtained by the Yokuts from coastal people, and acorns, rare in the Great Basin, were among many items exported to the east by Yokuts traders (Davis 1961). Settlements were oriented along the waterways, with their village sites normally placed adjacent to these features for their nearby water and food resources. House structures varied in size and shape (Latta 1949; Kroeber 1925). The Yokuts experienced severe depopulation after contact with the Spanish and subsequent explorers. The most devastating impacts of the Spanish colonization effort were not the result of military conflicts but came from Old World diseases newly introduced to the native people (Peak 2022).

Cultural Resources Record Search

On January 24th, 2022, a records search was conducted from the SSJVIC of the CHRIS at California State University in Bakersfield, California, provided to 4Creeks. The records search included the Project area and surrounding land within a 0.5-mile radius of the Project. Sources consulted included archaeological site and survey base maps, historical USGS topographic maps, reports of previous investigations, cultural resource records (DPR forms) as well as listings of the Historic Properties Directory of the Office of Historic Preservation, General Land Office Maps, Archaeological Determinations of Eligibility, and the California Inventory of Historic Resources. According to the SSJVIC records search, there have been no previous cultural resource investigations within the Project area. There has only been one cultural resource study conducted within a 0.5-mile radius of the Project. The search resulted in the following potential cultural resources:

- A segment of the People's Ditch lies within the northern portion of the site. The ditch was designed in 1875 to bring water from the Kings River to the Hanford area. Many changes have occurred to the ditch since the 1926 mapping by the USGS of the region, including the straightening of segments allowing suburban development. In 2019, one recorder of a segment of the Ditch went further and looked at the entire system. An archeologist with the firm of ASM Affiliates evaluated the entire resource as not significant for the recordation of a segment of the Ditch, based on a lack of many aspects of integrity.
- The USGS topographic map shows a building in the southern portion of the Project. The building is no longer present.
- To the east, paralleling the eastern Project boundary is the line of the Atchinson, Topeka, and Santa Fe Railroad.

In addition, a Field Assessment was conducted in January 2022 for a complete inspection of the site. The ground visibility is very good in most areas due to vegetation removal and active farming. The survey strategy included parallel transects with no more than ten meters spacing in historically lower elevation areas and five-meter intervals where historical maps show increased elevation. One meter, overlapping transects were used near the southern boundary

where an older map shows a building. Close inspection of ground occurred where farming activities excavated or cut into the soil. No prehistoric resources were observed. The only historical resource observed is the section of the Peoples Ditch irrigation ditch located in the northernmost part of the Project area. No materials from the previous building in the southern part of the parcel were observed.

Native American Consultation

The State requires lead agencies to consider the potential effects of proposed Projects and consult with California Native American tribes during the local planning process to protect Traditional Tribal Cultural Resources through the California Environmental Quality Act (CEQA) Guidelines. According to PRC Section 21080.3.1, the lead agency shall begin consultation with the California Native American tribe that is traditionally and culturally affiliated with the geographical area of the proposed Project. Such significant cultural resources are either sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a tribe that is either on or eligible for inclusion in the California Historic Register or local historic register, or, the lead agency, at its discretion, and support by substantial evidence, choose to treat the resources as a Tribal Cultural Resources (PRC Section 21074(a) (1-2)).

The site is currently vacant and has been routinely disturbed as part of the agricultural operations. If any artifacts are inadvertently discovered during ground-disturbing activities, existing federal, State, and local laws, and regulations as well as the mitigation measures will require construction activities to cease until such artifacts are properly examined and determined not to be of significance by a qualified cultural resource professional.

The NAHC Sacred Lands File search and AB 52 formal tribal consultation with the Santa Rosa Rancheria Tachi Yokut Tribe was conducted by the City of Hanford. The formal consultation period began on August 12th, 2024, and will conclude on September 11th, 2024.The NAHC Sacred Lands File search assists in the identification of sacred places or other special areas important to the tribes within the Project boundary and helps to fulfill AB 52 requirements for tribal consultation.

Regulatory Setting

Historical Resources

Historical resources are defined by CEQA as resources that are listed in or eligible for the California Register of Historical Resources, resources that are listed in a local historical resource register, or resources that are otherwise determined to be historical under California Public Resources Code Section 21084.1 or California Code of Regulations Section 15064.5. Under these definitions Historical Resources can include archaeological resources, Tribal cultural resources, and Paleontological Resources.

Archaeological Resources

As stated above, archaeological resources may be considered historical resources. If they do not meet the qualifications under the California Public Resources Code 21084.1 or California Code of Regulations Section 15064.5, they are instead determined to be "unique" as defined by the CEQA Statute Section 21083.2. A unique archaeological resource is an artifact, object, or site that: (1) contains information (for which there is a demonstrable public interest) needed to answer important scientific research questions; (2) has a special and particular quality, such as being the oldest of its type or the best available example of its type; or (3) is directly associated with a scientifically recognized important prehistoric or historic event or person.

Tribal Cultural Resource (TCR)

Tribal Cultural Resources can include site features, places, cultural landscapes, sacred places, or objects, which are of cultural value to a Tribe. It is either listed on or eligible for the CA Historic Register or a local historic register or determined by the lead agency to be treated as TCR.

Paleontological Resources

For the purposes of this section, "paleontological resources" refers to the fossilized plant and animal remains of prehistoric species. Paleontological Resources are a limited scientific and educational resource and are valued for the information they yield about the history of the earth and its ecology. Fossilized remains, such as bones, teeth, shells, and leaves, are found in geologic deposits (i.e., rock formations). Paleontological resources generally include the geologic formations and localities in which the fossils are collected.

Native American Reserve (NAR)

This designation recognizes tribal trust and reservation lands managed by a Native American Tribe under the United States Department of the Interior's Bureau of Indian Affairs over which the County has no land use jurisdiction. The County encourages adoption of tribal management plans for these areas that consider compatibility and impacts upon adjacent area facilities and plans.

National Historic Preservation Act

The National Historic Preservation Act was adopted in 1966 to preserve historic and archeological sites in the United States. The Act created the National Register of Historic Places, the list of National Historic Landmarks, and the State Historic Preservation offices.

California Health and Safety Code Sections 7050.5, 7051, And 7054

These sections collectively address the illegality of interference with human burial remains, as well as the disposition of Native American burials in archaeological sites. The law protects such remains from disturbance, vandalism, or inadvertent destruction, and establishes procedures to be implemented if Native American skeletal remains are discovered during construction of a Project, including the treatment of remains prior to, during, and after evaluation, and reburial procedures.

California Public Resources Code Section 15064.5(e)
This law addresses the disposition of Native American burials in archaeological sites and protects such remains from disturbance, vandalism, or inadvertent destruction. The section establishes procedures to be implemented if Native American skeletal remains are discovered during construction of a Project and establishes the Native American Heritage Commission as the entity responsible to resolve disputes regarding the disposition of such remains.

Assembly Bill 52
Assembly Bill (AB) 52 establishes a formal consultation process for California tribes as part of CEQA and equates significant impacts on tribal cultural resources with significant environmental impacts. AB 52 defines a "California Native American Tribe" as a Native American tribe located in California that is on the contact list maintained by the Native American Heritage Commission. AB 52 requires formal consultation with California Native American Tribes prior to determining the level of environmental document if a tribe has requested to be informed by the lead agency of proposed Projects. AB 52 also requires that consultation address Project alternatives, mitigation measures, for significant effects, if requested by the California Native American Tribe, and that consultation be considered concluded when either the parties agree to measures to mitigate or avoid a significant effect, or the agency concludes that mutual agreement cannot be reached. Under AB 52, such measures shall be recommended for inclusion in the environmental document and adopted mitigation monitoring program if determined to avoid or lessen a significant impact on a tribal cultural resource.

California Historic Register
The California Historic Register was developed as a program to identify, evaluate, register, and protect Historical Resources in California. California Historical Landmarks are sites, buildings, features, or events that are of statewide significance and have anthropological, cultural, military, political, architectural, economic, scientific, religious, experimental, or other value. For a resource to be designated as a historical landmark, it must meet the following criteria:

- Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage.
- Is associated with the lives of persons important in our past.
- Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values.
- Has yielded, or may be likely to yield, information important in prehistory or history.

City of Hanford General Plan

The 2035 General Plan includes the policies related to tribal cultural resources that correlate to the proposed Project:

- *Policy O46*: *Archaeological Site Consultation.* Consult with appropriate Native American associations about potential archaeological sites in the beginning stages of the development review process.
- *Policy O47*: *Archaeological Site Study.* Require archaeological studies by a certified archeologist in areas of archeological potential significance prior to approval of development Projects.
- *Policy O48*: *Cultural Site Consultation.* Consult with the California Archaeological Inventory Southern San Joaquin Valley at California State University, Bakersfield about potential cultural sites on Projects that could have an impact on cultural resources.
- *Policy O49*: *Cultural Site Discovery.* Halt construction at a development site if cultural resources are encountered unexpectedly during construction.

Discussion

a) Would the Project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

i. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or

Less Than Significant Impact with Mitigation: The Project would not cause a substantial adverse change in the significance of a tribal cultural resource that is listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources. Based on the results of the records search, no previously recorded tribal cultural resources are located within the Project site. Although no cultural resources were identified, the presence of remains or unanticipated cultural resources under the ground surface is possible. Implementation of Mitigation Measures CUL-1 and CUL-2 will ensure that impacts to this checklist item will be less than significant with mitigation incorporation.

ii. **A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.**

Less Than Significant Impact with Mitigation: The lead agency has not determined there to be any known tribal cultural resources located within the Project area. Additionally, there are not believed to be any paleontological resources or human remains buried within the Project area's vicinity. However, if resources were found to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resources to a California Native American Tribe. Implementation of Mitigation Measures CUL-1 and CUL-2 will ensure that any impacts resulting from Project implementation remain *less than significant with mitigation* incorporation.

Mitigation Measures for Impacts to Tribal Cultural Resources:

Mitigation Measure CUL-1: Protection of Cultural Resources. In order to avoid the potential for impacts to historic and prehistoric archaeological resources, the following measures shall be implemented, as necessary, in conjunction with the construction of the Project:

a. Cultural Resources Alert on Project Plans: The Project proponent shall note on any plans that require ground disturbing excavation that there is a potential for exposing buried cultural resources.
b. Pre-Construction Briefing: The Project proponent shall retain Santa Rosa Rancheria Cultural Staff to provide a pre-construction Cultural Sensitivity Training to construction staff regarding the discovery of cultural resources and the potential for discovery during ground disturbing activities, which will include information on potential cultural material finds and, on the procedures, to be enacted if resources are found.
c. Stop Work Near any Discovered Cultural Resources: The Project proponent shall retain a professional archaeologist on an "on-call" basis during ground disturbing construction for the Project to review, identify and evaluate cultural resources that may be inadvertently exposed during construction. Should previously unidentified cultural resources be discovered during construction of the Project, the Project proponent shall cease work within 100 feet of the resources, and Kings County Community Development Agency (CDA) shall be notified immediately. The archaeologist shall review and evaluate any discoveries to determine if they are historical resource(s) and/or unique archaeological resources under CEQA.
d. Mitigation for Discovered Cultural Resources: If the professional archaeologist determines that any cultural resources exposed during construction constitute a historical resource and/or unique archaeological resource, he/she shall notify the Project proponent and other appropriate parties of the evaluation and recommended

mitigation measures to mitigate the impact to a less-than-significant level. Mitigation measures may include avoidance, preservation in place, recordation, additional archaeological testing, and data recovery, among other options. Treatment of any significant cultural resources shall be undertaken with the approval of the Kings County CDA. The archaeologist shall document the resources using DPR 523 forms and file said forms with the California Historical Resources Information System, Southern San Joaquin Valley Information Center. The resources shall be photo-documented and collected by the archaeologist for submittal to the Santa Rosa Rancheria's Cultural and Historical Preservation Department. The archaeologist shall be required to submit to the County for review and approval a report of the findings and method of curation or protection of the resources. Further grading or sitework within the area of discovery shall not be allowed until the preceding steps have been taken.

e. Native American Monitoring: Prior to any ground disturbance, the Project proponent shall offer the Santa Rosa Rancheria Tachi Yokut Tribe the opportunity to provide a Native American Monitor during ground disturbing activities during both construction and decommissioning. Tribal participation would be dependent upon the availability and interest of the Tribe.
f. Disposition of Cultural Resources: Upon coordination with the Kings County Community Development Agency, any prehistoric archaeological artifacts recovered shall be donated to an appropriate Tribal custodian or a qualified scientific institution where they would be afforded applicable cultural resources laws and guidelines.

Mitigation Measure CUL-2: Protection of Buried Human Remains. In order to avoid the potential for impacts to buried human remains, the following measures shall be implemented, as necessary, in conjunction with the construction of the Project:

a. Pursuant to State Health and Safety Code Section 7050.5(e) and Public Resources Code Section 5097.98, if human bone or bone of unknown origin is found at any time during on- or off-site construction, all work shall stop within 25 feet of the discovery and the Kings County Coroner shall be notified immediately and the resource shall be protected in compliance with applicable state and federal laws. If the remains are determined to be Native American, the Coroner shall notify the California State Native American Heritage Commission (NAHC), who shall identify the person believed to be the Most Likely Descendant (MLD) pursuant to Public Resources Code Section 5097.98. The Project proponent and MLD, with the assistance of the archaeologist, shall make all reasonable efforts to develop an agreement for the treatment of human remains and associated or unassociated funerary objects with appropriate dignity (CEQA Guidelines Sec. 15064.5(d)). The agreed upon treatment shall address the appropriate excavation, removal, recordation, analysis, custodianship, curation, and final disposition of the human remains and associated or unassociated funerary objects. California Public Resources Code allows 48 hours for the MLD to make their wishes known to the landowner after being granted access to the site. If the MLD and the other parties do not agree on the reburial method, the Project will follow Public Resources Code Section 5097.98(b) which states that "…. the

landowner or his or her authorized representative shall reinter the human remains and items associated with Native American burials with appropriate dignity on the property in a location not subject to further subsurface disturbance."

b. Any findings shall be submitted by the archaeologist in a professional report submitted to the Project applicant, the MLD, the Kings County Community Development Agency, and the California Historical Resources Information System, Southern San Joaquin Valley Information Center.

XIX. UTILITIES AND SERVICE SYSTEMS

Would the Project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relation of which could cause significant environmental effects?	☐	☐	☑	☐
b) Have sufficient water supplies available to serve the Project and reasonably foreseeable future development during normal, dry and multiple dry years?	☐	☐	☑	☐
c) Result in a determination by the wastewater treatment provider which serves or may serve the Project that it has adequate capacity to serve the Project's Projected demand in addition to the provider's existing commitments?	☐	☐	☑	☐
d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	☐	☐	☐	☑
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	☐	☐	☐	☑

Environmental Setting

Wastewater

The City of Hanford wastewater system provides for the treatment, disposal, and reuse of effluent, which meets all of the state's discharge requirements for the city. The wastewater system consists of a treatment plant and 21 sanitary sewer lift stations located throughout the city. The treatment facility has a capacity of 8 million gallons per day and is located south of Houston Avenue and East of 11th Avenue. The City's wastewater system also pursues water

conservation strategies to ensure the long-term reuse of treated disinfected wastewater to reduce the need for groundwater.

Solid Waste

Solid waste in the city is collected by a private contractor, Kings Waste Recycling Authority (KWRA). Refuse is sorted at the KWRA facility to recover recyclable materials before being hauled to the landfills in Kettleman Hills. For single-family residential customers, the City has instituted a green waste collection mixed recycle collection program.

Water

The City of Hanford's water supply system is a groundwater system. The city is located within the Tulare Lake Hydrologic Region is within the Tulare Lake Groundwater Subbasin which transmits, filters, and stores water from the main San Joaquin Valley Groundwater Basin. The system consists of 14 groundwater wells, three storage reservoirs, distribution mains, and fire hydrants. The system does not use surface water. Groundwater is recharged by rain and snowfall in addition to percolation from stormwater basins, local waterways, and agricultural irrigation.

Regulatory Setting

CalRecycle

California Code of Regulations, Title 14, Natural Resources – Division 7 contains all current CalRecycle regulations regarding nonhazardous waste management in the state. These regulations include standards for the handling of solid waste, standards for the handling of compostable materials, design standards for disposal facilities, and disposal standards for specific types of waste.

Central Valley RWQCB

The Central Valley RWQCB requires a Stormwater Pollution Prevention Plan (SWPPP) for Projects disturbing more than one acre of the total land area. Because the Project is greater than one acre, an SWPPP to manage stormwater generated during Project construction will be required.

The Central Valley RWQCB regulates Wastewater Discharges to Land by establishing thresholds for discharged pollutants and implementing monitoring programs to evaluate program compliance. This program regulates approximately 1500 dischargers in the region.

The Central Valley RWQCB is also responsible for implementing the federal program, the National Pollutant Discharge Elimination System (NPDES). The NPDES Program is the federal permitting program that regulates the discharges of pollutants to the surface waters of the U.S. Under this program, a NPDES permit is required to discharge pollutants into Waters of the U.S. There are 350 permitted facilities within the Central Valley Region.

Cal Water Urban Water Management Plan (UWMP) – Hanford District

The UWMP describes the Hanford District service area, system demand and usage, available water resources, reliability of the water supply, and contingency planning for water shortage. It also contains a conservation section in compliance with SB X7-7 describing water usage reduction targets and implementation measures. The UWMP identifies five core programs for water conservation in the District that involve promotion of high-efficiency fixtures in residential settings, promotion of high-efficiency irrigation systems, and public information and education.

City of Hanford General Plan

The 2035 General Plan includes the objectives and policies related to utilities and service systems that correlate to the proposed Project:

- *Policy P3. Water Supply and Fire Flow Availability*: Condition approval of new development Projects and water service extensions on the availability of adequate water supply and the ability to meet domestic and fire flow needs of the area.
- *Policy P7. New Water Infrastructure*: Require developers to fund and install new water distribution facilities to service their new developments.
- *Policy P11. Adequate Sanitary Sewer Improvements Availability*: Condition approval of development Projects on the provision of adequate sanitary sewer improvements.
- *Policy P13. New Wastewater Infrastructure*: Require developers to fund and install new wastewater collection facilities to service their new developments.
- *Policy P17. Adequate Storm Water Drainage Improvements*: Availability Condition approval of development Projects on the provision of adequate storm water drainage improvements.
- *Policy P19. Multi-use Storm Water Basins*: Where appropriate, support dual-purpose storm water detention basins for multiple use as parks.
- *Policy P20. Sloughs and Watercourses*: To the extent feasible, maintain slough remnants and watercourses within the Hanford Planning Area as components of the storm drainage infrastructure.
- *Policy P21. New Storm Water Drainage Infrastructure*: Require developers to fund and install new storm water drainage facilities to service their new developments.
- *Policy P24. New Development Run-Off Volumes*: Require new development to discharge storm water runoff at volumes no greater than the capacity of any portion of the existing downstream system by utilizing detention or retention or other approved methods unless the Project is providing drainage infrastructure in accordance with an adopted drainage plan.
- *Policy P25. Reduction in Storm Water Runoff*: Adopt development standards to reduce peak-hour storm water flow and increase groundwater recharge.

Discussion

a) Would the Project require or result in the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relation of which could cause significant environmental effects?

Less than Significant Impact: The proposed Project would result in new and expanded services; however, as the site is appropriately designated and zoned, these expansions have been accounted for and analyzed in the City's planning infrastructure documents. Hanford's current system for water, wastewater, and other services have the capacity to handle the Projected growth expected in the General Plan. To compensate for these services, the new development will be required to pay impact fees. It is not anticipated that the implementation of the proposed Project would result in increased demand for any utility services beyond the planned conditions. There is *a less than significant impact.*

b) Would the Project have sufficient water supplies available to serve the Project and reasonably foreseeable future development during normal, dry, and multiple dry years?

Less than Significant Impact: Hanford will provide water services upon development. Hanford's water supply comes from groundwater extraction. The City has 14 active wells with a capacity of 31.6 million gallons (97 AF) of groundwater per day. This totals approximately 35,405 AF per year. However, this is the maximum capacity and the UWMP states that there is a reasonably available supply of 16,142 AFY by 2045. In 2020, the recorded yearly water usage was 11,714 AF of water. The Hanford UWMP states that 2000 is a year that had an average amount of rain, a single dry year was 1984, while a drought occurred from 1987-1991. According to the UWMP, Hanford will have an available water volume of 16,142 AFY by 2045. A single dry year has a supply of 84% of the average. This would be 13,559 AFY on a single dry year. Over multiple dry years of 1987-1991, the UWMP states that Hanford would have 93%, 90%, 88%, 86%, and 87% of the average supply. This would be 15,012 AFY, 14,528 AFY, 14,205 AFY, 12,268 AFY, and 14,044 AFY. In 2045, the Hanford water district with the Project developed would demand 13,874 AFY. This is higher than the expected supply in a single dry year. However, the UWMP is expecting a total demand of 13,982 AFY. This includes the expected demand for the planned residential and commercial uses of the site in the General Plan. As such, the Project would not affect groundwater supplies beyond what has already been analyzed and approved. To compensate for new water Projects, all new developments will pay impact fees for new water services, along with the reduced water use implementations from the policies outlined in the Hanford General Plan. Therefore, the impact is *less than significant*.

c) Would the Project result in a determination by the wastewater treatment provider which serves or may serve the Project that it has adequate capacity to serve the Project's Projected demand in addition to the provider's existing commitments?

Less than Significant Impact: The Project does not propose any new or expanded uses and is therefore not anticipated to result in increased demand for wastewater treatment services beyond existing conditions in the Hanford General Plan. Additionally, the City's Water System Management Plan has evaluated the site's current and future wastewater service demand. The current capacity of the wastewater system is approximately 8 mgd, or 8,961 AFY. In 2015, it received 4,971 AF, leaving an available 3,990 AFY. In addition, a future upgrade plans to increase the capacity to 26 mgd. Based on the average per-acre daily wastewater use (1,300 gallons), the 304-acre Project would produce approximately 395,200 MGD of wastewater, or 443 AFY.

Because the City's sewer system has the capacity to meet the Project site's expected demand for wastewater treatment, and it is not anticipated that the Project will increase the site's demand for wastewater treatment, it can be inferred that the existing wastewater treatment system has adequate capacity to serve the proposed Project. There is a *less than significant impact.*

d) Would the Project generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?

No Impact: KWRA provides solid waste services to the proposed Project site. The Project does not propose any new or expanded uses beyond what has been planned for and is therefore not anticipated to result in increased generation of solid waste beyond. Because the City's existing infrastructure has the capacity to accommodate the solid waste currently planned in the General Plan for the expanded population, it can be inferred that the existing solid waste infrastructure has adequate capacity to serve the proposed Project. The Project would not generate solid waste in excess of State or Local Standards and will pay a refuse impact fee to prevent any adverse impacts on the current solid waste system, so there is *no impact.*

e) Would the Project comply with federal, state, and local management and reduction statutes and regulations related to solid waste?

No Impact: This proposed Project conforms to all applicable statutes and regulations related to solid waste disposal. The proposed Project will comply with the adopted policies related to solid waste and will comply with all applicable federal, state, and local statutes and regulations about disposal of solid waste, including recycling. Therefore, the proposed Project would have *no impact* on solid waste regulations.

XX. WILDFIRE

If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the Project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☑
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose Project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	☐	☐	☐	☑
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	☐	☐	☑	☐
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	☐	☐	☐	☑

Environmental Setting

There are no State Responsibility Areas (SRAs) within the vicinity of the Project site, and the Project site is not categorized as a "Very High" Fire Hazard Severity Zone (FHSZ) by CalFire. This CEQA topic only applies to areas within an SRA or a Very High FHSZ.

Regulatory Setting

Fire Hazard Severity Zones: geographical areas designated pursuant to California Public Resources Codes Sections 4201 through 4204 and classified as Very High, High, or Moderate in State Responsibility Areas or as Local Agency Very High Fire Hazard Severity Zones designated pursuant to California Government Code, Sections 51175 through 51189.

Discussion

a) Would the Project substantially impair an adopted emergency response plan or emergency evacuation plan?

No Impact: The Project would not substantially impair an adopted emergency response plan or emergency evacuation plan. The Project will be reviewed by the City of Hanford Fire Chief to ensure the Project does not impair emergency response or emergency evacuation. Additionally, the proposed Project site is not located within an SRA or a Very High FHSZ. There is *no impact.*

b) Due to slope, prevailing winds, and other factors, would the Project exacerbate wildfire risks, and thereby expose Project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?

No Impact: The Project is located on a flat area of agricultural and urban land which is considered to be at little risk of fire. Additionally, the proposed Project site is not located within an SRA or a Very High FHSZ. There is *no impact.*

c) Would the Project require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?

Less than Significant Impact: The construction of the Project involves adding new local residential streets, and new utilities. Utilities such as emergency water sources and power lines would be included as part of the proposed development, however all improvements would be subject to City standards and Fire Chief approval. The proposed Project would not exacerbate fire risk and the impact would be *less than significant*

d) Would the Project expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire instability, or drainage changes?

No Impact: The Project site is not located in an area designated as a Fire Hazard Severity Zone and lands associated with the Project site are relatively flat. Therefore, the Project would not be susceptible to downslope or downstream flooding or landslides as a result of post-fire instability or drainage changes. There is *no impact.*

XXI. MANDATORY FINDINGS OF SIGNIFICANCE

Would the Project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
a) Does the Project have the potential substantially to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☑	☐	☐	☐
b) Does the Project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a Project are considerable when viewed in connection with the effects of past Projects, the effects of other current Projects, and the effects of probable future Projects)?	☑	☐	☐	☐
c) Does the Project have environmental effects, which will cause substantial adverse effects on human beings, either directly or indirectly?	☑	☐	☐	☐

Discussion

a) Does the Project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?

Potentially Significant: This initial study found the Project could have significant impacts on air quality, biological resources, geology and soils, hazards and hazardous materials, noise, hydrology and water quality, transportation, cultural resources, and Tribal cultural resources. Implementation of the identified mitigation measures for all resource areas except air quality, hazards and hazardous materials, and transportation would reduce the impact to less than significant levels. The identified mitigation measures for air quality, hazards and hazardous materials, and transportation would not reduce impacts sufficiently, resulting in potentially significant impacts for these resource areas. These sections will be analyzed in more detail in the forthcoming Focused EIR. The impact is *potentially significant.*

b) Does the Project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a Project are considerable when viewed in connection with the effects of past Projects, the effects of other current Projects, and the effects of probable future Projects)?

Potentially Significant: CEQA Guidelines Section 15064(h) states that a Lead Agency shall consider whether the cumulative impact of a Project is significant and whether the effects of the Project are cumulatively considerable. The assessment of the significance of the cumulative effects of a Project must, therefore, be conducted in connection with the effects of past Projects, other current Projects, and probable future Projects. Due to the nature of the Project and consistency with environmental policies, incremental contributions to impacts are considered to be cumulatively considerable. Due to the size of the Project, it may contribute substantially to adverse cumulative conditions or create substantial indirect impacts (i.e., increase in population could lead to an increased need for housing, increase in traffic, air pollutants, etc). Cumulative conditions will be discussed in more detail in the forthcoming EIR. Impacts would be potentially significant

c) Does the Project have environmental effects, which will cause substantial adverse effects on human beings, either directly or indirectly?

Potentially Significant: The analyses of environmental issues contained in this Initial Study indicate that the Project may result in substantial impacts to human beings, either directly

or indirectly. Mitigation measures have been incorporated in the Project design to reduce potentially significant impacts to less than significant, but impacts to air quality, hazards and hazardous materials, and transportation remain potentially significant. Environmental effects that result in indirect and direct impacts to human beings will be analyzed further in the Focused EIR prepared for the Project. The impact is *potentially significant.*

1.6 MITIGATION MONITORING AND REPORTING PROGRAM

As required by Public Resources Code Section 21081.6, subd. (a)(1), a Mitigation Monitoring and Reporting Program (MMRP) has been prepared for the Project in order to monitor the implementation of the mitigation measures that have been adopted for the Project. This Mitigation Monitoring and Reporting Program (MMRP) has been created based upon the findings of the Initial Study (IS) for the Fargo Village Project in the City of Hanford.

The first column of the table identifies the mitigation measure. The second column names the party responsible for carrying out the required action. The third column, "Timing of Mitigation Measure" identifies the time the mitigation measure should be initiated. The fourth column, "Responsible Party for Monitoring," names the party ensuring that the mitigation measure is implemented. The last column will be used by the City to ensure that the individual mitigation measures have been monitored.

Plan checking and verification of mitigation compliance shall be the responsibility of the City of Hanford.

Mitigation Measure	Responsible Party for Implementation	Implementation Timing	Responsible Party for Monitoring	Verification
Mitigation Measure AG-1: The Project shall comply with HMC Section 16.40.110 Right to Farm, sub-section (E) Disclosure and Recordation Requirements, "all approvals for improvement or development of property including without limitation application for rezonings, land divisions, zoning permits, and residential building permits, on property in the city of Hanford within one (1) mile of the city's urban limit line, shall include a condition that notice and disclosure of this agricultural land use policy be given by the applicant, or the owner if different from the applicant. The applicant, or owner if different from the applicant, shall also acknowledge the contents of the notice and disclosure, which includes a	City of Hanford	Prior to Construction	City of Hanford	

Mitigation Measure	Responsible Party for Implementation	Implementation Timing	Responsible Party for Monitoring	Verification
description of the property the notice and disclosure pertains to, in the Official Records of the Kings County Recorder, and recorded at the applicant's own expense." The Hanford Community Development Department is responsible for carrying out the notice, disclosure, and recordation required by the HMC.				
MM-AQ-1 Zero VOC Architectural Coating Requirement and VOC Educational Program. Prior to the occupancy of any on-site development, the Project Applicant or its designee shall provide evidence to the City of Hanford that the applicant/phase developer has implemented the use of Zero VOC Architectural Coating (Paint) products for use on all interior and exterior surfaces excluding parking lots. The products used must contain 5 grams/liter or less for VOC content to remain in compliance with this mitigation measure. For parking lot paint, products with a VOC content less than or equal to 50 grams/liter may be used. Additionally, the Project Application or its designee must provide evidence to the City of Hanford that the applicant/phase developer has developed a Green Cleaning Product and Architectural Coating (Paint) education program to be made available at rental offices, leasing spaces, and/or on websites.	City of Hanford	Prior to Construction	City of Hanford	

Mitigation Measure	Responsible Party for Implementation	Implementation Timing	Responsible Party for Monitoring	Verification
MM-AQ-2 Tier 4 Final Equipment. For heavy-duty diesel equipment with engines of 75 horsepower or greater, use equipment equipped with Tier 4 Final engines. Prior to the commencement of construction activities for the Project, the Project Applicant shall require its construction contractor to demonstrate that all 75-horsepower or greater diesel-powered equipment is powered with California Air Resources Board (CARB)-certified Tier 4 Final engines. An exemption from this requirement may be granted if (a) the Project Applicant documents equipment with Tier 4 Final engines are not reasonably available, and (b) the required corresponding reductions in criteria air pollutant emissions can be achieved from other combinations of construction equipment. Before an exemption may be granted, the Project Applicant's construction contractor shall: (1) demonstrate that at least two construction fleet owners/operators in Tulare County were contacted and that those owners/operators confirmed Tier 4 Final equipment could not be located within Tulare County during the desired construction schedule; and (2) the proposed replacement equipment has been evaluated using California Emissions Estimator Model (CalEEMod) or other industry standard emission estimation method and documentation provided to the City to	City of Hanford	Ongoing during Construction	City of Hanford	

Mitigation Measure	Responsible Party for Implementation	Implementation Timing	Responsible Party for Monitoring	Verification
confirm that Project-generated emissions do not exceed applicable San Joaquin Valley Air Pollution Control District (SJVAPCD) carcinogenic (cancer) risk threshold.				
MM-AQ-3 Multi-Family Residential Parking. Applications for building permits submitted to City by the Project proponent/developer shall include plans and specifications demonstrating that the following features have been incorporated into the building designs or specifications for multifamily residential buildings: • Visitor parking shall include preferentially located parking spaces for electric vehicles. • Bicycle parking shall be provided as specified in Section A4.106.9, Residential Voluntary Measures, of the California Green Building Standards (CALGreen) Code.	City of Hanford	Prior to Construction	City of Hanford	
MM-AQ-4 Multi-Family Residential and Park/Trail Parking. Applications for a tentative tract map, parcel map (excluding financing map), or commercial site plan review, that include parking structures, parking lots with 20 or more parking spaces that serve uses other than residential or nonresidential buildings (e.g., trailhead, park), and parking structures and parking lots that serve multifamily	City of Hanford	Prior to Construction	City of Hanford	

Mitigation Measure	Responsible Party for Implementation	Implementation Timing	Responsible Party for Monitoring	Verification
residential buildings with 15 or more multifamily units, shall include a minimum of 5% of preferentially located parking spaces shall be reserved for electric and ride-share vehicles.				
MM-AQ-5 Preferential Parking and Electric Vehicle Charging for Nonresidential Buildings. Applications for commercial site plan review and building permits for nonresidential buildings shall include preferential parking for electric cars, low emission vehicles, and carpools/vanpools to encourage use of such vehicles. Proof of compliance shall be provided to the City prior to the issuance of occupancy permits. Preferential parking for such vehicles shall include two spaces for nonresidential lots containing 10 to 25 spaces; four spaces for 26 to 50 space lots; six spaces for 51 to 75 space lots; nine spaces for 76 to 100 space lots; eleven spaces for 101 to 150 space lots; 18 spaces for 151 to 200 space lots; and at least 10% of total spaces for lots with more than 200 spaces.	City of Hanford	Prior to Construction	City of Hanford	
Mitigation Measure BIO-1: Avoid and Minimize Impacts to Swainson's Hawk If construction, grading, or Project-related improvements are to commence between February 1st and August 31st, a focused survey for Swainson's hawk nests on the site and within 1/2 mile of the construction area shall be conducted by a qualified biologist no later than 30 days prior to	City of Hanford	Prior to Construction	City of Hanford	

Mitigation Measure	Responsible Party for Implementation	Implementation Timing	Responsible Party for Monitoring	Verification
the start of construction work (including clearing and grubbing). If active nests are found, a 0.5-mile no disturbance buffer will be established, and the CDFW will be contacted to determine other protective measures that should be taken. If no active nests are found during the focused survey, no further mitigation will be required.				
Mitigation Measure BIO-1a: Nesting Bird and Raptor Survey If Project-related activities are scheduled between February 1st to September 1st (the typical nesting/breeding season), a focused survey for nests shall be conducted by a qualified biologist within fourteen (14) calendar days prior to the beginning of Project-related activities. The qualified biologist shall survey: a minimum 0.5-mile radius of the construction area for non-listed raptors and a 1,000-foot radius for birds protected by the MBTA. If no active nests are found, Project activities may proceed as scheduled.	City of Hanford	Prior to Construction	City of Hanford	
Mitigation Measure BIO-1b: Active Nests If an active nest is located, then it should be avoided, and a minimum no-disturbance or destruction buffer of 500-feet shall be established for non-listed raptors and a minimum of 250-feet for birds protected by the MBTA unless a qualified biologist determines that smaller buffers would be sufficient to avoid impacts to nesting birds and raptors. The extent of these buffers will	City of Hanford	Ongoing during Construction	City of Hanford	

Mitigation Measure	Responsible Party for Implementation	Implementation Timing	Responsible Party for Monitoring	Verification
depend on the species present, the level of noise or construction disturbance, line of sight between the nest and the disturbance, ambient levels of noise and other disturbances, and other topographical or artificial barriers. The buffer shall be kept in place until after the qualified biologist has determined that the young have fledged and are no longer reliant upon the nest or parental care for survival.				
CUL-1: Protection of Cultural Resources. In order to avoid the potential for impacts to historic and prehistoric archaeological resources, the following measures shall be implemented, as necessary, in conjunction with the construction of the Project: a. Cultural Resources Alert on Project Plans: The Project proponent shall note on any plans that require ground disturbing excavation that there is a potential for exposing buried cultural resources. b. Pre-Construction Briefing: The Project proponent shall retain Santa Rosa Rancheria Cultural Staff to provide a pre-construction Cultural Sensitivity Training to construction staff regarding the discovery of cultural resources and the potential for discovery during ground disturbing activities, which will include information on potential cultural material finds and, on the procedures, to be enacted if resources are found.	City of Hanford	Prior to and Ongoing during Construction	City of Hanford	

Mitigation Measure	Responsible Party for Implementation	Implementation Timing	Responsible Party for Monitoring	Verification
c. Stop Work Near any Discovered Cultural Resources: The Project proponent shall retain a professional archaeologist on an "on-call" basis during ground disturbing construction for the Project to review, identify and evaluate cultural resources that may be inadvertently exposed during construction. Should previously unidentified cultural resources be discovered during construction of the Project, the Project proponent shall cease work within 100 feet of the resources, and Kings County Community Development Agency (CDA) shall be notified immediately. The archaeologist shall review and evaluate any discoveries to determine if they are historical resource(s) and/or unique archaeological resources under CEQA. d. Mitigation for Discovered Cultural Resources: If the professional archaeologist determines that any cultural resources exposed during construction constitute a historical resource and/or unique archaeological resource, he/she shall notify the Project proponent and other appropriate parties of the evaluation and recommended mitigation measures to mitigate the impact to a less-than-significant level. Mitigation measures may include avoidance,				

Mitigation Measure	Responsible Party for Implementation	Implementation Timing	Responsible Party for Monitoring	Verification
preservation in place, recordation, additional archaeological testing, and data recovery, among other options. Treatment of any significant cultural resources shall be undertaken with the approval of the Kings County CDA. The archaeologist shall document the resources using DPR 523 forms and file said forms with the California Historical Resources Information System, Southern San Joaquin Valley Information Center. The resources shall be photo-documented and collected by the archaeologist for submittal to the Santa Rosa Rancheria's Cultural and Historical Preservation Department. The archaeologist shall be required to submit to the County for review and approval a report of the findings and method of curation or protection of the resources. Further grading or sitework within the area of discovery shall not be allowed until the preceding steps have been taken. e. Native American Monitoring: Prior to any ground disturbance, the Project proponent shall offer the Santa Rosa Rancheria Tachi Yokut Tribe the opportunity to provide a Native American Monitor during ground disturbing activities during both construction and decommissioning. Tribal participation would be dependent				

Mitigation Measure	Responsible Party for Implementation	Implementation Timing	Responsible Party for Monitoring	Verification
upon the availability and interest of the Tribe. f. <u>Disposition of Cultural Resources:</u> Upon coordination with the Kings County Community Development Agency, any prehistoric archaeological artifacts recovered shall be donated to an appropriate Tribal custodian or a qualified scientific institution where they would be afforded applicable cultural resources laws and guidelines.				
<u>CUL-2:</u> Protection of Buried Human Remains. In order to avoid the potential for impacts to buried human remains, the following measures shall be implemented, as necessary, in conjunction with the construction of the Project: a. Pursuant to State Health and Safety Code Section 7050.5(e) and Public Resources Code Section 5097.98, if human bone or bone of unknown origin is found at any time during on- or off-site construction, all work shall stop within 25 feet of the discovery and the Kings County Coroner shall be notified immediately and the resource shall be protected in compliance with applicable state and federal laws. If the remains are determined to be Native American, the Coroner shall notify the California State Native American Heritage Commission (NAHC), who shall identify the person believed to	City of Hanford	Ongoing to during Construction	City of Hanford	

Mitigation Measure	Responsible Party for Implementation	Implementation Timing	Responsible Party for Monitoring	Verification
be the Most Likely Descendant (MLD) pursuant to Public Resources Code Section 5097.98. The Project proponent and MLD, with the assistance of the archaeologist, shall make all reasonable efforts to develop an agreement for the treatment of human remains and associated or unassociated funerary objects with appropriate dignity (CEQA Guidelines Sec. 15064.5(d)). The agreed upon treatment shall address the appropriate excavation, removal, recordation, analysis, custodianship, curation, and final disposition of the human remains and associated or unassociated funerary objects. California Public Resources Code allows 48 hours for the MLD to make their wishes known to the landowner after being granted access to the site. If the MLD and the other parties do not agree on the reburial method, the Project will follow Public Resources Code Section 5097.98(b) which states that "…. the landowner or his or her authorized representative shall reinter the human remains and items associated with Native American burials with appropriate dignity on the property in a location not subject to further subsurface disturbance."				

Mitigation Measure	Responsible Party for Implementation	Implementation Timing	Responsible Party for Monitoring	Verification
Any findings shall be submitted by the archaeologist in a professional report submitted to the Project applicant, the MLD, the Kings County Community Development Agency, and the California Historical Resources Information System, Southern San Joaquin Valley Information Center.				
NS-1: A temporary noise barrier of a minimum 12-foot height (as measured from the ground surface) shall be erected along any portions of the northern, eastern and southern boundaries for construction activities that would take place within 300 feet of a given section of this boundary and maintained in place for the duration of construction activities taking place within 300 feet of a given portion of the boundary.	City of Hanford	Ongoing during Construction	City of Hanford	

1.7 References

BREEZE Software, A Division of Trinity Consultants & South Coast Air Quality Management District. (2021). Calculation Details for CalEEMod. In *South Coast Air Quality Management District (AQMD)*. California Air Districts. Retrieved May 17, 2024, from https://www.aqmd.gov/docs/default-source/caleemod/user-guide-2021/appendix-a2020-4-0.pdf?sfvrsn=6

Board, L. a. R. W. Q. C. (n.d.). *SWPPP - Storm Water Pollution Prevention Plan Checklist | Los Angeles Regional Water Quality Control Board*. https://www.waterboards.ca.gov/losangeles/water_issues/programs/stormwater/sw_swppp.html

California Department of Fish and Wildlife. (n.d.). Appendix I: CDFW's Conservation Measures for Biological Resources That May Be Affected by Program-level Actions. In *California State Portal*. https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=73979

California Air Resources Board. (2020). Consumer Products EICs 2020 inventory update. In *Consumer Products* (pp. 1–36). https://ww2.arb.ca.gov/sites/default/files/2022-08/Documentation%20of%202020%20Inventory%20and%20Profile%20Update%200626620.pdf

California Energy Commission. (n.d.). *Integrated Energy Policy Report - IEPR*. https://www.energy.ca.gov/data-reports/reports/integrated-energy-policy-report

California Energy Commission. (n.d.). *Supply and demand of natural gas in California*. https://www.energy.ca.gov/data-reports/energy-almanac/californias-natural-gas-market/supply-and-demand-natural-gas-california

California Energy Commission. (2022). 2022 Building Energy Efficiency Standards for residential and nonresidential buildings. In *California Energy Commission* (CEC-400-2022-010). California Energy Commission Energy Efficiency Division. Retrieved May 29, 2024, from https://www.energy.ca.gov/sites/default/files/2022-12/CEC-400-2022-010_CMF.pdf

California, S. O. (n.d.). *Cortese List: Section 65962.5(A) | CALEPA*. https://calepa.ca.gov/sitecleanup/corteselist/section-65962-5a/

California, S. O. (n.d.-b). *Scenic Highways | Caltrans*. https://dot.ca.gov/programs/design/lap-landscape-architecture-and-community-livability/lap-liv-i-scenic-highways

CAPCOA (California Air Pollution Control Officers Association). 2021. California Emissions Estimator Model (CalEEMod) User's Guide Version 2020.4.0. Accessed May 2024.

CARB (California Air Resources Board). 2000. Risk Reduction Plan to Reduce Particulate Matter Emissions from DieselFueled Engines and Vehicles. October 2000. http://www.arb.ca.gov/diesel/documents/rrpfinal.pdf.

CARB. 2005. Air Quality and Land Use Handbook: A Community Health Perspective. April 2005. http://www.arb.ca.gov/ch/landuse.htm.

CARB. 2016a. "Glossary of Air Pollution Terms." CARB website. http://www.arb.ca.gov/html/gloss.htm. CARB. 2016b. "Overview: Diesel Exhaust and Health." April 12, 2016. https://www.arb.ca.gov/research/diesel/ diesel-health.htm.

CARB. 2016c. "Ambient Air Quality Standards." May 4, 2016. http://www.arb.ca.gov/research/aaqs/aaqs2.pdf.

CARB. 2017. "Inhalable Particulate Matter and Health (PM2.5 and PM10)." https://www.arb.ca.gov/research/aaqs/common-pollutants/pm/pm.htm. CARB. 2019a. "Ozone & Health." https://ww2.arb.ca.gov/resources/ozone-and-health.

CARB. 2019b. "Nitrogen Dioxide & Health." https://ww2.arb.ca.gov/resources/nitrogen-dioxide-and-health.

CARB. 2019c. "Carbon Monoxide & Health." https://ww2.arb.ca.gov/resources/carbon-monoxide-and-health.

CARB. 2019d. "Sulfur Dioxide & Health." https://ww2.arb.ca.gov/resources/sulfur-dioxide-and-health.

CARB. 2021. "iADAM: Air Quality Data Statistics." http://www.arb.ca.gov/adam/topfour/topfour1.php. CDPH (California Department of Public Health). 2022.

CDPH Infectious Diseases Branch (IDB) Yearly Summaries of Selected Communicable Diseases in California, 2012-2020.

CEC (California Energy Commission). 2018. California Energy Demand 2018–2030 Preliminary Forecast. CEC200-2018-002-CMF. February 2018. https://www.energy.ca.gov/ data-reports/reports/integrated-energy-policy-report/2017-integrated-energy-policy-report/2017-iepr.

CEC. 2020a. "Gas Consumption by Entity." Accessed September 2022. http://ecdms.energy.ca.gov/gasbycounty.aspx.

CEC. 2020b. "Gas Consumption by Planning Area." Accessed September 2022. http://ecdms.energy.ca.gov/gasbyplan.aspx.

City of Hanford, CA home. (n.d.). https://ecode360.com/HA4933/home

City of Hanford, CA: *PARKING AND LOADING STANDARDS*. (n.d.). City of Hanford, CA Code. https://ecode360.com/43895020

City of Hanford Community Development. (2014). City of Hanford General Plan Background Report. In *City of Hanford*. Quad Knopf. Retrieved May 22, 2024, from https://www.cityofhanfordca.com/DocumentCenter/View/382/2034-General-Plan-Background-Report-PDF

City of Hanford Public Works Department. (2006). Hanford Public Works Standard Specifications. In *City of Hanford*. Retrieved May 22, 2024, from https://www.ci.hanford.ca.us/DocumentCenter/View/394/Public-Works-Standard-Specifications-PDF

City of Hanford. (2005). Storm Water Management Plan. In *City of Hanford*. https://www.waterboards.ca.gov/water_issues/programs/stormwater/swmp/hanford_swmp.pdf

City of Hanford. (2021). 2020 Urban Water Management Plan. In *City of Hanford*. Retrieved May 30, 2024, from https://www.cityofhanfordca.com/DocumentCenter/View/567/2020-Urban-Water-Management-Plan-PDF

CPUC. 2020. "Natural Gas and California." Accessed May 2024. http://www.cpuc.ca.gov/natural_gas/.

District-accepted fleet mix for residential Projects. (2013). https://ww2.valleyair.org/media/cfdag21r/residential-fleet-mix.pdf

EIA. 2024a. "California State Energy Profile." Last updated May 16, 2024. Accessed May 2024. https://www.eia.gov/state/?sid=CA

EIA. 2024b. "Natural Gas Consumption by End Use." April 2024. Accessed May 2024. https://www.eia.gov/dnav/ng/ng_cons_sum_dcu_nus_a.htm

EIA. 2024c. "California State Profile and Energy Estimates – Table F16: Total Petroleum Consumption Estimates, 2017." Accessed May 2024. https://www.eia.gov/state/print.php?sid=CA

EPA (U.S. Environmental Protection Agency). 2004. Air Quality Criteria for Particulate Matter, Vol. 1 and 2. EPA/600/P-99/002aF. National Center for Environmental Assessment, Office of Research and Development, U.S. Environmental Protection Agency, Research Triangle Park, NC. October 2004.

EPA. 2008. Reducing Urban Heat Islands: Compendium of Strategies – Urban Heat Island Basics.

EPA. 2009. Integrated Science Assessment for Particulate Matter. U.S. EPA, EPA/600/R-08/139F, 2009.

EPA. 2013. Integrated Science Assessment of Ozone and Related Photochemical Oxidants. U.S. EPA, EPA/ 600R-10/076F, 2013.

EPA. 2016. "Criteria Air Pollutants." July 21, 2016. https://www.epa.gov/criteria-air-pollutants. EPA. 2022a. "AirData: Access to Air Pollution Data." Accessed December 2022. http://www.epa.gov/airdata/ ad_rep_mon.html.

EPA. 2022b. Air Quality Dispersion Modeling – Preferred and Recommended Models. Accessed July 2023. https://www.epa.gov/scram/air-quality-dispersion-modeling-preferred-and-recommendedmodels#aermod

Federal Highway Administration [FHWA]. (2006). FHWA HIGHWAY CONSTRUCTION NOISE HANDBOOK. In *San Diego County* (FHWA-HEP-06-015). U.S. Department of Transportation. Retrieved May 22, 2024, from https://www.sandiegocounty.gov/content/dam/sdc/pds/ceqa/OtayRanchVillage13Resort/PrePC/2015Comments/Comments/O-14/O-14_KendallHolbrook_A4.pdf

Gkatzelis, G. & California Air Resources Board. (2021). *Updated temporal profiles for consumer products*. https://ww2.arb.ca.gov/sites/default/files/2022-08/Documentation%20of%20CP%20Temporal%20Profiles%20Update%20-%20052021.pdf

Governor's Office of Planning and Research. (2018). *ON EVALUATING TRANSPORTATION IMPACTS IN CEQA TECHNICAL ADVISORY*. https://opr.ca.gov/docs/20180416-743_Technical_Advisory_4.16.18.pdf

Greenhouse effect. (n.d.). https://education.nationalgeographic.org/resource/greenhouse-effect/

Howell Consulting & Kings County Planning Department. (2012). Kings County Multi-Jurisdictional Local Hazard Mitigation Plan: Including the participating jurisdictions of the cities of Avenal, Corcoran, Hanford and Lemoore. In *Kings County Office of Emergency Management*. Retrieved May 29, 2024, from https://www.countyofkingsca.gov/home/showpublisheddocument/23875/637298992208470000

Important Farmland Categories. (2024). California Department of Conservation. Retrieved April 24, 2024, from https://www.conservation.ca.gov/dlrp/fmmp/Pages/Important-Farmland-Categories.aspx#:~:text=For%20environmental%20review%20purposes%20under,Public%20Resources%20Code%20Section%2021060.1).

International Code Council (ICC). (n.d.). *California Building Code, Title 24, Part2*. https://codes.iccsafe.org/content/CABC2022P1

Kings County Community Development Agency. (2010). 2035 Kings County General Plan. In *County of Kings*. Retrieved May 22, 2024, from https://www.countyofkingsca.gov/home/showpublisheddocument/3106/635274892972100000

LSA Associates, Inc. & City of Hanford. (2022). City of Hanford VMT Thresholds and Implementation Guidelines. In *City of Hanford*. Retrieved June 6, 2024, from https://www.cityofhanfordca.com/DocumentCenter/View/1276/City-of-Hanford-VMT-Thresholds-and-Implementation-Guidelines

Mukherjee, A. & LSA Associates, Inc. (2023a). *Traffic study*.

Mukherjee, A. & LSA Associates, Inc. (2023). *Vehicle miles traveled analysis: Singh Development Project*.

Natural Areas Small - California Essential Habitat Connectivity (CEHC) [ds1073]. (n.d.). https://data-cdfw.opendata.arcgis.com/datasets/CDFW::natural-areas-small-california-essential-habitat-connectivity-cehc-ds1073-1/explore?location=36.381183%2C-119.715557%2C12.89

Northern California Water Association, & Land Use/Water Supply Guidebook, N. (2007). Land Use/Water Supply Analysis Guidebook [Guidebook]. In *Sacramento Valley Integrated Regional Water Management Plan*. https://www.norcalwater.org/res/docs/NCWA-guidebook-final.pdf

NRC (National Research Council). 2005. Interim Report of the Committee on Changes in New Source Review Programs for Stationary Sources of Air Pollutants. Washington, DC: The National Academies Press. https://doi.org/10.17226/11208.

OEHHA (Office of Environmental Health Hazard Assessment). 2015. Air Toxics Hot Spots Program. Risk Assessment Guidelines. Guidance Manual for Preparation of Health Risk Assessments. February 2015. http://oehha.ca.gov/air/hot_spots/2015/2015GuidanceManual.pdf.

Official Series Description - NORD Series. (n.d.). https://soilseries.sc.egov.usda.gov/OSD_Docs/N/NORD.html#:~:text=The%20Nord%20series%20consists%20of,is%20about%2062%20degrees%20F.

Official Series Description - WHITEWOLF Series. (n.d.). https://soilseries.sc.egov.usda.gov/OSD_Docs/W/WHITEWOLF.html

On-Road (EMFAC) | California Air Resources Board. (n.d.). https://ww2.arb.ca.gov/our-work/programs/msei/on-road-emfac

Overview of greenhouse gases | Greenhouse gas (GHG) emissions | US EPA. (n.d.). https://19january2017snapshot.epa.gov/ghgemissions/overview-greenhouse-gases_.html#:~:text=For%20each%20greenhouse%20gas%2C%20a,contribute%20more%20to%20warming%20Earth.

Reduce urban Heat Island Effect | US EPA. (2024, April 17). US EPA. https://www.epa.gov/green-infrastructure/reduce-urban-heat-island-effect

Rincon Consultants, Inc., Harnish, M., & Kittelson & Associates, Inc. (2014). Final Regional Climate Action Plan. In *Kings County Association of Governments*. Retrieved May 30, 2024, from https://www.cityofhanfordca.com/DocumentCenter/View/359/Regional-Climate-Action-Plan-PDF

SJVAPCD. 2020c. Ambient Air Quality Standards & Valley Attainment Status. Accessed May 2024. http://www.valleyair.org/aqinfo/attainment.htm.

SCAQMD (South Coast Air Quality Management District). 2003. Final 2003 AQMP Appendix V. August 2003. https://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/ 2003-air-quality-management-plan/2003-aqmp- appendix-v.pdf?sfvrsn=2.

SCAQMD. 2017. 2016 Air Quality Management Plan Appendix I, Health Effects. March 2017. https://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/2016-air-quality-management-plan/ final-2016-aqmp/appendix-i.pdf?sfvrsn=14.

SCE (Southern California Edison). 2022. 2022 Power Content Labels. https://www.sce.com/sites/default/files/custom-files/PDF_Files/SCE_2022_Power_Content_Label_B%26W.pdf

SJVAPCD. (2020). RULE 4601 ARCHITECTURAL COATINGS. In *SJVUAPCD* (pp. 1–3). https://ww2.arb.ca.gov/sites/default/files/classic/technology-clearinghouse/rules/RuleID4662.pdf

SJVAPCD (San Joaquin Valley Air Pollution Control District). 2004. Extreme Ozone Attainment Demonstration Plan. October 2004. Accessed August 2017. http://www.valleyair.org/Air_Quality_Plans/AQ_Final_Adopted_Ozone2004.htm.

SJVAPCD (San Joaquin Valley Air Pollution Control District). 2015. Guidance for Assessing and Mitigating Air Quality Impacts. Accessed August 2017. http://www.valleyair.org/transportation/GAMAQI_3-19-15.pdf

Southern California Edison. (2022). *2022 POWER CONTENT LABEL*. https://www.sce.com/sites/default/files/custom-files/PDF_Files/SCE_2022_Power_Content_Label_B%26W.pdf

South Coast Air Quality Management District [South Coast AQMD]. (2022). South Coast ACMD Air Quality Management Plan: Chapter 2: Air quality and health effects. In *South Coast Air Quality Management District*. South Coast Air Quality Management District. Retrieved May 22, 2024, from https://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/2022-air-quality-management-plan/final-2022-aqmp/05-ch2.pdf?sfvrsn=12

Statute and Guidelines - California Association of Environmental Professionals. (n.d.). https://www.califaep.org/statute_and_guidelines.php

The Climate Registry. (2023). *The climate registry 2023 default emission factors*. https://theclimateregistry.org/wp-content/uploads/2023/06/2023-Default-Emission-Factors-Final-1.pdf

U.S. Census Bureau QuickFacts. (n.d.). U.S. Census Bureau. Retrieved May 22, 2024, from https://www.census.gov/quickfacts/fact/table/hanfordcitycalifornia/LND110210

VI. Geology and soils. (n.d.). https://ia.cpuc.ca.gov/Environment/info/esa/pgedivest/pipeline/fpipech_2vi.html

Wetlands Data Limitations, Exclusions and precautions | U.S. Fish & Wildlife Service. (n.d.). FWS.gov. https://www.fws.gov/node/264582

What is the difference between a sinkhole and land subsidence? | U.S. Geological Survey. (2016, October 25). https://www.usgs.gov/faqs/what-difference-between-a-sinkhole-and-land-subsidence#:~:text=Land%20subsidence%20is%20a%20gradual,%2C%20sinkholes%2C%20and%20thawing%20permafrost.

Appendix A1

Air Quality/ Greenhouse Gas Study

August 2024

Fargo Village
Air Quality/GHG Assessment



Prepared By:

4CREEKS

4Creeks, Inc.
324 S Santa Fe, Suite A
Visalia, CA 93292

Prepared For:

City of Hanford
317 N Douty Street
Hanford, CA, 93220

Table of Contents

Section 1 – Introduction 1

1.1 Project Description 1
1.2 Project Setting 3
1.3 Summary of CEQA Requirements 3

Section 2 – Background Information 4

2.1 Air Quality 4
2.2 Greenhouse Gases 5

Section 3 – Regional Attainment Status and Regulatory Setting 9

3.1 Regional Attainment Status 9
3.2 Regulatory Setting 13

Section 4 – Air Quality Impacts Thresholds and Evaluation Methodology 19

4.1 Impact Significance Thresholds 19
4.2 Evaluation Methodology 20

Section 5 – Project-Related Emissions 21

5.1 Short-Term Emissions 21
5.2 Long-Term Emissions 23
5.3 Potential Impacts to Sensitive Receptors 25
5.4 Potential Odor Impacts 25
5.5 Greenhouse Gas Emissions 26

Section 6 – Conclusions 30

Section 7 – References 31

Attachments

Attachment A: Vicinity Map
Attachment B: Site Plan
Attachment C: CalEEMod Emissions Estimates Output Files

Section 1 – Introduction

1.1 Project Description

This document provides an air quality and greenhouse gas assessment for the Fargo Village Project in Hanford, CA. The Project proposes 1,146 units of Low, Medium, and High-Density residential development and Neighborhood Commercial land uses. The Project will also feature public park space, a future school site, and a stormwater retention basin. The Project would have 697 Single Family Homes, 235 Townhomes, and 214 Apartment Units. 6.73 acres of the site are planned to be used for Neighborhood Commercial. The proposed uses include two retail stores, a gas station, a restaurant, a drive-thru restaurant, and an outdoor food court. However, the Project may also include other uses that are permitted or conditionally permitted within the C-N Neighborhood Commercial Zone. These uses are listed in Table 1, below.

The Project will also include approximately 27.59 acres of parks and open space, 14.99 acres for a future school site and a 6.18-acre stormwater retention basin. The community park may include a soccer/football field, basketball courts, and playgrounds. Various infrastructure improvements (water, stormwater, and wastewater infrastructure, roadway improvements, and related improvements) will be required by the Project. A Vicinity Map and Site Plan are provided in Attachments A and B, respectively.

C-N Zone: Permitted and Conditional Uses	
Accessory and Support Uses	
Automated teller machine (ATM)	Permitted
Day care primarily for children of employees on the same site as a permitted use	Permitted
Drive-thru pick-up window, not in conjunction with a restaurant	Permitted
Electric vehicle recharging facility	Administrative Use Permit
Food service primarily for employees on the same site as a permitted use	Permitted
Games of skill or amusement, 8 or less	Permitted
Games of skill or amusement, more than 8	Conditional
Outdoor storage ancillary to and on the same site as a permitted use	Permitted
Vending machines	Permitted
Accessory or ancillary office use; medical, dental, or optometry, that the Community Development Director determines is customarily associated with, and subordinate to, a primary permitted use	Permitted
Other accessory or ancillary use or structure that the Community Development Director determines is customarily associated with, and subordinate to, a primary permitted use	Permitted
Eating and Drinking Establishment Uses	

Artisan food and beverage production and sales	Permitted
Brewpub	Conditional
Restaurant, full service	Permitted
Restaurant, limited service with drive-thru pickup window	Permitted
Restaurant, limited service without drive-thru pickup window	Permitted
Education, Religious, and Assembly Uses	
Studio for martial arts, music, dance, yoga, exercise, gymnastics or similar	Permitted
Office and Medical Uses	
Office; medical, dental, or optometry, under 2,000 sqft	Permitted
Office; medical, dental, or optometry, 2,000 – 6,000 sqft	Permitted
Office; medical, dental, or optometry, over 6,000 sqft	Permitted
Restaurant with a drive-through	Permitted
Office; professional or commercial, under 2,000 sqft	Permitted
Office; professional or commercial, 2,000 – 6,000 sqft	Permitted
Office; professional or commercial, over 6,000 sqft	Permitted
Pharmacy	Permitted
Urgent Care Center or other walk-in clinic	Permitted
Public and Quasi-Public Uses	
Community center or facility	Permitted
Electrical distribution and transmission and substation, gas regulator station, communications equipment building, public service pumping station or elevated pressure tank	Administrative Use Permit
Public safety facility or station	Permitted
Storm drainage basin, with or without a park	Permitted
Recreation Uses	
Commercial recreation facility, indoor	Conditional
Health or fitness facility, small	Permitted
Retail Uses	
Convenience store, with or without fuel sales	Permitted
Food market	Permitted
Food produce stand	Administrative Use Permit
Fuel sales, retail	Permitted
Liquor store	Permitted
Pet store	Permitted
Retail sales store	Permitted
Service Uses	
Bank or credit union, secondary branch	Permitted
Barber shop, hair salon, nail care, massage therapy, or day spa	Permitted
Car wash, automatic or full service	Conditional
Copy, printing, or mailing service	Permitted

Dry cleaning or laundromat	Permitted
Food catering	Permitted
Pet grooming	Conditional
Photography studio	Permitted
Recycling, small collection facility (CRV only)	Permitted
Repair shop, small appliance, or equipment	Conditional
Tailoring or clothing alterations	Permitted

Table 1. Conditional and Permitted Uses within C-N Zone. Source: City of Hanford Municipal Code.

1.2 Project Setting

The proposed Project is located on approximately 304 acres in the northern portion of the City of Hanford, California. The site is generally bound by Fargo Avenue to the south, 12th Avenue to the east, the BNSF Railway to the west, and Flint Avenue to the north. The site is comprised of two parcels: APN 007-010-031- 000 and 007-360-016-000. APN 007-010-031-000 is 151.96 acres consisting of agricultural uses, mainly walnut orchards, and vineyards. An agricultural irrigation canal, irrigation equipment, dirt access roads, and a storage building currently exist in this parcel. APN 007-360-016-000 is 150.08 acres consisting of agricultural uses, mainly walnut orchards, vineyards, and field crops. Irrigation equipment and dirt access roads currently exist in this parcel. The entire site is within the City of Hanford limits. The site is currently used for agricultural uses, however, the site has been designated by the City's General Plan for Low, Medium, and High-Density Residential, as well as Neighborhood Commercial. The proposed Project site is in a developing area of the City of Hanford. Currently, agricultural uses and rural residential homes are located to the west and north of the site. Hanford Christian School is also located north of the site. Single Family Homes and vacant land exist to the south. To the east are Single Family Homes and the BNSF Railway.

1.3 Summary of CEQA Requirements

CEQA is required by Section 21000 et seq. of the California Public Resources Code and Title 14 of the California Code of Regulations, Section 15000 *et seq.* Section 15002(a) of the CEQA Guidelines describes the basic purposes of CEQA as follows.

(1) Inform governmental decision-makers and the public about the potential significant environmental effects of proposed activities.
(2) Identify the ways that environmental damage can be avoided or significantly reduced.
(3) Prevent significant, avoidable damage to the environment by requiring changes in Projects through the use of alternatives or mitigation measures when the governmental agency finds the changes to be feasible.

(4) Disclose to the public the reasons why a governmental agency approved the Project in the manner the agency chose if significant environmental effects are involved.

The City of Hanford will act as Lead Agency for this Project pursuant to the California Environmental Quality Act (CEQA) and the CEQA Guidelines.

Section 2 – Background Information

2.1 Air Quality

The Air District has developed a Guide for Assessing and Mitigating Air Quality Impacts (GAMAQI) to act as an advisory document for addressing air quality in environmental documents. The San Joaquin Valley Air Pollution Control District is comprised of the San Joaquin, Stanislaus, Merced, Madera, Fresno, Kings, and Tulare Counties and the Valley portion of Kern County and has jurisdiction over most air quality matters in the San Joaquin Valley Air Basin (SJVAB).

The SJVAB has one of the most severe air pollution problems in the State of California and the nation. Air pollution is hazardous to health, reduces visibility, degrades or soils materials, and can damage native vegetation. State and national ambient air quality standards were created to protect health and welfare, and to minimize other impacts. The ambient air quality standards are outlined in the Regulatory Setting section.

Ozone: Ozone is not emitted directly into the environment but is generated from complex chemical reactions between reactive organic gases (ROG), or non-methane hydrocarbons, and oxides of nitrogen (NOX) that occur in the presence of sunlight. ROG and NOX generators in Tulare County include motor vehicles, recreational boats, other transportation sources, and industrial processes.

PM10: PM10, or particulate matter, is a complex mixture of primary or directly emitted particles, and secondary particles or aerosol droplets formed in the atmosphere by precursor chemicals.

Carbon Monoxide: Carbon Monoxide (CO) is a colorless, odorless, and poisonous gas produced by incomplete burning of carbon in fuels. When CO enters the bloodstream, it reduces the delivery of oxygen to the body's organs and tissues. Health threats are most serious for those who suffer from cardiovascular disease, particularly those with angina or peripheral vascular disease. Exposure to elevated CO levels can cause impairment of visual perception, manual dexterity, learning ability and performance of complex tasks. The primary source of carbon monoxide is automobile use.

Nitrogen Dioxide: Nitrogen Dioxide (NO2) is a brownish, highly reactive gas that is present in all urban atmospheres. NO2 can irritate the lungs, cause bronchitis and pneumonia, and lower resistance to respiratory infections. Nitrogen oxides are an important precursor both to ozone (O3) and acid rain and may affect both terrestrial and aquatic ecosystems.

The major mechanism for the formation of NO2 in the atmosphere is the oxidation of the primary air pollutant nitric oxide (NO). NO2 plays a key role, together with VOCs, in the atmospheric reactions that produce O3. NO2 forms when fuel is burned at hot temperatures. The two major emission sources are transportation and stationary fuel combustion sources such as electric utility and industrial boilers.

Sulfur Dioxide: Sulfur Dioxide (SO2) affects breathing and may aggravate existing respiratory and cardiovascular disease in high doses. Sensitive populations include asthmatics, individuals with bronchitis or emphysema, children, and the elderly. SO2 is also a primary contributor to acid deposition, or acid rain, which causes acidification of lakes and streams and can damage trees, crops, historic buildings, and statues. In addition, sulfur compounds in the air contribute to visibility impairment in large parts of the country. This is especially noticeable in national parks. Ambient SO2 results largely from stationary sources such as coal and oil combustion, steel mills, refineries, pulp, and paper mills and from nonferrous smelters.

2.2 Greenhouse Gases

Climate Change is a change in the average weather of the earth that may be measured by alterations in wind patterns, storms, precipitation, and temperatures. These changes are assessed using historical records of temperature changes occurring in the past, such as during previous ice ages. Many of the concerns regarding climate change use this data to extrapolate a level a statistical significance, specifically focusing on temperature records from the last 150 years, the Industrial Age, which differ from previous climate changes in rate and magnitude.

The United Nations Intergovernmental Panel on Climate Change (IPCC) constructed several emission trajectories of GHG needed to stabilize global temperatures and climate change impacts. The IPCC predicted that global mean temperatures change from 1990 to 2100, given six scenarios, could range from 1.1 degree Celsius (°C) to 6.4°C. Regardless of analytical methodology, global average temperatures and sea levels are expected to rise under all scenarios (IPCC 2007). In California, climate change may result in consequences such as the following form (CCCC 2006 and Moser et al. 2009).

1. A reduction in the quality and supply of water to the State from the Sierra snowpack.
2. Increased risk of large wildfires.
3. Reduction in the quality and quantity of certain agriculture products.
4. Exacerbation of air quality problems.
5. A rise in sea levels resulting in the displacement of coastal businesses and residences.

6. Damage to marine ecosystems and their natural environment.
7. An increase in infections, disease, asthma, and other health-related problems.
8. A decrease in the health and productivity of California's forest. (CCCC 2006 and Moser et al. 2009)

Greenhouse Gases (GHG) are gases that trap heat in the atmosphere and the presence of GHGs in the atmosphere affects the earth's temperature. The effect is equivalent to the way a greenhouse retains heat. Natural processes and human activities emit greenhouse gases. Common GHGs include water vapor, carbon dioxide, methane, nitrous oxide, ozone, chlorofluorocarbons, hydro chlorofluorocarbons, hydro fluorocarbons, per fluorocarbons, sulfur, and hexafluoride. Human activities, such as electricity production and vehicle use, have elevated the concentration of these gases in the atmosphere beyond the level of naturally occurring concentrations. Some greenhouse gases can remain in the atmosphere for over hundreds of years.

Some GHGs have a greater impact on climate change than others. In order to accurately compare GHG emissions, a Global Warming Potential (GWP) has been calculated for each greenhouse gas based on how long it remains in the atmosphere, on average, and how strongly it absorbs energy. Gases with a higher GWP absorb more energy, per pound, than gases with a lower GWP, and thus contribute more to global warming. For example, one pound of methane is equivalent to twenty-one pounds of carbon dioxide.

In regard to the quantity of these gases in the atmosphere, we first must establish the amount of particular gas in the air, known as Concentration, or abundance, which are measured in parts per million, parts per billion and even parts per trillion. To put this measurement in more relatable terms, one part per million is equivalent to one drop of water diluted into about thirteen gallons of water, roughly a full tank of gas in a compact car. Therefore, it can be assumed larger emission of greenhouse gases lead to a higher concentration in the atmosphere.

GHGs as defined by AB 32 include the following gases: carbon dioxide, methane, nitrous oxide, hydrocarbons, perfluorocarbons, and sulfur hexafluoride. GHGs as defined by AB 32 and sources are summarized in Table 2.

Greenhouse Gas	Description and Physical Properties	Lifetime	GWP	Sources
Methane (CH4)	Is a flammable gas and is the main component of natural gas	12 years	21	Emitted during the production and transport of coal, natural gas, and oil. Methane emissions also result from livestock and other agricultural practices and by the decay of organic waste in municipal solid waste landfills.
Carbon dioxide (CO2)	An odorless, colorless, natural greenhouse gas.	30-95 years	1	Enters the atmosphere through burning fossil fuels (coal, natural gas and oil), solid waste, trees and wood products, and also as a result of certain chemical reactions (e.g., manufacture of cement). Carbon dioxide is removed from the atmosphere (or "sequestered") when it is absorbed by plants as part of the biological carbon cycle.
Chloro-fluorocarbons	Gases formed synthetically by replacing all hydrogen atoms in methane or ethane with chlorine and/or fluorine atoms. They are non-toxic nonflammable, insoluble and chemically unreactive in the troposphere (the level of air at the earth's surface).	55-140 years	3,800 to 8,100	Were synthesized in 1928 for use as refrigerants, aerosol propellants, and cleaning solvents. They destroy stratospheric ozone.

Greenhouse Gas	Description and Physical Properties	Lifetime	GWP	Sources
Hydrofluorocarbons	A man-made greenhouse gas. It was developed to replace ozone-depleting gases found in a variety of appliances. Composed of a group of greenhouse gases containing carbon, chlorine an at least one hydrogen atom.	14 years	140 to 11,700	Powerful greenhouse gases that are emitted from a variety of industrial processes. Fluorinated gases are sometimes used as substitutes for stratospheric ozone-depleting substances. These gases are typically emitted in smaller quantities, but because they are potent greenhouse gases.
Nitrous oxide (N2O)	Commonly known as laughing gas, is a chemical compound with the formula N2O. It is an oxide of nitrogen. At room temperature, it is a colorless, non-flammable gas, with a slightly sweet odor and taste. It is used in surgery and dentistry for its anesthetic and analgesic effects.	120 years	310	Emitted during agricultural and industrial activities, as well as during combustion of fossil fuels and solid waste.
Pre-fluorocarbons	Has a stable molecular structure and only breaks down by ultraviolet rays about 60 kilometers above Earth's surface.	50,000 years	6,500 to 9,200	Two main sources of pre-fluorocarbons are primary aluminum production and semiconductor manufacturing.
Sulfur hexafluoride	An inorganic, odorless, colorless, and nontoxic nonflammable gas.	3,200 years	23,900	This gas is manmade and used for insulation in electric power transmission equipment, in the magnesium industry, in semiconductor manufacturing and as a tracer gas.

Table 2. Greenhouse Gasses; Source: EPA, Intergovernmental Panel on Climate Change

Each of the designated gases described above can reside in the atmosphere for different amounts of time, ranging from a few years to thousands of years. All of these gases remain in

the atmosphere long enough to become well mixed, meaning that the amount that is measured in the atmosphere is roughly the same all over the world regardless of the source of the emission.

Section 3 – Regional Attainment Status and Regulatory Setting

3.1 Regional Attainment Status

The State of California is divided into regional air basins based on topographic air drainage features. The proposed Project site is within the San Joaquin Valley Air Basin, which is bordered by the Sierra Nevada Mountains to the east, Coastal Ranges to the west, and the Tehachapi Mountains to the south. The mountain ranges surrounding the San Joaquin Valley Air Basin (SJVAB) serve to restrict air movement and prevent the dispersal of pollution. As a result, the SJVAB is highly susceptible to pollution accumulation over time. As shown in Table 3, the SJVAB is in nonattainment for several pollutant standards.

Pollutant	Designation/Classification	
	Federal Standards	State Standards
Ozone – One hour	No Federal Standard[f]	Nonattainment/Severe
Ozone – Eight hour	Nonattainment/Extreme[e]	Nonattainment
PM 10	Attainment[c]	Nonattainment
PM 2.5	Nonattainment[d]	Nonattainment
Carbon Monoxide	Attainment/Unclassified	Attainment/Unclassified
Nitrogen Dioxide	Attainment/Unclassified	Attainment
Sulfur Dioxide	Attainment/Unclassified	Attainment
Lead (Particulate)	No Designation/Classification	Attainment
Hydrogen Sulfide	No Federal Standard	Unclassified
Sulfates	No Federal Standard	Attainment
Visibility Reducing Particles	No Federal Standard	Unclassified
Vinyl Chloride	No Federal Standard	Attainment

[a] See 40 CFR Part 81
[b] See CCR Title 17 Sections 60200-60210
[c] On September 25, 2008, EPA redesignated the San Joaquin Valley to attainment for the PM10 National Ambient Air Quality Standard (NAAQS) and approved the PM10 Maintenance Plan.
[d] The Valley is designated nonattainment for the 1997 PM2.5 NAAQS. EPA designated the Valley as nonattainment for the 2006 PM2.5 NAAQS on November 13, 2009 (effective December 14, 2009).
[e] Though the Valley was initially classified as serious nonattainment for the 1997 8-hour ozone standard, EPA approved Valley reclassification to extreme nonattainment in the

Federal Register on May 5, 2010 (effective June 4, 2010).
[f] Effective June 15, 2005, the U.S. Environmental Protection Agency (EPA) revoked the federal 1-hour ozone standard, including associated designations and classifications. EPA had previously classified the SJVAB as extreme nonattainment for this standard. EPA approved the 2004 Extreme Ozone Attainment Demonstration Plan on March 8, 2010 (effective April 7, 2010). Many applicable requirements for extreme 1-hour ozone nonattainment areas continue to apply to the SJVAB.

Table 3. San Joaquin Valley Attainment Status; Source: SJVAPCD

The state and federal standards for the criteria pollutants are presented in Section 8.4 of The San Joaquin Valley Unified Air Pollution Control District's 2015 "Guidance for Assessing and Mitigating Air Quality Impacts". These standards are designed to protect public health and welfare. The "primary" standards have been established to protect public health. The "secondary" standards are intended to protect the nation's welfare and account for air pollutant effects on soils, water, visibility, materials, vegetation, and other aspects of general welfare. The U.S. EPA revoked the national 1-hour ozone standard on June 15, 2005, and the annual PM_{10} standard on September 21, 2006, when a new $PM_{2.5}$ 24-hour standard was established.

Pollutant	Averaging Time	California Standards[1]		National Standards[2]		
		Concentration[3]	Method[4]	Primary[3,5]	Secondary[3,6]	Method[7]
Ozone (03)	1 Hour	0.09 ppm (180 µg/m³)	Ultraviolet Photometry	--	Same as Primary Standard	Ultraviolet 8 Hour Photometry
	8 Hour	0.070 ppm (137 µg/m³)		0.075 ppm (147 µg/m³)		
Respirable Particulate Matter (PM_{10})	24 Hour	50 µg/m	Gravimetric or Beta Attenuation	150 µg/m³	Same as Primary Standard	Inertial Separation and Gravimetric Annual Analysis
	Annual Arithmetic Mean	20 µg/m3		--		
Fine Particulate Matter ($PM_{2.5}$)	24 Hour		Gravimetric or Beta Attenuation	35 µg/m³	Same as Primary Standard	Inertial Separation and Gravimetric Annual Analysis
	Annual Arithmetic Mean	12 µg/m³		15 µg/m³		
Carbon Monoxide (CO)	1 Hour	20 ppm (23 mg/m³)	Non-Dispersive Infrared Photometry (NDIR)	35 ppm (40 mg/m³)	--	Non-Dispersive Infrared Photometry (NDIR)
	8 Hour	9.0 ppm (10 mg/m³)		9 ppm (10 mg/m³)	--	

Pollutant	Averaging Time	California Standards[1]		National Standards[2]		
		Concentration[3]	Method[4]	Primary[3,5]	Secondary[3,6]	Method[7]
	8 Hour (Lake Tahoe)	6 ppm (7 mg/m³)		--	--	
Nitrogen Dioxide (NO_2) [8]	1 Hour	0.18 ppm (339 µg/m³)	Gas Phase Chemiluminescence	100 ppb (188 µg/m³)	--	Gas Phase Annual Chemiluminescence
	Arithmetic Mean	0.030 ppm (57 µg/m³)		53 ppb (100 µg/m³)	Same as Primary Standard	
Sulfur Dioxide	1 Hour	0.25 ppm (655 µg/m³)	Ultraviolet Fluorescence	75 ppb (196 µg/m³)	--	Ultraviolet Fluorescence; Spectrophotometry (Pararosaniline Method)
	3 Hour	--		--	0.5 ppm (1300 µg/m³)	
	24 Hour	0.04 ppm (105 µg/m³)		0.14 ppm (for certain areas)9	--	
	Annual Arithmetic Mean	--		0.030 ppm (for certain areas)9	--	
Lead[10,11]	30 Day Average	1.5 µg/m³	Atomic Absorption	--	--	High Volume Sampler and Atomic Absorption
	Calendar Quarter	--		1.5 µg/m3 (for certain areas)11	Same as Primary Standard	
	Rolling 3-Month Average	--		0.15 µg/m³		
Visibility Reducing Particles[12]	8 Hour	See footnote 12	Beta Attenuation and Transmittance through Filter Tape	No National Standard		
Sulfates	24 Hour	25 µg/m³	Ion Chromatography			
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m³)	Ultraviolet Fluorescence			

Pollutant	Averaging Time	California Standards[1]		National Standards[2]		
		Concentration[3]	Method[4]	Primary[3,5]	Secondary[3,6]	Method[7]
Vinyl Chloride[10]	24 Hour	0.01ppm (26 μg/m^3)	Gas Chromatography			

1. California standards for ozone, carbon monoxide (except 8-hour Lake Tahoe), sulfur dioxide (1 and 24 hour), nitrogen dioxide, and particulate matter (PM10, PM2.5, and visibility reducing particles), are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.
2. National standards (other than ozone, particulate matter, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over three years, is equal to or less than the standard. For PM10, the 24 hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 μg/m3 is equal to or less than one. For PM2.5, the 24 hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard. Contact the U.S. EPA for further clarification and current national policies.
3. Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.
4. Any equivalent measurement method which can be shown to the satisfaction of the ARB to give equivalent results at or near the level of the air quality standard may be used.
5. National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.
6. National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.
7. Reference method as described by the U.S. EPA. An "equivalent method" of measurement may be used but must have a "consistent relationship to the reference method" and must be approved by the U.S. EPA.
8. To attain the 1-hour national standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 ppb. Note that the national standards are in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the national standards to the California standards the units can be converted from ppb to ppm. In this case, the national standards of 53 ppb and 100 ppb are identical to 0.053 ppm and 0.100 ppm, respectively.
9. On June 2, 2010, a new 1-hour SO2 standard was established and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO2 national standards (24-hour and annual) remain in effect until one year after an area is designated for the 2010 standard, except that in areas designated nonattainment for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved. Note that the 1-hour national standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the 1-hour national standard to the California standard the units can be converted to ppm. In this case, the national standard of 75 ppb is identical to 0.075 ppm.

Pollutant	Averaging Time	California Standards[1]		National Standards[2]		
		Concentration[3]	Method[4]	Primary[3,5]	Secondary[3,6]	Method[7]
10. The ARB has identified lead and vinyl chloride as 'toxic air contaminants' with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants. 11. The national standard for lead was revised on October 15, 2008 to a rolling 3-month average. The 1978 lead standard (1.5 μg/m3 as a quarterly average) remains in effect until one year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved. 12. In 1989, the ARB converted both the general statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are "extinction of 0.23 per kilometer" and "extinction of 0.07 per kilometer" for the statewide and Lake Tahoe Air Basin standards, respectively.						

Table 4. Ambient Air Quality Standards; Source: SJVAPCD

3.2 Regulatory Setting

The California Environmental Quality Act (CEQA) requires lead agencies to determine if each Project of a certain threshold has an impact on the air quality of the area. The Air Quality standards and Greenhouse Gas guidance measures are used to establish levels of air quality impact of a Project. The following regulatory background represents global, federal, state, and local standards and guidance that have been reviewed in this study.

Federal Clean Air Act: The 1977 Federal Clean Air Act (CAA) authorized the establishment of the National Ambient Air Quality Standards (NAAQS) and set deadlines for their attainment. The Clean Air Act identifies specific emission reduction goals, requires both a demonstration of reasonable further progress and an attainment demonstration, and incorporates more stringent sanctions for failure to meet interim milestones. The U.S. EPA is the federal agency charged with administering the Act and other air quality-related legislation. EPA's principal functions include setting NAAQS; establishing minimum national emission limits for major sources of pollution; and promulgating regulations. Under CAA, the NCCAB is identified as an attainment area for all pollutants.

California Clean Air Act: California Air Resources Board coordinates and oversees both state and federal air pollution control programs in California. As part of this responsibility, the California Air Resources Board monitors existing air quality, establishes California Ambient Air Quality Standards, and limits allowable emissions from vehicular sources. Regulatory authority within established air basins is provided by air pollution control and management districts, which control stationary-source and most categories of area-source emissions and develop regional air quality plans. The Project is located within the jurisdiction of the San Joaquin Valley Air Pollution Control District.

San Joaquin Valley Air Pollution Control District (SJVAPCD): The SJVAPCD is responsible for enforcing air quality standards in the Project area. The following SJVAPCD rules and regulations may apply to the proposed Project:

- **Rule 2010:** Permits Required. The purpose of this rule is to require any person constructing, altering, replacing, or operating any source operation which emits, may emit, or may reduce emissions to obtain an Authority to Construct or a Permit to Operate. This rule also explains the posting requirements for a Permit to Operate and the illegality of a person willfully altering, defacing, forging, counterfeiting, or falsifying any Permit to Operate.
- **Rule 3135:** Dust Control Plan Fee. All Projects which include construction, demolition, excavation, extraction, and/or other earth moving activities as defined by Regulation VIII (Described below) are required to submit a Dust Control Plan and required fees to mitigate impacts related to dust.
- **Rule 4002:** National Emission Standards for Hazardous Air Pollutants. This rule incorporates the National Emission Standards for Hazardous Air Pollutants from Part 61, Chapter I, Subchapter C, Title 40, Code of Federal Regulations (CFR) and the National Emission Standards for Hazardous Air Pollutants for Source Categories from Part 63, Chapter I, Subchapter C, Title 40, Code of Federal Regulations (CFR).
- **Rule 4101:** Visible Emissions. District Rule 4101 prohibits visible emissions of air contaminants that are dark in color and/or have the potential to obstruct visibility.
- **Rule 4102:** Nuisance. The purpose of this rule is to protect the health and safety of the public.
- **Rule 4601:** Architectural Coatings. The purpose of this rule is to limit VOC emissions from architectural coatings. This rule specifies architectural coatings storage, cleanup, and labeling requirements.
- **Rule 4641:** Cutback, Slow Cure, and Emulsified Asphalt, Paving and Maintenance Operations. The purpose of this rule is to limit VOC emissions from asphalt paving and maintenance operations. This rule applies to the manufacture and use of cutback asphalt, slow cure asphalt and emulsified asphalt for paving and maintenance operations.
- **Rule 4662:** District Rule 4662 was developed to help reduce emissions of volatile organic compounds (VOC) and hazardous air pollutants produced from degreasing operations, in which an enclosure or device is used for removing dirt, oil, grease and other contaminants.
- **Rule 4663:** District Rule 4663 was developed to limit the emissions of volatile organic compounds (VOCs) from organic solvent cleaning and from the storage and disposal of solvents and waste solvent materials.
- **Rule 9510:** Indirect Source Review (ISR). This rule reduces the impact PM10 and NOX emissions from growth on the SJVB. This rule places application and emission reduction requirements on applicable development Projects in order to reduce emissions through onsite mitigation, offsite SJVAPCD administered Projects, or a combination of the two.

This Project will submit an Air Impact Assessment (AIA) application in accordance with Rule 9510's requirements.

- **Regulation VIII:** Fugitive PM10 Prohibitions. Regulation VIII is composed of eight rules which together aim to limit PM10 emissions by reducing fugitive dust. These rules contain required management practices to limit PM10 emissions during construction, demolition, excavation, extraction, and/or other earth moving activities.

Greenhouse Gases: Climate changes is a global, national, state, and local issue involving greenhouse gas emissions from all around the world; therefore, countries around the world, including the United States, have established regulations to assist in the emissions of GHGs. Tables 5-8 give a brief explanation of international, national, state, and local regulations.

Regulation	Adopted	Protocol
Intergovernmental Panel on Climate Change	1998	The United Nations and the World Meteorological Organization established the Intergovernmental Panel on Climate Change to assess the scientific, technical and socio-economical information relevant to understanding the scientific basis of risk of human-induced climate change and its potential impacts.
United Nations Framework Convention on Climate Change	March 21, 1994	Governments gather and share information on GHG emissions, national polices and best practices; launch national strategies for addressing GHG emissions and adapting to expected impacts.
Kyoto Protocol	Adopted: December 1, 1997 Entered into Force: February 16, 2005	Sets binding targets for 37 industrialized countries and the European community for reducing GHG emissions at an average of 5% against 1990 levels over the five-year period of 2008-2012
Paris Climate Agreement	Adopted: December 12, 2015 Entered into Force: November 4 2016	The Paris Climate Agreement is an agreement within the United UNFCCC to limit global temperature rise to 2 degrees Celsius above preindustrial levels. Under the agreement, each country determines, plans, and regularly reports its own contribution to mitigate global warming. The agreement is voluntary and is not legally binding.

Table 5. International Greenhouse Gas Regulations

Regulation	Adopted	Protocol
Greenhouse Gas Endangerment	December 7, 2009	The EPA Administrator signed two distinct findings regarding GHG emissions under section 2029(a) of the Clean Air Act. 1. Endangerment Finding: The Administrator finds that the current and Projected concentrations of the six key well-mixed greenhouse gases — carbon dioxide (CO2), methane (CH4), nitrous oxide (N2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF6) 2. Cause or Contribute Finding: The Administrator finds that the combined emissions of these well-mixed greenhouse gases from new motor vehicles and new motor vehicle engines contribute to the greenhouse gas pollution which threatens public health and welfare.
Corporate Average Fuel Economy (CAFE)	Adopted: 1975 Revised: July 29, 2011	An agreement between thirteen large automakers (accounting for 90% of all vehicles sold in the United States), the United Auto Workers, and the State of California to increase fuel economy to 54.5 miles per gallon for cars and light-duty trucks by model year 2025.
Greenhouse Gas Reporting Program	September 22, 2009	Requires reporting of GHG emissions from large sources and suppliers in the United States. Any facility that emits 25,000 metric tons or more per year of GHG emissions are required to submit annual reports to the EPA.
New Source Review	May 13, 2013	Tailors the requirements of the Clean Air Act permitting programs to limit which facilities will be required to obtain Prevention of Significant Deterioration and Title V permits.
Standards of Performance for GHG Emissions for New Stationary Sources: Electrical Utility Generating Units	March 27, 2012	The EPA proposed new performance standards for emissions of carbon dioxide for new affected fossil fuel-fired electrical utility generated units. New sources greater than 25 megawatts would be required to meet an output-based standard of 1,000 pound of carbon dioxide per megawatt-hour, based on the performance of widely used natural gas combined cycle technology
Western Climate Initiative Partner	*Yet to be formally adopted*	Jurisdictions have developed a comprehensive initiative to reduce regional GHG emissions to 15 percent below 2005 levels by 2020. The partners are

		California, British Columbia, Manitoba, Ontario, and Quebec. Its cap-and-trade program is estimated to be fully implemented by 2012

Table 6. Federal Greenhouse Gas Regulations

Regulation	Adopted	Protocol
Title 24	Adopted: 1978 2008 Standards Effective: January 1, 2010	California's Energy Efficiency Standards for Residential and Non-Residential Buildings. Their standards are updated periodically to allow consideration and possible incorporation of new energy efficient technologies and methods
California Green Building Standards	January 12, 2010	A comprehensive and uniform regulatory code for all residential, commercial and K-14 school buildings.
Pavley Regulations, AB 1493	July 22, 2002	Reduce GHG emissions in new passenger vehicles from 2009 through 2016. These amendments are part of California's commitment toward a nation-wide program to reduce new passenger vehicle GHGs from 2012 through 2016. ARB's September amendments will cement California's enforcement of the Pavley rule starting in 2009 while providing vehicle manufacturers with new compliance flexibility.
Low Carbon Fuel Standard-Executive Order S-01-07	January 18, 2007	Calls for a reduction of at least 10 percent in the carbon intensity of California's transportation fuels by 2020. It instructed the California Environmental Protection Agency to develop and propose a draft compliance schedule to meet the 2020 target.
SB 1368	2006	The law limits long-term investments in base load generation by the state's utilities to power plants that meet an emissions performance standard (EPS).
SB 97	February 16, 2010	The Natural Resources Agency adopted Amendments to the CEQA Guidelines for greenhouse gas emissions.
AB 32	2006	Set the 2020 greenhouse gas emissions reduction goal into law. It directed the California Air Resources Board to begin developing discrete early actions to reduce greenhouse gases while also preparing a scoping plan to identify how best to reach the 2020 limit. The reduction measures to meet the 2020 target are to be adopted by the start of 2011.

SB 375	August 30, 2008	Enhances California's ability to reach its AB 32 goals by promoting good planning with the goal of more sustainable communities. Sustainable Communities requires ARB to develop regional greenhouse gas emission reduction targets for passenger vehicles. ARB is to establish targets for 2020 and 2035 for each region covered by one of the State's 18 metropolitan planning organizations
Executive Order S-13-08	2009	A comprehensive "Climate Adaptation Strategy" that would identify the state's vulnerabilities and plan accordingly. State agencies will take this report into account, due in December 2010, when planning new infrastructure such as roads, bridges, and water treatment facilities. The executive order noted that the country's longest continuously operating sea level gauge, San Francisco Bay's Fort Point, recorded a seven-inch rise in sea level over the 20th century.
SB 1078, SB 107, and Executive Order S-14-08	September 12, 2002	Requires California to generate 20% of its electricity from renewable energy by 2017. SB 107 then changes the 2017 deadline to 2010. Executive Order S-14-08 required that all retail sellers of electricity serve 33 percent of their load with renewable energy by 2020.
CEQA Guidelines Update	Adopted: April 13, 2009 Updated: May 2011	These Thresholds are designed to establish the level at which the District believed air pollution emissions would cause significant environmental impacts under CEQA and were posted on the Air District's website and included in the Air District's updated CEQA Guidelines
Executive Order B-30-15	April 20, 2015	Establishes a California GHG reduction target of 40 percent below 1990 levels by 2030.
AB 398	July 17, 2017	Extended the California Cap and Trade program through 2030.

Table 7. State Greenhouse Gas Regulations

Regulation	Adopted	Protocol
San Joaquin Valley Air Pollution Control District		The San Joaquin Valley Air Pollution Control District is made up of eight counties in California's Central Valley: San Joaquin, Stanislaus, Merced, Madera, Fresno, Kings, Tulare, and Kern. The Valley Air District is governed by a Governing Board consisting of representatives from the Board of Supervisors of all eight counties, one Health and Science member, one Physician, and five Valley city representatives.

SJVAPCD CEQA Greenhouse Gas Guidance	December 2009	The SJVAPCD approach is intended to streamline the process of determining if Project specific GHG emissions would have a significant effect. Best Performance Standards would be established according to performance-based determinations.
San Joaquin Valley Carbon Exchange	November 2008	Intended to quantify, verify, and track voluntary GHG emissions reductions generated within the San Joaquin Valley
Rule 2301	January 19, 2012	Emission Reduction Credit Banking. Provided an administrative mechanism for sources to bank GHG emissions, mechanism for sources to transfer GHG reductions to other users and defines eligibility standards, quantitative and procedures.

Table 8. Regional Greenhouse Gas Regulations

Section 4 – Air Quality Impacts Thresholds and Evaluation Methodology

4.1 Impact Significance Thresholds

Significance thresholds are based on the CEQA Appendix G Environmental Checklist Form and thresholds established by the SJVAPCD. The CEQA Appendix G Environmental Checklist Form states that the Project would have a potentially significant impact on air quality or greenhouse gases if the Project would:

a) Conflict with or obstruct implementation of the applicable air quality plan?
b) Result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is nonattainment under an applicable federal or state ambient air quality standard?
c) Expose sensitive receptors to substantial pollutant concentrations; and/or
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?
e) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?
f) Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases?

The SJVAPCD has recommended the following thresholds of significance for criteria pollutant emissions from Projects (Table 9). The SJVAPCD does not provide numeric thresholds for GHG emissions. Instead, the SJVAPCD "Guidance for Valley Land Use Agencies in Addressing GHG Emission Impacts for New Projects under CEQA" states that Projects which achieve a 29% GHG

emission reduction compared to Business as Usual (BAU) would be determined to have a less than significant individual and cumulative impact on GHG emissions.

Pollutant/Precursor	Construction Emissions	Operational Emissions	
		Permitted Equipment and Activities	Non-Permitted Equipment and Activities
	Emissions (tpy)	Emissions (tpy)	Emissions (tpy)
CO	100	100	100
Nox	10	10	10
ROG	10	10	10
SOx	27	27	27
PM10	15	15	15
PM2.5	15	15	15

Table 9. SJVAPCD Thresholds of Significance for Criteria Pollutants; Source: SJVAPCD

4.1 Evaluation Methodology

Air pollution emissions can be estimated by using emission factors and examining the level of activity occurring. Emission factors are the emission rate of a pollutant given the activity over time; for example, grams of NOx per horsepower hour. The ARB has published emission factors for on-road equipment and vehicles in the OFFROAD emission model. An air emissions model (or calculator) combines the emission factors and the various levels of activity and outputs the emissions for the various pieces of equipment.

The California Emissions Estimator (CalEEMod), Version 2020.4.0, is a statewide land use emissions computer model designed to provide a uniform platform for government agencies, land use planners, and environmental professionals to quantify potential criteria pollutants and greenhouse gas (GHG) emissions associated with both construction and operations from a variety of land use Projects. The model quantifies direct emissions from construction and operations, including vehicle use, as well as indirect emissions, such as GHG emissions from energy use, solid waste disposal, vegetation planting and/or removal, and water use. The model incorporates Pavley standards and Low Carbon Fuel standards into the mobile source emission factors. Further, the model identifies mitigation measures to reduce criteria pollutant and GHG emissions along with calculating the benefits achieved from measures chosen by the user. The CalEEMod model was run based off of the following land use assumptions:

- Single Family Housing: 697 D.U., 187.57 Acres
- Condo/Townhouse: 235 D.U., 26.56 Acres
- Apartments Low Rise: 214 D.U., 13.36 Acres
- Regional Shopping Center: 146,579 Square Feet

- Commercial Parking Lot: 488 Spaces
- Elementary School: 600 Students/14.99 Acres
- City Park: 27.59 Acres

The commercial square footage was determined by applying the maximum FAR (0.5) to the planned Neighborhood Commercial Zone. The parking for the commercial was found with this square footage and Hanford's off-street parking code. The number of parking required for potential use on this site was for the *Retail Store and Artisan Food and Beverage Production and Sales* land use (1 parking space per 300 square feet). This resulted in a potential maximum of 488 parking spaces as the maximum estimate. According to the California Department of Education, elementary schools in California average 468 students. For a conservative estimate, 600 students were used for the school on the Project Site. Vehicle trip counts were based on the estimates provided in the Traffic Study prepared for the Project by LSA Associates, Inc.

CalEEMod default values were used to estimate construction duration, construction trips, equipment use, trip lengths, and solid waste generation. In order to accurately estimate fleet mix for both commercial and residential portions, two separate CalEEMods were run. One model included residential, educational, and park land uses, and the other model included commercial and the associated parking area. The residential CalEEMod analysis utilized the District Accepted Fleet Mix for the year 2040 (SJVAPCD 2013). The commercial and parking CalEEMod analysis utilized the retail commercial fleet mix using data from the Riverpark Truck Trip Survey in 2013, which was prepared for a similar Project in the Kings County region. The survey measured the total number of truck trips for an operational shopping center in Fresno, CA, and determined the proportions of Light Heavy-Duty (LHD), Medium Heavy-Duty (MHD), and Heavy-Heavy Duty (HHD) truck trips relative to the total trips. These proportions were then applied to the proposed retail commercial fleet mix.

Section 5 – Project-Related Emissions

a) Would the Project conflict with or obstruct implementation of the applicable air quality plan?

b) Would the Project result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is non-attainment under an applicable federal or state ambient air quality standard?

5.1 Short-Term Emissions

Project construction would generate pollutant emissions from the following construction activities: demolition, site preparation, grading, building construction, application of architectural coatings, and paving. The short-term emissions from these activities were calculated using CalEEMod. The full CalEEMod Reports for the commercial and residential portions can be found in Attachments C and D, respectively. As shown in Table 10 below, Project

construction related emissions do not exceed the thresholds for criteria pollutants established by the SJVAPCD.

Construction Phase Modeling Parameters. Construction schedule assumptions, lot sizes, maximum floor area ratios (FAR), and parking space counts were based on the approved site plan for the Project and the standards set forth in the City of Hanford Municipal Code. Architectural coatings were set to follow Rule 4601, which limits the VOC emissions from architectural coatings. For construction this value was set to the established limit for the SJVAPCD, which is 50 g/L for each product.

Default values provided in CalEEMod were used where detailed Project information was not available. The construction phases for the residential, park and school portion included demolition, site preparation, grading, building construction, paving and architectural coating and total construction is expected to occur over the span of 22 years (2025-2047). The construction phases for the 6.7-acre commercial portion included site preparation, grading, building construction, paving and architectural coating and is expected to last approximately one year (2025-2026). It is assumed that construction of the residential (park & school included) and commercial portions would occur simultaneously.

Construction Emissions

Implementation of the Project would generate air pollutant emissions from entrained dust, off-road equipment, vehicle emissions, architectural coatings, and asphalt pavement application. Entrained dust results from the exposure of earth surfaces to wind from the direct disturbance and movement of soil, resulting in PM10 and PM2.5 emissions. The Project would implement various dust control strategies (AQ-1) and would be required to comply with SJVAPCD Regulation VIII to control dust emissions generated during the grading activities. Proposed construction practices that would be employed to reduce fugitive dust emissions include watering of the active sites and unpaved roads two times per day depending on weather conditions. Internal combustion engines used by construction equipment, vendor trucks (i.e., delivery trucks), and worker vehicles would result in emissions of ROGs, NOx, CO, PM10, and PM2.5.

The application of architectural coatings, such as exterior application/interior paint and other finishes, and of asphalt pavement would also produce ROG emissions; however, the contractor is required to procure architectural coatings from a supplier in compliance with the requirements of SJVAPCD's Rule 4601 (Architectural Coatings) and limit the amount of ROG emissions from cutback asphalt in compliance with the requirements of SJVAPCD's Rule 4641 (Cutback, Slow Cure, and Emulsified Asphalt, Paving and Maintenance Operations). Pursuant to Regulation VIII, Rule 8021, Section 6.3, the Project would be required to develop, prepare,

submit, obtain approval of, and implement a dust control plan, which would reduce fugitive dust impacts to less than significant for Project construction.

Table 10 presents the estimated emissions generated during construction of the Project. The full CalEEMod estimates can be found in Attachments C and D of this report.

	CO (tpy)	ROG (tpy)	SOx (tpy)*	NOx (tpy)	PM10 (tpy)	PM2.5 (tpy)
Emissions Generated from Project Construction	**7.68**	**3.89**	**0.02**	**5.65**	**1.79**	**0.62**
SJVAPCD Thresholds of Significance	**100**	**10**	**27**	**10**	**15**	**15**
*Threshold established by SJVAPCD for SOx, however emissions are reported as SO2 by CalEEMod.						

Table 10. Projected Project Emissions Compared to SJVAPCD Thresholds of Significance for Criteria Pollutants related to Construction; Source: SJVAPCD, CalEEMod Analysis (Attachments C & D)

5.2 Long-Term Emissions

Implementation of the proposed Project would result in long-term emissions associated with mobile, energy, and area sources. Operational emissions from these factors were calculated using CalEEMod. The full CalEEMod Reports can be found in Attachments C and D of this report. Operational emission estimates include the following mitigation measures:

Operational Phase Modeling Parameters. Vehicle trips were based on the Traffic Study prepared by LSA Associates, Inc. (Appendix B, Attachment E1). As mentioned previously in "Approach and Methodology" the fleet mix that was used for the residential portion was the "District Accepted Fleet Mix for Residential Projects", which was established by CARB (See Referenced Materials). For the commercial portion, data from the Riverpark Truck Trip Survey conducted in 2013 was utilized to estimate the fleet mix. This survey measured the total number of truck trips for an operational shopping center in Fresno, California, and determined the proportions of Light-Heavy Duty (LHD), Medium Heavy-Duty (MHD), and Heavy Heavy-Duty (HHD) truck trips relative to the total trips (See Attachment F).

For areawide operational emissions, adjustments were made to Consumer Products and Area Architectural Coatings. For Consumer Products that produce VOCs, the emission factors were adjusted to reflect the most recent VOC emissions inventory ("Updated Temporal Profiles for Consumer Products", 2021). Therefore, the Statewide total emissions were updated to 225.6 tons ROG/day, degreaser emissions were 0.2 tons ROG/day and pesticides/fertilizers were 0.19 tons

ROG/day. The same calculation utilized by CalEEMod defaults were used, but the updated amounts were altered in the calculation to reflect current levels. For Area Architectural Coatings, the emission factor in grams per liter was updated to reflect the current standards set by Rule 4601, which was adopted by the SJVAPCD. The levels of each architectural coating product was set to 50 g/L. ("Rule 4601: Architectural Coatings", 2020)

Operational Emissions

The Project would involve construction of low-, medium-, and high-density residences, a commercial center, a park space, and a school. Operation of the Project would generate ROG, NOx, CO, SOx, PM10, and PM2.5 emissions from mobile sources, including vehicle trips from passenger vehicles; area sources, including the use of consumer products, architectural coatings for repainting, and landscape maintenance equipment; and energy sources, including combustion of fuels used for space and water heating. As discussed previously, pollutant emissions associated with long-term operations were quantified using CalEEMod for area, energy, and mobile sources, and were primarily based on CalEEMod default values. Project-generated mobile source emissions were based on the trip rates provided in the Traffic Study prepared by LSA Associates, Inc. (Appendix B, Attachment E1). Table 12 presents the annual area, energy, mobile, off-road, and stationary source emissions associated with operation (year 2047) of the Project. Details of the emissions estimates are provided in Attachments C and D.

As shown in Table 11 below, the Project's operational emissions do not exceed the thresholds established by the SJVAPCD.

	CO (tpy)	ROG (tpy)	SOx (tpy)*	NOx (tpy)	PM10 (tpy)	PM2.5 (tpy)
CalEEMod Mitigation Measures Included						
Emissions Generated from Project Operation	**30.29**	**9.94**	**0.046**	**4.47**	**5.04**	**1.46**
SJVAPCD Thresholds of Significance	**100**	**10**	**27**	**10**	**15**	**15**
CalEEMod Mitigation Measures Not Included						
Emissions Generated from Project Operation	**48.8**	**10.99**	**0.12**	**7.51**	**14.93**	**4.15**
SJVAPCD Thresholds of Significance	**100**	**10**	**27**	**10**	**15**	**15**
*Threshold established by SJVAPCD for SOx, however, emissions are reported as SO2 by CalEEMod.						

Table 11. Projected Project Emissions Compared to SJVAPCD Thresholds of Significance for Criteria Pollutants related to Operations; Source: SJVAPCD, CalEEMod Analysis (Attachments C & D)

As shown in Table 11, Project construction emissions would not exceed the SJVAPCD thresholds of significance. Project operational emissions, however, have the potential to exceed the

SJVAPCD's operational thresholds. Therefore, Mitigation Measures AQ-1, AQ-3 and AQ-5 will be implemented to reduce air quality impacts resulting from cumulatively considerable increases in criteria pollutants. Since the Project is not anticipated to exceed any SJVAPCD thresholds of significance with implementation of Mitigation Measures AQ-1, AQ-2, and AQ-3, the Project will not conflict with or delay the implementation of the SJVAPCD attainment plans. The impacts resulting from CEQA Thresholds a and b would remain *less than significant with mitigation incorporated.*

c) Would the Project expose sensitive receptors to substantial pollutant concentrations?

5.3 Potential Impacts to Sensitive Receptors

A Health Risk Assessment was prepared by Core Environmental Consulting in July 2024, which was used as the basis for the assessment of toxic air contaminants (TACs) and health impacts as a result of the proposed Project.

Sensitive receptors are defined as areas where young children, chronically ill individuals, the elderly, or people who are more sensitive than the general population reside, such as schools, hospitals, nursing homes, and daycare centers. Hanford Christian School is the nearest sensitive receptor and is located across Flint Avenue from the site. The single-family homes located to the south and east may also be considered sensitive receptors that may be affected by pollutants produced during the Project's construction and operation.

Based on a preliminary screening by Core Environmental Consulting, the Project would produce diesel particulate matter (DPM) emissions during the construction phase, which has been classified as a carcinogen. Additionally, the Project's operational phase includes a gas dispensing facility (GDF), which would release toxic air contaminants. In order to assess relevant TACs and impacts on sensitive receptors, an HRA has been prepared for inclusion in the EIR analysis. A full analysis of DPM and the GDF is provided in the HRA in Appendix D of the Environmental Impact Report prepared for this Project.

Due to the release of DPM and other toxic air contaminants during the construction and operation period, the proposed Project may have a *potentially significant impact* on sensitive receptors.

d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

5.4 Potential Odor Impacts

Some typical construction-related odors would be generated during Project construction and operation of the proposed gas station would produce emissions that would lead to odors. As

mentioned in Threshold C, the Project is adjacent to sensitive receptors to the north, south and east, which may be affected by such odors. Although construction would be temporary, the length of construction and close proximity to sensitive receptors may lead to potentially significant impacts related to odors. Additionally, operation of a gas station would produce odors that may have an adverse impact on a substantial number of people throughout its Project life. The proposed Project would not include any potential odor sources identified in Table 6 of the SJVAPCD's Guidance for Assessing and Mitigating Air Quality Impacts (GAMAQI).

To address emissions leading to odors and other health impacts on sensitive receptors, a Health Risk Assessment (HRA) has been prepared and is included in Appendix D of the Focused EIR. The Focused EIR prepared for the Project will include a detailed analysis of TAC's, odors, and impacts on sensitive receptors.

The Project may create objectionable odors affecting a substantial number of people during construction and operation; therefore, the impacts would be *potentially significant.*

e) Would the Project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.

f) Would the Project conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

5.5 Greenhouse Gas Emissions

The SJVAPCD does not provide numeric thresholds to assess the significance of greenhouse gas emissions. Instead, the SJVAPCD "Guidance for Valley Land Use Agencies in Addressing GHG Emission Impacts for New Projects under CEQA" states that Projects which achieve a 29% GHG emission reduction compared to Business as Usual (BAU) would be determined to have a less than significant individual and cumulative impact for GHG. "Business as usual" (BAU) conditions are defined based on the year 2005 building energy efficiency, average vehicle emissions, and electricity energy conditions. The BAU conditions assume no improvements in energy efficiency, fuel efficiency, or renewable energy generation beyond that existing today.

The Project's operational GHG emissions and 2005 BAU GHG emissions were estimated using CalEEMod (Attachment E). The Project's annual GHG emissions are less than the 2005 BAU emissions by 14,899 MT CO2e, which is a 68% reduction.

	C02 (MT/Year)	CH4 (MT/Year)	N20 (MT/Year)	CO2e (MT/Year)
Total Project Emissions	6,411	17.62	0.36	6,960
2005 BAU	21,044	18.35	1.32	21,859

% Reduction From BAU	70%	3.9%	72%	**68%**

Table 12. Projected Project Operational GHG Emissions Compared to 2005 BAU

Additionally, the Project will be consistent with all applicable plans, policies, and regulations, including the Regional Climate Action Plan for Kings County. Table 13 below, demonstrates the consistency of the Project with all the applicable policies and goals of the Kings County Regional Climate Action Plan.

CAP Policies	Project Consistency
Goal E-4: On-Site Small-Scale Solar Energy	
E-4.2: Work with the building industry to incorporate designs improving solar readiness into building plans through voluntary green building guidelines.	*Consistent.* The Project buildings would be designed with solar panels and would be compliant with Title 24 requirements for building efficiency.
Goal TL-1: Infill and Mixed-Use Development	
TL-1.1: Support and encourage mixed-use and medium- and high-density land use categories located within ¼ mile of a transit stop, park and ride facility, or existing developed areas, by allowing flexible zoning and/or density bonuses for applicable Projects.	*Consistent.* The Project proposes a variety of uses on one site which will include low, medium, and high-density residential housing, commercial, parks/recreation, and educational land uses. The Project is located within ¼ mile of existing developed areas.
Goal TL-2: Bicycle and Pedestrian Environment	
TL-2.2: Incorporate multi-modal improvements into pavement resurfacing, restriping, and signalization operations where safety and convenience of users can be improved within the scope of work.	*Consistent.* The planned internal roads will incorporate a Class I Bike Path alongside the roadway, which will promote multimodal transportation within the community connect the residential, educational, commercial and park land uses.
TL-2.4: Encourage the installation of adequate and secure bicycle parking at all multi-family residential, commercial, governmental, and recreational locations throughout the region.	*Consistent.* Bike racks will be implemented in the neighborhood commercial center, apartment complex and community park.
TL-2.5: Support land use planning that will promote pedestrian and bicyclist access to and from new development by encouraging land use and subdivision designs that provide safe bicycle and pedestrian circulation, including bicycle parking	*Consistent.* The Project includes an internal Class I Bike/Pedestrian Path which will form a loop, connecting all land uses to the multimodal circulation system. As previously mentioned, bike racks will be included as part of the Project design.

facilities and internal bicycle and pedestrian routes, where feasible.	
Goal T-1: Trees, Parks, and Open Space	
T-1.1: Provide tree planting guidelines that address the types of trees appropriate to plant in the region, with emphasis placed on native, drought-tolerant trees.	*Consistent.* The Project's landscaping will comply with the provisions set forth in the City of Hanford's landscape ordinance (Section 12.08.090). Therefore, the Project will plant native species where feasible and select trees based on applicable local tree ordinances, with an emphasis on drought tolerant species.
T-1.3: Identify and secure undeveloped land that could be vegetated and converted to parkland or open space.	*Consistent.* The Project site is currently undeveloped and includes the construction of a 27.59-acre park.
Goal TL-5: Parking Supply Management	
TL.5.1: Conduct an assessment of existing parking requirements and identify opportunities to reduce them as a means of facilitating alternative transportation.	*Consistent.* The Project proposes approximately 488 parking spaces in the neighborhood commercial zone, which abides by the provisions in the City's municipal code (Table 17.54.040) for "Integrated Shopping Center", which allows 1 space per 300 square feet. The maximum parking density allowed is 1 space per 150 square feet. Reducing the parking spaces may facilitate alternative transportation near the Project site.

Table 13. Consistency Analysis with the Kings County Regional Climate Action Plan

The Project would not generate a cumulatively considerable GHG impact, nor would it conflict with any applicable plan, policy or regulation adopted for the purpose of reducing GHG emissions. The impact is *less than significant.*

Mitigation Measures (Air Quality & Greenhouse Gas Emissions)

MM-AQ-1 **Zero VOC Architectural Coating Requirement and VOC Educational Program.** Prior to the occupancy of any on-site development, the Project Applicant or its designee shall provide evidence to the City of Hanford that the applicant/phase developer has implemented the use of Zero VOC Architectural Coating (Paint) products for use on all interior and exterior surfaces excluding parking lots. The products used must contain 5 grams/liter or less for VOC content to remain in compliance with this

mitigation measure. For parking lot paint, products with a VOC content less than or equal to 50 grams/liter may be used.

Additionally, the Project Application or its designee must provide evidence to the City of Hanford that the applicant/phase developer has developed a Green Cleaning Product and Architectural Coating (Paint) education program to be made available at rental offices, leasing spaces, and/or on websites.

MM-AQ-2 **Tier 4 Final Equipment.** For heavy-duty diesel equipment with engines of 75 horsepower or greater, use equipment equipped with Tier 4 Final engines. Prior to the commencement of construction activities for the Project, the Project Applicant shall require its construction contractor to demonstrate that all 75-horsepower or greater diesel-powered equipment is powered with California Air Resources Board (CARB)-certified Tier 4 Final engines.

An exemption from this requirement may be granted if (a) the Project Applicant documents equipment with Tier 4 Final engines are not reasonably available, and (b) the required corresponding reductions in criteria air pollutant emissions can be achieved from other combinations of construction equipment. Before an exemption may be granted, the Project Applicant's construction contractor shall: (1) demonstrate that at least two construction fleet owners/operators in Tulare County were contacted and that those owners/operators confirmed Tier 4 Final equipment could not be located within Tulare County during the desired construction schedule; and (2) the proposed replacement equipment has been evaluated using California Emissions Estimator Model (CalEEMod) or other industry standard emission estimation method and documentation provided to the City to confirm that Project-generated emissions do not exceed applicable San Joaquin Valley Air Pollution Control District (SJVAPCD) carcinogenic (cancer) risk threshold.

MM-AQ-3 **Multi-Family Residential Parking.** Applications for building permits submitted to City by the Project proponent/developer shall include plans and specifications demonstrating that the following features have been incorporated into the building designs or specifications for multifamily residential buildings:

- Visitor parking shall include preferentially located parking spaces for electric vehicles.

- Bicycle parking shall be provided as specified in Section A4.106.9, Residential Voluntary Measures, of the California Green Building Standards (CALGreen) Code.

MM-AQ-4 **Multi-Family Residential and Park/Trail Parking.** Applications for a tentative tract map, parcel map (excluding financing map), or commercial site plan review, that include parking structures, parking lots with 20 or more parking spaces that serve uses other than residential or nonresidential buildings (e.g., trailhead, park), and parking structures and parking lots that serve multifamily residential buildings with 15 or more multifamily units, shall include a minimum of 5% of preferentially located parking spaces shall be reserved for electric and ride-share vehicles.

MM-AQ-5 **Preferential Parking and Electric Vehicle Charging for Nonresidential Buildings.** Applications for commercial site plan review and building permits for nonresidential buildings shall include preferential parking for electric cars, low emission vehicles, and carpools/vanpools to encourage use of such vehicles. Proof of compliance shall be provided to the City prior to the issuance of occupancy permits. Preferential parking for such vehicles shall include two spaces for nonresidential lots containing 10 to 25 spaces; four spaces for 26 to 50 space lots; six spaces for 51 to 75 space lots; nine spaces for 76 to 100 space lots; eleven spaces for 101 to 150 space lots; 18 spaces for 151 to 200 space lots; and at least 10% of total spaces for lots with more than 200 spaces.

Section 6 – Conclusions

Construction and operation of the proposed Project would result in criteria pollutant and GHG emissions, however these emissions would not exceed the thresholds of significance established by the SJVAPCD with Mitigation Measures AQ-1 through AQ-5 incorporated. Impacts to air quality from the proposed Project would be *less than significant with mitigation incorporated*. Impacts from greenhouse gas emissions would remain far below established thresholds (at least 29% reduction from 2005 BAU) and would not conflict with any applicable plan, policy, or regulation. Impacts related to greenhouse gas emissions would remain *less than significant.*

Section 7 – References

California Environmental Quality Act (CEQA). 2019. (Public Resources Code 21000 - 21189) and CEQA Guidelines (California Code of Regulations Title 14, Division 6, Chapter 3, Sections 15000 – 15387).

California Environmental Quality Act (CEQA). 2019. CEQA, Appendix G – Environmental Checklist Form, Final Text.

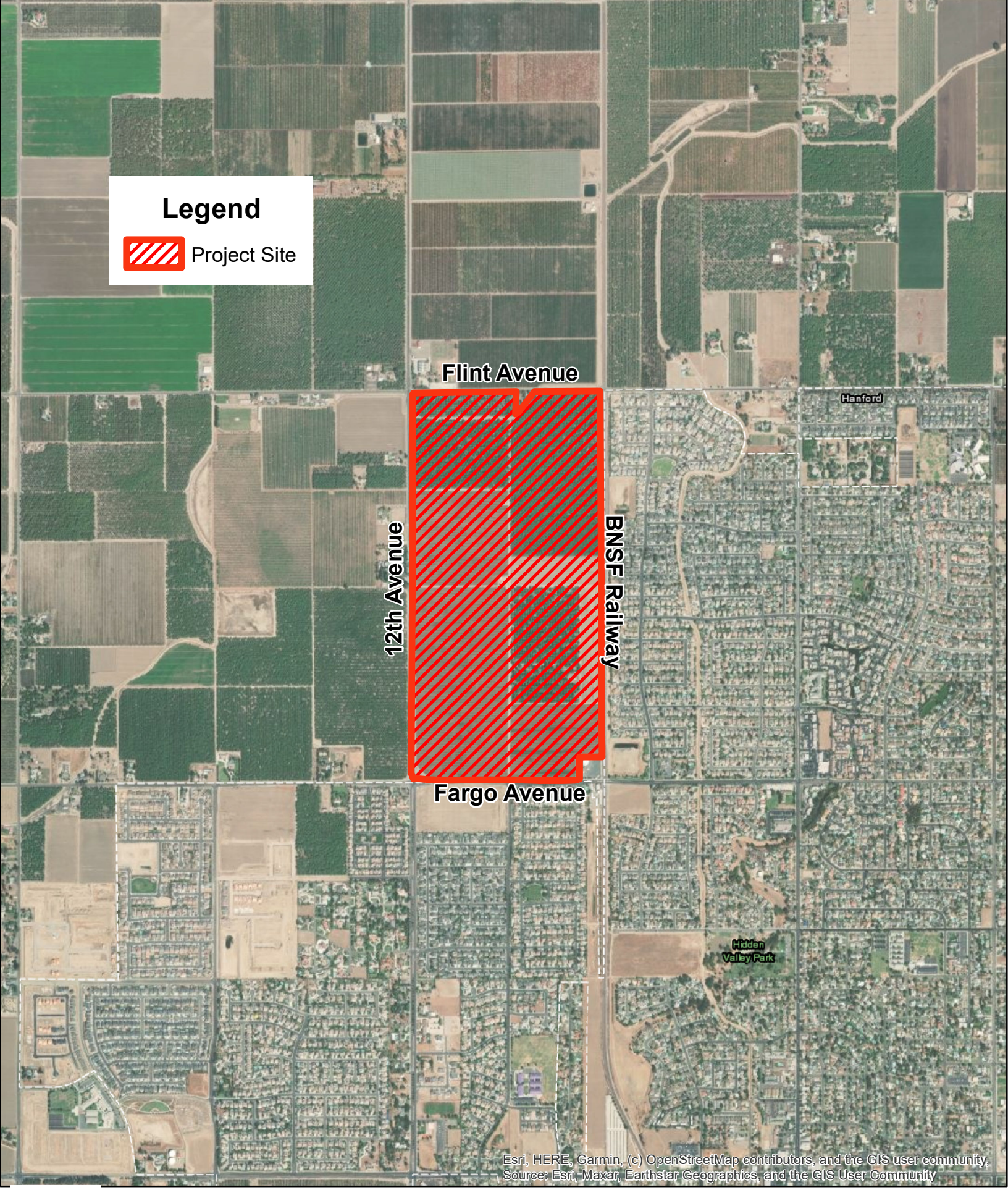
California Air Pollution Control Officers Association (CAPCOA). 2016. California Emissions Estimator Model tm (CalEEMod), version 2020.4.0.

San Joaquin Valley Air Pollution Control District (SJVAPCD). 2015. Guidance for Assessing and Mitigating Air Quality Impacts (GAMAQI). March 19, 2015.

San Joaquin Valley Air Pollution Control District (SJVAPCD). 2009. Guidance for Valley Land-use Agencies in Addressing GHG Emission Impacts for New Projects under CEQA. December 17, 2009.

Attachment A

Vicinity Map



4CREEKS

Vicinity Map
Singh Property Project
City of Hanford

N

1 inch = 2,000 feet

Attachment B

Site Plan

SINGH PROPERTY

TENTATIVE SUBDIVISION MAP

BEING A DIVISION OF A PORTION OF SEC. 14, T. 18 S., R. 21 E., M.D.B. & M.,
IN THE CITY OF HANFORD, COUNTY OF KINGS, STATE OF CALIFORNIA.

SITE DATA:

APN:	007-010-031-000, 007-360-016-000
GROSS ACREAGE:	±304.0 AC.
NET RESIDENTIAL ACREAGE:	±267.4 AC.
PROPOSED LOTS:	870 (EXCLUDING APT. UNITS)
EXISTING ZONING:	R-L-5, R-M, R-H, C-N, P-F
PROPOSED ZONING:	R-L-5, R-L-5, R-M, R-H, C-N, P-F
FLOOD ZONE:	X
GENERAL PLAN:	LOW, MEDIUM, & HIGH DENSITY RESIDENTIAL; NEIGHBORHOOD COMMERCIAL
EXISTING USE:	VACANT
PROPOSED USE:	LOW, MEDIUM, & HIGH DENSITY RESIDENTIAL; NEIGHBORHOOD COMMERCIAL
PROPOSED MAINTENANCE:	CITY OF HANFORD

UTILITIES:

SEWER SERVICE:	CITY OF HANFORD
WATER SERVICE:	CITY OF HANFORD
STORM DRAIN SERVICE:	CITY OF HANFORD
ELECTRICITY:	SOUTHERN CALIFORNIA EDISON COMPANY
NATURAL GAS:	SOUTHERN CALIFORNIA GAS COMPANY
TELEPHONE:	AT&T (TBD)
REFUSE:	CITY OF HANOFRD

LOT DATA:

LDR:	11,900 S.F. (85' x 140')	113 UNITS
LDR:	7,200 S.F. (60' x 120')	184 UNITS
LDR:	5,000 S.F. (50' x 100')	400 UNITS
MDR:	(TOWNHOMES)	235 UNITS
HDR:	(APARTMENTS)	13 AC

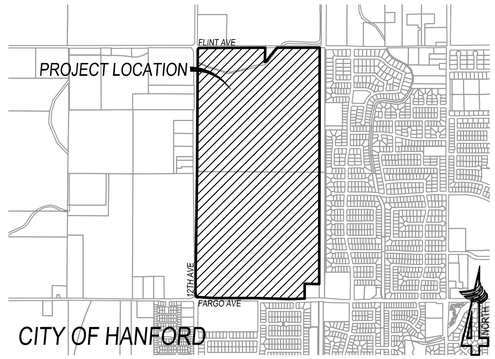
*OUTLOTS A-D1 TO BE DEDICATED TO THE CITY OF HANFORD MAINTENENCE DISTRICT

*ALLEYS 1-5 TO BE DEDICATED AS PART OF HOA AGREEMENT

TYPE I TRAIL PER LOOP ROAD CROSS SECTION

UTILITY REQUIREMENTS:

SEWER:	12TH AVE - INSTALL 12" MAIN FROM FLINT TO FARGO FARGO AVE - EXTEND EXIST. 12" MAIN TO 12TH AVE.
WATER:	12TH AVE - EXTEND EXIST. 12" MAIN TO FLINT AVE. FLINT AVE - INSTALL 12" MAIN FROM 12TH AVE. TO GLACIER WAY.
STORM DRAIN:	RETENTION BASIN TO MAINTAIN ALL ON-SITE DRAINAGE
OVERHEAD POWER UNDERGROUNDING:	12TH AVE (22) FARGO AVE (1) FLINT AVE (11)



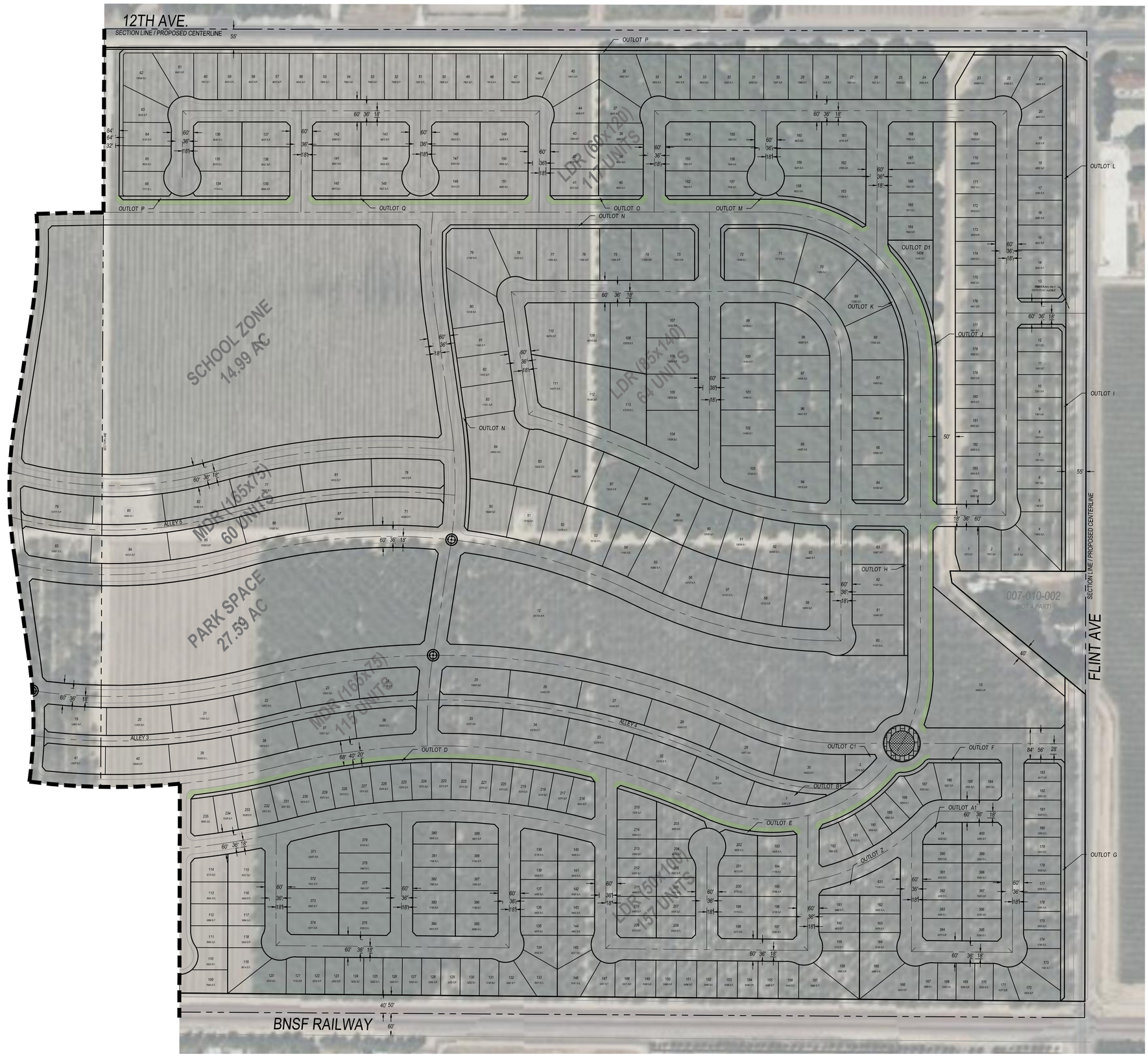
VICINITY MAP

SCALE: 1" = 1.5 MILE

NORTH

125' 0' 125'

PREPARED BY:
4CREEKS
324 S. SANTA FE, STE. A
P.O. BOX 7593
VISALIA, CA 93292
TEL: 559.802.3052
FAX: 559.802.3215



SINGH PROPERTY

TENTATIVE SUBDIVISION MAP

BEING A DIVISION OF A PORTION OF SEC. 14, T. 18 S., R. 21 E., M.D.B. & M.,
IN THE CITY OF HANFORD, COUNTY OF KINGS, STATE OF CALIFORNIA.

SITE DATA:

APN:	007-010-031-000, 007-360-016-000
GROSS ACREAGE:	±304.0 AC.
NET RESIDENTIAL ACREAGE:	±267.4 AC.
PROPOSED LOTS:	870 (EXCLUDING APT. UNITS)
EXISTING ZONING:	R-L-5, R-M, R-H, C-N, P-F
PROPOSED ZONING:	R-L-5, R-L-5, R-M, R-H, C-N, P-F
FLOOD ZONE:	X
GENERAL PLAN:	LOW, MEDIUM, & HIGH DENSITY RESIDENTIAL; NEIGHBORHOOD COMMERCIAL
EXISTING USE:	VACANT
PROPOSED USE:	LOW, MEDIUM, & HIGH DENSITY RESIDENTIAL; NEIGHBORHOOD COMMERCIAL
PROPOSED MAINTENANCE:	CITY OF HANFORD

UTILITIES:

SEWER SERVICE:	CITY OF HANFORD
WATER SERVICE:	CITY OF HANFORD
STORM DRAIN SERVICE:	CITY OF HANFORD
ELECTRICITY:	SOUTHERN CALIFORNIA EDISON COMPANY
NATURAL GAS:	SOUTHERN CALIFORNIA GAS COMPANY
TELEPHONE:	AT&T (TBD)
REFUSE:	CITY OF HANOFRD

LOT DATA:

LDR:	11,900 S.F. (85' x 140')	113 UNITS
LDR:	7,200 S.F. (60' x 120')	184 UNITS
LDR:	5,000 S.F. (50' x 100')	400 UNITS
MDR:	(TOWNHOMES)	235 UNITS
HDR:	(APARTMENTS)	13 AC

*OUTLOTS A-D1 TO BE DEDICATED TO THE CITY OF HANFORD MAINTENENCE DISTRICT

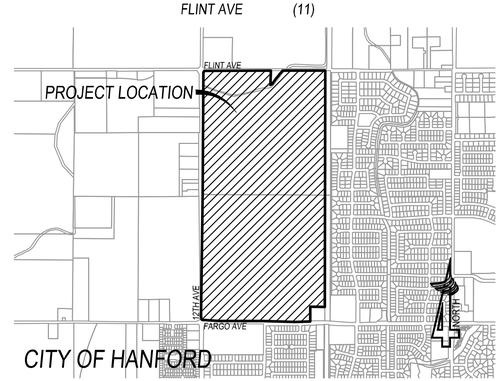
*ALLEYS 1-5 TO BE DEDICATED AS PART OF HOA AGREEMENT

TYPE I TRAIL PER LOOP ROAD CROSS SECTION

UTILITY REQUIREMENTS:

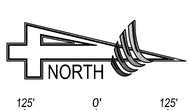
SEWER:	12TH AVE - INSTALL 12" MAIN FROM FLINT TO FARGO FARGO AVE - EXTEND EXIST. 12" MAIN TO 12TH AVE.
WATER:	12TH AVE - EXTEND EXIST. 12" MAIN TO FLINT AVE. FLINT AVE - INSTALL 12" MAIN FROM 12TH AVE. TO GLACIER WAY.
STORM DRAIN:	RETENTION BASIN TO MAINTAIN ALL ON-SITE DRAINAGE

OVERHEAD POWER UNDERGROUNDING:	12TH AVE	(22)
	FARGO AVE	(1)
	FLINT AVE	(11)



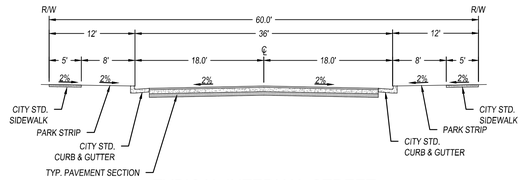
VICINITY MAP

SCALE: 1" = 1.5 MILE

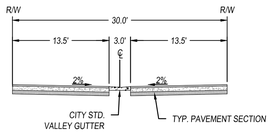


PREPARED BY:

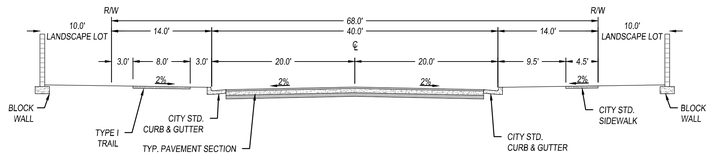
4CREEKS
324 S. SANTA FE, STE. A
P.O. BOX 7593
VISALIA, CA 93292
TEL: 559.802.3052
FAX: 559.802.3215



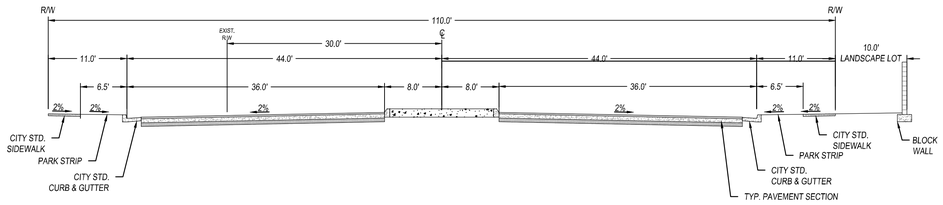
TYPICAL INTERNAL STREET



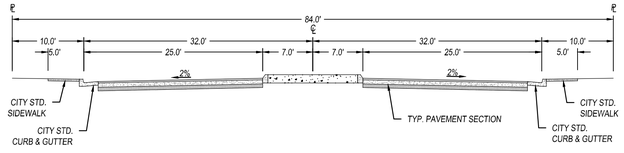
ALLEY CROSS SECTION



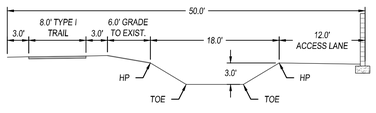
LOOP ROAD CROSS SECTION



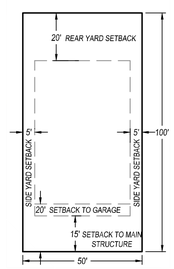
12TH AVENUE / FLINT AVENUE
(LOOKING NORTH) (LOOKING EAST)



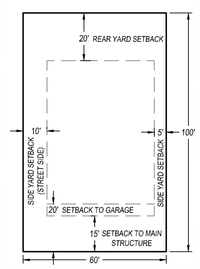
FARGO AVENUE
(LOOKING WEST)



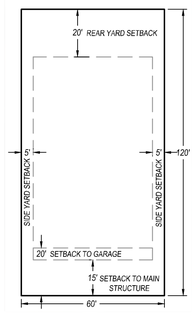
DITCH CROSS SECTION



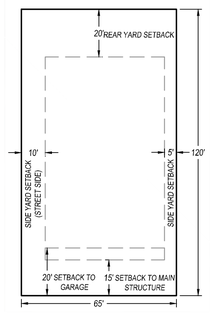
TYP. 50x100 INTERNAL LOT



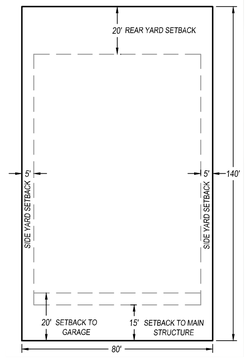
TYP. 50x100 CORNER LOT



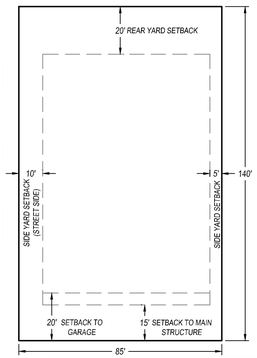
TYP. 60x120 INTERNAL LOT



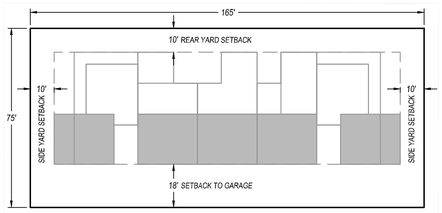
TYP. 60x120 CORNER LOT



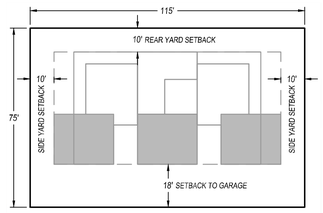
TYP. 80x140 INTERNAL LOT



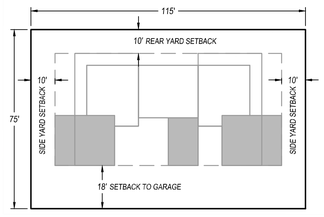
TYP. 80x140 CORNER LOT



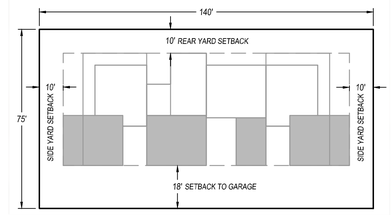
5-PACK TOWNHOME FOOT PRINT



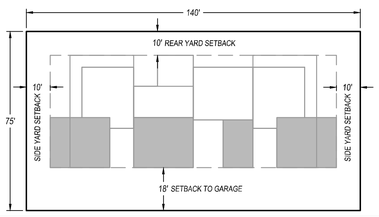
3-PACK TOWNHOME FOOT PRINT (1)



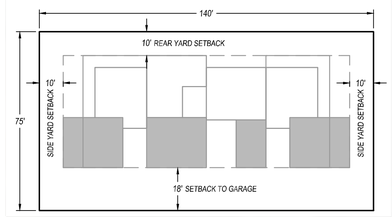
3-PACK TOWNHOME FOOT PRINT (2)



4-PACK TOWNHOME FOOT PRINT (1)



4-PACK TOWNHOME FOOT PRINT (2)



4-PACK TOWNHOME FOOT PRINT (3)

PREPARED BY:
4CREEKS
324 S. SANTA FE, STE. A
P.O. BOX 7593
VISALIA, CA 93292
TEL: 559.802.3052
FAX: 559.802.3215

Attachment C

CalEEMod Emissions Estimates
Output Files

Fargo Village - Kings County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Fargo Village

Kings County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Elementary School	600.00	Student	14.99	50,162.02	0
City Park	27.59	Acre	27.59	1,201,820.40	0
Apartments Low Rise	214.00	Dwelling Unit	13.36	214,000.00	612
Condo/Townhouse	235.00	Dwelling Unit	56.56	235,000.00	672
Single Family Housing	697.00	Dwelling Unit	187.50	1,254,600.00	1993

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	37
Climate Zone	3			**Operational Year**	2045
Utility Company	Sonoma Clean Power				
CO2 Intensity (lb/MWhr)	119.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Lot sizes consistent with City and applicant-approved site plan.

Construction Phase - Demolition expected to last no more than a day, as structure is 650 square feet.

Demolition -

Architectural Coating - Project to use Low VOC architectural coating products pursuant to CARB Rule 4601 and 1113; based on product type for VOC emissions.

Vehicle Trips - Trip rates/counts based on findings of Traffic Scoping Analysis prepared by LSA Associates, Inc. for the project.

Woodstoves - Actual project values, no woodstoves proposed for installation in homes.

Fargo Village - Kings County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Fleet Mix - Used SJVPCD Accepted fleet-mix for residential projects.

Consumer Products - General Category: Statewide total emissions were updated to 225.6 tons/day based on the 2020 Update of the Organic Gas Speciation Profiles for Consumer Products. Degreaser and pesticides/fertilizers emissions factors utilized the same calculation used by CalEEMod default, but used the updated CARB Emissions Inventory for 2020.
Degreaser: 0.2 tons ROG/day Pesticides/Fertilizer: 0.19 tons ROG/day

Area Coating - Project to use Low VOC architectural coating products pursuant to CARB Rule 4601; based on product type for VOC emissions.

Construction Off-road Equipment Mitigation -

Area Mitigation - EF (g/L) set to the standard established by Rule 4601 for architectural coatings. Mitigation measure: Use zero-VOC paint containing 5 g/L or less VOC for all architectural coating applications except for parking.

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	150.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	150.00	50.00
tblArchitecturalCoating	EF_Parking	150.00	50.00
tblArchitecturalCoating	EF_Residential_Exterior	150.00	50.00
tblArchitecturalCoating	EF_Residential_Interior	150.00	50.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	150	50
tblAreaCoating	Area_EF_Nonresidential_Interior	150	50
tblAreaCoating	Area_EF_Parking	150	50
tblAreaCoating	Area_EF_Residential_Exterior	150	50
tblAreaCoating	Area_EF_Residential_Interior	150	50
tblAreaCoating	ReapplicationRatePercent	10	5
tblAreaMitigation	UseLowVOCPaintNonresidentialExteriorValue	50	5
tblAreaMitigation	UseLowVOCPaintNonresidentialInteriorValue	50	5
tblAreaMitigation	UseLowVOCPaintParkingCheck	False	True
tblAreaMitigation	UseLowVOCPaintResidentialExteriorValue	50	5
tblAreaMitigation	UseLowVOCPaintResidentialInteriorValue	50	5
tblConstructionPhase	NumDays	300.00	1.00
tblConsumerProducts	ROG_EF	2.14E-05	2.01E-05
tblConsumerProducts	ROG_EF_Degreaser	3.542E-07	6.5E-08

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblConsumerProducts	ROG_EF_PesticidesFertilizers	5.152E-08	2E-10
tblFleetMix	HHD	0.04	0.02
tblFleetMix	HHD	0.04	0.02
tblFleetMix	HHD	0.04	0.02
tblFleetMix	HHD	0.04	0.02
tblFleetMix	HHD	0.04	0.02
tblFleetMix	LDA	0.54	0.48
tblFleetMix	LDA	0.54	0.48
tblFleetMix	LDA	0.54	0.48
tblFleetMix	LDA	0.54	0.48
tblFleetMix	LDA	0.54	0.48
tblFleetMix	LDT1	0.06	0.24
tblFleetMix	LDT1	0.06	0.24
tblFleetMix	LDT1	0.06	0.24
tblFleetMix	LDT1	0.06	0.24
tblFleetMix	LDT1	0.06	0.24
tblFleetMix	LDT2	0.18	0.17
tblFleetMix	LDT2	0.18	0.17
tblFleetMix	LDT2	0.18	0.17
tblFleetMix	LDT2	0.18	0.17
tblFleetMix	LDT2	0.18	0.17
tblFleetMix	LHD1	0.02	9.0000e-004
tblFleetMix	LHD1	0.02	9.0000e-004
tblFleetMix	LHD1	0.02	9.0000e-004
tblFleetMix	LHD1	0.02	9.0000e-004
tblFleetMix	LHD1	0.02	9.0000e-004
tblFleetMix	LHD2	5.5230e-003	1.0000e-003
tblFleetMix	LHD2	5.5230e-003	1.0000e-003
tblFleetMix	LHD2	5.5230e-003	1.0000e-003

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblFleetMix	LHD2	5.5230e-003	1.0000e-003
tblFleetMix	LHD2	5.5230e-003	1.0000e-003
tblFleetMix	MCY	0.02	3.3000e-003
tblFleetMix	MCY	0.02	3.3000e-003
tblFleetMix	MCY	0.02	3.3000e-003
tblFleetMix	MCY	0.02	3.3000e-003
tblFleetMix	MCY	0.02	3.3000e-003
tblFleetMix	MDV	0.12	0.06
tblFleetMix	MDV	0.12	0.06
tblFleetMix	MDV	0.12	0.06
tblFleetMix	MDV	0.12	0.06
tblFleetMix	MDV	0.12	0.06
tblFleetMix	MH	2.3250e-003	4.4000e-003
tblFleetMix	MH	2.3250e-003	4.4000e-003
tblFleetMix	MH	2.3250e-003	4.4000e-003
tblFleetMix	MH	2.3250e-003	4.4000e-003
tblFleetMix	MH	2.3250e-003	4.4000e-003
tblFleetMix	MHD	7.0410e-003	7.9000e-003
tblFleetMix	MHD	7.0410e-003	7.9000e-003
tblFleetMix	MHD	7.0410e-003	7.9000e-003
tblFleetMix	MHD	7.0410e-003	7.9000e-003
tblFleetMix	MHD	7.0410e-003	7.9000e-003
tblFleetMix	OBUS	5.2000e-004	0.00
tblFleetMix	OBUS	5.2000e-004	0.00
tblFleetMix	OBUS	5.2000e-004	0.00
tblFleetMix	OBUS	5.2000e-004	0.00
tblFleetMix	OBUS	5.2000e-004	0.00
tblFleetMix	SBUS	8.1800e-004	1.1000e-003
tblFleetMix	SBUS	8.1800e-004	1.1000e-003

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblFleetMix	SBUS	8.1800e-004	1.1000e-003
tblFleetMix	SBUS	8.1800e-004	1.1000e-003
tblFleetMix	SBUS	8.1800e-004	1.1000e-003
tblFleetMix	UBUS	1.8100e-004	4.3000e-003
tblFleetMix	UBUS	1.8100e-004	4.3000e-003
tblFleetMix	UBUS	1.8100e-004	4.3000e-003
tblFleetMix	UBUS	1.8100e-004	4.3000e-003
tblFleetMix	UBUS	1.8100e-004	4.3000e-003
tblLandUse	LotAcreage	1.15	14.99
tblLandUse	LotAcreage	13.38	13.36
tblLandUse	LotAcreage	14.69	56.56
tblLandUse	LotAcreage	226.30	187.50
tblWoodstoves	NumberCatalytic	13.36	0.00
tblWoodstoves	NumberCatalytic	56.56	0.00
tblWoodstoves	NumberCatalytic	187.50	0.00
tblWoodstoves	NumberNoncatalytic	13.36	0.00
tblWoodstoves	NumberNoncatalytic	56.56	0.00
tblWoodstoves	NumberNoncatalytic	187.50	0.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

Fargo Village - Kings County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2025	0.3459	3.4025	2.7269	6.0900e-003	2.7696	0.1436	2.9131	1.1267	0.1321	1.2588	0.0000	535.8024	535.8024	0.1688	4.0000e-004	540.1410
2026	0.3850	3.6504	3.4890	8.2600e-003	1.5466	0.1477	1.6942	0.5174	0.1359	0.6533	0.0000	726.9018	726.9018	0.2304	3.9000e-004	732.7790
2027	0.4730	3.6770	4.5006	0.0147	1.8780	0.1154	1.9935	0.4918	0.1072	0.5990	0.0000	1,360.6980	1,360.6980	0.1582	0.0703	1,385.6074
2028	0.5302	3.6604	5.2551	0.0201	1.4328	0.0855	1.5183	0.3873	0.0805	0.4678	0.0000	1,896.5568	1,896.5568	0.0910	0.1298	1,937.4982
2029	0.5128	3.6491	5.1506	0.0198	1.4384	0.0854	1.5238	0.3887	0.0805	0.4692	0.0000	1,875.3300	1,875.3300	0.0899	0.1271	1,915.4637
2030	0.4871	3.0367	5.0550	0.0200	1.4384	0.0356	1.4739	0.3887	0.0347	0.4234	0.0000	1,890.2496	1,890.2496	0.0313	0.1244	1,928.0887
2031	0.4695	3.0202	4.9613	0.0197	1.4384	0.0352	1.4736	0.3887	0.0344	0.4231	0.0000	1,867.5614	1,867.5614	0.0302	0.1219	1,904.6517
2032	0.4557	3.0175	4.9017	0.0196	1.4439	0.0351	1.4789	0.3902	0.0343	0.4245	0.0000	1,854.6094	1,854.6094	0.0294	0.1203	1,891.1905
2033	0.4383	2.9823	4.7973	0.0192	1.4328	0.0345	1.4674	0.3873	0.0337	0.4210	0.0000	1,822.7346	1,822.7346	0.0283	0.1175	1,858.4686
2034	0.4262	2.9709	4.7388	0.0190	1.4328	0.0343	1.4671	0.3873	0.0335	0.4207	0.0000	1,806.9477	1,806.9477	0.0276	0.1159	1,842.1803
2035	0.4049	2.8704	4.7021	0.0189	1.4384	0.0266	1.4650	0.3887	0.0259	0.4146	0.0000	1,799.9624	1,799.9624	0.0261	0.1149	1,834.8674
2036	0.4064	2.8814	4.7201	0.0190	1.4439	0.0267	1.4706	0.3902	0.0260	0.4162	0.0000	1,806.8589	1,806.8589	0.0262	0.1154	1,841.8976
2037	0.4049	2.8704	4.7021	0.0189	1.4384	0.0266	1.4650	0.3887	0.0259	0.4146	0.0000	1,799.9624	1,799.9624	0.0261	0.1149	1,834.8674
2038	0.4049	2.8704	4.7021	0.0189	1.4384	0.0266	1.4650	0.3887	0.0259	0.4146	0.0000	1,799.9624	1,799.9624	0.0261	0.1149	1,834.8674
2039	0.4033	2.8594	4.6840	0.0188	1.4328	0.0265	1.4593	0.3873	0.0258	0.4130	0.0000	1,793.0660	1,793.0660	0.0260	0.1145	1,827.8373
2040	0.3630	2.8027	4.5377	0.0183	1.4384	0.0236	1.4619	0.3887	0.0229	0.4116	0.0000	1,752.4849	1,752.4849	0.0235	0.1103	1,785.9352
2041	0.3630	2.8027	4.5377	0.0183	1.4384	0.0236	1.4619	0.3887	0.0229	0.4116	0.0000	1,752.4849	1,752.4849	0.0235	0.1103	1,785.9352
2042	0.3630	2.8027	4.5377	0.0183	1.4384	0.0236	1.4619	0.3887	0.0229	0.4116	0.0000	1,752.4849	1,752.4849	0.0235	0.1103	1,785.9352
2043	0.3630	2.8027	4.5377	0.0183	1.4384	0.0236	1.4619	0.3887	0.0229	0.4116	0.0000	1,752.4849	1,752.4849	0.0235	0.1103	1,785.9352

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2044	0.3630	2.8027	4.5377	0.0183	1.4384	0.0236	1.4619	0.3887	0.0229	0.4116	0.0000	1,752.4849	1,752.4849	0.0235	0.1103	1,785.9352
2045	0.1969	1.1693	2.7922	8.0000e-003	0.4408	0.0176	0.4584	0.1191	0.0174	0.1365	0.0000	742.8968	742.8968	0.0142	0.0325	752.9267
2046	1.9598	0.3207	1.4415	2.9000e-003	0.1088	9.2200e-003	0.1180	0.0289	9.2100e-003	0.0381	0.0000	260.7918	260.7918	7.2100e-003	1.4000e-003	261.3892
2047	3.6177	0.0949	0.4937	1.4900e-003	0.1918	1.1400e-003	0.1929	0.0510	1.1100e-003	0.0521	0.0000	147.6337	147.6337	2.2200e-003	2.4700e-003	148.4246
Maximum	**3.6177**	**3.6770**	**5.2551**	**0.0201**	**2.7696**	**0.1477**	**2.9131**	**1.1267**	**0.1359**	**1.2588**	**0.0000**	**1,896.5568**	**1,896.5568**	**0.2304**	**0.1298**	**1,937.4982**

2.1 Overall Construction

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2025	0.3459	3.4025	2.7269	6.0900e-003	0.8775	0.1436	1.0211	0.3551	0.1321	0.4872	0.0000	535.8017	535.8017	0.1688	4.0000e-004	540.1404
2026	0.3850	3.6504	3.4890	8.2600e-003	0.4970	0.1477	0.6446	0.1653	0.1359	0.3011	0.0000	726.9010	726.9010	0.2304	3.9000e-004	732.7781
2027	0.4730	3.6770	4.5006	0.0147	1.1122	0.1154	1.2277	0.2957	0.1072	0.4028	0.0000	1,360.6974	1,360.6974	0.1582	0.0703	1,385.6068
2028	0.5302	3.6604	5.2550	0.0201	1.4328	0.0855	1.5183	0.3873	0.0805	0.4678	0.0000	1,896.5564	1,896.5564	0.0910	0.1298	1,937.4979
2029	0.5128	3.6491	5.1506	0.0198	1.4384	0.0854	1.5238	0.3887	0.0805	0.4692	0.0000	1,875.3297	1,875.3297	0.0899	0.1271	1,915.4634
2030	0.4871	3.0367	5.0550	0.0200	1.4384	0.0356	1.4739	0.3887	0.0347	0.4234	0.0000	1,890.2492	1,890.2492	0.0313	0.1244	1,928.0883
2031	0.4695	3.0201	4.9613	0.0197	1.4384	0.0352	1.4736	0.3887	0.0344	0.4231	0.0000	1,867.5610	1,867.5610	0.0302	0.1219	1,904.6513

Fargo Village - Kings County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2032	0.4557	3.0175	4.9017	0.0196	1.4439	0.0351	1.4789	0.3902	0.0343	0.4245	0.0000	1,854.6089	1,854.6089	0.0294	0.1203	1,891.1901
2033	0.4383	2.9823	4.7973	0.0192	1.4328	0.0345	1.4674	0.3873	0.0337	0.4210	0.0000	1,822.7341	1,822.7341	0.0283	0.1175	1,858.4682
2034	0.4262	2.9709	4.7388	0.0190	1.4328	0.0343	1.4671	0.3873	0.0335	0.4207	0.0000	1,806.9473	1,806.9473	0.0276	0.1159	1,842.1799
2035	0.4049	2.8704	4.7021	0.0189	1.4384	0.0266	1.4650	0.3887	0.0259	0.4146	0.0000	1,799.9620	1,799.9620	0.0261	0.1149	1,834.8670
2036	0.4064	2.8814	4.7201	0.0190	1.4439	0.0267	1.4706	0.3902	0.0260	0.4162	0.0000	1,806.8584	1,806.8584	0.0262	0.1154	1,841.8972
2037	0.4049	2.8704	4.7021	0.0189	1.4384	0.0266	1.4650	0.3887	0.0259	0.4146	0.0000	1,799.9620	1,799.9620	0.0261	0.1149	1,834.8670
2038	0.4049	2.8704	4.7021	0.0189	1.4384	0.0266	1.4650	0.3887	0.0259	0.4146	0.0000	1,799.9620	1,799.9620	0.0261	0.1149	1,834.8670
2039	0.4033	2.8594	4.6840	0.0188	1.4328	0.0265	1.4593	0.3873	0.0258	0.4130	0.0000	1,793.0656	1,793.0656	0.0260	0.1145	1,827.8369
2040	0.3630	2.8027	4.5377	0.0183	1.4384	0.0236	1.4619	0.3887	0.0229	0.4116	0.0000	1,752.4845	1,752.4845	0.0235	0.1103	1,785.9347
2041	0.3630	2.8027	4.5377	0.0183	1.4384	0.0236	1.4619	0.3887	0.0229	0.4116	0.0000	1,752.4845	1,752.4845	0.0235	0.1103	1,785.9347
2042	0.3630	2.8027	4.5377	0.0183	1.4384	0.0236	1.4619	0.3887	0.0229	0.4116	0.0000	1,752.4845	1,752.4845	0.0235	0.1103	1,785.9347
2043	0.3630	2.8027	4.5377	0.0183	1.4384	0.0236	1.4619	0.3887	0.0229	0.4116	0.0000	1,752.4845	1,752.4845	0.0235	0.1103	1,785.9347
2044	0.3630	2.8027	4.5377	0.0183	1.4384	0.0236	1.4619	0.3887	0.0229	0.4116	0.0000	1,752.4845	1,752.4845	0.0235	0.1103	1,785.9347
2045	0.1969	1.1693	2.7922	8.0000e-003	0.4408	0.0176	0.4584	0.1191	0.0174	0.1365	0.0000	742.8964	742.8964	0.0142	0.0325	752.9264
2046	1.9598	0.3207	1.4415	2.9000e-003	0.1088	9.2200e-003	0.1180	0.0289	9.2100e-003	0.0381	0.0000	260.7916	260.7916	7.2100e-003	1.4000e-003	261.3889
2047	3.6177	0.0949	0.4937	1.4900e-003	0.1918	1.1400e-003	0.1929	0.0510	1.1100e-003	0.0521	0.0000	147.6337	147.6337	2.2200e-003	2.4700e-003	148.4246
Maximum	**3.6177**	**3.6770**	**5.2550**	**0.0201**	**1.4439**	**0.1477**	**1.5238**	**0.3902**	**0.1359**	**0.4872**	**0.0000**	**1,896.5564**	**1,896.5564**	**0.2304**	**0.1298**	**1,937.4979**

Fargo Village - Kings County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	11.82	0.00	11.44	14.76	0.00	13.31	0.00	0.00	0.00	0.00	0.00	0.00

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	1-1-2025	3-31-2025	0.8910	0.8910
2	4-1-2025	6-30-2025	0.9031	0.9031
3	7-1-2025	9-30-2025	0.9355	0.9355
4	10-1-2025	12-31-2025	1.0164	1.0164
5	1-1-2026	3-31-2026	0.9941	0.9941
6	4-1-2026	6-30-2026	1.0051	1.0051
7	7-1-2026	9-30-2026	1.0162	1.0162
8	10-1-2026	12-31-2026	1.0162	1.0162
9	1-1-2027	3-31-2027	0.9939	0.9939
10	4-1-2027	6-30-2027	1.0083	1.0083
11	7-1-2027	9-30-2027	1.0604	1.0604
12	10-1-2027	12-31-2027	1.0903	1.0903
13	1-1-2028	3-31-2028	1.0661	1.0661
14	4-1-2028	6-30-2028	1.0365	1.0365
15	7-1-2028	9-30-2028	1.0479	1.0479
16	10-1-2028	12-31-2028	1.0778	1.0778
17	1-1-2029	3-31-2029	1.0428	1.0428
18	4-1-2029	6-30-2029	1.0250	1.0250
19	7-1-2029	9-30-2029	1.0362	1.0362
20	10-1-2029	12-31-2029	1.0660	1.0660
21	1-1-2030	3-31-2030	0.8852	0.8852
22	4-1-2030	6-30-2030	0.8656	0.8656
23	7-1-2030	9-30-2030	0.8751	0.8751
24	10-1-2030	12-31-2030	0.9049	0.9049
25	1-1-2031	3-31-2031	0.8765	0.8765

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

26	**4-1-2031**	**6-30-2031**	0.8566	0.8566
27	**7-1-2031**	**9-30-2031**	0.8661	0.8661
28	**10-1-2031**	**12-31-2031**	0.8959	0.8959
29	**1-1-2032**	**3-31-2032**	0.8785	0.8785
30	**4-1-2032**	**6-30-2032**	0.8488	0.8488
31	**7-1-2032**	**9-30-2032**	0.8581	0.8581
32	**10-1-2032**	**12-31-2032**	0.8881	0.8881
33	**1-1-2033**	**3-31-2033**	0.8621	0.8621
34	**4-1-2033**	**6-30-2033**	0.8418	0.8418
35	**7-1-2033**	**9-30-2033**	0.8511	0.8511
36	**10-1-2033**	**12-31-2033**	0.8813	0.8813
37	**1-1-2034**	**3-31-2034**	0.8561	0.8561
38	**4-1-2034**	**6-30-2034**	0.8356	0.8356
39	**7-1-2034**	**9-30-2034**	0.8448	0.8448
40	**10-1-2034**	**12-31-2034**	0.8751	0.8751
41	**1-1-2035**	**3-31-2035**	0.8227	0.8227
42	**4-1-2035**	**6-30-2035**	0.8016	0.8016
43	**7-1-2035**	**9-30-2035**	0.8104	0.8104
44	**10-1-2035**	**12-31-2035**	0.8410	0.8410
45	**1-1-2036**	**3-31-2036**	0.8319	0.8319
46	**4-1-2036**	**6-30-2036**	0.8016	0.8016
47	**7-1-2036**	**9-30-2036**	0.8104	0.8104
48	**10-1-2036**	**12-31-2036**	0.8410	0.8410
49	**1-1-2037**	**3-31-2037**	0.8227	0.8227
50	**4-1-2037**	**6-30-2037**	0.8016	0.8016
51	**7-1-2037**	**9-30-2037**	0.8104	0.8104
52	**10-1-2037**	**12-31-2037**	0.8410	0.8410
53	**1-1-2038**	**3-31-2038**	0.8227	0.8227
54	**4-1-2038**	**6-30-2038**	0.8016	0.8016

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

55	**7-1-2038**	**9-30-2038**	0.8104	0.8104
56	**10-1-2038**	**12-31-2038**	0.8410	0.8410
57	**1-1-2039**	**3-31-2039**	0.8227	0.8227
58	**4-1-2039**	**6-30-2039**	0.8016	0.8016
59	**7-1-2039**	**9-30-2039**	0.8104	0.8104
60	**10-1-2039**	**12-31-2039**	0.8410	0.8410
61	**1-1-2040**	**3-31-2040**	0.8042	0.8042
62	**4-1-2040**	**6-30-2040**	0.7727	0.7727
63	**7-1-2040**	**9-30-2040**	0.7812	0.7812
64	**10-1-2040**	**12-31-2040**	0.8130	0.8130
65	**1-1-2041**	**3-31-2041**	0.7953	0.7953
66	**4-1-2041**	**6-30-2041**	0.7727	0.7727
67	**7-1-2041**	**9-30-2041**	0.7812	0.7812
68	**10-1-2041**	**12-31-2041**	0.8130	0.8130
69	**1-1-2042**	**3-31-2042**	0.7953	0.7953
70	**4-1-2042**	**6-30-2042**	0.7727	0.7727
71	**7-1-2042**	**9-30-2042**	0.7812	0.7812
72	**10-1-2042**	**12-31-2042**	0.8130	0.8130
73	**1-1-2043**	**3-31-2043**	0.7953	0.7953
74	**4-1-2043**	**6-30-2043**	0.7727	0.7727
75	**7-1-2043**	**9-30-2043**	0.7812	0.7812
76	**10-1-2043**	**12-31-2043**	0.8130	0.8130
77	**1-1-2044**	**3-31-2044**	0.8042	0.8042
78	**4-1-2044**	**6-30-2044**	0.7727	0.7727
79	**7-1-2044**	**9-30-2044**	0.7812	0.7812
80	**10-1-2044**	**12-31-2044**	0.8130	0.8130
81	**1-1-2045**	**3-31-2045**	0.7896	0.7896
82	**4-1-2045**	**6-30-2045**	0.2807	0.2807
83	**7-1-2045**	**9-30-2045**	0.1542	0.1542

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

84	**10-1-2045**	**12-31-2045**	0.1543	0.1543
85	**1-1-2046**	**3-31-2046**	0.1509	0.1509
86	**4-1-2046**	**6-30-2046**	0.1526	0.1526
87	**7-1-2046**	**9-30-2046**	0.8611	0.8611
88	**10-1-2046**	**12-31-2046**	1.1252	1.1252
89	**1-1-2047**	**3-31-2047**	1.1008	1.1008
90	**4-1-2047**	**6-30-2047**	1.1126	1.1126
91	**7-1-2047**	**9-30-2047**	1.1248	1.1248
		Highest	1.1252	1.1252

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	7.0097	0.5265	8.6600	3.1900e-003		0.0819	0.0819		0.0819	0.0819	0.0000	510.3665	510.3665	0.0228	9.1000e-003	513.6482
Energy	0.1339	1.1478	0.5138	7.3000e-003		0.0925	0.0925		0.0925	0.0925	0.0000	1,757.4157	1,757.4157	0.1443	0.0387	1,772.5586
Mobile	1.2545	4.3610	23.4676	0.0785	11.1988	0.0433	11.2421	2.9887	0.0407	3.0294	0.0000	8,094.4390	8,094.4390	0.4206	0.3539	8,210.3998
Waste						0.0000	0.0000		0.0000	0.0000	210.2763	0.0000	210.2763	12.4270	0.0000	520.9507
Water						0.0000	0.0000		0.0000	0.0000	24.1497	38.3561	62.5058	2.4910	0.0599	142.6140
Total	**8.3980**	**6.0353**	**32.6413**	**0.0889**	**11.1988**	**0.2177**	**11.4165**	**2.9887**	**0.2151**	**3.2038**	**234.4260**	**10,400.5772**	**10,635.0032**	**15.5056**	**0.4615**	**11,160.1712**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	6.6184	0.0978	8.4775	4.5000e-004		0.0472	0.0472		0.0472	0.0472	0.0000	13.9108	13.9108	0.0133	0.0000	14.2423
Energy	0.1339	1.1478	0.5138	7.3000e-003		0.0925	0.0925		0.0925	0.0925	0.0000	1,757.1310	1,757.1310	0.1443	0.0387	1,772.2692
Mobile	1.0402	2.3788	12.4871	0.0278	3.7236	0.0165	3.7401	0.9937	0.0155	1.0092	0.0000	2,864.0811	2,864.0811	0.1911	0.1736	2,920.5825
Waste						0.0000	0.0000		0.0000	0.0000	210.2763	0.0000	210.2763	12.4270	0.0000	520.9507
Water						0.0000	0.0000		0.0000	0.0000	24.1497	38.3561	62.5058	2.4910	0.0599	142.6140
Total	**7.7924**	**3.6244**	**21.4785**	**0.0356**	**3.7236**	**0.1562**	**3.8798**	**0.9937**	**0.1552**	**1.1489**	**234.4260**	**4,673.4790**	**4,907.9050**	**15.2666**	**0.2721**	**5,370.6586**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**7.21**	**39.95**	**34.20**	**60.02**	**66.75**	**28.25**	**66.02**	**66.75**	**27.86**	**64.14**	**0.00**	**55.07**	**53.85**	**1.54**	**41.04**	**51.88**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2025	1/1/2025	5	1	
2	Site Preparation	Site Preparation	1/2/2025	9/10/2025	5	180	
3	Grading	Grading	9/11/2025	6/23/2027	5	465	

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4	Building Construction	Building Construction	6/24/2027	4/19/2045	5	4650	
5	Paving	Paving	4/20/2045	7/25/2046	5	330	
6	Architectural Coating	Architectural Coating	7/26/2046	10/30/2047	5	330	

Acres of Grading (Site Preparation Phase): 270

Acres of Grading (Grading Phase): 1395

Acres of Paving: 0

Residential Indoor: 3,449,790; Residential Outdoor: 1,149,930; Non-Residential Indoor: 75,243; Non-Residential Outdoor: 25,081; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	3.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	1,100.00	328.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	220.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Soil Stabilizer

Replace Ground Cover

Water Exposed Area

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					3.2000e-004	0.0000	3.2000e-004	5.0000e-005	0.0000	5.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.0500e-003	9.6000e-003	9.7100e-003	2.0000e-005		4.3000e-004	4.3000e-004		4.0000e-004	4.0000e-004	0.0000	1.6999	1.6999	4.7000e-004	0.0000	1.7118
Total	**1.0500e-003**	**9.6000e-003**	**9.7100e-003**	**2.0000e-005**	**3.2000e-004**	**4.3000e-004**	**7.5000e-004**	**5.0000e-005**	**4.0000e-004**	**4.5000e-004**	**0.0000**	**1.6999**	**1.6999**	**4.7000e-004**	**0.0000**	**1.7118**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	1.8000e-004	4.0000e-005	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0806	0.0806	0.0000	1.0000e-005	0.0844
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.0000e-005	1.0000e-005	1.6000e-004	0.0000	6.0000e-005	0.0000	6.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0457	0.0457	0.0000	0.0000	0.0461
Total	**2.0000e-005**	**1.9000e-004**	**2.0000e-004**	**0.0000**	**9.0000e-005**	**0.0000**	**9.0000e-005**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**0.0000**	**0.1263**	**0.1263**	**0.0000**	**1.0000e-005**	**0.1305**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2025

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.0000e-004	0.0000	1.0000e-004	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.0500e-003	9.6000e-003	9.7100e-003	2.0000e-005		4.3000e-004	4.3000e-004		4.0000e-004	4.0000e-004	0.0000	1.6999	1.6999	4.7000e-004	0.0000	1.7118
Total	**1.0500e-003**	**9.6000e-003**	**9.7100e-003**	**2.0000e-005**	**1.0000e-004**	**4.3000e-004**	**5.3000e-004**	**2.0000e-005**	**4.0000e-004**	**4.2000e-004**	**0.0000**	**1.6999**	**1.6999**	**4.7000e-004**	**0.0000**	**1.7118**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	1.8000e-004	4.0000e-005	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0806	0.0806	0.0000	1.0000e-005	0.0844
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.0000e-005	1.0000e-005	1.6000e-004	0.0000	6.0000e-005	0.0000	6.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0457	0.0457	0.0000	0.0000	0.0461
Total	**2.0000e-005**	**1.9000e-004**	**2.0000e-004**	**0.0000**	**9.0000e-005**	**0.0000**	**9.0000e-005**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**0.0000**	**0.1263**	**0.1263**	**0.0000**	**1.0000e-005**	**0.1305**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Site Preparation - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.7691	0.0000	1.7691	0.9092	0.0000	0.9092	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.2225	2.2711	1.6121	3.4300e-003		0.0978	0.0978		0.0900	0.0900	0.0000	301.2029	301.2029	0.0974	0.0000	303.6383
Total	**0.2225**	**2.2711**	**1.6121**	**3.4300e-003**	**1.7691**	**0.0978**	**1.8669**	**0.9092**	**0.0900**	**0.9992**	**0.0000**	**301.2029**	**301.2029**	**0.0974**	**0.0000**	**303.6383**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.2000e-003	2.6500e-003	0.0346	1.0000e-004	0.0130	6.0000e-005	0.0131	3.4600e-003	6.0000e-005	3.5100e-003	0.0000	9.8729	9.8729	2.6000e-004	2.6000e-004	9.9562
Total	**4.2000e-003**	**2.6500e-003**	**0.0346**	**1.0000e-004**	**0.0130**	**6.0000e-005**	**0.0131**	**3.4600e-003**	**6.0000e-005**	**3.5100e-003**	**0.0000**	**9.8729**	**9.8729**	**2.6000e-004**	**2.6000e-004**	**9.9562**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Site Preparation - 2025

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.5520	0.0000	0.5520	0.2837	0.0000	0.2837	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.2225	2.2711	1.6121	3.4300e-003		0.0978	0.0978		0.0900	0.0900	0.0000	301.2025	301.2025	0.0974	0.0000	303.6379
Total	**0.2225**	**2.2711**	**1.6121**	**3.4300e-003**	**0.5520**	**0.0978**	**0.6498**	**0.2837**	**0.0900**	**0.3737**	**0.0000**	**301.2025**	**301.2025**	**0.0974**	**0.0000**	**303.6379**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.2000e-003	2.6500e-003	0.0346	1.0000e-004	0.0130	6.0000e-005	0.0131	3.4600e-003	6.0000e-005	3.5100e-003	0.0000	9.8729	9.8729	2.6000e-004	2.6000e-004	9.9562
Total	**4.2000e-003**	**2.6500e-003**	**0.0346**	**1.0000e-004**	**0.0130**	**6.0000e-005**	**0.0131**	**3.4600e-003**	**6.0000e-005**	**3.5100e-003**	**0.0000**	**9.8729**	**9.8729**	**2.6000e-004**	**2.6000e-004**	**9.9562**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.9806	0.0000	0.9806	0.2123	0.0000	0.2123	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1161	1.1177	1.0532	2.4800e-003		0.0452	0.0452		0.0416	0.0416	0.0000	218.0249	218.0249	0.0705	0.0000	219.7877
Total	**0.1161**	**1.1177**	**1.0532**	**2.4800e-003**	**0.9806**	**0.0452**	**1.0258**	**0.2123**	**0.0416**	**0.2539**	**0.0000**	**218.0249**	**218.0249**	**0.0705**	**0.0000**	**219.7877**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.0800e-003	1.3100e-003	0.0171	5.0000e-005	6.4300e-003	3.0000e-005	6.4600e-003	1.7100e-003	3.0000e-005	1.7300e-003	0.0000	4.8755	4.8755	1.3000e-004	1.3000e-004	4.9166
Total	**2.0800e-003**	**1.3100e-003**	**0.0171**	**5.0000e-005**	**6.4300e-003**	**3.0000e-005**	**6.4600e-003**	**1.7100e-003**	**3.0000e-005**	**1.7300e-003**	**0.0000**	**4.8755**	**4.8755**	**1.3000e-004**	**1.3000e-004**	**4.9166**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2025

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.3059	0.0000	0.3059	0.0662	0.0000	0.0662	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1161	1.1177	1.0532	2.4800e-003		0.0452	0.0452		0.0416	0.0416	0.0000	218.0246	218.0246	0.0705	0.0000	219.7874
Total	**0.1161**	**1.1177**	**1.0532**	**2.4800e-003**	**0.3059**	**0.0452**	**0.3512**	**0.0662**	**0.0416**	**0.1079**	**0.0000**	**218.0246**	**218.0246**	**0.0705**	**0.0000**	**219.7874**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.0800e-003	1.3100e-003	0.0171	5.0000e-005	6.4300e-003	3.0000e-005	6.4600e-003	1.7100e-003	3.0000e-005	1.7300e-003	0.0000	4.8755	4.8755	1.3000e-004	1.3000e-004	4.9166
Total	**2.0800e-003**	**1.3100e-003**	**0.0171**	**5.0000e-005**	**6.4300e-003**	**3.0000e-005**	**6.4600e-003**	**1.7100e-003**	**3.0000e-005**	**1.7300e-003**	**0.0000**	**4.8755**	**4.8755**	**1.3000e-004**	**1.3000e-004**	**4.9166**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2026

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.5256	0.0000	1.5256	0.5119	0.0000	0.5119	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.3786	3.6466	3.4362	8.1000e-003		0.1476	0.1476		0.1358	0.1358	0.0000	711.3061	711.3061	0.2301	0.0000	717.0573
Total	**0.3786**	**3.6466**	**3.4362**	**8.1000e-003**	**1.5256**	**0.1476**	**1.6732**	**0.5119**	**0.1358**	**0.6476**	**0.0000**	**711.3061**	**711.3061**	**0.2301**	**0.0000**	**717.0573**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.3400e-003	3.8500e-003	0.0528	1.6000e-004	0.0210	9.0000e-005	0.0211	5.5700e-003	9.0000e-005	5.6600e-003	0.0000	15.5957	15.5957	3.8000e-004	3.9000e-004	15.7216
Total	**6.3400e-003**	**3.8500e-003**	**0.0528**	**1.6000e-004**	**0.0210**	**9.0000e-005**	**0.0211**	**5.5700e-003**	**9.0000e-005**	**5.6600e-003**	**0.0000**	**15.5957**	**15.5957**	**3.8000e-004**	**3.9000e-004**	**15.7216**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2026

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.4760	0.0000	0.4760	0.1597	0.0000	0.1597	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.3786	3.6465	3.4362	8.1000e-003		0.1476	0.1476		0.1358	0.1358	0.0000	711.3052	711.3052	0.2301	0.0000	717.0565
Total	**0.3786**	**3.6465**	**3.4362**	**8.1000e-003**	**0.4760**	**0.1476**	**0.6236**	**0.1597**	**0.1358**	**0.2955**	**0.0000**	**711.3052**	**711.3052**	**0.2301**	**0.0000**	**717.0565**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.3400e-003	3.8500e-003	0.0528	1.6000e-004	0.0210	9.0000e-005	0.0211	5.5700e-003	9.0000e-005	5.6600e-003	0.0000	15.5957	15.5957	3.8000e-004	3.9000e-004	15.7216
Total	**6.3400e-003**	**3.8500e-003**	**0.0528**	**1.6000e-004**	**0.0210**	**9.0000e-005**	**0.0211**	**5.5700e-003**	**9.0000e-005**	**5.6600e-003**	**0.0000**	**15.5957**	**15.5957**	**3.8000e-004**	**3.9000e-004**	**15.7216**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2027

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.1131	0.0000	1.1131	0.2851	0.0000	0.2851	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1799	1.7325	1.6325	3.8500e-003		0.0701	0.0701		0.0645	0.0645	0.0000	337.9385	337.9385	0.1093	0.0000	340.6709
Total	**0.1799**	**1.7325**	**1.6325**	**3.8500e-003**	**1.1131**	**0.0701**	**1.1832**	**0.2851**	**0.0645**	**0.3496**	**0.0000**	**337.9385**	**337.9385**	**0.1093**	**0.0000**	**340.6709**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.8200e-003	1.6600e-003	0.0237	8.0000e-005	9.9600e-003	4.0000e-005	0.0100	2.6500e-003	4.0000e-005	2.6900e-003	0.0000	7.2501	7.2501	1.6000e-004	1.8000e-004	7.3065
Total	**2.8200e-003**	**1.6600e-003**	**0.0237**	**8.0000e-005**	**9.9600e-003**	**4.0000e-005**	**0.0100**	**2.6500e-003**	**4.0000e-005**	**2.6900e-003**	**0.0000**	**7.2501**	**7.2501**	**1.6000e-004**	**1.8000e-004**	**7.3065**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2027

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.3473	0.0000	0.3473	0.0890	0.0000	0.0890	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1799	1.7325	1.6325	3.8500e-003		0.0701	0.0701		0.0645	0.0645	0.0000	337.9381	337.9381	0.1093	0.0000	340.6705
Total	**0.1799**	**1.7325**	**1.6325**	**3.8500e-003**	**0.3473**	**0.0701**	**0.4174**	**0.0890**	**0.0645**	**0.1535**	**0.0000**	**337.9381**	**337.9381**	**0.1093**	**0.0000**	**340.6705**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.8200e-003	1.6600e-003	0.0237	8.0000e-005	9.9600e-003	4.0000e-005	0.0100	2.6500e-003	4.0000e-005	2.6900e-003	0.0000	7.2501	7.2501	1.6000e-004	1.8000e-004	7.3065
Total	**2.8200e-003**	**1.6600e-003**	**0.0237**	**8.0000e-005**	**9.9600e-003**	**4.0000e-005**	**0.0100**	**2.6500e-003**	**4.0000e-005**	**2.6900e-003**	**0.0000**	**7.2501**	**7.2501**	**1.6000e-004**	**1.8000e-004**	**7.3065**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2027

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0937	0.8542	1.1018	1.8500e-003		0.0361	0.0361		0.0340	0.0340	0.0000	158.8648	158.8648	0.0373	0.0000	159.7984
Total	**0.0937**	**0.8542**	**1.1018**	**1.8500e-003**		**0.0361**	**0.0361**		**0.0340**	**0.0340**	**0.0000**	**158.8648**	**158.8648**	**0.0373**	**0.0000**	**159.7984**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0252	0.9878	0.3044	4.3500e-003	0.1496	6.5700e-003	0.1562	0.0432	6.2800e-003	0.0495	0.0000	416.0826	416.0826	1.4800e-003	0.0595	433.8418
Worker	0.1714	0.1009	1.4382	4.5900e-003	0.6054	2.5600e-003	0.6079	0.1608	2.3600e-003	0.1632	0.0000	440.5619	440.5619	9.9400e-003	0.0107	443.9898
Total	**0.1966**	**1.0887**	**1.7426**	**8.9400e-003**	**0.7550**	**9.1300e-003**	**0.7641**	**0.2041**	**8.6400e-003**	**0.2127**	**0.0000**	**856.6446**	**856.6446**	**0.0114**	**0.0701**	**877.8316**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2027

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0937	0.8542	1.1018	1.8500e-003		0.0361	0.0361		0.0340	0.0340	0.0000	158.8646	158.8646	0.0373	0.0000	159.7982
Total	**0.0937**	**0.8542**	**1.1018**	**1.8500e-003**		**0.0361**	**0.0361**		**0.0340**	**0.0340**	**0.0000**	**158.8646**	**158.8646**	**0.0373**	**0.0000**	**159.7982**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0252	0.9878	0.3044	4.3500e-003	0.1496	6.5700e-003	0.1562	0.0432	6.2800e-003	0.0495	0.0000	416.0826	416.0826	1.4800e-003	0.0595	433.8418
Worker	0.1714	0.1009	1.4382	4.5900e-003	0.6054	2.5600e-003	0.6079	0.1608	2.3600e-003	0.1632	0.0000	440.5619	440.5619	9.9400e-003	0.0107	443.9898
Total	**0.1966**	**1.0887**	**1.7426**	**8.9400e-003**	**0.7550**	**9.1300e-003**	**0.7641**	**0.2041**	**8.6400e-003**	**0.2127**	**0.0000**	**856.6446**	**856.6446**	**0.0114**	**0.0701**	**877.8316**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2028

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1778	1.6211	2.0910	3.5000e-003		0.0686	0.0686		0.0645	0.0645	0.0000	301.4953	301.4953	0.0709	0.0000	303.2671
Total	**0.1778**	**1.6211**	**2.0910**	**3.5000e-003**		**0.0686**	**0.0686**		**0.0645**	**0.0645**	**0.0000**	**301.4953**	**301.4953**	**0.0709**	**0.0000**	**303.2671**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0472	1.8639	0.5708	8.1100e-003	0.2840	0.0124	0.2964	0.0820	0.0118	0.0938	0.0000	775.1768	775.1768	2.7600e-003	0.1105	808.1671
Worker	0.3052	0.1754	2.5932	8.4700e-003	1.1488	4.5500e-003	1.1534	0.3052	4.1800e-003	0.3094	0.0000	819.8847	819.8847	0.0173	0.0193	826.0641
Total	**0.3524**	**2.0393**	**3.1640**	**0.0166**	**1.4328**	**0.0169**	**1.4498**	**0.3873**	**0.0160**	**0.4033**	**0.0000**	**1,595.0615**	**1,595.0615**	**0.0201**	**0.1298**	**1,634.2311**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2028

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1778	1.6211	2.0910	3.5000e-003		0.0686	0.0686		0.0645	0.0645	0.0000	301.4949	301.4949	0.0709	0.0000	303.2667
Total	**0.1778**	**1.6211**	**2.0910**	**3.5000e-003**		**0.0686**	**0.0686**		**0.0645**	**0.0645**	**0.0000**	**301.4949**	**301.4949**	**0.0709**	**0.0000**	**303.2667**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0472	1.8639	0.5708	8.1100e-003	0.2840	0.0124	0.2964	0.0820	0.0118	0.0938	0.0000	775.1768	775.1768	2.7600e-003	0.1105	808.1671
Worker	0.3052	0.1754	2.5932	8.4700e-003	1.1488	4.5500e-003	1.1534	0.3052	4.1800e-003	0.3094	0.0000	819.8847	819.8847	0.0173	0.0193	826.0641
Total	**0.3524**	**2.0393**	**3.1640**	**0.0166**	**1.4328**	**0.0169**	**1.4498**	**0.3873**	**0.0160**	**0.4033**	**0.0000**	**1,595.0615**	**1,595.0615**	**0.0201**	**0.1298**	**1,634.2311**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2029

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1785	1.6273	2.0991	3.5200e-003		0.0689	0.0689		0.0648	0.0648	0.0000	302.6549	302.6549	0.0711	0.0000	304.4335
Total	**0.1785**	**1.6273**	**2.0991**	**3.5200e-003**		**0.0689**	**0.0689**		**0.0648**	**0.0648**	**0.0000**	**302.6549**	**302.6549**	**0.0711**	**0.0000**	**304.4335**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0468	1.8595	0.5666	7.9900e-003	0.2851	0.0123	0.2974	0.0823	0.0118	0.0941	0.0000	764.1285	764.1285	2.7300e-003	0.1086	796.5571
Worker	0.2876	0.1624	2.4849	8.3000e-003	1.1533	4.2600e-003	1.1575	0.3064	3.9200e-003	0.3103	0.0000	808.5466	808.5466	0.0160	0.0185	814.4732
Total	**0.3343**	**2.0218**	**3.0515**	**0.0163**	**1.4384**	**0.0166**	**1.4549**	**0.3887**	**0.0157**	**0.4045**	**0.0000**	**1,572.6751**	**1,572.6751**	**0.0188**	**0.1271**	**1,611.0302**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2029

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1784	1.6273	2.0991	3.5200e-003		0.0689	0.0689		0.0648	0.0648	0.0000	302.6545	302.6545	0.0711	0.0000	304.4331
Total	**0.1784**	**1.6273**	**2.0991**	**3.5200e-003**		**0.0689**	**0.0689**		**0.0648**	**0.0648**	**0.0000**	**302.6545**	**302.6545**	**0.0711**	**0.0000**	**304.4331**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0468	1.8595	0.5666	7.9900e-003	0.2851	0.0123	0.2974	0.0823	0.0118	0.0941	0.0000	764.1285	764.1285	2.7300e-003	0.1086	796.5571
Worker	0.2876	0.1624	2.4849	8.3000e-003	1.1533	4.2600e-003	1.1575	0.3064	3.9200e-003	0.3103	0.0000	808.5466	808.5466	0.0160	0.0185	814.4732
Total	**0.3343**	**2.0218**	**3.0515**	**0.0163**	**1.4384**	**0.0166**	**1.4549**	**0.3887**	**0.0157**	**0.4045**	**0.0000**	**1,572.6751**	**1,572.6751**	**0.0188**	**0.1271**	**1,611.0302**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2030

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1708	1.0355	2.1085	4.0400e-003		0.0193	0.0193		0.0193	0.0193	0.0000	343.0336	343.0336	0.0138	0.0000	343.3777
Total	**0.1708**	**1.0355**	**2.1085**	**4.0400e-003**		**0.0193**	**0.0193**		**0.0193**	**0.0193**	**0.0000**	**343.0336**	**343.0336**	**0.0138**	**0.0000**	**343.3777**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0463	1.8505	0.5622	7.8600e-003	0.2851	0.0122	0.2973	0.0823	0.0117	0.0940	0.0000	751.3525	751.3525	2.6900e-003	0.1065	783.1547
Worker	0.2700	0.1507	2.3843	8.1100e-003	1.1533	3.9900e-003	1.1572	0.3064	3.6700e-003	0.3101	0.0000	795.8635	795.8635	0.0148	0.0179	801.5563
Total	**0.3163**	**2.0012**	**2.9465**	**0.0160**	**1.4384**	**0.0162**	**1.4546**	**0.3887**	**0.0154**	**0.4041**	**0.0000**	**1,547.2160**	**1,547.2160**	**0.0175**	**0.1244**	**1,584.7110**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2030

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1708	1.0355	2.1085	4.0400e-003		0.0193	0.0193		0.0193	0.0193	0.0000	343.0332	343.0332	0.0138	0.0000	343.3773
Total	**0.1708**	**1.0355**	**2.1085**	**4.0400e-003**		**0.0193**	**0.0193**		**0.0193**	**0.0193**	**0.0000**	**343.0332**	**343.0332**	**0.0138**	**0.0000**	**343.3773**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0463	1.8505	0.5622	7.8600e-003	0.2851	0.0122	0.2973	0.0823	0.0117	0.0940	0.0000	751.3525	751.3525	2.6900e-003	0.1065	783.1547
Worker	0.2700	0.1507	2.3843	8.1100e-003	1.1533	3.9900e-003	1.1572	0.3064	3.6700e-003	0.3101	0.0000	795.8635	795.8635	0.0148	0.0179	801.5563
Total	**0.3163**	**2.0012**	**2.9465**	**0.0160**	**1.4384**	**0.0162**	**1.4546**	**0.3887**	**0.0154**	**0.4041**	**0.0000**	**1,547.2160**	**1,547.2160**	**0.0175**	**0.1244**	**1,584.7110**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2031

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1708	1.0355	2.1085	4.0400e-003		0.0193	0.0193		0.0193	0.0193	0.0000	343.0336	343.0336	0.0138	0.0000	343.3777
Total	**0.1708**	**1.0355**	**2.1085**	**4.0400e-003**		**0.0193**	**0.0193**		**0.0193**	**0.0193**	**0.0000**	**343.0336**	**343.0336**	**0.0138**	**0.0000**	**343.3777**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0459	1.8446	0.5588	7.7400e-003	0.2851	0.0122	0.2973	0.0823	0.0116	0.0940	0.0000	739.9425	739.9425	2.6700e-003	0.1047	771.2017
Worker	0.2528	0.1401	2.2940	7.9500e-003	1.1533	3.7300e-003	1.1570	0.3064	3.4300e-003	0.3098	0.0000	784.5853	784.5853	0.0138	0.0173	790.0723
Total	**0.2987**	**1.9847**	**2.8528**	**0.0157**	**1.4384**	**0.0159**	**1.4542**	**0.3887**	**0.0151**	**0.4038**	**0.0000**	**1,524.5278**	**1,524.5278**	**0.0164**	**0.1219**	**1,561.2740**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2031

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1708	1.0355	2.1085	4.0400e-003		0.0193	0.0193		0.0193	0.0193	0.0000	343.0332	343.0332	0.0138	0.0000	343.3773
Total	**0.1708**	**1.0355**	**2.1085**	**4.0400e-003**		**0.0193**	**0.0193**		**0.0193**	**0.0193**	**0.0000**	**343.0332**	**343.0332**	**0.0138**	**0.0000**	**343.3773**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0459	1.8446	0.5588	7.7400e-003	0.2851	0.0122	0.2973	0.0823	0.0116	0.0940	0.0000	739.9425	739.9425	2.6700e-003	0.1047	771.2017
Worker	0.2528	0.1401	2.2940	7.9500e-003	1.1533	3.7300e-003	1.1570	0.3064	3.4300e-003	0.3098	0.0000	784.5853	784.5853	0.0138	0.0173	790.0723
Total	**0.2987**	**1.9847**	**2.8528**	**0.0157**	**1.4384**	**0.0159**	**1.4542**	**0.3887**	**0.0151**	**0.4038**	**0.0000**	**1,524.5278**	**1,524.5278**	**0.0164**	**0.1219**	**1,561.2740**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2032

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1715	1.0394	2.1166	4.0600e-003		0.0194	0.0194		0.0194	0.0194	0.0000	344.3479	344.3479	0.0138	0.0000	344.6933
Total	**0.1715**	**1.0394**	**2.1166**	**4.0600e-003**		**0.0194**	**0.0194**		**0.0194**	**0.0194**	**0.0000**	**344.3479**	**344.3479**	**0.0138**	**0.0000**	**344.6933**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0458	1.8461	0.5596	7.6700e-003	0.2862	0.0122	0.2983	0.0826	0.0116	0.0943	0.0000	732.5702	732.5702	2.6600e-003	0.1035	763.4675
Worker	0.2384	0.1319	2.2256	7.8300e-003	1.1577	3.5000e-003	1.1612	0.3076	3.2200e-003	0.3108	0.0000	777.6913	777.6913	0.0129	0.0168	783.0297
Total	**0.2843**	**1.9781**	**2.7852**	**0.0155**	**1.4439**	**0.0157**	**1.4595**	**0.3902**	**0.0148**	**0.4051**	**0.0000**	**1,510.2614**	**1,510.2614**	**0.0155**	**0.1203**	**1,546.4972**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2032

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1715	1.0394	2.1166	4.0600e-003		0.0194	0.0194		0.0194	0.0194	0.0000	344.3475	344.3475	0.0138	0.0000	344.6929
Total	**0.1715**	**1.0394**	**2.1166**	**4.0600e-003**		**0.0194**	**0.0194**		**0.0194**	**0.0194**	**0.0000**	**344.3475**	**344.3475**	**0.0138**	**0.0000**	**344.6929**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0458	1.8461	0.5596	7.6700e-003	0.2862	0.0122	0.2983	0.0826	0.0116	0.0943	0.0000	732.5702	732.5702	2.6600e-003	0.1035	763.4675
Worker	0.2384	0.1319	2.2256	7.8300e-003	1.1577	3.5000e-003	1.1612	0.3076	3.2200e-003	0.3108	0.0000	777.6913	777.6913	0.0129	0.0168	783.0297
Total	**0.2843**	**1.9781**	**2.7852**	**0.0155**	**1.4439**	**0.0157**	**1.4595**	**0.3902**	**0.0148**	**0.4051**	**0.0000**	**1,510.2614**	**1,510.2614**	**0.0155**	**0.1203**	**1,546.4972**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2033

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1702	1.0315	2.1004	4.0200e-003		0.0193	0.0193		0.0193	0.0193	0.0000	341.7193	341.7193	0.0137	0.0000	342.0621
Total	**0.1702**	**1.0315**	**2.1004**	**4.0200e-003**		**0.0193**	**0.0193**		**0.0193**	**0.0193**	**0.0000**	**341.7193**	**341.7193**	**0.0137**	**0.0000**	**342.0621**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0454	1.8271	0.5555	7.5100e-003	0.2840	0.0120	0.2960	0.0820	0.0115	0.0935	0.0000	717.9216	717.9216	2.6400e-003	0.1012	748.1572
Worker	0.2228	0.1236	2.1414	7.6400e-003	1.1488	3.2600e-003	1.1521	0.3052	3.0000e-003	0.3082	0.0000	763.0936	763.0936	0.0120	0.0163	768.2494
Total	**0.2682**	**1.9508**	**2.6969**	**0.0152**	**1.4328**	**0.0153**	**1.4481**	**0.3873**	**0.0145**	**0.4017**	**0.0000**	**1,481.0152**	**1,481.0152**	**0.0146**	**0.1175**	**1,516.4066**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2033

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1702	1.0315	2.1004	4.0200e-003		0.0193	0.0193		0.0193	0.0193	0.0000	341.7189	341.7189	0.0137	0.0000	342.0617
Total	**0.1702**	**1.0315**	**2.1004**	**4.0200e-003**		**0.0193**	**0.0193**		**0.0193**	**0.0193**	**0.0000**	**341.7189**	**341.7189**	**0.0137**	**0.0000**	**342.0617**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0454	1.8271	0.5555	7.5100e-003	0.2840	0.0120	0.2960	0.0820	0.0115	0.0935	0.0000	717.9216	717.9216	2.6400e-003	0.1012	748.1572
Worker	0.2228	0.1236	2.1414	7.6400e-003	1.1488	3.2600e-003	1.1521	0.3052	3.0000e-003	0.3082	0.0000	763.0936	763.0936	0.0120	0.0163	768.2494
Total	**0.2682**	**1.9508**	**2.6969**	**0.0152**	**1.4328**	**0.0153**	**1.4481**	**0.3873**	**0.0145**	**0.4017**	**0.0000**	**1,481.0152**	**1,481.0152**	**0.0146**	**0.1175**	**1,516.4066**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2034

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1702	1.0315	2.1004	4.0200e-003		0.0193	0.0193		0.0193	0.0193	0.0000	341.7193	341.7193	0.0137	0.0000	342.0621
Total	**0.1702**	**1.0315**	**2.1004**	**4.0200e-003**		**0.0193**	**0.0193**		**0.0193**	**0.0193**	**0.0000**	**341.7193**	**341.7193**	**0.0137**	**0.0000**	**342.0621**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0453	1.8216	0.5560	7.4300e-003	0.2840	0.0119	0.2959	0.0820	0.0114	0.0934	0.0000	709.7180	709.7180	2.6400e-003	0.0999	739.5669
Worker	0.2107	0.1178	2.0824	7.5300e-003	1.1488	3.0600e-003	1.1519	0.3052	2.8200e-003	0.3081	0.0000	755.5104	755.5104	0.0112	0.0160	760.5514
Total	**0.2560**	**1.9394**	**2.6384**	**0.0150**	**1.4328**	**0.0150**	**1.4478**	**0.3873**	**0.0142**	**0.4015**	**0.0000**	**1,465.2284**	**1,465.2284**	**0.0139**	**0.1159**	**1,500.1183**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2034

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1702	1.0315	2.1004	4.0200e-003		0.0193	0.0193		0.0193	0.0193	0.0000	341.7189	341.7189	0.0137	0.0000	342.0617
Total	**0.1702**	**1.0315**	**2.1004**	**4.0200e-003**		**0.0193**	**0.0193**		**0.0193**	**0.0193**	**0.0000**	**341.7189**	**341.7189**	**0.0137**	**0.0000**	**342.0617**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0453	1.8216	0.5560	7.4300e-003	0.2840	0.0119	0.2959	0.0820	0.0114	0.0934	0.0000	709.7180	709.7180	2.6400e-003	0.0999	739.5669
Worker	0.2107	0.1178	2.0824	7.5300e-003	1.1488	3.0600e-003	1.1519	0.3052	2.8200e-003	0.3081	0.0000	755.5104	755.5104	0.0112	0.0160	760.5514
Total	**0.2560**	**1.9394**	**2.6384**	**0.0150**	**1.4328**	**0.0150**	**1.4478**	**0.3873**	**0.0142**	**0.4015**	**0.0000**	**1,465.2284**	**1,465.2284**	**0.0139**	**0.1159**	**1,500.1183**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2035

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1588	0.9346	2.1034	4.0400e-003		0.0118	0.0118		0.0118	0.0118	0.0000	343.0336	343.0336	0.0128	0.0000	343.3530
Total	**0.1588**	**0.9346**	**2.1034**	**4.0400e-003**		**0.0118**	**0.0118**		**0.0118**	**0.0118**	**0.0000**	**343.0336**	**343.0336**	**0.0128**	**0.0000**	**343.3530**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0455	1.8221	0.5587	7.3800e-003	0.2851	0.0119	0.2970	0.0823	0.0114	0.0937	0.0000	705.0608	705.0608	2.6500e-003	0.0992	734.6779
Worker	0.2006	0.1137	2.0400	7.4600e-003	1.1533	2.8900e-003	1.1562	0.3064	2.6600e-003	0.3091	0.0000	751.8680	751.8680	0.0106	0.0158	756.8365
Total	**0.2461**	**1.9358**	**2.5987**	**0.0148**	**1.4384**	**0.0148**	**1.4532**	**0.3887**	**0.0140**	**0.4028**	**0.0000**	**1,456.9288**	**1,456.9288**	**0.0133**	**0.1149**	**1,491.5144**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2035

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1588	0.9346	2.1034	4.0400e-003		0.0118	0.0118		0.0118	0.0118	0.0000	343.0332	343.0332	0.0128	0.0000	343.3526
Total	**0.1588**	**0.9346**	**2.1034**	**4.0400e-003**		**0.0118**	**0.0118**		**0.0118**	**0.0118**	**0.0000**	**343.0332**	**343.0332**	**0.0128**	**0.0000**	**343.3526**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0455	1.8221	0.5587	7.3800e-003	0.2851	0.0119	0.2970	0.0823	0.0114	0.0937	0.0000	705.0608	705.0608	2.6500e-003	0.0992	734.6779
Worker	0.2006	0.1137	2.0400	7.4600e-003	1.1533	2.8900e-003	1.1562	0.3064	2.6600e-003	0.3091	0.0000	751.8680	751.8680	0.0106	0.0158	756.8365
Total	**0.2461**	**1.9358**	**2.5987**	**0.0148**	**1.4384**	**0.0148**	**1.4532**	**0.3887**	**0.0140**	**0.4028**	**0.0000**	**1,456.9288**	**1,456.9288**	**0.0133**	**0.1149**	**1,491.5144**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2036

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1594	0.9381	2.1114	4.0600e-003		0.0118	0.0118		0.0118	0.0118	0.0000	344.3479	344.3479	0.0128	0.0000	344.6686
Total	**0.1594**	**0.9381**	**2.1114**	**4.0600e-003**		**0.0118**	**0.0118**		**0.0118**	**0.0118**	**0.0000**	**344.3479**	**344.3479**	**0.0128**	**0.0000**	**344.6686**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0457	1.8290	0.5609	7.4100e-003	0.2862	0.0120	0.2981	0.0827	0.0114	0.0941	0.0000	707.7622	707.7622	2.6600e-003	0.0995	737.4927
Worker	0.2014	0.1142	2.0478	7.4900e-003	1.1577	2.9100e-003	1.1606	0.3076	2.6700e-003	0.3103	0.0000	754.7488	754.7488	0.0107	0.0158	759.7363
Total	**0.2470**	**1.9432**	**2.6086**	**0.0149**	**1.4439**	**0.0149**	**1.4587**	**0.3902**	**0.0141**	**0.4043**	**0.0000**	**1,462.5109**	**1,462.5109**	**0.0133**	**0.1154**	**1,497.2290**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2036

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1594	0.9381	2.1114	4.0600e-003		0.0118	0.0118		0.0118	0.0118	0.0000	344.3475	344.3475	0.0128	0.0000	344.6682
Total	**0.1594**	**0.9381**	**2.1114**	**4.0600e-003**		**0.0118**	**0.0118**		**0.0118**	**0.0118**	**0.0000**	**344.3475**	**344.3475**	**0.0128**	**0.0000**	**344.6682**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0457	1.8290	0.5609	7.4100e-003	0.2862	0.0120	0.2981	0.0827	0.0114	0.0941	0.0000	707.7622	707.7622	2.6600e-003	0.0995	737.4927
Worker	0.2014	0.1142	2.0478	7.4900e-003	1.1577	2.9100e-003	1.1606	0.3076	2.6700e-003	0.3103	0.0000	754.7488	754.7488	0.0107	0.0158	759.7363
Total	**0.2470**	**1.9432**	**2.6086**	**0.0149**	**1.4439**	**0.0149**	**1.4587**	**0.3902**	**0.0141**	**0.4043**	**0.0000**	**1,462.5109**	**1,462.5109**	**0.0133**	**0.1154**	**1,497.2290**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2037

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1588	0.9346	2.1034	4.0400e-003		0.0118	0.0118		0.0118	0.0118	0.0000	343.0336	343.0336	0.0128	0.0000	343.3530
Total	**0.1588**	**0.9346**	**2.1034**	**4.0400e-003**		**0.0118**	**0.0118**		**0.0118**	**0.0118**	**0.0000**	**343.0336**	**343.0336**	**0.0128**	**0.0000**	**343.3530**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0455	1.8221	0.5587	7.3800e-003	0.2851	0.0119	0.2970	0.0823	0.0114	0.0937	0.0000	705.0608	705.0608	2.6500e-003	0.0992	734.6779
Worker	0.2006	0.1137	2.0400	7.4600e-003	1.1533	2.8900e-003	1.1562	0.3064	2.6600e-003	0.3091	0.0000	751.8680	751.8680	0.0106	0.0158	756.8365
Total	**0.2461**	**1.9358**	**2.5987**	**0.0148**	**1.4384**	**0.0148**	**1.4532**	**0.3887**	**0.0140**	**0.4028**	**0.0000**	**1,456.9288**	**1,456.9288**	**0.0133**	**0.1149**	**1,491.5144**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2037

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1588	0.9346	2.1034	4.0400e-003		0.0118	0.0118		0.0118	0.0118	0.0000	343.0332	343.0332	0.0128	0.0000	343.3526
Total	**0.1588**	**0.9346**	**2.1034**	**4.0400e-003**		**0.0118**	**0.0118**		**0.0118**	**0.0118**	**0.0000**	**343.0332**	**343.0332**	**0.0128**	**0.0000**	**343.3526**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0455	1.8221	0.5587	7.3800e-003	0.2851	0.0119	0.2970	0.0823	0.0114	0.0937	0.0000	705.0608	705.0608	2.6500e-003	0.0992	734.6779
Worker	0.2006	0.1137	2.0400	7.4600e-003	1.1533	2.8900e-003	1.1562	0.3064	2.6600e-003	0.3091	0.0000	751.8680	751.8680	0.0106	0.0158	756.8365
Total	**0.2461**	**1.9358**	**2.5987**	**0.0148**	**1.4384**	**0.0148**	**1.4532**	**0.3887**	**0.0140**	**0.4028**	**0.0000**	**1,456.9288**	**1,456.9288**	**0.0133**	**0.1149**	**1,491.5144**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2038

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1588	0.9346	2.1034	4.0400e-003		0.0118	0.0118		0.0118	0.0118	0.0000	343.0336	343.0336	0.0128	0.0000	343.3530
Total	**0.1588**	**0.9346**	**2.1034**	**4.0400e-003**		**0.0118**	**0.0118**		**0.0118**	**0.0118**	**0.0000**	**343.0336**	**343.0336**	**0.0128**	**0.0000**	**343.3530**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0455	1.8221	0.5587	7.3800e-003	0.2851	0.0119	0.2970	0.0823	0.0114	0.0937	0.0000	705.0608	705.0608	2.6500e-003	0.0992	734.6779
Worker	0.2006	0.1137	2.0400	7.4600e-003	1.1533	2.8900e-003	1.1562	0.3064	2.6600e-003	0.3091	0.0000	751.8680	751.8680	0.0106	0.0158	756.8365
Total	**0.2461**	**1.9358**	**2.5987**	**0.0148**	**1.4384**	**0.0148**	**1.4532**	**0.3887**	**0.0140**	**0.4028**	**0.0000**	**1,456.9288**	**1,456.9288**	**0.0133**	**0.1149**	**1,491.5144**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2038

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1588	0.9346	2.1034	4.0400e-003		0.0118	0.0118		0.0118	0.0118	0.0000	343.0332	343.0332	0.0128	0.0000	343.3526
Total	**0.1588**	**0.9346**	**2.1034**	**4.0400e-003**		**0.0118**	**0.0118**		**0.0118**	**0.0118**	**0.0000**	**343.0332**	**343.0332**	**0.0128**	**0.0000**	**343.3526**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0455	1.8221	0.5587	7.3800e-003	0.2851	0.0119	0.2970	0.0823	0.0114	0.0937	0.0000	705.0608	705.0608	2.6500e-003	0.0992	734.6779
Worker	0.2006	0.1137	2.0400	7.4600e-003	1.1533	2.8900e-003	1.1562	0.3064	2.6600e-003	0.3091	0.0000	751.8680	751.8680	0.0106	0.0158	756.8365
Total	**0.2461**	**1.9358**	**2.5987**	**0.0148**	**1.4384**	**0.0148**	**1.4532**	**0.3887**	**0.0140**	**0.4028**	**0.0000**	**1,456.9288**	**1,456.9288**	**0.0133**	**0.1149**	**1,491.5144**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2039

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1582	0.9310	2.0953	4.0200e-003		0.0118	0.0118		0.0118	0.0118	0.0000	341.7193	341.7193	0.0127	0.0000	342.0375
Total	**0.1582**	**0.9310**	**2.0953**	**4.0200e-003**		**0.0118**	**0.0118**		**0.0118**	**0.0118**	**0.0000**	**341.7193**	**341.7193**	**0.0127**	**0.0000**	**342.0375**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0453	1.8151	0.5566	7.3500e-003	0.2840	0.0119	0.2959	0.0820	0.0113	0.0934	0.0000	702.3594	702.3594	2.6400e-003	0.0988	731.8630
Worker	0.1998	0.1133	2.0321	7.4300e-003	1.1488	2.8800e-003	1.1517	0.3052	2.6500e-003	0.3079	0.0000	748.9873	748.9873	0.0106	0.0157	753.9367
Total	**0.2451**	**1.9284**	**2.5887**	**0.0148**	**1.4329**	**0.0147**	**1.4476**	**0.3873**	**0.0140**	**0.4012**	**0.0000**	**1,451.3467**	**1,451.3467**	**0.0132**	**0.1145**	**1,485.7998**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2039

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1582	0.9310	2.0953	4.0200e-003		0.0118	0.0118		0.0118	0.0118	0.0000	341.7189	341.7189	0.0127	0.0000	342.0371
Total	**0.1582**	**0.9310**	**2.0953**	**4.0200e-003**		**0.0118**	**0.0118**		**0.0118**	**0.0118**	**0.0000**	**341.7189**	**341.7189**	**0.0127**	**0.0000**	**342.0371**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0453	1.8151	0.5566	7.3500e-003	0.2840	0.0119	0.2959	0.0820	0.0113	0.0934	0.0000	702.3594	702.3594	2.6400e-003	0.0988	731.8630
Worker	0.1998	0.1133	2.0321	7.4300e-003	1.1488	2.8800e-003	1.1517	0.3052	2.6500e-003	0.3079	0.0000	748.9873	748.9873	0.0106	0.0157	753.9367
Total	**0.2451**	**1.9284**	**2.5887**	**0.0148**	**1.4329**	**0.0147**	**1.4476**	**0.3873**	**0.0140**	**0.4012**	**0.0000**	**1,451.3467**	**1,451.3467**	**0.0132**	**0.1145**	**1,485.7998**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2040

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1562	0.8992	2.1035	4.0400e-003		9.6200e-003	9.6200e-003		9.6200e-003	9.6200e-003	0.0000	343.0337	343.0337	0.0123	0.0000	343.3419
Total	**0.1562**	**0.8992**	**2.1035**	**4.0400e-003**		**9.6200e-003**	**9.6200e-003**		**9.6200e-003**	**9.6200e-003**	**0.0000**	**343.0337**	**343.0337**	**0.0123**	**0.0000**	**343.3419**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0457	1.8033	0.5638	7.1100e-003	0.2851	0.0117	0.2968	0.0823	0.0112	0.0935	0.0000	678.9400	678.9400	2.6700e-003	0.0952	707.3833
Worker	0.1611	0.1002	1.8704	7.1400e-003	1.1533	2.2800e-003	1.1555	0.3064	2.1000e-003	0.3085	0.0000	730.5112	730.5112	8.4500e-003	0.0151	735.2100
Total	**0.2068**	**1.9035**	**2.4342**	**0.0143**	**1.4384**	**0.0140**	**1.4523**	**0.3887**	**0.0133**	**0.4020**	**0.0000**	**1,409.4512**	**1,409.4512**	**0.0111**	**0.1103**	**1,442.5933**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2040

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1562	0.8992	2.1035	4.0400e-003		9.6200e-003	9.6200e-003		9.6200e-003	9.6200e-003	0.0000	343.0333	343.0333	0.0123	0.0000	343.3415
Total	**0.1562**	**0.8992**	**2.1035**	**4.0400e-003**		**9.6200e-003**	**9.6200e-003**		**9.6200e-003**	**9.6200e-003**	**0.0000**	**343.0333**	**343.0333**	**0.0123**	**0.0000**	**343.3415**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0457	1.8033	0.5638	7.1100e-003	0.2851	0.0117	0.2968	0.0823	0.0112	0.0935	0.0000	678.9400	678.9400	2.6700e-003	0.0952	707.3833
Worker	0.1611	0.1002	1.8704	7.1400e-003	1.1533	2.2800e-003	1.1555	0.3064	2.1000e-003	0.3085	0.0000	730.5112	730.5112	8.4500e-003	0.0151	735.2100
Total	**0.2068**	**1.9035**	**2.4342**	**0.0143**	**1.4384**	**0.0140**	**1.4523**	**0.3887**	**0.0133**	**0.4020**	**0.0000**	**1,409.4512**	**1,409.4512**	**0.0111**	**0.1103**	**1,442.5933**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2041

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1562	0.8992	2.1035	4.0400e-003		9.6200e-003	9.6200e-003		9.6200e-003	9.6200e-003	0.0000	343.0337	343.0337	0.0123	0.0000	343.3419
Total	**0.1562**	**0.8992**	**2.1035**	**4.0400e-003**		**9.6200e-003**	**9.6200e-003**		**9.6200e-003**	**9.6200e-003**	**0.0000**	**343.0337**	**343.0337**	**0.0123**	**0.0000**	**343.3419**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0457	1.8033	0.5638	7.1100e-003	0.2851	0.0117	0.2968	0.0823	0.0112	0.0935	0.0000	678.9400	678.9400	2.6700e-003	0.0952	707.3833
Worker	0.1611	0.1002	1.8704	7.1400e-003	1.1533	2.2800e-003	1.1555	0.3064	2.1000e-003	0.3085	0.0000	730.5112	730.5112	8.4500e-003	0.0151	735.2100
Total	**0.2068**	**1.9035**	**2.4342**	**0.0143**	**1.4384**	**0.0140**	**1.4523**	**0.3887**	**0.0133**	**0.4020**	**0.0000**	**1,409.4512**	**1,409.4512**	**0.0111**	**0.1103**	**1,442.5933**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2041

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1562	0.8992	2.1035	4.0400e-003		9.6200e-003	9.6200e-003		9.6200e-003	9.6200e-003	0.0000	343.0333	343.0333	0.0123	0.0000	343.3415
Total	**0.1562**	**0.8992**	**2.1035**	**4.0400e-003**		**9.6200e-003**	**9.6200e-003**		**9.6200e-003**	**9.6200e-003**	**0.0000**	**343.0333**	**343.0333**	**0.0123**	**0.0000**	**343.3415**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0457	1.8033	0.5638	7.1100e-003	0.2851	0.0117	0.2968	0.0823	0.0112	0.0935	0.0000	678.9400	678.9400	2.6700e-003	0.0952	707.3833
Worker	0.1611	0.1002	1.8704	7.1400e-003	1.1533	2.2800e-003	1.1555	0.3064	2.1000e-003	0.3085	0.0000	730.5112	730.5112	8.4500e-003	0.0151	735.2100
Total	**0.2068**	**1.9035**	**2.4342**	**0.0143**	**1.4384**	**0.0140**	**1.4523**	**0.3887**	**0.0133**	**0.4020**	**0.0000**	**1,409.4512**	**1,409.4512**	**0.0111**	**0.1103**	**1,442.5933**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2042

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1562	0.8992	2.1035	4.0400e-003		9.6200e-003	9.6200e-003		9.6200e-003	9.6200e-003	0.0000	343.0337	343.0337	0.0123	0.0000	343.3419
Total	**0.1562**	**0.8992**	**2.1035**	**4.0400e-003**		**9.6200e-003**	**9.6200e-003**		**9.6200e-003**	**9.6200e-003**	**0.0000**	**343.0337**	**343.0337**	**0.0123**	**0.0000**	**343.3419**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0457	1.8033	0.5638	7.1100e-003	0.2851	0.0117	0.2968	0.0823	0.0112	0.0935	0.0000	678.9400	678.9400	2.6700e-003	0.0952	707.3833
Worker	0.1611	0.1002	1.8704	7.1400e-003	1.1533	2.2800e-003	1.1555	0.3064	2.1000e-003	0.3085	0.0000	730.5112	730.5112	8.4500e-003	0.0151	735.2100
Total	**0.2068**	**1.9035**	**2.4342**	**0.0143**	**1.4384**	**0.0140**	**1.4523**	**0.3887**	**0.0133**	**0.4020**	**0.0000**	**1,409.4512**	**1,409.4512**	**0.0111**	**0.1103**	**1,442.5933**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2042

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1562	0.8992	2.1035	4.0400e-003		9.6200e-003	9.6200e-003		9.6200e-003	9.6200e-003	0.0000	343.0333	343.0333	0.0123	0.0000	343.3415
Total	**0.1562**	**0.8992**	**2.1035**	**4.0400e-003**		**9.6200e-003**	**9.6200e-003**		**9.6200e-003**	**9.6200e-003**	**0.0000**	**343.0333**	**343.0333**	**0.0123**	**0.0000**	**343.3415**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0457	1.8033	0.5638	7.1100e-003	0.2851	0.0117	0.2968	0.0823	0.0112	0.0935	0.0000	678.9400	678.9400	2.6700e-003	0.0952	707.3833
Worker	0.1611	0.1002	1.8704	7.1400e-003	1.1533	2.2800e-003	1.1555	0.3064	2.1000e-003	0.3085	0.0000	730.5112	730.5112	8.4500e-003	0.0151	735.2100
Total	**0.2068**	**1.9035**	**2.4342**	**0.0143**	**1.4384**	**0.0140**	**1.4523**	**0.3887**	**0.0133**	**0.4020**	**0.0000**	**1,409.4512**	**1,409.4512**	**0.0111**	**0.1103**	**1,442.5933**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2043

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1562	0.8992	2.1035	4.0400e-003		9.6200e-003	9.6200e-003		9.6200e-003	9.6200e-003	0.0000	343.0337	343.0337	0.0123	0.0000	343.3419
Total	**0.1562**	**0.8992**	**2.1035**	**4.0400e-003**		**9.6200e-003**	**9.6200e-003**		**9.6200e-003**	**9.6200e-003**	**0.0000**	**343.0337**	**343.0337**	**0.0123**	**0.0000**	**343.3419**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0457	1.8033	0.5638	7.1100e-003	0.2851	0.0117	0.2968	0.0823	0.0112	0.0935	0.0000	678.9400	678.9400	2.6700e-003	0.0952	707.3833
Worker	0.1611	0.1002	1.8704	7.1400e-003	1.1533	2.2800e-003	1.1555	0.3064	2.1000e-003	0.3085	0.0000	730.5112	730.5112	8.4500e-003	0.0151	735.2100
Total	**0.2068**	**1.9035**	**2.4342**	**0.0143**	**1.4384**	**0.0140**	**1.4523**	**0.3887**	**0.0133**	**0.4020**	**0.0000**	**1,409.4512**	**1,409.4512**	**0.0111**	**0.1103**	**1,442.5933**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2043

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1562	0.8992	2.1035	4.0400e-003		9.6200e-003	9.6200e-003		9.6200e-003	9.6200e-003	0.0000	343.0333	343.0333	0.0123	0.0000	343.3415
Total	**0.1562**	**0.8992**	**2.1035**	**4.0400e-003**		**9.6200e-003**	**9.6200e-003**		**9.6200e-003**	**9.6200e-003**	**0.0000**	**343.0333**	**343.0333**	**0.0123**	**0.0000**	**343.3415**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0457	1.8033	0.5638	7.1100e-003	0.2851	0.0117	0.2968	0.0823	0.0112	0.0935	0.0000	678.9400	678.9400	2.6700e-003	0.0952	707.3833
Worker	0.1611	0.1002	1.8704	7.1400e-003	1.1533	2.2800e-003	1.1555	0.3064	2.1000e-003	0.3085	0.0000	730.5112	730.5112	8.4500e-003	0.0151	735.2100
Total	**0.2068**	**1.9035**	**2.4342**	**0.0143**	**1.4384**	**0.0140**	**1.4523**	**0.3887**	**0.0133**	**0.4020**	**0.0000**	**1,409.4512**	**1,409.4512**	**0.0111**	**0.1103**	**1,442.5933**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2044

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1562	0.8992	2.1035	4.0400e-003		9.6200e-003	9.6200e-003		9.6200e-003	9.6200e-003	0.0000	343.0337	343.0337	0.0123	0.0000	343.3419
Total	**0.1562**	**0.8992**	**2.1035**	**4.0400e-003**		**9.6200e-003**	**9.6200e-003**		**9.6200e-003**	**9.6200e-003**	**0.0000**	**343.0337**	**343.0337**	**0.0123**	**0.0000**	**343.3419**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0457	1.8033	0.5638	7.1100e-003	0.2851	0.0117	0.2968	0.0823	0.0112	0.0935	0.0000	678.9400	678.9400	2.6700e-003	0.0952	707.3833
Worker	0.1611	0.1002	1.8704	7.1400e-003	1.1533	2.2800e-003	1.1555	0.3064	2.1000e-003	0.3085	0.0000	730.5112	730.5112	8.4500e-003	0.0151	735.2100
Total	**0.2068**	**1.9035**	**2.4342**	**0.0143**	**1.4384**	**0.0140**	**1.4523**	**0.3887**	**0.0133**	**0.4020**	**0.0000**	**1,409.4512**	**1,409.4512**	**0.0111**	**0.1103**	**1,442.5933**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2044

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1562	0.8992	2.1035	4.0400e-003		9.6200e-003	9.6200e-003		9.6200e-003	9.6200e-003	0.0000	343.0333	343.0333	0.0123	0.0000	343.3415
Total	**0.1562**	**0.8992**	**2.1035**	**4.0400e-003**		**9.6200e-003**	**9.6200e-003**		**9.6200e-003**	**9.6200e-003**	**0.0000**	**343.0333**	**343.0333**	**0.0123**	**0.0000**	**343.3415**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0457	1.8033	0.5638	7.1100e-003	0.2851	0.0117	0.2968	0.0823	0.0112	0.0935	0.0000	678.9400	678.9400	2.6700e-003	0.0952	707.3833
Worker	0.1611	0.1002	1.8704	7.1400e-003	1.1533	2.2800e-003	1.1555	0.3064	2.1000e-003	0.3085	0.0000	730.5112	730.5112	8.4500e-003	0.0151	735.2100
Total	**0.2068**	**1.9035**	**2.4342**	**0.0143**	**1.4384**	**0.0140**	**1.4523**	**0.3887**	**0.0133**	**0.4020**	**0.0000**	**1,409.4512**	**1,409.4512**	**0.0111**	**0.1103**	**1,442.5933**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2045

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0467	0.2687	0.6286	1.2100e-003		2.8800e-003	2.8800e-003		2.8800e-003	2.8800e-003	0.0000	102.5158	102.5158	3.6800e-003	0.0000	102.6079
Total	**0.0467**	**0.2687**	**0.6286**	**1.2100e-003**		**2.8800e-003**	**2.8800e-003**		**2.8800e-003**	**2.8800e-003**	**0.0000**	**102.5158**	**102.5158**	**3.6800e-003**	**0.0000**	**102.6079**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0138	0.5382	0.1694	2.0800e-003	0.0852	3.4700e-003	0.0887	0.0246	3.3200e-003	0.0279	0.0000	198.6732	198.6732	8.0000e-004	0.0279	207.0052
Worker	0.0431	0.0287	0.5377	2.0900e-003	0.3447	6.0000e-004	0.3453	0.0916	5.5000e-004	0.0921	0.0000	215.5441	215.5441	2.2500e-003	4.4300e-003	216.9217
Total	**0.0568**	**0.5669**	**0.7071**	**4.1700e-003**	**0.4299**	**4.0700e-003**	**0.4339**	**0.1162**	**3.8700e-003**	**0.1201**	**0.0000**	**414.2172**	**414.2172**	**3.0500e-003**	**0.0323**	**423.9269**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2045

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0467	0.2687	0.6286	1.2100e-003		2.8800e-003	2.8800e-003		2.8800e-003	2.8800e-003	0.0000	102.5157	102.5157	3.6800e-003	0.0000	102.6078
Total	**0.0467**	**0.2687**	**0.6286**	**1.2100e-003**		**2.8800e-003**	**2.8800e-003**		**2.8800e-003**	**2.8800e-003**	**0.0000**	**102.5157**	**102.5157**	**3.6800e-003**	**0.0000**	**102.6078**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0138	0.5382	0.1694	2.0800e-003	0.0852	3.4700e-003	0.0887	0.0246	3.3200e-003	0.0279	0.0000	198.6732	198.6732	8.0000e-004	0.0279	207.0052
Worker	0.0431	0.0287	0.5377	2.0900e-003	0.3447	6.0000e-004	0.3453	0.0916	5.5000e-004	0.0921	0.0000	215.5441	215.5441	2.2500e-003	4.4300e-003	216.9217
Total	**0.0568**	**0.5669**	**0.7071**	**4.1700e-003**	**0.4299**	**4.0700e-003**	**0.4339**	**0.1162**	**3.8700e-003**	**0.1201**	**0.0000**	**414.2172**	**414.2172**	**3.0500e-003**	**0.0323**	**423.9269**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Paving - 2045

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0920	0.3328	1.4394	2.5500e-003		0.0106	0.0106		0.0106	0.0106	0.0000	219.3056	219.3056	7.3700e-003	0.0000	219.4899
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0920**	**0.3328**	**1.4394**	**2.5500e-003**		**0.0106**	**0.0106**		**0.0106**	**0.0106**	**0.0000**	**219.3056**	**219.3056**	**7.3700e-003**	**0.0000**	**219.4899**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.3700e-003	9.1000e-004	0.0171	7.0000e-005	0.0110	2.0000e-005	0.0110	2.9100e-003	2.0000e-005	2.9300e-003	0.0000	6.8582	6.8582	7.0000e-005	1.4000e-004	6.9021
Total	**1.3700e-003**	**9.1000e-004**	**0.0171**	**7.0000e-005**	**0.0110**	**2.0000e-005**	**0.0110**	**2.9100e-003**	**2.0000e-005**	**2.9300e-003**	**0.0000**	**6.8582**	**6.8582**	**7.0000e-005**	**1.4000e-004**	**6.9021**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Paving - 2045

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0920	0.3328	1.4394	2.5500e-003		0.0106	0.0106		0.0106	0.0106	0.0000	219.3053	219.3053	7.3700e-003	0.0000	219.4896
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0920**	**0.3328**	**1.4394**	**2.5500e-003**		**0.0106**	**0.0106**		**0.0106**	**0.0106**	**0.0000**	**219.3053**	**219.3053**	**7.3700e-003**	**0.0000**	**219.4896**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.3700e-003	9.1000e-004	0.0171	7.0000e-005	0.0110	2.0000e-005	0.0110	2.9100e-003	2.0000e-005	2.9300e-003	0.0000	6.8582	6.8582	7.0000e-005	1.4000e-004	6.9021
Total	**1.3700e-003**	**9.1000e-004**	**0.0171**	**7.0000e-005**	**0.0110**	**2.0000e-005**	**0.0110**	**2.9100e-003**	**2.0000e-005**	**2.9300e-003**	**0.0000**	**6.8582**	**6.8582**	**7.0000e-005**	**1.4000e-004**	**6.9021**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Paving - 2046

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0748	0.2706	1.1705	2.0800e-003		8.6200e-003	8.6200e-003		8.6200e-003	8.6200e-003	0.0000	178.3364	178.3364	5.9900e-003	0.0000	178.4863
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0748**	**0.2706**	**1.1705**	**2.0800e-003**		**8.6200e-003**	**8.6200e-003**		**8.6200e-003**	**8.6200e-003**	**0.0000**	**178.3364**	**178.3364**	**5.9900e-003**	**0.0000**	**178.4863**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.1100e-003	7.4000e-004	0.0139	5.0000e-005	8.9200e-003	2.0000e-005	8.9300e-003	2.3700e-003	1.0000e-005	2.3800e-003	0.0000	5.5770	5.5770	6.0000e-005	1.1000e-004	5.6127
Total	**1.1100e-003**	**7.4000e-004**	**0.0139**	**5.0000e-005**	**8.9200e-003**	**2.0000e-005**	**8.9300e-003**	**2.3700e-003**	**1.0000e-005**	**2.3800e-003**	**0.0000**	**5.5770**	**5.5770**	**6.0000e-005**	**1.1000e-004**	**5.6127**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Paving - 2046

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0748	0.2706	1.1705	2.0800e-003		8.6200e-003	8.6200e-003		8.6200e-003	8.6200e-003	0.0000	178.3362	178.3362	5.9900e-003	0.0000	178.4860
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0748**	**0.2706**	**1.1705**	**2.0800e-003**		**8.6200e-003**	**8.6200e-003**		**8.6200e-003**	**8.6200e-003**	**0.0000**	**178.3362**	**178.3362**	**5.9900e-003**	**0.0000**	**178.4860**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.1100e-003	7.4000e-004	0.0139	5.0000e-005	8.9200e-003	2.0000e-005	8.9300e-003	2.3700e-003	1.0000e-005	2.3800e-003	0.0000	5.5770	5.5770	6.0000e-005	1.1000e-004	5.6127
Total	**1.1100e-003**	**7.4000e-004**	**0.0139**	**5.0000e-005**	**8.9200e-003**	**2.0000e-005**	**8.9300e-003**	**2.3700e-003**	**1.0000e-005**	**2.3800e-003**	**0.0000**	**5.5770**	**5.5770**	**6.0000e-005**	**1.1000e-004**	**5.6127**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 2046

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	1.8649					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.4900e-003	0.0411	0.1013	1.7000e-004		4.2000e-004	4.2000e-004		4.2000e-004	4.2000e-004	0.0000	14.4259	14.4259	5.1000e-004	0.0000	14.4386
Total	**1.8714**	**0.0411**	**0.1013**	**1.7000e-004**		**4.2000e-004**	**4.2000e-004**		**4.2000e-004**	**4.2000e-004**	**0.0000**	**14.4259**	**14.4259**	**5.1000e-004**	**0.0000**	**14.4386**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0125	8.3200e-003	0.1558	6.1000e-004	0.0999	1.7000e-004	0.1000	0.0265	1.6000e-004	0.0267	0.0000	62.4525	62.4525	6.5000e-004	1.2800e-003	62.8517
Total	**0.0125**	**8.3200e-003**	**0.1558**	**6.1000e-004**	**0.0999**	**1.7000e-004**	**0.1000**	**0.0265**	**1.6000e-004**	**0.0267**	**0.0000**	**62.4525**	**62.4525**	**6.5000e-004**	**1.2800e-003**	**62.8517**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 2046

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	1.8649					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.4900e-003	0.0411	0.1013	1.7000e-004		4.2000e-004	4.2000e-004		4.2000e-004	4.2000e-004	0.0000	14.4259	14.4259	5.1000e-004	0.0000	14.4386
Total	**1.8714**	**0.0411**	**0.1013**	**1.7000e-004**		**4.2000e-004**	**4.2000e-004**		**4.2000e-004**	**4.2000e-004**	**0.0000**	**14.4259**	**14.4259**	**5.1000e-004**	**0.0000**	**14.4386**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0125	8.3200e-003	0.1558	6.1000e-004	0.0999	1.7000e-004	0.1000	0.0265	1.6000e-004	0.0267	0.0000	62.4525	62.4525	6.5000e-004	1.2800e-003	62.8517
Total	**0.0125**	**8.3200e-003**	**0.1558**	**6.1000e-004**	**0.0999**	**1.7000e-004**	**0.1000**	**0.0265**	**1.6000e-004**	**0.0267**	**0.0000**	**62.4525**	**62.4525**	**6.5000e-004**	**1.2800e-003**	**62.8517**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 2047

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	3.5813					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0125	0.0789	0.1945	3.2000e-004		8.1000e-004	8.1000e-004		8.1000e-004	8.1000e-004	0.0000	27.7028	27.7028	9.7000e-004	0.0000	27.7272
Total	**3.5937**	**0.0789**	**0.1945**	**3.2000e-004**		**8.1000e-004**	**8.1000e-004**		**8.1000e-004**	**8.1000e-004**	**0.0000**	**27.7028**	**27.7028**	**9.7000e-004**	**0.0000**	**27.7272**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0240	0.0160	0.2992	1.1600e-003	0.1918	3.3000e-004	0.1921	0.0510	3.1000e-004	0.0513	0.0000	119.9309	119.9309	1.2500e-003	2.4700e-003	120.6975
Total	**0.0240**	**0.0160**	**0.2992**	**1.1600e-003**	**0.1918**	**3.3000e-004**	**0.1921**	**0.0510**	**3.1000e-004**	**0.0513**	**0.0000**	**119.9309**	**119.9309**	**1.2500e-003**	**2.4700e-003**	**120.6975**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 2047

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	3.5813					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0125	0.0789	0.1945	3.2000e-004		8.1000e-004	8.1000e-004		8.1000e-004	8.1000e-004	0.0000	27.7028	27.7028	9.7000e-004	0.0000	27.7271
Total	**3.5937**	**0.0789**	**0.1945**	**3.2000e-004**		**8.1000e-004**	**8.1000e-004**		**8.1000e-004**	**8.1000e-004**	**0.0000**	**27.7028**	**27.7028**	**9.7000e-004**	**0.0000**	**27.7271**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0240	0.0160	0.2992	1.1600e-003	0.1918	3.3000e-004	0.1921	0.0510	3.1000e-004	0.0513	0.0000	119.9309	119.9309	1.2500e-003	2.4700e-003	120.6975
Total	**0.0240**	**0.0160**	**0.2992**	**1.1600e-003**	**0.1918**	**3.3000e-004**	**0.1921**	**0.0510**	**3.1000e-004**	**0.0513**	**0.0000**	**119.9309**	**119.9309**	**1.2500e-003**	**2.4700e-003**	**120.6975**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Density

Increase Diversity

Improve Walkability Design

Improve Destination Accessibility

Improve Pedestrian Network

Provide Traffic Calming Measures

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	1.0402	2.3788	12.4871	0.0278	3.7236	0.0165	3.7401	0.9937	0.0155	1.0092	0.0000	2,864.0811	2,864.0811	0.1911	0.1736	2,920.5825
Unmitigated	1.2545	4.3610	23.4676	0.0785	11.1988	0.0433	11.2421	2.9887	0.0407	3.0294	0.0000	8,094.4390	8,094.4390	0.4206	0.3539	8,210.3998

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	1,566.48	1,741.96	1343.92	4,464,405	1,484,415
City Park	21.52	54.08	60.42	67,736	22,522
Condo/Townhouse	1,720.20	1,912.90	1475.80	4,902,501	1,630,082
Elementary School	1,134.00	0.00	0.00	1,786,001	593,845
Single Family Housing	6,579.68	6,649.38	5959.35	18,607,533	6,187,005
Total	11,021.88	10,358.32	8,839.49	29,828,176	9,917,868

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Low Rise	10.80	7.30	7.50	42.30	19.60	38.10	86	11	3
City Park	9.50	7.30	7.30	33.00	48.00	19.00	66	28	6
Condo/Townhouse	10.80	7.30	7.50	42.30	19.60	38.10	86	11	3
Elementary School	9.50	7.30	7.30	65.00	30.00	5.00	63	25	12
Single Family Housing	10.80	7.30	7.50	42.30	19.60	38.10	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Low Rise	0.483400	0.236300	0.171600	0.062500	0.000900	0.001000	0.007900	0.023300	0.000000	0.004300	0.003300	0.001100	0.004400
City Park	0.483400	0.236300	0.171600	0.062500	0.000900	0.001000	0.007900	0.023300	0.000000	0.004300	0.003300	0.001100	0.004400
Condo/Townhouse	0.483400	0.236300	0.171600	0.062500	0.000900	0.001000	0.007900	0.023300	0.000000	0.004300	0.003300	0.001100	0.004400
Elementary School	0.483400	0.236300	0.171600	0.062500	0.000900	0.001000	0.007900	0.023300	0.000000	0.004300	0.003300	0.001100	0.004400
Single Family Housing	0.483400	0.236300	0.171600	0.062500	0.000900	0.001000	0.007900	0.023300	0.000000	0.004300	0.003300	0.001100	0.004400

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Kilowatt Hours of Renewable Electricity Generated

Fargo Village - Kings County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	432.1099	432.1099	0.1189	0.0144	439.3742
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	432.3946	432.3946	0.1189	0.0144	439.6637
NaturalGas Mitigated	0.1339	1.1478	0.5138	7.3000e-003		0.0925	0.0925		0.0925	0.0925	0.0000	1,325.0210	1,325.0210	0.0254	0.0243	1,332.8950
NaturalGas Unmitigated	0.1339	1.1478	0.5138	7.3000e-003		0.0925	0.0925		0.0925	0.0925	0.0000	1,325.0210	1,325.0210	0.0254	0.0243	1,332.8950

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Low Rise	2.92046e+006	0.0158	0.1346	0.0573	8.6000e-004		0.0109	0.0109		0.0109	0.0109	0.0000	155.8470	155.8470	2.9900e-003	2.8600e-003	156.7731
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Condo/Townhouse	3.90729e+006	0.0211	0.1800	0.0766	1.1500e-003		0.0146	0.0146		0.0146	0.0146	0.0000	208.5079	208.5079	4.0000e-003	3.8200e-003	209.7470
Elementary School	1.24803e+006	6.7300e-003	0.0612	0.0514	3.7000e-004		4.6500e-003	4.6500e-003		4.6500e-003	4.6500e-003	0.0000	66.5997	66.5997	1.2800e-003	1.2200e-003	66.9955
Single Family Housing	1.67542e+007	0.0903	0.7720	0.3285	4.9300e-003		0.0624	0.0624		0.0624	0.0624	0.0000	894.0664	894.0664	0.0171	0.0164	899.3794
Total		**0.1339**	**1.1478**	**0.5138**	**7.3100e-003**		**0.0925**	**0.0925**		**0.0925**	**0.0925**	**0.0000**	**1,325.0210**	**1,325.0210**	**0.0254**	**0.0243**	**1,332.8950**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Low Rise	2.92046e+006	0.0158	0.1346	0.0573	8.6000e-004		0.0109	0.0109		0.0109	0.0109	0.0000	155.8470	155.8470	2.9900e-003	2.8600e-003	156.7731
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Condo/Townhouse	3.90729e+006	0.0211	0.1800	0.0766	1.1500e-003		0.0146	0.0146		0.0146	0.0146	0.0000	208.5079	208.5079	4.0000e-003	3.8200e-003	209.7470
Elementary School	1.24803e+006	6.7300e-003	0.0612	0.0514	3.7000e-004		4.6500e-003	4.6500e-003		4.6500e-003	4.6500e-003	0.0000	66.5997	66.5997	1.2800e-003	1.2200e-003	66.9955
Single Family Housing	1.67542e+007	0.0903	0.7720	0.3285	4.9300e-003		0.0624	0.0624		0.0624	0.0624	0.0000	894.0664	894.0664	0.0171	0.0164	899.3794
Total		**0.1339**	**1.1478**	**0.5138**	**7.3100e-003**		**0.0925**	**0.0925**		**0.0925**	**0.0925**	**0.0000**	**1,325.0210**	**1,325.0210**	**0.0254**	**0.0243**	**1,332.8950**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	884040	48.1113	0.0132	1.6000e-003	48.9201
City Park	0	0.0000	0.0000	0.0000	0.0000
Condo/Townhouse	1.16222e+006	63.2505	0.0174	2.1100e-003	64.3138
Elementary School	341102	18.5634	5.1100e-003	6.2000e-004	18.8755
Single Family Housing	5.55785e+006	302.4694	0.0832	0.0101	307.5542
Total		**432.3946**	**0.1189**	**0.0144**	**439.6637**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	882994	48.0543	0.0132	1.6000e-003	48.8622
City Park	-1046.2	-0.0569	0.0000	0.0000	-0.0579
Condo/Townhouse	1.16118e+006	63.1936	0.0174	2.1100e-003	64.2559
Elementary School	340056	18.5065	5.0900e-003	6.2000e-004	18.8176
Single Family Housing	5.5568e+006	302.4125	0.0832	0.0101	307.4964
Total		**432.1099**	**0.1189**	**0.0144**	**439.3742**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Residential Interior

Use Low VOC Paint - Residential Exterior

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

No Hearths Installed

Use Low VOC Cleaning Supplies

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	6.6184	0.0978	8.4775	4.5000e-004		0.0472	0.0472		0.0472	0.0472	0.0000	13.9108	13.9108	0.0133	0.0000	14.2423
Unmitigated	7.0097	0.5265	8.6600	3.1900e-003		0.0819	0.0819		0.0819	0.0819	0.0000	510.3665	510.3665	0.0228	9.1000e-003	513.6482

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.2723					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	6.4333					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0502	0.4287	0.1824	2.7400e-003		0.0347	0.0347		0.0347	0.0347	0.0000	496.4557	496.4557	9.5200e-003	9.1000e-003	499.4059
Landscaping	0.2539	0.0978	8.4775	4.5000e-004		0.0472	0.0472		0.0472	0.0472	0.0000	13.9108	13.9108	0.0133	0.0000	14.2423
Total	**7.0097**	**0.5265**	**8.6600**	**3.1900e-003**		**0.0819**	**0.0819**		**0.0819**	**0.0819**	**0.0000**	**510.3665**	**510.3665**	**0.0228**	**9.1000e-003**	**513.6482**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0272					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	6.3373					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.2539	0.0978	8.4775	4.5000e-004		0.0472	0.0472		0.0472	0.0472	0.0000	13.9108	13.9108	0.0133	0.0000	14.2423
Total	**6.6184**	**0.0978**	**8.4775**	**4.5000e-004**		**0.0472**	**0.0472**		**0.0472**	**0.0472**	**0.0000**	**13.9108**	**13.9108**	**0.0133**	**0.0000**	**14.2423**

7.0 Water Detail

7.1 Mitigation Measures Water

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	62.5058	2.4910	0.0599	142.6140
Unmitigated	62.5058	2.4910	0.0599	142.6140

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	13.943 / 8.79013	10.2037	0.4559	0.0109	24.8560
City Park	0 / 32.873	6.2616	1.7200e-003	2.1000e-004	6.3668
Condo/Townhouse	15.3112 / 9.65271	11.2050	0.5007	0.0120	27.2951
Elementary School	1.45454 / 3.74026	1.6022	0.0477	1.1600e-003	3.1398
Single Family Housing	45.4124 / 28.6295	33.2334	1.4849	0.0356	80.9562
Total		**62.5058**	**2.4910**	**0.0599**	**142.6140**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	13.943 / 8.79013	10.2037	0.4559	0.0109	24.8560
City Park	0 / 32.873	6.2616	1.7200e-003	2.1000e-004	6.3668
Condo/Townhouse	15.3112 / 9.65271	11.2050	0.5007	0.0120	27.2951
Elementary School	1.45454 / 3.74026	1.6022	0.0477	1.1600e-003	3.1398
Single Family Housing	45.4124 / 28.6295	33.2334	1.4849	0.0356	80.9562
Total		**62.5058**	**2.4910**	**0.0599**	**142.6140**

8.0 Waste Detail

8.1 Mitigation Measures Waste

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	210.2763	12.4270	0.0000	520.9507
Unmitigated	210.2763	12.4270	0.0000	520.9507

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	98.44	19.9824	1.1809	0.0000	49.5056
City Park	2.37	0.4811	0.0284	0.0000	1.1919
Condo/Townhouse	108.1	21.9433	1.2968	0.0000	54.3637
Elementary School	109.5	22.2275	1.3136	0.0000	55.0677
Single Family Housing	717.48	145.6420	8.6072	0.0000	360.8218
Total		**210.2763**	**12.4270**	**0.0000**	**520.9507**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	98.44	19.9824	1.1809	0.0000	49.5056
City Park	2.37	0.4811	0.0284	0.0000	1.1919
Condo/Townhouse	108.1	21.9433	1.2968	0.0000	54.3637
Elementary School	109.5	22.2275	1.3136	0.0000	55.0677
Single Family Housing	717.48	145.6420	8.6072	0.0000	360.8218
Total		**210.2763**	**12.4270**	**0.0000**	**520.9507**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Fargo Village - Kings County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Fargo Village

Kings County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Elementary School	600.00	Student	14.99	50,162.02	0
City Park	27.59	Acre	27.59	1,201,820.40	0
Apartments Low Rise	214.00	Dwelling Unit	13.36	214,000.00	612
Condo/Townhouse	235.00	Dwelling Unit	56.56	235,000.00	672
Single Family Housing	697.00	Dwelling Unit	187.50	1,254,600.00	1993

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	37
Climate Zone	3			**Operational Year**	2045
Utility Company	Sonoma Clean Power				
CO2 Intensity (lb/MWhr)	119.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Lot sizes consistent with City and applicant-approved site plan.

Construction Phase - Demolition expected to last no more than a day, as structure is 650 square feet.

Demolition -

Architectural Coating - Project to use Low VOC architectural coating products pursuant to CARB Rule 4601 and 1113; based on product type for VOC emissions.

Vehicle Trips - Trip rates/counts based on findings of Traffic Scoping Analysis prepared by LSA Associates, Inc. for the project.

Woodstoves - Actual project values, no woodstoves proposed for installation in homes.

Fargo Village - Kings County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Fleet Mix - Used SJVPCD Accepted fleet-mix for residential projects.

Consumer Products - General Category: Statewide total emissions were updated to 225.6 tons/day based on the 2020 Update of the Organic Gas Speciation Profiles for Consumer Products. Degreaser and pesticides/fertilizers emissions factors utilized the same calculation used by CalEEMod default, but used the updated CARB Emissions Inventory for 2020.
Degreaser: 0.2 tons ROG/day Pesticides/Fertilizer: 0.19 tons ROG/day

Area Coating - Project to use Low VOC architectural coating products pursuant to CARB Rule 4601; based on product type for VOC emissions.

Construction Off-road Equipment Mitigation -

Area Mitigation - EF (g/L) set to the standard established by Rule 4601 for architectural coatings. Mitigation measure: Use zero-VOC paint containing 5 g/L or less VOC for all architectural coating applications except for parking.

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	150.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	150.00	50.00
tblArchitecturalCoating	EF_Parking	150.00	50.00
tblArchitecturalCoating	EF_Residential_Exterior	150.00	50.00
tblArchitecturalCoating	EF_Residential_Interior	150.00	50.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	150	50
tblAreaCoating	Area_EF_Nonresidential_Interior	150	50
tblAreaCoating	Area_EF_Parking	150	50
tblAreaCoating	Area_EF_Residential_Exterior	150	50
tblAreaCoating	Area_EF_Residential_Interior	150	50
tblAreaCoating	ReapplicationRatePercent	10	5
tblAreaMitigation	UseLowVOCPaintNonresidentialExteriorValue	50	5
tblAreaMitigation	UseLowVOCPaintNonresidentialInteriorValue	50	5
tblAreaMitigation	UseLowVOCPaintParkingCheck	False	True
tblAreaMitigation	UseLowVOCPaintResidentialExteriorValue	50	5
tblAreaMitigation	UseLowVOCPaintResidentialInteriorValue	50	5
tblConstructionPhase	NumDays	300.00	1.00
tblConsumerProducts	ROG_EF	2.14E-05	2.01E-05
tblConsumerProducts	ROG_EF_Degreaser	3.542E-07	6.5E-08

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblConsumerProducts	ROG_EF_PesticidesFertilizers	5.152E-08	2E-10
tblFleetMix	HHD	0.04	0.02
tblFleetMix	HHD	0.04	0.02
tblFleetMix	HHD	0.04	0.02
tblFleetMix	HHD	0.04	0.02
tblFleetMix	HHD	0.04	0.02
tblFleetMix	LDA	0.54	0.48
tblFleetMix	LDA	0.54	0.48
tblFleetMix	LDA	0.54	0.48
tblFleetMix	LDA	0.54	0.48
tblFleetMix	LDA	0.54	0.48
tblFleetMix	LDT1	0.06	0.24
tblFleetMix	LDT1	0.06	0.24
tblFleetMix	LDT1	0.06	0.24
tblFleetMix	LDT1	0.06	0.24
tblFleetMix	LDT1	0.06	0.24
tblFleetMix	LDT2	0.18	0.17
tblFleetMix	LDT2	0.18	0.17
tblFleetMix	LDT2	0.18	0.17
tblFleetMix	LDT2	0.18	0.17
tblFleetMix	LDT2	0.18	0.17
tblFleetMix	LHD1	0.02	9.0000e-004
tblFleetMix	LHD1	0.02	9.0000e-004
tblFleetMix	LHD1	0.02	9.0000e-004
tblFleetMix	LHD1	0.02	9.0000e-004
tblFleetMix	LHD1	0.02	9.0000e-004
tblFleetMix	LHD2	5.5230e-003	1.0000e-003
tblFleetMix	LHD2	5.5230e-003	1.0000e-003
tblFleetMix	LHD2	5.5230e-003	1.0000e-003

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblFleetMix	LHD2	5.5230e-003	1.0000e-003
tblFleetMix	LHD2	5.5230e-003	1.0000e-003
tblFleetMix	MCY	0.02	3.3000e-003
tblFleetMix	MCY	0.02	3.3000e-003
tblFleetMix	MCY	0.02	3.3000e-003
tblFleetMix	MCY	0.02	3.3000e-003
tblFleetMix	MCY	0.02	3.3000e-003
tblFleetMix	MDV	0.12	0.06
tblFleetMix	MDV	0.12	0.06
tblFleetMix	MDV	0.12	0.06
tblFleetMix	MDV	0.12	0.06
tblFleetMix	MDV	0.12	0.06
tblFleetMix	MH	2.3250e-003	4.4000e-003
tblFleetMix	MH	2.3250e-003	4.4000e-003
tblFleetMix	MH	2.3250e-003	4.4000e-003
tblFleetMix	MH	2.3250e-003	4.4000e-003
tblFleetMix	MH	2.3250e-003	4.4000e-003
tblFleetMix	MHD	7.0410e-003	7.9000e-003
tblFleetMix	MHD	7.0410e-003	7.9000e-003
tblFleetMix	MHD	7.0410e-003	7.9000e-003
tblFleetMix	MHD	7.0410e-003	7.9000e-003
tblFleetMix	MHD	7.0410e-003	7.9000e-003
tblFleetMix	OBUS	5.2000e-004	0.00
tblFleetMix	OBUS	5.2000e-004	0.00
tblFleetMix	OBUS	5.2000e-004	0.00
tblFleetMix	OBUS	5.2000e-004	0.00
tblFleetMix	OBUS	5.2000e-004	0.00
tblFleetMix	SBUS	8.1800e-004	1.1000e-003
tblFleetMix	SBUS	8.1800e-004	1.1000e-003

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblFleetMix	SBUS	8.1800e-004	1.1000e-003
tblFleetMix	SBUS	8.1800e-004	1.1000e-003
tblFleetMix	SBUS	8.1800e-004	1.1000e-003
tblFleetMix	UBUS	1.8100e-004	4.3000e-003
tblFleetMix	UBUS	1.8100e-004	4.3000e-003
tblFleetMix	UBUS	1.8100e-004	4.3000e-003
tblFleetMix	UBUS	1.8100e-004	4.3000e-003
tblFleetMix	UBUS	1.8100e-004	4.3000e-003
tblLandUse	LotAcreage	1.15	14.99
tblLandUse	LotAcreage	13.38	13.36
tblLandUse	LotAcreage	14.69	56.56
tblLandUse	LotAcreage	226.30	187.50
tblWoodstoves	NumberCatalytic	13.36	0.00
tblWoodstoves	NumberCatalytic	56.56	0.00
tblWoodstoves	NumberCatalytic	187.50	0.00
tblWoodstoves	NumberNoncatalytic	13.36	0.00
tblWoodstoves	NumberNoncatalytic	56.56	0.00
tblWoodstoves	NumberNoncatalytic	187.50	0.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

Fargo Village - Kings County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2025	0.3459	3.4025	2.7269	6.0900e-003	2.7696	0.1436	2.9131	1.1267	0.1321	1.2588	0.0000	535.8024	535.8024	0.1688	4.0000e-004	540.1410
2026	0.3850	3.6504	3.4890	8.2600e-003	1.5466	0.1477	1.6942	0.5174	0.1359	0.6533	0.0000	726.9018	726.9018	0.2304	3.9000e-004	732.7790
2027	0.4730	3.6770	4.5006	0.0147	1.8780	0.1154	1.9935	0.4918	0.1072	0.5990	0.0000	1,360.6980	1,360.6980	0.1582	0.0703	1,385.6074
2028	0.5302	3.6604	5.2551	0.0201	1.4328	0.0855	1.5183	0.3873	0.0805	0.4678	0.0000	1,896.5568	1,896.5568	0.0910	0.1298	1,937.4982
2029	0.5128	3.6491	5.1506	0.0198	1.4384	0.0854	1.5238	0.3887	0.0805	0.4692	0.0000	1,875.3300	1,875.3300	0.0899	0.1271	1,915.4637
2030	0.4871	3.0367	5.0550	0.0200	1.4384	0.0356	1.4739	0.3887	0.0347	0.4234	0.0000	1,890.2496	1,890.2496	0.0313	0.1244	1,928.0887
2031	0.4695	3.0202	4.9613	0.0197	1.4384	0.0352	1.4736	0.3887	0.0344	0.4231	0.0000	1,867.5614	1,867.5614	0.0302	0.1219	1,904.6517
2032	0.4557	3.0175	4.9017	0.0196	1.4439	0.0351	1.4789	0.3902	0.0343	0.4245	0.0000	1,854.6094	1,854.6094	0.0294	0.1203	1,891.1905
2033	0.4383	2.9823	4.7973	0.0192	1.4328	0.0345	1.4674	0.3873	0.0337	0.4210	0.0000	1,822.7346	1,822.7346	0.0283	0.1175	1,858.4686
2034	0.4262	2.9709	4.7388	0.0190	1.4328	0.0343	1.4671	0.3873	0.0335	0.4207	0.0000	1,806.9477	1,806.9477	0.0276	0.1159	1,842.1803
2035	0.4049	2.8704	4.7021	0.0189	1.4384	0.0266	1.4650	0.3887	0.0259	0.4146	0.0000	1,799.9624	1,799.9624	0.0261	0.1149	1,834.8674
2036	0.4064	2.8814	4.7201	0.0190	1.4439	0.0267	1.4706	0.3902	0.0260	0.4162	0.0000	1,806.8589	1,806.8589	0.0262	0.1154	1,841.8976
2037	0.4049	2.8704	4.7021	0.0189	1.4384	0.0266	1.4650	0.3887	0.0259	0.4146	0.0000	1,799.9624	1,799.9624	0.0261	0.1149	1,834.8674
2038	0.4049	2.8704	4.7021	0.0189	1.4384	0.0266	1.4650	0.3887	0.0259	0.4146	0.0000	1,799.9624	1,799.9624	0.0261	0.1149	1,834.8674
2039	0.4033	2.8594	4.6840	0.0188	1.4328	0.0265	1.4593	0.3873	0.0258	0.4130	0.0000	1,793.0660	1,793.0660	0.0260	0.1145	1,827.8373
2040	0.3630	2.8027	4.5377	0.0183	1.4384	0.0236	1.4619	0.3887	0.0229	0.4116	0.0000	1,752.4849	1,752.4849	0.0235	0.1103	1,785.9352
2041	0.3630	2.8027	4.5377	0.0183	1.4384	0.0236	1.4619	0.3887	0.0229	0.4116	0.0000	1,752.4849	1,752.4849	0.0235	0.1103	1,785.9352
2042	0.3630	2.8027	4.5377	0.0183	1.4384	0.0236	1.4619	0.3887	0.0229	0.4116	0.0000	1,752.4849	1,752.4849	0.0235	0.1103	1,785.9352
2043	0.3630	2.8027	4.5377	0.0183	1.4384	0.0236	1.4619	0.3887	0.0229	0.4116	0.0000	1,752.4849	1,752.4849	0.0235	0.1103	1,785.9352

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2044	0.3630	2.8027	4.5377	0.0183	1.4384	0.0236	1.4619	0.3887	0.0229	0.4116	0.0000	1,752.4849	1,752.4849	0.0235	0.1103	1,785.9352
2045	0.1969	1.1693	2.7922	8.0000e-003	0.4408	0.0176	0.4584	0.1191	0.0174	0.1365	0.0000	742.8968	742.8968	0.0142	0.0325	752.9267
2046	1.9598	0.3207	1.4415	2.9000e-003	0.1088	9.2200e-003	0.1180	0.0289	9.2100e-003	0.0381	0.0000	260.7918	260.7918	7.2100e-003	1.4000e-003	261.3892
2047	3.6177	0.0949	0.4937	1.4900e-003	0.1918	1.1400e-003	0.1929	0.0510	1.1100e-003	0.0521	0.0000	147.6337	147.6337	2.2200e-003	2.4700e-003	148.4246
Maximum	**3.6177**	**3.6770**	**5.2551**	**0.0201**	**2.7696**	**0.1477**	**2.9131**	**1.1267**	**0.1359**	**1.2588**	**0.0000**	**1,896.5568**	**1,896.5568**	**0.2304**	**0.1298**	**1,937.4982**

2.1 Overall Construction

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2025	0.3459	3.4025	2.7269	6.0900e-003	0.8775	0.1436	1.0211	0.3551	0.1321	0.4872	0.0000	535.8017	535.8017	0.1688	4.0000e-004	540.1404
2026	0.3850	3.6504	3.4890	8.2600e-003	0.4970	0.1477	0.6446	0.1653	0.1359	0.3011	0.0000	726.9010	726.9010	0.2304	3.9000e-004	732.7781
2027	0.4730	3.6770	4.5006	0.0147	1.1122	0.1154	1.2277	0.2957	0.1072	0.4028	0.0000	1,360.6974	1,360.6974	0.1582	0.0703	1,385.6068
2028	0.5302	3.6604	5.2550	0.0201	1.4328	0.0855	1.5183	0.3873	0.0805	0.4678	0.0000	1,896.5564	1,896.5564	0.0910	0.1298	1,937.4979
2029	0.5128	3.6491	5.1506	0.0198	1.4384	0.0854	1.5238	0.3887	0.0805	0.4692	0.0000	1,875.3297	1,875.3297	0.0899	0.1271	1,915.4634
2030	0.4871	3.0367	5.0550	0.0200	1.4384	0.0356	1.4739	0.3887	0.0347	0.4234	0.0000	1,890.2492	1,890.2492	0.0313	0.1244	1,928.0883
2031	0.4695	3.0201	4.9613	0.0197	1.4384	0.0352	1.4736	0.3887	0.0344	0.4231	0.0000	1,867.5610	1,867.5610	0.0302	0.1219	1,904.6513

Fargo Village - Kings County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2032	0.4557	3.0175	4.9017	0.0196	1.4439	0.0351	1.4789	0.3902	0.0343	0.4245	0.0000	1,854.6089	1,854.6089	0.0294	0.1203	1,891.1901
2033	0.4383	2.9823	4.7973	0.0192	1.4328	0.0345	1.4674	0.3873	0.0337	0.4210	0.0000	1,822.7341	1,822.7341	0.0283	0.1175	1,858.4682
2034	0.4262	2.9709	4.7388	0.0190	1.4328	0.0343	1.4671	0.3873	0.0335	0.4207	0.0000	1,806.9473	1,806.9473	0.0276	0.1159	1,842.1799
2035	0.4049	2.8704	4.7021	0.0189	1.4384	0.0266	1.4650	0.3887	0.0259	0.4146	0.0000	1,799.9620	1,799.9620	0.0261	0.1149	1,834.8670
2036	0.4064	2.8814	4.7201	0.0190	1.4439	0.0267	1.4706	0.3902	0.0260	0.4162	0.0000	1,806.8584	1,806.8584	0.0262	0.1154	1,841.8972
2037	0.4049	2.8704	4.7021	0.0189	1.4384	0.0266	1.4650	0.3887	0.0259	0.4146	0.0000	1,799.9620	1,799.9620	0.0261	0.1149	1,834.8670
2038	0.4049	2.8704	4.7021	0.0189	1.4384	0.0266	1.4650	0.3887	0.0259	0.4146	0.0000	1,799.9620	1,799.9620	0.0261	0.1149	1,834.8670
2039	0.4033	2.8594	4.6840	0.0188	1.4328	0.0265	1.4593	0.3873	0.0258	0.4130	0.0000	1,793.0656	1,793.0656	0.0260	0.1145	1,827.8369
2040	0.3630	2.8027	4.5377	0.0183	1.4384	0.0236	1.4619	0.3887	0.0229	0.4116	0.0000	1,752.4845	1,752.4845	0.0235	0.1103	1,785.9347
2041	0.3630	2.8027	4.5377	0.0183	1.4384	0.0236	1.4619	0.3887	0.0229	0.4116	0.0000	1,752.4845	1,752.4845	0.0235	0.1103	1,785.9347
2042	0.3630	2.8027	4.5377	0.0183	1.4384	0.0236	1.4619	0.3887	0.0229	0.4116	0.0000	1,752.4845	1,752.4845	0.0235	0.1103	1,785.9347
2043	0.3630	2.8027	4.5377	0.0183	1.4384	0.0236	1.4619	0.3887	0.0229	0.4116	0.0000	1,752.4845	1,752.4845	0.0235	0.1103	1,785.9347
2044	0.3630	2.8027	4.5377	0.0183	1.4384	0.0236	1.4619	0.3887	0.0229	0.4116	0.0000	1,752.4845	1,752.4845	0.0235	0.1103	1,785.9347
2045	0.1969	1.1693	2.7922	8.0000e-003	0.4408	0.0176	0.4584	0.1191	0.0174	0.1365	0.0000	742.8964	742.8964	0.0142	0.0325	752.9264
2046	1.9598	0.3207	1.4415	2.9000e-003	0.1088	9.2200e-003	0.1180	0.0289	9.2100e-003	0.0381	0.0000	260.7916	260.7916	7.2100e-003	1.4000e-003	261.3889
2047	3.6177	0.0949	0.4937	1.4900e-003	0.1918	1.1400e-003	0.1929	0.0510	1.1100e-003	0.0521	0.0000	147.6337	147.6337	2.2200e-003	2.4700e-003	148.4246
Maximum	**3.6177**	**3.6770**	**5.2550**	**0.0201**	**1.4439**	**0.1477**	**1.5238**	**0.3902**	**0.1359**	**0.4872**	**0.0000**	**1,896.5564**	**1,896.5564**	**0.2304**	**0.1298**	**1,937.4979**

Fargo Village - Kings County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	11.82	0.00	11.44	14.76	0.00	13.31	0.00	0.00	0.00	0.00	0.00	0.00

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	1-1-2025	3-31-2025	0.8910	0.8910
2	4-1-2025	6-30-2025	0.9031	0.9031
3	7-1-2025	9-30-2025	0.9355	0.9355
4	10-1-2025	12-31-2025	1.0164	1.0164
5	1-1-2026	3-31-2026	0.9941	0.9941
6	4-1-2026	6-30-2026	1.0051	1.0051
7	7-1-2026	9-30-2026	1.0162	1.0162
8	10-1-2026	12-31-2026	1.0162	1.0162
9	1-1-2027	3-31-2027	0.9939	0.9939
10	4-1-2027	6-30-2027	1.0083	1.0083
11	7-1-2027	9-30-2027	1.0604	1.0604
12	10-1-2027	12-31-2027	1.0903	1.0903
13	1-1-2028	3-31-2028	1.0661	1.0661
14	4-1-2028	6-30-2028	1.0365	1.0365
15	7-1-2028	9-30-2028	1.0479	1.0479
16	10-1-2028	12-31-2028	1.0778	1.0778
17	1-1-2029	3-31-2029	1.0428	1.0428
18	4-1-2029	6-30-2029	1.0250	1.0250
19	7-1-2029	9-30-2029	1.0362	1.0362
20	10-1-2029	12-31-2029	1.0660	1.0660
21	1-1-2030	3-31-2030	0.8852	0.8852
22	4-1-2030	6-30-2030	0.8656	0.8656
23	7-1-2030	9-30-2030	0.8751	0.8751
24	10-1-2030	12-31-2030	0.9049	0.9049
25	1-1-2031	3-31-2031	0.8765	0.8765

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

26	**4-1-2031**	**6-30-2031**	0.8566	0.8566
27	**7-1-2031**	**9-30-2031**	0.8661	0.8661
28	**10-1-2031**	**12-31-2031**	0.8959	0.8959
29	**1-1-2032**	**3-31-2032**	0.8785	0.8785
30	**4-1-2032**	**6-30-2032**	0.8488	0.8488
31	**7-1-2032**	**9-30-2032**	0.8581	0.8581
32	**10-1-2032**	**12-31-2032**	0.8881	0.8881
33	**1-1-2033**	**3-31-2033**	0.8621	0.8621
34	**4-1-2033**	**6-30-2033**	0.8418	0.8418
35	**7-1-2033**	**9-30-2033**	0.8511	0.8511
36	**10-1-2033**	**12-31-2033**	0.8813	0.8813
37	**1-1-2034**	**3-31-2034**	0.8561	0.8561
38	**4-1-2034**	**6-30-2034**	0.8356	0.8356
39	**7-1-2034**	**9-30-2034**	0.8448	0.8448
40	**10-1-2034**	**12-31-2034**	0.8751	0.8751
41	**1-1-2035**	**3-31-2035**	0.8227	0.8227
42	**4-1-2035**	**6-30-2035**	0.8016	0.8016
43	**7-1-2035**	**9-30-2035**	0.8104	0.8104
44	**10-1-2035**	**12-31-2035**	0.8410	0.8410
45	**1-1-2036**	**3-31-2036**	0.8319	0.8319
46	**4-1-2036**	**6-30-2036**	0.8016	0.8016
47	**7-1-2036**	**9-30-2036**	0.8104	0.8104
48	**10-1-2036**	**12-31-2036**	0.8410	0.8410
49	**1-1-2037**	**3-31-2037**	0.8227	0.8227
50	**4-1-2037**	**6-30-2037**	0.8016	0.8016
51	**7-1-2037**	**9-30-2037**	0.8104	0.8104
52	**10-1-2037**	**12-31-2037**	0.8410	0.8410
53	**1-1-2038**	**3-31-2038**	0.8227	0.8227
54	**4-1-2038**	**6-30-2038**	0.8016	0.8016

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

55	**7-1-2038**	**9-30-2038**	0.8104	0.8104
56	**10-1-2038**	**12-31-2038**	0.8410	0.8410
57	**1-1-2039**	**3-31-2039**	0.8227	0.8227
58	**4-1-2039**	**6-30-2039**	0.8016	0.8016
59	**7-1-2039**	**9-30-2039**	0.8104	0.8104
60	**10-1-2039**	**12-31-2039**	0.8410	0.8410
61	**1-1-2040**	**3-31-2040**	0.8042	0.8042
62	**4-1-2040**	**6-30-2040**	0.7727	0.7727
63	**7-1-2040**	**9-30-2040**	0.7812	0.7812
64	**10-1-2040**	**12-31-2040**	0.8130	0.8130
65	**1-1-2041**	**3-31-2041**	0.7953	0.7953
66	**4-1-2041**	**6-30-2041**	0.7727	0.7727
67	**7-1-2041**	**9-30-2041**	0.7812	0.7812
68	**10-1-2041**	**12-31-2041**	0.8130	0.8130
69	**1-1-2042**	**3-31-2042**	0.7953	0.7953
70	**4-1-2042**	**6-30-2042**	0.7727	0.7727
71	**7-1-2042**	**9-30-2042**	0.7812	0.7812
72	**10-1-2042**	**12-31-2042**	0.8130	0.8130
73	**1-1-2043**	**3-31-2043**	0.7953	0.7953
74	**4-1-2043**	**6-30-2043**	0.7727	0.7727
75	**7-1-2043**	**9-30-2043**	0.7812	0.7812
76	**10-1-2043**	**12-31-2043**	0.8130	0.8130
77	**1-1-2044**	**3-31-2044**	0.8042	0.8042
78	**4-1-2044**	**6-30-2044**	0.7727	0.7727
79	**7-1-2044**	**9-30-2044**	0.7812	0.7812
80	**10-1-2044**	**12-31-2044**	0.8130	0.8130
81	**1-1-2045**	**3-31-2045**	0.7896	0.7896
82	**4-1-2045**	**6-30-2045**	0.2807	0.2807
83	**7-1-2045**	**9-30-2045**	0.1542	0.1542

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

84	**10-1-2045**	**12-31-2045**	0.1543	0.1543
85	**1-1-2046**	**3-31-2046**	0.1509	0.1509
86	**4-1-2046**	**6-30-2046**	0.1526	0.1526
87	**7-1-2046**	**9-30-2046**	0.8611	0.8611
88	**10-1-2046**	**12-31-2046**	1.1252	1.1252
89	**1-1-2047**	**3-31-2047**	1.1008	1.1008
90	**4-1-2047**	**6-30-2047**	1.1126	1.1126
91	**7-1-2047**	**9-30-2047**	1.1248	1.1248
		Highest	1.1252	1.1252

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	7.0097	0.5265	8.6600	3.1900e-003		0.0819	0.0819		0.0819	0.0819	0.0000	510.3665	510.3665	0.0228	9.1000e-003	513.6482
Energy	0.1339	1.1478	0.5138	7.3000e-003		0.0925	0.0925		0.0925	0.0925	0.0000	1,757.4157	1,757.4157	0.1443	0.0387	1,772.5586
Mobile	1.2545	4.3610	23.4676	0.0785	11.1988	0.0433	11.2421	2.9887	0.0407	3.0294	0.0000	8,094.4390	8,094.4390	0.4206	0.3539	8,210.3998
Waste						0.0000	0.0000		0.0000	0.0000	210.2763	0.0000	210.2763	12.4270	0.0000	520.9507
Water						0.0000	0.0000		0.0000	0.0000	24.1497	38.3561	62.5058	2.4910	0.0599	142.6140
Total	**8.3980**	**6.0353**	**32.6413**	**0.0889**	**11.1988**	**0.2177**	**11.4165**	**2.9887**	**0.2151**	**3.2038**	**234.4260**	**10,400.5772**	**10,635.0032**	**15.5056**	**0.4615**	**11,160.1712**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	6.6184	0.0978	8.4775	4.5000e-004		0.0472	0.0472		0.0472	0.0472	0.0000	13.9108	13.9108	0.0133	0.0000	14.2423
Energy	0.1339	1.1478	0.5138	7.3000e-003		0.0925	0.0925		0.0925	0.0925	0.0000	1,757.1310	1,757.1310	0.1443	0.0387	1,772.2692
Mobile	1.0402	2.3788	12.4871	0.0278	3.7236	0.0165	3.7401	0.9937	0.0155	1.0092	0.0000	2,864.0811	2,864.0811	0.1911	0.1736	2,920.5825
Waste						0.0000	0.0000		0.0000	0.0000	210.2763	0.0000	210.2763	12.4270	0.0000	520.9507
Water						0.0000	0.0000		0.0000	0.0000	24.1497	38.3561	62.5058	2.4910	0.0599	142.6140
Total	**7.7924**	**3.6244**	**21.4785**	**0.0356**	**3.7236**	**0.1562**	**3.8798**	**0.9937**	**0.1552**	**1.1489**	**234.4260**	**4,673.4790**	**4,907.9050**	**15.2666**	**0.2721**	**5,370.6586**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**7.21**	**39.95**	**34.20**	**60.02**	**66.75**	**28.25**	**66.02**	**66.75**	**27.86**	**64.14**	**0.00**	**55.07**	**53.85**	**1.54**	**41.04**	**51.88**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2025	1/1/2025	5	1	
2	Site Preparation	Site Preparation	1/2/2025	9/10/2025	5	180	
3	Grading	Grading	9/11/2025	6/23/2027	5	465	

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4	Building Construction	Building Construction	6/24/2027	4/19/2045	5	4650	
5	Paving	Paving	4/20/2045	7/25/2046	5	330	
6	Architectural Coating	Architectural Coating	7/26/2046	10/30/2047	5	330	

Acres of Grading (Site Preparation Phase): 270

Acres of Grading (Grading Phase): 1395

Acres of Paving: 0

Residential Indoor: 3,449,790; Residential Outdoor: 1,149,930; Non-Residential Indoor: 75,243; Non-Residential Outdoor: 25,081; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	3.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	1,100.00	328.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	220.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Soil Stabilizer

Replace Ground Cover

Water Exposed Area

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					3.2000e-004	0.0000	3.2000e-004	5.0000e-005	0.0000	5.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.0500e-003	9.6000e-003	9.7100e-003	2.0000e-005		4.3000e-004	4.3000e-004		4.0000e-004	4.0000e-004	0.0000	1.6999	1.6999	4.7000e-004	0.0000	1.7118
Total	**1.0500e-003**	**9.6000e-003**	**9.7100e-003**	**2.0000e-005**	**3.2000e-004**	**4.3000e-004**	**7.5000e-004**	**5.0000e-005**	**4.0000e-004**	**4.5000e-004**	**0.0000**	**1.6999**	**1.6999**	**4.7000e-004**	**0.0000**	**1.7118**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	1.8000e-004	4.0000e-005	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0806	0.0806	0.0000	1.0000e-005	0.0844
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.0000e-005	1.0000e-005	1.6000e-004	0.0000	6.0000e-005	0.0000	6.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0457	0.0457	0.0000	0.0000	0.0461
Total	**2.0000e-005**	**1.9000e-004**	**2.0000e-004**	**0.0000**	**9.0000e-005**	**0.0000**	**9.0000e-005**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**0.0000**	**0.1263**	**0.1263**	**0.0000**	**1.0000e-005**	**0.1305**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2025

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.0000e-004	0.0000	1.0000e-004	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.0500e-003	9.6000e-003	9.7100e-003	2.0000e-005		4.3000e-004	4.3000e-004		4.0000e-004	4.0000e-004	0.0000	1.6999	1.6999	4.7000e-004	0.0000	1.7118
Total	**1.0500e-003**	**9.6000e-003**	**9.7100e-003**	**2.0000e-005**	**1.0000e-004**	**4.3000e-004**	**5.3000e-004**	**2.0000e-005**	**4.0000e-004**	**4.2000e-004**	**0.0000**	**1.6999**	**1.6999**	**4.7000e-004**	**0.0000**	**1.7118**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	1.8000e-004	4.0000e-005	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0806	0.0806	0.0000	1.0000e-005	0.0844
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.0000e-005	1.0000e-005	1.6000e-004	0.0000	6.0000e-005	0.0000	6.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0457	0.0457	0.0000	0.0000	0.0461
Total	**2.0000e-005**	**1.9000e-004**	**2.0000e-004**	**0.0000**	**9.0000e-005**	**0.0000**	**9.0000e-005**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**0.0000**	**0.1263**	**0.1263**	**0.0000**	**1.0000e-005**	**0.1305**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Site Preparation - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.7691	0.0000	1.7691	0.9092	0.0000	0.9092	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.2225	2.2711	1.6121	3.4300e-003		0.0978	0.0978		0.0900	0.0900	0.0000	301.2029	301.2029	0.0974	0.0000	303.6383
Total	**0.2225**	**2.2711**	**1.6121**	**3.4300e-003**	**1.7691**	**0.0978**	**1.8669**	**0.9092**	**0.0900**	**0.9992**	**0.0000**	**301.2029**	**301.2029**	**0.0974**	**0.0000**	**303.6383**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.2000e-003	2.6500e-003	0.0346	1.0000e-004	0.0130	6.0000e-005	0.0131	3.4600e-003	6.0000e-005	3.5100e-003	0.0000	9.8729	9.8729	2.6000e-004	2.6000e-004	9.9562
Total	**4.2000e-003**	**2.6500e-003**	**0.0346**	**1.0000e-004**	**0.0130**	**6.0000e-005**	**0.0131**	**3.4600e-003**	**6.0000e-005**	**3.5100e-003**	**0.0000**	**9.8729**	**9.8729**	**2.6000e-004**	**2.6000e-004**	**9.9562**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Site Preparation - 2025

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.5520	0.0000	0.5520	0.2837	0.0000	0.2837	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.2225	2.2711	1.6121	3.4300e-003		0.0978	0.0978		0.0900	0.0900	0.0000	301.2025	301.2025	0.0974	0.0000	303.6379
Total	**0.2225**	**2.2711**	**1.6121**	**3.4300e-003**	**0.5520**	**0.0978**	**0.6498**	**0.2837**	**0.0900**	**0.3737**	**0.0000**	**301.2025**	**301.2025**	**0.0974**	**0.0000**	**303.6379**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.2000e-003	2.6500e-003	0.0346	1.0000e-004	0.0130	6.0000e-005	0.0131	3.4600e-003	6.0000e-005	3.5100e-003	0.0000	9.8729	9.8729	2.6000e-004	2.6000e-004	9.9562
Total	**4.2000e-003**	**2.6500e-003**	**0.0346**	**1.0000e-004**	**0.0130**	**6.0000e-005**	**0.0131**	**3.4600e-003**	**6.0000e-005**	**3.5100e-003**	**0.0000**	**9.8729**	**9.8729**	**2.6000e-004**	**2.6000e-004**	**9.9562**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.9806	0.0000	0.9806	0.2123	0.0000	0.2123	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1161	1.1177	1.0532	2.4800e-003		0.0452	0.0452		0.0416	0.0416	0.0000	218.0249	218.0249	0.0705	0.0000	219.7877
Total	**0.1161**	**1.1177**	**1.0532**	**2.4800e-003**	**0.9806**	**0.0452**	**1.0258**	**0.2123**	**0.0416**	**0.2539**	**0.0000**	**218.0249**	**218.0249**	**0.0705**	**0.0000**	**219.7877**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.0800e-003	1.3100e-003	0.0171	5.0000e-005	6.4300e-003	3.0000e-005	6.4600e-003	1.7100e-003	3.0000e-005	1.7300e-003	0.0000	4.8755	4.8755	1.3000e-004	1.3000e-004	4.9166
Total	**2.0800e-003**	**1.3100e-003**	**0.0171**	**5.0000e-005**	**6.4300e-003**	**3.0000e-005**	**6.4600e-003**	**1.7100e-003**	**3.0000e-005**	**1.7300e-003**	**0.0000**	**4.8755**	**4.8755**	**1.3000e-004**	**1.3000e-004**	**4.9166**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2025

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.3059	0.0000	0.3059	0.0662	0.0000	0.0662	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1161	1.1177	1.0532	2.4800e-003		0.0452	0.0452		0.0416	0.0416	0.0000	218.0246	218.0246	0.0705	0.0000	219.7874
Total	**0.1161**	**1.1177**	**1.0532**	**2.4800e-003**	**0.3059**	**0.0452**	**0.3512**	**0.0662**	**0.0416**	**0.1079**	**0.0000**	**218.0246**	**218.0246**	**0.0705**	**0.0000**	**219.7874**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.0800e-003	1.3100e-003	0.0171	5.0000e-005	6.4300e-003	3.0000e-005	6.4600e-003	1.7100e-003	3.0000e-005	1.7300e-003	0.0000	4.8755	4.8755	1.3000e-004	1.3000e-004	4.9166
Total	**2.0800e-003**	**1.3100e-003**	**0.0171**	**5.0000e-005**	**6.4300e-003**	**3.0000e-005**	**6.4600e-003**	**1.7100e-003**	**3.0000e-005**	**1.7300e-003**	**0.0000**	**4.8755**	**4.8755**	**1.3000e-004**	**1.3000e-004**	**4.9166**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2026

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.5256	0.0000	1.5256	0.5119	0.0000	0.5119	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.3786	3.6466	3.4362	8.1000e-003		0.1476	0.1476		0.1358	0.1358	0.0000	711.3061	711.3061	0.2301	0.0000	717.0573
Total	**0.3786**	**3.6466**	**3.4362**	**8.1000e-003**	**1.5256**	**0.1476**	**1.6732**	**0.5119**	**0.1358**	**0.6476**	**0.0000**	**711.3061**	**711.3061**	**0.2301**	**0.0000**	**717.0573**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.3400e-003	3.8500e-003	0.0528	1.6000e-004	0.0210	9.0000e-005	0.0211	5.5700e-003	9.0000e-005	5.6600e-003	0.0000	15.5957	15.5957	3.8000e-004	3.9000e-004	15.7216
Total	**6.3400e-003**	**3.8500e-003**	**0.0528**	**1.6000e-004**	**0.0210**	**9.0000e-005**	**0.0211**	**5.5700e-003**	**9.0000e-005**	**5.6600e-003**	**0.0000**	**15.5957**	**15.5957**	**3.8000e-004**	**3.9000e-004**	**15.7216**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2026

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.4760	0.0000	0.4760	0.1597	0.0000	0.1597	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.3786	3.6465	3.4362	8.1000e-003		0.1476	0.1476		0.1358	0.1358	0.0000	711.3052	711.3052	0.2301	0.0000	717.0565
Total	**0.3786**	**3.6465**	**3.4362**	**8.1000e-003**	**0.4760**	**0.1476**	**0.6236**	**0.1597**	**0.1358**	**0.2955**	**0.0000**	**711.3052**	**711.3052**	**0.2301**	**0.0000**	**717.0565**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.3400e-003	3.8500e-003	0.0528	1.6000e-004	0.0210	9.0000e-005	0.0211	5.5700e-003	9.0000e-005	5.6600e-003	0.0000	15.5957	15.5957	3.8000e-004	3.9000e-004	15.7216
Total	**6.3400e-003**	**3.8500e-003**	**0.0528**	**1.6000e-004**	**0.0210**	**9.0000e-005**	**0.0211**	**5.5700e-003**	**9.0000e-005**	**5.6600e-003**	**0.0000**	**15.5957**	**15.5957**	**3.8000e-004**	**3.9000e-004**	**15.7216**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2027

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.1131	0.0000	1.1131	0.2851	0.0000	0.2851	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1799	1.7325	1.6325	3.8500e-003		0.0701	0.0701		0.0645	0.0645	0.0000	337.9385	337.9385	0.1093	0.0000	340.6709
Total	**0.1799**	**1.7325**	**1.6325**	**3.8500e-003**	**1.1131**	**0.0701**	**1.1832**	**0.2851**	**0.0645**	**0.3496**	**0.0000**	**337.9385**	**337.9385**	**0.1093**	**0.0000**	**340.6709**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.8200e-003	1.6600e-003	0.0237	8.0000e-005	9.9600e-003	4.0000e-005	0.0100	2.6500e-003	4.0000e-005	2.6900e-003	0.0000	7.2501	7.2501	1.6000e-004	1.8000e-004	7.3065
Total	**2.8200e-003**	**1.6600e-003**	**0.0237**	**8.0000e-005**	**9.9600e-003**	**4.0000e-005**	**0.0100**	**2.6500e-003**	**4.0000e-005**	**2.6900e-003**	**0.0000**	**7.2501**	**7.2501**	**1.6000e-004**	**1.8000e-004**	**7.3065**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2027

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.3473	0.0000	0.3473	0.0890	0.0000	0.0890	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1799	1.7325	1.6325	3.8500e-003		0.0701	0.0701		0.0645	0.0645	0.0000	337.9381	337.9381	0.1093	0.0000	340.6705
Total	**0.1799**	**1.7325**	**1.6325**	**3.8500e-003**	**0.3473**	**0.0701**	**0.4174**	**0.0890**	**0.0645**	**0.1535**	**0.0000**	**337.9381**	**337.9381**	**0.1093**	**0.0000**	**340.6705**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.8200e-003	1.6600e-003	0.0237	8.0000e-005	9.9600e-003	4.0000e-005	0.0100	2.6500e-003	4.0000e-005	2.6900e-003	0.0000	7.2501	7.2501	1.6000e-004	1.8000e-004	7.3065
Total	**2.8200e-003**	**1.6600e-003**	**0.0237**	**8.0000e-005**	**9.9600e-003**	**4.0000e-005**	**0.0100**	**2.6500e-003**	**4.0000e-005**	**2.6900e-003**	**0.0000**	**7.2501**	**7.2501**	**1.6000e-004**	**1.8000e-004**	**7.3065**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2027

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0937	0.8542	1.1018	1.8500e-003		0.0361	0.0361		0.0340	0.0340	0.0000	158.8648	158.8648	0.0373	0.0000	159.7984
Total	**0.0937**	**0.8542**	**1.1018**	**1.8500e-003**		**0.0361**	**0.0361**		**0.0340**	**0.0340**	**0.0000**	**158.8648**	**158.8648**	**0.0373**	**0.0000**	**159.7984**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0252	0.9878	0.3044	4.3500e-003	0.1496	6.5700e-003	0.1562	0.0432	6.2800e-003	0.0495	0.0000	416.0826	416.0826	1.4800e-003	0.0595	433.8418
Worker	0.1714	0.1009	1.4382	4.5900e-003	0.6054	2.5600e-003	0.6079	0.1608	2.3600e-003	0.1632	0.0000	440.5619	440.5619	9.9400e-003	0.0107	443.9898
Total	**0.1966**	**1.0887**	**1.7426**	**8.9400e-003**	**0.7550**	**9.1300e-003**	**0.7641**	**0.2041**	**8.6400e-003**	**0.2127**	**0.0000**	**856.6446**	**856.6446**	**0.0114**	**0.0701**	**877.8316**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2027

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0937	0.8542	1.1018	1.8500e-003		0.0361	0.0361		0.0340	0.0340	0.0000	158.8646	158.8646	0.0373	0.0000	159.7982
Total	**0.0937**	**0.8542**	**1.1018**	**1.8500e-003**		**0.0361**	**0.0361**		**0.0340**	**0.0340**	**0.0000**	**158.8646**	**158.8646**	**0.0373**	**0.0000**	**159.7982**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0252	0.9878	0.3044	4.3500e-003	0.1496	6.5700e-003	0.1562	0.0432	6.2800e-003	0.0495	0.0000	416.0826	416.0826	1.4800e-003	0.0595	433.8418
Worker	0.1714	0.1009	1.4382	4.5900e-003	0.6054	2.5600e-003	0.6079	0.1608	2.3600e-003	0.1632	0.0000	440.5619	440.5619	9.9400e-003	0.0107	443.9898
Total	**0.1966**	**1.0887**	**1.7426**	**8.9400e-003**	**0.7550**	**9.1300e-003**	**0.7641**	**0.2041**	**8.6400e-003**	**0.2127**	**0.0000**	**856.6446**	**856.6446**	**0.0114**	**0.0701**	**877.8316**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2028

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1778	1.6211	2.0910	3.5000e-003		0.0686	0.0686		0.0645	0.0645	0.0000	301.4953	301.4953	0.0709	0.0000	303.2671
Total	**0.1778**	**1.6211**	**2.0910**	**3.5000e-003**		**0.0686**	**0.0686**		**0.0645**	**0.0645**	**0.0000**	**301.4953**	**301.4953**	**0.0709**	**0.0000**	**303.2671**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0472	1.8639	0.5708	8.1100e-003	0.2840	0.0124	0.2964	0.0820	0.0118	0.0938	0.0000	775.1768	775.1768	2.7600e-003	0.1105	808.1671
Worker	0.3052	0.1754	2.5932	8.4700e-003	1.1488	4.5500e-003	1.1534	0.3052	4.1800e-003	0.3094	0.0000	819.8847	819.8847	0.0173	0.0193	826.0641
Total	**0.3524**	**2.0393**	**3.1640**	**0.0166**	**1.4328**	**0.0169**	**1.4498**	**0.3873**	**0.0160**	**0.4033**	**0.0000**	**1,595.0615**	**1,595.0615**	**0.0201**	**0.1298**	**1,634.2311**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2028

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1778	1.6211	2.0910	3.5000e-003		0.0686	0.0686		0.0645	0.0645	0.0000	301.4949	301.4949	0.0709	0.0000	303.2667
Total	**0.1778**	**1.6211**	**2.0910**	**3.5000e-003**		**0.0686**	**0.0686**		**0.0645**	**0.0645**	**0.0000**	**301.4949**	**301.4949**	**0.0709**	**0.0000**	**303.2667**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0472	1.8639	0.5708	8.1100e-003	0.2840	0.0124	0.2964	0.0820	0.0118	0.0938	0.0000	775.1768	775.1768	2.7600e-003	0.1105	808.1671
Worker	0.3052	0.1754	2.5932	8.4700e-003	1.1488	4.5500e-003	1.1534	0.3052	4.1800e-003	0.3094	0.0000	819.8847	819.8847	0.0173	0.0193	826.0641
Total	**0.3524**	**2.0393**	**3.1640**	**0.0166**	**1.4328**	**0.0169**	**1.4498**	**0.3873**	**0.0160**	**0.4033**	**0.0000**	**1,595.0615**	**1,595.0615**	**0.0201**	**0.1298**	**1,634.2311**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2029

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1785	1.6273	2.0991	3.5200e-003		0.0689	0.0689		0.0648	0.0648	0.0000	302.6549	302.6549	0.0711	0.0000	304.4335
Total	**0.1785**	**1.6273**	**2.0991**	**3.5200e-003**		**0.0689**	**0.0689**		**0.0648**	**0.0648**	**0.0000**	**302.6549**	**302.6549**	**0.0711**	**0.0000**	**304.4335**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0468	1.8595	0.5666	7.9900e-003	0.2851	0.0123	0.2974	0.0823	0.0118	0.0941	0.0000	764.1285	764.1285	2.7300e-003	0.1086	796.5571
Worker	0.2876	0.1624	2.4849	8.3000e-003	1.1533	4.2600e-003	1.1575	0.3064	3.9200e-003	0.3103	0.0000	808.5466	808.5466	0.0160	0.0185	814.4732
Total	**0.3343**	**2.0218**	**3.0515**	**0.0163**	**1.4384**	**0.0166**	**1.4549**	**0.3887**	**0.0157**	**0.4045**	**0.0000**	**1,572.6751**	**1,572.6751**	**0.0188**	**0.1271**	**1,611.0302**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2029

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1784	1.6273	2.0991	3.5200e-003		0.0689	0.0689		0.0648	0.0648	0.0000	302.6545	302.6545	0.0711	0.0000	304.4331
Total	**0.1784**	**1.6273**	**2.0991**	**3.5200e-003**		**0.0689**	**0.0689**		**0.0648**	**0.0648**	**0.0000**	**302.6545**	**302.6545**	**0.0711**	**0.0000**	**304.4331**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0468	1.8595	0.5666	7.9900e-003	0.2851	0.0123	0.2974	0.0823	0.0118	0.0941	0.0000	764.1285	764.1285	2.7300e-003	0.1086	796.5571
Worker	0.2876	0.1624	2.4849	8.3000e-003	1.1533	4.2600e-003	1.1575	0.3064	3.9200e-003	0.3103	0.0000	808.5466	808.5466	0.0160	0.0185	814.4732
Total	**0.3343**	**2.0218**	**3.0515**	**0.0163**	**1.4384**	**0.0166**	**1.4549**	**0.3887**	**0.0157**	**0.4045**	**0.0000**	**1,572.6751**	**1,572.6751**	**0.0188**	**0.1271**	**1,611.0302**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2030

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1708	1.0355	2.1085	4.0400e-003		0.0193	0.0193		0.0193	0.0193	0.0000	343.0336	343.0336	0.0138	0.0000	343.3777
Total	**0.1708**	**1.0355**	**2.1085**	**4.0400e-003**		**0.0193**	**0.0193**		**0.0193**	**0.0193**	**0.0000**	**343.0336**	**343.0336**	**0.0138**	**0.0000**	**343.3777**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0463	1.8505	0.5622	7.8600e-003	0.2851	0.0122	0.2973	0.0823	0.0117	0.0940	0.0000	751.3525	751.3525	2.6900e-003	0.1065	783.1547
Worker	0.2700	0.1507	2.3843	8.1100e-003	1.1533	3.9900e-003	1.1572	0.3064	3.6700e-003	0.3101	0.0000	795.8635	795.8635	0.0148	0.0179	801.5563
Total	**0.3163**	**2.0012**	**2.9465**	**0.0160**	**1.4384**	**0.0162**	**1.4546**	**0.3887**	**0.0154**	**0.4041**	**0.0000**	**1,547.2160**	**1,547.2160**	**0.0175**	**0.1244**	**1,584.7110**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2030

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1708	1.0355	2.1085	4.0400e-003		0.0193	0.0193		0.0193	0.0193	0.0000	343.0332	343.0332	0.0138	0.0000	343.3773
Total	**0.1708**	**1.0355**	**2.1085**	**4.0400e-003**		**0.0193**	**0.0193**		**0.0193**	**0.0193**	**0.0000**	**343.0332**	**343.0332**	**0.0138**	**0.0000**	**343.3773**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0463	1.8505	0.5622	7.8600e-003	0.2851	0.0122	0.2973	0.0823	0.0117	0.0940	0.0000	751.3525	751.3525	2.6900e-003	0.1065	783.1547
Worker	0.2700	0.1507	2.3843	8.1100e-003	1.1533	3.9900e-003	1.1572	0.3064	3.6700e-003	0.3101	0.0000	795.8635	795.8635	0.0148	0.0179	801.5563
Total	**0.3163**	**2.0012**	**2.9465**	**0.0160**	**1.4384**	**0.0162**	**1.4546**	**0.3887**	**0.0154**	**0.4041**	**0.0000**	**1,547.2160**	**1,547.2160**	**0.0175**	**0.1244**	**1,584.7110**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2031

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1708	1.0355	2.1085	4.0400e-003		0.0193	0.0193		0.0193	0.0193	0.0000	343.0336	343.0336	0.0138	0.0000	343.3777
Total	**0.1708**	**1.0355**	**2.1085**	**4.0400e-003**		**0.0193**	**0.0193**		**0.0193**	**0.0193**	**0.0000**	**343.0336**	**343.0336**	**0.0138**	**0.0000**	**343.3777**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0459	1.8446	0.5588	7.7400e-003	0.2851	0.0122	0.2973	0.0823	0.0116	0.0940	0.0000	739.9425	739.9425	2.6700e-003	0.1047	771.2017
Worker	0.2528	0.1401	2.2940	7.9500e-003	1.1533	3.7300e-003	1.1570	0.3064	3.4300e-003	0.3098	0.0000	784.5853	784.5853	0.0138	0.0173	790.0723
Total	**0.2987**	**1.9847**	**2.8528**	**0.0157**	**1.4384**	**0.0159**	**1.4542**	**0.3887**	**0.0151**	**0.4038**	**0.0000**	**1,524.5278**	**1,524.5278**	**0.0164**	**0.1219**	**1,561.2740**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2031

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1708	1.0355	2.1085	4.0400e-003		0.0193	0.0193		0.0193	0.0193	0.0000	343.0332	343.0332	0.0138	0.0000	343.3773
Total	**0.1708**	**1.0355**	**2.1085**	**4.0400e-003**		**0.0193**	**0.0193**		**0.0193**	**0.0193**	**0.0000**	**343.0332**	**343.0332**	**0.0138**	**0.0000**	**343.3773**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0459	1.8446	0.5588	7.7400e-003	0.2851	0.0122	0.2973	0.0823	0.0116	0.0940	0.0000	739.9425	739.9425	2.6700e-003	0.1047	771.2017
Worker	0.2528	0.1401	2.2940	7.9500e-003	1.1533	3.7300e-003	1.1570	0.3064	3.4300e-003	0.3098	0.0000	784.5853	784.5853	0.0138	0.0173	790.0723
Total	**0.2987**	**1.9847**	**2.8528**	**0.0157**	**1.4384**	**0.0159**	**1.4542**	**0.3887**	**0.0151**	**0.4038**	**0.0000**	**1,524.5278**	**1,524.5278**	**0.0164**	**0.1219**	**1,561.2740**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2032

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1715	1.0394	2.1166	4.0600e-003		0.0194	0.0194		0.0194	0.0194	0.0000	344.3479	344.3479	0.0138	0.0000	344.6933
Total	**0.1715**	**1.0394**	**2.1166**	**4.0600e-003**		**0.0194**	**0.0194**		**0.0194**	**0.0194**	**0.0000**	**344.3479**	**344.3479**	**0.0138**	**0.0000**	**344.6933**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0458	1.8461	0.5596	7.6700e-003	0.2862	0.0122	0.2983	0.0826	0.0116	0.0943	0.0000	732.5702	732.5702	2.6600e-003	0.1035	763.4675
Worker	0.2384	0.1319	2.2256	7.8300e-003	1.1577	3.5000e-003	1.1612	0.3076	3.2200e-003	0.3108	0.0000	777.6913	777.6913	0.0129	0.0168	783.0297
Total	**0.2843**	**1.9781**	**2.7852**	**0.0155**	**1.4439**	**0.0157**	**1.4595**	**0.3902**	**0.0148**	**0.4051**	**0.0000**	**1,510.2614**	**1,510.2614**	**0.0155**	**0.1203**	**1,546.4972**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2032

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1715	1.0394	2.1166	4.0600e-003		0.0194	0.0194		0.0194	0.0194	0.0000	344.3475	344.3475	0.0138	0.0000	344.6929
Total	**0.1715**	**1.0394**	**2.1166**	**4.0600e-003**		**0.0194**	**0.0194**		**0.0194**	**0.0194**	**0.0000**	**344.3475**	**344.3475**	**0.0138**	**0.0000**	**344.6929**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0458	1.8461	0.5596	7.6700e-003	0.2862	0.0122	0.2983	0.0826	0.0116	0.0943	0.0000	732.5702	732.5702	2.6600e-003	0.1035	763.4675
Worker	0.2384	0.1319	2.2256	7.8300e-003	1.1577	3.5000e-003	1.1612	0.3076	3.2200e-003	0.3108	0.0000	777.6913	777.6913	0.0129	0.0168	783.0297
Total	**0.2843**	**1.9781**	**2.7852**	**0.0155**	**1.4439**	**0.0157**	**1.4595**	**0.3902**	**0.0148**	**0.4051**	**0.0000**	**1,510.2614**	**1,510.2614**	**0.0155**	**0.1203**	**1,546.4972**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2033

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1702	1.0315	2.1004	4.0200e-003		0.0193	0.0193		0.0193	0.0193	0.0000	341.7193	341.7193	0.0137	0.0000	342.0621
Total	**0.1702**	**1.0315**	**2.1004**	**4.0200e-003**		**0.0193**	**0.0193**		**0.0193**	**0.0193**	**0.0000**	**341.7193**	**341.7193**	**0.0137**	**0.0000**	**342.0621**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0454	1.8271	0.5555	7.5100e-003	0.2840	0.0120	0.2960	0.0820	0.0115	0.0935	0.0000	717.9216	717.9216	2.6400e-003	0.1012	748.1572
Worker	0.2228	0.1236	2.1414	7.6400e-003	1.1488	3.2600e-003	1.1521	0.3052	3.0000e-003	0.3082	0.0000	763.0936	763.0936	0.0120	0.0163	768.2494
Total	**0.2682**	**1.9508**	**2.6969**	**0.0152**	**1.4328**	**0.0153**	**1.4481**	**0.3873**	**0.0145**	**0.4017**	**0.0000**	**1,481.0152**	**1,481.0152**	**0.0146**	**0.1175**	**1,516.4066**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2033

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1702	1.0315	2.1004	4.0200e-003		0.0193	0.0193		0.0193	0.0193	0.0000	341.7189	341.7189	0.0137	0.0000	342.0617
Total	**0.1702**	**1.0315**	**2.1004**	**4.0200e-003**		**0.0193**	**0.0193**		**0.0193**	**0.0193**	**0.0000**	**341.7189**	**341.7189**	**0.0137**	**0.0000**	**342.0617**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0454	1.8271	0.5555	7.5100e-003	0.2840	0.0120	0.2960	0.0820	0.0115	0.0935	0.0000	717.9216	717.9216	2.6400e-003	0.1012	748.1572
Worker	0.2228	0.1236	2.1414	7.6400e-003	1.1488	3.2600e-003	1.1521	0.3052	3.0000e-003	0.3082	0.0000	763.0936	763.0936	0.0120	0.0163	768.2494
Total	**0.2682**	**1.9508**	**2.6969**	**0.0152**	**1.4328**	**0.0153**	**1.4481**	**0.3873**	**0.0145**	**0.4017**	**0.0000**	**1,481.0152**	**1,481.0152**	**0.0146**	**0.1175**	**1,516.4066**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2034

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1702	1.0315	2.1004	4.0200e-003		0.0193	0.0193		0.0193	0.0193	0.0000	341.7193	341.7193	0.0137	0.0000	342.0621
Total	**0.1702**	**1.0315**	**2.1004**	**4.0200e-003**		**0.0193**	**0.0193**		**0.0193**	**0.0193**	**0.0000**	**341.7193**	**341.7193**	**0.0137**	**0.0000**	**342.0621**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0453	1.8216	0.5560	7.4300e-003	0.2840	0.0119	0.2959	0.0820	0.0114	0.0934	0.0000	709.7180	709.7180	2.6400e-003	0.0999	739.5669
Worker	0.2107	0.1178	2.0824	7.5300e-003	1.1488	3.0600e-003	1.1519	0.3052	2.8200e-003	0.3081	0.0000	755.5104	755.5104	0.0112	0.0160	760.5514
Total	**0.2560**	**1.9394**	**2.6384**	**0.0150**	**1.4328**	**0.0150**	**1.4478**	**0.3873**	**0.0142**	**0.4015**	**0.0000**	**1,465.2284**	**1,465.2284**	**0.0139**	**0.1159**	**1,500.1183**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2034

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1702	1.0315	2.1004	4.0200e-003		0.0193	0.0193		0.0193	0.0193	0.0000	341.7189	341.7189	0.0137	0.0000	342.0617
Total	**0.1702**	**1.0315**	**2.1004**	**4.0200e-003**		**0.0193**	**0.0193**		**0.0193**	**0.0193**	**0.0000**	**341.7189**	**341.7189**	**0.0137**	**0.0000**	**342.0617**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0453	1.8216	0.5560	7.4300e-003	0.2840	0.0119	0.2959	0.0820	0.0114	0.0934	0.0000	709.7180	709.7180	2.6400e-003	0.0999	739.5669
Worker	0.2107	0.1178	2.0824	7.5300e-003	1.1488	3.0600e-003	1.1519	0.3052	2.8200e-003	0.3081	0.0000	755.5104	755.5104	0.0112	0.0160	760.5514
Total	**0.2560**	**1.9394**	**2.6384**	**0.0150**	**1.4328**	**0.0150**	**1.4478**	**0.3873**	**0.0142**	**0.4015**	**0.0000**	**1,465.2284**	**1,465.2284**	**0.0139**	**0.1159**	**1,500.1183**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2035

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1588	0.9346	2.1034	4.0400e-003		0.0118	0.0118		0.0118	0.0118	0.0000	343.0336	343.0336	0.0128	0.0000	343.3530
Total	**0.1588**	**0.9346**	**2.1034**	**4.0400e-003**		**0.0118**	**0.0118**		**0.0118**	**0.0118**	**0.0000**	**343.0336**	**343.0336**	**0.0128**	**0.0000**	**343.3530**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0455	1.8221	0.5587	7.3800e-003	0.2851	0.0119	0.2970	0.0823	0.0114	0.0937	0.0000	705.0608	705.0608	2.6500e-003	0.0992	734.6779
Worker	0.2006	0.1137	2.0400	7.4600e-003	1.1533	2.8900e-003	1.1562	0.3064	2.6600e-003	0.3091	0.0000	751.8680	751.8680	0.0106	0.0158	756.8365
Total	**0.2461**	**1.9358**	**2.5987**	**0.0148**	**1.4384**	**0.0148**	**1.4532**	**0.3887**	**0.0140**	**0.4028**	**0.0000**	**1,456.9288**	**1,456.9288**	**0.0133**	**0.1149**	**1,491.5144**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2035

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1588	0.9346	2.1034	4.0400e-003		0.0118	0.0118		0.0118	0.0118	0.0000	343.0332	343.0332	0.0128	0.0000	343.3526
Total	**0.1588**	**0.9346**	**2.1034**	**4.0400e-003**		**0.0118**	**0.0118**		**0.0118**	**0.0118**	**0.0000**	**343.0332**	**343.0332**	**0.0128**	**0.0000**	**343.3526**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0455	1.8221	0.5587	7.3800e-003	0.2851	0.0119	0.2970	0.0823	0.0114	0.0937	0.0000	705.0608	705.0608	2.6500e-003	0.0992	734.6779
Worker	0.2006	0.1137	2.0400	7.4600e-003	1.1533	2.8900e-003	1.1562	0.3064	2.6600e-003	0.3091	0.0000	751.8680	751.8680	0.0106	0.0158	756.8365
Total	**0.2461**	**1.9358**	**2.5987**	**0.0148**	**1.4384**	**0.0148**	**1.4532**	**0.3887**	**0.0140**	**0.4028**	**0.0000**	**1,456.9288**	**1,456.9288**	**0.0133**	**0.1149**	**1,491.5144**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2036

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1594	0.9381	2.1114	4.0600e-003		0.0118	0.0118		0.0118	0.0118	0.0000	344.3479	344.3479	0.0128	0.0000	344.6686
Total	**0.1594**	**0.9381**	**2.1114**	**4.0600e-003**		**0.0118**	**0.0118**		**0.0118**	**0.0118**	**0.0000**	**344.3479**	**344.3479**	**0.0128**	**0.0000**	**344.6686**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0457	1.8290	0.5609	7.4100e-003	0.2862	0.0120	0.2981	0.0827	0.0114	0.0941	0.0000	707.7622	707.7622	2.6600e-003	0.0995	737.4927
Worker	0.2014	0.1142	2.0478	7.4900e-003	1.1577	2.9100e-003	1.1606	0.3076	2.6700e-003	0.3103	0.0000	754.7488	754.7488	0.0107	0.0158	759.7363
Total	**0.2470**	**1.9432**	**2.6086**	**0.0149**	**1.4439**	**0.0149**	**1.4587**	**0.3902**	**0.0141**	**0.4043**	**0.0000**	**1,462.5109**	**1,462.5109**	**0.0133**	**0.1154**	**1,497.2290**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2036

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1594	0.9381	2.1114	4.0600e-003		0.0118	0.0118		0.0118	0.0118	0.0000	344.3475	344.3475	0.0128	0.0000	344.6682
Total	**0.1594**	**0.9381**	**2.1114**	**4.0600e-003**		**0.0118**	**0.0118**		**0.0118**	**0.0118**	**0.0000**	**344.3475**	**344.3475**	**0.0128**	**0.0000**	**344.6682**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0457	1.8290	0.5609	7.4100e-003	0.2862	0.0120	0.2981	0.0827	0.0114	0.0941	0.0000	707.7622	707.7622	2.6600e-003	0.0995	737.4927
Worker	0.2014	0.1142	2.0478	7.4900e-003	1.1577	2.9100e-003	1.1606	0.3076	2.6700e-003	0.3103	0.0000	754.7488	754.7488	0.0107	0.0158	759.7363
Total	**0.2470**	**1.9432**	**2.6086**	**0.0149**	**1.4439**	**0.0149**	**1.4587**	**0.3902**	**0.0141**	**0.4043**	**0.0000**	**1,462.5109**	**1,462.5109**	**0.0133**	**0.1154**	**1,497.2290**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2037

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1588	0.9346	2.1034	4.0400e-003		0.0118	0.0118		0.0118	0.0118	0.0000	343.0336	343.0336	0.0128	0.0000	343.3530
Total	**0.1588**	**0.9346**	**2.1034**	**4.0400e-003**		**0.0118**	**0.0118**		**0.0118**	**0.0118**	**0.0000**	**343.0336**	**343.0336**	**0.0128**	**0.0000**	**343.3530**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0455	1.8221	0.5587	7.3800e-003	0.2851	0.0119	0.2970	0.0823	0.0114	0.0937	0.0000	705.0608	705.0608	2.6500e-003	0.0992	734.6779
Worker	0.2006	0.1137	2.0400	7.4600e-003	1.1533	2.8900e-003	1.1562	0.3064	2.6600e-003	0.3091	0.0000	751.8680	751.8680	0.0106	0.0158	756.8365
Total	**0.2461**	**1.9358**	**2.5987**	**0.0148**	**1.4384**	**0.0148**	**1.4532**	**0.3887**	**0.0140**	**0.4028**	**0.0000**	**1,456.9288**	**1,456.9288**	**0.0133**	**0.1149**	**1,491.5144**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2037

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1588	0.9346	2.1034	4.0400e-003		0.0118	0.0118		0.0118	0.0118	0.0000	343.0332	343.0332	0.0128	0.0000	343.3526
Total	**0.1588**	**0.9346**	**2.1034**	**4.0400e-003**		**0.0118**	**0.0118**		**0.0118**	**0.0118**	**0.0000**	**343.0332**	**343.0332**	**0.0128**	**0.0000**	**343.3526**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0455	1.8221	0.5587	7.3800e-003	0.2851	0.0119	0.2970	0.0823	0.0114	0.0937	0.0000	705.0608	705.0608	2.6500e-003	0.0992	734.6779
Worker	0.2006	0.1137	2.0400	7.4600e-003	1.1533	2.8900e-003	1.1562	0.3064	2.6600e-003	0.3091	0.0000	751.8680	751.8680	0.0106	0.0158	756.8365
Total	**0.2461**	**1.9358**	**2.5987**	**0.0148**	**1.4384**	**0.0148**	**1.4532**	**0.3887**	**0.0140**	**0.4028**	**0.0000**	**1,456.9288**	**1,456.9288**	**0.0133**	**0.1149**	**1,491.5144**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2038

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1588	0.9346	2.1034	4.0400e-003		0.0118	0.0118		0.0118	0.0118	0.0000	343.0336	343.0336	0.0128	0.0000	343.3530
Total	**0.1588**	**0.9346**	**2.1034**	**4.0400e-003**		**0.0118**	**0.0118**		**0.0118**	**0.0118**	**0.0000**	**343.0336**	**343.0336**	**0.0128**	**0.0000**	**343.3530**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0455	1.8221	0.5587	7.3800e-003	0.2851	0.0119	0.2970	0.0823	0.0114	0.0937	0.0000	705.0608	705.0608	2.6500e-003	0.0992	734.6779
Worker	0.2006	0.1137	2.0400	7.4600e-003	1.1533	2.8900e-003	1.1562	0.3064	2.6600e-003	0.3091	0.0000	751.8680	751.8680	0.0106	0.0158	756.8365
Total	**0.2461**	**1.9358**	**2.5987**	**0.0148**	**1.4384**	**0.0148**	**1.4532**	**0.3887**	**0.0140**	**0.4028**	**0.0000**	**1,456.9288**	**1,456.9288**	**0.0133**	**0.1149**	**1,491.5144**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2038

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1588	0.9346	2.1034	4.0400e-003		0.0118	0.0118		0.0118	0.0118	0.0000	343.0332	343.0332	0.0128	0.0000	343.3526
Total	**0.1588**	**0.9346**	**2.1034**	**4.0400e-003**		**0.0118**	**0.0118**		**0.0118**	**0.0118**	**0.0000**	**343.0332**	**343.0332**	**0.0128**	**0.0000**	**343.3526**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0455	1.8221	0.5587	7.3800e-003	0.2851	0.0119	0.2970	0.0823	0.0114	0.0937	0.0000	705.0608	705.0608	2.6500e-003	0.0992	734.6779
Worker	0.2006	0.1137	2.0400	7.4600e-003	1.1533	2.8900e-003	1.1562	0.3064	2.6600e-003	0.3091	0.0000	751.8680	751.8680	0.0106	0.0158	756.8365
Total	**0.2461**	**1.9358**	**2.5987**	**0.0148**	**1.4384**	**0.0148**	**1.4532**	**0.3887**	**0.0140**	**0.4028**	**0.0000**	**1,456.9288**	**1,456.9288**	**0.0133**	**0.1149**	**1,491.5144**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2039

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1582	0.9310	2.0953	4.0200e-003		0.0118	0.0118		0.0118	0.0118	0.0000	341.7193	341.7193	0.0127	0.0000	342.0375
Total	**0.1582**	**0.9310**	**2.0953**	**4.0200e-003**		**0.0118**	**0.0118**		**0.0118**	**0.0118**	**0.0000**	**341.7193**	**341.7193**	**0.0127**	**0.0000**	**342.0375**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0453	1.8151	0.5566	7.3500e-003	0.2840	0.0119	0.2959	0.0820	0.0113	0.0934	0.0000	702.3594	702.3594	2.6400e-003	0.0988	731.8630
Worker	0.1998	0.1133	2.0321	7.4300e-003	1.1488	2.8800e-003	1.1517	0.3052	2.6500e-003	0.3079	0.0000	748.9873	748.9873	0.0106	0.0157	753.9367
Total	**0.2451**	**1.9284**	**2.5887**	**0.0148**	**1.4329**	**0.0147**	**1.4476**	**0.3873**	**0.0140**	**0.4012**	**0.0000**	**1,451.3467**	**1,451.3467**	**0.0132**	**0.1145**	**1,485.7998**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2039

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1582	0.9310	2.0953	4.0200e-003		0.0118	0.0118		0.0118	0.0118	0.0000	341.7189	341.7189	0.0127	0.0000	342.0371
Total	**0.1582**	**0.9310**	**2.0953**	**4.0200e-003**		**0.0118**	**0.0118**		**0.0118**	**0.0118**	**0.0000**	**341.7189**	**341.7189**	**0.0127**	**0.0000**	**342.0371**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0453	1.8151	0.5566	7.3500e-003	0.2840	0.0119	0.2959	0.0820	0.0113	0.0934	0.0000	702.3594	702.3594	2.6400e-003	0.0988	731.8630
Worker	0.1998	0.1133	2.0321	7.4300e-003	1.1488	2.8800e-003	1.1517	0.3052	2.6500e-003	0.3079	0.0000	748.9873	748.9873	0.0106	0.0157	753.9367
Total	**0.2451**	**1.9284**	**2.5887**	**0.0148**	**1.4329**	**0.0147**	**1.4476**	**0.3873**	**0.0140**	**0.4012**	**0.0000**	**1,451.3467**	**1,451.3467**	**0.0132**	**0.1145**	**1,485.7998**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2040

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1562	0.8992	2.1035	4.0400e-003		9.6200e-003	9.6200e-003		9.6200e-003	9.6200e-003	0.0000	343.0337	343.0337	0.0123	0.0000	343.3419
Total	**0.1562**	**0.8992**	**2.1035**	**4.0400e-003**		**9.6200e-003**	**9.6200e-003**		**9.6200e-003**	**9.6200e-003**	**0.0000**	**343.0337**	**343.0337**	**0.0123**	**0.0000**	**343.3419**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0457	1.8033	0.5638	7.1100e-003	0.2851	0.0117	0.2968	0.0823	0.0112	0.0935	0.0000	678.9400	678.9400	2.6700e-003	0.0952	707.3833
Worker	0.1611	0.1002	1.8704	7.1400e-003	1.1533	2.2800e-003	1.1555	0.3064	2.1000e-003	0.3085	0.0000	730.5112	730.5112	8.4500e-003	0.0151	735.2100
Total	**0.2068**	**1.9035**	**2.4342**	**0.0143**	**1.4384**	**0.0140**	**1.4523**	**0.3887**	**0.0133**	**0.4020**	**0.0000**	**1,409.4512**	**1,409.4512**	**0.0111**	**0.1103**	**1,442.5933**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2040

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1562	0.8992	2.1035	4.0400e-003		9.6200e-003	9.6200e-003		9.6200e-003	9.6200e-003	0.0000	343.0333	343.0333	0.0123	0.0000	343.3415
Total	**0.1562**	**0.8992**	**2.1035**	**4.0400e-003**		**9.6200e-003**	**9.6200e-003**		**9.6200e-003**	**9.6200e-003**	**0.0000**	**343.0333**	**343.0333**	**0.0123**	**0.0000**	**343.3415**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0457	1.8033	0.5638	7.1100e-003	0.2851	0.0117	0.2968	0.0823	0.0112	0.0935	0.0000	678.9400	678.9400	2.6700e-003	0.0952	707.3833
Worker	0.1611	0.1002	1.8704	7.1400e-003	1.1533	2.2800e-003	1.1555	0.3064	2.1000e-003	0.3085	0.0000	730.5112	730.5112	8.4500e-003	0.0151	735.2100
Total	**0.2068**	**1.9035**	**2.4342**	**0.0143**	**1.4384**	**0.0140**	**1.4523**	**0.3887**	**0.0133**	**0.4020**	**0.0000**	**1,409.4512**	**1,409.4512**	**0.0111**	**0.1103**	**1,442.5933**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2041

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1562	0.8992	2.1035	4.0400e-003		9.6200e-003	9.6200e-003		9.6200e-003	9.6200e-003	0.0000	343.0337	343.0337	0.0123	0.0000	343.3419
Total	**0.1562**	**0.8992**	**2.1035**	**4.0400e-003**		**9.6200e-003**	**9.6200e-003**		**9.6200e-003**	**9.6200e-003**	**0.0000**	**343.0337**	**343.0337**	**0.0123**	**0.0000**	**343.3419**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0457	1.8033	0.5638	7.1100e-003	0.2851	0.0117	0.2968	0.0823	0.0112	0.0935	0.0000	678.9400	678.9400	2.6700e-003	0.0952	707.3833
Worker	0.1611	0.1002	1.8704	7.1400e-003	1.1533	2.2800e-003	1.1555	0.3064	2.1000e-003	0.3085	0.0000	730.5112	730.5112	8.4500e-003	0.0151	735.2100
Total	**0.2068**	**1.9035**	**2.4342**	**0.0143**	**1.4384**	**0.0140**	**1.4523**	**0.3887**	**0.0133**	**0.4020**	**0.0000**	**1,409.4512**	**1,409.4512**	**0.0111**	**0.1103**	**1,442.5933**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2041

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1562	0.8992	2.1035	4.0400e-003		9.6200e-003	9.6200e-003		9.6200e-003	9.6200e-003	0.0000	343.0333	343.0333	0.0123	0.0000	343.3415
Total	**0.1562**	**0.8992**	**2.1035**	**4.0400e-003**		**9.6200e-003**	**9.6200e-003**		**9.6200e-003**	**9.6200e-003**	**0.0000**	**343.0333**	**343.0333**	**0.0123**	**0.0000**	**343.3415**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0457	1.8033	0.5638	7.1100e-003	0.2851	0.0117	0.2968	0.0823	0.0112	0.0935	0.0000	678.9400	678.9400	2.6700e-003	0.0952	707.3833
Worker	0.1611	0.1002	1.8704	7.1400e-003	1.1533	2.2800e-003	1.1555	0.3064	2.1000e-003	0.3085	0.0000	730.5112	730.5112	8.4500e-003	0.0151	735.2100
Total	**0.2068**	**1.9035**	**2.4342**	**0.0143**	**1.4384**	**0.0140**	**1.4523**	**0.3887**	**0.0133**	**0.4020**	**0.0000**	**1,409.4512**	**1,409.4512**	**0.0111**	**0.1103**	**1,442.5933**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2042

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1562	0.8992	2.1035	4.0400e-003		9.6200e-003	9.6200e-003		9.6200e-003	9.6200e-003	0.0000	343.0337	343.0337	0.0123	0.0000	343.3419
Total	**0.1562**	**0.8992**	**2.1035**	**4.0400e-003**		**9.6200e-003**	**9.6200e-003**		**9.6200e-003**	**9.6200e-003**	**0.0000**	**343.0337**	**343.0337**	**0.0123**	**0.0000**	**343.3419**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0457	1.8033	0.5638	7.1100e-003	0.2851	0.0117	0.2968	0.0823	0.0112	0.0935	0.0000	678.9400	678.9400	2.6700e-003	0.0952	707.3833
Worker	0.1611	0.1002	1.8704	7.1400e-003	1.1533	2.2800e-003	1.1555	0.3064	2.1000e-003	0.3085	0.0000	730.5112	730.5112	8.4500e-003	0.0151	735.2100
Total	**0.2068**	**1.9035**	**2.4342**	**0.0143**	**1.4384**	**0.0140**	**1.4523**	**0.3887**	**0.0133**	**0.4020**	**0.0000**	**1,409.4512**	**1,409.4512**	**0.0111**	**0.1103**	**1,442.5933**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2042

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1562	0.8992	2.1035	4.0400e-003		9.6200e-003	9.6200e-003		9.6200e-003	9.6200e-003	0.0000	343.0333	343.0333	0.0123	0.0000	343.3415
Total	**0.1562**	**0.8992**	**2.1035**	**4.0400e-003**		**9.6200e-003**	**9.6200e-003**		**9.6200e-003**	**9.6200e-003**	**0.0000**	**343.0333**	**343.0333**	**0.0123**	**0.0000**	**343.3415**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0457	1.8033	0.5638	7.1100e-003	0.2851	0.0117	0.2968	0.0823	0.0112	0.0935	0.0000	678.9400	678.9400	2.6700e-003	0.0952	707.3833
Worker	0.1611	0.1002	1.8704	7.1400e-003	1.1533	2.2800e-003	1.1555	0.3064	2.1000e-003	0.3085	0.0000	730.5112	730.5112	8.4500e-003	0.0151	735.2100
Total	**0.2068**	**1.9035**	**2.4342**	**0.0143**	**1.4384**	**0.0140**	**1.4523**	**0.3887**	**0.0133**	**0.4020**	**0.0000**	**1,409.4512**	**1,409.4512**	**0.0111**	**0.1103**	**1,442.5933**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2043

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1562	0.8992	2.1035	4.0400e-003		9.6200e-003	9.6200e-003		9.6200e-003	9.6200e-003	0.0000	343.0337	343.0337	0.0123	0.0000	343.3419
Total	**0.1562**	**0.8992**	**2.1035**	**4.0400e-003**		**9.6200e-003**	**9.6200e-003**		**9.6200e-003**	**9.6200e-003**	**0.0000**	**343.0337**	**343.0337**	**0.0123**	**0.0000**	**343.3419**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0457	1.8033	0.5638	7.1100e-003	0.2851	0.0117	0.2968	0.0823	0.0112	0.0935	0.0000	678.9400	678.9400	2.6700e-003	0.0952	707.3833
Worker	0.1611	0.1002	1.8704	7.1400e-003	1.1533	2.2800e-003	1.1555	0.3064	2.1000e-003	0.3085	0.0000	730.5112	730.5112	8.4500e-003	0.0151	735.2100
Total	**0.2068**	**1.9035**	**2.4342**	**0.0143**	**1.4384**	**0.0140**	**1.4523**	**0.3887**	**0.0133**	**0.4020**	**0.0000**	**1,409.4512**	**1,409.4512**	**0.0111**	**0.1103**	**1,442.5933**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2043

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1562	0.8992	2.1035	4.0400e-003		9.6200e-003	9.6200e-003		9.6200e-003	9.6200e-003	0.0000	343.0333	343.0333	0.0123	0.0000	343.3415
Total	**0.1562**	**0.8992**	**2.1035**	**4.0400e-003**		**9.6200e-003**	**9.6200e-003**		**9.6200e-003**	**9.6200e-003**	**0.0000**	**343.0333**	**343.0333**	**0.0123**	**0.0000**	**343.3415**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0457	1.8033	0.5638	7.1100e-003	0.2851	0.0117	0.2968	0.0823	0.0112	0.0935	0.0000	678.9400	678.9400	2.6700e-003	0.0952	707.3833
Worker	0.1611	0.1002	1.8704	7.1400e-003	1.1533	2.2800e-003	1.1555	0.3064	2.1000e-003	0.3085	0.0000	730.5112	730.5112	8.4500e-003	0.0151	735.2100
Total	**0.2068**	**1.9035**	**2.4342**	**0.0143**	**1.4384**	**0.0140**	**1.4523**	**0.3887**	**0.0133**	**0.4020**	**0.0000**	**1,409.4512**	**1,409.4512**	**0.0111**	**0.1103**	**1,442.5933**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2044

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1562	0.8992	2.1035	4.0400e-003		9.6200e-003	9.6200e-003		9.6200e-003	9.6200e-003	0.0000	343.0337	343.0337	0.0123	0.0000	343.3419
Total	**0.1562**	**0.8992**	**2.1035**	**4.0400e-003**		**9.6200e-003**	**9.6200e-003**		**9.6200e-003**	**9.6200e-003**	**0.0000**	**343.0337**	**343.0337**	**0.0123**	**0.0000**	**343.3419**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0457	1.8033	0.5638	7.1100e-003	0.2851	0.0117	0.2968	0.0823	0.0112	0.0935	0.0000	678.9400	678.9400	2.6700e-003	0.0952	707.3833
Worker	0.1611	0.1002	1.8704	7.1400e-003	1.1533	2.2800e-003	1.1555	0.3064	2.1000e-003	0.3085	0.0000	730.5112	730.5112	8.4500e-003	0.0151	735.2100
Total	**0.2068**	**1.9035**	**2.4342**	**0.0143**	**1.4384**	**0.0140**	**1.4523**	**0.3887**	**0.0133**	**0.4020**	**0.0000**	**1,409.4512**	**1,409.4512**	**0.0111**	**0.1103**	**1,442.5933**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2044

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1562	0.8992	2.1035	4.0400e-003		9.6200e-003	9.6200e-003		9.6200e-003	9.6200e-003	0.0000	343.0333	343.0333	0.0123	0.0000	343.3415
Total	**0.1562**	**0.8992**	**2.1035**	**4.0400e-003**		**9.6200e-003**	**9.6200e-003**		**9.6200e-003**	**9.6200e-003**	**0.0000**	**343.0333**	**343.0333**	**0.0123**	**0.0000**	**343.3415**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0457	1.8033	0.5638	7.1100e-003	0.2851	0.0117	0.2968	0.0823	0.0112	0.0935	0.0000	678.9400	678.9400	2.6700e-003	0.0952	707.3833
Worker	0.1611	0.1002	1.8704	7.1400e-003	1.1533	2.2800e-003	1.1555	0.3064	2.1000e-003	0.3085	0.0000	730.5112	730.5112	8.4500e-003	0.0151	735.2100
Total	**0.2068**	**1.9035**	**2.4342**	**0.0143**	**1.4384**	**0.0140**	**1.4523**	**0.3887**	**0.0133**	**0.4020**	**0.0000**	**1,409.4512**	**1,409.4512**	**0.0111**	**0.1103**	**1,442.5933**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2045

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0467	0.2687	0.6286	1.2100e-003		2.8800e-003	2.8800e-003		2.8800e-003	2.8800e-003	0.0000	102.5158	102.5158	3.6800e-003	0.0000	102.6079
Total	**0.0467**	**0.2687**	**0.6286**	**1.2100e-003**		**2.8800e-003**	**2.8800e-003**		**2.8800e-003**	**2.8800e-003**	**0.0000**	**102.5158**	**102.5158**	**3.6800e-003**	**0.0000**	**102.6079**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0138	0.5382	0.1694	2.0800e-003	0.0852	3.4700e-003	0.0887	0.0246	3.3200e-003	0.0279	0.0000	198.6732	198.6732	8.0000e-004	0.0279	207.0052
Worker	0.0431	0.0287	0.5377	2.0900e-003	0.3447	6.0000e-004	0.3453	0.0916	5.5000e-004	0.0921	0.0000	215.5441	215.5441	2.2500e-003	4.4300e-003	216.9217
Total	**0.0568**	**0.5669**	**0.7071**	**4.1700e-003**	**0.4299**	**4.0700e-003**	**0.4339**	**0.1162**	**3.8700e-003**	**0.1201**	**0.0000**	**414.2172**	**414.2172**	**3.0500e-003**	**0.0323**	**423.9269**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2045

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0467	0.2687	0.6286	1.2100e-003		2.8800e-003	2.8800e-003		2.8800e-003	2.8800e-003	0.0000	102.5157	102.5157	3.6800e-003	0.0000	102.6078
Total	**0.0467**	**0.2687**	**0.6286**	**1.2100e-003**		**2.8800e-003**	**2.8800e-003**		**2.8800e-003**	**2.8800e-003**	**0.0000**	**102.5157**	**102.5157**	**3.6800e-003**	**0.0000**	**102.6078**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0138	0.5382	0.1694	2.0800e-003	0.0852	3.4700e-003	0.0887	0.0246	3.3200e-003	0.0279	0.0000	198.6732	198.6732	8.0000e-004	0.0279	207.0052
Worker	0.0431	0.0287	0.5377	2.0900e-003	0.3447	6.0000e-004	0.3453	0.0916	5.5000e-004	0.0921	0.0000	215.5441	215.5441	2.2500e-003	4.4300e-003	216.9217
Total	**0.0568**	**0.5669**	**0.7071**	**4.1700e-003**	**0.4299**	**4.0700e-003**	**0.4339**	**0.1162**	**3.8700e-003**	**0.1201**	**0.0000**	**414.2172**	**414.2172**	**3.0500e-003**	**0.0323**	**423.9269**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Paving - 2045

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0920	0.3328	1.4394	2.5500e-003		0.0106	0.0106		0.0106	0.0106	0.0000	219.3056	219.3056	7.3700e-003	0.0000	219.4899
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0920**	**0.3328**	**1.4394**	**2.5500e-003**		**0.0106**	**0.0106**		**0.0106**	**0.0106**	**0.0000**	**219.3056**	**219.3056**	**7.3700e-003**	**0.0000**	**219.4899**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.3700e-003	9.1000e-004	0.0171	7.0000e-005	0.0110	2.0000e-005	0.0110	2.9100e-003	2.0000e-005	2.9300e-003	0.0000	6.8582	6.8582	7.0000e-005	1.4000e-004	6.9021
Total	**1.3700e-003**	**9.1000e-004**	**0.0171**	**7.0000e-005**	**0.0110**	**2.0000e-005**	**0.0110**	**2.9100e-003**	**2.0000e-005**	**2.9300e-003**	**0.0000**	**6.8582**	**6.8582**	**7.0000e-005**	**1.4000e-004**	**6.9021**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Paving - 2045

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0920	0.3328	1.4394	2.5500e-003		0.0106	0.0106		0.0106	0.0106	0.0000	219.3053	219.3053	7.3700e-003	0.0000	219.4896
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0920**	**0.3328**	**1.4394**	**2.5500e-003**		**0.0106**	**0.0106**		**0.0106**	**0.0106**	**0.0000**	**219.3053**	**219.3053**	**7.3700e-003**	**0.0000**	**219.4896**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.3700e-003	9.1000e-004	0.0171	7.0000e-005	0.0110	2.0000e-005	0.0110	2.9100e-003	2.0000e-005	2.9300e-003	0.0000	6.8582	6.8582	7.0000e-005	1.4000e-004	6.9021
Total	**1.3700e-003**	**9.1000e-004**	**0.0171**	**7.0000e-005**	**0.0110**	**2.0000e-005**	**0.0110**	**2.9100e-003**	**2.0000e-005**	**2.9300e-003**	**0.0000**	**6.8582**	**6.8582**	**7.0000e-005**	**1.4000e-004**	**6.9021**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Paving - 2046

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0748	0.2706	1.1705	2.0800e-003		8.6200e-003	8.6200e-003		8.6200e-003	8.6200e-003	0.0000	178.3364	178.3364	5.9900e-003	0.0000	178.4863
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0748**	**0.2706**	**1.1705**	**2.0800e-003**		**8.6200e-003**	**8.6200e-003**		**8.6200e-003**	**8.6200e-003**	**0.0000**	**178.3364**	**178.3364**	**5.9900e-003**	**0.0000**	**178.4863**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.1100e-003	7.4000e-004	0.0139	5.0000e-005	8.9200e-003	2.0000e-005	8.9300e-003	2.3700e-003	1.0000e-005	2.3800e-003	0.0000	5.5770	5.5770	6.0000e-005	1.1000e-004	5.6127
Total	**1.1100e-003**	**7.4000e-004**	**0.0139**	**5.0000e-005**	**8.9200e-003**	**2.0000e-005**	**8.9300e-003**	**2.3700e-003**	**1.0000e-005**	**2.3800e-003**	**0.0000**	**5.5770**	**5.5770**	**6.0000e-005**	**1.1000e-004**	**5.6127**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Paving - 2046

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0748	0.2706	1.1705	2.0800e-003		8.6200e-003	8.6200e-003		8.6200e-003	8.6200e-003	0.0000	178.3362	178.3362	5.9900e-003	0.0000	178.4860
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0748**	**0.2706**	**1.1705**	**2.0800e-003**		**8.6200e-003**	**8.6200e-003**		**8.6200e-003**	**8.6200e-003**	**0.0000**	**178.3362**	**178.3362**	**5.9900e-003**	**0.0000**	**178.4860**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.1100e-003	7.4000e-004	0.0139	5.0000e-005	8.9200e-003	2.0000e-005	8.9300e-003	2.3700e-003	1.0000e-005	2.3800e-003	0.0000	5.5770	5.5770	6.0000e-005	1.1000e-004	5.6127
Total	**1.1100e-003**	**7.4000e-004**	**0.0139**	**5.0000e-005**	**8.9200e-003**	**2.0000e-005**	**8.9300e-003**	**2.3700e-003**	**1.0000e-005**	**2.3800e-003**	**0.0000**	**5.5770**	**5.5770**	**6.0000e-005**	**1.1000e-004**	**5.6127**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 2046

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	1.8649					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.4900e-003	0.0411	0.1013	1.7000e-004		4.2000e-004	4.2000e-004		4.2000e-004	4.2000e-004	0.0000	14.4259	14.4259	5.1000e-004	0.0000	14.4386
Total	**1.8714**	**0.0411**	**0.1013**	**1.7000e-004**		**4.2000e-004**	**4.2000e-004**		**4.2000e-004**	**4.2000e-004**	**0.0000**	**14.4259**	**14.4259**	**5.1000e-004**	**0.0000**	**14.4386**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0125	8.3200e-003	0.1558	6.1000e-004	0.0999	1.7000e-004	0.1000	0.0265	1.6000e-004	0.0267	0.0000	62.4525	62.4525	6.5000e-004	1.2800e-003	62.8517
Total	**0.0125**	**8.3200e-003**	**0.1558**	**6.1000e-004**	**0.0999**	**1.7000e-004**	**0.1000**	**0.0265**	**1.6000e-004**	**0.0267**	**0.0000**	**62.4525**	**62.4525**	**6.5000e-004**	**1.2800e-003**	**62.8517**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 2046

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	1.8649					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.4900e-003	0.0411	0.1013	1.7000e-004		4.2000e-004	4.2000e-004		4.2000e-004	4.2000e-004	0.0000	14.4259	14.4259	5.1000e-004	0.0000	14.4386
Total	**1.8714**	**0.0411**	**0.1013**	**1.7000e-004**		**4.2000e-004**	**4.2000e-004**		**4.2000e-004**	**4.2000e-004**	**0.0000**	**14.4259**	**14.4259**	**5.1000e-004**	**0.0000**	**14.4386**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0125	8.3200e-003	0.1558	6.1000e-004	0.0999	1.7000e-004	0.1000	0.0265	1.6000e-004	0.0267	0.0000	62.4525	62.4525	6.5000e-004	1.2800e-003	62.8517
Total	**0.0125**	**8.3200e-003**	**0.1558**	**6.1000e-004**	**0.0999**	**1.7000e-004**	**0.1000**	**0.0265**	**1.6000e-004**	**0.0267**	**0.0000**	**62.4525**	**62.4525**	**6.5000e-004**	**1.2800e-003**	**62.8517**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 2047

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	3.5813					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0125	0.0789	0.1945	3.2000e-004		8.1000e-004	8.1000e-004		8.1000e-004	8.1000e-004	0.0000	27.7028	27.7028	9.7000e-004	0.0000	27.7272
Total	**3.5937**	**0.0789**	**0.1945**	**3.2000e-004**		**8.1000e-004**	**8.1000e-004**		**8.1000e-004**	**8.1000e-004**	**0.0000**	**27.7028**	**27.7028**	**9.7000e-004**	**0.0000**	**27.7272**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0240	0.0160	0.2992	1.1600e-003	0.1918	3.3000e-004	0.1921	0.0510	3.1000e-004	0.0513	0.0000	119.9309	119.9309	1.2500e-003	2.4700e-003	120.6975
Total	**0.0240**	**0.0160**	**0.2992**	**1.1600e-003**	**0.1918**	**3.3000e-004**	**0.1921**	**0.0510**	**3.1000e-004**	**0.0513**	**0.0000**	**119.9309**	**119.9309**	**1.2500e-003**	**2.4700e-003**	**120.6975**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 2047

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	3.5813					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0125	0.0789	0.1945	3.2000e-004		8.1000e-004	8.1000e-004		8.1000e-004	8.1000e-004	0.0000	27.7028	27.7028	9.7000e-004	0.0000	27.7271
Total	**3.5937**	**0.0789**	**0.1945**	**3.2000e-004**		**8.1000e-004**	**8.1000e-004**		**8.1000e-004**	**8.1000e-004**	**0.0000**	**27.7028**	**27.7028**	**9.7000e-004**	**0.0000**	**27.7271**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0240	0.0160	0.2992	1.1600e-003	0.1918	3.3000e-004	0.1921	0.0510	3.1000e-004	0.0513	0.0000	119.9309	119.9309	1.2500e-003	2.4700e-003	120.6975
Total	**0.0240**	**0.0160**	**0.2992**	**1.1600e-003**	**0.1918**	**3.3000e-004**	**0.1921**	**0.0510**	**3.1000e-004**	**0.0513**	**0.0000**	**119.9309**	**119.9309**	**1.2500e-003**	**2.4700e-003**	**120.6975**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Density

Increase Diversity

Improve Walkability Design

Improve Destination Accessibility

Improve Pedestrian Network

Provide Traffic Calming Measures

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	1.0402	2.3788	12.4871	0.0278	3.7236	0.0165	3.7401	0.9937	0.0155	1.0092	0.0000	2,864.0811	2,864.0811	0.1911	0.1736	2,920.5825
Unmitigated	1.2545	4.3610	23.4676	0.0785	11.1988	0.0433	11.2421	2.9887	0.0407	3.0294	0.0000	8,094.4390	8,094.4390	0.4206	0.3539	8,210.3998

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	1,566.48	1,741.96	1343.92	4,464,405	1,484,415
City Park	21.52	54.08	60.42	67,736	22,522
Condo/Townhouse	1,720.20	1,912.90	1475.80	4,902,501	1,630,082
Elementary School	1,134.00	0.00	0.00	1,786,001	593,845
Single Family Housing	6,579.68	6,649.38	5959.35	18,607,533	6,187,005
Total	11,021.88	10,358.32	8,839.49	29,828,176	9,917,868

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Low Rise	10.80	7.30	7.50	42.30	19.60	38.10	86	11	3
City Park	9.50	7.30	7.30	33.00	48.00	19.00	66	28	6
Condo/Townhouse	10.80	7.30	7.50	42.30	19.60	38.10	86	11	3
Elementary School	9.50	7.30	7.30	65.00	30.00	5.00	63	25	12
Single Family Housing	10.80	7.30	7.50	42.30	19.60	38.10	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Low Rise	0.483400	0.236300	0.171600	0.062500	0.000900	0.001000	0.007900	0.023300	0.000000	0.004300	0.003300	0.001100	0.004400
City Park	0.483400	0.236300	0.171600	0.062500	0.000900	0.001000	0.007900	0.023300	0.000000	0.004300	0.003300	0.001100	0.004400
Condo/Townhouse	0.483400	0.236300	0.171600	0.062500	0.000900	0.001000	0.007900	0.023300	0.000000	0.004300	0.003300	0.001100	0.004400
Elementary School	0.483400	0.236300	0.171600	0.062500	0.000900	0.001000	0.007900	0.023300	0.000000	0.004300	0.003300	0.001100	0.004400
Single Family Housing	0.483400	0.236300	0.171600	0.062500	0.000900	0.001000	0.007900	0.023300	0.000000	0.004300	0.003300	0.001100	0.004400

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Kilowatt Hours of Renewable Electricity Generated

Fargo Village - Kings County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	432.1099	432.1099	0.1189	0.0144	439.3742
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	432.3946	432.3946	0.1189	0.0144	439.6637
NaturalGas Mitigated	0.1339	1.1478	0.5138	7.3000e-003		0.0925	0.0925		0.0925	0.0925	0.0000	1,325.0210	1,325.0210	0.0254	0.0243	1,332.8950
NaturalGas Unmitigated	0.1339	1.1478	0.5138	7.3000e-003		0.0925	0.0925		0.0925	0.0925	0.0000	1,325.0210	1,325.0210	0.0254	0.0243	1,332.8950

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Low Rise	2.92046e+006	0.0158	0.1346	0.0573	8.6000e-004		0.0109	0.0109		0.0109	0.0109	0.0000	155.8470	155.8470	2.9900e-003	2.8600e-003	156.7731
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Condo/Townhouse	3.90729e+006	0.0211	0.1800	0.0766	1.1500e-003		0.0146	0.0146		0.0146	0.0146	0.0000	208.5079	208.5079	4.0000e-003	3.8200e-003	209.7470
Elementary School	1.24803e+006	6.7300e-003	0.0612	0.0514	3.7000e-004		4.6500e-003	4.6500e-003		4.6500e-003	4.6500e-003	0.0000	66.5997	66.5997	1.2800e-003	1.2200e-003	66.9955
Single Family Housing	1.67542e+007	0.0903	0.7720	0.3285	4.9300e-003		0.0624	0.0624		0.0624	0.0624	0.0000	894.0664	894.0664	0.0171	0.0164	899.3794
Total		**0.1339**	**1.1478**	**0.5138**	**7.3100e-003**		**0.0925**	**0.0925**		**0.0925**	**0.0925**	**0.0000**	**1,325.0210**	**1,325.0210**	**0.0254**	**0.0243**	**1,332.8950**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Low Rise	2.92046e+006	0.0158	0.1346	0.0573	8.6000e-004		0.0109	0.0109		0.0109	0.0109	0.0000	155.8470	155.8470	2.9900e-003	2.8600e-003	156.7731
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Condo/Townhouse	3.90729e+006	0.0211	0.1800	0.0766	1.1500e-003		0.0146	0.0146		0.0146	0.0146	0.0000	208.5079	208.5079	4.0000e-003	3.8200e-003	209.7470
Elementary School	1.24803e+006	6.7300e-003	0.0612	0.0514	3.7000e-004		4.6500e-003	4.6500e-003		4.6500e-003	4.6500e-003	0.0000	66.5997	66.5997	1.2800e-003	1.2200e-003	66.9955
Single Family Housing	1.67542e+007	0.0903	0.7720	0.3285	4.9300e-003		0.0624	0.0624		0.0624	0.0624	0.0000	894.0664	894.0664	0.0171	0.0164	899.3794
Total		**0.1339**	**1.1478**	**0.5138**	**7.3100e-003**		**0.0925**	**0.0925**		**0.0925**	**0.0925**	**0.0000**	**1,325.0210**	**1,325.0210**	**0.0254**	**0.0243**	**1,332.8950**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	884040	48.1113	0.0132	1.6000e-003	48.9201
City Park	0	0.0000	0.0000	0.0000	0.0000
Condo/Townhouse	1.16222e+006	63.2505	0.0174	2.1100e-003	64.3138
Elementary School	341102	18.5634	5.1100e-003	6.2000e-004	18.8755
Single Family Housing	5.55785e+006	302.4694	0.0832	0.0101	307.5542
Total		**432.3946**	**0.1189**	**0.0144**	**439.6637**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	882994	48.0543	0.0132	1.6000e-003	48.8622
City Park	-1046.2	-0.0569	0.0000	0.0000	-0.0579
Condo/Townhouse	1.16118e+006	63.1936	0.0174	2.1100e-003	64.2559
Elementary School	340056	18.5065	5.0900e-003	6.2000e-004	18.8176
Single Family Housing	5.5568e+006	302.4125	0.0832	0.0101	307.4964
Total		**432.1099**	**0.1189**	**0.0144**	**439.3742**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Residential Interior

Use Low VOC Paint - Residential Exterior

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

No Hearths Installed

Use Low VOC Cleaning Supplies

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	6.6184	0.0978	8.4775	4.5000e-004		0.0472	0.0472		0.0472	0.0472	0.0000	13.9108	13.9108	0.0133	0.0000	14.2423
Unmitigated	7.0097	0.5265	8.6600	3.1900e-003		0.0819	0.0819		0.0819	0.0819	0.0000	510.3665	510.3665	0.0228	9.1000e-003	513.6482

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.2723					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	6.4333					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0502	0.4287	0.1824	2.7400e-003		0.0347	0.0347		0.0347	0.0347	0.0000	496.4557	496.4557	9.5200e-003	9.1000e-003	499.4059
Landscaping	0.2539	0.0978	8.4775	4.5000e-004		0.0472	0.0472		0.0472	0.0472	0.0000	13.9108	13.9108	0.0133	0.0000	14.2423
Total	**7.0097**	**0.5265**	**8.6600**	**3.1900e-003**		**0.0819**	**0.0819**		**0.0819**	**0.0819**	**0.0000**	**510.3665**	**510.3665**	**0.0228**	**9.1000e-003**	**513.6482**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0272					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	6.3373					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.2539	0.0978	8.4775	4.5000e-004		0.0472	0.0472		0.0472	0.0472	0.0000	13.9108	13.9108	0.0133	0.0000	14.2423
Total	**6.6184**	**0.0978**	**8.4775**	**4.5000e-004**		**0.0472**	**0.0472**		**0.0472**	**0.0472**	**0.0000**	**13.9108**	**13.9108**	**0.0133**	**0.0000**	**14.2423**

7.0 Water Detail

7.1 Mitigation Measures Water

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	62.5058	2.4910	0.0599	142.6140
Unmitigated	62.5058	2.4910	0.0599	142.6140

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	13.943 / 8.79013	10.2037	0.4559	0.0109	24.8560
City Park	0 / 32.873	6.2616	1.7200e-003	2.1000e-004	6.3668
Condo/Townhouse	15.3112 / 9.65271	11.2050	0.5007	0.0120	27.2951
Elementary School	1.45454 / 3.74026	1.6022	0.0477	1.1600e-003	3.1398
Single Family Housing	45.4124 / 28.6295	33.2334	1.4849	0.0356	80.9562
Total		**62.5058**	**2.4910**	**0.0599**	**142.6140**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	13.943 / 8.79013	10.2037	0.4559	0.0109	24.8560
City Park	0 / 32.873	6.2616	1.7200e-003	2.1000e-004	6.3668
Condo/Townhouse	15.3112 / 9.65271	11.2050	0.5007	0.0120	27.2951
Elementary School	1.45454 / 3.74026	1.6022	0.0477	1.1600e-003	3.1398
Single Family Housing	45.4124 / 28.6295	33.2334	1.4849	0.0356	80.9562
Total		**62.5058**	**2.4910**	**0.0599**	**142.6140**

8.0 Waste Detail

8.1 Mitigation Measures Waste

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	210.2763	12.4270	0.0000	520.9507
Unmitigated	210.2763	12.4270	0.0000	520.9507

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	98.44	19.9824	1.1809	0.0000	49.5056
City Park	2.37	0.4811	0.0284	0.0000	1.1919
Condo/Townhouse	108.1	21.9433	1.2968	0.0000	54.3637
Elementary School	109.5	22.2275	1.3136	0.0000	55.0677
Single Family Housing	717.48	145.6420	8.6072	0.0000	360.8218
Total		**210.2763**	**12.4270**	**0.0000**	**520.9507**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	98.44	19.9824	1.1809	0.0000	49.5056
City Park	2.37	0.4811	0.0284	0.0000	1.1919
Condo/Townhouse	108.1	21.9433	1.2968	0.0000	54.3637
Elementary School	109.5	22.2275	1.3136	0.0000	55.0677
Single Family Housing	717.48	145.6420	8.6072	0.0000	360.8218
Total		**210.2763**	**12.4270**	**0.0000**	**520.9507**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Appendix A2

CalEEMod 2005
Business-As-Usual

Singh Property 2005 BAU - Kings County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Singh Property 2005 BAU

Kings County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Elementary School	600.00	Student	14.99	50,162.02	0
City Park	27.59	Acre	27.59	1,201,820.40	0
Apartments Low Rise	214.00	Dwelling Unit	13.36	214,000.00	612
Condo/Townhouse	235.00	Dwelling Unit	56.56	235,000.00	672
Single Family Housing	697.00	Dwelling Unit	187.50	1,254,600.00	1993
Regional Shopping Center	146.36	1000sqft	3.36	146,360.00	0
Parking Lot	488.00	Space	3.36	195,200.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	37
Climate Zone	3			**Operational Year**	2025
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	390.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Lot sizes consistent with City and applicant-approved site plan. Parking spaces determined by the parking space requirement set by the City of Hanford Municipal Code Section 17.54.040 which is 1 space per 300 square feet.

Construction Phase - Demolition expected to last no more than ~1 days, as structure is 650 square feet.

Demolition -

Architectural Coating - Project to use Low VOC architectural coating products pursuant to CARB Rule 4601 for VOC emissions.

Singh Property 2005 BAU - Kings County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Vehicle Trips - Trip rates/counts based on findings of Traffic Scoping Analysis prepared by LSA Associates, Inc. for the project.

Woodstoves - Actual project values, no woodstoves proposed for installation in homes.

Area Coating - Operational phase will follow the California Air Resources Board (CARB) Rule 4601, which pertains to the reduction of Volatile Organic Compound (VOC) emissions from architectural coatings.

Energy Use - Using historical data to accurately show building efficiency.

Construction Off-road Equipment Mitigation -

Mobile Land Use Mitigation -

Area Mitigation - Rule 4601 applied to Project since it took effect in 1999.

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	150.00	100.00
tblArchitecturalCoating	EF_Nonresidential_Interior	150.00	100.00
tblArchitecturalCoating	EF_Parking	150.00	100.00
tblArchitecturalCoating	EF_Residential_Exterior	150.00	100.00
tblArchitecturalCoating	EF_Residential_Interior	150.00	100.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	150	100
tblAreaCoating	Area_EF_Nonresidential_Interior	150	100
tblAreaCoating	Area_EF_Parking	150	100
tblAreaCoating	Area_EF_Residential_Exterior	150	100
tblAreaCoating	Area_EF_Residential_Interior	150	100
tblAreaMitigation	UseLowVOCPaintParkingCheck	False	True
tblConstructionPhase	NumDays	400.00	1.00
tblConstructionPhase	PhaseEndDate	12/19/2031	6/11/2031
tblConstructionPhase	PhaseEndDate	8/4/2028	1/26/2028
tblConstructionPhase	PhaseEndDate	7/13/2001	1/3/2000
tblConstructionPhase	PhaseEndDate	10/29/2004	4/21/2003
tblConstructionPhase	PhaseEndDate	4/12/2030	10/3/2029
tblConstructionPhase	PhaseEndDate	6/14/2002	12/4/2000
tblConstructionPhase	PhaseStartDate	4/13/2030	10/4/2029
tblConstructionPhase	PhaseStartDate	10/30/2004	4/22/2004

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblConstructionPhase	PhaseStartDate	6/15/2002	12/5/2000
tblConstructionPhase	PhaseStartDate	8/5/2028	1/27/2028
tblConstructionPhase	PhaseStartDate	7/14/2001	1/4/2000
tblEnergyUse	LightingElect	3.69	2.99
tblEnergyUse	LightingElect	0.88	0.35
tblEnergyUse	LightingElect	4.53	3.71
tblEnergyUse	NT24E	2,630.88	3,172.76
tblEnergyUse	NT24E	3,125.85	3,795.01
tblEnergyUse	NT24E	5,093.98	6,155.97
tblEnergyUse	NT24NG	2,498.00	3,723.00
tblEnergyUse	NT24NG	2,951.00	3,723.00
tblEnergyUse	NT24NG	6,005.20	3,723.00
tblEnergyUse	Refrigerator	712.50	643.00
tblEnergyUse	Refrigerator	824.10	731.00
tblEnergyUse	Refrigerator	1,251.38	827.00
tblEnergyUse	T24E	499.01	147.91
tblEnergyUse	T24E	671.81	149.52
tblEnergyUse	T24E	2.81	1.92
tblEnergyUse	T24E	1,243.06	209.15
tblEnergyUse	T24E	2.77	1.91
tblEnergyUse	T24NG	13,167.83	9,924.02
tblEnergyUse	T24NG	16,254.64	12,903.77
tblEnergyUse	T24NG	27.22	22.96
tblEnergyUse	T24NG	28,148.14	20,314.55
tblEnergyUse	T24NG	10.42	8.53
tblLandUse	LotAcreage	1.15	14.99
tblLandUse	LotAcreage	13.38	13.36
tblLandUse	LotAcreage	14.69	56.56
tblLandUse	LotAcreage	226.30	187.50

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblLandUse	LotAcreage	4.39	3.36
tblWoodstoves	NumberCatalytic	13.36	0.00
tblWoodstoves	NumberCatalytic	56.56	0.00
tblWoodstoves	NumberCatalytic	187.50	0.00
tblWoodstoves	NumberNoncatalytic	13.36	0.00
tblWoodstoves	NumberNoncatalytic	56.56	0.00
tblWoodstoves	NumberNoncatalytic	187.50	0.00
tblWoodstoves	WoodstoveDayYear	82.00	0.00
tblWoodstoves	WoodstoveDayYear	82.00	0.00
tblWoodstoves	WoodstoveDayYear	82.00	0.00
tblWoodstoves	WoodstoveWoodMass	3,019.20	0.00
tblWoodstoves	WoodstoveWoodMass	3,019.20	0.00
tblWoodstoves	WoodstoveWoodMass	3,019.20	0.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2000	1.5482	10.9082	4.8127	0.0611	3.4216	0.6697	4.0913	1.3553	0.6697	2.0250	0.0000	566.2885	566.2885	0.1260	3.5000e-003	570.4797
2001	2.0331	15.9703	8.6081	0.0896	1.7931	0.8388	2.6319	0.5441	0.8387	1.3828	0.0000	878.2692	878.2692	0.1652	3.8500e-003	883.5468
2002	2.0331	15.9703	8.6081	0.0896	1.7931	0.8388	2.6319	0.5441	0.8387	1.3828	0.0000	878.2692	878.2692	0.1652	3.8500e-003	883.5468
2003	0.6154	4.8339	2.6055	0.0271	1.2305	0.2539	1.4844	0.2389	0.2539	0.4928	0.0000	265.8363	265.8363	0.0500	1.1700e-003	267.4337

Singh Property 2005 BAU - Kings County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2004	4.5734	18.4006	33.0772	0.1183	1.1312	0.8100	1.9413	0.3059	0.7888	1.0947	0.0000	2,161.5142	2,161.5142	0.3275	0.2933	2,257.1088
2005	4.9684	22.6097	34.0799	0.1645	1.6160	1.0457	2.6618	0.4370	1.0191	1.4562	0.0000	2,990.2006	2,990.2006	0.3548	0.3503	3,103.4600
2006	4.9684	22.6097	34.0799	0.1645	1.6160	1.0457	2.6618	0.4370	1.0191	1.4562	0.0000	2,990.2006	2,990.2006	0.3548	0.3503	3,103.4600
2007	4.9875	22.6966	34.2109	0.1651	1.6222	1.0498	2.6720	0.4387	1.0231	1.4618	0.0000	3,001.7014	3,001.7014	0.3562	0.3517	3,115.3964
2008	5.0066	22.7836	34.3420	0.1658	1.6285	1.0538	2.6823	0.4404	1.0270	1.4674	0.0000	3,013.2022	3,013.2022	0.3575	0.3530	3,127.3328
2009	4.9875	22.6966	34.2109	0.1651	1.6222	1.0498	2.6720	0.4387	1.0231	1.4618	0.0000	3,001.7014	3,001.7014	0.3562	0.3517	3,115.3964
2010	3.5420	17.2473	24.4062	0.0309	1.6222	0.8139	2.4361	0.4387	0.7739	1.2126	0.0000	2,893.9851	2,893.9851	0.2849	0.2870	2,986.6222
2011	3.3359	16.2914	22.7907	0.0307	1.6160	0.7800	2.3960	0.4370	0.7415	1.1785	0.0000	2,862.2956	2,862.2956	0.2697	0.2772	2,951.6293
2012	3.1304	15.3671	21.2543	0.0306	1.6222	0.7343	2.3565	0.4387	0.6975	1.1362	0.0000	2,861.2468	2,861.2468	0.2553	0.2705	2,948.2415
2013	2.8279	14.0413	19.2227	0.0301	1.6222	0.6486	2.2707	0.4387	0.6154	1.0541	0.0000	2,805.4296	2,805.4296	0.2348	0.2593	2,888.5585
2014	2.5102	12.7269	17.1025	0.0297	1.6222	0.5662	2.1883	0.4387	0.5368	0.9755	0.0000	2,766.1578	2,766.1578	0.2148	0.2488	2,845.6685
2015	2.2542	11.6439	15.3321	0.0293	1.6222	0.5121	2.1343	0.4387	0.4850	0.9237	0.0000	2,728.5547	2,728.5547	0.1978	0.2388	2,804.6724
2016	1.9768	10.4624	13.5774	0.0288	1.6222	0.4481	2.0703	0.4387	0.4239	0.8627	0.0000	2,684.0700	2,684.0700	0.1803	0.2280	2,756.5264
2017	1.6955	9.2613	11.8688	0.0282	1.6160	0.3766	1.9926	0.4370	0.3559	0.7929	0.0000	2,623.0182	2,623.0182	0.1626	0.2173	2,691.8217
2018	1.4703	8.3126	10.5530	0.0278	1.6222	0.3158	1.9380	0.4387	0.2985	0.7373	0.0000	2,581.2355	2,581.2355	0.1493	0.2094	2,647.3557
2019	1.2914	7.5352	9.4794	0.0273	1.6222	0.2690	1.8912	0.4387	0.2542	0.6930	0.0000	2,532.8062	2,532.8062	0.1380	0.2020	2,596.4381
2020	1.1439	6.8124	8.6766	0.0269	1.6285	0.2272	1.8557	0.4404	0.2147	0.6551	0.0000	2,492.9910	2,492.9910	0.1291	0.1963	2,554.7054
2021	1.0160	6.0862	7.9869	0.0263	1.6222	0.1923	1.8145	0.4387	0.1816	0.6204	0.0000	2,436.0605	2,436.0605	0.1214	0.1890	2,495.4296
2022	0.8660	5.2024	7.3190	0.0256	1.6160	0.1436	1.7597	0.4370	0.1355	0.5725	0.0000	2,369.9419	2,369.9419	0.1132	0.1813	2,426.7878

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2023	0.7485	4.4385	6.7996	0.0249	1.6160	0.1123	1.7283	0.4370	0.1057	0.5428	0.0000	2,300.3576	2,300.3576	0.1066	0.1726	2,354.4693
2024	0.7019	4.3089	6.5171	0.0245	1.6285	0.1015	1.7300	0.4404	0.0956	0.5360	0.0000	2,271.0953	2,271.0953	0.1037	0.1693	2,324.1301
2025	0.6524	4.1230	6.2032	0.0239	1.6223	0.0896	1.7119	0.4387	0.0844	0.5231	0.0000	2,213.1913	2,213.1913	0.1000	0.1639	2,264.5450
2026	0.6244	4.0829	6.0085	0.0235	1.6223	0.0894	1.7116	0.4387	0.0842	0.5229	0.0000	2,170.7003	2,170.7003	0.0977	0.1596	2,220.7033
2027	0.5985	4.0445	5.8084	0.0230	1.6223	0.0889	1.7112	0.4387	0.0837	0.5225	0.0000	2,126.1216	2,126.1216	0.0956	0.1554	2,174.8060
2028	0.1567	1.3174	2.1857	4.4200e-003	0.1265	0.0568	0.1833	0.0341	0.0524	0.0865	0.0000	395.9039	395.9039	0.0850	0.0107	401.2154
2029	1.7770	0.8961	1.6579	2.8800e-003	0.0742	0.0433	0.1175	0.0197	0.0400	0.0597	0.0000	255.1828	255.1828	0.0656	1.1900e-003	257.1775
2030	6.9568	0.1453	0.7597	2.2000e-003	0.2579	3.5300e-003	0.2614	0.0685	3.4600e-003	0.0720	0.0000	199.6933	199.6933	4.6700e-003	3.9900e-003	201.0001
2031	3.0902	0.0635	0.3284	9.6000e-004	0.1146	1.5400e-003	0.1162	0.0305	1.5100e-003	0.0320	0.0000	87.2476	87.2476	1.9700e-003	1.7200e-003	87.8079
Maximum	**6.9568**	**22.7836**	**34.3420**	**0.1658**	**3.4216**	**1.0538**	**4.0913**	**1.3553**	**1.0270**	**2.0250**	**0.0000**	**3,013.2022**	**3,013.2022**	**0.3575**	**0.3530**	**3,127.3328**

2.1 Overall Construction

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2000	1.5482	10.9082	4.8127	0.0611	3.4216	0.6697	4.0913	1.3553	0.6697	2.0250	0.0000	566.2878	566.2878	0.1260	3.5000e-003	570.4790
2001	2.0331	15.9703	8.6081	0.0896	1.7931	0.8388	2.6319	0.5441	0.8387	1.3828	0.0000	878.2682	878.2682	0.1652	3.8500e-003	883.5458

Singh Property 2005 BAU - Kings County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2002	2.0331	15.9703	8.6081	0.0896	1.7931	0.8388	2.6319	0.5441	0.8387	1.3828	0.0000	878.2682	878.2682	0.1652	3.8500e-003	883.5458
2003	0.6154	4.8339	2.6055	0.0271	1.2305	0.2539	1.4844	0.2389	0.2539	0.4928	0.0000	265.8360	265.8360	0.0500	1.1700e-003	267.4334
2004	4.5734	18.4006	33.0772	0.1183	1.1312	0.8100	1.9413	0.3059	0.7888	1.0947	0.0000	2,161.5139	2,161.5139	0.3275	0.2933	2,257.1085
2005	4.9684	22.6097	34.0799	0.1645	1.6160	1.0457	2.6618	0.4370	1.0191	1.4562	0.0000	2,990.2002	2,990.2002	0.3548	0.3503	3,103.4596
2006	4.9684	22.6097	34.0799	0.1645	1.6160	1.0457	2.6618	0.4370	1.0191	1.4562	0.0000	2,990.2002	2,990.2002	0.3548	0.3503	3,103.4596
2007	4.9875	22.6966	34.2109	0.1651	1.6222	1.0498	2.6720	0.4387	1.0231	1.4618	0.0000	3,001.7010	3,001.7010	0.3562	0.3517	3,115.3960
2008	5.0066	22.7836	34.3420	0.1658	1.6285	1.0538	2.6823	0.4404	1.0270	1.4674	0.0000	3,013.2018	3,013.2018	0.3575	0.3530	3,127.3323
2009	4.9875	22.6966	34.2109	0.1651	1.6222	1.0498	2.6720	0.4387	1.0231	1.4618	0.0000	3,001.7010	3,001.7010	0.3562	0.3517	3,115.3960
2010	3.5420	17.2473	24.4062	0.0309	1.6222	0.8139	2.4361	0.4387	0.7739	1.2126	0.0000	2,893.9847	2,893.9847	0.2849	0.2870	2,986.6218
2011	3.3359	16.2914	22.7907	0.0307	1.6160	0.7800	2.3960	0.4370	0.7415	1.1785	0.0000	2,862.2952	2,862.2952	0.2697	0.2772	2,951.6289
2012	3.1304	15.3671	21.2543	0.0306	1.6222	0.7343	2.3565	0.4387	0.6975	1.1362	0.0000	2,861.2464	2,861.2464	0.2553	0.2705	2,948.2411
2013	2.8279	14.0413	19.2227	0.0301	1.6222	0.6486	2.2707	0.4387	0.6154	1.0541	0.0000	2,805.4293	2,805.4293	0.2348	0.2593	2,888.5581
2014	2.5102	12.7269	17.1025	0.0297	1.6222	0.5661	2.1883	0.4387	0.5368	0.9755	0.0000	2,766.1575	2,766.1575	0.2148	0.2488	2,845.6681
2015	2.2542	11.6439	15.3321	0.0293	1.6222	0.5121	2.1343	0.4387	0.4850	0.9237	0.0000	2,728.5544	2,728.5544	0.1978	0.2388	2,804.6720
2016	1.9768	10.4624	13.5774	0.0288	1.6222	0.4481	2.0703	0.4387	0.4239	0.8627	0.0000	2,684.0696	2,684.0696	0.1803	0.2280	2,756.5260
2017	1.6955	9.2613	11.8688	0.0282	1.6160	0.3766	1.9926	0.4370	0.3559	0.7929	0.0000	2,623.0179	2,623.0179	0.1626	0.2173	2,691.8214
2018	1.4703	8.3126	10.5530	0.0278	1.6222	0.3158	1.9380	0.4387	0.2985	0.7373	0.0000	2,581.2351	2,581.2351	0.1493	0.2094	2,647.3553
2019	1.2914	7.5352	9.4794	0.0273	1.6222	0.2690	1.8912	0.4387	0.2542	0.6930	0.0000	2,532.8058	2,532.8058	0.1380	0.2020	2,596.4377
2020	1.1439	6.8124	8.6766	0.0269	1.6285	0.2272	1.8557	0.4404	0.2147	0.6551	0.0000	2,492.9906	2,492.9906	0.1291	0.1963	2,554.7051

Singh Property 2005 BAU - Kings County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2021	1.0160	6.0862	7.9869	0.0263	1.6222	0.1923	1.8145	0.4387	0.1816	0.6204	0.0000	2,436.0601	2,436.0601	0.1214	0.1890	2,495.4292
2022	0.8660	5.2024	7.3190	0.0256	1.6160	0.1436	1.7597	0.4370	0.1355	0.5725	0.0000	2,369.9415	2,369.9415	0.1132	0.1813	2,426.7874
2023	0.7485	4.4385	6.7996	0.0249	1.6160	0.1123	1.7283	0.4370	0.1057	0.5428	0.0000	2,300.3573	2,300.3573	0.1066	0.1726	2,354.4690
2024	0.7019	4.3089	6.5171	0.0245	1.6285	0.1015	1.7300	0.4404	0.0956	0.5360	0.0000	2,271.0949	2,271.0949	0.1037	0.1693	2,324.1297
2025	0.6524	4.1230	6.2032	0.0239	1.6223	0.0896	1.7119	0.4387	0.0844	0.5231	0.0000	2,213.1910	2,213.1910	0.1000	0.1639	2,264.5446
2026	0.6244	4.0829	6.0085	0.0235	1.6223	0.0894	1.7116	0.4387	0.0842	0.5229	0.0000	2,170.6999	2,170.6999	0.0977	0.1596	2,220.7030
2027	0.5985	4.0445	5.8084	0.0230	1.6223	0.0889	1.7112	0.4387	0.0837	0.5225	0.0000	2,126.1213	2,126.1213	0.0956	0.1554	2,174.8056
2028	0.1567	1.3174	2.1857	4.4200e-003	0.1265	0.0568	0.1833	0.0341	0.0524	0.0865	0.0000	395.9035	395.9035	0.0850	0.0107	401.2151
2029	1.7770	0.8961	1.6579	2.8800e-003	0.0742	0.0433	0.1175	0.0197	0.0400	0.0597	0.0000	255.1825	255.1825	0.0656	1.1900e-003	257.1772
2030	6.9568	0.1453	0.7597	2.2000e-003	0.2579	3.5300e-003	0.2614	0.0685	3.4600e-003	0.0720	0.0000	199.6932	199.6932	4.6700e-003	3.9900e-003	201.0001
2031	3.0902	0.0635	0.3284	9.6000e-004	0.1146	1.5400e-003	0.1162	0.0305	1.5100e-003	0.0320	0.0000	87.2476	87.2476	1.9700e-003	1.7200e-003	87.8079
Maximum	**6.9568**	**22.7836**	**34.3420**	**0.1658**	**3.4216**	**1.0538**	**4.0913**	**1.3553**	**1.0270**	**2.0250**	**0.0000**	**3,013.2018**	**3,013.2018**	**0.3575**	**0.3530**	**3,127.3323**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	**1-1-2000**	**3-31-2000**	3.0077	3.0077
2	**4-1-2000**	**6-30-2000**	3.0063	3.0063
3	**7-1-2000**	**9-30-2000**	3.0393	3.0393

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

4	**10-1-2000**	**12-31-2000**	3.4804	3.4804
5	**1-1-2001**	**3-31-2001**	4.4372	4.4372
6	**4-1-2001**	**6-30-2001**	4.4836	4.4836
7	**7-1-2001**	**9-30-2001**	4.5329	4.5329
8	**10-1-2001**	**12-31-2001**	4.5358	4.5358
9	**1-1-2002**	**3-31-2002**	4.4372	4.4372
10	**4-1-2002**	**6-30-2002**	4.4836	4.4836
11	**7-1-2002**	**9-30-2002**	4.5329	4.5329
12	**10-1-2002**	**12-31-2002**	4.5358	4.5358
13	**1-1-2003**	**3-31-2003**	4.4372	4.4372
14	**4-1-2003**	**6-30-2003**	1.0347	1.0347
18	**4-1-2004**	**6-30-2004**	6.1840	6.1840
19	**7-1-2004**	**9-30-2004**	8.1275	8.1275
20	**10-1-2004**	**12-31-2004**	8.5481	8.5481
21	**1-1-2005**	**3-31-2005**	6.9818	6.9818
22	**4-1-2005**	**6-30-2005**	6.7764	6.7764
23	**7-1-2005**	**9-30-2005**	6.8508	6.8508
24	**10-1-2005**	**12-31-2005**	7.1370	7.1370
25	**1-1-2006**	**3-31-2006**	6.9818	6.9818
26	**4-1-2006**	**6-30-2006**	6.7764	6.7764
27	**7-1-2006**	**9-30-2006**	6.8508	6.8508
28	**10-1-2006**	**12-31-2006**	7.1370	7.1370
29	**1-1-2007**	**3-31-2007**	6.9818	6.9818
30	**4-1-2007**	**6-30-2007**	6.7764	6.7764
31	**7-1-2007**	**9-30-2007**	6.8508	6.8508
32	**10-1-2007**	**12-31-2007**	7.1370	7.1370
33	**1-1-2008**	**3-31-2008**	7.0594	7.0594
34	**4-1-2008**	**6-30-2008**	6.7764	6.7764
35	**7-1-2008**	**9-30-2008**	6.8508	6.8508

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

36	**10-1-2008**	**12-31-2008**	7.1370	7.1370
37	**1-1-2009**	**3-31-2009**	6.9818	6.9818
38	**4-1-2009**	**6-30-2009**	6.7764	6.7764
39	**7-1-2009**	**9-30-2009**	6.8508	6.8508
40	**10-1-2009**	**12-31-2009**	7.1370	7.1370
41	**1-1-2010**	**3-31-2010**	5.2410	5.2410
42	**4-1-2010**	**6-30-2010**	5.0842	5.0842
43	**7-1-2010**	**9-30-2010**	5.1401	5.1401
44	**10-1-2010**	**12-31-2010**	5.3574	5.3574
45	**1-1-2011**	**3-31-2011**	4.9644	4.9644
46	**4-1-2011**	**6-30-2011**	4.8211	4.8211
47	**7-1-2011**	**9-30-2011**	4.8741	4.8741
48	**10-1-2011**	**12-31-2011**	5.0748	5.0748
49	**1-1-2012**	**3-31-2012**	4.7095	4.7095
50	**4-1-2012**	**6-30-2012**	4.5302	4.5302
51	**7-1-2012**	**9-30-2012**	4.5800	4.5800
52	**10-1-2012**	**12-31-2012**	4.7613	4.7613
53	**1-1-2013**	**3-31-2013**	4.2448	4.2448
54	**4-1-2013**	**6-30-2013**	4.1373	4.1373
55	**7-1-2013**	**9-30-2013**	4.1828	4.1828
56	**10-1-2013**	**12-31-2013**	4.3392	4.3392
57	**1-1-2014**	**3-31-2014**	3.8313	3.8313
58	**4-1-2014**	**6-30-2014**	3.7409	3.7409
59	**7-1-2014**	**9-30-2014**	3.7820	3.7820
60	**10-1-2014**	**12-31-2014**	3.9164	3.9164
61	**1-1-2015**	**3-31-2015**	3.4914	3.4914
62	**4-1-2015**	**6-30-2015**	3.4154	3.4154
63	**7-1-2015**	**9-30-2015**	3.4529	3.4529
64	**10-1-2015**	**12-31-2015**	3.5690	3.5690

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

65	**1-1-2016**	**3-31-2016**	3.1570	3.1570
66	**4-1-2016**	**6-30-2016**	3.0598	3.0598
67	**7-1-2016**	**9-30-2016**	3.0935	3.0935
68	**10-1-2016**	**12-31-2016**	3.1916	3.1916
69	**1-1-2017**	**3-31-2017**	2.7591	2.7591
70	**4-1-2017**	**6-30-2017**	2.7081	2.7081
71	**7-1-2017**	**9-30-2017**	2.7378	2.7378
72	**10-1-2017**	**12-31-2017**	2.8204	2.8204
73	**1-1-2018**	**3-31-2018**	2.4533	2.4533
74	**4-1-2018**	**6-30-2018**	2.4085	2.4085
75	**7-1-2018**	**9-30-2018**	2.4349	2.4349
76	**10-1-2018**	**12-31-2018**	2.5078	2.5078
77	**1-1-2019**	**3-31-2019**	2.2131	2.2131
78	**4-1-2019**	**6-30-2019**	2.1727	2.1727
79	**7-1-2019**	**9-30-2019**	2.1966	2.1966
80	**10-1-2019**	**12-31-2019**	2.2623	2.2623
81	**1-1-2020**	**3-31-2020**	2.0094	2.0094
82	**4-1-2020**	**6-30-2020**	1.9513	1.9513
83	**7-1-2020**	**9-30-2020**	1.9727	1.9727
84	**10-1-2020**	**12-31-2020**	2.0315	2.0315
85	**1-1-2021**	**3-31-2021**	1.7810	1.7810
86	**4-1-2021**	**6-30-2021**	1.7491	1.7491
87	**7-1-2021**	**9-30-2021**	1.7683	1.7683
88	**10-1-2021**	**12-31-2021**	1.8206	1.8206
89	**1-1-2022**	**3-31-2022**	1.5285	1.5285
90	**4-1-2022**	**6-30-2022**	1.5026	1.5026
91	**7-1-2022**	**9-30-2022**	1.5191	1.5191
92	**10-1-2022**	**12-31-2022**	1.5624	1.5624
93	**1-1-2023**	**3-31-2023**	1.3077	1.3077

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

94	**4-1-2023**	**6-30-2023**	1.2867	1.2867
95	**7-1-2023**	**9-30-2023**	1.3009	1.3009
96	**10-1-2023**	**12-31-2023**	1.3368	1.3368
97	**1-1-2024**	**3-31-2024**	1.2675	1.2675
98	**4-1-2024**	**6-30-2024**	1.2321	1.2321
99	**7-1-2024**	**9-30-2024**	1.2456	1.2456
100	**10-1-2024**	**12-31-2024**	1.2814	1.2814
101	**1-1-2025**	**3-31-2025**	1.1993	1.1993
102	**4-1-2025**	**6-30-2025**	1.1775	1.1775
103	**7-1-2025**	**9-30-2025**	1.1904	1.1904
104	**10-1-2025**	**12-31-2025**	1.2259	1.2259
105	**1-1-2026**	**3-31-2026**	1.1817	1.1817
106	**4-1-2026**	**6-30-2026**	1.1599	1.1599
107	**7-1-2026**	**9-30-2026**	1.1726	1.1726
108	**10-1-2026**	**12-31-2026**	1.2080	1.2080
109	**1-1-2027**	**3-31-2027**	1.1652	1.1652
110	**4-1-2027**	**6-30-2027**	1.1434	1.1434
111	**7-1-2027**	**9-30-2027**	1.1559	1.1559
112	**10-1-2027**	**12-31-2027**	1.1911	1.1911
113	**1-1-2028**	**3-31-2028**	0.5547	0.5547
114	**4-1-2028**	**6-30-2028**	0.3110	0.3110
115	**7-1-2028**	**9-30-2028**	0.3145	0.3145
116	**10-1-2028**	**12-31-2028**	0.3144	0.3144
117	**1-1-2029**	**3-31-2029**	0.3075	0.3075
118	**4-1-2029**	**6-30-2029**	0.3109	0.3109
119	**7-1-2029**	**9-30-2029**	0.3143	0.3143
120	**10-1-2029**	**12-31-2029**	1.7536	1.7536
121	**1-1-2030**	**3-31-2030**	1.7507	1.7507
122	**4-1-2030**	**6-30-2030**	1.7704	1.7704

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

123	**7-1-2030**	**9-30-2030**	1.7898	1.7898
124	**10-1-2030**	**12-31-2030**	1.7896	1.7896
125	**1-1-2031**	**3-31-2031**	1.7491	1.7491
126	**4-1-2031**	**6-30-2031**	1.3994	1.3994
		Highest	8.5481	8.5481

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	8.9111	0.5267	8.6951	3.1900e-003		0.0819	0.0819		0.0819	0.0819	0.0000	510.3778	510.3778	0.0229	9.1000e-003	513.6622
Energy	0.1423	1.2239	0.5777	7.7600e-003		0.0983	0.0983		0.0983	0.0983	0.0000	3,034.6273	3,034.6273	0.1643	0.0425	3,051.3857
Mobile	7.0297	13.0691	62.4885	0.1515	14.7754	0.1423	14.9177	3.9491	0.1339	4.0830	0.0000	14,038.4904	14,038.4904	0.7315	0.8536	14,311.1350
Waste						0.0000	0.0000		0.0000	0.0000	241.4720	0.0000	241.4720	14.2706	0.0000	598.2366
Water						0.0000	0.0000		0.0000	0.0000	27.5891	139.5193	167.1085	2.8454	0.0683	258.6088
Total	**16.0831**	**14.8197**	**71.7613**	**0.1625**	**14.7754**	**0.3224**	**15.0979**	**3.9491**	**0.3140**	**4.2631**	**269.0611**	**17,723.0148**	**17,992.0759**	**18.0346**	**0.9734**	**18,733.0283**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	8.3563	0.5267	8.6951	3.1900e-003		0.0819	0.0819		0.0819	0.0819	0.0000	510.3778	510.3778	0.0229	9.1000e-003	513.6622
Energy	0.1423	1.2239	0.5777	7.7600e-003		0.0983	0.0983		0.0983	0.0983	0.0000	3,033.6996	3,033.6996	0.1642	0.0424	3,050.4532
Mobile	7.0297	13.0691	62.4885	0.1515	14.7754	0.1423	14.9177	3.9491	0.1339	4.0830	0.0000	14,038.4904	14,038.4904	0.7315	0.8536	14,311.1350
Waste						0.0000	0.0000		0.0000	0.0000	241.4720	0.0000	241.4720	14.2706	0.0000	598.2366
Water						0.0000	0.0000		0.0000	0.0000	27.5891	139.5193	167.1085	2.8454	0.0683	258.6088
Total	**15.5283**	**14.8197**	**71.7613**	**0.1625**	**14.7754**	**0.3224**	**15.0979**	**3.9491**	**0.3140**	**4.2631**	**269.0611**	**17,722.0871**	**17,991.1482**	**18.0346**	**0.9734**	**18,732.0958**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**3.45**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.01**	**0.01**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2000	1/3/2000	5	1	
2	Site Preparation	Site Preparation	1/4/2000	12/4/2000	5	240	
3	Grading	Grading	12/5/2000	4/21/2003	5	620	

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

4	Building Construction	Building Construction	4/22/2004	1/26/2028	5	6200	
5	Paving	Paving	1/27/2028	10/3/2029	5	440	
6	Architectural Coating	Architectural Coating	10/4/2029	6/11/2031	5	440	

Acres of Grading (Site Preparation Phase): 360

Acres of Grading (Grading Phase): 1860

Acres of Paving: 3.36

Residential Indoor: 3,449,790; Residential Outdoor: 1,149,930; Non-Residential Indoor: 294,783; Non-Residential Outdoor: 98,261; Striped Parking Area: 11,712 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	3.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	1,229.00	384.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	246.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2000

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					3.2000e-004	0.0000	3.2000e-004	5.0000e-005	0.0000	5.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.1000e-003	0.0385	0.0146	2.2000e-004		2.1900e-003	2.1900e-003		2.1900e-003	2.1900e-003	0.0000	1.9861	1.9861	4.2000e-004	0.0000	1.9965
Total	**5.1000e-003**	**0.0385**	**0.0146**	**2.2000e-004**	**3.2000e-004**	**2.1900e-003**	**2.5100e-003**	**5.0000e-005**	**2.1900e-003**	**2.2400e-003**	**0.0000**	**1.9861**	**1.9861**	**4.2000e-004**	**0.0000**	**1.9965**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Demolition - 2000

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.1000e-004	1.5400e-003	3.7000e-004	1.0000e-005	3.0000e-005	5.0000e-005	8.0000e-005	1.0000e-005	5.0000e-005	6.0000e-005	0.0000	0.1095	0.1095	0.0000	2.0000e-005	0.1148
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.7000e-004	2.3000e-004	1.6500e-003	0.0000	6.0000e-005	0.0000	6.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0699	0.0699	1.0000e-005	1.0000e-005	0.0735
Total	**2.8000e-004**	**1.7700e-003**	**2.0200e-003**	**1.0000e-005**	**9.0000e-005**	**5.0000e-005**	**1.4000e-004**	**3.0000e-005**	**5.0000e-005**	**8.0000e-005**	**0.0000**	**0.1794**	**0.1794**	**1.0000e-005**	**3.0000e-005**	**0.1883**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					3.2000e-004	0.0000	3.2000e-004	5.0000e-005	0.0000	5.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.1000e-003	0.0385	0.0146	2.2000e-004		2.1900e-003	2.1900e-003		2.1900e-003	2.1900e-003	0.0000	1.9861	1.9861	4.2000e-004	0.0000	1.9965
Total	**5.1000e-003**	**0.0385**	**0.0146**	**2.2000e-004**	**3.2000e-004**	**2.1900e-003**	**2.5100e-003**	**5.0000e-005**	**2.1900e-003**	**2.2400e-003**	**0.0000**	**1.9861**	**1.9861**	**4.2000e-004**	**0.0000**	**1.9965**

Singh Property 2005 BAU - Kings County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Demolition - 2000

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.1000e-004	1.5400e-003	3.7000e-004	1.0000e-005	3.0000e-005	5.0000e-005	8.0000e-005	1.0000e-005	5.0000e-005	6.0000e-005	0.0000	0.1095	0.1095	0.0000	2.0000e-005	0.1148
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.7000e-004	2.3000e-004	1.6500e-003	0.0000	6.0000e-005	0.0000	6.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0699	0.0699	1.0000e-005	1.0000e-005	0.0735
Total	**2.8000e-004**	**1.7700e-003**	**2.0200e-003**	**1.0000e-005**	**9.0000e-005**	**5.0000e-005**	**1.4000e-004**	**3.0000e-005**	**5.0000e-005**	**8.0000e-005**	**0.0000**	**0.1794**	**0.1794**	**1.0000e-005**	**3.0000e-005**	**0.1883**

3.3 Site Preparation - 2000

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.3588	0.0000	2.3588	1.2123	0.0000	1.2123	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.3455	9.6379	3.6932	0.0540		0.6057	0.6057		0.6057	0.6057	0.0000	480.0554	480.0554	0.1096	0.0000	482.7949
Total	**1.3455**	**9.6379**	**3.6932**	**0.0540**	**2.3588**	**0.6057**	**2.9645**	**1.2123**	**0.6057**	**1.8180**	**0.0000**	**480.0554**	**480.0554**	**0.1096**	**0.0000**	**482.7949**

Singh Property 2005 BAU - Kings County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Site Preparation - 2000

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0494	0.0674	0.4762	3.2000e-004	0.0174	7.2000e-004	0.0181	4.6100e-003	6.7000e-004	5.2800e-003	0.0000	20.1323	20.1323	3.9100e-003	3.1900e-003	21.1805
Total	**0.0494**	**0.0674**	**0.4762**	**3.2000e-004**	**0.0174**	**7.2000e-004**	**0.0181**	**4.6100e-003**	**6.7000e-004**	**5.2800e-003**	**0.0000**	**20.1323**	**20.1323**	**3.9100e-003**	**3.1900e-003**	**21.1805**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.3588	0.0000	2.3588	1.2123	0.0000	1.2123	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.3455	9.6379	3.6932	0.0540		0.6057	0.6057		0.6057	0.6057	0.0000	480.0548	480.0548	0.1096	0.0000	482.7943
Total	**1.3455**	**9.6379**	**3.6932**	**0.0540**	**2.3588**	**0.6057**	**2.9645**	**1.2123**	**0.6057**	**1.8180**	**0.0000**	**480.0548**	**480.0548**	**0.1096**	**0.0000**	**482.7943**

Singh Property 2005 BAU - Kings County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Site Preparation - 2000

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0494	0.0674	0.4762	3.2000e-004	0.0174	7.2000e-004	0.0181	4.6100e-003	6.7000e-004	5.2800e-003	0.0000	20.1323	20.1323	3.9100e-003	3.1900e-003	21.1805
Total	**0.0494**	**0.0674**	**0.4762**	**3.2000e-004**	**0.0174**	**7.2000e-004**	**0.0181**	**4.6100e-003**	**6.7000e-004**	**5.2800e-003**	**0.0000**	**20.1323**	**20.1323**	**3.9100e-003**	**3.1900e-003**	**21.1805**

3.4 Grading - 2000

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.0435	0.0000	1.0435	0.1379	0.0000	0.1379	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1437	1.1567	0.5848	6.5000e-003		0.0610	0.0610		0.0610	0.0610	0.0000	62.1644	62.1644	0.0117	0.0000	62.4564
Total	**0.1437**	**1.1567**	**0.5848**	**6.5000e-003**	**1.0435**	**0.0610**	**1.1045**	**0.1379**	**0.0610**	**0.1989**	**0.0000**	**62.1644**	**62.1644**	**0.0117**	**0.0000**	**62.4564**

Singh Property 2005 BAU - Kings County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Grading - 2000

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.3400e-003	5.9300e-003	0.0419	3.0000e-005	1.5300e-003	6.0000e-005	1.5900e-003	4.1000e-004	6.0000e-005	4.6000e-004	0.0000	1.7709	1.7709	3.4000e-004	2.8000e-004	1.8631
Total	**4.3400e-003**	**5.9300e-003**	**0.0419**	**3.0000e-005**	**1.5300e-003**	**6.0000e-005**	**1.5900e-003**	**4.1000e-004**	**6.0000e-005**	**4.6000e-004**	**0.0000**	**1.7709**	**1.7709**	**3.4000e-004**	**2.8000e-004**	**1.8631**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.0435	0.0000	1.0435	0.1379	0.0000	0.1379	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1437	1.1567	0.5848	6.5000e-003		0.0610	0.0610		0.0610	0.0610	0.0000	62.1643	62.1643	0.0117	0.0000	62.4563
Total	**0.1437**	**1.1567**	**0.5848**	**6.5000e-003**	**1.0435**	**0.0610**	**1.1045**	**0.1379**	**0.0610**	**0.1989**	**0.0000**	**62.1643**	**62.1643**	**0.0117**	**0.0000**	**62.4563**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Grading - 2000

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.3400e-003	5.9300e-003	0.0419	3.0000e-005	1.5300e-003	6.0000e-005	1.5900e-003	4.1000e-004	6.0000e-005	4.6000e-004	0.0000	1.7709	1.7709	3.4000e-004	2.8000e-004	1.8631
Total	**4.3400e-003**	**5.9300e-003**	**0.0419**	**3.0000e-005**	**1.5300e-003**	**6.0000e-005**	**1.5900e-003**	**4.1000e-004**	**6.0000e-005**	**4.6000e-004**	**0.0000**	**1.7709**	**1.7709**	**3.4000e-004**	**2.8000e-004**	**1.8631**

3.4 Grading - 2001

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.7722	0.0000	1.7722	0.5385	0.0000	0.5385	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.9735	15.8889	8.0328	0.0892		0.8379	0.8379		0.8379	0.8379	0.0000	853.9427	853.9427	0.1604	0.0000	857.9537
Total	**1.9735**	**15.8889**	**8.0328**	**0.0892**	**1.7722**	**0.8379**	**2.6101**	**0.5385**	**0.8379**	**1.3764**	**0.0000**	**853.9427**	**853.9427**	**0.1604**	**0.0000**	**857.9537**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Grading - 2001

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0597	0.0815	0.5754	3.8000e-004	0.0210	8.7000e-004	0.0218	5.5700e-003	8.1000e-004	6.3800e-003	0.0000	24.3265	24.3265	4.7200e-003	3.8500e-003	25.5931
Total	**0.0597**	**0.0815**	**0.5754**	**3.8000e-004**	**0.0210**	**8.7000e-004**	**0.0218**	**5.5700e-003**	**8.1000e-004**	**6.3800e-003**	**0.0000**	**24.3265**	**24.3265**	**4.7200e-003**	**3.8500e-003**	**25.5931**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.7722	0.0000	1.7722	0.5385	0.0000	0.5385	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.9735	15.8888	8.0328	0.0892		0.8379	0.8379		0.8379	0.8379	0.0000	853.9417	853.9417	0.1604	0.0000	857.9527
Total	**1.9735**	**15.8888**	**8.0328**	**0.0892**	**1.7722**	**0.8379**	**2.6101**	**0.5385**	**0.8379**	**1.3764**	**0.0000**	**853.9417**	**853.9417**	**0.1604**	**0.0000**	**857.9527**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Grading - 2001

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0597	0.0815	0.5754	3.8000e-004	0.0210	8.7000e-004	0.0218	5.5700e-003	8.1000e-004	6.3800e-003	0.0000	24.3265	24.3265	4.7200e-003	3.8500e-003	25.5931
Total	**0.0597**	**0.0815**	**0.5754**	**3.8000e-004**	**0.0210**	**8.7000e-004**	**0.0218**	**5.5700e-003**	**8.1000e-004**	**6.3800e-003**	**0.0000**	**24.3265**	**24.3265**	**4.7200e-003**	**3.8500e-003**	**25.5931**

3.4 Grading - 2002

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.7722	0.0000	1.7722	0.5385	0.0000	0.5385	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.9735	15.8889	8.0328	0.0892		0.8379	0.8379		0.8379	0.8379	0.0000	853.9427	853.9427	0.1604	0.0000	857.9537
Total	**1.9735**	**15.8889**	**8.0328**	**0.0892**	**1.7722**	**0.8379**	**2.6101**	**0.5385**	**0.8379**	**1.3764**	**0.0000**	**853.9427**	**853.9427**	**0.1604**	**0.0000**	**857.9537**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Grading - 2002

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0597	0.0815	0.5754	3.8000e-004	0.0210	8.7000e-004	0.0218	5.5700e-003	8.1000e-004	6.3800e-003	0.0000	24.3265	24.3265	4.7200e-003	3.8500e-003	25.5931
Total	**0.0597**	**0.0815**	**0.5754**	**3.8000e-004**	**0.0210**	**8.7000e-004**	**0.0218**	**5.5700e-003**	**8.1000e-004**	**6.3800e-003**	**0.0000**	**24.3265**	**24.3265**	**4.7200e-003**	**3.8500e-003**	**25.5931**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.7722	0.0000	1.7722	0.5385	0.0000	0.5385	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.9735	15.8888	8.0328	0.0892		0.8379	0.8379		0.8379	0.8379	0.0000	853.9417	853.9417	0.1604	0.0000	857.9527
Total	**1.9735**	**15.8888**	**8.0328**	**0.0892**	**1.7722**	**0.8379**	**2.6101**	**0.5385**	**0.8379**	**1.3764**	**0.0000**	**853.9417**	**853.9417**	**0.1604**	**0.0000**	**857.9527**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Grading - 2002

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0597	0.0815	0.5754	3.8000e-004	0.0210	8.7000e-004	0.0218	5.5700e-003	8.1000e-004	6.3800e-003	0.0000	24.3265	24.3265	4.7200e-003	3.8500e-003	25.5931
Total	**0.0597**	**0.0815**	**0.5754**	**3.8000e-004**	**0.0210**	**8.7000e-004**	**0.0218**	**5.5700e-003**	**8.1000e-004**	**6.3800e-003**	**0.0000**	**24.3265**	**24.3265**	**4.7200e-003**	**3.8500e-003**	**25.5931**

3.4 Grading - 2003

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.2241	0.0000	1.2241	0.2373	0.0000	0.2373	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.5973	4.8093	2.4314	0.0270		0.2536	0.2536		0.2536	0.2536	0.0000	258.4731	258.4731	0.0486	0.0000	259.6871
Total	**0.5973**	**4.8093**	**2.4314**	**0.0270**	**1.2241**	**0.2536**	**1.4778**	**0.2373**	**0.2536**	**0.4909**	**0.0000**	**258.4731**	**258.4731**	**0.0486**	**0.0000**	**259.6871**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Grading - 2003

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0181	0.0247	0.1742	1.2000e-004	6.3500e-003	2.6000e-004	6.6100e-003	1.6900e-003	2.5000e-004	1.9300e-003	0.0000	7.3632	7.3632	1.4300e-003	1.1700e-003	7.7466
Total	**0.0181**	**0.0247**	**0.1742**	**1.2000e-004**	**6.3500e-003**	**2.6000e-004**	**6.6100e-003**	**1.6900e-003**	**2.5000e-004**	**1.9300e-003**	**0.0000**	**7.3632**	**7.3632**	**1.4300e-003**	**1.1700e-003**	**7.7466**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.2241	0.0000	1.2241	0.2373	0.0000	0.2373	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.5973	4.8093	2.4314	0.0270		0.2536	0.2536		0.2536	0.2536	0.0000	258.4728	258.4728	0.0486	0.0000	259.6868
Total	**0.5973**	**4.8093**	**2.4314**	**0.0270**	**1.2241**	**0.2536**	**1.4778**	**0.2373**	**0.2536**	**0.4909**	**0.0000**	**258.4728**	**258.4728**	**0.0486**	**0.0000**	**259.6868**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Grading - 2003

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0181	0.0247	0.1742	1.2000e-004	6.3500e-003	2.6000e-004	6.6100e-003	1.6900e-003	2.5000e-004	1.9300e-003	0.0000	7.3632	7.3632	1.4300e-003	1.1700e-003	7.7466
Total	**0.0181**	**0.0247**	**0.1742**	**1.2000e-004**	**6.3500e-003**	**2.6000e-004**	**6.6100e-003**	**1.6900e-003**	**2.5000e-004**	**1.9300e-003**	**0.0000**	**7.3632**	**7.3632**	**1.4300e-003**	**1.1700e-003**	**7.7466**

3.5 Building Construction - 2004

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.7940	4.3918	2.0347	0.0277		0.3453	0.3453		0.3453	0.3453	0.0000	239.2035	239.2035	0.0647	0.0000	240.8201
Total	**0.7940**	**4.3918**	**2.0347**	**0.0277**		**0.3453**	**0.3453**		**0.3453**	**0.3453**	**0.0000**	**239.2035**	**239.2035**	**0.0647**	**0.0000**	**240.8201**

Singh Property 2005 BAU - Kings County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Building Construction - 2004

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.2223	10.5174	6.3881	0.0742	0.2327	0.4274	0.6601	0.0672	0.4089	0.4761	0.0000	879.9158	879.9158	0.0604	0.1282	919.6205
Worker	2.5571	3.4914	24.6544	0.0165	0.8985	0.0374	0.9359	0.2387	0.0347	0.2734	0.0000	1,042.3949	1,042.3949	0.2024	0.1652	1,096.6682
Total	**3.7795**	**14.0087**	**31.0425**	**0.0907**	**1.1312**	**0.4648**	**1.5960**	**0.3059**	**0.4435**	**0.7495**	**0.0000**	**1,922.3107**	**1,922.3107**	**0.2628**	**0.2933**	**2,016.2887**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.7940	4.3918	2.0347	0.0277		0.3453	0.3453		0.3453	0.3453	0.0000	239.2032	239.2032	0.0647	0.0000	240.8198
Total	**0.7940**	**4.3918**	**2.0347**	**0.0277**		**0.3453**	**0.3453**		**0.3453**	**0.3453**	**0.0000**	**239.2032**	**239.2032**	**0.0647**	**0.0000**	**240.8198**

Singh Property 2005 BAU - Kings County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Building Construction - 2004

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.2223	10.5174	6.3881	0.0742	0.2327	0.4274	0.6601	0.0672	0.4089	0.4761	0.0000	879.9158	879.9158	0.0604	0.1282	919.6205
Worker	2.5571	3.4914	24.6544	0.0165	0.8985	0.0374	0.9359	0.2387	0.0347	0.2734	0.0000	1,042.3949	1,042.3949	0.2024	0.1652	1,096.6682
Total	**3.7795**	**14.0087**	**31.0425**	**0.0907**	**1.1312**	**0.4648**	**1.5960**	**0.3059**	**0.4435**	**0.7495**	**0.0000**	**1,922.3107**	**1,922.3107**	**0.2628**	**0.2933**	**2,016.2887**

3.5 Building Construction - 2005

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.9770	5.3879	2.6505	0.0395		0.4524	0.4524		0.4524	0.4524	0.0000	341.7193	341.7193	0.0797	0.0000	343.7129
Total	**0.9770**	**5.3879**	**2.6505**	**0.0395**		**0.4524**	**0.4524**		**0.4524**	**0.4524**	**0.0000**	**341.7193**	**341.7193**	**0.0797**	**0.0000**	**343.7129**

Singh Property 2005 BAU - Kings County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Building Construction - 2005

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.4615	13.9344	5.3996	0.1094	0.3325	0.5625	0.8950	0.0960	0.5381	0.6342	0.0000	1,227.6135	1,227.6135	0.0675	0.1838	1,284.0698
Worker	2.5299	3.2874	26.0298	0.0155	1.2836	0.0309	1.3145	0.3410	0.0287	0.3697	0.0000	1,420.8678	1,420.8678	0.2075	0.1665	1,475.6773
Total	**3.9914**	**17.2218**	**31.4294**	**0.1250**	**1.6160**	**0.5934**	**2.2094**	**0.4370**	**0.5668**	**1.0038**	**0.0000**	**2,648.4813**	**2,648.4813**	**0.2751**	**0.3503**	**2,759.7471**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.9770	5.3878	2.6505	0.0395		0.4524	0.4524		0.4524	0.4524	0.0000	341.7189	341.7189	0.0797	0.0000	343.7124
Total	**0.9770**	**5.3878**	**2.6505**	**0.0395**		**0.4524**	**0.4524**		**0.4524**	**0.4524**	**0.0000**	**341.7189**	**341.7189**	**0.0797**	**0.0000**	**343.7124**

Singh Property 2005 BAU - Kings County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Building Construction - 2005

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.4615	13.9344	5.3996	0.1094	0.3325	0.5625	0.8950	0.0960	0.5381	0.6342	0.0000	1,227.6135	1,227.6135	0.0675	0.1838	1,284.0698
Worker	2.5299	3.2874	26.0298	0.0155	1.2836	0.0309	1.3145	0.3410	0.0287	0.3697	0.0000	1,420.8678	1,420.8678	0.2075	0.1665	1,475.6773
Total	**3.9914**	**17.2218**	**31.4294**	**0.1250**	**1.6160**	**0.5934**	**2.2094**	**0.4370**	**0.5668**	**1.0038**	**0.0000**	**2,648.4813**	**2,648.4813**	**0.2751**	**0.3503**	**2,759.7471**

3.5 Building Construction - 2006

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.9770	5.3879	2.6505	0.0395		0.4524	0.4524		0.4524	0.4524	0.0000	341.7193	341.7193	0.0797	0.0000	343.7129
Total	**0.9770**	**5.3879**	**2.6505**	**0.0395**		**0.4524**	**0.4524**		**0.4524**	**0.4524**	**0.0000**	**341.7193**	**341.7193**	**0.0797**	**0.0000**	**343.7129**

Singh Property 2005 BAU - Kings County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Building Construction - 2006

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.4615	13.9344	5.3996	0.1094	0.3325	0.5625	0.8950	0.0960	0.5381	0.6342	0.0000	1,227.6135	1,227.6135	0.0675	0.1838	1,284.0698
Worker	2.5299	3.2874	26.0298	0.0155	1.2836	0.0309	1.3145	0.3410	0.0287	0.3697	0.0000	1,420.8678	1,420.8678	0.2075	0.1665	1,475.6773
Total	**3.9914**	**17.2218**	**31.4294**	**0.1250**	**1.6160**	**0.5934**	**2.2094**	**0.4370**	**0.5668**	**1.0038**	**0.0000**	**2,648.4813**	**2,648.4813**	**0.2751**	**0.3503**	**2,759.7471**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.9770	5.3878	2.6505	0.0395		0.4524	0.4524		0.4524	0.4524	0.0000	341.7189	341.7189	0.0797	0.0000	343.7124
Total	**0.9770**	**5.3878**	**2.6505**	**0.0395**		**0.4524**	**0.4524**		**0.4524**	**0.4524**	**0.0000**	**341.7189**	**341.7189**	**0.0797**	**0.0000**	**343.7124**

Singh Property 2005 BAU - Kings County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Building Construction - 2006

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.4615	13.9344	5.3996	0.1094	0.3325	0.5625	0.8950	0.0960	0.5381	0.6342	0.0000	1,227.6135	1,227.6135	0.0675	0.1838	1,284.0698
Worker	2.5299	3.2874	26.0298	0.0155	1.2836	0.0309	1.3145	0.3410	0.0287	0.3697	0.0000	1,420.8678	1,420.8678	0.2075	0.1665	1,475.6773
Total	**3.9914**	**17.2218**	**31.4294**	**0.1250**	**1.6160**	**0.5934**	**2.2094**	**0.4370**	**0.5668**	**1.0038**	**0.0000**	**2,648.4813**	**2,648.4813**	**0.2751**	**0.3503**	**2,759.7471**

3.5 Building Construction - 2007

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.9808	5.4086	2.6607	0.0397		0.4541	0.4541		0.4541	0.4541	0.0000	343.0336	343.0336	0.0801	0.0000	345.0348
Total	**0.9808**	**5.4086**	**2.6607**	**0.0397**		**0.4541**	**0.4541**		**0.4541**	**0.4541**	**0.0000**	**343.0336**	**343.0336**	**0.0801**	**0.0000**	**345.0348**

Singh Property 2005 BAU - Kings County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Building Construction - 2007

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.4671	13.9880	5.4204	0.1099	0.3337	0.5647	0.8984	0.0964	0.5402	0.6366	0.0000	1,232.3351	1,232.3351	0.0678	0.1845	1,289.0086
Worker	2.5396	3.3001	26.1299	0.0156	1.2885	0.0310	1.3195	0.3424	0.0288	0.3711	0.0000	1,426.3327	1,426.3327	0.2083	0.1672	1,481.3530
Total	**4.0067**	**17.2881**	**31.5503**	**0.1255**	**1.6222**	**0.5957**	**2.2179**	**0.4387**	**0.5690**	**1.0077**	**0.0000**	**2,658.6678**	**2,658.6678**	**0.2761**	**0.3517**	**2,770.3615**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.9808	5.4086	2.6607	0.0397		0.4541	0.4541		0.4541	0.4541	0.0000	343.0332	343.0332	0.0801	0.0000	345.0344
Total	**0.9808**	**5.4086**	**2.6607**	**0.0397**		**0.4541**	**0.4541**		**0.4541**	**0.4541**	**0.0000**	**343.0332**	**343.0332**	**0.0801**	**0.0000**	**345.0344**

Singh Property 2005 BAU - Kings County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Building Construction - 2007

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.4671	13.9880	5.4204	0.1099	0.3337	0.5647	0.8984	0.0964	0.5402	0.6366	0.0000	1,232.3351	1,232.3351	0.0678	0.1845	1,289.0086
Worker	2.5396	3.3001	26.1299	0.0156	1.2885	0.0310	1.3195	0.3424	0.0288	0.3711	0.0000	1,426.3327	1,426.3327	0.2083	0.1672	1,481.3530
Total	**4.0067**	**17.2881**	**31.5503**	**0.1255**	**1.6222**	**0.5957**	**2.2179**	**0.4387**	**0.5690**	**1.0077**	**0.0000**	**2,658.6678**	**2,658.6678**	**0.2761**	**0.3517**	**2,770.3615**

3.5 Building Construction - 2008

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.9846	5.4293	2.6709	0.0398		0.4558	0.4558		0.4558	0.4558	0.0000	344.3479	344.3479	0.0804	0.0000	346.3568
Total	**0.9846**	**5.4293**	**2.6709**	**0.0398**		**0.4558**	**0.4558**		**0.4558**	**0.4558**	**0.0000**	**344.3479**	**344.3479**	**0.0804**	**0.0000**	**346.3568**

Singh Property 2005 BAU - Kings County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Building Construction - 2008

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.4727	14.0416	5.4412	0.1103	0.3350	0.5668	0.9018	0.0968	0.5423	0.6390	0.0000	1,237.0567	1,237.0567	0.0681	0.1852	1,293.9473
Worker	2.5493	3.3127	26.2300	0.0157	1.2934	0.0311	1.3246	0.3437	0.0289	0.3725	0.0000	1,431.7976	1,431.7976	0.2091	0.1678	1,487.0287
Total	**4.0221**	**17.3543**	**31.6712**	**0.1259**	**1.6285**	**0.5980**	**2.2264**	**0.4404**	**0.5712**	**1.0115**	**0.0000**	**2,668.8543**	**2,668.8543**	**0.2772**	**0.3530**	**2,780.9760**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.9846	5.4293	2.6709	0.0398		0.4558	0.4558		0.4558	0.4558	0.0000	344.3475	344.3475	0.0804	0.0000	346.3564
Total	**0.9846**	**5.4293**	**2.6709**	**0.0398**		**0.4558**	**0.4558**		**0.4558**	**0.4558**	**0.0000**	**344.3475**	**344.3475**	**0.0804**	**0.0000**	**346.3564**

Singh Property 2005 BAU - Kings County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Building Construction - 2008

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.4727	14.0416	5.4412	0.1103	0.3350	0.5668	0.9018	0.0968	0.5423	0.6390	0.0000	1,237.0567	1,237.0567	0.0681	0.1852	1,293.9473
Worker	2.5493	3.3127	26.2300	0.0157	1.2934	0.0311	1.3246	0.3437	0.0289	0.3725	0.0000	1,431.7976	1,431.7976	0.2091	0.1678	1,487.0287
Total	**4.0221**	**17.3543**	**31.6712**	**0.1259**	**1.6285**	**0.5980**	**2.2264**	**0.4404**	**0.5712**	**1.0115**	**0.0000**	**2,668.8543**	**2,668.8543**	**0.2772**	**0.3530**	**2,780.9760**

3.5 Building Construction - 2009

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.9808	5.4086	2.6607	0.0397		0.4541	0.4541		0.4541	0.4541	0.0000	343.0336	343.0336	0.0801	0.0000	345.0348
Total	**0.9808**	**5.4086**	**2.6607**	**0.0397**		**0.4541**	**0.4541**		**0.4541**	**0.4541**	**0.0000**	**343.0336**	**343.0336**	**0.0801**	**0.0000**	**345.0348**

Singh Property 2005 BAU - Kings County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Building Construction - 2009

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.4671	13.9880	5.4204	0.1099	0.3337	0.5647	0.8984	0.0964	0.5402	0.6366	0.0000	1,232.3351	1,232.3351	0.0678	0.1845	1,289.0086
Worker	2.5396	3.3001	26.1299	0.0156	1.2885	0.0310	1.3195	0.3424	0.0288	0.3711	0.0000	1,426.3327	1,426.3327	0.2083	0.1672	1,481.3530
Total	**4.0067**	**17.2881**	**31.5503**	**0.1255**	**1.6222**	**0.5957**	**2.2179**	**0.4387**	**0.5690**	**1.0077**	**0.0000**	**2,658.6678**	**2,658.6678**	**0.2761**	**0.3517**	**2,770.3615**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.9808	5.4086	2.6607	0.0397		0.4541	0.4541		0.4541	0.4541	0.0000	343.0332	343.0332	0.0801	0.0000	345.0344
Total	**0.9808**	**5.4086**	**2.6607**	**0.0397**		**0.4541**	**0.4541**		**0.4541**	**0.4541**	**0.0000**	**343.0332**	**343.0332**	**0.0801**	**0.0000**	**345.0344**

Singh Property 2005 BAU - Kings County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Building Construction - 2009

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.4671	13.9880	5.4204	0.1099	0.3337	0.5647	0.8984	0.0964	0.5402	0.6366	0.0000	1,232.3351	1,232.3351	0.0678	0.1845	1,289.0086
Worker	2.5396	3.3001	26.1299	0.0156	1.2885	0.0310	1.3195	0.3424	0.0288	0.3711	0.0000	1,426.3327	1,426.3327	0.2083	0.1672	1,481.3530
Total	**4.0067**	**17.2881**	**31.5503**	**0.1255**	**1.6222**	**0.5957**	**2.2179**	**0.4387**	**0.5690**	**1.0077**	**0.0000**	**2,658.6678**	**2,658.6678**	**0.2761**	**0.3517**	**2,770.3615**

3.5 Building Construction - 2010

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.6164	4.6640	2.5603	3.5200e-003		0.3413	0.3413		0.3222	0.3222	0.0000	326.0372	326.0372	0.0883	0.0000	328.2446
Total	**0.6164**	**4.6640**	**2.5603**	**3.5200e-003**		**0.3413**	**0.3413**		**0.3222**	**0.3222**	**0.0000**	**326.0372**	**326.0372**	**0.0883**	**0.0000**	**328.2446**

Singh Property 2005 BAU - Kings County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Building Construction - 2010

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.0899	10.5016	4.0952	0.0124	0.3337	0.4548	0.7885	0.0964	0.4351	0.5314	0.0000	1,185.5859	1,185.5859	0.0512	0.1748	1,238.9408
Worker	1.8357	2.0818	17.7507	0.0150	1.2885	0.0179	1.3064	0.3424	0.0166	0.3590	0.0000	1,382.3620	1,382.3620	0.1454	0.1122	1,419.4369
Total	**2.9256**	**12.5834**	**21.8459**	**0.0274**	**1.6222**	**0.4727**	**2.0949**	**0.4387**	**0.4517**	**0.8904**	**0.0000**	**2,567.9479**	**2,567.9479**	**0.1966**	**0.2870**	**2,658.3777**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.6164	4.6639	2.5603	3.5200e-003		0.3413	0.3413		0.3222	0.3222	0.0000	326.0368	326.0368	0.0883	0.0000	328.2442
Total	**0.6164**	**4.6639**	**2.5603**	**3.5200e-003**		**0.3413**	**0.3413**		**0.3222**	**0.3222**	**0.0000**	**326.0368**	**326.0368**	**0.0883**	**0.0000**	**328.2442**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Building Construction - 2010

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.0899	10.5016	4.0952	0.0124	0.3337	0.4548	0.7885	0.0964	0.4351	0.5314	0.0000	1,185.5859	1,185.5859	0.0512	0.1748	1,238.9408
Worker	1.8357	2.0818	17.7507	0.0150	1.2885	0.0179	1.3064	0.3424	0.0166	0.3590	0.0000	1,382.3620	1,382.3620	0.1454	0.1122	1,419.4369
Total	**2.9256**	**12.5834**	**21.8459**	**0.0274**	**1.6222**	**0.4727**	**2.0949**	**0.4387**	**0.4517**	**0.8904**	**0.0000**	**2,567.9479**	**2,567.9479**	**0.1966**	**0.2870**	**2,658.3777**

3.5 Building Construction - 2011

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.5885	4.5179	2.5319	3.5000e-003		0.3309	0.3309		0.3123	0.3123	0.0000	324.0331	324.0331	0.0865	0.0000	326.1951
Total	**0.5885**	**4.5179**	**2.5319**	**3.5000e-003**		**0.3309**	**0.3309**		**0.3123**	**0.3123**	**0.0000**	**324.0331**	**324.0331**	**0.0865**	**0.0000**	**326.1951**

Singh Property 2005 BAU - Kings County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Building Construction - 2011

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.0259	9.8774	3.8850	0.0123	0.3324	0.4329	0.7653	0.0960	0.4141	0.5101	0.0000	1,178.3036	1,178.3036	0.0482	0.1733	1,231.1635
Worker	1.7216	1.8961	16.3739	0.0148	1.2836	0.0163	1.2999	0.3410	0.0151	0.3561	0.0000	1,359.9588	1,359.9588	0.1350	0.1038	1,394.2708
Total	**2.7475**	**11.7736**	**20.2588**	**0.0271**	**1.6160**	**0.4492**	**2.0651**	**0.4370**	**0.4292**	**0.8663**	**0.0000**	**2,538.2625**	**2,538.2625**	**0.1832**	**0.2772**	**2,625.4342**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.5885	4.5179	2.5319	3.5000e-003		0.3309	0.3309		0.3123	0.3123	0.0000	324.0327	324.0327	0.0865	0.0000	326.1947
Total	**0.5885**	**4.5179**	**2.5319**	**3.5000e-003**		**0.3309**	**0.3309**		**0.3123**	**0.3123**	**0.0000**	**324.0327**	**324.0327**	**0.0865**	**0.0000**	**326.1947**

Singh Property 2005 BAU - Kings County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Building Construction - 2011

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.0259	9.8774	3.8850	0.0123	0.3324	0.4329	0.7653	0.0960	0.4141	0.5101	0.0000	1,178.3036	1,178.3036	0.0482	0.1733	1,231.1635
Worker	1.7216	1.8961	16.3739	0.0148	1.2836	0.0163	1.2999	0.3410	0.0151	0.3561	0.0000	1,359.9588	1,359.9588	0.1350	0.1038	1,394.2708
Total	**2.7475**	**11.7736**	**20.2588**	**0.0271**	**1.6160**	**0.4492**	**2.0651**	**0.4370**	**0.4292**	**0.8663**	**0.0000**	**2,538.2625**	**2,538.2625**	**0.1832**	**0.2772**	**2,625.4342**

3.5 Building Construction - 2012

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.5722	4.4621	2.5368	3.5200e-003		0.3262	0.3262		0.3075	0.3075	0.0000	324.6738	324.6738	0.0853	0.0000	326.8060
Total	**0.5722**	**4.4621**	**2.5368**	**3.5200e-003**		**0.3262**	**0.3262**		**0.3075**	**0.3075**	**0.0000**	**324.6738**	**324.6738**	**0.0853**	**0.0000**	**326.8060**

Singh Property 2005 BAU - Kings County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Building Construction - 2012

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.9345	9.1747	3.5426	0.0123	0.3337	0.3932	0.7269	0.0964	0.3762	0.4726	0.0000	1,182.2628	1,182.2628	0.0440	0.1743	1,235.3094
Worker	1.6238	1.7303	15.1748	0.0147	1.2885	0.0149	1.3034	0.3424	0.0138	0.3561	0.0000	1,354.3102	1,354.3102	0.1260	0.0962	1,386.1261
Total	**2.5583**	**10.9051**	**18.7175**	**0.0271**	**1.6222**	**0.4081**	**2.0303**	**0.4387**	**0.3900**	**0.8287**	**0.0000**	**2,536.5730**	**2,536.5730**	**0.1700**	**0.2705**	**2,621.4355**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.5722	4.4621	2.5368	3.5200e-003		0.3262	0.3262		0.3075	0.3075	0.0000	324.6734	324.6734	0.0853	0.0000	326.8056
Total	**0.5722**	**4.4621**	**2.5368**	**3.5200e-003**		**0.3262**	**0.3262**		**0.3075**	**0.3075**	**0.0000**	**324.6734**	**324.6734**	**0.0853**	**0.0000**	**326.8056**

Singh Property 2005 BAU - Kings County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Building Construction - 2012

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.9345	9.1747	3.5426	0.0123	0.3337	0.3932	0.7269	0.0964	0.3762	0.4726	0.0000	1,182.2628	1,182.2628	0.0440	0.1743	1,235.3094
Worker	1.6238	1.7303	15.1748	0.0147	1.2885	0.0149	1.3034	0.3424	0.0138	0.3561	0.0000	1,354.3102	1,354.3102	0.1260	0.0962	1,386.1261
Total	**2.5583**	**10.9051**	**18.7175**	**0.0271**	**1.6222**	**0.4081**	**2.0303**	**0.4387**	**0.3900**	**0.8287**	**0.0000**	**2,536.5730**	**2,536.5730**	**0.1700**	**0.2705**	**2,621.4355**

3.5 Building Construction - 2013

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.5428	4.3095	2.5141	3.5200e-003		0.3116	0.3116		0.2935	0.2935	0.0000	323.4520	323.4520	0.0836	0.0000	325.5414
Total	**0.5428**	**4.3095**	**2.5141**	**3.5200e-003**		**0.3116**	**0.3116**		**0.2935**	**0.2935**	**0.0000**	**323.4520**	**323.4520**	**0.0836**	**0.0000**	**325.5414**

Singh Property 2005 BAU - Kings County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Building Construction - 2013

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.7820	8.1851	2.9275	0.0121	0.3337	0.3235	0.6571	0.0964	0.3095	0.4058	0.0000	1,156.4672	1,156.4672	0.0364	0.1716	1,208.5100
Worker	1.5032	1.5467	13.7812	0.0145	1.2885	0.0135	1.3020	0.3424	0.0125	0.3549	0.0000	1,325.5105	1,325.5105	0.1149	0.0877	1,354.5070
Total	**2.2851**	**9.7318**	**16.7086**	**0.0266**	**1.6222**	**0.3370**	**1.9592**	**0.4387**	**0.3220**	**0.7607**	**0.0000**	**2,481.9777**	**2,481.9777**	**0.1513**	**0.2593**	**2,563.0171**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.5428	4.3095	2.5141	3.5200e-003		0.3116	0.3116		0.2935	0.2935	0.0000	323.4516	323.4516	0.0836	0.0000	325.5410
Total	**0.5428**	**4.3095**	**2.5141**	**3.5200e-003**		**0.3116**	**0.3116**		**0.2935**	**0.2935**	**0.0000**	**323.4516**	**323.4516**	**0.0836**	**0.0000**	**325.5410**

Singh Property 2005 BAU - Kings County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Building Construction - 2013

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.7820	8.1851	2.9275	0.0121	0.3337	0.3235	0.6571	0.0964	0.3095	0.4058	0.0000	1,156.4672	1,156.4672	0.0364	0.1716	1,208.5100
Worker	1.5032	1.5467	13.7812	0.0145	1.2885	0.0135	1.3020	0.3424	0.0125	0.3549	0.0000	1,325.5105	1,325.5105	0.1149	0.0877	1,354.5070
Total	**2.2851**	**9.7318**	**16.7086**	**0.0266**	**1.6222**	**0.3370**	**1.9592**	**0.4387**	**0.3220**	**0.7607**	**0.0000**	**2,481.9777**	**2,481.9777**	**0.1513**	**0.2593**	**2,563.0171**

3.5 Building Construction - 2014

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.5067	4.1016	2.4783	3.5200e-003		0.2918	0.2918		0.2747	0.2747	0.0000	322.1068	322.1068	0.0820	0.0000	324.1557
Total	**0.5067**	**4.1016**	**2.4783**	**3.5200e-003**		**0.2918**	**0.2918**		**0.2747**	**0.2747**	**0.0000**	**322.1068**	**322.1068**	**0.0820**	**0.0000**	**324.1557**

Singh Property 2005 BAU - Kings County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Building Construction - 2014

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.6626	7.2802	2.5210	0.0120	0.3337	0.2623	0.5960	0.0964	0.2510	0.3473	0.0000	1,146.3597	1,146.3597	0.0312	0.1701	1,197.8214
Worker	1.3409	1.3451	12.1032	0.0142	1.2885	0.0120	1.3006	0.3424	0.0111	0.3535	0.0000	1,297.6914	1,297.6914	0.1017	0.0787	1,323.6914
Total	**2.0035**	**8.6253**	**14.6242**	**0.0262**	**1.6222**	**0.2743**	**1.8965**	**0.4387**	**0.2621**	**0.7008**	**0.0000**	**2,444.0511**	**2,444.0511**	**0.1328**	**0.2488**	**2,521.5127**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.5067	4.1016	2.4783	3.5200e-003		0.2918	0.2918		0.2747	0.2747	0.0000	322.1064	322.1064	0.0820	0.0000	324.1553
Total	**0.5067**	**4.1016**	**2.4783**	**3.5200e-003**		**0.2918**	**0.2918**		**0.2747**	**0.2747**	**0.0000**	**322.1064**	**322.1064**	**0.0820**	**0.0000**	**324.1553**

Singh Property 2005 BAU - Kings County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Building Construction - 2014

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.6626	7.2802	2.5210	0.0120	0.3337	0.2623	0.5960	0.0964	0.2510	0.3473	0.0000	1,146.3597	1,146.3597	0.0312	0.1701	1,197.8214
Worker	1.3409	1.3451	12.1032	0.0142	1.2885	0.0120	1.3006	0.3424	0.0111	0.3535	0.0000	1,297.6914	1,297.6914	0.1017	0.0787	1,323.6914
Total	**2.0035**	**8.6253**	**14.6242**	**0.0262**	**1.6222**	**0.2743**	**1.8965**	**0.4387**	**0.2621**	**0.7008**	**0.0000**	**2,444.0511**	**2,444.0511**	**0.1328**	**0.2488**	**2,521.5127**

3.5 Building Construction - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.4794	3.9412	2.4539	3.5100e-003		0.2773	0.2773		0.2607	0.2607	0.0000	319.7702	319.7702	0.0803	0.0000	321.7775
Total	**0.4794**	**3.9412**	**2.4539**	**3.5100e-003**		**0.2773**	**0.2773**		**0.2607**	**0.2607**	**0.0000**	**319.7702**	**319.7702**	**0.0803**	**0.0000**	**321.7775**

Singh Property 2005 BAU - Kings County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Building Construction - 2015

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.5811	6.5352	2.2142	0.0118	0.3337	0.2239	0.5576	0.0964	0.2142	0.3106	0.0000	1,130.7802	1,130.7802	0.0273	0.1683	1,181.6058
Worker	1.1938	1.1676	10.6640	0.0139	1.2885	0.0110	1.2995	0.3424	0.0101	0.3525	0.0000	1,278.0044	1,278.0044	0.0902	0.0706	1,301.2891
Total	**1.7749**	**7.7027**	**12.8782**	**0.0258**	**1.6222**	**0.2349**	**1.8571**	**0.4387**	**0.2244**	**0.6631**	**0.0000**	**2,408.7846**	**2,408.7846**	**0.1175**	**0.2388**	**2,482.8949**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.4794	3.9412	2.4539	3.5100e-003		0.2773	0.2773		0.2607	0.2607	0.0000	319.7698	319.7698	0.0803	0.0000	321.7772
Total	**0.4794**	**3.9412**	**2.4539**	**3.5100e-003**		**0.2773**	**0.2773**		**0.2607**	**0.2607**	**0.0000**	**319.7698**	**319.7698**	**0.0803**	**0.0000**	**321.7772**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Building Construction - 2015

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.5811	6.5352	2.2142	0.0118	0.3337	0.2239	0.5576	0.0964	0.2142	0.3106	0.0000	1,130.7802	1,130.7802	0.0273	0.1683	1,181.6058
Worker	1.1938	1.1676	10.6640	0.0139	1.2885	0.0110	1.2995	0.3424	0.0101	0.3525	0.0000	1,278.0044	1,278.0044	0.0902	0.0706	1,301.2891
Total	**1.7749**	**7.7027**	**12.8782**	**0.0258**	**1.6222**	**0.2349**	**1.8571**	**0.4387**	**0.2244**	**0.6631**	**0.0000**	**2,408.7846**	**2,408.7846**	**0.1175**	**0.2388**	**2,482.8949**

3.5 Building Construction - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.4463	3.7416	2.4227	3.5100e-003		0.2577	0.2577		0.2421	0.2421	0.0000	317.3540	317.3540	0.0788	0.0000	319.3235
Total	**0.4463**	**3.7416**	**2.4227**	**3.5100e-003**		**0.2577**	**0.2577**		**0.2421**	**0.2421**	**0.0000**	**317.3540**	**317.3540**	**0.0788**	**0.0000**	**319.3235**

Singh Property 2005 BAU - Kings County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Building Construction - 2016

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.4907	5.7314	1.9516	0.0117	0.3337	0.1804	0.5141	0.0964	0.1726	0.2690	0.0000	1,118.2224	1,118.2224	0.0233	0.1656	1,168.1435
Worker	1.0398	0.9894	9.2032	0.0136	1.2885	9.9600e-003	1.2985	0.3424	9.2000e-003	0.3515	0.0000	1,248.4936	1,248.4936	0.0782	0.0625	1,269.0594
Total	**1.5305**	**6.7208**	**11.1548**	**0.0253**	**1.6222**	**0.1904**	**1.8126**	**0.4387**	**0.1818**	**0.6205**	**0.0000**	**2,366.7160**	**2,366.7160**	**0.1015**	**0.2280**	**2,437.2029**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.4463	3.7416	2.4227	3.5100e-003		0.2577	0.2577		0.2421	0.2421	0.0000	317.3536	317.3536	0.0788	0.0000	319.3231
Total	**0.4463**	**3.7416**	**2.4227**	**3.5100e-003**		**0.2577**	**0.2577**		**0.2421**	**0.2421**	**0.0000**	**317.3536**	**317.3536**	**0.0788**	**0.0000**	**319.3231**

Singh Property 2005 BAU - Kings County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Building Construction - 2016

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.4907	5.7314	1.9516	0.0117	0.3337	0.1804	0.5141	0.0964	0.1726	0.2690	0.0000	1,118.2224	1,118.2224	0.0233	0.1656	1,168.1435
Worker	1.0398	0.9894	9.2032	0.0136	1.2885	9.9600e-003	1.2985	0.3424	9.2000e-003	0.3515	0.0000	1,248.4936	1,248.4936	0.0782	0.0625	1,269.0594
Total	**1.5305**	**6.7208**	**11.1548**	**0.0253**	**1.6222**	**0.1904**	**1.8126**	**0.4387**	**0.1818**	**0.6205**	**0.0000**	**2,366.7160**	**2,366.7160**	**0.1015**	**0.2280**	**2,437.2029**

3.5 Building Construction - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.4049	3.4521	2.3637	3.5000e-003		0.2324	0.2324		0.2183	0.2183	0.0000	312.6407	312.6407	0.0770	0.0000	314.5663
Total	**0.4049**	**3.4521**	**2.3637**	**3.5000e-003**		**0.2324**	**0.2324**		**0.2183**	**0.2183**	**0.0000**	**312.6407**	**312.6407**	**0.0770**	**0.0000**	**314.5663**

Singh Property 2005 BAU - Kings County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Building Construction - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.3817	4.9779	1.6006	0.0115	0.3325	0.1349	0.4674	0.0960	0.1291	0.2251	0.0000	1,098.4040	1,098.4040	0.0184	0.1623	1,147.2214
Worker	0.9089	0.8313	7.9045	0.0132	1.2836	9.2300e-003	1.2928	0.3410	8.5200e-003	0.3496	0.0000	1,211.9735	1,211.9735	0.0672	0.0550	1,230.0340
Total	**1.2906**	**5.8092**	**9.5051**	**0.0247**	**1.6160**	**0.1441**	**1.7602**	**0.4370**	**0.1376**	**0.5746**	**0.0000**	**2,310.3775**	**2,310.3775**	**0.0855**	**0.2173**	**2,377.2554**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.4049	3.4521	2.3637	3.5000e-003		0.2324	0.2324		0.2183	0.2183	0.0000	312.6403	312.6403	0.0770	0.0000	314.5660
Total	**0.4049**	**3.4521**	**2.3637**	**3.5000e-003**		**0.2324**	**0.2324**		**0.2183**	**0.2183**	**0.0000**	**312.6403**	**312.6403**	**0.0770**	**0.0000**	**314.5660**

Singh Property 2005 BAU - Kings County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Building Construction - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.3817	4.9779	1.6006	0.0115	0.3325	0.1349	0.4674	0.0960	0.1291	0.2251	0.0000	1,098.4040	1,098.4040	0.0184	0.1623	1,147.2214
Worker	0.9089	0.8313	7.9045	0.0132	1.2836	9.2300e-003	1.2928	0.3410	8.5200e-003	0.3496	0.0000	1,211.9735	1,211.9735	0.0672	0.0550	1,230.0340
Total	**1.2906**	**5.8092**	**9.5051**	**0.0247**	**1.6160**	**0.1441**	**1.7602**	**0.4370**	**0.1376**	**0.5746**	**0.0000**	**2,310.3775**	**2,310.3775**	**0.0855**	**0.2173**	**2,377.2554**

3.5 Building Construction - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.3497	3.0524	2.2943	3.5100e-003		0.1957	0.1957		0.1840	0.1840	0.0000	310.2862	310.2862	0.0760	0.0000	312.1867
Total	**0.3497**	**3.0524**	**2.2943**	**3.5100e-003**		**0.1957**	**0.1957**		**0.1840**	**0.1840**	**0.0000**	**310.2862**	**310.2862**	**0.0760**	**0.0000**	**312.1867**

Singh Property 2005 BAU - Kings County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Building Construction - 2018

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.3228	4.5643	1.3957	0.0114	0.3337	0.1113	0.4451	0.0964	0.1065	0.2029	0.0000	1,090.6800	1,090.6800	0.0155	0.1607	1,138.9650
Worker	0.7979	0.6958	6.8631	0.0129	1.2885	8.7200e-003	1.2972	0.3424	8.0400e-003	0.3504	0.0000	1,180.2692	1,180.2692	0.0577	0.0486	1,196.2040
Total	**1.1207**	**5.2602**	**8.2587**	**0.0243**	**1.6222**	**0.1200**	**1.7423**	**0.4387**	**0.1145**	**0.5533**	**0.0000**	**2,270.9492**	**2,270.9492**	**0.0732**	**0.2094**	**2,335.1690**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.3497	3.0524	2.2942	3.5100e-003		0.1957	0.1957		0.1840	0.1840	0.0000	310.2859	310.2859	0.0760	0.0000	312.1864
Total	**0.3497**	**3.0524**	**2.2942**	**3.5100e-003**		**0.1957**	**0.1957**		**0.1840**	**0.1840**	**0.0000**	**310.2859**	**310.2859**	**0.0760**	**0.0000**	**312.1864**

Singh Property 2005 BAU - Kings County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Building Construction - 2018

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.3228	4.5643	1.3957	0.0114	0.3337	0.1113	0.4451	0.0964	0.1065	0.2029	0.0000	1,090.6800	1,090.6800	0.0155	0.1607	1,138.9650
Worker	0.7979	0.6958	6.8631	0.0129	1.2885	8.7200e-003	1.2972	0.3424	8.0400e-003	0.3504	0.0000	1,180.2692	1,180.2692	0.0577	0.0486	1,196.2040
Total	**1.1207**	**5.2602**	**8.2587**	**0.0243**	**1.6222**	**0.1200**	**1.7423**	**0.4387**	**0.1145**	**0.5533**	**0.0000**	**2,270.9492**	**2,270.9492**	**0.0732**	**0.2094**	**2,335.1690**

3.5 Building Construction - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.3081	2.7508	2.2399	3.5100e-003		0.1683	0.1683		0.1583	0.1583	0.0000	306.8110	306.8110	0.0747	0.0000	308.6795
Total	**0.3081**	**2.7508**	**2.2399**	**3.5100e-003**		**0.1683**	**0.1683**		**0.1583**	**0.1583**	**0.0000**	**306.8110**	**306.8110**	**0.0747**	**0.0000**	**308.6795**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Building Construction - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.2756	4.1959	1.2437	0.0113	0.3337	0.0923	0.4260	0.0964	0.0883	0.1847	0.0000	1,079.2923	1,079.2923	0.0133	0.1586	1,126.8908
Worker	0.7077	0.5886	5.9958	0.0125	1.2885	8.3500e-003	1.2969	0.3424	7.6900e-003	0.3500	0.0000	1,146.7029	1,146.7029	0.0499	0.0433	1,160.8677
Total	**0.9833**	**4.7844**	**7.2395**	**0.0238**	**1.6222**	**0.1006**	**1.7229**	**0.4387**	**0.0960**	**0.5347**	**0.0000**	**2,225.9952**	**2,225.9952**	**0.0632**	**0.2020**	**2,287.7585**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.3081	2.7508	2.2399	3.5100e-003		0.1683	0.1683		0.1583	0.1583	0.0000	306.8106	306.8106	0.0747	0.0000	308.6792
Total	**0.3081**	**2.7508**	**2.2399**	**3.5100e-003**		**0.1683**	**0.1683**		**0.1583**	**0.1583**	**0.0000**	**306.8106**	**306.8106**	**0.0747**	**0.0000**	**308.6792**

Singh Property 2005 BAU - Kings County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Building Construction - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.2756	4.1959	1.2437	0.0113	0.3337	0.0923	0.4260	0.0964	0.0883	0.1847	0.0000	1,079.2923	1,079.2923	0.0133	0.1586	1,126.8908
Worker	0.7077	0.5886	5.9958	0.0125	1.2885	8.3500e-003	1.2969	0.3424	7.6900e-003	0.3500	0.0000	1,146.7029	1,146.7029	0.0499	0.0433	1,160.8677
Total	**0.9833**	**4.7844**	**7.2395**	**0.0238**	**1.6222**	**0.1006**	**1.7229**	**0.4387**	**0.0960**	**0.5347**	**0.0000**	**2,225.9952**	**2,225.9952**	**0.0632**	**0.2020**	**2,287.7585**

3.5 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2777	2.5134	2.2072	3.5300e-003		0.1463	0.1463		0.1376	0.1376	0.0000	303.4091	303.4091	0.0740	0.0000	305.2596
Total	**0.2777**	**2.5134**	**2.2072**	**3.5300e-003**		**0.1463**	**0.1463**		**0.1376**	**0.1376**	**0.0000**	**303.4091**	**303.4091**	**0.0740**	**0.0000**	**305.2596**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Building Construction - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.2274	3.7929	1.1230	0.0112	0.3350	0.0729	0.4079	0.0967	0.0697	0.1665	0.0000	1,072.4018	1,072.4018	0.0111	0.1571	1,119.4983
Worker	0.6388	0.5061	5.3465	0.0122	1.2934	7.9900e-003	1.3014	0.3437	7.3600e-003	0.3510	0.0000	1,117.1801	1,117.1801	0.0440	0.0392	1,129.9476
Total	**0.8662**	**4.2990**	**6.4694**	**0.0234**	**1.6285**	**0.0809**	**1.7093**	**0.4404**	**0.0771**	**0.5175**	**0.0000**	**2,189.5819**	**2,189.5819**	**0.0551**	**0.1963**	**2,249.4458**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2777	2.5134	2.2072	3.5300e-003		0.1463	0.1463		0.1376	0.1376	0.0000	303.4087	303.4087	0.0740	0.0000	305.2592
Total	**0.2777**	**2.5134**	**2.2072**	**3.5300e-003**		**0.1463**	**0.1463**		**0.1376**	**0.1376**	**0.0000**	**303.4087**	**303.4087**	**0.0740**	**0.0000**	**305.2592**

Singh Property 2005 BAU - Kings County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Building Construction - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.2274	3.7929	1.1230	0.0112	0.3350	0.0729	0.4079	0.0967	0.0697	0.1665	0.0000	1,072.4018	1,072.4018	0.0111	0.1571	1,119.4983
Worker	0.6388	0.5061	5.3465	0.0122	1.2934	7.9900e-003	1.3014	0.3437	7.3600e-003	0.3510	0.0000	1,117.1801	1,117.1801	0.0440	0.0392	1,129.9476
Total	**0.8662**	**4.2990**	**6.4694**	**0.0234**	**1.6285**	**0.0809**	**1.7093**	**0.4404**	**0.0771**	**0.5175**	**0.0000**	**2,189.5819**	**2,189.5819**	**0.0551**	**0.1963**	**2,249.4458**

3.5 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2481	2.2749	2.1631	3.5100e-003		0.1251	0.1251		0.1176	0.1176	0.0000	302.2867	302.2867	0.0729	0.0000	304.1099
Total	**0.2481**	**2.2749**	**2.1631**	**3.5100e-003**		**0.1251**	**0.1251**		**0.1176**	**0.1176**	**0.0000**	**302.2867**	**302.2867**	**0.0729**	**0.0000**	**304.1099**

Singh Property 2005 BAU - Kings County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Building Construction - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1900	3.3752	1.0298	0.0110	0.3337	0.0597	0.3934	0.0964	0.0571	0.1535	0.0000	1,052.6413	1,052.6413	9.3800e-003	0.1537	1,098.6623
Worker	0.5780	0.4362	4.7941	0.0118	1.2885	7.5000e-003	1.2960	0.3424	6.9100e-003	0.3493	0.0000	1,081.1326	1,081.1326	0.0391	0.0354	1,092.6574
Total	**0.7680**	**3.8113**	**5.8238**	**0.0228**	**1.6222**	**0.0672**	**1.6894**	**0.4387**	**0.0640**	**0.5027**	**0.0000**	**2,133.7738**	**2,133.7738**	**0.0485**	**0.1891**	**2,191.3197**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2481	2.2749	2.1631	3.5100e-003		0.1251	0.1251		0.1176	0.1176	0.0000	302.2863	302.2863	0.0729	0.0000	304.1095
Total	**0.2481**	**2.2749**	**2.1631**	**3.5100e-003**		**0.1251**	**0.1251**		**0.1176**	**0.1176**	**0.0000**	**302.2863**	**302.2863**	**0.0729**	**0.0000**	**304.1095**

Singh Property 2005 BAU - Kings County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Building Construction - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1900	3.3752	1.0298	0.0110	0.3337	0.0597	0.3934	0.0964	0.0571	0.1535	0.0000	1,052.6413	1,052.6413	9.3800e-003	0.1537	1,098.6623
Worker	0.5780	0.4362	4.7941	0.0118	1.2885	7.5000e-003	1.2960	0.3424	6.9100e-003	0.3493	0.0000	1,081.1326	1,081.1326	0.0391	0.0354	1,092.6574
Total	**0.7680**	**3.8113**	**5.8238**	**0.0228**	**1.6222**	**0.0672**	**1.6894**	**0.4387**	**0.0640**	**0.5027**	**0.0000**	**2,133.7738**	**2,133.7738**	**0.0485**	**0.1891**	**2,191.3197**

3.5 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2218	2.0300	2.1272	3.5000e-003		0.1052	0.1052		0.0990	0.0990	0.0000	301.2428	301.2428	0.0722	0.0000	303.0471
Total	**0.2218**	**2.0300**	**2.1272**	**3.5000e-003**		**0.1052**	**0.1052**		**0.0990**	**0.0990**	**0.0000**	**301.2428**	**301.2428**	**0.0722**	**0.0000**	**303.0471**

Singh Property 2005 BAU - Kings County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Building Construction - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1177	2.7939	0.8593	0.0107	0.3325	0.0315	0.3639	0.0960	0.0301	0.1261	0.0000	1,025.3718	1,025.3718	6.2200e-003	0.1491	1,069.9495
Worker	0.5265	0.3785	4.3325	0.0114	1.2836	7.0000e-003	1.2906	0.3410	6.4400e-003	0.3475	0.0000	1,043.3272	1,043.3272	0.0348	0.0322	1,053.7912
Total	**0.6442**	**3.1724**	**5.1917**	**0.0221**	**1.6160**	**0.0385**	**1.6545**	**0.4370**	**0.0366**	**0.4736**	**0.0000**	**2,068.6991**	**2,068.6991**	**0.0410**	**0.1813**	**2,123.7407**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2218	2.0300	2.1272	3.5000e-003		0.1052	0.1052		0.0990	0.0990	0.0000	301.2425	301.2425	0.0722	0.0000	303.0467
Total	**0.2218**	**2.0300**	**2.1272**	**3.5000e-003**		**0.1052**	**0.1052**		**0.0990**	**0.0990**	**0.0000**	**301.2425**	**301.2425**	**0.0722**	**0.0000**	**303.0467**

Singh Property 2005 BAU - Kings County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Building Construction - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1177	2.7939	0.8593	0.0107	0.3325	0.0315	0.3639	0.0960	0.0301	0.1261	0.0000	1,025.3718	1,025.3718	6.2200e-003	0.1491	1,069.9495
Worker	0.5265	0.3785	4.3325	0.0114	1.2836	7.0000e-003	1.2906	0.3410	6.4400e-003	0.3475	0.0000	1,043.3272	1,043.3272	0.0348	0.0322	1,053.7912
Total	**0.6442**	**3.1724**	**5.1917**	**0.0221**	**1.6160**	**0.0385**	**1.6545**	**0.4370**	**0.0366**	**0.4736**	**0.0000**	**2,068.6991**	**2,068.6991**	**0.0410**	**0.1813**	**2,123.7407**

3.5 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2045	1.8700	2.1117	3.5000e-003		0.0910	0.0910		0.0856	0.0856	0.0000	301.3462	301.3462	0.0717	0.0000	303.1383
Total	**0.2045**	**1.8700**	**2.1117**	**3.5000e-003**		**0.0910**	**0.0910**		**0.0856**	**0.0856**	**0.0000**	**301.3462**	**301.3462**	**0.0717**	**0.0000**	**303.1383**

Singh Property 2005 BAU - Kings County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Building Construction - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0611	2.2373	0.7374	0.0103	0.3325	0.0147	0.3472	0.0960	0.0141	0.1101	0.0000	989.2432	989.2432	3.7500e-003	0.1431	1,031.9766
Worker	0.4830	0.3311	3.9505	0.0110	1.2836	6.5700e-003	1.2901	0.3410	6.0500e-003	0.3471	0.0000	1,009.7683	1,009.7683	0.0311	0.0296	1,019.3544
Total	**0.5441**	**2.5684**	**4.6879**	**0.0214**	**1.6160**	**0.0213**	**1.6373**	**0.4370**	**0.0201**	**0.4572**	**0.0000**	**1,999.0114**	**1,999.0114**	**0.0349**	**0.1727**	**2,051.3310**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2045	1.8700	2.1117	3.5000e-003		0.0910	0.0910		0.0856	0.0856	0.0000	301.3458	301.3458	0.0717	0.0000	303.1380
Total	**0.2045**	**1.8700**	**2.1117**	**3.5000e-003**		**0.0910**	**0.0910**		**0.0856**	**0.0856**	**0.0000**	**301.3458**	**301.3458**	**0.0717**	**0.0000**	**303.1380**

Singh Property 2005 BAU - Kings County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Building Construction - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0611	2.2373	0.7374	0.0103	0.3325	0.0147	0.3472	0.0960	0.0141	0.1101	0.0000	989.2432	989.2432	3.7500e-003	0.1431	1,031.9766
Worker	0.4830	0.3311	3.9505	0.0110	1.2836	6.5700e-003	1.2901	0.3410	6.0500e-003	0.3471	0.0000	1,009.7683	1,009.7683	0.0311	0.0296	1,019.3544
Total	**0.5441**	**2.5684**	**4.6879**	**0.0214**	**1.6160**	**0.0213**	**1.6373**	**0.4370**	**0.0201**	**0.4572**	**0.0000**	**1,999.0114**	**1,999.0114**	**0.0349**	**0.1727**	**2,051.3310**

3.5 Building Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1928	1.7611	2.1179	3.5300e-003		0.0803	0.0803		0.0756	0.0756	0.0000	303.7223	303.7223	0.0718	0.0000	305.5179
Total	**0.1928**	**1.7611**	**2.1179**	**3.5300e-003**		**0.0803**	**0.0803**		**0.0756**	**0.0756**	**0.0000**	**303.7223**	**303.7223**	**0.0718**	**0.0000**	**305.5179**

Singh Property 2005 BAU - Kings County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Building Construction - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0600	2.2533	0.7232	0.0103	0.3350	0.0149	0.3500	0.0968	0.0143	0.1110	0.0000	982.2737	982.2737	3.6300e-003	0.1417	1,024.6014
Worker	0.4492	0.2945	3.6761	0.0107	1.2934	6.2600e-003	1.2997	0.3437	5.7600e-003	0.3494	0.0000	985.0993	985.0993	0.0282	0.0275	994.0108
Total	**0.5091**	**2.5478**	**4.3993**	**0.0210**	**1.6285**	**0.0212**	**1.6497**	**0.4404**	**0.0200**	**0.4605**	**0.0000**	**1,967.3730**	**1,967.3730**	**0.0319**	**0.1693**	**2,018.6122**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1928	1.7611	2.1179	3.5300e-003		0.0803	0.0803		0.0756	0.0756	0.0000	303.7220	303.7220	0.0718	0.0000	305.5175
Total	**0.1928**	**1.7611**	**2.1179**	**3.5300e-003**		**0.0803**	**0.0803**		**0.0756**	**0.0756**	**0.0000**	**303.7220**	**303.7220**	**0.0718**	**0.0000**	**305.5175**

Singh Property 2005 BAU - Kings County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Building Construction - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0600	2.2533	0.7232	0.0103	0.3350	0.0149	0.3500	0.0968	0.0143	0.1110	0.0000	982.2737	982.2737	3.6300e-003	0.1417	1,024.6014
Worker	0.4492	0.2945	3.6761	0.0107	1.2934	6.2600e-003	1.2997	0.3437	5.7600e-003	0.3494	0.0000	985.0993	985.0993	0.0282	0.0275	994.0108
Total	**0.5091**	**2.5478**	**4.3993**	**0.0210**	**1.6285**	**0.0212**	**1.6497**	**0.4404**	**0.0200**	**0.4605**	**0.0000**	**1,967.3730**	**1,967.3730**	**0.0319**	**0.1693**	**2,018.6122**

3.5 Building Construction - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1785	1.6273	2.0991	3.5200e-003		0.0689	0.0689		0.0648	0.0648	0.0000	302.6549	302.6549	0.0711	0.0000	304.4335
Total	**0.1785**	**1.6273**	**2.0991**	**3.5200e-003**		**0.0689**	**0.0689**		**0.0648**	**0.0648**	**0.0000**	**302.6549**	**302.6549**	**0.0711**	**0.0000**	**304.4335**

Singh Property 2005 BAU - Kings County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Building Construction - 2025

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0583	2.2343	0.7035	0.0101	0.3338	0.0149	0.3486	0.0964	0.0142	0.1106	0.0000	962.2407	962.2407	3.4900e-003	0.1384	1,003.5730
Worker	0.4156	0.2615	3.4006	0.0103	1.2885	5.9200e-003	1.2944	0.3424	5.4500e-003	0.3478	0.0000	948.2958	948.2958	0.0254	0.0255	956.5385
Total	**0.4739**	**2.4957**	**4.1041**	**0.0204**	**1.6223**	**0.0208**	**1.6430**	**0.4387**	**0.0197**	**0.4584**	**0.0000**	**1,910.5364**	**1,910.5364**	**0.0289**	**0.1639**	**1,960.1115**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1784	1.6273	2.0991	3.5200e-003		0.0689	0.0689		0.0648	0.0648	0.0000	302.6545	302.6545	0.0711	0.0000	304.4331
Total	**0.1784**	**1.6273**	**2.0991**	**3.5200e-003**		**0.0689**	**0.0689**		**0.0648**	**0.0648**	**0.0000**	**302.6545**	**302.6545**	**0.0711**	**0.0000**	**304.4331**

Singh Property 2005 BAU - Kings County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Building Construction - 2025

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0583	2.2343	0.7035	0.0101	0.3338	0.0149	0.3486	0.0964	0.0142	0.1106	0.0000	962.2407	962.2407	3.4900e-003	0.1384	1,003.5730
Worker	0.4156	0.2615	3.4006	0.0103	1.2885	5.9200e-003	1.2944	0.3424	5.4500e-003	0.3478	0.0000	948.2958	948.2958	0.0254	0.0255	956.5385
Total	**0.4739**	**2.4957**	**4.1041**	**0.0204**	**1.6223**	**0.0208**	**1.6430**	**0.4387**	**0.0197**	**0.4584**	**0.0000**	**1,910.5364**	**1,910.5364**	**0.0289**	**0.1639**	**1,960.1115**

3.5 Building Construction - 2026

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1785	1.6273	2.0991	3.5200e-003		0.0689	0.0689		0.0648	0.0648	0.0000	302.6549	302.6549	0.0711	0.0000	304.4335
Total	**0.1785**	**1.6273**	**2.0991**	**3.5200e-003**		**0.0689**	**0.0689**		**0.0648**	**0.0648**	**0.0000**	**302.6549**	**302.6549**	**0.0711**	**0.0000**	**304.4335**

Singh Property 2005 BAU - Kings County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Building Construction - 2026

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0572	2.2197	0.6898	9.8900e-003	0.3338	0.0148	0.3485	0.0964	0.0141	0.1105	0.0000	945.8295	945.8295	3.3900e-003	0.1356	986.3183
Worker	0.3888	0.2359	3.2196	0.0101	1.2885	5.7400e-003	1.2942	0.3424	5.2800e-003	0.3476	0.0000	922.2159	922.2159	0.0232	0.0240	929.9515
Total	**0.4460**	**2.4556**	**3.9095**	**0.0200**	**1.6223**	**0.0205**	**1.6428**	**0.4387**	**0.0194**	**0.4581**	**0.0000**	**1,868.0454**	**1,868.0454**	**0.0266**	**0.1596**	**1,916.2698**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1784	1.6273	2.0991	3.5200e-003		0.0689	0.0689		0.0648	0.0648	0.0000	302.6545	302.6545	0.0711	0.0000	304.4331
Total	**0.1784**	**1.6273**	**2.0991**	**3.5200e-003**		**0.0689**	**0.0689**		**0.0648**	**0.0648**	**0.0000**	**302.6545**	**302.6545**	**0.0711**	**0.0000**	**304.4331**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Building Construction - 2026

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0572	2.2197	0.6898	9.8900e-003	0.3338	0.0148	0.3485	0.0964	0.0141	0.1105	0.0000	945.8295	945.8295	3.3900e-003	0.1356	986.3183
Worker	0.3888	0.2359	3.2196	0.0101	1.2885	5.7400e-003	1.2942	0.3424	5.2800e-003	0.3476	0.0000	922.2159	922.2159	0.0232	0.0240	929.9515
Total	**0.4460**	**2.4556**	**3.9095**	**0.0200**	**1.6223**	**0.0205**	**1.6428**	**0.4387**	**0.0194**	**0.4581**	**0.0000**	**1,868.0454**	**1,868.0454**	**0.0266**	**0.1596**	**1,916.2698**

3.5 Building Construction - 2027

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1785	1.6273	2.0991	3.5200e-003		0.0689	0.0689		0.0648	0.0648	0.0000	302.6549	302.6549	0.0711	0.0000	304.4335
Total	**0.1785**	**1.6273**	**2.0991**	**3.5200e-003**		**0.0689**	**0.0689**		**0.0648**	**0.0648**	**0.0000**	**302.6549**	**302.6549**	**0.0711**	**0.0000**	**304.4335**

Singh Property 2005 BAU - Kings County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Building Construction - 2027

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0562	2.2031	0.6790	9.7100e-003	0.3338	0.0147	0.3484	0.0964	0.0140	0.1104	0.0000	928.0191	928.0191	3.3100e-003	0.1326	967.6286
Worker	0.3638	0.2141	3.0303	9.7700e-003	1.2885	5.4000e-003	1.2939	0.3424	4.9700e-003	0.3473	0.0000	895.4477	895.4477	0.0212	0.0227	902.7439
Total	**0.4201**	**2.4172**	**3.7093**	**0.0195**	**1.6223**	**0.0201**	**1.6423**	**0.4387**	**0.0190**	**0.4577**	**0.0000**	**1,823.4668**	**1,823.4668**	**0.0245**	**0.1554**	**1,870.3725**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1784	1.6273	2.0991	3.5200e-003		0.0689	0.0689		0.0648	0.0648	0.0000	302.6545	302.6545	0.0711	0.0000	304.4331
Total	**0.1784**	**1.6273**	**2.0991**	**3.5200e-003**		**0.0689**	**0.0689**		**0.0648**	**0.0648**	**0.0000**	**302.6545**	**302.6545**	**0.0711**	**0.0000**	**304.4331**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Building Construction - 2027

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0562	2.2031	0.6790	9.7100e-003	0.3338	0.0147	0.3484	0.0964	0.0140	0.1104	0.0000	928.0191	928.0191	3.3100e-003	0.1326	967.6286
Worker	0.3638	0.2141	3.0303	9.7700e-003	1.2885	5.4000e-003	1.2939	0.3424	4.9700e-003	0.3473	0.0000	895.4477	895.4477	0.0212	0.0227	902.7439
Total	**0.4201**	**2.4172**	**3.7093**	**0.0195**	**1.6223**	**0.0201**	**1.6423**	**0.4387**	**0.0190**	**0.4577**	**0.0000**	**1,823.4668**	**1,823.4668**	**0.0245**	**0.1554**	**1,870.3725**

3.5 Building Construction - 2028

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0123	0.1122	0.1448	2.4000e-004		4.7500e-003	4.7500e-003		4.4700e-003	4.4700e-003	0.0000	20.8728	20.8728	4.9100e-003	0.0000	20.9954
Total	**0.0123**	**0.1122**	**0.1448**	**2.4000e-004**		**4.7500e-003**	**4.7500e-003**		**4.4700e-003**	**4.4700e-003**	**0.0000**	**20.8728**	**20.8728**	**4.9100e-003**	**0.0000**	**20.9954**

Singh Property 2005 BAU - Kings County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Building Construction - 2028

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.8300e-003	0.1511	0.0463	6.6000e-004	0.0230	1.0000e-003	0.0240	6.6500e-003	9.6000e-004	7.6100e-003	0.0000	62.8286	62.8286	2.2000e-004	8.9500e-003	65.5025
Worker	0.0235	0.0135	0.1982	6.6000e-004	0.0889	3.5000e-004	0.0892	0.0236	3.2000e-004	0.0239	0.0000	60.1066	60.1066	1.3400e-003	1.4900e-003	60.5846
Total	**0.0274**	**0.1646**	**0.2445**	**1.3200e-003**	**0.1119**	**1.3500e-003**	**0.1132**	**0.0303**	**1.2800e-003**	**0.0315**	**0.0000**	**122.9352**	**122.9352**	**1.5600e-003**	**0.0104**	**126.0871**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0123	0.1122	0.1448	2.4000e-004		4.7500e-003	4.7500e-003		4.4700e-003	4.4700e-003	0.0000	20.8727	20.8727	4.9100e-003	0.0000	20.9954
Total	**0.0123**	**0.1122**	**0.1448**	**2.4000e-004**		**4.7500e-003**	**4.7500e-003**		**4.4700e-003**	**4.4700e-003**	**0.0000**	**20.8727**	**20.8727**	**4.9100e-003**	**0.0000**	**20.9954**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Building Construction - 2028

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.8300e-003	0.1511	0.0463	6.6000e-004	0.0230	1.0000e-003	0.0240	6.6500e-003	9.6000e-004	7.6100e-003	0.0000	62.8286	62.8286	2.2000e-004	8.9500e-003	65.5025
Worker	0.0235	0.0135	0.1982	6.6000e-004	0.0889	3.5000e-004	0.0892	0.0236	3.2000e-004	0.0239	0.0000	60.1066	60.1066	1.3400e-003	1.4900e-003	60.5846
Total	**0.0274**	**0.1646**	**0.2445**	**1.3200e-003**	**0.1119**	**1.3500e-003**	**0.1132**	**0.0303**	**1.2800e-003**	**0.0315**	**0.0000**	**122.9352**	**122.9352**	**1.5600e-003**	**0.0104**	**126.0871**

3.6 Paving - 2028

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1107	1.0384	1.7639	2.7600e-003		0.0506	0.0506		0.0466	0.0466	0.0000	242.2330	242.2330	0.0783	0.0000	244.1916
Paving	2.4200e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.1132**	**1.0384**	**1.7639**	**2.7600e-003**		**0.0506**	**0.0506**		**0.0466**	**0.0466**	**0.0000**	**242.2330**	**242.2330**	**0.0783**	**0.0000**	**244.1916**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Paving - 2028

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.8600e-003	2.2200e-003	0.0325	1.1000e-004	0.0146	6.0000e-005	0.0146	3.8700e-003	5.0000e-005	3.9300e-003	0.0000	9.8629	9.8629	2.2000e-004	2.4000e-004	9.9413
Total	**3.8600e-003**	**2.2200e-003**	**0.0325**	**1.1000e-004**	**0.0146**	**6.0000e-005**	**0.0146**	**3.8700e-003**	**5.0000e-005**	**3.9300e-003**	**0.0000**	**9.8629**	**9.8629**	**2.2000e-004**	**2.4000e-004**	**9.9413**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1107	1.0384	1.7639	2.7600e-003		0.0506	0.0506		0.0466	0.0466	0.0000	242.2327	242.2327	0.0783	0.0000	244.1913
Paving	2.4200e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.1132**	**1.0384**	**1.7639**	**2.7600e-003**		**0.0506**	**0.0506**		**0.0466**	**0.0466**	**0.0000**	**242.2327**	**242.2327**	**0.0783**	**0.0000**	**244.1913**

Singh Property 2005 BAU - Kings County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Paving - 2028

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.8600e-003	2.2200e-003	0.0325	1.1000e-004	0.0146	6.0000e-005	0.0146	3.8700e-003	5.0000e-005	3.9300e-003	0.0000	9.8629	9.8629	2.2000e-004	2.4000e-004	9.9413
Total	**3.8600e-003**	**2.2200e-003**	**0.0325**	**1.1000e-004**	**0.0146**	**6.0000e-005**	**0.0146**	**3.8700e-003**	**5.0000e-005**	**3.9300e-003**	**0.0000**	**9.8629**	**9.8629**	**2.2000e-004**	**2.4000e-004**	**9.9413**

3.6 Paving - 2029

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0906	0.8496	1.4432	2.2600e-003		0.0414	0.0414		0.0381	0.0381	0.0000	198.1906	198.1906	0.0641	0.0000	199.7931
Paving	1.9800e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0926**	**0.8496**	**1.4432**	**2.2600e-003**		**0.0414**	**0.0414**		**0.0381**	**0.0381**	**0.0000**	**198.1906**	**198.1906**	**0.0641**	**0.0000**	**199.7931**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Paving - 2029

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.9600e-003	1.6700e-003	0.0254	9.0000e-005	0.0119	4.0000e-005	0.0120	3.1700e-003	4.0000e-005	3.2100e-003	0.0000	7.8720	7.8720	1.7000e-004	1.9000e-004	7.9333
Total	**2.9600e-003**	**1.6700e-003**	**0.0254**	**9.0000e-005**	**0.0119**	**4.0000e-005**	**0.0120**	**3.1700e-003**	**4.0000e-005**	**3.2100e-003**	**0.0000**	**7.8720**	**7.8720**	**1.7000e-004**	**1.9000e-004**	**7.9333**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0906	0.8496	1.4432	2.2600e-003		0.0414	0.0414		0.0381	0.0381	0.0000	198.1904	198.1904	0.0641	0.0000	199.7929
Paving	1.9800e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0926**	**0.8496**	**1.4432**	**2.2600e-003**		**0.0414**	**0.0414**		**0.0381**	**0.0381**	**0.0000**	**198.1904**	**198.1904**	**0.0641**	**0.0000**	**199.7929**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Paving - 2029

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.9600e-003	1.6700e-003	0.0254	9.0000e-005	0.0119	4.0000e-005	0.0120	3.1700e-003	4.0000e-005	3.2100e-003	0.0000	7.8720	7.8720	1.7000e-004	1.9000e-004	7.9333
Total	**2.9600e-003**	**1.6700e-003**	**0.0254**	**9.0000e-005**	**0.0119**	**4.0000e-005**	**0.0120**	**3.1700e-003**	**4.0000e-005**	**3.2100e-003**	**0.0000**	**7.8720**	**7.8720**	**1.7000e-004**	**1.9000e-004**	**7.9333**

3.7 Architectural Coating - 2029

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	1.6606					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.3800e-003	0.0361	0.0570	9.0000e-005		1.6200e-003	1.6200e-003		1.6200e-003	1.6200e-003	0.0000	8.0428	8.0428	4.4000e-004	0.0000	8.0537
Total	**1.6660**	**0.0361**	**0.0570**	**9.0000e-005**		**1.6200e-003**	**1.6200e-003**		**1.6200e-003**	**1.6200e-003**	**0.0000**	**8.0428**	**8.0428**	**4.4000e-004**	**0.0000**	**8.0537**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.7 Architectural Coating - 2029

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0155	8.7300e-003	0.1323	4.5000e-004	0.0623	2.3000e-004	0.0625	0.0165	2.1000e-004	0.0168	0.0000	41.0774	41.0774	8.7000e-004	1.0000e-003	41.3973
Total	**0.0155**	**8.7300e-003**	**0.1323**	**4.5000e-004**	**0.0623**	**2.3000e-004**	**0.0625**	**0.0165**	**2.1000e-004**	**0.0168**	**0.0000**	**41.0774**	**41.0774**	**8.7000e-004**	**1.0000e-003**	**41.3973**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	1.6606					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.3800e-003	0.0361	0.0570	9.0000e-005		1.6200e-003	1.6200e-003		1.6200e-003	1.6200e-003	0.0000	8.0427	8.0427	4.4000e-004	0.0000	8.0537
Total	**1.6660**	**0.0361**	**0.0570**	**9.0000e-005**		**1.6200e-003**	**1.6200e-003**		**1.6200e-003**	**1.6200e-003**	**0.0000**	**8.0427**	**8.0427**	**4.4000e-004**	**0.0000**	**8.0537**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.7 Architectural Coating - 2029

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0155	8.7300e-003	0.1323	4.5000e-004	0.0623	2.3000e-004	0.0625	0.0165	2.1000e-004	0.0168	0.0000	41.0774	41.0774	8.7000e-004	1.0000e-003	41.3973
Total	**0.0155**	**8.7300e-003**	**0.1323**	**4.5000e-004**	**0.0623**	**2.3000e-004**	**0.0625**	**0.0165**	**2.1000e-004**	**0.0168**	**0.0000**	**41.0774**	**41.0774**	**8.7000e-004**	**1.0000e-003**	**41.3973**

3.7 Architectural Coating - 2030

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	6.8797					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0171	0.1117	0.2346	3.9000e-004		2.6500e-003	2.6500e-003		2.6500e-003	2.6500e-003	0.0000	33.3200	33.3200	1.3500e-003	0.0000	33.3537
Total	**6.8967**	**0.1117**	**0.2346**	**3.9000e-004**		**2.6500e-003**	**2.6500e-003**		**2.6500e-003**	**2.6500e-003**	**0.0000**	**33.3200**	**33.3200**	**1.3500e-003**	**0.0000**	**33.3537**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.7 Architectural Coating - 2030

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0601	0.0335	0.5251	1.8100e-003	0.2579	8.8000e-004	0.2588	0.0685	8.1000e-004	0.0693	0.0000	166.3733	166.3733	3.3200e-003	3.9900e-003	167.6464
Total	**0.0601**	**0.0335**	**0.5251**	**1.8100e-003**	**0.2579**	**8.8000e-004**	**0.2588**	**0.0685**	**8.1000e-004**	**0.0693**	**0.0000**	**166.3733**	**166.3733**	**3.3200e-003**	**3.9900e-003**	**167.6464**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	6.8797					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0171	0.1117	0.2346	3.9000e-004		2.6500e-003	2.6500e-003		2.6500e-003	2.6500e-003	0.0000	33.3199	33.3199	1.3500e-003	0.0000	33.3536
Total	**6.8967**	**0.1117**	**0.2346**	**3.9000e-004**		**2.6500e-003**	**2.6500e-003**		**2.6500e-003**	**2.6500e-003**	**0.0000**	**33.3199**	**33.3199**	**1.3500e-003**	**0.0000**	**33.3536**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.7 Architectural Coating - 2030

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0601	0.0335	0.5251	1.8100e-003	0.2579	8.8000e-004	0.2588	0.0685	8.1000e-004	0.0693	0.0000	166.3733	166.3733	3.3200e-003	3.9900e-003	167.6464
Total	**0.0601**	**0.0335**	**0.5251**	**1.8100e-003**	**0.2579**	**8.8000e-004**	**0.2588**	**0.0685**	**8.1000e-004**	**0.0693**	**0.0000**	**166.3733**	**166.3733**	**3.3200e-003**	**3.9900e-003**	**167.6464**

3.7 Architectural Coating - 2031

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	3.0576					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.5800e-003	0.0497	0.1043	1.7000e-004		1.1800e-003	1.1800e-003		1.1800e-003	1.1800e-003	0.0000	14.8089	14.8089	6.0000e-004	0.0000	14.8239
Total	**3.0652**	**0.0497**	**0.1043**	**1.7000e-004**		**1.1800e-003**	**1.1800e-003**		**1.1800e-003**	**1.1800e-003**	**0.0000**	**14.8089**	**14.8089**	**6.0000e-004**	**0.0000**	**14.8239**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.7 Architectural Coating - 2031

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0250	0.0139	0.2241	7.9000e-004	0.1146	3.6000e-004	0.1150	0.0305	3.4000e-004	0.0308	0.0000	72.4387	72.4387	1.3700e-003	1.7200e-003	72.9841
Total	**0.0250**	**0.0139**	**0.2241**	**7.9000e-004**	**0.1146**	**3.6000e-004**	**0.1150**	**0.0305**	**3.4000e-004**	**0.0308**	**0.0000**	**72.4387**	**72.4387**	**1.3700e-003**	**1.7200e-003**	**72.9841**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	3.0576					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.5800e-003	0.0497	0.1043	1.7000e-004		1.1800e-003	1.1800e-003		1.1800e-003	1.1800e-003	0.0000	14.8089	14.8089	6.0000e-004	0.0000	14.8238
Total	**3.0652**	**0.0497**	**0.1043**	**1.7000e-004**		**1.1800e-003**	**1.1800e-003**		**1.1800e-003**	**1.1800e-003**	**0.0000**	**14.8089**	**14.8089**	**6.0000e-004**	**0.0000**	**14.8238**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.7 Architectural Coating - 2031

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0250	0.0139	0.2241	7.9000e-004	0.1146	3.6000e-004	0.1150	0.0305	3.4000e-004	0.0308	0.0000	72.4387	72.4387	1.3700e-003	1.7200e-003	72.9841
Total	**0.0250**	**0.0139**	**0.2241**	**7.9000e-004**	**0.1146**	**3.6000e-004**	**0.1150**	**0.0305**	**3.4000e-004**	**0.0308**	**0.0000**	**72.4387**	**72.4387**	**1.3700e-003**	**1.7200e-003**	**72.9841**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Singh Property 2005 BAU - Kings County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	7.0297	13.0691	62.4885	0.1515	14.7754	0.1423	14.9177	3.9491	0.1339	4.0830	0.0000	14,038.4904	14,038.4904	0.7315	0.8536	14,311.1350
Unmitigated	7.0297	13.0691	62.4885	0.1515	14.7754	0.1423	14.9177	3.9491	0.1339	4.0830	0.0000	14,038.4904	14,038.4904	0.7315	0.8536	14,311.1350

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	1,566.48	1,741.96	1343.92	4,464,405	4,464,405
City Park	21.52	54.08	60.42	67,736	67,736
Condo/Townhouse	1,720.20	1,912.90	1475.80	4,902,501	4,902,501
Elementary School	1,134.00	0.00	0.00	1,786,001	1,786,001
Single Family Housing	6,579.68	6,649.38	5959.35	18,607,533	18,607,533
Parking Lot	0.00	0.00	0.00		
Regional Shopping Center	5,525.09	6,750.12	3088.20	9,383,630	9,383,630
Total	16,546.97	17,108.44	11,927.69	39,211,805	39,211,805

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Low Rise	10.80	7.30	7.50	42.30	19.60	38.10	86	11	3
City Park	9.50	7.30	7.30	33.00	48.00	19.00	66	28	6
Condo/Townhouse	10.80	7.30	7.50	42.30	19.60	38.10	86	11	3
Elementary School	9.50	7.30	7.30	65.00	30.00	5.00	63	25	12
Single Family Housing	10.80	7.30	7.50	42.30	19.60	38.10	86	11	3

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Regional Shopping Center	9.50	7.30	7.30	16.30	64.70	19.00	54	35	11

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Low Rise	0.509079	0.051904	0.169516	0.159109	0.028747	0.006626	0.008281	0.037038	0.000603	0.000188	0.024404	0.001123	0.003381
City Park	0.509079	0.051904	0.169516	0.159109	0.028747	0.006626	0.008281	0.037038	0.000603	0.000188	0.024404	0.001123	0.003381
Condo/Townhouse	0.509079	0.051904	0.169516	0.159109	0.028747	0.006626	0.008281	0.037038	0.000603	0.000188	0.024404	0.001123	0.003381
Elementary School	0.509079	0.051904	0.169516	0.159109	0.028747	0.006626	0.008281	0.037038	0.000603	0.000188	0.024404	0.001123	0.003381
Single Family Housing	0.509079	0.051904	0.169516	0.159109	0.028747	0.006626	0.008281	0.037038	0.000603	0.000188	0.024404	0.001123	0.003381
Parking Lot	0.509079	0.051904	0.169516	0.159109	0.028747	0.006626	0.008281	0.037038	0.000603	0.000188	0.024404	0.001123	0.003381
Regional Shopping Center	0.509079	0.051904	0.169516	0.159109	0.028747	0.006626	0.008281	0.037038	0.000603	0.000188	0.024404	0.001123	0.003381

5.0 Energy Detail

Historical Energy Use: Y

5.1 Mitigation Measures Energy

Kilowatt Hours of Renewable Electricity Generated

Singh Property 2005 BAU - Kings County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	1,625.8109	1,625.8109	0.1372	0.0166	1,634.1982
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	1,626.7386	1,626.7386	0.1373	0.0166	1,635.1307
NaturalGas Mitigated	0.1423	1.2239	0.5777	7.7600e-003		0.0983	0.0983		0.0983	0.0983	0.0000	1,407.8886	1,407.8886	0.0270	0.0258	1,416.2550
NaturalGas Unmitigated	0.1423	1.2239	0.5777	7.7600e-003		0.0983	0.0983		0.0983	0.0983	0.0000	1,407.8886	1,407.8886	0.0270	0.0258	1,416.2550

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Low Rise	2.92046e+006	0.0158	0.1346	0.0573	8.6000e-004		0.0109	0.0109		0.0109	0.0109	0.0000	155.8470	155.8470	2.9900e-003	2.8600e-003	156.7731
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Condo/Townhouse	3.90729e+006	0.0211	0.1800	0.0766	1.1500e-003		0.0146	0.0146		0.0146	0.0146	0.0000	208.5079	208.5079	4.0000e-003	3.8200e-003	209.7470
Elementary School	1.24803e+006	6.7300e-003	0.0612	0.0514	3.7000e-004		4.6500e-003	4.6500e-003		4.6500e-003	4.6500e-003	0.0000	66.5997	66.5997	1.2800e-003	1.2200e-003	66.9955
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	1.55288e+006	8.3700e-003	0.0761	0.0639	4.6000e-004		5.7900e-003	5.7900e-003		5.7900e-003	5.7900e-003	0.0000	82.8676	82.8676	1.5900e-003	1.5200e-003	83.3600
Single Family Housing	1.67542e+007	0.0903	0.7720	0.3285	4.9300e-003		0.0624	0.0624		0.0624	0.0624	0.0000	894.0664	894.0664	0.0171	0.0164	899.3794
Total		**0.1423**	**1.2239**	**0.5777**	**7.7700e-003**		**0.0983**	**0.0983**		**0.0983**	**0.0983**	**0.0000**	**1,407.8886**	**1,407.8886**	**0.0270**	**0.0258**	**1,416.2550**

Singh Property 2005 BAU - Kings County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Low Rise	2.92046e+006	0.0158	0.1346	0.0573	8.6000e-004		0.0109	0.0109		0.0109	0.0109	0.0000	155.8470	155.8470	2.9900e-003	2.8600e-003	156.7731
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Condo/Townhouse	3.90729e+006	0.0211	0.1800	0.0766	1.1500e-003		0.0146	0.0146		0.0146	0.0146	0.0000	208.5079	208.5079	4.0000e-003	3.8200e-003	209.7470
Elementary School	1.24803e+006	6.7300e-003	0.0612	0.0514	3.7000e-004		4.6500e-003	4.6500e-003		4.6500e-003	4.6500e-003	0.0000	66.5997	66.5997	1.2800e-003	1.2200e-003	66.9955
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	1.55288e+006	8.3700e-003	0.0761	0.0639	4.6000e-004		5.7900e-003	5.7900e-003		5.7900e-003	5.7900e-003	0.0000	82.8676	82.8676	1.5900e-003	1.5200e-003	83.3600
Single Family Housing	1.67542e+007	0.0903	0.7720	0.3285	4.9300e-003		0.0624	0.0624		0.0624	0.0624	0.0000	894.0664	894.0664	0.0171	0.0164	899.3794
Total		**0.1423**	**1.2239**	**0.5777**	**7.7700e-003**		**0.0983**	**0.0983**		**0.0983**	**0.0983**	**0.0000**	**1,407.8886**	**1,407.8886**	**0.0270**	**0.0258**	**1,416.2550**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	884040	156.7806	0.0132	1.6000e-003	157.5894
City Park	0	0.0000	0.0000	0.0000	0.0000
Condo/Townhouse	1.16222e+006	206.1151	0.0174	2.1100e-003	207.1784
Elementary School	341102	60.4929	5.1100e-003	6.2000e-004	60.8050
Parking Lot	68320	12.1163	1.0200e-003	1.2000e-004	12.1788
Regional Shopping Center	1.15917e+006	205.5739	0.0174	2.1000e-003	206.6344
Single Family Housing	5.55785e+006	985.6600	0.0832	0.0101	990.7448
Total		**1,626.7386**	**0.1373**	**0.0166**	**1,635.1307**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	883293	156.6481	0.0132	1.6000e-003	157.4562
City Park	-747.286	-0.1325	0.0000	0.0000	-0.1332
Condo/Townhouse	1.16148e+006	205.9826	0.0174	2.1100e-003	207.0452
Elementary School	340354	60.3604	5.0900e-003	6.2000e-004	60.6717
Parking Lot	67572.7	11.9837	1.0100e-003	1.2000e-004	12.0455
Regional Shopping Center	1.15842e+006	205.4413	0.0173	2.1000e-003	206.5012
Single Family Housing	5.5571e+006	985.5274	0.0832	0.0101	990.6116
Total		**1,625.8109**	**0.1372**	**0.0166**	**1,634.1982**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Residential Interior

Use Low VOC Paint - Residential Exterior

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

Use only Natural Gas Hearths

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Use Low VOC Cleaning Supplies

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	8.3563	0.5267	8.6951	3.1900e-003		0.0819	0.0819		0.0819	0.0819	0.0000	510.3778	510.3778	0.0229	9.1000e-003	513.6622
Unmitigated	8.9111	0.5267	8.6951	3.1900e-003		0.0819	0.0819		0.0819	0.0819	0.0000	510.3778	510.3778	0.0229	9.1000e-003	513.6622

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	1.1598					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	7.4448					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0502	0.4287	0.1824	2.7400e-003		0.0347	0.0347		0.0347	0.0347	0.0000	496.4557	496.4557	9.5200e-003	9.1000e-003	499.4059
Landscaping	0.2563	0.0980	8.5127	4.5000e-004		0.0472	0.0472		0.0472	0.0472	0.0000	13.9222	13.9222	0.0134	0.0000	14.2564
Total	**8.9111**	**0.5267**	**8.6951**	**3.1900e-003**		**0.0819**	**0.0819**		**0.0819**	**0.0819**	**0.0000**	**510.3778**	**510.3778**	**0.0229**	**9.1000e-003**	**513.6622**

Singh Property 2005 BAU - Kings County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	1.1598					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	6.8900					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0502	0.4287	0.1824	2.7400e-003		0.0347	0.0347		0.0347	0.0347	0.0000	496.4557	496.4557	9.5200e-003	9.1000e-003	499.4059
Landscaping	0.2563	0.0980	8.5127	4.5000e-004		0.0472	0.0472		0.0472	0.0472	0.0000	13.9222	13.9222	0.0134	0.0000	14.2564
Total	**8.3563**	**0.5267**	**8.6951**	**3.1900e-003**		**0.0819**	**0.0819**		**0.0819**	**0.0819**	**0.0000**	**510.3778**	**510.3778**	**0.0229**	**9.1000e-003**	**513.6622**

7.0 Water Detail

7.1 Mitigation Measures Water

Singh Property 2005 BAU - Kings County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	167.1085	2.8454	0.0683	258.6088
Unmitigated	167.1085	2.8454	0.0683	258.6088

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	13.943 / 8.79013	23.2595	0.4559	0.0109	37.9118
City Park	0 / 32.873	20.4046	1.7200e-003	2.1000e-004	20.5098
Condo/Townhouse	15.3112 / 9.65271	25.5419	0.5007	0.0120	41.6321
Elementary School	1.45454 / 3.74026	4.1789	0.0477	1.1600e-003	5.7165
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	10.8413 / 6.64464	17.9673	0.3545	8.4900e-003	29.3595
Single Family Housing	45.4124 / 28.6295	75.7563	1.4849	0.0356	123.4791
Total		**167.1084**	**2.8454**	**0.0683**	**258.6088**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	13.943 / 8.79013	23.2595	0.4559	0.0109	37.9118
City Park	0 / 32.873	20.4046	1.7200e-003	2.1000e-004	20.5098
Condo/Townhouse	15.3112 / 9.65271	25.5419	0.5007	0.0120	41.6321
Elementary School	1.45454 / 3.74026	4.1789	0.0477	1.1600e-003	5.7165
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	10.8413 / 6.64464	17.9673	0.3545	8.4900e-003	29.3595
Single Family Housing	45.4124 / 28.6295	75.7563	1.4849	0.0356	123.4791
Total		**167.1084**	**2.8454**	**0.0683**	**258.6088**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Singh Property 2005 BAU - Kings County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	241.4720	14.2706	0.0000	598.2366
Unmitigated	241.4720	14.2706	0.0000	598.2366

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	98.44	19.9824	1.1809	0.0000	49.5056
City Park	2.37	0.4811	0.0284	0.0000	1.1919
Condo/Townhouse	108.1	21.9433	1.2968	0.0000	54.3637
Elementary School	109.5	22.2275	1.3136	0.0000	55.0677
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	153.68	31.1957	1.8436	0.0000	77.2859
Single Family Housing	717.48	145.6420	8.6072	0.0000	360.8218
Total		**241.4720**	**14.2706**	**0.0000**	**598.2366**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	98.44	19.9824	1.1809	0.0000	49.5056
City Park	2.37	0.4811	0.0284	0.0000	1.1919
Condo/Townhouse	108.1	21.9433	1.2968	0.0000	54.3637
Elementary School	109.5	22.2275	1.3136	0.0000	55.0677
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	153.68	31.1957	1.8436	0.0000	77.2859
Single Family Housing	717.48	145.6420	8.6072	0.0000	360.8218
Total		**241.4720**	**14.2706**	**0.0000**	**598.2366**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Appendix B

Biological Resources Assessment

BIOLOGICAL RESOURCE ASSESSMENT

12th AVENUE SITE, HANFORD CALIFORNIA

Prepared For:

Woodside Homes

February 2, 2022

BIOLOGICAL RESOURCE ASSESSMENT

12TH AVENUE, HANFORD, CA

Prepared For:

Woodside Homes

Prepared By:

ARGONAUT ECOLOGICAL CONSULTING, INC.
2377 Gold Meadow Way, Suite 100
Gold River, CA 95670

February 2, 2022

Table of Contents

1.0 EXECUTIVE SUMMARY AND INTRODUCTION 0

EXECUTIVE SUMMARY 0
1.1 INTRODUCTION 0
1.2 STUDY OBJECTIVES 0
1.3 REGULATORY JURISDICTION AND BACKGROUND 3
WETLAND PROTECTION 3
LISTED PROTECTED SPECIES AND HABITAT PROTECTION 4
CALIFORNIA ENDANGERED SPECIES ACT 4
CALIFORNIA ENVIRONMENTAL QUALITY ACT 6
LAND USE ENTITLEMENTS 7

2.0 RESOURCES CONSULTED, METHODS, AND RESULTS 8

2.1 DATA AND LITERATURE REVIEW 8
2.2 AERIAL PHOTOGRAPHY AND WETLAND MAPPING 8
2.3 FIELD INVESTIGATION 8

3.0 RESULTS AND CONCLUSIONS 9

3.1 PHYSICAL RESOURCES AND ELEMENTS 9
CLIMATE 9
TOPOGRAPHY/SOILS 9
LAND USE 10
HABITAT 10
WATERS/WETLAND 11
SPECIAL STATUS SPECIES 12

3.3 CONCLUSIONS 15

List of Figures

Figure 1: Location 2
Figure 2: 1926USGS Topographic Map 10
Figure 3: Soils Map 10
Figure 4: National Wetland Inventory Map 13
Figure 5: CNDDB Bio Records in the Vicinity of the Study Area 14

Appendices

Attachment A: Photographs

1.0 EXECUTIVE SUMMARY AND INTRODUCTION

EXECUTIVE SUMMARY

Argonaut Ecological, Inc. conducted a biological evaluation of a proposed development of a roughly 300-acre study area located immediately northeast of 12th Avenue and Fargo Avenue in the City of Hanford (Figure 1). The assessment included assessing the types of habitats present and sensitive species associated with those habitats. The biological evaluation focused on mapping existing habitat types based on a field review and reviewing public and commercial databases, aerial photographs (current and historical), and other published information and available data.

The Study Area has been in agricultural production for several decades and the potential to support special status species is very low. No sensitive biological resources are present within the Study Area.

1.1 INTRODUCTION

The project proponent ("Project") proposes to develop the parcel into residential property. There are two homesites within the Study Area that are part of the proposed development. However, the habitat surrounding the home sites is described in general terms.

The Study Area is currently in agricultural production but is zoned as a mixture of low density residential, medium density residential, and commercial.

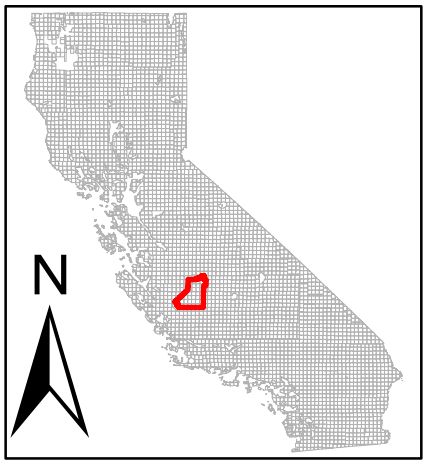
1.2 STUDY OBJECTIVES

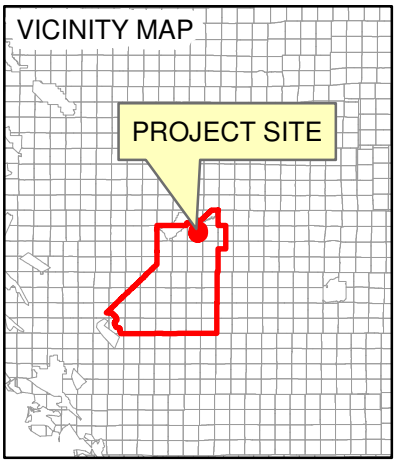
This report provides an overall assessment of the biological resources present within and adjacent to the Study Area, describes the area's biological characteristics, and evaluates the Study Area's likelihood to support sensitive biological resources (such as wetlands, creeks/drainages, and special status species). This evaluation used available literature, aerial photography, historic topographic and aerial maps, and a site visits. For purposes of this study, wetland habitat includes those areas possibly considered to be "waters of the U.S." as defined by the U.S. Army Corps of Engineers (Army Corps) or Waters of the State of California. As described in Section 1.2.1, wetlands are a subset of "Waters of the U.S." under the Federal Clean Water Act.

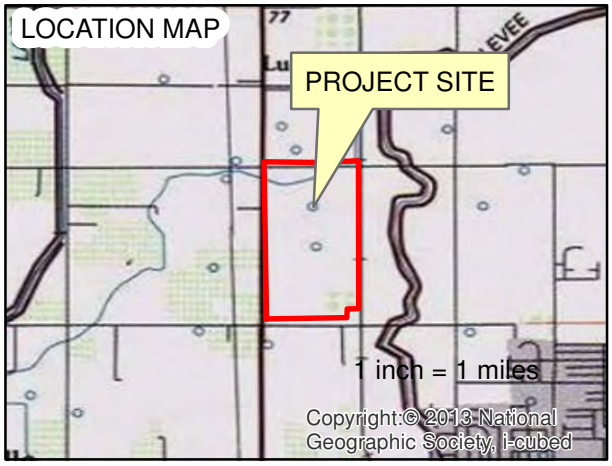
VICINITY AND LOCATION MAP

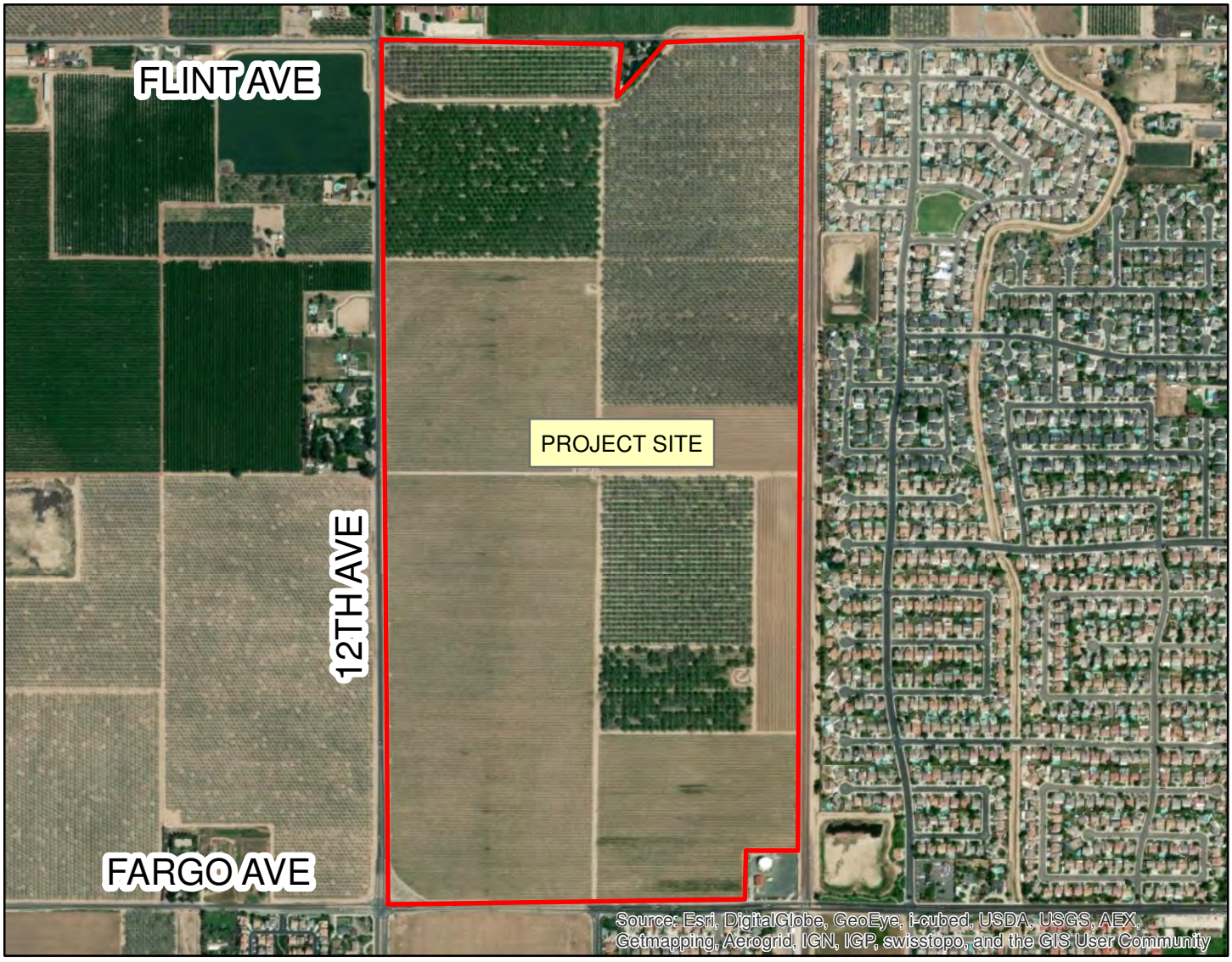
PROJECT: HANFORD SITE WOODSIDE

PROJECT LOCATION: Part of Section 14, T. 18S., R.21E., Mount Diablo Base and Meridian
Kings County California,









Legend

APPROXIMATE BOUNDARY (305 AC.)

1,000 500 0 1,000 Feet

1 in = 1,000 ft

ARGONAUT ECOLOGICAL CONSULTING, INC.

Date: 2/1/2022

This report assesses the Project's potential effects on biological resources and evaluates whether any associated regulatory approvals or permits are required. This report also evaluates potential impacts site development may have on protected habitat, species protected by the Federal Endangered Species Act, or those protected under the California Environmental Quality Act or California Endangered Species Act.

1.3 REGULATORY JURISDICTION AND BACKGROUND

Several agencies share regulatory jurisdiction over biological resources. The following is a brief description of the primary agencies and their respective jurisdiction.

Wetland Protection

U.S. Army Corps of Engineers

Wetlands are a type of Waters of the U.S. The U.S. Army Corps of Engineers (Army Corps) and the U.S. Environmental Protection Agency regulate the placement of fill into the Waters of the U.S. under Section 404 of the Federal Clean Water Act and Section 10 of the Rivers and Harbor Act. For this purpose, the term "Waters of the U.S." is legally defined under Section 404 of the Federal Clean Water Act and includes interstate streams, creeks, and adjacent wetlands. The Army Corps defines wetlands as "*those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions*" (Environmental Laboratory 1987). In California, seasonally inundated areas that meet the criteria of all three wetland parameters (soils, hydrology, and vegetation), as defined in the recently issued Wetland Delineation Manual for the Arid West (USACE 2006), are also considered jurisdictional wetlands.

Since 2001, several U.S. Supreme Court rulings regarding the regulation of isolated, intrastate waters by the Army Corps have limited the scope of federal jurisdiction under the Federal Clean Water Act and excluded many California wetlands from federal regulation.

In December 2019, the U.S. Environmental Protection Agency and the U.S. Army published the final rule to repeal the 2015 Clean Water Rule. The "Clean Water Rule" clarified what constitutes waters of the U.S., and presumably, more precisely define and make permitting more predictable, thus less costly, and more straightforward.

After several challenges to the "Clean Water Rule," a revised rule became effective on June 22, 2020; however, in 2021, the Army Corps announced that the Clean Water Rules was rescinded and the regulations in effect before 2015 would be restored. On November 18, 2021, the U.S. Environmental Protection Agency and the Department of the Army announced the signing of a proposed rule to revise the definition of "waters of the United States." In doing so, the agencies propose to put back into place the pre-2015 "(pre-Obama-era rules) definition of "waters of the United States," updated to reflect consideration of Supreme Court decisions. Reverting to the pre-2015 rules may mean returning to policies from the 1980s and 1990s that have been subject to decades of legal battles, including a series of U.S. Supreme Court decisions from the 2000s

(e.g., *Rapanos v. United States* and *Solid Waste Agency of Northern Cook County v. United States*)[1]

California State Water Resources Control Board

Since 1993, California has had a Wetlands Conservation Policy (a.k.a., the Executive Order W-51 59-93) and is commonly referred to as the *No Net Loss policy* for wetlands. This order establishes a state mandate for developing and adopting a policy framework and strategy to protect the state's wetland ecosystems. The policy was to be implemented voluntarily and was expressly not to be implemented on a "project-by-project" basis (See EO W-59-93, Section III).

In 2020 California adopted the State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State. The State definition of wetland differs from the Federal definition in that the state definition includes areas with no vegetation, assuming the other criteria are met. Wetlands of the State include 1) natural wetlands, 2) wetlands created by modification of water of the state (at any point in history), and 3) artificial wetlands that meet specific criteria. The State definition only exempts a few types of waters. Examples of water features excluded from the state's definition include industrial or municipal wastewater, certain stormwater treatment facilities, agricultural crop irrigation, industrial processing or cooling, and fields flooded for rice growing.

Listed Protected Species and Habitat Protection

U.S. Fish and Wildlife Service

The U.S. Fish and Wildlife Service (USFWS) implements the Migratory Bird Treaty Act (16 USC Section 703-711), Bald and Golden Eagle Protection Act (16 United States Code [USC] Section 668), and Federal Endangered Species Act (FESA; 16 USC § 153 *et seq.)*.

[3] As stated in the National Law Review on December 16, 2021 (Volume XI, Number 256) "*Between 2006 and 2015 both USEPA and the Corps developed guidance setting forth its interpretation of Rapanos which concentrated on Justice Kennedy's one-man opinion in support of the larger plurality of the Court. The result was general dissatisfaction amongst the regulated community due to a lack of certainty as to what constituted jurisdictional waters. We have now returned to this regime of uncertainty following the Arizona District Court's ruling.*

Adding to the uncertainty moving forward is the question of whether {a} the Arizona District Court's ruling applies nationwide or only in Arizona es nationwide or only in Arizona. Further, the court itself is weighing whether to resurrect the Obama-era rules, which had been removed by the Trump administration, or revert to the pre-Obama Rapanos regime. Even further, the Biden Administration has announced its intent to introduce a new rule vacating the NWPR, reinstating the Obama-era rule, and simultaneously developing a third WOTUS rule. Under any circumstance, there is significant uncertainty ahead with regard to the issue of WOTUS."

The **Migratory Bird Treaty Act (MBTA**) was first enacted in 1918 to protect migratory birds between the United States and Great Britain (acting on behalf of Canada). The MBTA makes it illegal for anyone to take, possess, import, transport, purchase, barter, or offer for sale or purchase any migratory birds, nests, or eggs unless a federal agency has issued a permit. The USFWS has statutory authority and responsibility for enforcing the MBTA. The MBTA was reformed in 2004 to include all species native to the U.S. or its territories due to natural biological or ecological processes (70 FR 12710, March 15, 2005). The Act does not include non-native species whose occurrences in the U.S. are solely the result of intentional or unintentional human introduction. The USFWS maintains a list of bird species not protected under the MBTA.

In January 2021, the USFWS published a new rule in the Federal Register. Under the rule change, the unintentional killing of migratory birds does not violate the MBTA. Only the intentional "pursuing, hunting, taking, capturing, killing, or attempting to do the same ... directed at migratory birds, their nests, or their eggs" would be illegal under the changes.

The **Federal Endangered Species Act** prohibits "take" "of any federally listed wildlife species (the destruction of federally listed plants on private property is not prohibited and does not require a permit)**.** "Take" under the federal definition means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct. "Incidental take" is harm or death that may occur during the implementation of an otherwise lawful activity. "Candidate species" do not have the full protection of FESA. However, the USFWS advises project applicants that it is prudent to address these species since they could be elevated to "listed status" before completion of projects with long planning or development schedules.

Projects that would result in "take" "of any federally-listed threatened or endangered species can obtain authorization from the USFWS through either Section 7 (interagency consultation) or Section 10(a) (incidental take permit) of FESA. The authorization process determines if a project would jeopardize a listed species' continued existence and what mitigation measures would be required to avoid jeopardizing the species.

An Incidental Take Permit or Take Permit is required when an activity would either kill, harm, harass, or interrupt a listed species' breeding or nesting. The ESA definition of "harm" is somewhat less definitive since it includes ubiquitous activities. In 1999 the USFWS clarified the term "harm" as it applies to the ESA in the Federal Register. As stated, the final rule defined the term "harm" "to include any act which causes actual harm (kills or injures fish or wildlife) and emphasizes that such actions may have significant habitat modification or degradation that significantly impairs essential behavioral patterns of fish or wildlife.

California Department of Fish and Wildlife

The California Department of Fish and Wildlife (CDFW) is a Trustee Agency responsible under CEQA to review and evaluate projects impacts on plant and wildlife resources. Under the Fish and Game Code Section 1802, the CDFW has jurisdiction over the conservation, protection, and management of fish, wildlife, native plants, and habitat necessary for biologically sustainable populations. The California Fish and Game Code also provides authority for the CDFW to regulate

projects that could result in the "take" of any species listed by the state as threatened or endangered (Section 2081). CDFW also has authority over all state streams, as described below.

Perennial and intermittent streams also fall under the jurisdiction of CDFW according to Sections 1601-1603 of the Fish and Game Code (Streambed Alteration Agreements). CDFW's jurisdictional extent includes work within the stream zone, including the diversion or obstruction of the natural flow or changes in the channel, bed, or bank of any river, stream, or lake. Before issuing a 1601 or 1603 Streambed Alteration Agreement, the CDFW must demonstrate compliance with CEQA. In most cases, CDFW relies on the CEQA review performed by the local lead agency. However, in cases where no CEQA review was required for the project, CDFW would act as the lead agency under CEQA.

The CDFW also has authority for the protection of state-listed species issues under Section 2081 Incidental Take Permit if a project has the potential to negatively affect state-protected plant or animal species or their habitats, either directly or indirectly. Protected species include those "listed" by the state as endangered or threatened. Besides listed species, other species protection categories include "fully protected" and California Species of Special Concern (CSC). Adverse impacts to species that are "fully protected" are prohibited.

Under the California Fish & Game Code (FGC Section 3503), "it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird…." Birds of prey (falcons, hawks, owls, and eagles) get extra protection under the law (FGC Section 3503.5).

As is the case with USFWS, CDFW does not have the authority to require a landowner to apply for an Incidental Take Permit (ITP) authorizing take. Instead, the landowner has the legal obligation to avoid any take of state-listed species if it does not seek an ITP. That said, CDFW (and USFWS) can initiate an enforcement action if they believe that an illegal take has occurred or will occur.

California Endangered Species Act

The California Endangered Species Act (CESA) protects candidate plants and animal species and those listed under CESA as rare, threatened, or endangered. This Act prohibits the take of any such species unless authorized. Section 2081 authorizes the state to issue incidental take permits. The state definition of taking applies only to acts that result in death or adverse impacts to protected species. The CAESA mirrors the federal regulation as it relates to "take"; however, there is no state equivalent definition of "harm" or "harass." Incidental take is also not defined by the CAESA statute or regulation. Unlike the federal ESA, CAESA does qualify that incidental take" "is not prohibited "if it is the result of an act that occurs on a farm or ranch in the course of an otherwise lawful routine and ongoing agricultural activity." Where disagreement occurs (and in some cases, this has been the subject of court cases) is in the common understanding of “routine and ongoing agricultural activity."

California Environmental Quality Act

The CEQA Guidelines require a review of projects to determine their environmental effects and identify mitigation measures to reduce impacts to a less than significant level. The Guidelines state

that an effect may be significant if it affects rare and endangered species. Section 15380 of the Guidelines defines *rare* to include listed species and allows agencies to consider rare species other than those designated as State or Federal threatened or endangered, but that meet the standards for rare under the Federal or State endangered species acts. On this basis, plants designated as rare by non-regulatory organizations (e.g., California Native Plant Society), species of special concern as defined by CDFW, candidate species as defined by USFWS, and other designations need to be considered in CEQA analyses.

Land Use Entitlements

City of Hanford

The Study Area is located in the City of Hanford in Kings County, California. The City will be responsible for the CEQA compliance. As the lead agency under CEQA, the City will consider other responsible agencies' recommendations during the CEQA review.

2.0 RESOURCES CONSULTED AND METHODS

The following section describes the methods used to assess the Study Area and includes data review and evaluation, field studies, and aerial photograph interpretations.

2.1 DATA AND LITERATURE REVIEW

Documents and sources of information used to prepare this evaluation include the following:

- U.S. Department of Agriculture, Natural Resources Conservation Service, Soil Survey of Fresno Area (Soils mapper).
- Aerial photography (Google Earth®, Bing®, and historic aerials).
- California Department of Fish and Wildlife, California Natural Diversity Database (CNDDB/RareFind - Recent version with updates)
- U.S. Fish and Wildlife Service, National Wetland Inventory Map
- U.S. Geological Survey, National Geologic Database Project, Topo View. Accessed online.

Before conducting a site review, numerous data sources were viewed to focus the field study. The California Natural Diversity Database/ RareFind (CNDDB) was consulted to determine the species potentially present within the Study Area based on location. The purpose of the review was to assess the likelihood of special status species being present on the site based on the site's distance from documented species occurrences and the presence or absence of habitat types utilized by such species. The CNDDB includes records of reported observations for special status plant and animal species and is queried based on a search radius of USGS quadrangle maps.

2.2 AERIAL PHOTOGRAPHY AND WETLAND MAPPING

As described previously, both current and historic aerial photographs were also reviewed to determine if any areas on the site appear to support the presence of Waters of the U.S.

2.3 FIELD INVESTIGATION

A site investigation was performed on January 15, 2022. The entire Study Area was reviewed, and all habitat features were mapped. Soils, vegetation, and drainage patterns within the Study Area were inspected to determine the habitat present and suitability for species of concern. Photographs are included in Attachment A.

3.0 RESULTS AND CONCLUSIONS

Section 3.1, below, describes the physical features (i.e., land use, soils, vegetation, topography, drainage, etc.) and the study area's biological features. The physical components and land use strongly influence the types of plants and animals present. This section also describes the habitats present and the specific biological resources observed during the site review.

Section 3.2 presents our conclusions, and Section 3.3 contains recommended avoidance and minimization measures to avoid potential impacts.

The following is not an exhaustive inventory of plants and animals present. Instead, the discussion provides sufficient information to identify biological resources that are considered unique, sensitive, or protected by current law and the potential impacts on those resources due to site development**.**

3.1 PHYSICAL RESOURCES AND ELEMENTS

Climate

The Study Area climate is typical of the central San Joaquin Valley, with long, hot, and dry summers and winters that are cool and mild. In the winter, rainfall averages approximately 8.8 inches per year, falling mainly between November and April (Western Regional Climate Center, 2004).

Topography and Soils

Topography:

The Study Area lies within the San Joaquin Valley and is relatively flat, but slopes toward the southwest. Figure 2 shows the topography of the property in 1926. The topography has remained relatively unchanged, but portions of the Study Area have been altered to accommodate agricultural uses.

As can be seen in the historic topographic map, the there is a ditch that crosses through the northwest corner of the Study Area. This ditch appears to originate from the northeast from the Peoples Ditch and flow southwest toward Grangeville where it ends. All drainage appears to flow toward the southwest direction. This ditch feature persists on the current USGS topographic map.

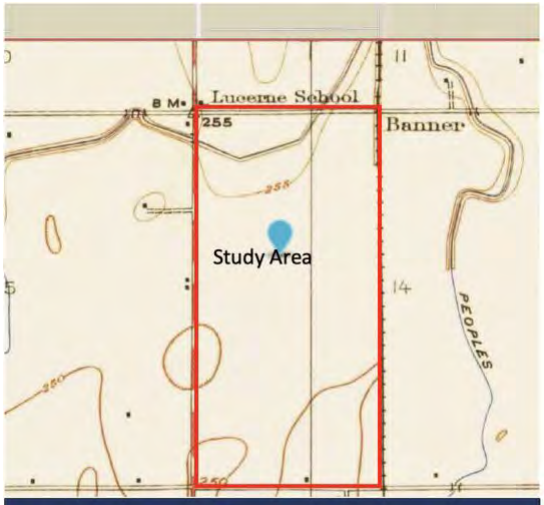


Figure 2
Topographic Map (1926)

Soils:

The site is made up of three soil types as shown in Table 1 (and Figure 3, right). The soils are primary sandy loam and course sandy loam. These soils are generally well drained. None of the soils are classified as hydric, indicating a low potential for drainage or wetland features.

The most prevalent soil type is the Nord complex makes up over 82% of the soil type present.



Figure 3
Soils Map

Table 1
Soil Types Within the Study Area

Soil Type	Classified as Hydric?	% of Study Area
Nord fine sandy loam	No	15.9
Nord complex	No	82.9
Whitewolf course sandy loam	No	1.3

Land Use

The Study Area is surrounded by a mixture of agricultural lands and residential homes. There are two home sites within the Study Area (but they are not part of the proposed project boundary). To the east is high density residential development. Separating the Study Area from the residential is a rail line that appears heavily used. The lands to the north and west are agricultural and rural residential and to the south the lands are developed in high density residential and some agricultural. In the southeast corner of the Study Area is a municipal site, owned by the City of Hanford Water Department (Fargo Tank Site).

Habitat

There are several California habitat classification systems. Most of these classification systems describe natural communities and do not have established classifications for developed or agricultural habitats.

The majority of the Study Area (98% of the land) is used agricultural (row crops, vineyards, and orchards). There are small areas of ruderal habitat, dominated by bare ground or weedy species

(storksbill, dwarf nettle, shepherd's purse, dove weed, mustard, star-thistle, etc.) along the fields and agricultural buildings/equipment, roadways, and canal ditch. There are also mature trees around the residential home within the Study Area.

Waters/Wetland

According to the National Wetland Inventory Map (Figure 4), there is one surface water/wetland within the Study Area. The NWI maps are not intended to define regulatory jurisdiction, nor are they considered necessarily accurate since they are created from a combination of the resources (historic topographic maps, aerials photography, soils studies, etc.). NWI maps are only to be used as a mean of identifying the presence of potential waters/wetlands but the lack of mapping does not mean wetlands are not present. Field studies are needed to confirm the presence or absence of waters/wetlands on any given site. The classification system used by the NWI is based on the Cowardian Wetland Classification System (Cowardian, 1979).

The mapped surface water/wetland within the Study Area is classified as (RSUBFx). This classification code is listed as "*Riverine, unknown perennial, unconsolidated bottom, semi permanently flooded, excavated*". This drainage historically flowed from a lateral ditch from the Peoples Canal (located northeast of the Study Area), southwest toward Grangeville. The surface water feature is shown in the NWI map along the historic drainage alignment. However, sometimes in the early 1990s, a segment of the ditch was filled in and a new ditch alignment was excavated immediately north.

The ditch is owned/operated by the People Canal Company for irrigation water delivery. The ditch is roughly 16 feet in width and was dry at the time of the field review. The bottom of the ditch showed recent growth of grass/forbs, likely as a result of recent rainfall, but does not support any wetland habitat (lacked wetland habitat). The ditch appears periodically maintained (scrapped). The walls of the ditch are vegetated with dry grasses.

As indicated previously, the ditch features lies within a non-historic alignment. It appears the historic alignment was removed/filled in sometimes around 1990. It is unknown whether the removal/filling of the previous alignment required any agency permits/authorizations. Any proposed modifications to the existing alignment would likely not require any permits/authorization because the new ditch was excavated in upland habitat and is operated and maintained as an irrigation ditch.

There are no wetlands within the Study Area.

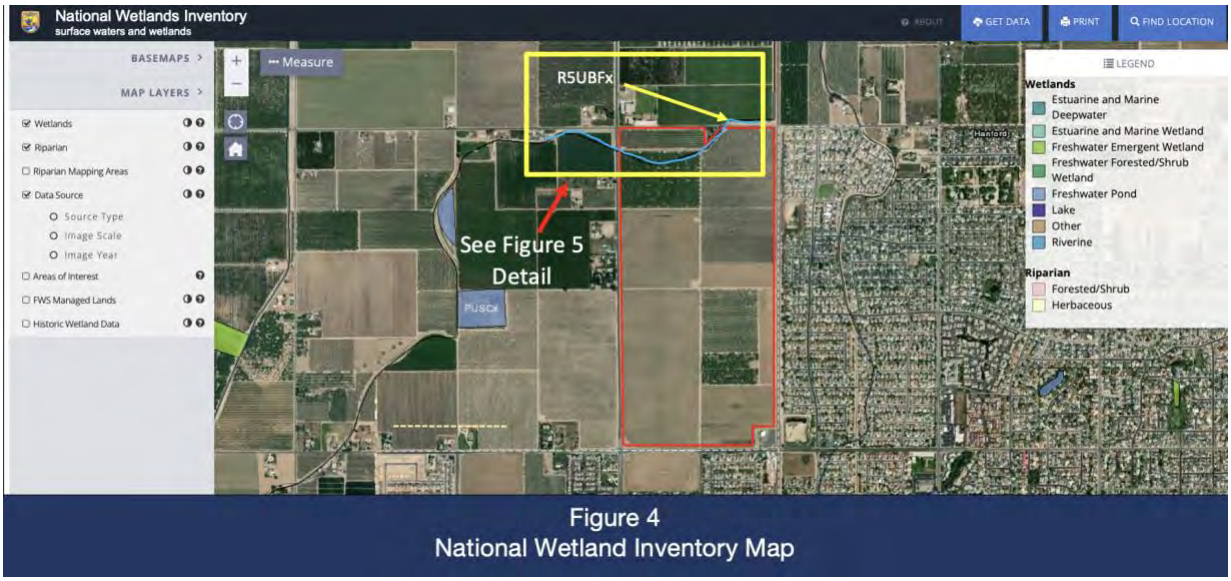


Figure 4
National Wetland Inventory Map

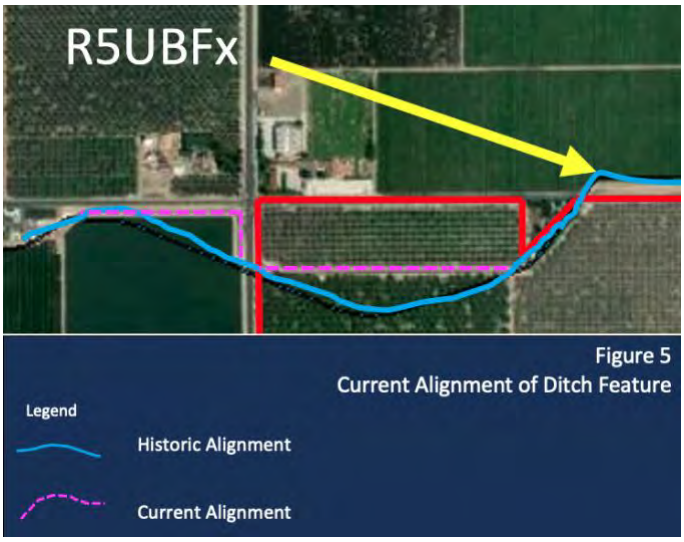


Figure 5
Current Alignment of Ditch Feature

Special Status Species

A search of the California Natural Diversity Database (CNDDB) was reviewed to determine which special status species could be present within the Study Area. There is no critical habitat for any species within or near the Study Area. The CNDDB Bios mapping (Figure 6) shows the location of known records of special status species near the Study Area and Table 2 includes a summary of the CNDDB query results.

There are not many records near the Study Area. These species present within the region require habitat not present within the Study Area. The Study Area is significantly disturbed by agricultural uses and provides little, to no, habitat for special status species.

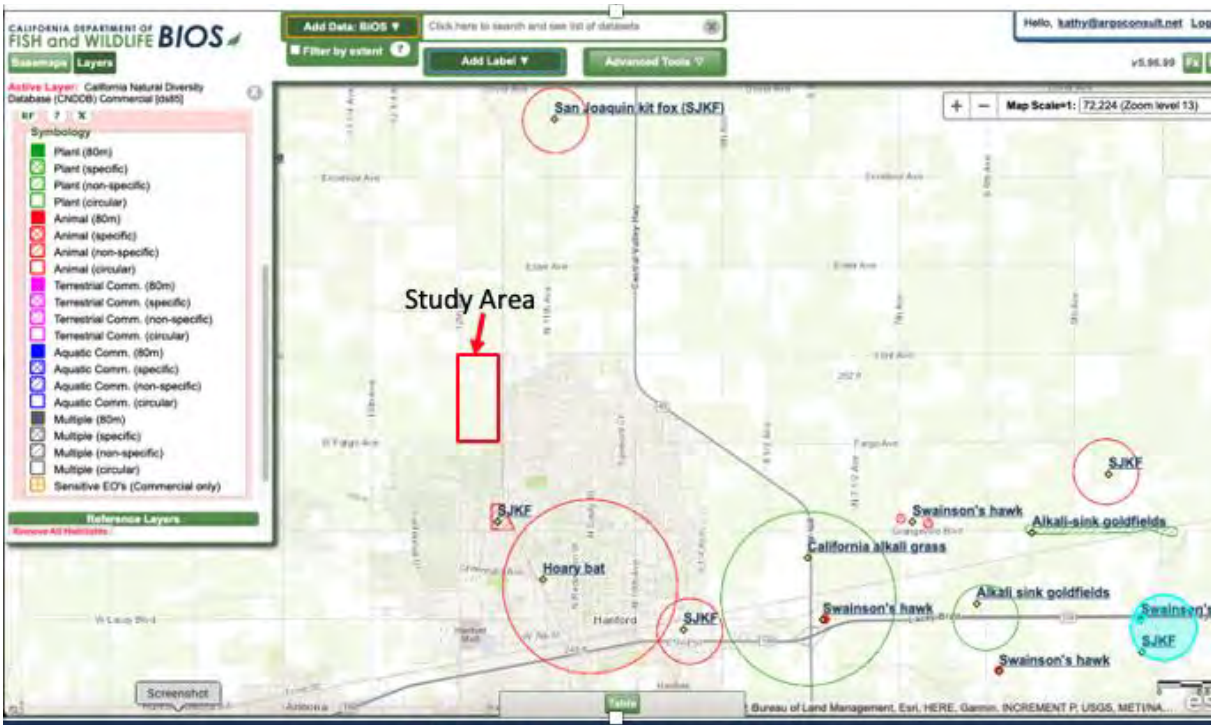


Figure 5 – CNDDB Bios

Table 2
Special Status Species Summary for 12th Avenue Site

Common Name	*Scientific Name*	*Status*[1]	*Effects*[2]	*Occurrence in the Study Area*[3]
Birds				
Swainson's hawk	*Buteo swainsoni*	CT	ME	**Absent.** Nests in mature trees. No unoccupied nests observed. Unlikely to nest in orchards**.**
Mammals				
Hoary bat	*Lasiurus cinereus*	--/--	NE	**Absent:** Occurs in open areas or habitat mosaics. Roosts in dense foliage of medium to large trees. Feeds primarily on moths. Habitats: broadleaf upland forest, Cismontane woodland, lower montane coniferous forest, north coast forest. Suitable habitat no present within Study Area.
San Joaquin kit fox	*Lasiurus cinereus*	--/--	NE	**Absent:** Hunts and dens within annual grassland and grassland open stages with scattered shrubby vegetation. No suitable habitat present within the Study Area. No dens found within the Study Area and no evidence of potential occupation.
Tipton kangaroo rat	*Depodomys nitratoides nitratoides*	FE/SE	NE	**Absent:** Occurs in saltbrush scrub and sink scrub communities in the Tulare Lake Basin. Study Area within northern range for the species within an area of low quality habitat. Based on CDFW habitat suitability model, agricultural land rarely supports this species because of recurring disturbance of ground burrows.
Plants				
California alkali grass	*Puccinellia simplex*	--/-- 1B.2	NE	**Absent.** Chenopod scrub, Valley, and foothill grassland. No suitable habitat within Study Area.

1 **Status= Listing of special status species, unless otherwise indicated**

CE: California listed as Endangered

CT: California listed as Threatened

FE: Federally listed as Endangered

FT: Federally listed as Threatened

1B.1, 1B.2, 2B.2, 2B.3: California Native Plant Society Ranking

2 **Effects = Effect determination**

NE: No Effect

ME: May Effect, not likely to adversely effect

3 **Definition of Occurrence Indicators**

- **Present/Potentially**: Species recorded in the area and some habitat elements present within Study Area similar to known occurrences.
- **Absent/Likely Absent**: Species not recorded in Study Area and/or suitable habitat or critical habitat components not present.

3.3 CONCLUSIONS AND RECOMMENDATIONS

- The Study Area is made up exclusively of agricultural land that is primary in orchard production.
- There are a few mature trees located adjacent to one home site (outside the proposed project area). No unoccupied raptor nests were found.
- There is no potential suitable habitat for special status species within or adjacent to the Study Area.
- Development of the Study Area is not expected to result in any significant impacts to wildlife, special status species, or sensitive aquatic habitat.

ARGONAUT ECOLOGICAL CONSULTING, INC.

Photographic Documentation

Client: Woodside Homes
Project: 12th Avenue, Hanford
Photographer: K. Kinsland



Photograph No. 1:

View of north end of drainage channel, immediately wouth of 12th Avenue.



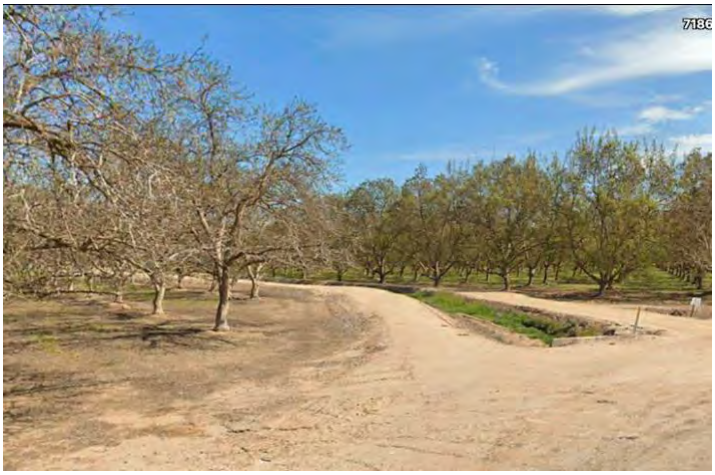
Photograph No. 2:

View of Study Area, east side along railroad line.

ARGONAUT ECOLOGICAL CONSULTING, INC.

Photographic Documentation

Client: Woodside Homes
Project: 12th Avenue, Hanford
Photographer: K. Kinsland



Photograph No 3:

View of west end of drainage channel, looking from Fargo Avenue.



Photograph No. 4:

View of drainage channel, looking northeast toward 12th Avenue.

Client: Woodside Homes
Project: 12th Avenue, Hanford
Photographer: K. Kinsland



Photograph No. 5:

View of drainage canal, looking east.

ARGONAUT ECOLOGICAL CONSULTING, INC.

Photographic Documentation

Client: Woodside Homes
Project: 12th Avenue, Hanford
Photographer: K. Kinsland



Photograph No. 6

View of existing orchard



Photograph No. 7

Direction: East

View of interior orchard access road

Appendix C

Cultural Resources Assessment

CULTURAL RESOURCE ASSESSMENT FOR THE

HANFORD 302 PROJECT

CITY OF HANFORD, CALIFORNIA

Prepared by

Melinda A. Peak
Peak & Associates, Inc.
3941 Park Drive, Suite 20-329
El Dorado Hills, CA 95762
(916) 939-2405

Prepared for

Woodside Homes

February 7, 2022
(Job #21-110)

INTRODUCTION

The project involves a tract of 302 acres proposed for residential development within the City of Hanford in Kings County (Figures 1 and 2). The project area is mapped in the west half of Section 14, Township 18 South Range 21 East, mapped on the Hanford United States Geological Survey 7.5-minute topographic quadrangle (Figure 3).

Melinda A. Peak, senior historian/archeologist with Peak & Associates, Inc. served as principal investigator for the study, with archeologist Michael Lawson completing the field survey (resumes, Appendix 1).

REGULATORY CONTEXT

State historic preservation regulations affecting this project include the statutes and guidelines contained in the California Environmental Quality Act (CEQA; Public Resources Code sections 21083.2 and 21084.1 and sections 15064.5 and 15126.4 (b) of the CEQA Guidelines). CEQA Section 15064.5 requires that lead agencies determine whether projects may have a significant effect on archaeological and historical resources. Public Resources Code Section 21098.1 further cites: A project that may cause a substantial adverse change in the significance of an historical resource is a project that may have a significant effect on the environment.

An "historical resource" includes, but is not limited to, any object, building, structure, site, area, place, record or manuscript that is historically or archaeologically significant (Public Resources Code section 5020.1).

Advice on procedures to identify such resources, evaluate their importance, and estimate potential effects is given in several agency publications such as the series produced by the Governor's Office of Planning and Research (OPR), *CEQA and Archaeological Resources,* 1994. The technical advice series produced by OPR strongly recommends that Native American concerns and the concerns of other interested persons and corporate entities, including, but not limited to, museums, historical commissions, associations and societies be solicited as part of the process of cultural resources inventory. In addition, California law protects Native American burials, skeletal remains, and associated grave goods regardless of the antiquity and provides for the sensitive treatment and disposition of those remains (California Health and Safety Code Section 7050.5, California Public Resources Codes Sections 5097.94 et al).

The California Register of Historical Resources (Public Resources Code Section 5020 et seq.)

The State Historic Preservation Office (SHPO) maintains the California Register of Historical Resources (CRHR). Properties listed, or formally designated as eligible for listing, on the National Register of Historic Places are automatically listed on the CRHR, as are State Landmarks and

FEBRUARY 4, 2022

SINGH PROPERTY

CONCEPTUAL LAND USE MAP



SITE DATA:

APN:	007-360-016-000, 007-010-031-000
TOTAL AREA:	±304.0 ACRES
NET RESIDENTIAL AREA:	±267.4 ACRES

LEGEND:	AREA (AC.):	# OF LOTS:
VERY LOW DENSITY RESIDENTIAL	±61.0	169
LOW DENSITY RESIDENTIAL	±63.7	257
MEDIUM DENSITY RESIDENTIAL	±61.9	327
HIGH DENSITY RESIDENTIAL (APTS)	±10.1	121 HU/AC
HIGH DENSITY RESIDENTIAL (TH)	±25.5	XX HU/AC
NEIGHBORHOOD COMMERCIAL	±6.63	N/A
STORAGE SPACE	±7.51	N/A
PARK/POND	±26.2	N/A
RAILROAD	N/A	N/A

NORTH

300' 0 300'

PREPARED BY:

4CREEKS

FIGURE 1

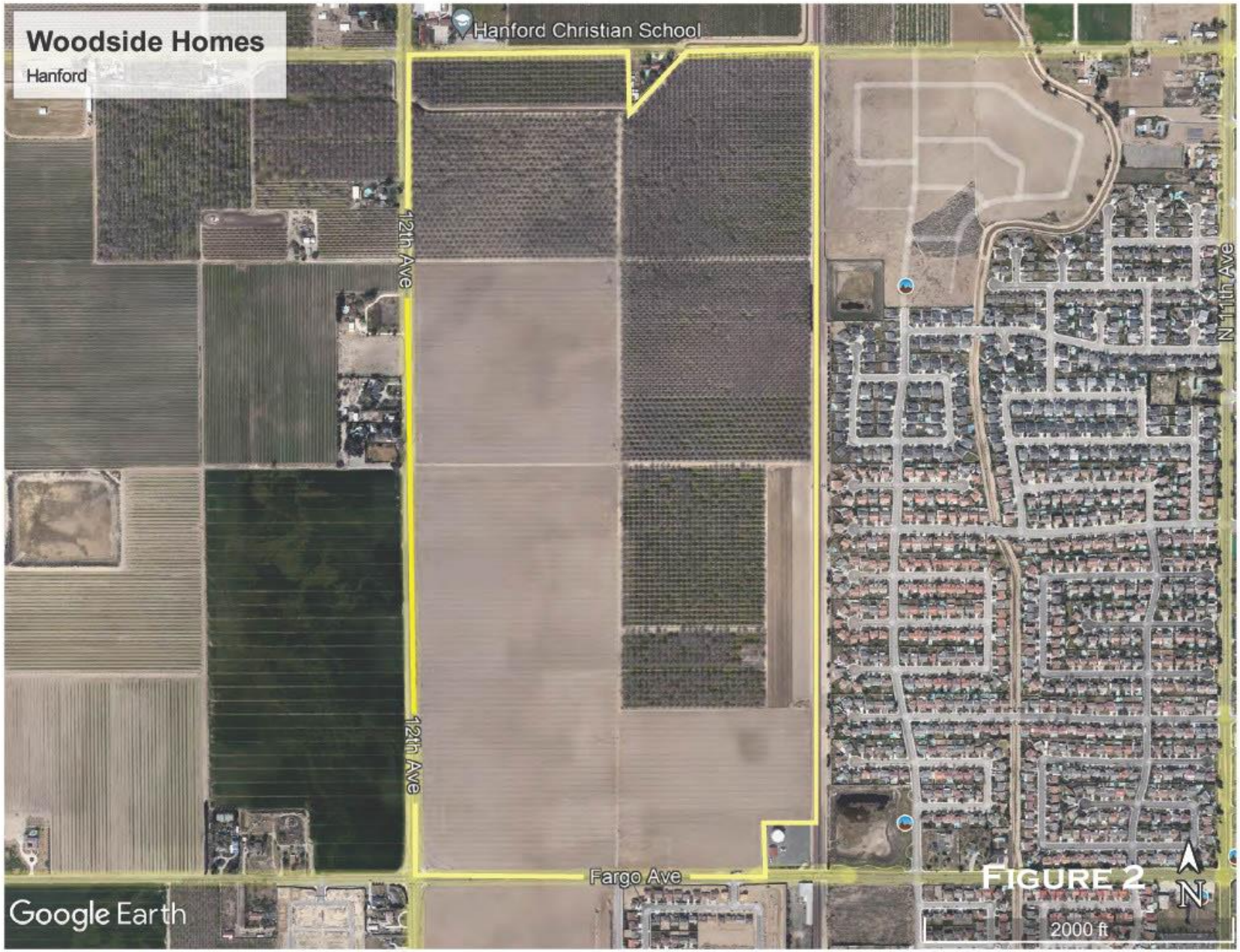

Woodside Homes
Hanford
Hanford Christian School
12th Ave
12th Ave
N 11th Ave
Fargo Ave
Google Earth
2000 ft
N

FIGURE 2

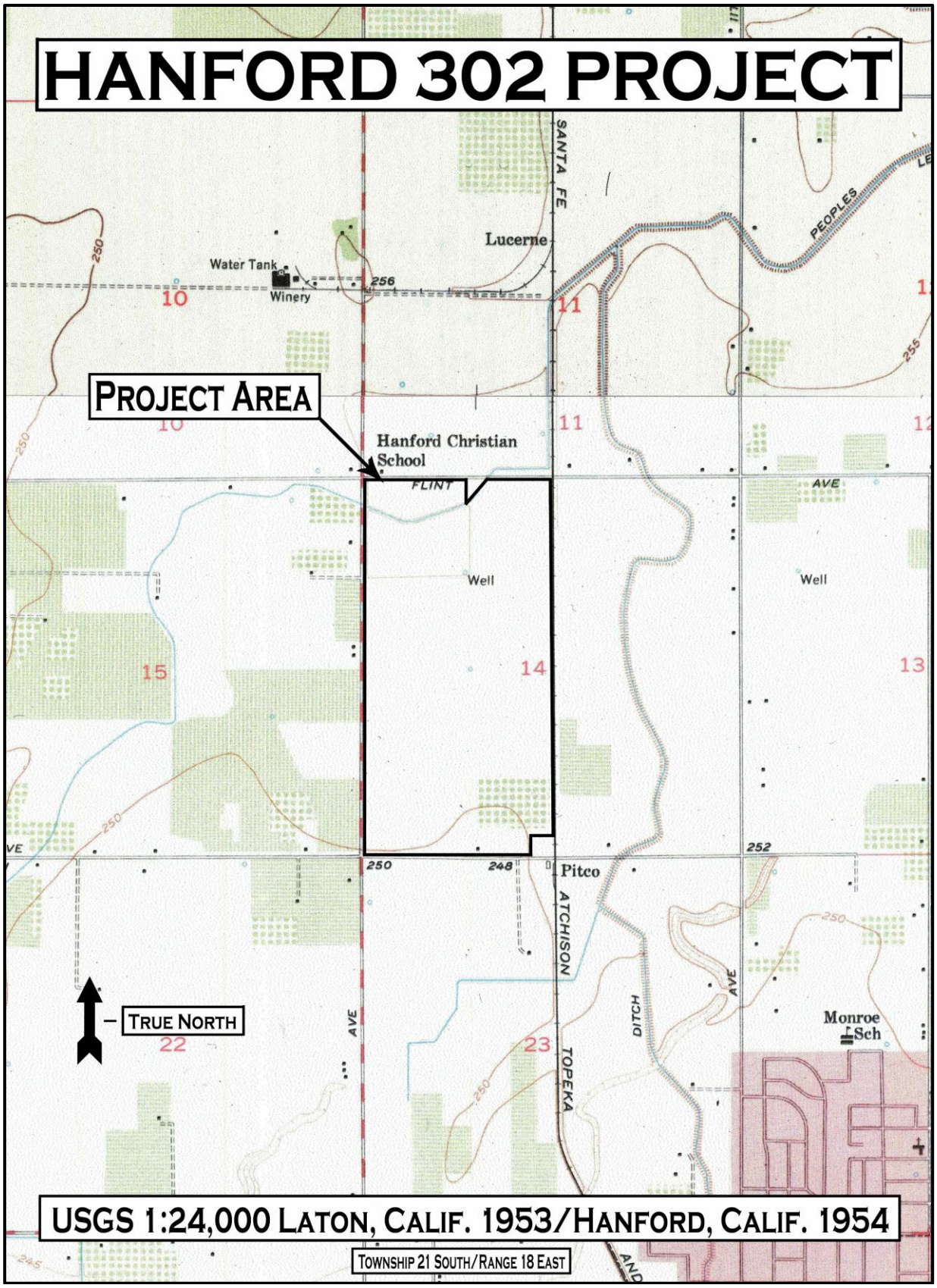

HANFORD 302 PROJECT
PROJECT AREA
Hanford Christian School
SANTA FE
Lucerne
PEOPLES
Water Tank
Winery
256
10
11
FLINT
Well
Well
15
14
13
250
248
252
Pitco
ATCHISON
TOPEKA
DITCH
AVE
Monroe Sch
TRUE NORTH
22
23
USGS 1:24,000 LATON, CALIF. 1953/HANFORD, CALIF. 1954
TOWNSHIP 21 SOUTH/RANGE 18 EAST

Figure 3

Points of Interest. The CRHR also includes properties designated under local ordinances or identified through local historical resource surveys.

For the purposes of CEQA, an historical resource is a resource listed in, or determined eligible for listing in the California Register of Historical Resources. When a project will impact a site, it needs to be determined whether the site is an historical resource. The criteria are set forth in Section 15064.5(a) (3) of the CEQA Guidelines, and are defined as any resource that does any of the following:

A. Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;

B. Is associated with the lives of persons important in our past;

C. Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or

D. Has yielded, or may be likely to yield, information important in prehistory or history.

In addition, the CEQA Guidelines, Section 15064.5(a) (4) states:

The fact that a resource is not listed in, or determined to be eligible for listing in the California Register of Historical Resources, not included in a local register of historical resources (pursuant to section 5020.1(k) of the Public Resources Code), or identified in an historical resources survey (meeting the criteria in section 5024.1(g) of the Public Resources Code) does not preclude a lead agency from determining that the resource may be an historical resource as defined in Public Resources Code section 5020.1(j) or 5024.1.

California Health and Safety Code Sections 7050.5, 7051, And 7054

These sections collectively address the illegality of interference with human burial remains, as well as the disposition of Native American burials in archaeological sites. The law protects such remains from disturbance, vandalism, or inadvertent destruction, and establishes procedures to be implemented if Native American skeletal remains are discovered during construction of a project, including the treatment of remains prior to, during, and after evaluation, and reburial procedures.

California Public Resources Code Section 15064.5(e)

This law addresses the disposition of Native American burials in archaeological sites and protects such remains from disturbance, vandalism, or inadvertent destruction. The section establishes procedures to be implemented if Native American skeletal remains are discovered during construction of a project and establishes the Native American Heritage Commission as the entity responsible to resolve disputes regarding the disposition of such remains.

Assembly Bill 52

Assembly Bill (AB) 52 establishes a formal consultation process for California tribes as part of CEQA and equates significant impacts on tribal cultural resources with significant environmental impacts. AB 52 defines a "California Native American Tribe" as a Native American tribe located in California that is on the contact list maintained by the Native American Heritage Commission. AB 52 requires formal consultation with California Native American Tribes prior to determining the level of environmental document if a tribe has requested to be informed by the lead agency of proposed projects. AB 52 also requires that consultation address project alternatives, mitigation measures, for significant effects, if requested by the California Native American Tribe, and that consultation be considered concluded when either the parties agree to measures to mitigate or avoid a significant effect, or the agency concludes that mutual agreement cannot be reached. Under AB 52, such measures shall be recommended for inclusion in the environmental document and adopted mitigation monitoring program if determined to avoid or lessen a significant impact on a tribal cultural resource.

ENVIRONMENTAL SETTING

The project area has three soil series: Nord fine sandy loam; Nord complex; and, Whitewolf coarse sandy loam. Nord fine sandy loam is located in the northern edge and midsection of the project area. It is derived from sedimentary and/or igneous rock and was deposited through alluvial activity. Nord fine sandy loam can be six feet in depth or more (usda.gov).

Nord complex soils occupy the southern and upper midsection area and are also deep, six feet or more and were deposited through alluviation.

Whitewolf coarse sandy loam covers approximately less than five percent of the project area in the northern portion. It differs from the adjacent Nord fine sandy loam and Nord complex having a much higher sand content turning from loam to pure sand at depths from 10 to 60 inches (usds.gov). It was also deposited through alluviation.

Nord loams date to Middle to late Holocene and are considered to have "very high" sensitivity for the potential for buried resources based on their age of deposition (Rosenthal and Meyer 2004: Appendix D). The same authors in another study (Meyer and Rosenthal 2008:159) examine other aspects for the sensitivity for the potential of buried resources, "Ideally, predictions about where buried archaeological sites are located would take into account a number of characteristics related to the past distribution of important subsistence resources (i.e., distance to water) and other environmental factors (e.g., aspect, ecotone, slope) that may have made a specific location more favorable for occupation than another."

The project area lacks any natural surface water. The closest source is Mussel Slough, about one-half mile east of the project area. Mussel Slough is now dry but was shown to have contained water with a much longer course on the 1926 USGS Hanford topographic map quadrangle. Kings

River is approximately three miles north of the project area. The overall distance to available surface water, one-half mile at minimum, decreases the probability of encountering buried cultural resources even though the age of the sediment deposition coincides with human activity in the area. The general sensitivity for encountering buried cultural material is probably low to moderate.

CULTURAL SETTING

Archeology

The Central Valley region was among the first in the state to attract intensive fieldwork, and research has continued to the present day. This has resulted in a substantial accumulation of data, but the emphasis has been in the northern portion of the valley. In the early decades of the 1900s, E.J. Dawson explored numerous sites near Stockton and Lodi, later collaborating with W.E. Schenck (Schenck and Dawson 1929). By 1933, the focus of work was directed to the Cosumnes locality, where survey and excavation were conducted by the Sacramento Junior College (Lillard and Purves 1936). Excavation data, in particular from the stratified Windmiller site (CA-Sac-107), suggested two temporally distinct cultural traditions. Later work at other mounds by Sacramento Junior College and the University of California, Berkeley, enabled the investigators to identify a third cultural tradition, intermediate between the previously postulated Early and Late Horizons. The three-horizon sequence, based on discrete changes in ornamental artifacts and mortuary practices, as well as on observed differences in soils within sites (Lillard, Heizer and Fenenga 1939), was later refined by Beardsley (1954). An expanded definition of artifacts diagnostic of each time period was developed, and its application extended to parts of the central California coast. Traits held in common allow the application of this system within certain limits of time and space to other areas of prehistoric central California.

In the southern San Joaquin Valley, with the exception of Hewes's excavation at CA-FRE-48 (the Tranquility Site), the foci of early investigations have been the old shorelines of the interior lakes: Tulare, Kern, and Buena Vista. In 1899, Dr. P. M. Jones directed fieldwork in the Buena Vista-Tulare Lake area of Kern County. Jones investigated 150 mounds and conducted trenching of several sites including CA-Ker-53. In 1909, N. C. Nelson investigated prehistoric Site CA-Ker-49, which is located to the west of Buena Vista Lake. Later, four surveys and excavations were conducted in the same locale under the auspices of the University of California. A compilation of these investigation results was published in 1926 by Gifford and Schenck.

As a result of this early work, an elaborate culture complex was defined for the late prehistoric period. This complex can be ascribed probably to the Yokuts and their direct ancestors. The material culture of this late temporal period complex included steatite vessels and beads, finely-made projectile points, pottery, shaped stone mortars, *Tivela* disc beads, use of asphaltum, and the presence of metates and manos. Flexed burials were the predominant interment mode. Earlier complexes underlying the late cultural expressions were represented by chipped stone crescents,

large projectile points, atlatl spurs, and weights. Mortuary practices, generally thought to be related, include extended rather than flexed burial position, a situation analogous to that of the northern valley (Gifford and Schenck 1926; Lillard, Heizer, and Fenenga 1939; Moratto 1972).

Presence of "Early Man," although not found in direct association with extinct animals, is demonstrated by the frequency of chipped stone crescents and fluted points similar to those of the Clovis-Folsom Complex in the American Southwest. Although fluted points have been found near the shores of Tulare Lake, an area that has also produced surface finds of extinct mammal bone of Pleistocene age, the association is not substantiated by controlled excavations and remains speculative (Riddell and Olsen 1969). Most of the point collection had been acquired by D. Witt over a period of 30 years.

Under the direction of Wedel (1941), the Civil Works Administration, in conjunction with the Smithsonian Institution, initiated the first major excavations using stratigraphic controls. Investigations of CA-KER-39 and CA-KER-60 as well as several smaller sites near Buena Vista Lake produced evidence of two distinct cultural entities or occupation periods. Wedel lacked methods for dating these two entities by cross-comparison of the assemblages, he tentatively stated that the early occupation at Buena Vista Lake appeared to be temporally older and less developed than the Early Horizon (Windmiller Pattern) of the Delta region. He compared this early component to the Oak Grove or Milling Stone culture of the Santa Barbara area (Rogers 1939). He divided the later cultural entity into two distinct phases, both clearly distinguished from the earlier cultural phase by artifact types. Wedel (1941:144-145) estimated that neither of these cultural periods exceeded 1500 B.P. (years Before the Present). Later, other investigators proposed far earlier ages for these early occupations, with dates ranging from 2000 to 7000 B.P. (Baumhoff and Olmstead 1963, 1964; Heizer 1964; Meighan 1959).

Later investigations in 1963 and 1964 at CA-KER-116 near Buena Vista Lake produced materials similar to Wedel's early occupation. These materials occurred in the lower levels of the "upper deposit," while an even deeper cultural deposit yielded materials similar to those of the San Dieguito Complex. Artifacts included a chipped stone crescent, crude point fragments, and an atlatl spur. Radiocarbon age determinations on shell from the lowest cultural levels returned a date of circa 8200 B.P. (Fredrickson and Grossman 1966, 1977; Fredrickson 1967).

Despite the previously mentioned investigations, the prehistory of the southern San Joaquin remains as yet poorly understood, without a tightly defined chronological sequence of cultural development.

Ethnology

Ethnographic literature is often uncertain in definition of cultural boundaries for Indian groups. Early displacement by white intrusion resulted in population shifts to avoid conflict with the Spanish, and later with the miners and settlers. The ravages of disease and warfare decimated the

native people, further weakening cultural identity. Informants were often uncertain of original territories of the various tribal groupings.

The Southern Valley Yokuts were members of the Penutian language family which held all of the Central Valley, San Francisco Bay Area, and the Pacific Coast from Marin County to near Point Sur. The Yokuts differed from other ethnographic groups in California as they had true tribal divisions with group names. The project area was occupied by the Tachi. Each tribe spoke a particular dialect, common to its members, but similar enough to other Yokuts that they were mutually intelligible (Kroeber 1925; Wallace 1978).

Trade was well developed, with mutually beneficial interchange of needed or desired goods. Obsidian, rare in the San Joaquin Valley, was obtained by trade with Paiute and Shoshoni groups on the eastern side of the Sierra Nevada, where numerous sources of this material are located, and to some extent from the Napa Valley to the north. Shell beads, obtained by the Yokuts from coastal people, and acorns, rare in the Great Basin, were among many items exported to the east by Yokuts traders (Davis 1961).

Economic subsistence was based on the acorn, with substantial dependency on gathering and processing of wild seeds and other vegetable foods. The rivers, streams, and sloughs which formed a maze within the valley provided abundant food resources such as fish, shellfish, and turtles. Game, wild fowl, and small mammals were trapped and hunted to provide protein augmentation of the diet. In general, the eastern portion of the San Joaquin Valley provided a lush environment of varied food resources, with the estimated large population centers reflecting this abundance (Cook 1955; Baumhoff 1963).

Settlements were oriented along the water ways, with their village sites normally placed adjacent to these features for their nearby water and food resources. House structures varied in size and shape (Latta 1949; Kroeber 1925). The housepit depressions ranged in diameter between 3 to 18 meters.

Latta (1949:99) reported that a village of 200 to 300 Yokuts might have four or five large houses that were used for ten or twelve years or until a family member died, at which time the Indians burned the house in which the death had occurred. If a sick or aged person died outside the dwelling, the family did not burn the house. When a Northern Yokuts died, his body was cremated or buried in a flexed position. Southern tribes normally buried their dead, although they did cremate shamans, persons who died away from their village and, among the Tachi, persons of great importance.

The Yokuts experienced severe depopulation after contact with the Spanish and subsequent explores. The most devastating impacts of the Spanish colonization effort were not the result of military conflicts, but came from Old World diseases newly introduced to the native people.

Historical Background

An increasing number of Euro-Americans entered the region after 1824, accelerating cultural change and the loss of cultural integrity by the native peoples. Although cultural retention was apparent until the early 1900s, there was a gradual weakening of attachment to the old lifeways and greater adoption of white styles.

More significant in terms of cultural deterioration were the ravages of disease--in particular, the documented drastic disease epidemic of 1831-1833 (Cook 1955). Native people had no natural immunity to introduced diseases, and nearly 75 percent of the valley population succumbed during the early 1830s to an illness Cook and other authorities believe to have been malaria. Decimation of the valley people essentially destroyed the Yokuts culture.

Although the immediate effects of the Gold Rush overleapt the Southern Central Valley, the decline of mining was accompanied by a shift of white attention to the rich agricultural promise of the valley. The remaining Valley Yokuts were pressured from the lands they held, usually those with highest farming potential, and driven into the mountains. White newcomers quickly recognized the agricultural promise of the valley and began an intensive alteration of the area that made it increasingly suitable for cultivation. Farmers and ranchers drained the marshes and lakes and established irrigation systems. Today, the valley floor, for the most part, bears little resemblance to its pre-contact condition. The oak groves are gone and lakes are dry. The vast marshes, once the refuge for enormous flocks of waterfowl, no longer exist. The grazing lands of the elk and antelope have become cultivated fields, producing a wide variety of crops. The native faunal community, with the exception of burrowing mammals, has been replaced by domestic livestock.

The early interior route was used by the Spanish to travel from El Pueblo de Los Angeles to the San Francisco Bay Area, followed the routes of earlier antelope and Indian trails. The roadway, known to the early Hispanic inhabitants of the San Joaquin Valley as El Camino Viejo á Los Angeles, was traversed by ox-cart, with individuals stopping their teams at the various watering holes along the west side. Later, portions of the trail were turned into wagon roads (Latta 1936).

The extension of a branch line of the Southern Pacific railroad in 1877 brought about the formation of the town of Hanford, named for a Southern Pacific official, and incorporated in 1891. In 1877, Hanford was established as a post office in Tulare County (Frickstad 1955). Kings County was organized from lands of Tulare County in 1893, with Hanford becoming the County seat. A second railroad was built through Hanford in 1897. This line serves as the main north-south line of the BNSF Railway through the San Joaquin Valley.

In 1880, a dispute over land titles between settlers and the Southern Pacific Railroad resulted in a bloody gun battle on a farm about six miles northwest of Hanford. This event became famous as the Mussel Slough Tragedy, and is dramatized in the 1901 novel, The Octopus, by Frank Norris (Hoover, Rensch and Rensch 1970).

The city continues to serve as the commercial and cultural center for the widespread agricultural region.

RESEARCH

A record search was conducted for the project area at the Southern San Joaquin Valley Information Center of the California Historical Resources Information System on January 24, 2022 (RS#22-022; Appendix 2).

A segment of the Peoples Ditch, previously recorded in several locations outside this project area as P-16-246, lies within the northern portion of the project area. Apparently, this ditch was designed in 1875 to bring water from the Kings River to the Hanford area. Many changes have occurred to the ditch since the 1926 mapping by the USGS of the region, including straightening of segments allowing suburban development. In 2019, one recorder of a segment of the Ditch went further and looked at the entire system. An archeologist with the firm of ASM Affiliates evaluated the entire resource as not significant for the recordation of a segment of the Ditch, based on a lack of many aspects of integrity (R. Azpitarte 2019, Appendix 2).

The USGS topographic map shows a building in the southern portion of the project. The building is no longer present.

To the east, paralleling the eastern project boundary, is the line of the Atchinson, Topeka and Santa Fe Railroad, recorded as P-16-00120. In addition, there are no recorded prehistoric period sites in or near the project area.

The SSJVIC reported that the project area has never been formally surveyed, and only one survey has been conducted within 0.25 miles of the project area.

FIELD ASSESSMENT

Michael Lawson (resume, Appendix 1) completed a field survey of the project site in January 2022 with a complete inspection of the proposed project site (Figure 4).

The project is in a rural area with Flint, 12th, and Fargo Avenues on the north, west, and south boundaries, respectively. The Union Pacific Railroad tracks are on the east. It is currently planted with walnut orchards and vineyards divided into 9 primary blocks, with elevated dirt roadways between them. There is an irrigation canal located near the northern boundary of the property.

The land has been mechanically leveled with orchard and vineyard blocks at the same elevation.

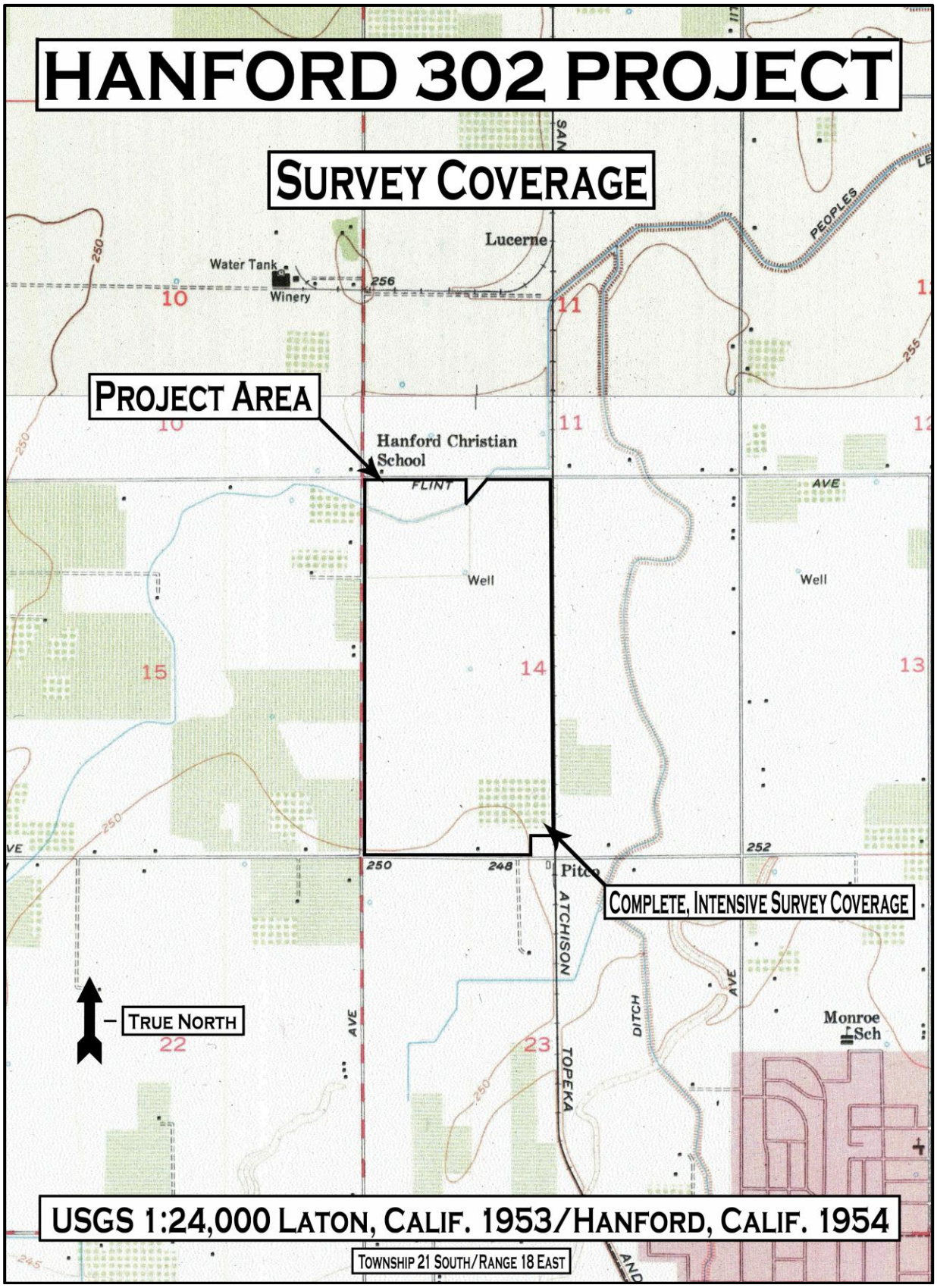

HANFORD 302 PROJECT
SURVEY COVERAGE
PROJECT AREA
COMPLETE, INTENSIVE SURVEY COVERAGE
TRUE NORTH
USGS 1:24,000 LATON, CALIF. 1953/HANFORD, CALIF. 1954
TOWNSHIP 21 SOUTH/RANGE 18 EAST
Lucerne
Water Tank
Winery
Hanford Christian School
FLINT
Well
Well
ATCHISON
TOPEKA
DITCH
Monroe Sch
PEOPLES
AVE
10
11
12
13
14
15
22
23
250
248
252
256
255
245

Figure 4

The soil is silty sand, with lite gravel content and no cobbles. Some cobbles were observed but likely imported as construction material. Soils are uniformly tan in color except in blocks with mature walnut trees, where organic introduction has changed the color to medium brown. Ballast stone (basalt, crypto-crystalline silicates, and other volcanics) from the adjacent railway line has intruded into nearly every block.

The ground visibility is very good in most areas due to vegetation removal and active farming.

Survey strategy included parallel transects with no more than ten meters spacing in historically lower elevation areas, and five-meter intervals where historical maps show increased elevation. One meter, overlapping transects were used near the southern boundary where an older map shows a building. Close inspection of ground occurred where farming activities excavated or cut into the soil.

No prehistoric resources were observed. The only historical resource observed is the section of the Peoples Ditch irrigation ditch located in the northernmost part of the project area. No materials from the previous building in the southern part of the parcel were observed.

There are no prehistoric period resources observed within the project area.

Peoples Ditch

The current version of the Peoples Ditch is an earthen excavation with no lining. It is about 16 feet wide on average at the surface, narrowing to about 8 feet at the bottom. Within this segment there are the ends of the two culverts carrying the ditch under public roads. These employ corrugated metal pipe encased in concrete. The only other feature is a single crossing for farm equipment consisting of a concrete slab supported in the middle by a concrete pier. This is located just west of the point where the straight east-west section of ditch turns to the northeast. Other than these three crossings this segment consists entirely of an open earthen ditch about 1,900 feet in length.

A site form has been prepared for this segment of the resource, as included in Appendix 3. This segment is realigned and straightened and has, therefore, lost all historic integrity.

CONCLUSIONS

For the purposes of CEQA, we conclude that there will be no impact to important cultural resources from implementation of the project.

RECOMMMENDATIONS

There is always a possibility that a site may exist in the project and be obscured by vegetation, siltation or historic activities, leaving no surface evidence. In order to assist in the recognition of cultural resources, a training session for all construction crew members should be conducted in advance of the initiation of any construction activities at the site. The training session will provide information on recognition of artifacts, human remains, and cultural deposits to help in the recognition of potential issues.

If artifacts, exotic rock, shell or bone are uncovered during the construction, work should stop in that area immediately. A qualified archeologist should be contacted to examine and evaluate the deposit, and consult with the appropriate Native American group(s).

Discovery of Human Remains

In the event of discovery or recognition of any human remains in any location other than a dedicated cemetery, there shall be no further excavation or disturbance of the site or any nearby area suspected to overlie adjacent remains until the Kings County Coroner has determined that the remains are not subject to any provisions of law concerning investigation of the circumstances, manner and cause of death, and the recommendations concerning the treatment and disposition of the human remains have been made to the person responsible for the excavation, or to his or her authorized representative. The coroner shall make his or her determination within two working days from the time the person responsible for the excavation, or his or her authorized representative, notifies the coroner of the discovery or recognition of the human remains.

If the Kings County Coroner determines that the remains are not subject to his or her authority and if the Coroner recognizes the human remains to be those of a Native American, or has reason to believe that they are those of a Native American, he or she shall contact, by telephone within 24 hours, the Native American Heritage Commission (NAHC).

After notification, the NAHC will follow the procedures outlined in Public Resources Code Section 5097.98, that include notification of most likely descendants (MLDs), and recommendations for treatment of the remains.

REFERENCES

Baumhoff, Martin A.

1963 Ecological Determinants of Aboriginal California Populations. *University of California Publications in American Archaeology and Ethnology* 49(2): 155-236. Berkeley.

Baumhoff, Martin A., and David Olmsted

1963 Radiocarbon support for Glottochronology. *American Anthropologist* 65(2): 278-284.

1964 Notes on Palaihnihan Culture History: Glottochronology and Archaeology. Studies in California linguistics, edited by William Bright, pp. 1-12. *University of California Publications in Linguistics* 34. Berkeley.

Beardsley, Richard K.

1954 Temporal and Areal Relationships in Central California Archeology (parts 1 and 2). *University of California Archaeological Survey Reports* 24, 25. Berkeley.

Cook, Sherburne F.

1960 Colonial Expeditions to the Interior of California: Central Valley 1800-1820. *University of California Anthropological Records* 16(6): 239-292. Berkeley.

1955a The Aboriginal Populations of the San Joaquin Valley, California. *University of California Press Anthropological Records* 16(2). Berkeley.

1955b The Epidemic of 1830-33 in California and Oregon. *University of California Publications in American Archaeology and Ethnology* 43(3): 303-326. Berkeley.

Davis, James T.

1961 Trade Routes and Economic Exchange among the Indians of California. *University of California Archaeological Survey Reports* 54:1-71. Berkeley.

Fredrickson, David A.

1967 Additional C-14 dates for Water Resources Investigations at Buena Vista Lake. *Society for California Archaeology Newsletter* 1(5).

Fredrickson, David A., and J. Grossman

1966 Radiocarbon Dating of an Early Site at Buena Vista Lake, California. Paper read before the annual meeting of the Society for American Archaeology, Reno.

1977 A San Dieguito Component at Buena Vista Lake, California. *The Journal of California Anthropology* 4(2): 173-190.

Frickstad, Walter
1955 *A Century of California Post Offices*. Pacific Rotapress Printing Company, Oakland.

Gifford, E. W., and W. E. Schenck
1926 Archaeology of the Southern San Joaquin Valley, California. *University of California Publications in American Archaeology and Ethnology*, Vol. 23, No. 1. Berkeley.

Gudde, Erwin
1969 *California Place Names* (Third Edition). University of California Press, Berkeley.

Hoover, Mildred, Hero E. Rensch, Ethel G. Rensch (William N. Abeloe, editor)
1970 *Historic Spots in California* (Third Edition). Stanford University Press, Stanford.

Kroeber, Alfred L.
1925 Handbook of the Indians of California. *Bureau of American Ethnology Bulletin* 78. Washington, D.C.

Latta, Franklin F.
1949 *Handbook of the Yokuts Indians*. Bear State Books, Oildale, California.

Lillard, Jeremiah B., Robert F. Heizer and Franklin Fenenga
1939 An Introduction to the Archaeology of Central California. *Sacramento Junior College, Department of Anthropology Bulletin* 2. Sacramento.

Lillard, Jeremiah B. and William K. Purves
1936 The Archeology of the Deer Creek-Cosumnes Area, Sacramento County, California. *Sacramento Junior College, Department of Anthropology Bulletin* 1.

Meighan, Clement W.
1959 California Cultures and the Concept of an Archaic Stage. *American Antiquity* 24(3): 289-318.

Meyer, Jack and Jeffery S Rosenthal
2008 A Geoarchaeological Overview and Assessment of Caltrans District 3: Cultural Resources Inventory of Caltrans District 3 Rural Conventional Highways. Ms. on file, Northeast Information Center, California State University, Chico.

Moratto, Michael J.
1984 *California Archaeology*. Academic Press, Inc., New York.

Riddell, Francis A. and William H. Olsen
1969 An Early Man Site in the San Joaquin Valley, California. *American Antiquity* 34(2): 121-131. Washington, D.C.

Rosenthal, Jeffery S., and Jack Meyer
2004 Cultural Resources Inventory of Caltrans District 10 Rural Conventional Highways, Volume III: Geoarchaeological Study Landscape Evolution and the Archaeological Record of Central California. Ms. on file, Central California Information Center, California State University, Stanislaus.

Rogers, Malcolm J.
1939 Early Lithic Industries of the Lower Basin of the Colorado River and Adjacent Desert Areas. *San Diego Museum Papers* 3. San Diego.

Schenck, W. Egbert and Elmer Dawson
1929 Archaeology of the Northern San Joaquin Valley. *University of California Publications in American Archaeology and Ethnology* 25(4): 289-413. Berkeley.

Smith, Wallace
1960 *Garden of the Sun*. Eighth edition. Privately printed.

Wallace, William J.
1978 Southern Valley Yokuts. In: *Handbook of North American Indians: California*, Volume 8, edited by Robert F. Heizer, pp. 448-461. William G. Sturtevant, general editor. Smithsonian Institution, Washington, D. C.

Wedel, Waldo R.
1941 Archaeological Investigations at Buena Vista Lake, Kern County, California. *Bureau of American Ethnology Bulletin* 130. Washington, D.C.

APPENDIX 1

Resumes

PEAK & ASSOCIATES, INC.
RESUME

MELINDA A. PEAK **January 2022**
Senior Historian/Archeologist
3941 Park Drive, Suite 20 #329
El Dorado Hills, CA 95762
(916) 939-2405

PROFESSIONAL EXPERIENCE

Ms. Peak has served as the principal investigator on a wide range of prehistoric and historic excavations throughout California. She has directed laboratory analyses of archeological materials, including the historic period. She has also conducted a wide variety of cultural resource assessments in California, including documentary research, field survey, Native American consultation and report preparation.

In addition, Ms. Peak has developed a second field of expertise in applied history, specializing in site-specific research for historic period resources. She is a registered professional historian and has completed a number of historical research projects for a wide variety of site types.

Through her education and experience, Ms. Peak meets the Secretary of Interior Standards for historian, architectural historian, prehistoric archeologist and historic archeologist.

EDUCATION

M.A. - History - California State University, Sacramento, 1989
Thesis: *The Bellevue Mine: A Historical Resources Management Site Study in Plumas and Sierra Counties, California*
B.A. - Anthropology - University of California, Berkeley

PROJECTS

In recent years, Ms. Peak has led the team completing the cultural resource sections for General Plan and General Plan Updates, for a number of cities/neighborhoods including Campbell, Milpitas, Yountville, Manteca, The Springs, Sebastopol, Martinez, Brentwood, Colusa County and Foster City. Older General Plan efforts include Wheatland, Rocklin, Sheridan, Granite Bay and South Sutter County.

In recent months, Ms. Peak has completed a number of determinations of eligibility and effect documents in coordination with the Corps of Engineers for projects requiring federal permits, assessing the eligibility of a number of sites for the National Register of Historic Places.

She has also completed historical research projects on a wide variety of topics for a number of projects including the development of a winery in a ranch in Folsom, commercial buildings in the City of Davis, a lumber mill in Clovis, older farmhouses dating to the 1860s, an early roadhouse, bridges, canals, former small-town site, and a section of an electric railway line.

In recent years, Ms. Peak has prepared a number of cultural resource overviews and predictive models for blocks of land proposed for future development for general and specific plans. She has been able to direct a number of surveys of these areas, allowing the model to be tested.

Ms. Peak completed the cultural resource research and contributed to the text prepared for the DeSabla-Centerville PAD for the initial stage of the FERC relicensing. She also served cultural resource project manager for the FERC relicensing of the Beardsley-Donnells Project. For the South Feather Power Project and the Woodleaf-Palermo and Sly Creek Transmission Lines, her team completing the technical work for the project.

She served as principal investigator for the multi-phase Twelve Bridges Golf Club project in Placer County. She served as liaison with the various agencies, helped prepare the historic properties treatment plan, managed the various phases of test and data recovery excavations, and completed the final report on the analysis of the test phase excavations of a number of prehistoric sites.

Ms. Peak has served as project manager for a number of major survey and excavation projects in recent years, including the many surveys and site definition excavations for the 172-mile-long Pacific Pipeline proposed for construction in Santa Barbara, Ventura and Los Angeles counties. She also completed an archival study in the City of Los Angeles for the project, and served as principal investigator for a major coaxial cable removal project for AT&T.

Additionally, she completed a number of small surveys, served as a construction monitor at several urban sites, and conducted emergency recovery excavations for sites found during monitoring. She has directed the excavations of several historic complexes in Sacramento, Placer and El Dorado Counties.

Ms. Peak is the author of a chapter and two sections of a published history (1999) of Sacramento County, *Sacramento: Gold Rush Legacy, Metropolitan Legacy*. She served as the consultant for a children's book on California, published by Capstone Press in 2003 in the Land of Liberty series.

PEAK & ASSOCIATES, INC.
RESUME

MICHAEL LAWSON **January 2022**
Archeological Specialist
3941 Park Drive, Suite 20-329
El Dorado Hills, CA 95672
(916) 939-2405

PROFESSIONAL EXPERIENCE

Mr. Lawson has compiled an excellent record of supervision of excavation and survey projects for both the public and private sectors over the past twenty-four years. He has conducted a number of surveys throughout northern and central California, as well as serving as an archeological technician and crew chief for a number of excavation projects.

EDUCATION

B.A. - Anthropology - California State University, Sacramento

Special Course: Comparative Osteology. University of Tennessee, Knoxville. Forensic Anthropology Center. January 2018.

Intensive lab and outdoor study with human example from outdoor research facility, including typical and non-metric examples, compared with fifty non-human species most commonly confused with human remains. Outdoor research facility "The Body Farm" study included survey, photography, collection and identification of faunal and human bone fragments, with a Power Point presentation discussing finds.

EXPERIENCE

- Extensive monitoring of open space, streets and project development areas for prehistoric period and historic period resources. Areas monitored include Sutter Street in Folsom; Mud Creek Archeological District in Chico; Camp Roberts, San Luis Obispo County; Avila Beach, San Luis Obispo County; Edgewood Golf Course, South Lake Tahoe; Davis Water Project, Davis; Star Bend levee section, Sutter County; Feather River levees, Sutter County; Bodega Bay, Sonoma County; San Jose BART line extension, Santa Clara County; and numerous sites for PG&E in San Francisco.
- Over twenty years of experience working in CRM, volunteer, and academic settings in California historic, proto-historic, and prehistoric archaeology.
- Expertise in pedestrian survey, excavation, feature (including burial) exposure, laboratory techniques, research. Field positions include crew chief and lead technician.

APPENDIX 2

SSJVIC Record Search

California Historical Resources Information System



Fresno
Kern
Kings
Madera
Tulare

Southern San Joaquin Valley Information Center
California State University, Bakersfield
Mail Stop: 72 DOB
9001 Stockdale Highway
Bakersfield, California 93311-1022
(661) 654-2289
E-mail: ssjvic@csub.edu
Website: www.csub.edu/ssjvic

1/24/2022

Robert Gerry
Peak & Associates, Inc.
3941 Park Drive, Ste 20-329
El Dorado Hills, CA 95762

Re: Woodside Hanford
Records Search File No.: 22-022

The Southern San Joaquin Valley Information Center received your record search request for the project area referenced above, located on the Hanford USGS 7.5' quad. The following reflects the results of the records search for the project area and the 0.25 mile radius:

As indicated on the data request form, the locations of resources and reports are provided in the following format: ☒ custom GIS maps ☐ GIS data

Resources within project area:	P-16-000246
Resources within 0.25 mile radius:	P-16-000120
Reports within project area:	None
Reports within 0.25 mile radius:	KI-00094

Resource Database Printout (list): ☒ enclosed ☐ not requested ☐ nothing listed

Resource Database Printout (details): ☐ enclosed ☒ not requested ☐ nothing listed

Resource Digital Database Records: ☐ enclosed ☒ not requested ☐ nothing listed

Report Database Printout (list): ☒ enclosed ☐ not requested ☐ nothing listed

Report Database Printout (details): ☐ enclosed ☒ not requested ☐ nothing listed

Report Digital Database Records: ☐ enclosed ☒ not requested ☐ nothing listed

Resource Record Copies: ☒ enclosed ☐ not requested ☐ nothing listed

Report Copies: ☐ enclosed ☐ not requested ☒ nothing listed

OHP Built Environment Resources Directory: ☐ enclosed ☐ not requested ☒ nothing listed

Archaeological Determinations of Eligibility: ☐ enclosed ☐ not requested ☒ nothing listed

CA Inventory of Historic Resources (1976): ☐ enclosed ☒ not requested ☐ nothing listed

Caltrans Bridge Survey: Not available at SSJVIC; please see https://dot.ca.gov/programs/environmental-analysis/cultural-studies/california-historical-bridges-tunnels

Ethnographic Information: Not available at SSJVIC

Historical Literature: Not available at SSJVIC

Historical Maps: Not available at SSJVIC; please see http://historicalmaps.arcgis.com/usgs/

Local Inventories: Not available at SSJVIC

GLO and/or Rancho Plat Maps: Not available at SSJVIC; please see http://www.glorecords.blm.gov/search/default.aspx#searchTabIndex=0&searchByTypeIndex=1 and/or http://www.oac.cdlib.org/view?docId=hb8489p15p;developer=local;style=oac4;doc.view=items

Shipwreck Inventory: Not available at SSJVIC; please see https://www.slc.ca.gov/shipwrecks/

Soil Survey Maps: Not available at SSJVIC; please see http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx

Please forward a copy of any resulting reports from this project to the office as soon as possible. Due to the sensitive nature of archaeological site location data, we ask that you do not include resource location maps and resource location descriptions in your report if the report is for public distribution. If you have any questions regarding the results presented herein, please contact the office at the phone number listed above.

The provision of CHRIS Data via this records search response does not in any way constitute public disclosure of records otherwise exempt from disclosure under the California Public Records Act or any other law, including, but not limited to, records related to archeological site information maintained by or on behalf of, or in the possession of, the State of California, Department of Parks and Recreation, State Historic Preservation Officer, Office of Historic Preservation, or the State Historical Resources Commission.

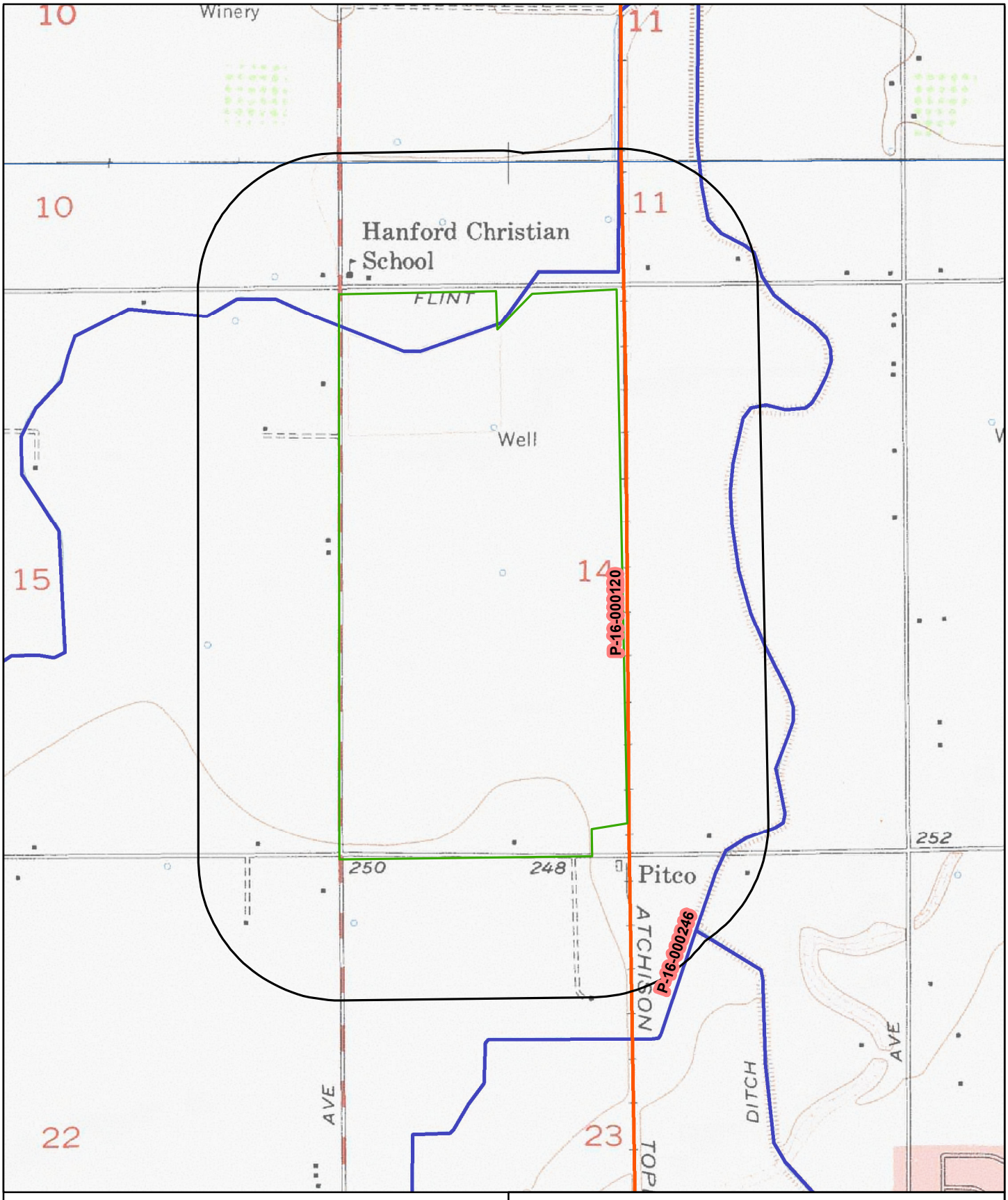
Due to processing delays and other factors, not all of the historical resource reports and resource records that have been submitted to the Office of Historic Preservation are available via this records search. Additional information may be available through the federal, state, and local agencies that produced or paid for historical resource management work in the search area. Additionally, Native American tribes have historical resource information not in the CHRIS Inventory, and you should contact the California Native American Heritage Commission for information on local/regional tribal contacts.

Should you require any additional information for the above referenced project, reference the record search number listed above when making inquiries. Invoices for Information Center services will be sent under separate cover from the California State University, Bakersfield Accounting Office.

Thank you for using the California Historical Resources Information System (CHRIS).

Sincerely,

Jeremy E David
Assistant Coordinator



May depict confidential cultural resource locations.
Do not distribute.

0 0.075 0.15 0.3 Miles

0 0.1 0.2 0.4 Kilometers

N

Project Area

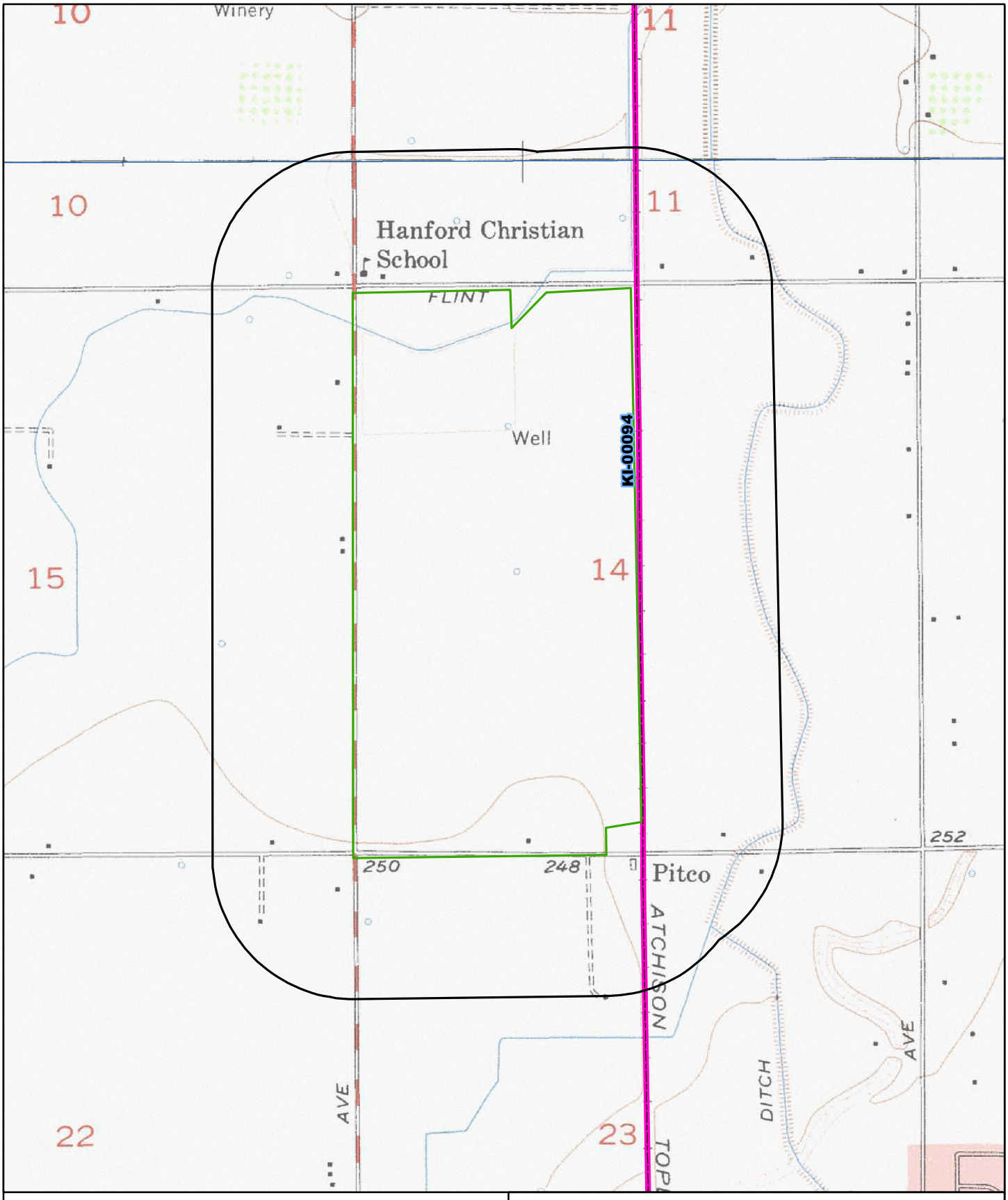
Record Search radius

Resources Map
SSJV Information Center Record Search 22-022
Requester: Robert Gerry, Peak & Associates, Inc.
Project Name: Woodside Hanford
USGS 7.5' Quad(s): Hanford
County: Kings

Resource List

SSJVIC Record Search 22-022

Primary No.	Trinomial	Other IDs	Type	Age	Attribute codes	Recorded by	Reports
P-16-000120		Resource Name - Burlington Northern and Santa Fe Railway (formerly Atchison, Topeka, and Santa Fe); Other - CRM TECH 607-7H	Structure	Historic	HP19; HP37	2001 (Bai "Tom" Tang, Daniel Ballester, CRM Tech); 2019 (Robert Azpitarte, ASM Affiliates, Inc.)	KI-00333
P-16-000246	CA-KIN-000097H	Other - JKI-002, CRM TECH 675-5H, CRM TECH 607-8H; Resource Name - People's Ditch; OTIS Resource Number - 666092	Structure	Historic	HP20	2001 (Bai "Tom" Tang, Daniel Ballester, CRM TECH); 2001 (Bai "Tom" Tang, Daniel Ballester, CRM TECH); 2009 (Joseph Freeman, Jarma Jones, JRP Historical Consulting, LLC); 2017 (Jessica Jones, Applied EarthWorks, Inc.); 2019 (R. Azpitarte, ASM Affiliates, Inc.)	KI-00196, KI-00310, KI-00334



May depict confidential cultural resource locations.
Do not distribute.

0 0.075 0.15 0.3 Miles

0 0.1 0.2 0.4 Kilometers

N

Project Area

Record Search radius

Report Map
SSJV Information Center Record Search 22-022
Requester: Robert Gerry, Peak & Associates, Inc.
Project Name: Woodside Hanford
USGS 7.5' Quad(s): Hanford
County: Kings

Report List

SSJVIC Record Search 22-022

Report No.	Other IDs	Year	Author(s)	Title	Affiliation	Resources
KI-00094	Submitter - Project Number 27101	2000	Nelson, Wendy J.	Cultural Resources Survey for the Level (3) Communications Long Haul Fiber Optics Project Segment WS04: Sacramento to Bakersfield	Far Western Anthropological Research Group, Inc.	16-000084

UPDATE

State of California – The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
CONTINUATION SHEET

Primary # P-16-000246
HRI #
Trinomial CA-KIN-000097H

***Resource Name or #:** P-16-000246 UPDATE
Recorded by: R. Azpitarte
Date: 6/24/2019
☐ Continuation ■ Update

P1. Other Identifier:
P2. Location: ■ **Not for Publication** ☐ **Unrestricted**
- **a. County:** Kings
- **b. USGS 7.5' Quad:** Burris Park **Date:** 1977 **T**17S; **R**22E; SE¼ of NE¼ **of** Sec 33; M.D.B.M.
- **c. Address**:
- **d. UTM**: **Zone** 11N**, NE End**: 268392**mE /** 4032671**mN; SW End**: 268125**mE /** 4032380**Mn; SE End**: 268385**mE /** 4032420**mN** *All GPS data collected with Trimble GEOXH 2005 Series in NAD 83.*
- **e. Other Locational Data**:

P3a. Description: This is a segment of the previously recorded Peoples Ditch, including its junction with the East Branch of the Peoples Ditch. The main branch of this resource runs northeast – southwest. The ditch is approximately 26-ft wide, bank-to-bank, and about 5-ft deep. It is an earthen ditch with steep and well-groomed sides. Dirt levees have been built up on each side of the ditch, now topped with dirt roads that are about 15-ft wide. Gates are present at the junction of the two branches, both on the East Branch, where it enters the main branch, and on the main branch immediately downstream (southwest) of this junction. The check-gate on the main branch is made of concrete, steel and wood. Wooden planks cross the concrete structure, allowing foot access to the four individual wooden gates, which are hand-operated and mounted on concrete head-frames. Two large steel pipes also cross the structure on the downstream side. A sluice-gate/spillway, with three concrete channels, serves as the intake for the East Branch. The concrete walls of this structure are slotted for the insertion of three wooden closures, but none were present at the time of the survey. A corrugated stainless-steel plank and a pipe railing cross the structure, allowing access to the gate insertions. A large metal pipe also crosses this structure.

P3b. Resource Attributes: HP20. Canal/aqueduct

P4. Resources Present: ☐ Building ■ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other (Isolates, etc.)

P5a. Photograph or Drawing:



P5b. Description of Photo: SW Overview of Peoples Ditch segments. Frame#0010.

P6. Date Constructed/Age and Source:
■ Historic ☐ Prehistoric ☐ Both

P7. Owner and Address:
N/A

P8. Recorded by:
R. Azpitarte
ASM Affiliates, Inc.
20424 West Valley Blvd, Suite A
Tehachapi, CA 93561

P9. Date Recorded:
6/20/2019

P10. Survey Type: Class III Inventory

P11. Report Citation: D.S. Whitley and R. Azpitarte (2019) CLASS III INVENTORY/PHASE I SURVEY, ESAJIAN RECHARGE BASIN PROJECT, KINGS COUNTY WATER DISTRICT, KINGS COUNTY, CALIFORNIA

Attachments: ☐ NONE ■ Location Map ■Sketch Map ■ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☐ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record

☐ Artifact Record ☐ Photograph Record ☐ Other (List):

State of California – The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
CONTINUATION SHEET

Primary # P-16-000246
HRI #
Trinomial CA-KIN-000097H

***Resource Name or #:** P-16-000246 UPDATE
Recorded by: R. Azpitarte
Date: 6/24/2019
■ Continuation ■ Update

***A5. Cultural Constituents:** No observed artifacts; see description for features

A14. Remarks: The Peoples Ditch was constructed by the Peoples Ditch Company in 1875 to bring Kings River water to the Hanford area. The ditch is approximately 18-miles in total length and is still owned and operated by the Peoples Ditch Company. It is thus strictly not a component of a larger water conveyance system and hence is not a part of a potential historical district.

As an individual historical resource, the Peoples Ditch is potentially eligible for NRHP/CRHR listing under Criterion A/1, association with major historical events or trends. It would be potentially eligible under the Development of Irrigated Agriculture in the San Joaquin Valley theme, with a period of significance from 1852 to 1964, due to its construction as part of this historical trend during this period.

The Peoples Ditch is not associated with any known significant historical figure and is not eligible under NRHP/CRHR Criterion B/2. It also represents a common property type and is not especially illustrative of this type of water conveyance system (see discussion of integrity below), nor is it an example of unusual workmanship. It is therefore not eligible under Criterion C/3. It also lacks research potential and is not eligible under NRHP/CRHR Criterion D/4.

With respect to integrity, NRHP/CRHR eligibility requires that a resource retain most of the seven aspects of integrity: location, design, setting, materials, workmanship, feeling, and association. The 2001, 2009 and 2017 previous recordings document a number of modifications to the Peoples Ditch that have accrued over time. These include the:

- Removal of the road-crossing that was present in the Project APE from at least 1926 to 1994;
- Use of a concrete culvert to carry water flow under a rail road crossing;
- Numerous contemporary/modern concrete bridge crossings;
- Addition of numerous metal distribution gates with concrete headwalls; and
- The creation of levees topped by 15-ft wide dirt roads on either side of the ditch.

A Master Agreement has also been developed which will allow the California High-Speed Rail to share the Peoples Ditch right-of-way for part of its north – south rail line (High-Speed Rail RFP No.: HSR 13-57 – Addendum 5 – 10/09/2014, Master Agreement Between California High-Speed Rail Authority and The People's [sic] Ditch Company).

Perhaps most pertinent to the integrity of this resource, based on a comparison of the 1926 USGS Kingsburg, Burris Park, and Hanford 1:31,680 topographical quadrangles with recent Google Earth imagery, are changes in the ditch route, primarily straightened segments of the ditch, and the development of suburban growth surrounding the ditch. These have occurred at the north end of the ditch, a short distance south of its Kings River head-gate; in a segment to the east of the community of Lucerne; and in much of its north – south route through the City of Hanford. Perhaps most importantly, the development of Hanford around this last segment—changing it from a route through open farmland to a contemporary suburban setting, with the ditch walled-off from the surrounding housing developments—has fully altered the setting and feel of the resource.

Based on these circumstances, the Peoples Ditch now lacks integrity of location, setting, materials and feeling. It is recommended as not NRHP/CRHR eligible.

APPENDIX 3

Site Record Update for P-16-000246 (Peoples Ditch)

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary # P-16-000246
HRI #
Trinomial CA-KIN000097H
NRHP Status Code

Other Listings
Review Code **Reviewer** **Date**

***Resource Name or #:** People's Ditch (segment)

P1. Other Identifier:

***P2. Location:** ☐ **Not for Publication** ■ **Unrestricted** ***a. County:** Kings

and (P2b and P2c or P2d. Attach a Location Map as necessary.)

***b. USGS 7.5' Quad:** Hanford **Date:** 1956 **T** 18S ; **R** 21E ; **NW ¼ of NW ¼ of Sec** 14; M.D. **B.M.**

c. Address: City: Zip:

d. UTM: NAD 27 Zone: 11; Point A: 2 60 284 mE/ 40 28 209 mN Point B: 2 60 713 mE/ 40 28 182 mN
Point C: 2 60 723 mE/ 40 28 185 mN

e. Other Locational Data: (e.g., parcel #, directions to resource, elevation, etc., as appropriate) Elevation: ± 250 ft
The ditch segment intersects Flint Avenue 1/3 of a mile east of 12th Avenue. It intersects 12th Avenue 290 ft south of Flint Avenue.

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)
The ditch is an earthen excavation with no lining. It is about 16 feet wide on average at the surface, narrrowing to about 8 feet at the bottom. Within this segment there are the ends of the two culverts carrying the ditch under public roads. These employ corrugated metal pipe encased in concrete. The only other feature is a single crossing for farm equipment consisting of a concrete slab supported in the middle by a concrete pier. This is located just west of the point where the straight east-west section of ditch turns to the northeast, Ppoint C on the map. Other than these three crossings this segment consists entirely of an open earthen ditch about 1,900 feet in length.

***P3b. Resource Attributes:** (List attributes and codes) HP20—Canal/Aqueduct

***P4. Resources Present:** ☐Building ■Structure ☐Object ☐Site ☐District ☐Element of District ☐Other (Isolates, etc.)

P5a. Photo or Drawing (Photo required for buildings, structures, and objects.)



P5b. Description of Photo: (View, date, accession #) Looking east at the angle in the ditch at Point C on the map. Shows farm quipment crossing. 1/21/22

***P6. Date Constructed/Age and Sources:** ■Historic ☐Prehistoric ☐Both

***P7. Owner and Address:**

***P8. Recorded by:** (Name, affiliation, and address)
M Lawson, R Gerry
Peak & Associates, Inc.
3941 Park Dr, Suite 20-329
El Dorado Hills, CA 95762

***P9. Date Recorded:** 1/21/22

***P10. Survey Type:** (Describe)
Complete pedestrian

***P11. Report Citation:** (Cite survey report and other sources, or enter "none.") Cultural Resources Assessment of Woodside Homes' 12th Avenue Site, Hanford, CA. Peak & Associates, Inc. February 2022

***Attachments:** ☐NONE ☐Location Map ☐Sketch Map ☐Continuation Sheet ☐Building, Structure, and Object Record ☐Archaeological Record ☐District Record ☐Linear Feature Record ☐Milling Station Record ☐Rock Art Record ☐Artifact Record ☐Photograph Record ☐ Other (List):

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

Primary # P-16-00246
HRI#

BUILDING, STRUCTURE, AND OBJECT RECORD

*NRHP Status Code

*Resource Name or # (Assigned by recorder) People's Ditch (segment)

B1. Historic Name: People's Ditch
B2. Common Name: same
B3. Original Use: Agricultural water supply B4. Present Use: same
*B5. **Architectural Style:**
*B6. **Construction History:** (Construction date, alterations, and date of alterations)
This is discussed at length in other segments of the site record. See particularly CRM Tech 2001.

*B7. **Moved?** ☐No ■Yes ☐Unknown **Date:** **Original Location:** Wandered through this area
*B8. **Related Features:**

B9a. Architect: b. Builder:
*B10. **Significance: Theme:** **Area:**
Period of Significance: **Property Type:** **Applicable Criteria:**
(Discuss importance in terms of historical or architectural context as defined by theme, period, and geographic scope. Also address integrity.)
The significance of the site will be established as other segments are recorded. This segment is realigned and straightened and has, therefore, lost all historic integrity. No conclusions on overall significance can be drawn from this segment.

B11. Additional Resource Attributes: (List attributes and codes)

*B12. **References:**

B13. Remarks:

*B14. **Evaluator:**

***Date of Evaluation:**

(This space reserved for official comments.)

(Sketch Map with north arrow required.)

See attached

*Required information

State of California ♿ Natural Resources Agency
DEPARTMENT OF PARKS AND RECREATION
LINEAR FEATURE RECORD

Primary#P-16-000246
HRI#
Trinomial CA-KIN-000097H

Resource Name or #: (Assigned by recorder) People's Ditch (segment)

L1. Historic and/or Common Name: Peoples Ditch, Grangeville Branch

L2a. Portion Described: ☐ Entire Resource ■ Segment ☐ Point Observation **Designation:**

b. Location of point or segment: (Provide UTM coordinates, decimal degrees, legal description, and any other useful locational data. Show the area that has been field inspected on a Location Map.) See Primary Record, Sketch and Location maps

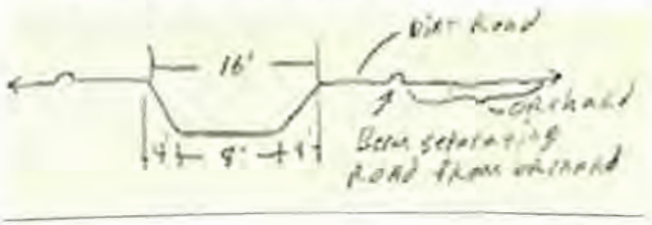
L3. Description: (Describe construction details, materials, and artifacts found at this segment/point. Provide plans/sections as appropriate.) See Primary and BSO records.

L4. Dimensions: (In feet for historic features and meters for prehistoric features)

- **a. Top Width** 16'
- **b. Bottom Width** 8'
- **c. Height or Depth** 4'
- **d. Length of Segment** ± 1900'

L5. Associated Resources: none

L4e. Sketch of Cross-Section (include scale) Facing: West



L6. Setting: (Describe natural features, landscape characteristics, slope, etc., as appropriate.): Ditch crosses a walnut orchard

L7. Integrity Considerations: This segment has been moved and straightened.

L8a. Photograph, Map or Drawing

L8b. Description of Photo, Map, or Drawing (View, scale, etc.) See Primary Record and Continuation

L9. Remarks:

L10. Form Prepared by: (Name, affiliation, and address)
Gerry/Lawson
See Primary

L11. Date:
1/21/22



View east from 12th Avenue into survey area



View south from Flint Avenue into survey area

State of California & Natural Resources Agency
DEPARTMENT OF PARKS AND RECREATION
SKETCH MAP

Primary # P-16-000246
HRI#
Trinomial CA-KIN-000097H

Page 5 **of** 6 ***Resource Name or #** (Assigned by recorder) People's Ditch (segment)

***Drawn by:** Google Earth and Gerry ***Date of map:** 2/6/2022



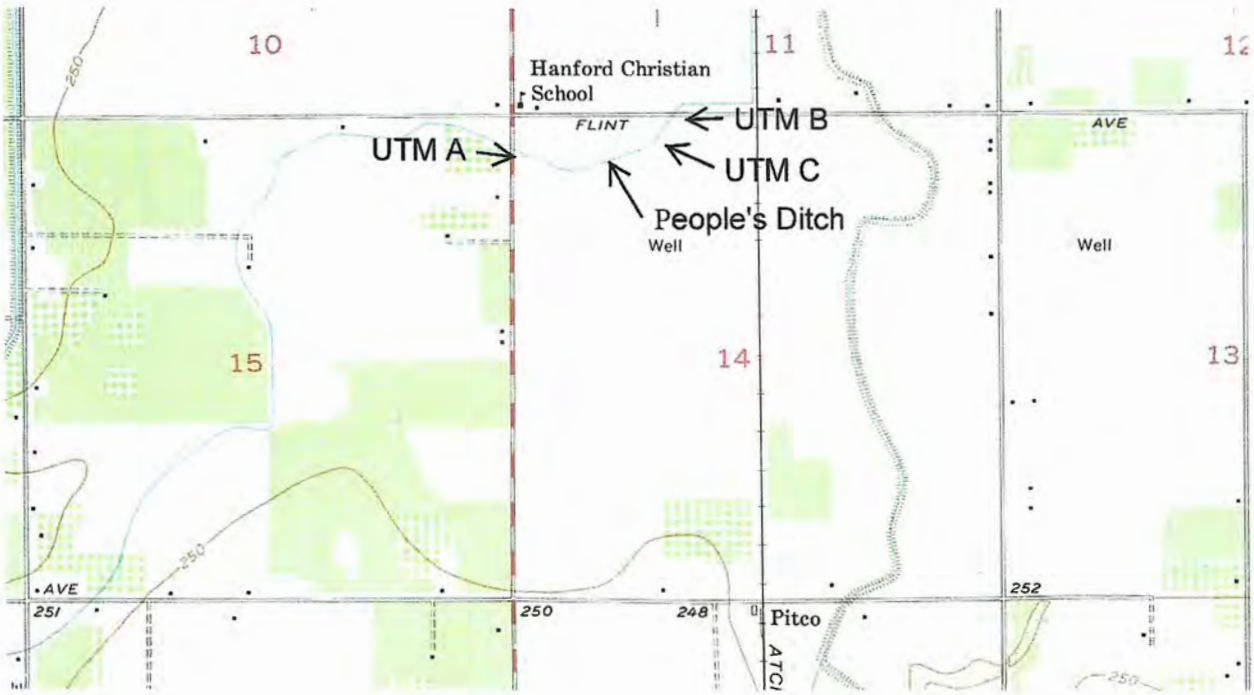
State of California & Natural Resources Agency
DEPARTMENT OF PARKS AND RECREATION

LOCATION MAP

Primary # P-16-000246
HRI#
Trinomial CA-KIN-000097H

 *Resource Name or # (Assigned by recorder) People's Ditch (segment)

*Map Name: Hanford *Scale: 1:24,000 *Date of map: 1954



SCALE 1:24 000

1 MILE
1000 0 1000 2000 3000 4000 5000 6000 7000 FEET
1 KILOMETRE

CONTOUR INTERVAL 5 FEET
NATIONAL GEODETIC VERTICAL DATUM OF 1929

Appendix D

Energy Calculations

Mobile Energy Use (Operations)

Total Annual VMT from Project (CalEEMod)	3,120,057

Fleet Mix & Fuel Calculations

Vehicle Class	Proportion of Fleet Mix[1]	Annual VMT by Vehicle Class	Proportion of vehicle class using gas or diesel (EMFAC2017)[2]		Annual VMT by Vehicle Class and Fuel Type		Fuel Efficiency (MPG) by Vehicle Class and Fuel Type (EMFAC2017)		Annual Fuel Use from Project (gallons)		MBTU/Year[3]
			Gas	Diesel	Gas	Diesel	Gas	Diesel	Gas	Diesel	
LDA	0.521938000	1628476.3	100%	0%	1625232.38	3243.93	28.46	42.24	57107.8	76.8	6640.3
LDT1	0.053295000	166283.4	100%	0%	166215.58	67.86	23.44	24.68	7090.6	2.7	823.5
LDT2	0.175231000	546730.7	100%	0%	545024.06	1706.65	22.89	32.12	23807.4	53.1	2771.2
MDV	0.213177000	665124.4	98%	2%	654420.04	10704.35	18.54	23.57	35292.8	454.2	4160.3
LHD1	0.000717000	2237.1	49%	51%	1103.28	1133.81	9.48	15.74	116.4	72.0	23.5
LHD2	0.000717000	2237.1	27%	73%	608.46	1628.62	8.48	13.09	71.7	124.4	25.6
MHD	0.003130000	9765.8	18%	82%	1774.58	7991.20	4.74	8.73	374.4	915.1	170.7
HHD	0.001183000	3691.0	0%	100%	0.96	3690.07	3.35	6.09	0.3	605.8	84.2
OBUS	0.000633000	1975.0	65%	35%	1291.47	683.53	4.75	6.90	272.2	99.1	45.4
UBUS	0.000190000	592.8	76%	24%	451.87	140.94	8.41	11.19	53.7	12.6	8.0
MCY	0.024959000	77873.5	100%	0%	77873.50	0.00	40.30	NA	1932.3	0.0	224.3
SBUS	0.001183000	3691.0	37%	63%	1377.75	2313.28	9.78	8.08	140.8	286.2	56.1
MH	0.003668000	11444.4	66%	34%	7546.14	3898.23	4.41	9.41	1711.0	414.3	256.2
Total	**100.002100%**	**3120122.5**			**3082920.07**	**37202.45**			**127971.4**	**3116.4**	**15289.4**

Usage Type	MBTU[4]
Electricity Use	
Natural Gas Use	

Fleet Characteristics

Source: EMFAC2017 (v1.0.3) Emissions Inventory
Region Type: County
Region: Kings
Calendar Year: 2024
Season: Annual
Vehicle Classification: EMFAC2007 Categories
Units: miles/year for VMT, trips/year for Trips, tons/year for Emissions, 1000 gallons/year for Fuel Consumption

GASOLINE

Region	Calendar Year	Vehicle Category	Model Year	Speed	Fuel	Population	VMT (Annual)	Trips (Annual)	Fuel Consumption (1000 gal/year)	Annual Fuel Consumption (gallons)	MPG
Kings	2024	HHDT	Aggregate	Aggregate	Gasoline	2	69595	5642	20.78	20779	3.35
Kings	2024	LDA	Aggregate	Aggregate	Gasoline	62891	943007371	325924543	33135.62	33135624	28.46
Kings	2024	LDT1	Aggregate	Aggregate	Gasoline	5722	69123876	31894273	2948.74	2948739	23.44
Kings	2024	LDT2	Aggregate	Aggregate	Gasoline	28214	404757831	105810710	17680.41	17680411	22.89
Kings	2024	LHDT1	Aggregate	Aggregate	Gasoline	2719	36105174	26803634	3808.07	3808070	9.48
Kings	2024	LHDT2	Aggregate	Aggregate	Gasoline	342	4509950	4406586	531.73	531729	8.48
Kings	2024	MCY	Aggregate	Aggregate	Gasoline	3376	7016638	6611059	174.10	174104	40.30
Kings	2024	MDV	Aggregate	Aggregate	Gasoline	27960	365147479	106279450	19692.36	19692364	18.54
Kings	2024	MH	Aggregate	Aggregate	Gasoline	376	1225178	30111	277.79	277794	4.41
Kings	2024	MHDT	Aggregate	Aggregate	Gasoline	180	3968196	2764314	837.27	837267	4.74
Kings	2024	OBUS	Aggregate	Aggregate	Gasoline	79	1536311	922982	323.76	323761	4.75
Kings	2024	SBUS	Aggregate	Aggregate	Gasoline	27	630591	109782	64.45	64451	9.78
Tulare	2024	UBUS	Aggregate	Aggregate	Gasoline	12	179850	99041	21.38	21382	8.41

DIESEL

Region	Calendar Year	Vehicle Category	Model Year	Speed	Fuel	Population	VMT (annual)	Trips (annual)	Fuel Consumption (1000 gal/year)	Annual Fuel Consumption (gallons)	MPG
Kings	2024	HHDT	Aggregate	Aggregate	Diesel	4739	267105141	31416840	43849.95	43849950	6.09
Kings	2024	LDA	Aggregate	Aggregate	Diesel	171	1882225	258942	44.56	44562	42.24
Kings	2024	LDT1	Aggregate	Aggregate	Diesel	5	28221	4875	1.14	1143	24.68
Kings	2024	LDT2	Aggregate	Aggregate	Diesel	83	1267427	144618	39.45	39453	32.12
Kings	2024	LHDT1	Aggregate	Aggregate	Diesel	2824	37104296	12964762	2356.84	2356840	15.74
Kings	2024	LHDT2	Aggregate	Aggregate	Diesel	872	12071416	4005740	922.40	922395	13.09
Kings	2024	MDV	Aggregate	Aggregate	Diesel	427	5972717	720591	253.42	253418	23.57
Kings	2024	MH	Aggregate	Aggregate	Diesel	198	632909	7237	67.27	67268	9.41
Kings	2024	MHDT	Aggregate	Aggregate	Diesel	1032	17869402	4406023	2046.25	2046248	8.73
Kings	2024	OBUS	Aggregate	Aggregate	Diesel	31	813109	137029	117.92	117916	6.90
Kings	2024	SBUS	Aggregate	Aggregate	Diesel	136	1058776	719558	130.99	130986	8.08
Kings	2024	UBUS	Aggregate	Aggregate	Diesel	2	56096	3518	5.01	5012	11.19

Notes

1. Used project-specific vehicle fleet mix
2. Proportion of diesel vs. gasoline vehicles calculated based on total annual VMT for each vehicle class
3. MBTU Calculated for comparison purposes. Assumed 1 gallon of gasoline = 0.116090 MBTU and 1 gallon of diesel = 0.139 MBTU
4. MBTU Calculated for comparison purposes. Assumed 1 kWh = 0.0034095 MBTU and 1 kBTU = 0.001 MBTU

Construction Equipment Energy Use

Phase Name	Off Road Equipment Type	Off Road Equipment Unit Amount[1]	Usage Hours Per Day[1]	Horse Power (lbs/sec)[1]	Load Factor[1]	Total Operational Hours	BSFC[2]	Fuel Used (gallons)[3]	MBTU[4]
Site Preparation	Rubber Tired Dozers	3	8	247	0.4	240	0.367	1224.12	170.153363
Site Preparation	Tractors/Loaders/Backhoes	4	8	97	0.37	320	0.408	659.14	91.6199153
Grading	Excavators	1	8	158	0.38	160	0.367	495.93	68.9339265
Grading	Graders	1	8	187	0.41	160	0.367	633.29	88.0273841
Grading	Rubber Tired Dozers	1	8	247	0.4	160	0.367	816.08	113.435575
Grading	Tractors/Loaders/Backhoes	3	8	97	0.37	480	0.408	988.70	137.429873
Building Construction	Cranes	1	7	231	0.29	1610	0.367	5567.93	773.941623
Building Construction	Forklifts	3	8	89	0.2	5520	0.408	5639.11	783.836583
Building Construction	Generator Sets	1	8	84	0.74	1840	0.408	6564.18	912.421012
Building Construction	Tractors/Loaders/Backhoes	3	7	97	0.37	4830	0.408	9948.84	1382.8881
Building Construction	Welders	1	8	46	0.45	1840	0.408	2185.95	303.846766
Paving	Pavers	2	8	130	0.42	320	0.367	901.99	125.376162
Paving	Paving Equipment	2	8	132	0.36	320	0.367	785.03	109.118594
Paving	Rollers	2	8	80	0.38	320	0.408	558.31	77.605055
Architectural Coating	Air Compressors	1	8	78	0.48	160	0.408	343.80	47.788376
Total								37312.39	5186.42

Construction Phases

PhaseNumber	Phase Name	Phase Type	Phase Start Date[1]	Phase End Date[1]	Num Days Week[1]	Total Number of Days[1]
1	Site Preparation	Site Preparation	1/1/2025	1/14/2025	5	10
2	Grading	Grading	1/15/2025	2/11/2025	5	20
3	Building Construction	Building Construc	2/12/2025	12/30/2025	5	230
4	Paving	Paving	12/31/2025	1/27/2026	5	20
5	Architectural Coating	Architectural Coa	1/28/2026	2/24/2026	5	20

Notes

1. Project Specific Values Used
2. BSFC - Brake Specific Fuel Consumption (pounds per horsepower-hour) – If less than 100 Horsepower = 0.408, if greater than 100 Horsepower = 0.367
3. Fuel Used = Load Factor x Horsepower x Total Operational Hours x BSFC / Unit Conversion
4. MBTU calculated for comparison purposes. Assumed 1 gallon of diesel = 0.139 MBTU

Mobile Energy Use (Construction)

Worker Trips

	Daily Worker Trips[1]	Worker Trip Length[2]	VMT/Day	MPG Factor (EMFAC2017)	Gallons of Gas/Day	# of Days	Total Gallons of Gas	MBTU[3]
Site Preparation	18	10.8	194.4	24.93	7.8	10	78.0	9.052505
Grading	15	10.8	162	24.93	6.5	20	130.0	15.08751
Building Construction	108	10.8	1166.4	24.93	46.8	230	10761.0	1249.246
Paving	15	10.8	162	24.93	6.5	20	130.0	
Architectural Coating	22	10.8	237.6	24.93	9.5	20	190.6	22.12835
Total	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**300**	**11289.5**	**1295.514**

Vendor Trips

	Daily Vendor Trips	Vendor Trip Length	VMT/Day	MPG Factor	Gallons of Diesel/Day	# of Days	Total Gallons of Diesel	MBTU
Building Construction	48	7.3	350.4	7.41	47.3	230	10876.11336	1511.78

Fleet Characteristics

	Vehicle Class	Fleet Mix	2024 MPG Factor (EMFAC2017)	Average MPG Factor
Assumed Vehicle Fleet for Workers	LDA	33%	28.46	
	LDT1	33%	23.44	
	LDT2	33%	22.89	24.93
Assumed Vehicle Fleet for Vendor Trips	MHD	50%	8.73	
	HHD	50%	6.09	7.41

Notes

1. Project specific construction values used.
2. CalEEMod Default values used
3. MBTU calculated for comparison purposes. Assumed 1 gallon of gasoline = 0.11609 MBTU

Summary of Energy Use (Construction)

	Off-Road Equipment Fuel (Diesel)		On-Road Vehicle Fuel				Total MBTU
			Diesel		Gasoline		
	Gallons	MMBTU	Gallons	MMBTU	Gallons	MMBTU	
Biogas Plant	37312	5186	10876	1511	11289	1295	7992
Total Construction Energy Use							7992
Average Annual Construction Energy Use							5328

Summary of Energy Use (Operation)

Mobile Fuel Use		
	Gal/Year	**MMBTU**
Fargo Village (Gasoline)	127971	15393
Fargo Village (Diesel)	3116	428
Electricity Use		
	kWh/Year*	**MMBTU**
Fargo Village	1,210,396	4130
Natural Gas Use		
	kBTU/Year	**MMBTU**
Fargo Village	1,552,880	1553
		MMBTU
Total Operational Energy Use		**21504**

*Based on project specific energy usage.

Mobile Energy Use (Construction)

Worker Trips

Gasoline & Energy Use	Daily Worker Trips[1]	Worker Trip Length[2]	VMT/Day	MPG Factor (EMFAC2017)	Gallons of Gas/Day	# of Days	Total Gallons of Gas	MBTU[3]
Demolition	15	10.8	162	24.93	6.5	1	6.5	0.754375451
Site Preparation	18	10.8	194.4	24.93	7.8	180	1403.6	162.9450975
Grading	20	10.8	216	24.93	8.7	115	996.4	115.6709025
Building Construction	1,100	10.8	11880	24.93	476.5	4650	2215884.5	257242.0289
Paving	15	10.8	162	24.93	6.5	330	2144.4	248.9438989
Architectural Coating	220	10.8	2376	24.93	95.3	330	31451.3	3651.177184
Total	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**5606**	**2251886.6**	**261421.5203**

Vendor Trips

Diesel & Energy Use	Daily Vendor Trips	Vendor Trip Length	VMT/Day	MPG Factor	Gallons of Diesel/Day	# of Days	Total Gallons of Diesel	MBTU
Building Construction	328	7.3	2394.4	7.41	323.1	4650	1502558.704	208855.6599

Fleet Characteristics

	Vehicle Class	Fleet Mix	2024 MPG Factor (EMFAC2017)	Average MPG Factor
Assumed Vehicle Fleet for Workers	LDA	33%	28.46	24.93
	LDT1	33%	23.44	
	LDT2	33%	22.89	
Assumed Vehicle Fleet for Vendor Trips	MHD	50%	8.73	7.41
	HHD	50%	6.09	

Hauling Trips

Gasoline & Energy Use (Hauling Only)	Daily Hauling Trips	Hauling Trip Length	VMT/Day	MPG Factor (EMFAC2017)	Gallons of Diesel/Day	# of Days	Total Gallons of Diesel	MBTU[3]
Demolition	3	20	60	7.41	8.1	1	8.1	0.94
Total	N/A	N/A	N/A	N/A	N/A	1	3	0.94

Notes

1. Project specific construction values used.
2. CalEEMod Default values used
3. MBTU calculated for comparison purposes. Assumed 1 gallon of gasoline = 0.11609 MBTU

Construction Equipment Energy Use

Phase Name	Off Road Equipment Type	Off Road Equipment Unit Amount[1]	Usage Hours Per Day[1]	Horse Power (lbs/sec)[1]	Load Factor[1]	Total Operational Hours	BSFC[2]	Fuel Used (gallons)[3]	MBTU[4]
Demolition	Concrete/Industrial Saws	1	8	81	0.73	8	0.408	27.15	3.77367344
Demolition	Excavators	3	8	158	0.38	24	0.367	74.39	10.340089
Demolition	Rubber Tired Dozers	2	8	247	0.4	16	0.367	81.61	11.3435575
Site Preparation	Rubber Tired Dozers	3	8	247	0.4	4320	0.367	22034.25	3062.76053
Site Preparation	Tractors/Loaders/Backhoes	4	8	97	0.37	5760	0.408	11864.45	1649.15847
Grading	Excavators	2	8	158	0.38	7440	0.367	23060.63	3205.42758
Grading	Graders	1	8	187	0.41	3720	0.408	16368.92	2275.28002
Grading	Rubber Tired Dozers	1	8	247	0.4	3720	0.408	21093.64	2932.01598
Grading	Scrapers	2	8	367	0.48	7440	0.367	67660.90	9404.86547
Grading	Tractors/Loaders/Backhoes	2	8	97	0.37	7440	0.367	13784.91	1916.10253
Building Construction	Cranes	1	7	231	0.29	32550	0.367	112568.93	15647.0806
Building Construction	Forklifts	3	8	89	0.2	111600	0.367	102551.44	14254.6496
Building Construction	Generator Sets	1	8	84	0.74	37200	0.408	132710.59	18446.7726
Building Construction	Tractors/Loaders/Backhoes	3	7	97	0.37	97650	0.367	180926.95	25148.8457
Building Construction	Welders	1	8	46	0.45	37200	0.367	39753.08	5525.67879
Paving	Pavers	2	8	130	0.42	5280	0.408	16545.44	2299.81559
Paving	Paving Equipment	2	8	132	0.36	5280	0.408	14399.98	2001.59775
Paving	Rollers	2	8	80	0.38	5280	0.367	8286.38	1151.80738
Architectural Coating	Air Compressors	1	6	78	0.48	1980	0.367	3827.00	531.953145
Total								787620.64	109479.27

Construction Phases

PhaseNumber	Phase Name	Phase Type	Phase Start Date[1]	Phase End Date[1]	Num Days Week[1]	Total Number of Days[1]
1	Demolition	Demolition	1/1/2025	1/1/2025	5	1
2	Site Preparation	Site Preparation	1/2/2025	9/10/2025	5	180
3	Grading	Grading	9/11/2025	6/23/2027	5	465
4	Building Construction	Building Construc	6/24/2027	4/19/2045	5	4650
5	Paving	Paving	4/20/2045	7/25/2046	5	330
6	Architectural Coating	Architectural Coa	7/26/2046	10/30/2047	5	330

Notes

1. Project Specific Values Used
2. BSFC - Brake Specific Fuel Consumption (pounds per horsepower-hour) – If less than 100 Horsepower = 0.408, if greater than 100 Horsepower = 0.367
3. Fuel Used = Load Factor x Horsepower x Total Operational Hours x BSFC / Unit Conversion
4. MBTU calculated for comparison purposes. Assumed 1 gallon of diesel = 0.139 MBTU

Summary of Energy Use (Construction)

	Off-Road Equipment Fuel (Diesel)		On-Road Vehicle Fuel				Total MBTU
			Diesel		Gasoline		
	Gallons	MMBTU	Gallons	MMBTU	Gallons	MMBTU	
Fargo Village	787620	109479	1502558	208855	2251886	261421	579755
						Total Construction Energy Use	579755
						Average Annual Construction Energy Use	386503

Mobile Energy Use (Operations)

Total Annual VMT from Project (CalEEMod)	9,917,868 (Residential portion only)

Fleet Mix & Fuel Calculations

Vehicle Class	Proportion of Fleet Mix[1]	Annual VMT by Vehicle Class	Proportion of vehicle class using gas or diesel (EMFAC2017)[2]		Annual VMT by Vehicle Class and Fuel Type		Fuel Efficiency (MPG) by Vehicle Class and Fuel Type (EMFAC2017)		Annual Fuel Use from Project (gallons)		MBTU/Year[3]
			Gas	Diesel	Gas	Diesel	Gas	Diesel	Gas	Diesel	
LDA	0.483400000	4794297.4	100%	0%	4784747.13	9550.27	28.46	42.24	168127.6	226.1	19549.4
LDT1	0.236300000	2343592.2	100%	0%	2342635.80	956.41	23.44	24.68	99933.9	38.7	11606.7
LDT2	0.171600000	1701906.1	100%	0%	1696593.57	5312.58	22.89	32.12	74109.7	165.4	8626.4
MDV	0.062500000	619866.8	98%	2%	609890.77	9975.98	18.54	23.57	32891.3	423.3	3877.2
LHD1	0.000900000	8926.1	49%	51%	4402.13	4523.95	9.48	15.74	464.3	287.4	93.8
LHD2	0.001000000	9917.9	27%	73%	2697.55	7220.32	8.48	13.09	318.0	551.7	113.6
MHD	0.007900000	78351.2	18%	82%	14237.50	64113.66	4.74	8.73	3004.0	7341.7	1369.2
HHD	0.023300000	231086.3	0%	100%	60.19	231026.13	3.35	6.09	18.0	37927.0	5273.9
OBUS	0.000000000	0.0	65%	35%	0.00	0.00	4.75	6.90	0.0	0.0	0.0
UBUS	0.004300000	42646.8	76%	24%	32507.55	10139.28	8.41	11.19	3864.7	906.0	574.6
MCY	0.003300000	32729.0	100%	0%	32728.96	0.00	40.30	NA	812.1	0.0	94.3
SBUS	0.001100000	10909.7	37%	63%	4072.25	6837.40	9.78	8.08	416.2	845.9	165.9
MH	0.004400000	43638.6	66%	34%	28774.25	14864.37	4.41	9.41	6524.2	1579.8	977.0
Total	**100.000000%**	**9917868.0**			**9553347.66**	**364520.34**			**390484.2**	**50293.0**	**52322.0**

Usage Type	MBTU[4]
Electricity Use	
Natural Gas Use	

Fleet Characteristics

Source: EMFAC2017 (v1.0.3) Emissions Inventory
Region Type: County
Region: Kings
Calendar Year: 2024
Season: Annual
Vehicle Classification: EMFAC2007 Categories
Units: miles/year for VMT, trips/year for Trips, tons/year for Emissions, 1000 gallons/year for Fuel Consumption

GASOLINE

Region	Calendar Year	Vehicle Category	Model Year	Speed	Fuel	Population	VMT (Annual)	Trips (Annual)	Fuel Consumption (1000 gal/year)	Annual Fuel Consumption (gallons)	MPG
Kings	2024	HHDT	Aggregate	Aggregate	Gasoline	2	69595	5642	20.78	20779	3.35
Kings	2024	LDA	Aggregate	Aggregate	Gasoline	62891	943007371	325924543	33135.62	33135624	28.46
Kings	2024	LDT1	Aggregate	Aggregate	Gasoline	5722	69123876	31894273	2948.74	2948739	23.44
Kings	2024	LDT2	Aggregate	Aggregate	Gasoline	28214	404757831	105810710	17680.41	17680411	22.89
Kings	2024	LHDT1	Aggregate	Aggregate	Gasoline	2719	36105174	26803634	3808.07	3808070	9.48
Kings	2024	LHDT2	Aggregate	Aggregate	Gasoline	342	4509950	4406586	531.73	531729	8.48
Kings	2024	MCY	Aggregate	Aggregate	Gasoline	3376	7016638	6611059	174.10	174104	40.30
Kings	2024	MDV	Aggregate	Aggregate	Gasoline	27960	365147479	106279450	19692.36	19692364	18.54
Kings	2024	MH	Aggregate	Aggregate	Gasoline	376	1225178	30111	277.79	277794	4.41
Kings	2024	MHDT	Aggregate	Aggregate	Gasoline	180	3968196	2764314	837.27	837267	4.74
Kings	2024	OBUS	Aggregate	Aggregate	Gasoline	79	1536311	922982	323.76	323761	4.75
Kings	2024	SBUS	Aggregate	Aggregate	Gasoline	27	630591	109782	64.45	64451	9.78
Tulare	2024	UBUS	Aggregate	Aggregate	Gasoline	12	179850	99041	21.38	21382	8.41

DIESEL

Region	Calendar Year	Vehicle Category	Model Year	Speed	Fuel	Population	VMT (annual)	Trips (annual)	Fuel Consumption (1000 gal/year)	Annual Fuel Consumption (gallons)	MPG
Kings	2024	HHDT	Aggregate	Aggregate	Diesel	4739	267105141	31416840	43849.95	43849950	6.09
Kings	2024	LDA	Aggregate	Aggregate	Diesel	171	1882225	258942	44.56	44562	42.24
Kings	2024	LDT1	Aggregate	Aggregate	Diesel	5	28221	4875	1.14	1143	24.68
Kings	2024	LDT2	Aggregate	Aggregate	Diesel	83	1267427	144618	39.45	39453	32.12
Kings	2024	LHDT1	Aggregate	Aggregate	Diesel	2824	37104296	12964762	2356.84	2356840	15.74
Kings	2024	LHDT2	Aggregate	Aggregate	Diesel	872	12071416	4005740	922.40	922395	13.09
Kings	2024	MDV	Aggregate	Aggregate	Diesel	427	5972717	720591	253.42	253418	23.57
Kings	2024	MH	Aggregate	Aggregate	Diesel	198	632909	7237	67.27	67268	9.41
Kings	2024	MHDT	Aggregate	Aggregate	Diesel	1032	17869402	4406023	2046.25	2046248	8.73
Kings	2024	OBUS	Aggregate	Aggregate	Diesel	31	813109	137029	117.92	117916	6.90
Kings	2024	SBUS	Aggregate	Aggregate	Diesel	136	1058776	719558	130.99	130986	8.08
Kings	2024	UBUS	Aggregate	Aggregate	Diesel	2	56096	3518	5.01	5012	11.19

Notes

1. Used project-specific vehicle fleet mix
2. Proportion of diesel vs. gasoline vehicles calculated based on total annual VMT for each vehicle class
3. MBTU Calculated for comparison purposes. Assumed 1 gallon of gasoline = 0.116090 MBTU and 1 gallon of diesel = 0.139 MBTU
4. MBTU Calculated for comparison purposes. Assumed 1 kWh = 0.0034095 MBTU and 1 kBTU = 0.001 MBTU

Summary of Energy Use (Operation)

Mobile Fuel Use		
	Gal/Year	**MMBTU**
Fargo Village (Gasoline)	390484	46970
Fargo Village (Diesel)	50293	6909
Electricity Use		
	kWh/Year*	**MMBTU**
Fargo Village	7,945,212	27109
Natural Gas Use		
	kBTU/Year	**MMBTU**
Fargo Village	24829980	24830
		MMBTU
Total Operational Energy Use		**105818**

*Based on project specific energy usage.

Appendix E1

Traffic Study

TRAFFIC STUDY

SINGH DEVELOPMENT PROJECT

HANFORD, KINGS COUNTY, CALIFORNIA

This Traffic Study has been prepared under the supervision of
Ambarish Mukherjee, P.E

LSA

May 2023

TRAFFIC STUDY

SINGH DEVELOPMENT PROJECT

HANFORD, KINGS COUNTY, CALIFORNIA

Prepared for:

4Creeks, Inc.
324 S. Santa Fe Street, Suite A
Visalia, California 93292

Prepared by:

LSA
1500 Iowa Avenue, Suite 200
Riverside, California 92507
951.781.9310

Project No. FOC2203

LSA

May 2023

TABLE OF CONTENTS

TABLE OF CONTENTS i
LIST OF ABBREVIATIONS AND ACRONYMS v
1.0 INTRODUCTION 1-1
1.1 Project Description 1-1
1.2 Study Area 1-2
1.2.1 Study Intersections 1-2
1.3 List of Chapter 1.0 Figures 1-3
2.0 ANALYSIS METHODOLOGY FOR LEVEL OF SERVICE ANALYSIS 2-1
2.1 Level of Service Definitions 2-1
2.2 Level of Service Procedures and Standards 2-1
2.3 List of Chapter 2.0 Tables 2-1
3.0 CIRCULATION NETWORK SETTING 3-1
3.1 Existing Circulation Network 3-1
3.2 Transit, Bicycles, and Pedestrians 3-2
3.2.1 Transit Network 3-2
3.2.2 Bicycle Network 3-3
3.2.3 Pedestrian Network 3-3
3.3 List of Chapter 3.0 Figures 3-3
4.0 TRAFFIC VOLUMES FOR WITHOUT PROJECT SCENARIOS 4-1
4.1 Existing Traffic Volumes 4-1
4.2 Near-Term Without Project Traffic Volumes 4-1
4.3 Cumulative Year (2042) Without Project Traffic Volumes 4-2
4.4 List of Chapter 4.0 Figures and Tables 4-2
5.0 PROJECT TRAFFIC 5-1
5.1 Project Trip Generation 5-1
5.2 Project Trip Distribution and Assignment 5-1
5.3 List of Chapter 5.0 Figures and Tables 5-2
6.0 TRAFFIC VOLUMES FOR PLUS PROJECT SCENARIOS 6-1
6.1 List of Chapter 6.0 Figures 6-1
7.0 INTERSECTION LEVELS OF SERVICE 7-1
7.1 Existing Levels of Service 7-1
7.2 Existing Plus Project Levels of Service 7-1
7.3 Near-Term Plus Project Levels of Service 7-1
7.4 Cumulative Year (2042) Plus Project Levels of Service 7-2
7.5 List of Chapter 7.0 Tables 7-2
8.0 SIGNAL WARRANT ANALYSIS 8-1
8.1 12th Avenue/Flint Avenue 8-1
8.2 Glacier Way/Fargo Avenue 8-1
8.3 11th Avenue/Flint Avenue 8-1

8.4 12th Avenue/Project Driveway 1 8-1
8.5 Project Driveway 4/Fargo Avenue 8-1
8.6 List of Chapter 8.0 Figures 8-2
9.0 CIRCULATION IMPROVEMENTS AND FUNDING SOURCES 9-1
9.1 Recommended Improvements 9-1
9.2 Funding Sources and Mechanisms 9-1
9.2.1 City of Hanford Development Impact Fee 9-1
9.2.2 Project Fair Share 9-1
9.3 List of Chapter 9.0 Figures and Tables 9-2
10.0 INTERSECTION QUEUING ANALYSIS 10-1
10.1 List of Chapter 10.0 Tables 10-1
11.0 SITE DISTANCE ANALYSIS 11-1
11.1 Sight Distance Analysis 11-1
11.2 List of Chapter 11.0 Figures 11-2
12.0 SUMMARY AND CONCLUSIONS 12-1
12.1 Existing Conditions Summary 12-1
12.2 Near-term Conditions Summary 12-1
12.3 Cumulative Year (2042) Conditions Summary 12-1
12.4 Improvements Summary 12-1
12.5 Queueing Analysis Summary 12-1
12.6 Sight Distance Analysis Summary 12-1

FIGURES

Figure 1-1: Regional and Project Location 1-4
Figure 1-2: Conceptual Land Use Plan 1-5
Figure 1-3: Study Area Intersections 1-6
Figure 3-1: City of Hanford Roadway Classification 3-4
Figure 3-2: Existing Study Intersection Geometrics and Traffic Control 3-5
Figure 3-3: Study Intersection Geometrics and Traffic Control under 'Plus Project' Scenarios 3-6
Figure 3-4: City of Hanford Existing and Proposed Bicycle Facilities 3-7
Figure 3-5: City of Hanford Pedestrian Network 3-8
Figure 4-1: Existing Peak-Hour Traffic Volumes 4-3
Figure 4-2: Cumulative Project Locations 4-4
Figure 4-3: Cumulative Project Trip Assignment 4-5
Figure 4-4: Near-Term without Project Peak-Hour Traffic Volumes 4-6
Figure 4-5: Cumulative Year (2042) without Project Peak-Hour Traffic Volumes 4-7
Figure 5-1: Project Trip Distribution – Residential 5-3
Figure 5-2: Project Trip Distribution – Retail/Commercial 5-4
Figure 5-3: Project Trip Distribution – Elementary School 5-5
Figure 5-4: Project Trip Assignment – Residential 5-6
Figure 5-5: Project Trip Assignment – Retail/Commercial 5-7
Figure 5-6: Project Trip Assignment – Elementary School 5-8
Figure 5-7: Total Project Net Trip Assignment 5-9

Figure 6-1: Existing Plus Project Peak-Hour Traffic Volumes 6-2
Figure 6-2: Near-Term Plus Project Peak-Hour Traffic Volumes 6-3
Figure 6-3: Cumulative Year (2042) Plus Project Peak-Hour Traffic Volumes 6-4
Figure 8-1: Warrant 3: Peak Hour – 12th Avenue/Flint Avenue – Existing Conditions 8-3
Figure 8-2: Warrant 3: Peak Hour – 12th Avenue/Flint Avenue – Near-Term Plus Project Conditions 8-4
Figure 8-3: Warrant 3: Peak Hour – 12th Avenue/Flint Avenue – Cumulative Year (2042) Plus Project Conditions 8-5
Figure 8-4: Warrant 3: Peak Hour – Glacier Way/Fargo Avenue – Existing Conditions 8-6
Figure 8-5: Warrant 3: Peak Hour – Glacier Way/Fargo Avenue – Near-Term Plus Project Conditions 8-7
Figure 8-6: Warrant 3: Peak Hour – Glacier Way/Fargo Avenue – Cumulative Year (2042) Plus Project Conditions 8-8
Figure 8-7: Warrant 3: Peak Hour – 11th Avenue/Flint Avenue – Existing Conditions 8-9
Figure 8-8: Warrant 3: Peak Hour – 11th Avenue/Flint Avenue – Near-Term Plus Project Conditions 8-10
Figure 8-9: Warrant 3: Peak Hour – 11th Avenue/Flint Avenue – Cumulative Year (2042) Plus Project Conditions 8-11
Figure 8-10: Warrant 3: Peak Hour – 12th Avenue/Project Driveway 1 – Existing Conditions 8-12
Figure 8-11: Warrant 3: Peak Hour – 12th Avenue/Project Driveway 1 – Near-Term Plus Project Conditions 8-13
Figure 8-12: Warrant 3: Peak Hour – 12th Avenue/Project Driveway 1 – Cumulative Year (2042) Plus Project Conditions 8-14
Figure 8-13: Warrant 3: Peak Hour – Project Driveway 4/Fargo Avenue – Existing Conditions 8-15
Figure 8-14: Warrant 3: Peak Hour – Project Driveway 4/Fargo Avenue – Near-Term Plus Project Conditions 8-16
Figure 8-15: Warrant 3: Peak Hour – Project Driveway 4/Fargo Avenue – Cumulative Year (2042) Plus Project Conditions 8-17
Figure 9-1: Existing and Near-Term Plus Project with Improvements Study Intersection Geometrics and Traffic Control 9-3
Figure 9-2: Cumulative Year (2042) Plus Project with Improvements Study Intersection Geometrics and Traffic Control 9-4
Figure 9-3: Conceptual Striping Plan at Project Frontage – Part 1 9-5
Figure 9-4: Conceptual Striping Plan at Project Frontage – Part 2 9-6
Figure 9-5: Conceptual Striping Plan at Project Frontage – Part 3 9-7
Figure 9-6: Conceptual Striping Plan at Project Frontage – Part 4 9-8
Figure 9-7: Conceptual Striping Plan at Project Frontage – Part 5 9-9
Figure 11-1: Sight Distance at Project Driveway 1 11-3
Figure 11-2: Sight Distance at Project Driveway 4 11-4
Figure 11-3: Sight Distance at Project Driveway 6 11-5

TABLES

Table 2-A: Intersection Level of Service Definitions 2-2
Table 2-B: Level of Service Criteria for Unsignalized and Signalized Intersections 2-2
Table 4-A: Cumulative Projects Trip Generation 4-8

Table 5-A: Project Trip Generation 5-10
Table 5-A: Project Trip Generation 5-11
Table 5-A: Project Trip Generation 5-12
Table 7-A: Existing Intersection Levels of Service 7-3
Table 7-B: Near-Term Intersection Levels of Service 7-4
Table 7-C: Cumulative Year (2042) Intersection Levels of Service 7-5
Table 9-A: Recommended Improvements for Intersections 9-10
Table 9-B: Existing Plus Project with Recommended Improvements Intersection Levels of Service 9-11
Table 9-C: Near-Term (2026) Plus Project with Recommended Improvements Intersection Levels of Service 9-12
Table 9-D: Cumulative Year (2042) Plus Project with Recommended Improvements Intersection Levels of Service 9-13
Table 9-E: Intersection Improvement Funding Mechanism and Fair Share 9-14
Table 10-A: Existing Queuing Analysis 10-2
Table 10-B: Near-Term Queuing Analysis 10-4
Table 10-C: Cumulative Year (2042) Queuing Analysis 10-7
Table 10-D: Existing Plus Project with Improvements Queuing Analysis 10-9
Table 10-E: Near-Term Plus Project with Improvements Queuing Analysis 10-11
Table 10-F: Cumulative (2042) Plus Project with Improvements Queuing Analysis 10-13

APPENDICES

A: SCOPING AGREEMENT
B: TRAFFIC COUNT AND SIGNAL TIMING SHEETS
C: VOLUME DEVELOPMENT WORKSHEETS
D: LEVEL OF SERVICE WORKSHEETS
E: QUEUING ANALYSIS WORKSHEETS

LIST OF ABBREVIATIONS AND ACRONYMS

ADA	Americans with Disabilities Act
ATP	Active Transportation Plan
Caltrans	California Department of Transportation
CEQA	California Environmental Quality Act
City	City of Hanford
FTIP	Federal Transportation Improvement Program
HCM	*Highway Capacity Manual*
HCM 6	*Highway Capacity Manual 6th Edition*
HCS	Highway Capacity Software
HDM	*Highway Design Manual*
HQTA	High-Quality Transit Area
ITE	Institute of Transportation Engineers
LOS	level of service
mph	miles per hour
NCHRP	National Cooperative Highway Research Program
project	Singh Development Project
RTP	Regional Transportation Plan
SR-198	State Route 198
SR-43	State Route 43
STIP	State Transportation Improvement Program
TAZ	traffic analysis zone
TS	Traffic Study
TWLTL	two-way-left-turn lane
VMT	vehicle miles traveled

1.0 INTRODUCTION

This Traffic Study (TS) has been prepared to assess the potential circulation impacts associated with the proposed Singh Development Project (project) in Hanford, Kings County, California. The approximately 304-acre project site is located at the southeast corner of the intersection of 12th Avenue and Flint Avenue. The project site is currently vacant. Figure 1-1 illustrates the regional and project location. (Figures and tables are provided at the end of each chapter.)

The City does not have its own Levels of Service (LOS) based Traffic Study guidelines. However, this report has been prepared based on the *Policy T29* of the City of Hanford *2035 General Plan Policy Document* (General Plan), dated April 2017, as well as the requirements established by the County of Kings and the California Department of Transportation (Caltrans).

While LOS analysis is no longer a determinant of California Environmental Quality Act (CEQA) impacts, consistency with the City's General Plan goals and policies is still required. Therefore, this TS includes a LOS and delay based operational efficiency evaluation. The scope of work for this LOS study, including trip generation, trip distribution, study area, and analysis methodologies, has been approved by City staff via the Scoping Agreement process. A copy of the Scoping Agreement is included as Appendix A.

1.1 PROJECT DESCRIPTION

The proposed project will be a mixed-use development including 697 single-family homes, 214 apartments, 235 townhomes, one elementary school with 600 students, 12,500 square feet (sf) of retail, a 11,000 sf sit-down restaurant, a 10,500 sf food court with outdoor seating, a 6,000 sf restaurant with drive-through window, and a gasoline station with 12 vehicle fueling positions and a 5,000 sf convenience store. Additionally, the project will include passive use/open space areas including playgrounds for children and allowing families to gather and socialize. For purposes of this TS, the entire buildout condition of this project has been considered under all 'plus project' conditions.

Figure 1-2 illustrates the conceptual land use plan for the project. As illustrated in Figure 1-2, access to the project will be provided by seven driveways – two on 12th Avenue, two on Flint Avenue, and three on Fargo Avenue. Among these driveways, following driveways would operate as full-access driveways:

- 12th Avenue/Project Driveway 1;
- Project Driveway 4/Fargo Avenue; and,
- Project Driveway 6/Flint Avenue.

Following are the remaining four driveway that would operate as right-in/right-out (RIRO) only driveways:

- 12th Avenue/Project Driveway 2;
- Project Driveway 3/Fargo Avenue;
- Project Driveway 5/Flint Avenue; and,
- Project Driveway 7/Fargo Avenue.

Additionally, following are improvements to be implemented by the project along the project frontage:

- Adding a second eastbound lane along the project frontage on Flint Avenue;
- Adding a second northbound lane along the project frontage on 12th Avenue;
- Adding a second westbound lane along the project frontage on Fargo Avenue;
- Ingress and egress turn lanes along the project driveways along with medians; and
- Sidewalks and bike lanes within and along the project frontage.

1.2 STUDY AREA

This study examines traffic operations in the vicinity of the proposed project under the following four scenarios:

- Existing Conditions
- Existing Plus Project Conditions
- Near-Term Plus Project Conditions
- Cumulative Year Plus Project Conditions

Traffic conditions at study intersections were examined for weekday a.m. and p.m. peak-hour conditions. The a.m. peak hour is defined as the one hour of highest traffic volumes occurring between 7:00 a.m. and 9:00 a.m. The p.m. peak hour is the one hour of highest traffic volumes occurring between 4:00 p.m. and 6:00 p.m.

1.2.1 Study Intersections

As approved in the Scoping Agreement (Appendix A), following is a list of intersections analyzed in this TS:

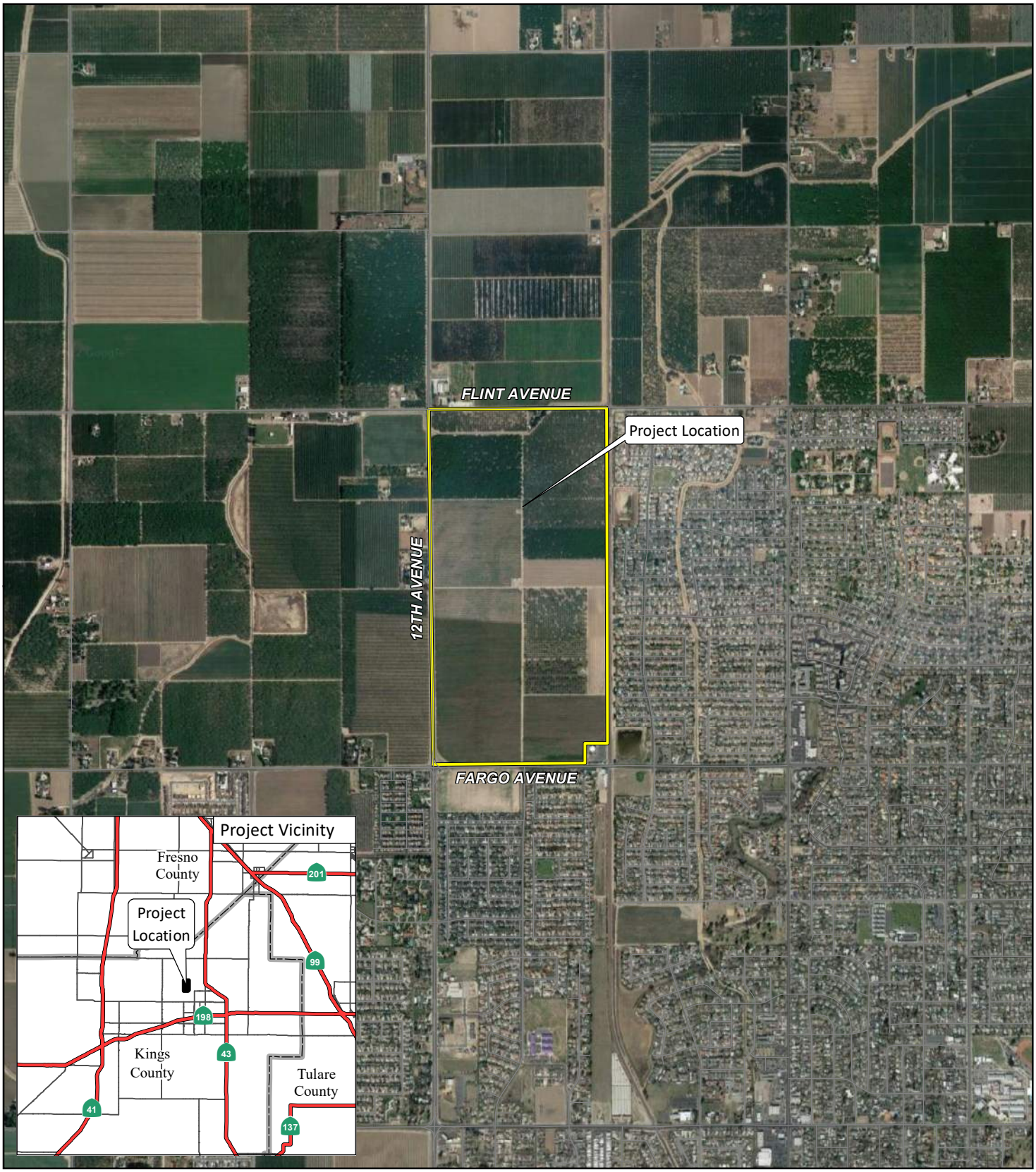
1. 13th Avenue/Flint Avenue (Kings County)
2. 13th Avenue/Fargo Avenue (Kings County)
3. 12th Avenue/Flint Avenue (Hanford/Kings County)
4. 12th Avenue/Fargo Avenue (Hanford/Kings County)
5. 12th Avenue/Grangeville Boulevard (Hanford)
6. 12th Avenue/Greenfield Avenue (Hanford)
7. 12th Avenue/Liberty Street – Kings County Drive (Hanford)
8. 12th Avenue/Lacey Boulevard (Hanford)
9. 12th Avenue/Centennial Drive -Mall Drive (Hanford)
10. 12th Avenue/SR-198 WB Ramps (Caltrans)
11. 12th Avenue/SR-198 EB Ramps (Caltrans)
12. Fitzgerald Lane/Fargo Avenue (Hanford/Kings County)
13. Glacier Way/Fargo Avenue (Hanford)
14. 11th Avenue/Flint Avenue (Hanford/Kings County)
15. 11th Avenue/Fargo Avenue (Hanford)
16. SR-43/Flint Avenue (Caltrans)

17. 12th Avenue/Project Driveway 1 (Hanford/Kings County)
18. 12th Avenue/Project Driveway 2 (Hanford/Kings County)
19. Project Driveway 3/Fargo Avenue (Hanford/Kings County)
20. Project Driveway 4/Fargo Avenue (Hanford/Kings County)
21. Project Driveway 5/Flint Avenue (Hanford/Kings County)
22. Project Driveway 6/Flint Avenue (Hanford/Kings County)
23. Project Driveway 7/Fargo Avenue (Hanford/Kings County)

Figure 1-3 illustrates the study area intersections.

1.3 LIST OF CHAPTER 1.0 FIGURES

- Figure 1-1: Regional and Project Location
- Figure 1-2: Conceptual Land Use Plan
- Figure 1-3: Study Area Intersections



LSA

FIGURE 1-1

N

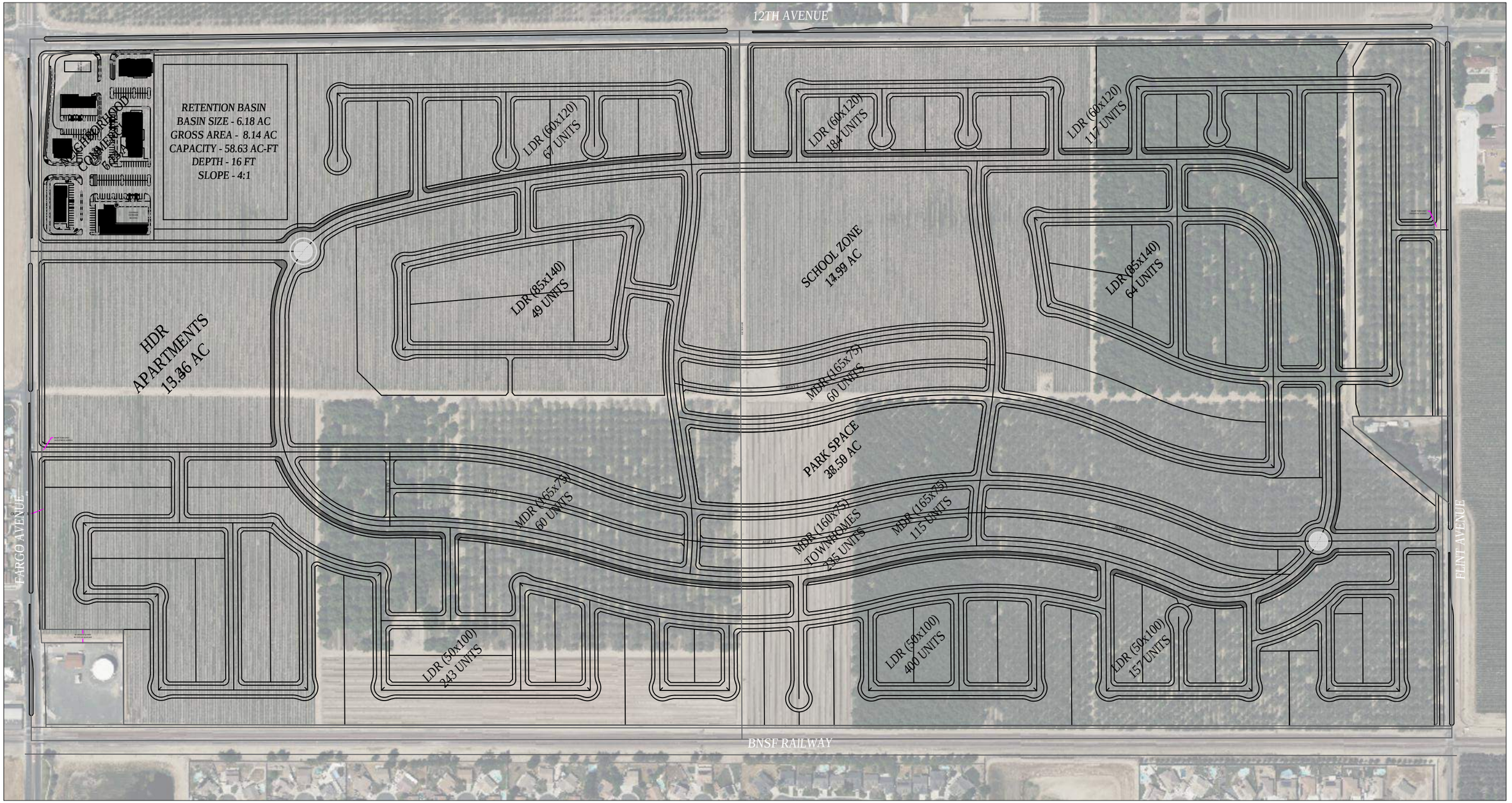
0 1000 2000
FEET

SOURCE: ESRI Streetmap, 2013; Google Earth, 2018.

P:\FOC2203\Traffic\GIS\Reports\fig1_Reg_ProjLoc.mxd (5/8/2023)

Singh Development Project
Traffic Study

Regional and Project Location



LSA

FIGURE 1-2

N

0 160 320

FEET

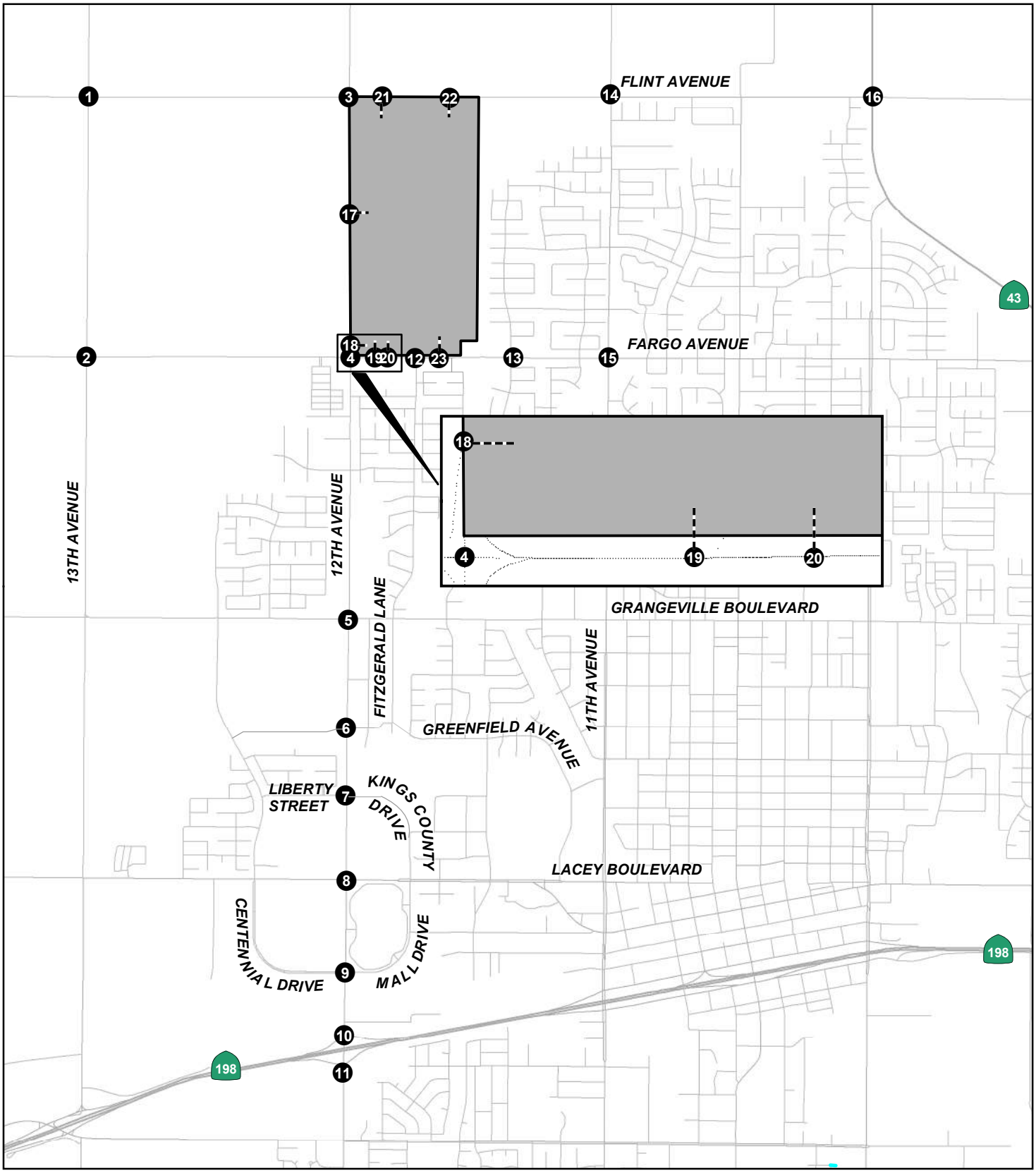
SOURCE: 4Creeks, May 2023

P:\FOC2203\Traffic\Site Plan\21413_TSM_05.03.23\SitePlan.dwg (5/8/2023)

Singh Development Project

Traffic Study

Conceptual Land Use Plan



LSA

LEGEND

Project Location

Study Area Intersection

Project Driveway

0 1375 2750

FEET

SOURCE: ESRI Streetmap, 2013.

P:\FOC2203\Traffic\GIS\Reports\fig3_Intersections.mxd (5/8/2023)

FIGURE 1-3

Singh Development Project
Traffic Study

Study Area Intersections

2.0 ANALYSIS METHODOLOGY FOR LEVEL OF SERVICE ANALYSIS

2.1 LEVEL OF SERVICE DEFINITIONS

A complete description of the meaning of LOS can be found in Transportation Research Board Special Report 209, *Highway Capacity Manual* (HCM). The HCM establishes LOS A through F for intersections. A description of LOS for signalized and unsignalized intersections is summarized in Table 2-A.

Table 2-B shows the LOS criteria for unsignalized and signalized intersections. For all study area intersections, the *Highway Capacity Manual 6th Edition* (HCM 6) analysis methodologies were used to determine intersection LOS. Intersection LOS was calculated using the Synchro 11 software, which uses the HCM 6 methodologies.

2.2 LEVEL OF SERVICE PROCEDURES AND STANDARDS

Study intersections analyzed in this report are completely under the jurisdiction of the City of Hanford or lie at the City boundary which is shared with Kings County. However, intersections located at freeway on-ramps and off-ramps are under the jurisdiction of Caltrans.

As previously mentioned, the City does not have its own LOS Study Guidelines. However, the City of Hanford *2035 General Plan Policy Document*, dated April 2017 in its Policy T29 states the following:

"Maintain a peak hour Level of Service E on streets and intersections within the area bounded by Highway 198, 10th Avenue, 11th Avenue, and Florinda Avenue, inclusive of these streets. Maintain a peak hour Level of Service D on all other streets and intersections with the Planned Growth Boundary."

None of the study intersections are located along Highway 198, 10th Avenue, 11th Avenue and Florinda Avenue. Therefore, for the study area, LOS D have been considered as the LOS standard. As such, improvements should be recommended for intersections that are currently operating or forecast to operate at a deficient LOS for consistency with the City's General Plan goals and policies regarding LOS standard. This criterion is applicable for all analysis scenarios including existing, near term, and long-term conditions.

Caltrans considers an acceptable LOS to be between LOS C and D at all intersections under its jurisdiction (delay of 45 seconds at signalized intersections). Caltrans does not have any operational deficiency criteria for study intersections. Therefore, an operational deficiency occurs when the project causes an unsatisfactory condition (deterioration from LOS A through D to E or F) for intersections or when the project contributes to an existing or forecast deficiency. The project needs to identify improvements to improve the intersection LOS to an acceptable level.

2.3 LIST OF CHAPTER 2.0 TABLES

- Table 2-A: Intersection Level of Service Definitions
- Table 2-B: Level of Service Criteria for Unsignalized and Signalized Intersections

Table 2-A: Intersection Level of Service Definitions

LOS	Description
A	Traffic operations with a control delay of 10 seconds per vehicle or less and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is low and either progression is exceptionally favorable or the cycle length is very short. If LOS A is the result of favorable progression, most vehicles arrive during the green indication and travel through the intersection without stopping.
B	Traffic operations with control delay between 10 seconds per vehicle and 20 seconds per vehicle and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is low and either progression is highly favorable or the cycle length is short. More vehicles stop than with LOS A.
C	Traffic operations with control delay between 20 and 35 seconds per vehicle and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when progression is favorable or the cycle length is moderate. Individual cycle failures (i.e., one or more queued vehicles are not able to depart as a result of the insufficient capacity during the cycle) may begin to appear at this level. The number of vehicles stopping is significant, although many vehicles still pass through the intersection without stopping.
D	Traffic operations with control delay between 35 and 55 seconds per vehicle and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is high and either progression is ineffective or the cycle length is long. Many vehicles stop and individual cycle failures are noticeable.
E	Traffic operations with control delay between 55 and 80 seconds per vehicle and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when volume-to-capacity ratio is high, progression is unfavorable, and the cycle length is long. Individual cycle failures are frequent.
F	Traffic operations with control delay exceeding 80 seconds per vehicle or a volume-to-capacity ratio greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is very high, progression is very poor, and the cycle length is long. Most cycles fail to clear the queue.

Source: Highway Capacity Manual (6th Edition).
LOS = level of service

Table 2-B: Level of Service Criteria for Unsignalized and Signalized Intersections

Level of Service	Unsignalized Intersection Average Delay per Vehicle (sec)	Signalized Intersection Average Delay per Vehicle (sec)
A	$\leq$ 10	$\leq$ 10
B	> 10 and $\leq$ 15	> 10 and $\leq$ 20
C	> 15 and $\leq$ 25	> 20 and $\leq$ 35
D	> 25 and $\leq$ 35	> 35 and $\leq$ 55
E	> 35 and $\leq$ 50	> 55 and $\leq$ 80
F	> 50	> 80

Source: Highway Capacity Manual (6th Edition).
sec = seconds

3.0 CIRCULATION NETWORK SETTING

3.1 EXISTING CIRCULATION NETWORK

The project study area includes the following major roadways as classified based on the roadway classification provided in the Circulation Element of the City's General Plan. Figure 3-1 summarizes the classifications of major roadways within the study area. Following is a brief description of these roadways:

- **13th Avenue:** 13th Avenue is designated as a Major Arterial in the City's General Plan. Between Flint Avenue and Fargo Avenue, 13th Avenue is a two-lane, undivided road. There are no bicycle facilities along both directions of this segment. There is also no provision for on-street parking.

- **12th Avenue:** 12th Avenue is designated as an Arterial in the City's General Plan. Between Flint Avenue and Fargo Avenue, 12th Avenue is a two-lane undivided road. There are no bicycle facilities along both directions of this segment. There is also no provision for on-street parking. Between Fargo Avenue and Lacey Boulevard, 12th Avenue is a four-lane divided road with a raised median. There are no bicycle facilities along both directions of this segment. There is also no provision for on-street parking. Between Lacey Boulevard and the SR-198 Eastbound Ramps, 12th Avenue is a six-lane divided road with a raised median. There are no bicycle facilities along both directions of this segment. There is also no provision for on-street parking. After the SR-198 Eastbound Ramps, 12th Avenue is a four-lane divided road with a raised median. There are no bicycle facilities and on-street parking along both directions.

- **Glacier Way:** Glacier Way is designated as a Collector in the City's General Plan. Within the study area, Glacier Way is a two-lane, undivided road. There are no bicycle facilities along both directions of this segment. There is also no provision for on-street parking.

- **11th Avenue:** 11th Avenue is designated as an Arterial in the City's General Plan. 11th Avenue is a two-lane undivided road. There is also no provision for on-street parking. Between Flint Avenue and Furlong Drive, there is a bicycle lane only along the southbound direction of this segment.

- **Flint Avenue:** Flint Avenue is designated as a Major Arterial in the City's General Plan. Between 13th Avenue and 11th Avenue, Flint Avenue is a two-lane, undivided road. Between 11th Avenue and SR-43, Flint Avenue is a two-lane, divided road. There are no bicycle facilities along both directions of these segments. There is also no provision for on-street parking.

- **Fargo Avenue:** Fargo Avenue is designated as an Arterial in the City's General Plan. Between 13th Avenue and 12th Avenue, Flint Avenue is a two-lane, undivided road. Between 12th Avenue and Glacier Way, Flint Avenue is a two-lane, divided road. Between Glacier Way and 11th Avenue, Flint Avenue is a two-lane, divided road with TWLTL median. There are no bicycle facilities along both directions of these segments. There is also no provision for on-street parking.

- **Grangeville Boulevard:** Grangeville Boulevard is designated as an Arterial in the City's General Plan. Grangeville Boulevard on the west is a three-lane divided road with TWLTL median. There

are no bicycle facilities along both directions of this segment. There is also no provision for on-street parking. Grangeville Boulevard on the east is a four-lane divided road with TWLTL median. There are no bicycle facilities along both directions of this segment. There is also no provision for on-street parking.

- **Greenfield Avenue:** Greenfield Avenue is designated as a Collector in the City's General Plan. Grangeville Boulevard on the west is a two-lane divided road. There are bicycle facilities along both directions of this segment. There is provision for on-street parking. Grangeville Boulevard on the east is a two-lane divided road with TWLTL median. There are bicycle facilities along both directions of this segment. There is also provision for on-street parking.

- **Liberty Street:** Liberty Street is designated as a Collector in the City's General Plan. Liberty Street is a two-lane divided road. There are no bicycle facilities along both directions of this segment. There is also no provision for on-street parking.

- **Kings County Drive:** Kings County Drive is designated as a Collector in the City's General Plan. Kings County Drive is a two-lane divided road with TWLTL median. There are no bicycle facilities along both directions of this segment. There is also no provision for on-street parking.

- **Lacey Boulevard:** Lacey Boulevard is designated as an Arterial in the City's General Plan. Within the study area, Lacey Boulevard is a four-lane, divided road with a raised median. There are no bicycle facilities along both directions of this segment. There is also no provision for on-street parking.

- **Centennial Drive:** Centennial Drive is designated as a Collector in the City's General Plan. Within the study area, Centennial Drive is a four-lane, divided road with a raised median. There are no bicycle facilities along both directions of this segment. There is also no provision for on-street parking.

- **Mall Drive:** Mall Drive is designated as a Collector in the City's General Plan. Within the study area, Mall Drive is a two-lane, divided road with a TWLTL median. There are no bicycle facilities along both directions of this segment. There is also no provision for on-street parking.

Figure 3-2 illustrates existing study intersection geometrics and traffic control. Figure 3-3 illustrates study intersection geometrics and traffic control under 'plus project' scenarios.

3.2 TRANSIT, BICYCLES, AND PEDESTRIANS

3.2.1 Transit Network

Kings Area Regional Transit (KART) Routes 1, 6, 7, 9, 12, and 14 operate within the study area. Route 1, 7, and 9 operates every 30 minutes from Monday through Friday and every hour on Saturdays. Route 6 operates every 30 minutes from Monday through Saturday. Route 12 is considered an out-of- town route and provides access to Avenal and Route 14 provides access to Laton.

In addition to fixed route services, KART Paratransit is the Hanford paratransit service for disabled City residents. KART Paratransit transit vehicles are all accessible in accordance with the Americans with Disabilities Act (ADA) standards. Uber GoKart provides a rideshare program for City residents.

3.2.2 Bicycle Network

The principal goal of the City of Hanford *Pedestrian and Bicycle Master Plan* (Plan) updated January 2016, is "to provide the means to support bicycling and walking as an alternative mode of transportation for work, daily activities, and recreational trips." The Plan identifies different strategies to improve safety and accessibility for active modes of transportation such as walking and biking. There are three different types of bicycle facilities in the City:

- Class II (Bike Lanes)
- Class II (Bike Routes)
- Class III (Bike Routes with Stripes)

One of the long-term visions of the City includes upgrading existing bicycle routes and providing connections between trip generators and trip attractors or destinations.

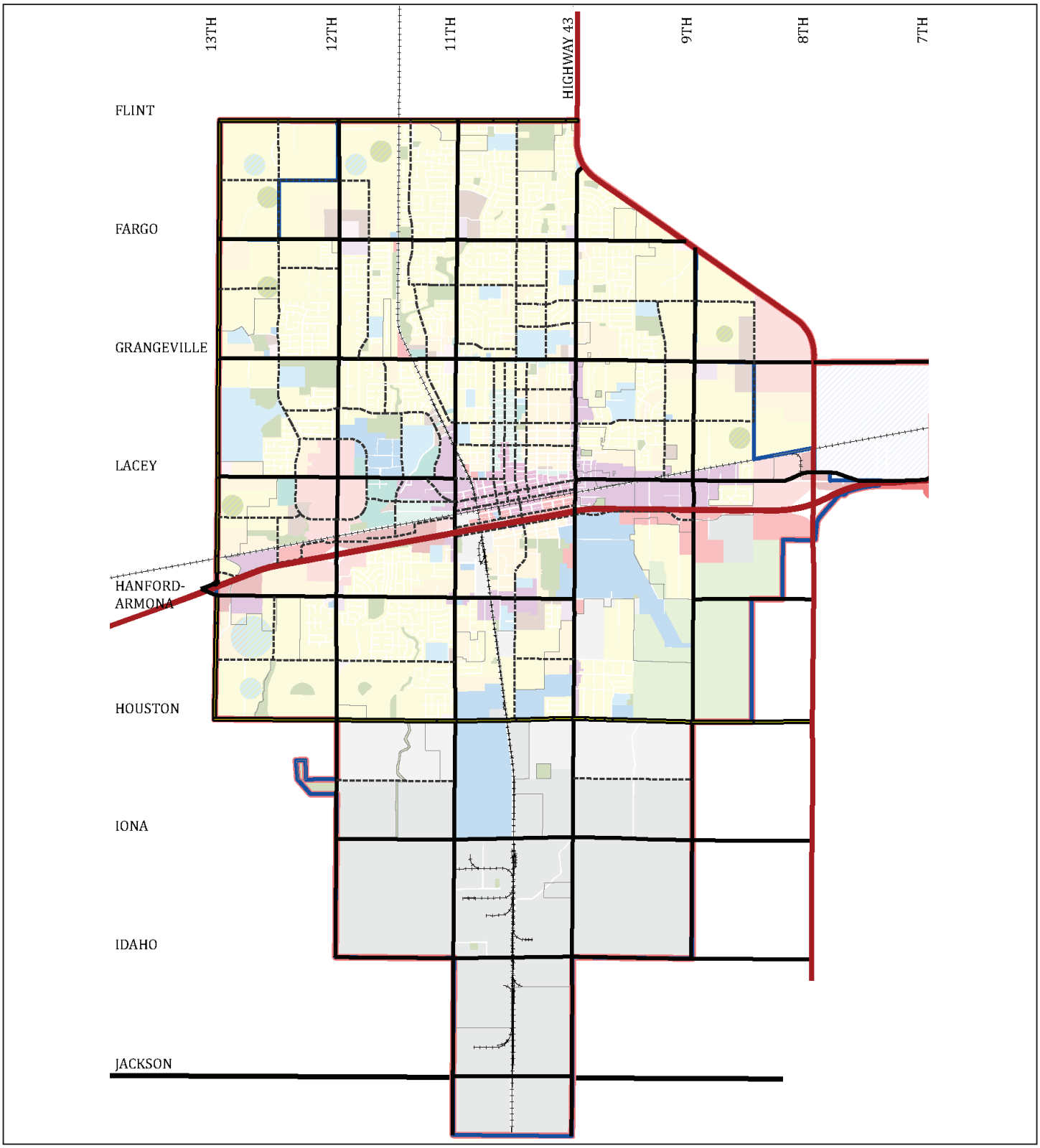
Figure 3-4 illustrates the existing and proposed bicycle facilities within the City. At present, Class III bicycle lanes exist along 12th Avenue, 11th Avenue, Fargo Avenue, and Grangeville Boulevard within the study area. However, as shown in Figure 3-4, Class II and Class III bicycle facilities are proposed along other roadways within the study area, such as Flint Avenue, Mall Drive, Liberty Street, and Lacey Boulevard.

3.2.3 Pedestrian Network

The Plan has been developed to encourage walking, improve the health of the residents by connecting residents to place where they can shop, relax, and explore the City. The City has an extensive pedestrian network, with sidewalks along most of the major roads. Figure 3-5 illustrates the pedestrian network map within Hanford. The City's Plan plans to identify improvements to the pedestrian network based on connections to trip attractors, proximity to bus stops and exhibits as an opportunity for future improvements.

3.3 LIST OF CHAPTER 3.0 FIGURES

- Figure 3-1: City of Hanford Roadway Classification
- Figure 3-2: Existing Study Intersection Geometrics and Traffic Control
- Figure 3-3: Study Intersection Geometrics and Traffic Control under 'Plus Project' Scenarios
- Figure 3-4: City of Hanford Existing and Proposed Bicycle Facilities
- Figure 3-5: City of Hanford Pedestrian Network



LSA

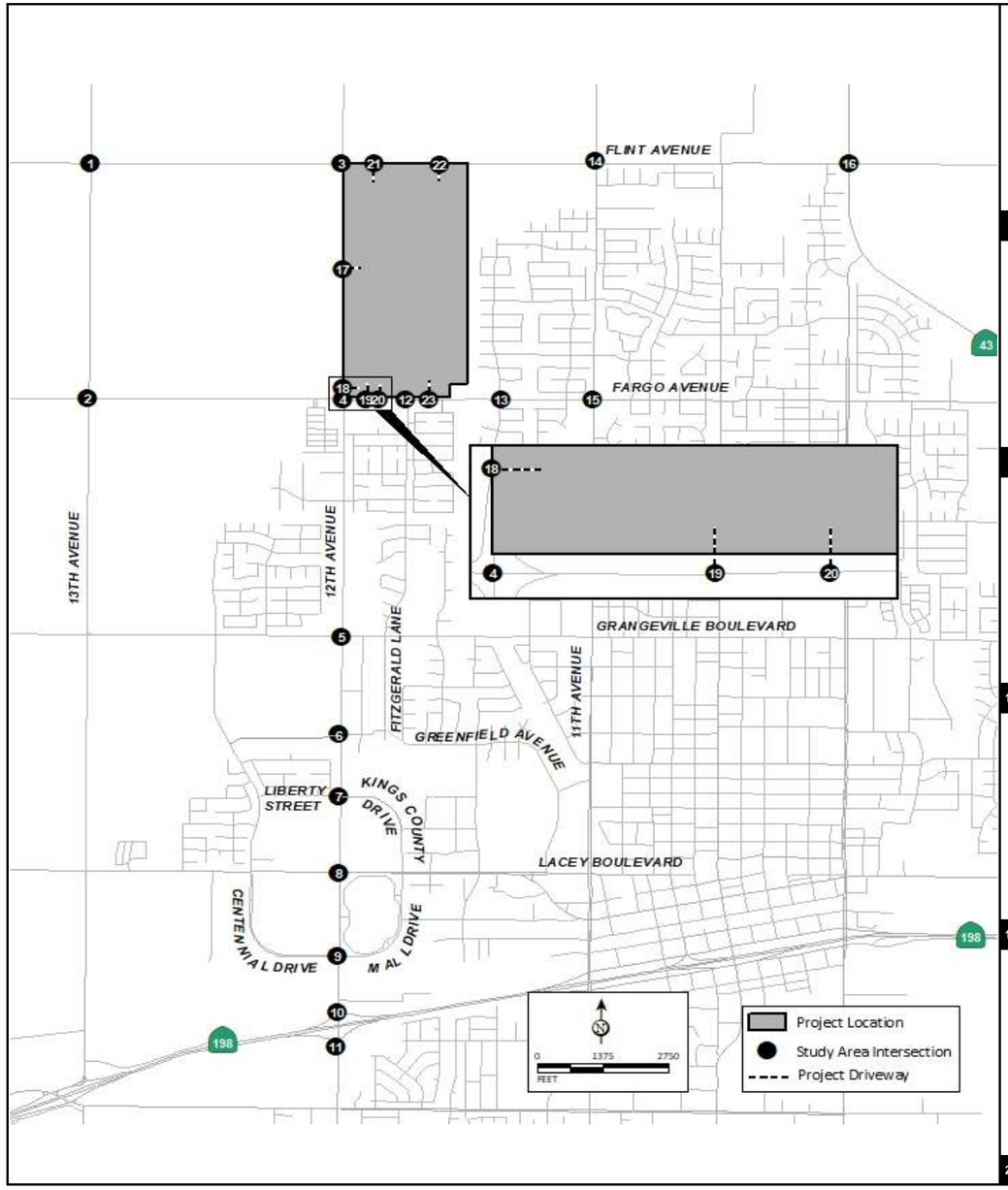
FIGURE 3-1

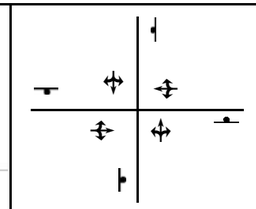
Singh Development Project
Traffic Study

City of Hanford Roadway Classification

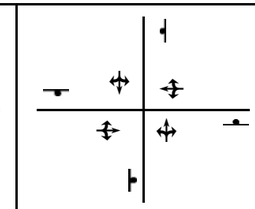
SOURCE: City of Hanford 2035 General Plan, 2017

P:\FOC2203\Traffic\GIS\Reports\fig3-1_GP_Rdway.ai (3/22/2023)

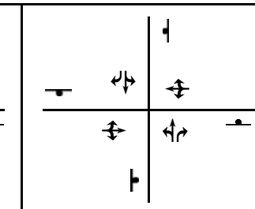




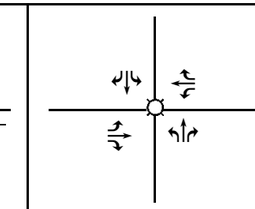
1 13th Avenue/Flint Avenue



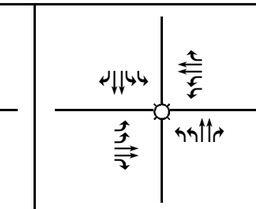
2 13th Avenue/Fargo Avenue



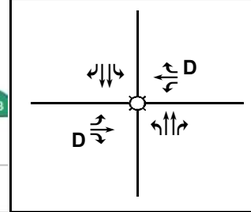
3 12th Avenue/Flint Avenue



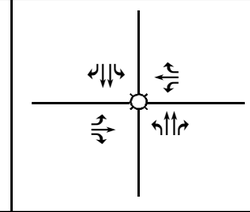
4 12th Avenue/Fargo Avenue



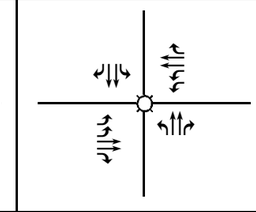
5 12th Avenue/Grangeville Boulevard



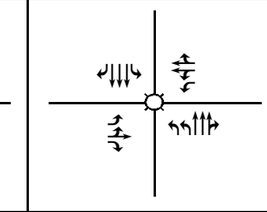
6 12th Avenue/Greenfield Avenue



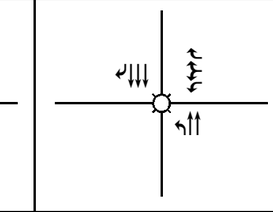
7 12th Avenue/Liberty Street - Kings County Drive



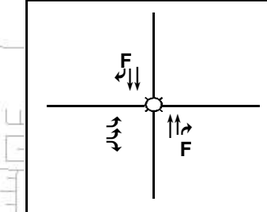
8 12th Avenue/Lacey Boulevard



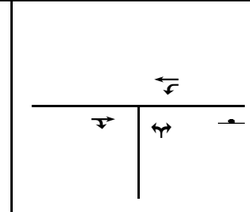
9 12th Avenue/Centennial Drive - Mall Drive



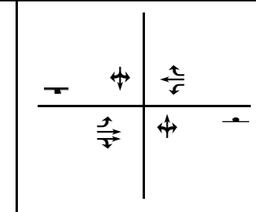
10 12th Avenue/SR-198 WB Ramps



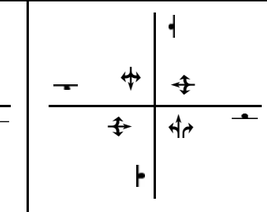
11 12th Avenue/SR-198 EB Ramps



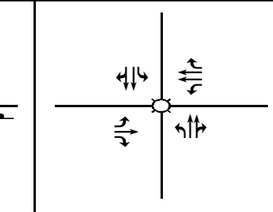
12 Fitzgerald Lane/Fargo Avenue



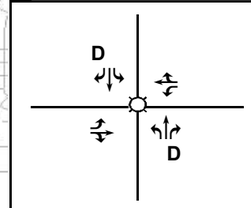
13 Glacier Way/Fargo Avenue



14 11th Avenue/Flint Avenue



15 11th Avenue/Fargo Avenue



16 SR-43/Flint Avenue

Future Intersection

17 12th Avenue/Project Driveway 1

Future Intersection

18 12th Avenue/Project Driveway 2

Future Intersection

19 Project Driveway 3/Fargo Avenue

Future Intersection

20 Project Driveway 4/Fargo Avenue

Future Intersection

21 Project Driveway 5/Flint Avenue

Future Intersection

22 Project Driveway 6/Flint Avenue

Future Intersection

23 Project Driveway 7/Fargo Avenue

LSA

FIGURE 3-2

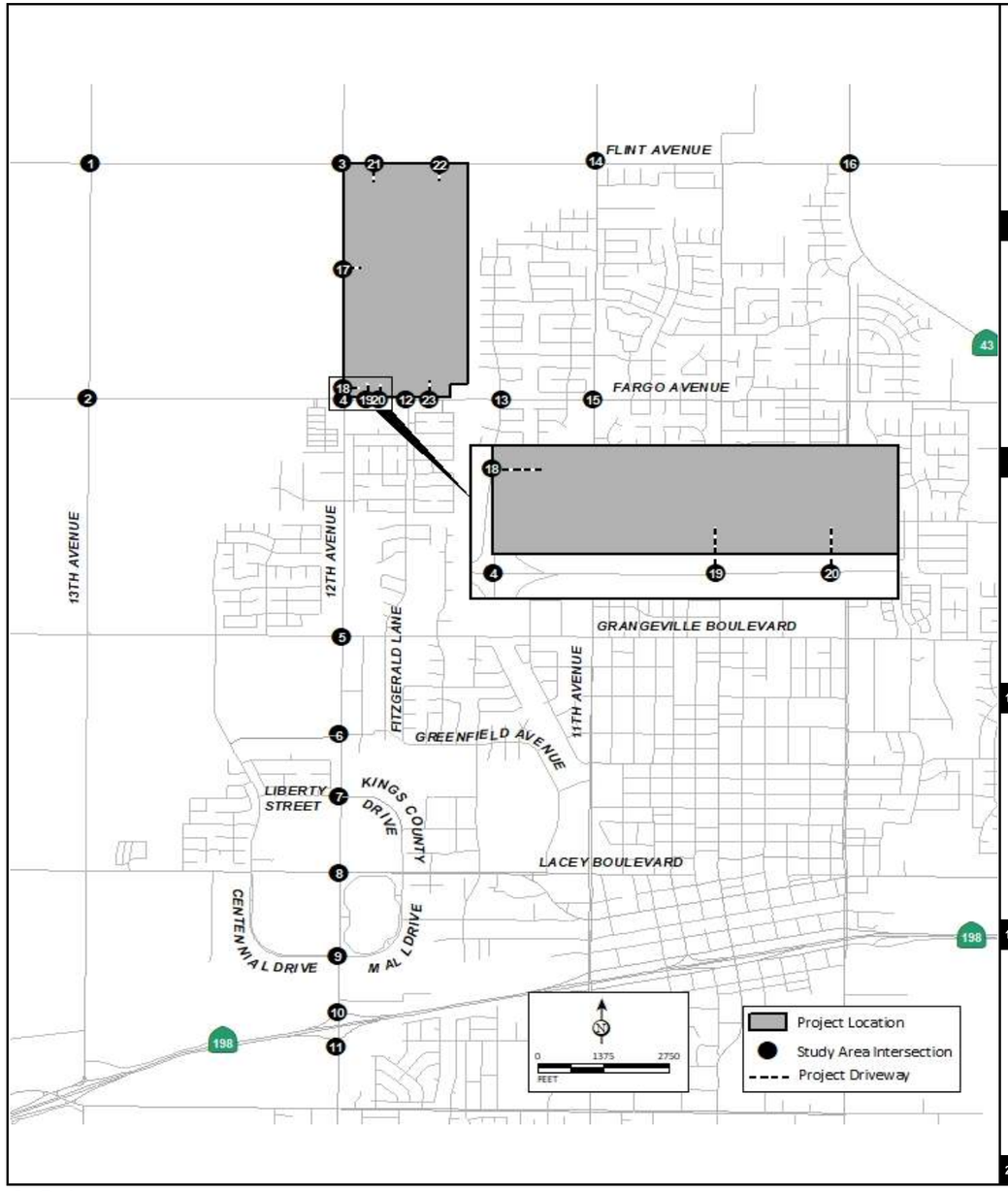
Legend

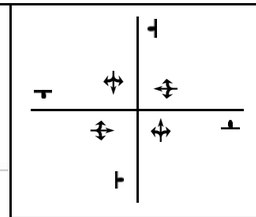
Signal
Stop Sign
F Free right-turn
D De-facto Right Turn
Project Driveway

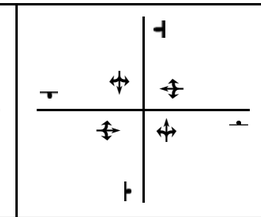
Singh Development Project
Traffic Study

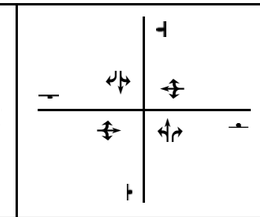
Existing Study Intersection Geometrics and Traffic Control

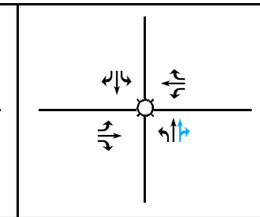
P:\FOC2203\Traffic\g45_Geo_Exist NP.xlsx 5/8/2023

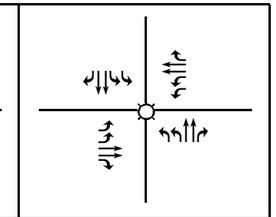


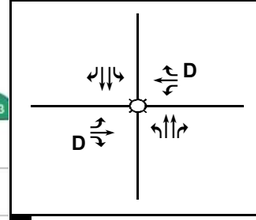


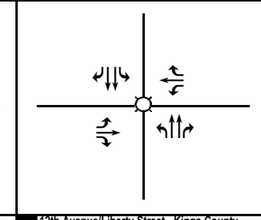


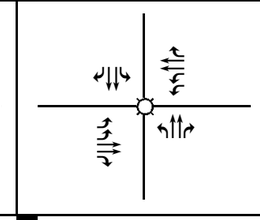


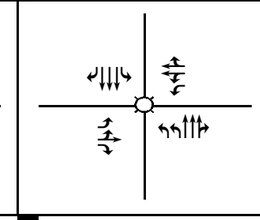


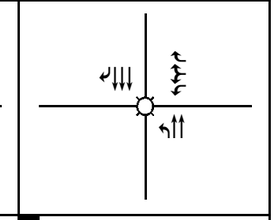


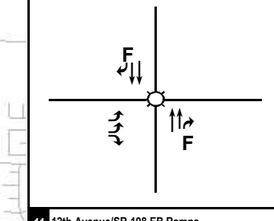


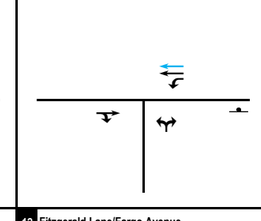


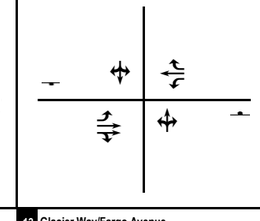


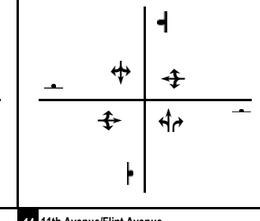


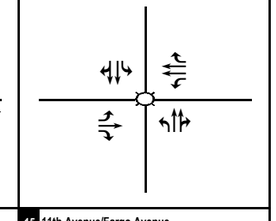


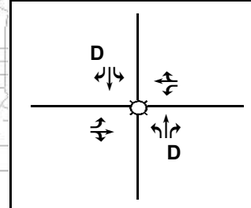


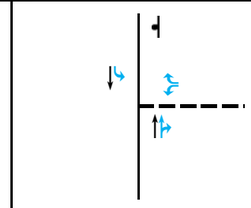


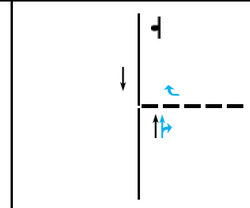


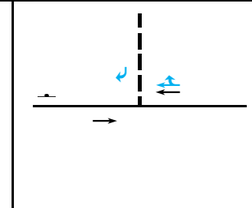


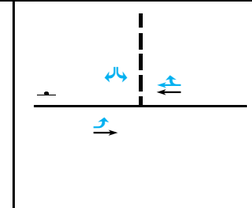


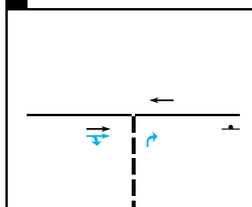


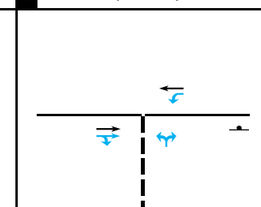


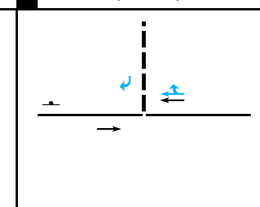












LSA

FIGURE 3-3

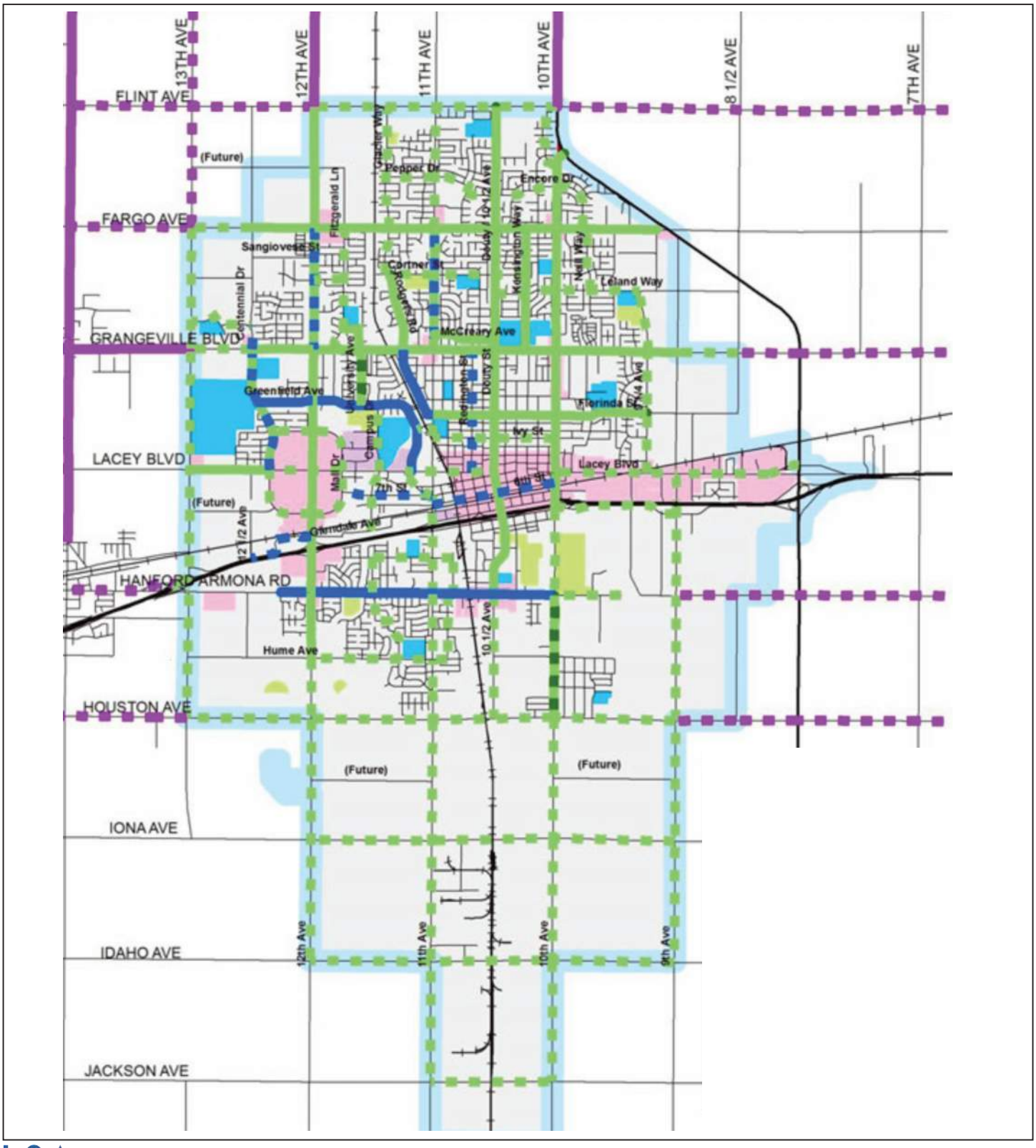
Legend

Signal
Stop Sign
F Free right-turn
D De-facto Right Turn
Project Driveway
Project Design Feature

Singh Development Project
Traffic Study

Study Intersection Geometrics and Traffic Control under "Plus Project" Scenarios

P:\FOC2203\Traffic\g45_Geo_Exist WP.xlsx 5/8/2023



LSA

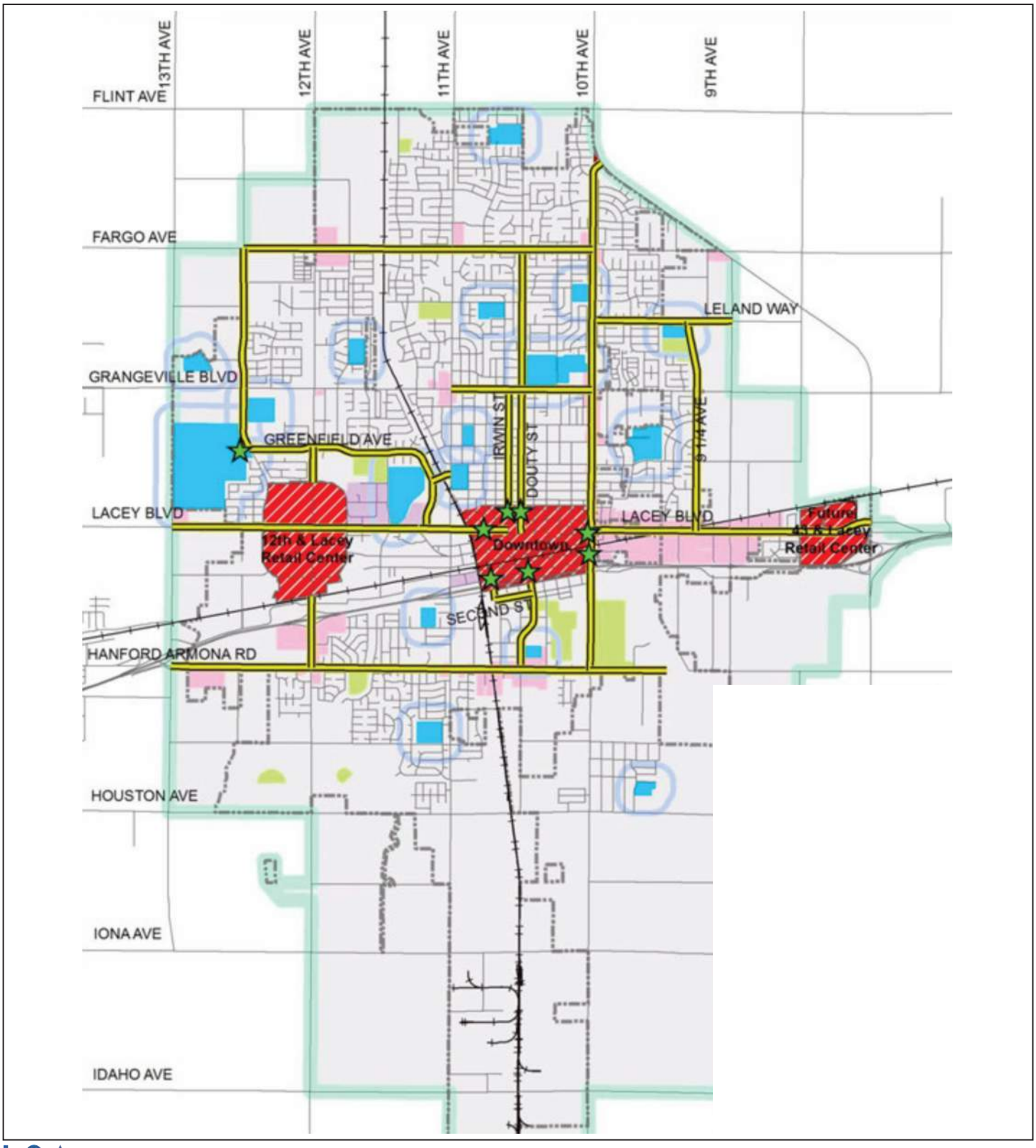
FIGURE 3-4

Singh Development Project
Traffic Study

City of Hanford Existing and Proposed Bicycle Facilities

SOURCE: City of Hanford Pedestrian and Bicycle Master Plan, January 2016

P:\FOC2203\Traffic\GIS\Reports\fig3-5_Proposed_Bike.ai (3/22/2023)



LSA

FIGURE 3-5

Singh Development Project
Traffic Study

City of Hanford Pedestrian Network

SOURCE: City of Hanford Pedestrian and Bicycle Master Plan, January 2016

P:\FOC2203\Traffic\GIS\Reports\fig3-6_Exist_Ped.ai (3/22/2023)

4.0 TRAFFIC VOLUMES FOR WITHOUT PROJECT SCENARIOS

4.1 EXISTING TRAFFIC VOLUMES

Traffic volumes for existing conditions were developed using recent count data collected by Counts Unlimited at study intersections.

It should be noted that some of the intersections, traffic counts were collected in May 2022, including traffic counts for the intersections of 12th Avenue/Flint Avenue, 12th Avenue/Greenfield Avenue, 12th Avenue/Liberty Street – Kings County Drive, 12th Avenue/Lacey Boulevard, 12th Avenue/Centennial Drive – Mall Drive, 12th Avenue/SR-168 WB Ramps, 12th Avenue/ SR-168 EB Ramps, Fitzgerald Lane/Fargo Avenue and Glacier Way/Fargo Avenue. However, traffic counts for the intersections of 13th Avenue/Flint Avenue, 13th Avenue/Fargo Avenue, 12th Avenue/Fargo Avenue, 12th Avenue/Grangeville Boulevard, and 11th Avenue/Flint Avenue were collected in March 2023. To account for the difference in traffic volumes between year 2022 and 2023, traffic growth rate at the 2022 count locations was estimated from the Kings County Association of Governments' (KCAG's) Travel Demand Model (TDM) modeled traffic growth. This growth rate was applied to the traffic counts collected in May 2022 to develop year 2023 traffic volumes at these intersections.

Vehicle classification counts were collected at selected study area intersections. Truck percentages for every approach at these intersections were obtained from the classification counts. As for the remaining study intersections without classification counts, truck percentages for the various approaches were obtained based on the truck percentages at the adjacent intersections.

Figure 4-1 illustrates peak-hour traffic volumes at study intersections under existing conditions.

Detailed count sheets are included in Appendix B.

4.2 NEAR-TERM WITHOUT PROJECT TRAFFIC VOLUMES

As approved during the City's scoping agreement process (Appendix A), traffic volumes for near-term conditions were developed by adding trips from cumulative projects in the area to existing traffic volumes. Information concerning cumulative projects in the vicinity of the proposed project was obtained from City staff. Figure 4-2 illustrates the cumulative project locations.

Trip generations for cumulative projects were either obtained from the respective traffic studies prepared for the projects or developed using trip generation rates from the Institute of Transportation Engineers (ITE) *Trip Generation Manual* (11th Edition). Table 4-A summarizes the cumulative project trip generation. As shown in Table 4-A, the cumulative projects are expected to generate 791 net a.m. peak-hour trips, 1,058 net p.m. peak-hour trips, and 10,700 net daily trips.

Cumulative project trips were assigned to the roadway network based on either the distributions provided in the respective traffic studies for these projects or their locations in relation to surrounding land uses and regional arterials. Figure 4-3 illustrates the peak-hour cumulative project trip assignments at study area intersections. Figure 4-4 illustrates the peak-hour traffic volumes at study intersections under near-term conditions.

It should be noted that volume development for this scenario have been conducted as an intermediate step for the development of traffic volumes for the Near-Term Plus Project Conditions. As such, as approved during the scoping agreement process, an operational analysis was not conducted for this scenario in the TS.

4.3 CUMULATIVE YEAR (2042) WITHOUT PROJECT TRAFFIC VOLUMES

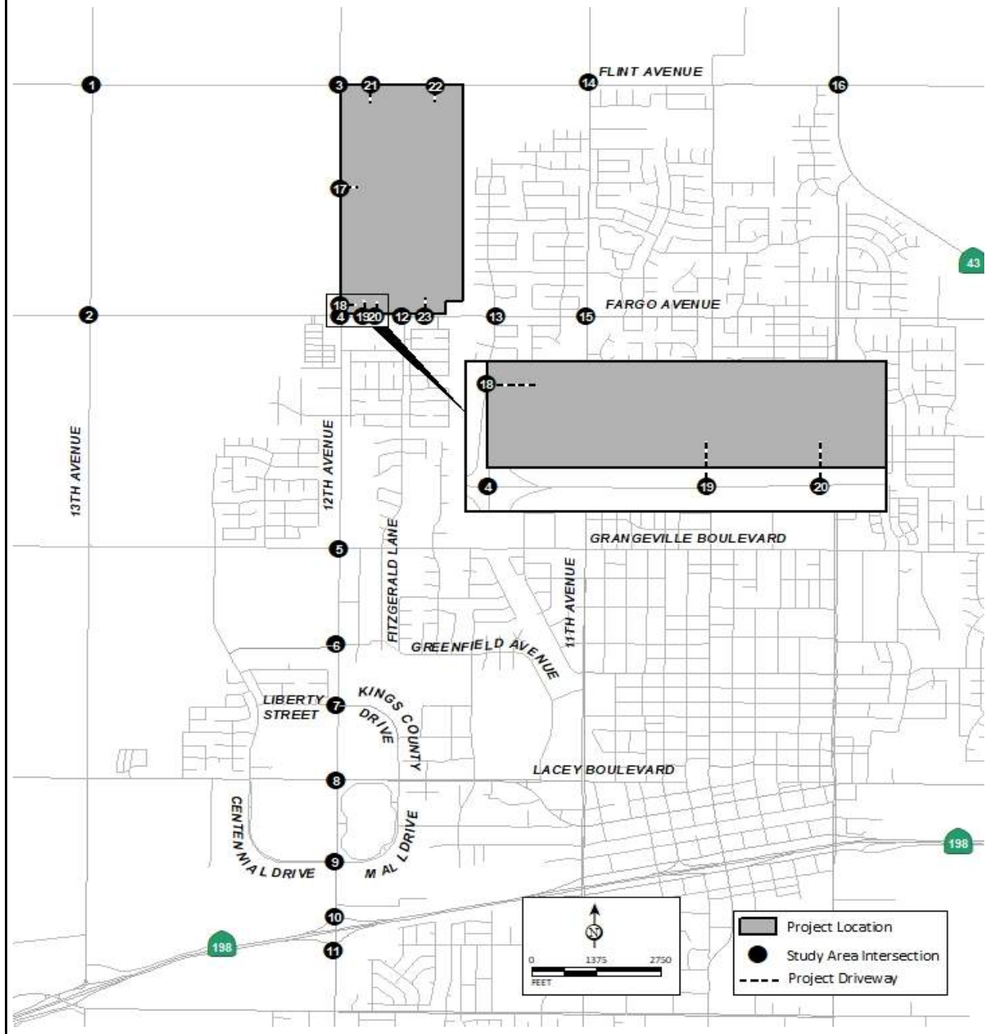
Traffic volumes for cumulative conditions were developed using the KCAG's TDM. The methodology used to develop cumulative traffic volumes at all study intersections is consistent with the National Cooperative Highway Research Program (NCHRP) and KCAG TDM's procedures for post-processing of modeled traffic volumes. Figure 4-5 illustrates the peak-hour traffic volumes at study intersections under cumulative conditions.

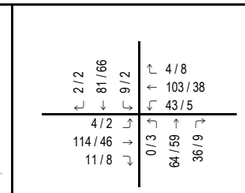
It should be noted that volume development for this scenario have been conducted as an intermediate step for the development of traffic volumes for the Cumulative Year (2042) Plus Project Conditions. As such, as approved during the scoping agreement process, an operational analysis was not conducted for this scenario in the TS.

Detailed volume development worksheets are included in Appendix C.

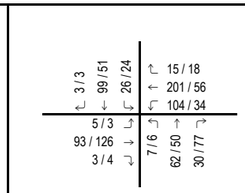
4.4 LIST OF CHAPTER 4.0 FIGURES AND TABLES

- Figure 4-1: Existing Peak-Hour Traffic Volumes
- Figure 4-2: Cumulative Project Locations
- Figure 4-3: Cumulative Projects Trip Assignment
- Figure 4-4: Near-Term without Project Peak-Hour Traffic Volumes
- Figure 4-5: Cumulative Year (2042) without Project Peak-Hour Traffic Volumes
- Table 4-A: Cumulative Projects Trip Generation

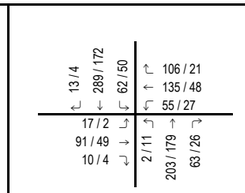




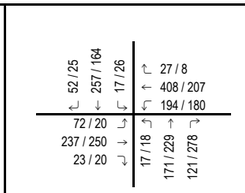
1 13th Avenue/Flint Avenue



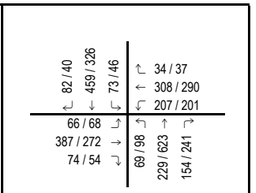
2 13th Avenue/Fargo Avenue



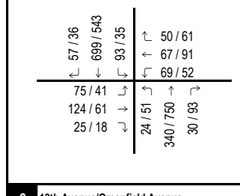
3 12th Avenue/Flint Avenue



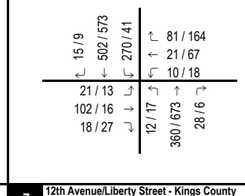
4 12th Avenue/Fargo Avenue



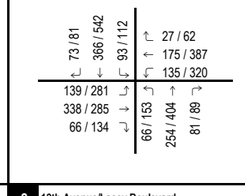
5 12th Avenue/Grangeville Boulevard



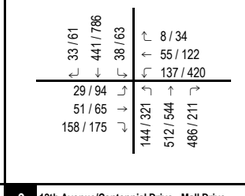
6 12th Avenue/Greenfield Avenue



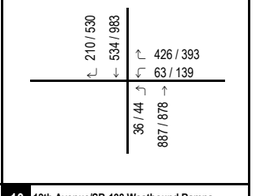
7 12th Avenue/Liberty Street - Kings County Drive



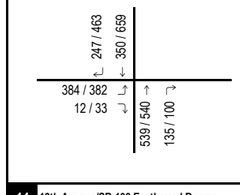
8 12th Avenue/Lacey Boulevard



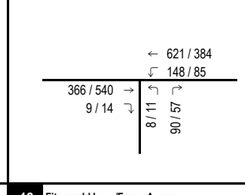
9 12th Avenue/Centennial Drive - Mall Drive



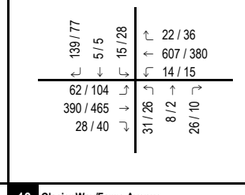
10 12th Avenue/SR-198 Westbound Ramps



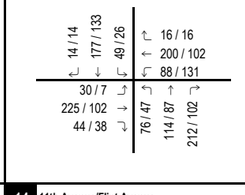
11 12th Avenue/SR-198 Eastbound Ramps



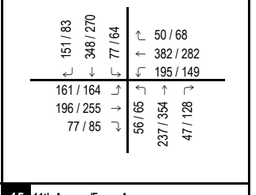
12 Fitzgerald Lane/Fargo Avenue



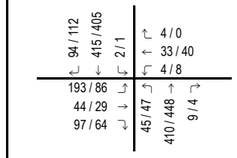
13 Glacier Way/Fargo Avenue



14 11th Avenue/Flint Avenue



15 11th Avenue/Fargo Avenue



16 SR-43/Flint Avenue

Future Intersection

17 12th Avenue/Project Driveway 1

Future Intersection

18 12th Avenue/Project Driveway 2

Future Intersection

19 Project Driveway 3/Fargo Avenue

Future Intersection

20 Project Driveway 4/Fargo Avenue

Future Intersection

21 Project Driveway 5/Flint Avenue

Future Intersection

22 Project Driveway 6/Flint Avenue

Future Intersection

23 Project Driveway 7/Fargo Avenue

LSA

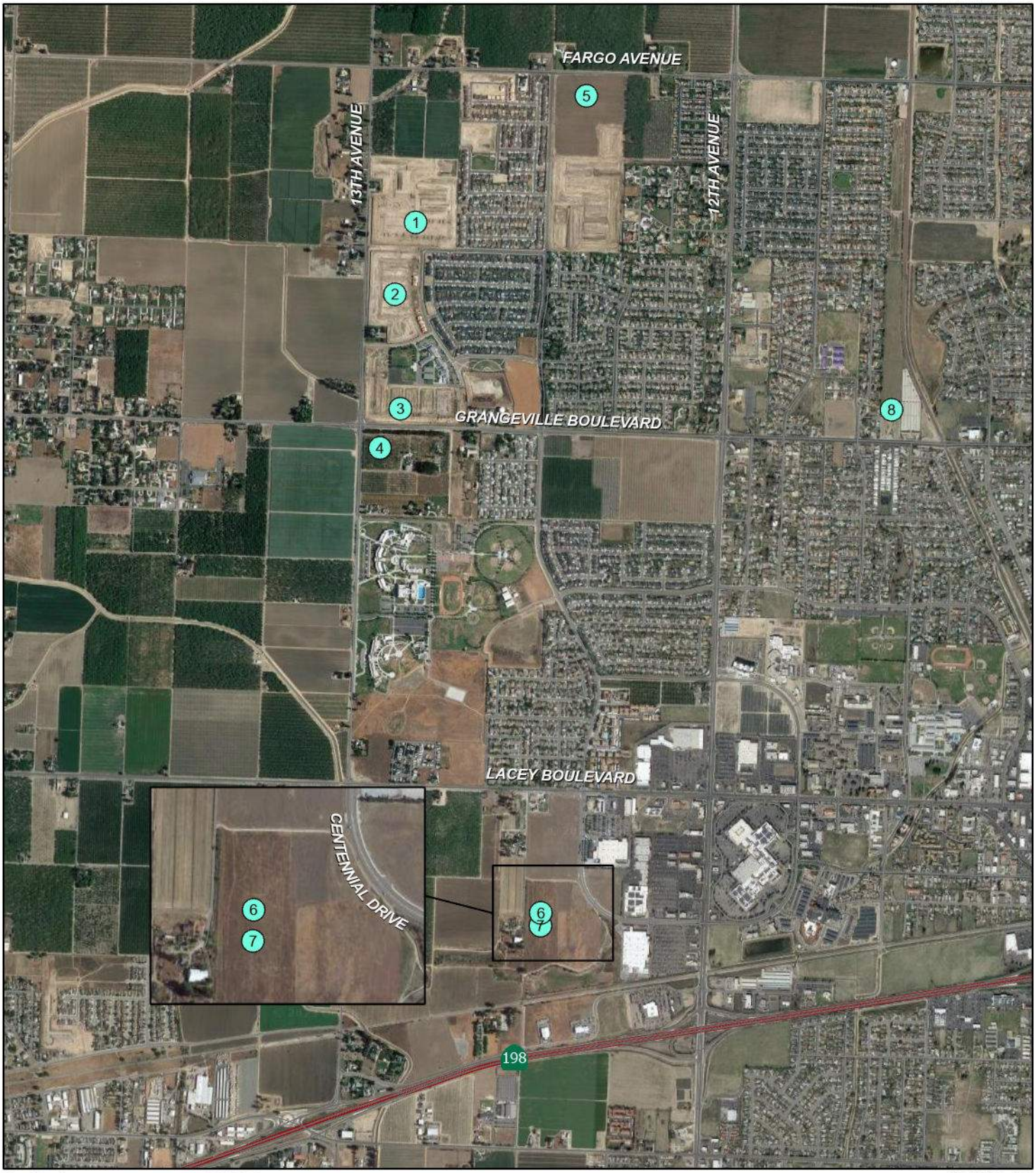
FIGURE 4-1

XXX / YYY
AM / PM Peak Hour Traffic Volumes
Project Driveway

Singh Development Project
Traffic Study

Existing Peak Hour Traffic Volumes

P:\FOC2203\Traffic\z45_Vol_Exist_NP.xlsx 5/8/2023



LSA

LEGEND

Cumulative Projects

FIGURE 4-2

0 975 1950

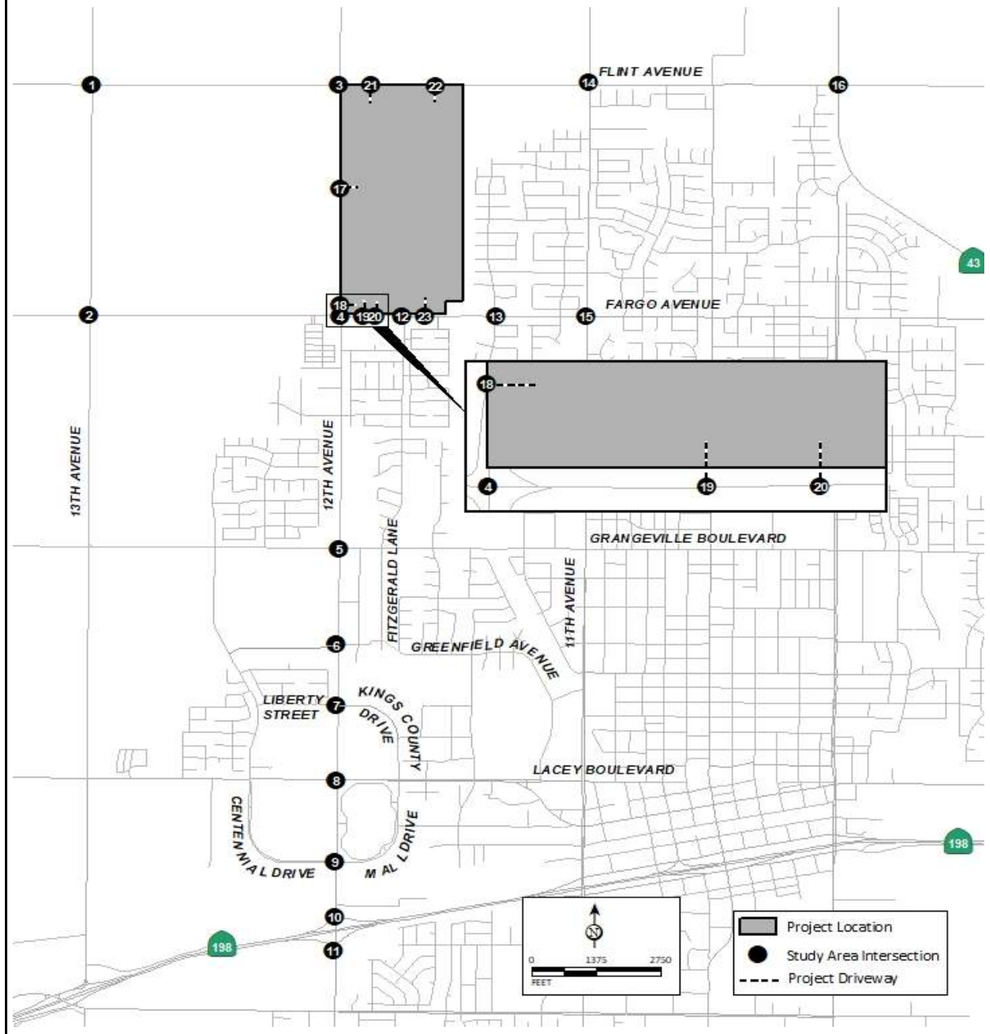
FEET

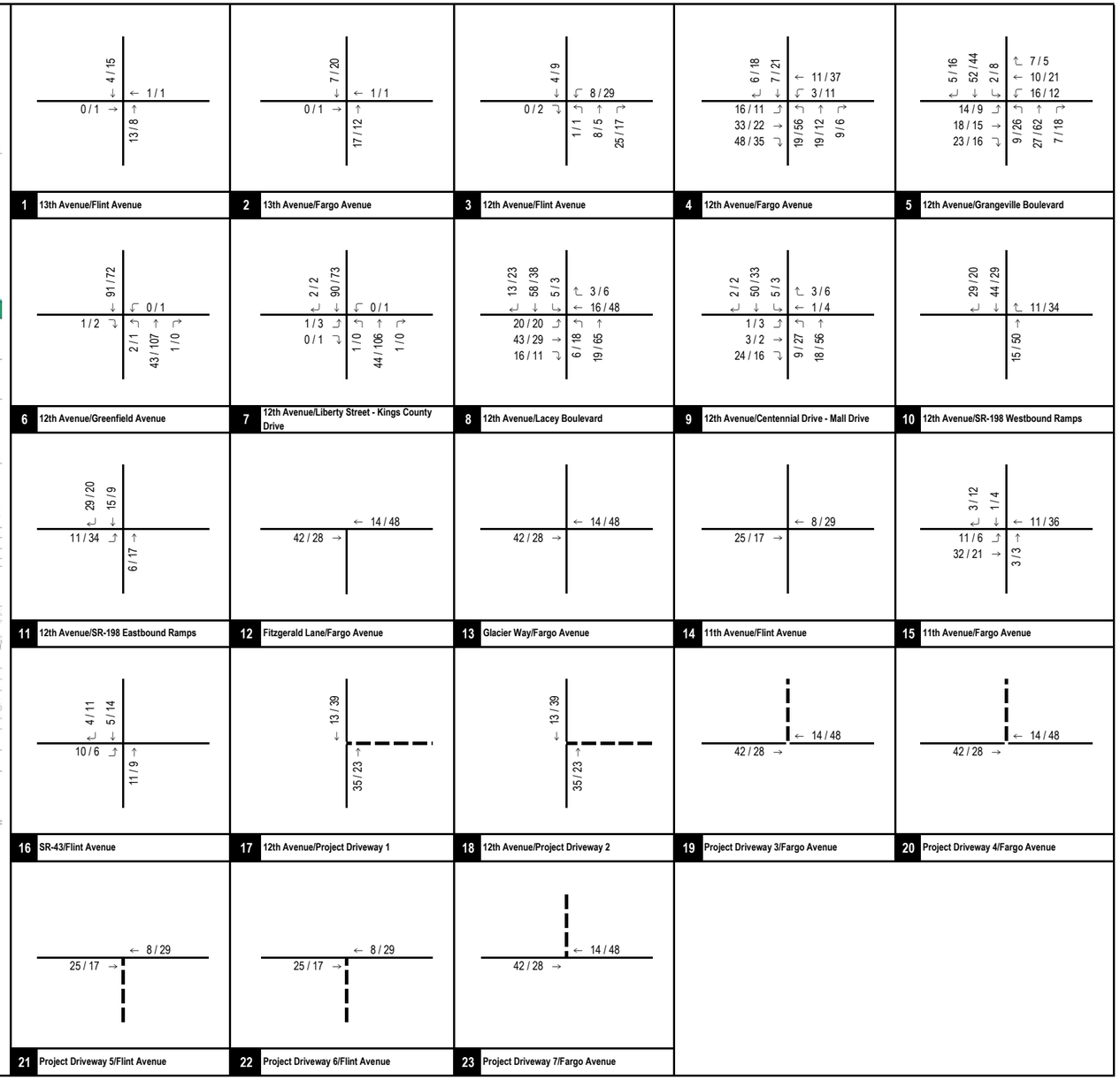
SOURCE: Google Imagery, 2021; ESRI Streetmap, 2021

P:\FOC2203\Traffic\GIS\Reports\fig4-2_CumProjLoc.aprx (5/8/2023)

Singh Development Project
Traffic Study

Cumulative Projects Locations





LSA

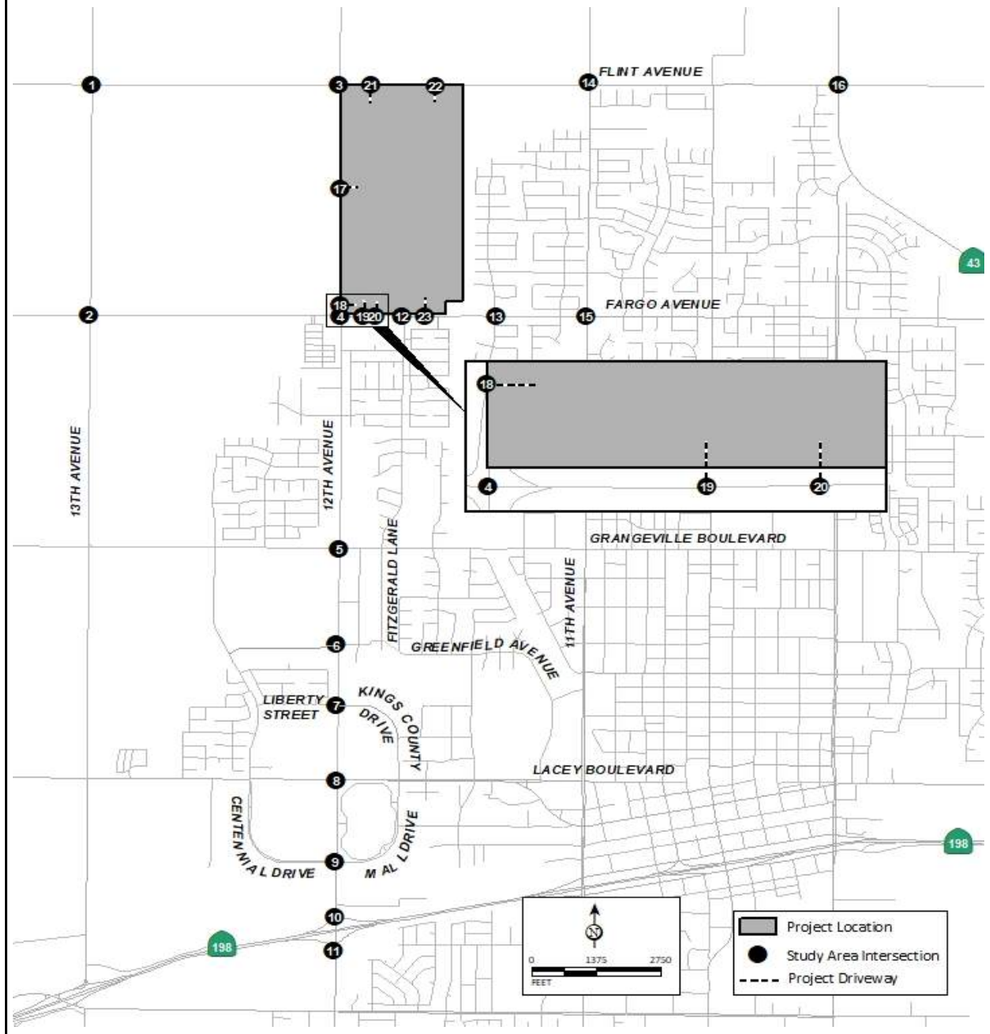
FIGURE 4-3

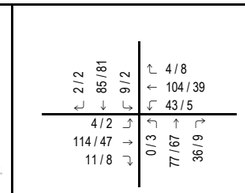
XX / YY
AM / PM Peak Hour Traffic Volumes
Project Driveway

Singh Development Project
Traffic Study

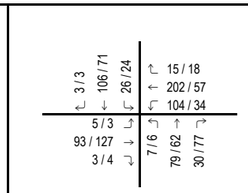
Cumulative Projects Trip Assignment

P:\FOC2203\Traffic\z45_Assign_Cumulative Projects.xlsx 5/8/2023

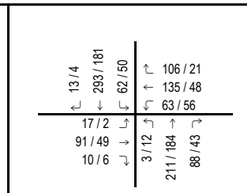




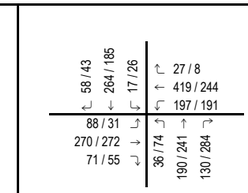
1 13th Avenue/Flint Avenue



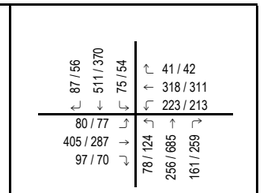
2 13th Avenue/Fargo Avenue



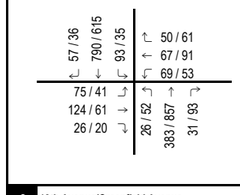
3 12th Avenue/Flint Avenue



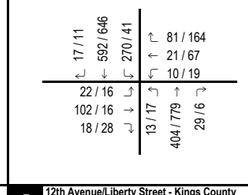
4 12th Avenue/Fargo Avenue



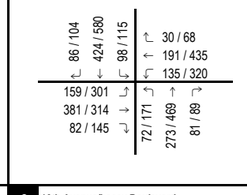
5 12th Avenue/Grangeville Boulevard



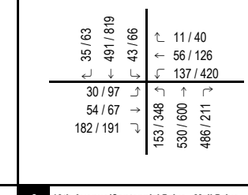
6 12th Avenue/Greenfield Avenue



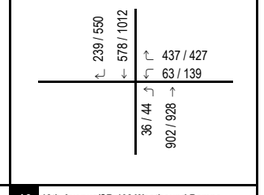
7 12th Avenue/Liberty Street - Kings County Drive



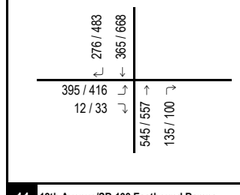
8 12th Avenue/Lacey Boulevard



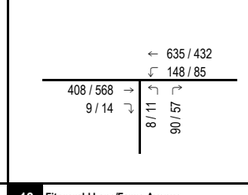
9 12th Avenue/Centennial Drive - Mall Drive



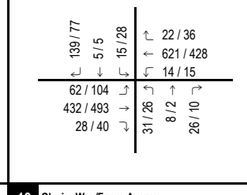
10 12th Avenue/SR-198 Westbound Ramps



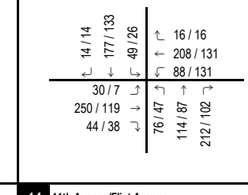
11 12th Avenue/SR-198 Eastbound Ramps



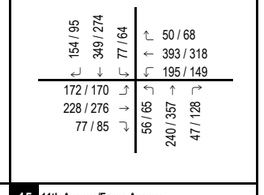
12 Fitzgerald Lane/Fargo Avenue



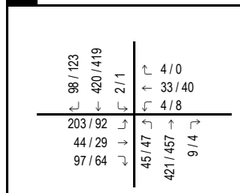
13 Glacier Way/Fargo Avenue



14 11th Avenue/Flint Avenue



15 11th Avenue/Fargo Avenue



16 SR-43/Flint Avenue

Future Intersection

17 12th Avenue/Project Driveway 1

Future Intersection

18 12th Avenue/Project Driveway 2

Future Intersection

19 Project Driveway 3/Fargo Avenue

Future Intersection

20 Project Driveway 4/Fargo Avenue

Future Intersection

21 Project Driveway 5/Flint Avenue

Future Intersection

22 Project Driveway 6/Flint Avenue

Future Intersection

23 Project Driveway 7/Fargo Avenue

LSA

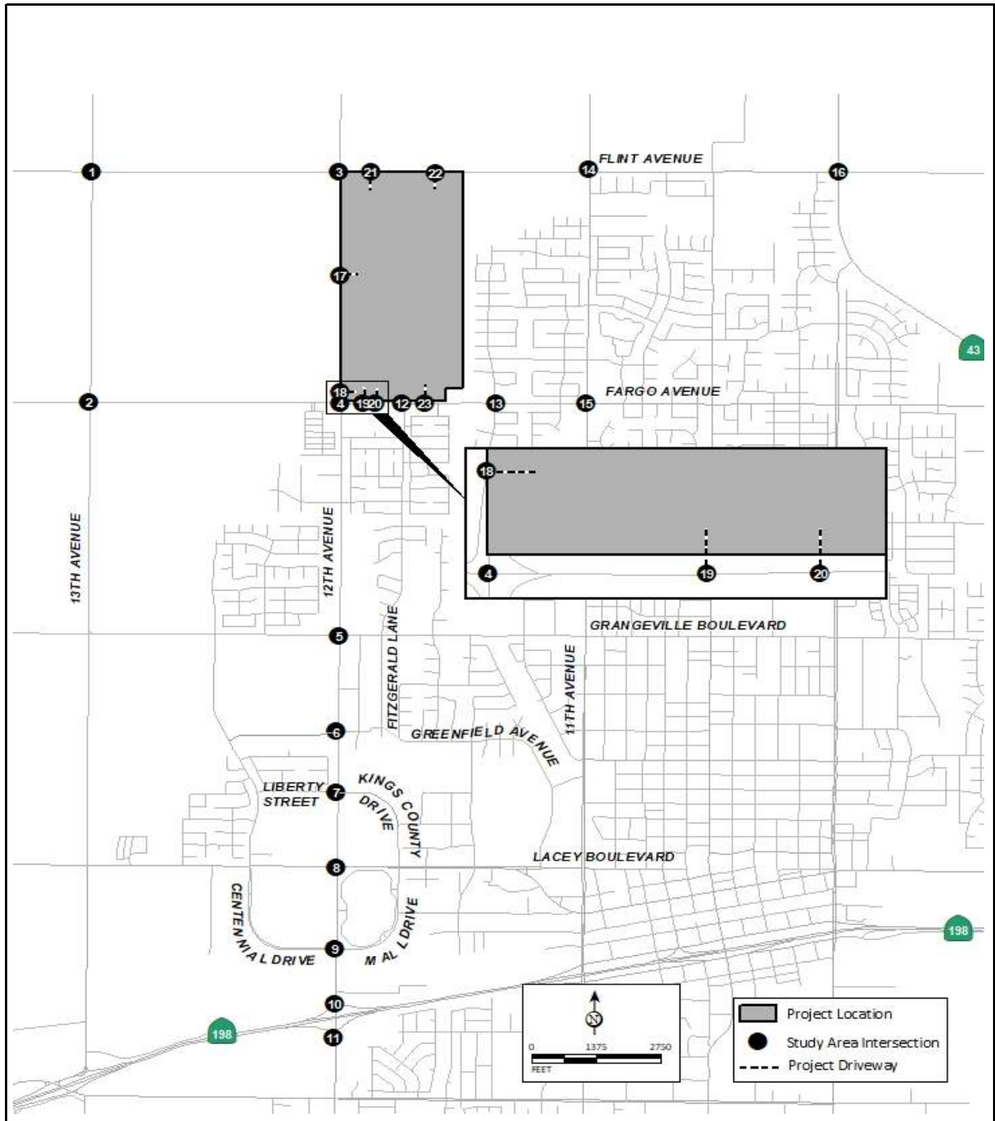
FIGURE 4-4

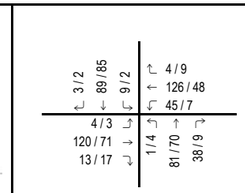
XXX / YYY
AM / PM Peak Hour Traffic Volumes
Project Driveway

Singh Development Project
Traffic Study

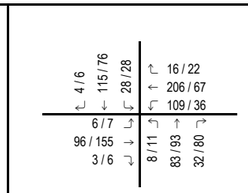
Near-Term without Project Peak Hour Traffic Volumes

P:\FOC2203\Traffic\z45_Vol_NT_NP.xlsx 5/8/2023

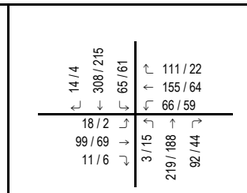




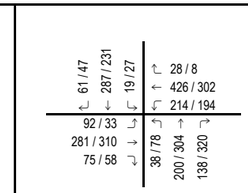
1 13th Avenue/Flint Avenue



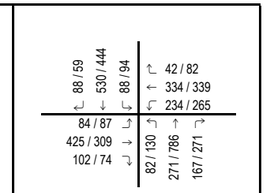
2 13th Avenue/Fargo Avenue



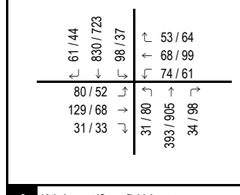
3 12th Avenue/Flint Avenue



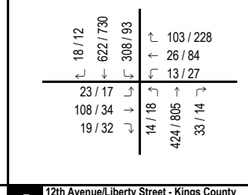
4 12th Avenue/Fargo Avenue



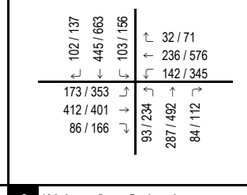
5 12th Avenue/Grangeville Boulevard



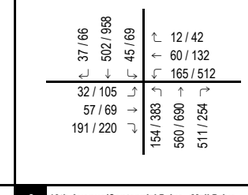
6 12th Avenue/Greenfield Avenue



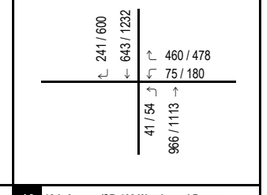
7 12th Avenue/Liberty Street - Kings County Drive



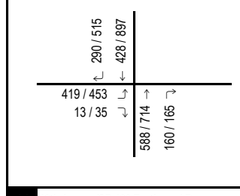
8 12th Avenue/Lacey Boulevard



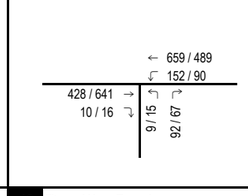
9 12th Avenue/Centennial Drive - Mall Drive



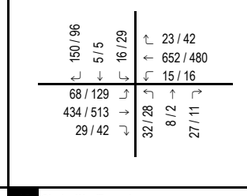
10 12th Avenue/SR-198 Westbound Ramps



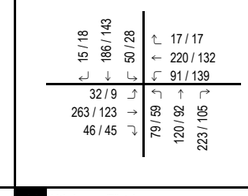
11 12th Avenue/SR-198 Eastbound Ramps



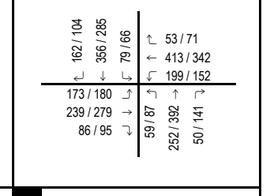
12 Fitzgerald Lane/Fargo Avenue



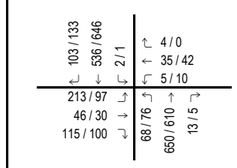
13 Glacier Way/Fargo Avenue



14 11th Avenue/Flint Avenue



15 11th Avenue/Fargo Avenue



16 SR-43/Flint Avenue

Future Intersection

17 12th Avenue/Project Driveway 1

Future Intersection

18 12th Avenue/Project Driveway 2

Future Intersection

19 Project Driveway 3/Fargo Avenue

Future Intersection

20 Project Driveway 4/Fargo Avenue

Future Intersection

21 Project Driveway 5/Flint Avenue

Future Intersection

22 Project Driveway 6/Flint Avenue

Future Intersection

23 Project Driveway 7/Fargo Avenue

LSA

FIGURE 4-5

XXX / YYY
AM / PM Peak Hour Traffic Volumes
Project Driveway

Singh Development Project
Traffic Study

Cumulative Year (2042) without Project Peak Hour Traffic Volumes

LSA

Table 4-A - Cumulative Projects Trip Generation

Project No.	Land Use/Builder/Applicant/Project Name	Units		A.M. Peak Hour In	A.M. Peak Hour Out	A.M. Peak Hour Total	P.M. Peak Hour In	P.M. Peak Hour Out	P.M. Peak Hour Total	Daily
1.	**TT 918**									
	Northwest Corner of Centennial Avenue and Devon Street									
	Single-Family Detached Housing[1]	127	DU							
	Trips/Unit			0.18	0.52	0.70	0.59	0.35	0.94	9.43
	Trip Generation			23	66	89	75	44	119	1,198
2.	**TT 929**									
	Northeast Corner of Devon Street and 13th Avenue									
	Single-Family Detached Housing[1]	158	DU							
	Trips/Unit			0.18	0.52	0.70	0.59	0.35	0.94	9.43
	Trip Generation			28	82	110	93	55	148	1,490
3.	**TT 927**									
	Northeast Corner of 13th Avenue and Grangeville Boulevard									
	Single-Family Detached Housing[1]	127	DU							
	Trips/Unit			0.18	0.52	0.70	0.59	0.35	0.94	9.43
	Trip Generation			23	66	89	75	44	119	1,198
4.	**TT 934**[2]									
	Southeast Corner of 13th Avenue and Grangeville Boulevard	161	DU	30	90	120	101	59	160	1,520
	Trip Generation									
5.	**TT 928**									
	Southeast Corner of Centennial Avenue and Fargo Avenue									
	Single-Family Detached Housing[1]	336	DU							
	Trips/Unit			0.18	0.52	0.70	0.59	0.35	0.94	9.43
	Trip Generation			60	175	235	198	118	316	3,168
6.	**SPR 2022-23**									
	South of Centrnnial Drive and East of 12 1/2 Avenue									
	Multifamily Housing (Low-Rise) Not Close to Rail Transit[3]	100	DU							
	Trips/Unit			0.10	0.30	0.40	0.32	0.19	0.51	6.74
	Trip Generation			10	30	40	32	19	51	674
7.	**TT 915**									
	South of Centrnnial Drive and East of 12 1/2 Avenue									
	Single-Family Detached Housing[1]	66	DU							
	Trips/Unit			0.18	0.52	0.70	0.59	0.35	0.94	9.43
	Trip Generation			12	34	46	39	23	62	622
8.	**TT 930**									
	North of Grangeville Boulevard and East of Kings Road									
	Single-Family Detached Housing[1]	88	DU							
	Trips/Unit			0.18	0.52	0.70	0.59	0.35	0.94	9.43
	Trip Generation			16	46	62	52	31	83	830
	Total Net Trip Generation			**202**	**589**	**791**	**665**	**393**	**1,058**	**10,700**

Notes:

DU = Dwelling Units

[1] Rates from Institute of Transportation Engineers (ITE) Trip Generation Manual, (11th Edition) Land Use 210 - "Single-Family Detached Housing" , Setting/Location - 'General Urban/Suburban'.

[2] Trip generation taken from "Proposed Tract 934" traffic study by Peters Engineering Group (January 2022).

[3] Rates from ITE *Trip Generation Manual* , (11th Edition), Land Use 220 - "Multifamily Housing (Low-Rise) Not Close to Rail Transit" , Setting/Location - 'General Urban/Suburban'.

5.0 PROJECT TRAFFIC

5.1 PROJECT TRIP GENERATION

The trip generation for the proposed project was developed using rates from the ITE *Trip Generation Manual* (11th Edition) for Land Use 210 – "Single-Family Detached Housing", 220 – "Multifamily Housing (Low Rise)", 520 – "Elementary School", 822 – "Strip Retail Plaza (<40k)", 932 – "High-Turnover (Sit-Down Restaurant)", 933 – "Fast-Food Restaurant without Drive-Through Window", 934 – "Fast-Food Restaurant with Drive-Through Window", and 945 – "Convenience Store/Gas Station." Table 5-A summarizes the project trip generation. As shown in Table 5-A, the project is anticipated to generate 2,291 gross trips in the a.m. peak hour, 1,982 gross trips in the p.m. peak hour, and 23,442 gross daily trips.

Since the project is a mixed-use development, it is estimated that a certain percentage of trips between the land uses will be made on-site, and these internal trips would not utilize the surrounding street system. The internal trips can be made either by walking or by vehicles using internal roadways without using external streets. Internal capture was limited to 10 percent for the project land uses as per recommendations from City staff. The internal capture rate was applied to each land uses' respective trip generation to determine the number of internal trips. The internal trips were then subtracted from the total trip generation for the land use to establish the total external trips.

For the retail/commercial uses, a certain percentage of external trips will be pass-by trips. A pass-by trip is a trip where an intermediate stop is made on the way from the origin to the primary destination of the trip without making a route diversion. It is not actually a "new" trip added to the surrounding circulation system. Pass-by rates were obtained from ITE *Trip Generation Manual* (11th Edition). After deducting the pass-by trips from the total external trips for the retail/commercial uses, the net external trips for the retail/commercial uses were obtained. Further, the net external trips for the non-residential uses were added to the external trips for the residential uses to obtain the total net trip generation for the project.

As shown in Table 5-A, the project is anticipated to generate 14,740 net daily trips, with 1,515 net trips occurring during the a.m. peak hour and 1,261 net trips occurring during the p.m. peak hour.

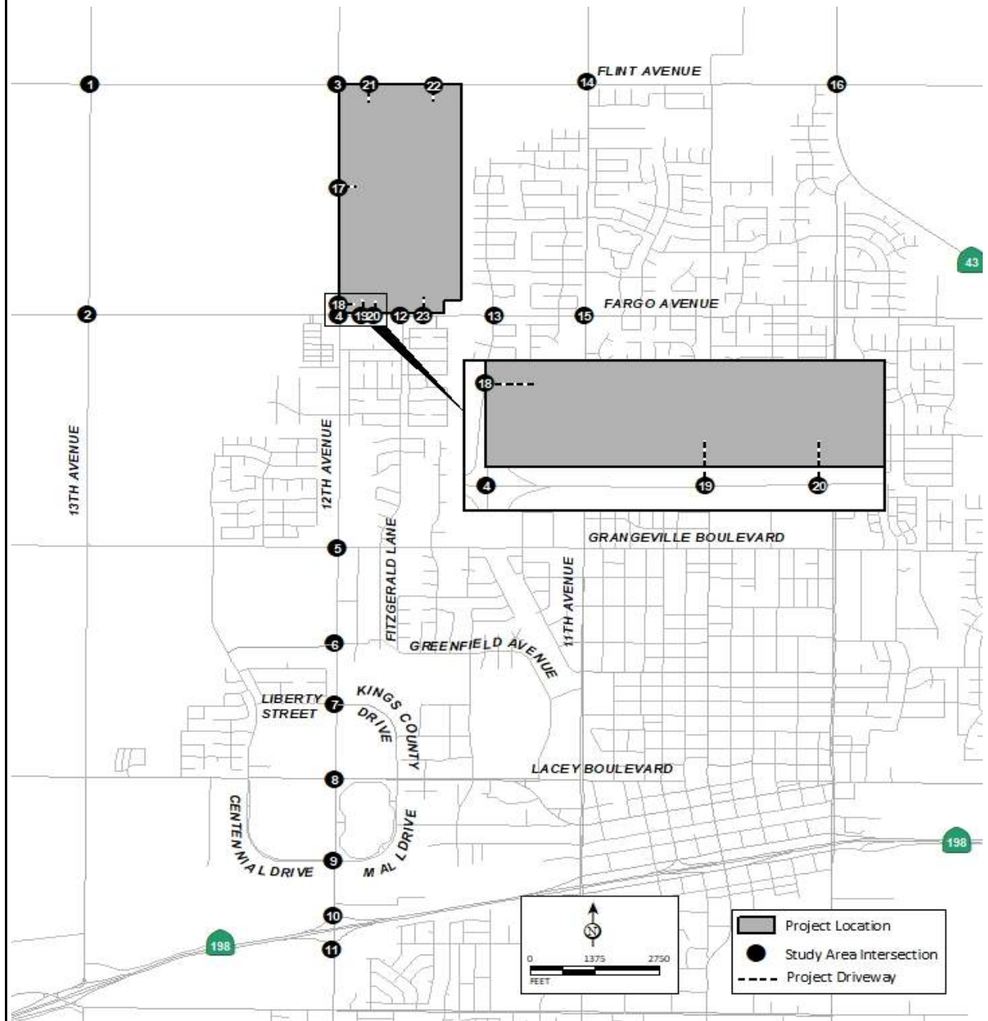
5.2 PROJECT TRIP DISTRIBUTION AND ASSIGNMENT

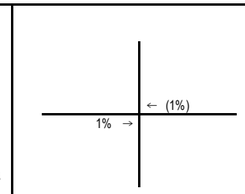
The project trip distribution was developed using select zone model runs conducted using the KCAG TDM. Since the project includes a mix of residential, retail and school uses, separate select zone runs were conducted for each land use component of the project. As such, separate trip distributions were prepared for each land use using the respective select zone runs. Appendix A includes the select zone model plots for the proposed project. Keeping the same regional distribution as the select zone runs, local adjustments were made to the trip distributions within the study area based on location of local land uses within the vicinity of the project and existing circulation network. Figures 5-1, 5-2, and 5-3 illustrates the project trip distribution for the residential, retail/commercial and school components, respectively. The project trip generation was applied to the corresponding trip distribution pattern to develop the project trip assignment. Figures 5-4, 5-5, and 5-6 illustrates

the project trip assignment for the residential, retail/commercial and school components respectively. Figure 5-7 illustrates the total net trip assignment for the project at the study area intersections.

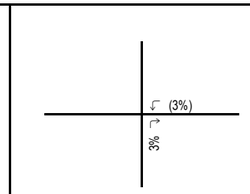
5.3 LIST OF CHAPTER 5.0 FIGURES AND TABLES

- Figure 5-1: Project Trip Distribution – Residential
- Figure 5-2: Project Trip Distribution – Retail/Commercial
- Figure 5-3: Project Trip Distribution – Elementary School
- Figure 5-4: Project Trip Assignment – Residential
- Figure 5-5: Project Trip Assignment – Retail/Commercial
- Figure 5-6: Project Trip Assignment – Elementary School
- Figure 5-7: Total Project Net Trip Assignment
- Table 5-A: Project Trip Generation

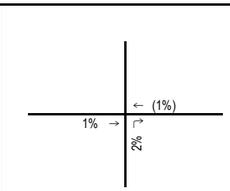




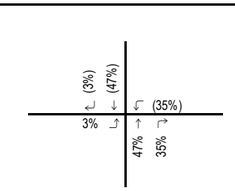
1 13th Avenue/Flint Avenue



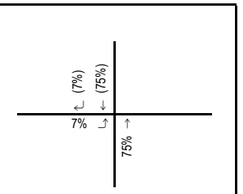
2 13th Avenue/Fargo Avenue



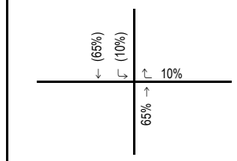
3 12th Avenue/Flint Avenue



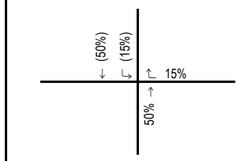
4 12th Avenue/Fargo Avenue



5 12th Avenue/Grangeville Boulevard



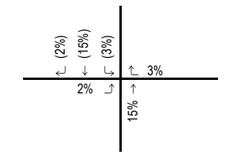
6 12th Avenue/Greenfield Avenue



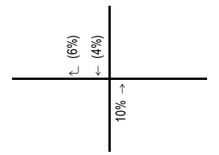
7 12th Avenue/Liberty Street - Kings County Drive



8 12th Avenue/Lacey Boulevard



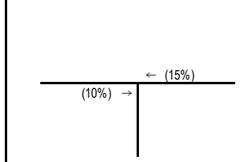
9 12th Avenue/Centennial Drive - Mall Drive



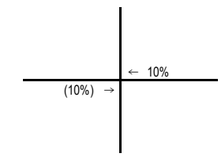
10 12th Avenue/SR-198 Westbound Ramps



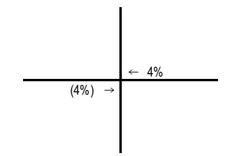
11 12th Avenue/SR-198 Eastbound Ramps



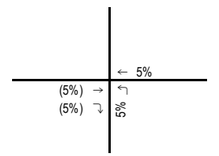
12 Fitzgerald Lane/Fargo Avenue



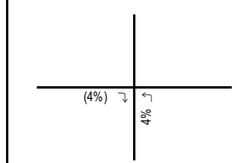
13 Glacier Way/Fargo Avenue



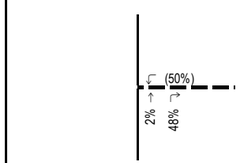
14 11th Avenue/Flint Avenue



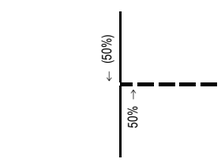
15 11th Avenue/Fargo Avenue



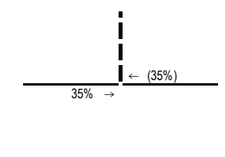
16 SR-43/Flint Avenue



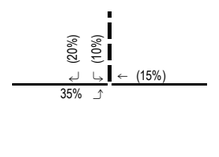
17 12th Avenue/Project Driveway 1



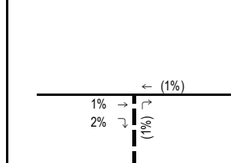
18 12th Avenue/Project Driveway 2



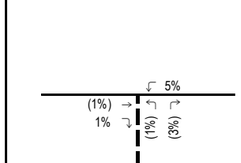
19 Project Driveway 3/Fargo Avenue



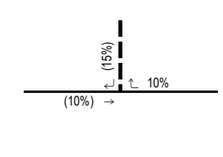
20 Project Driveway 4/Fargo Avenue



21 Project Driveway 5/Flint Avenue



22 Project Driveway 6/Flint Avenue



23 Project Driveway 7/Fargo Avenue

LSA

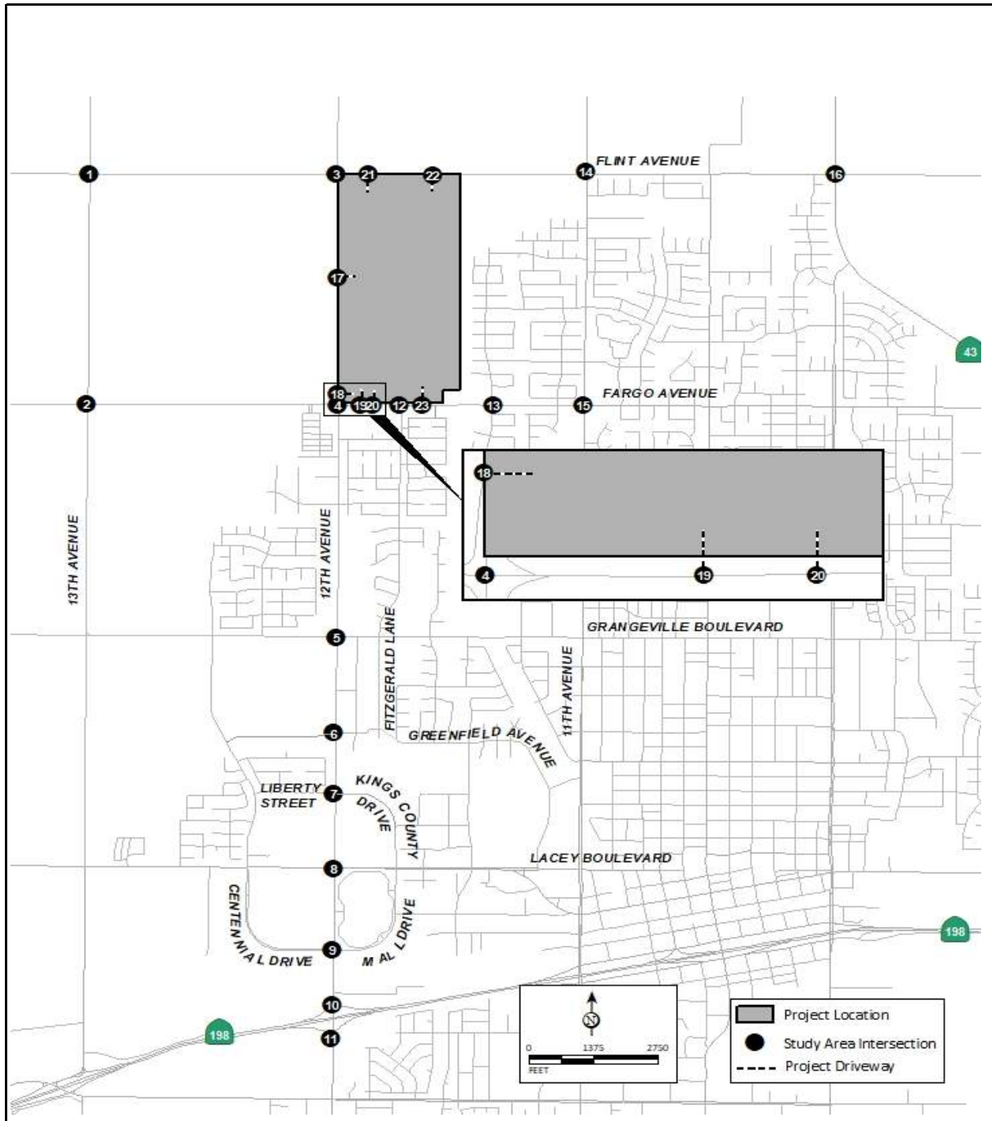
FIGURE 5-1

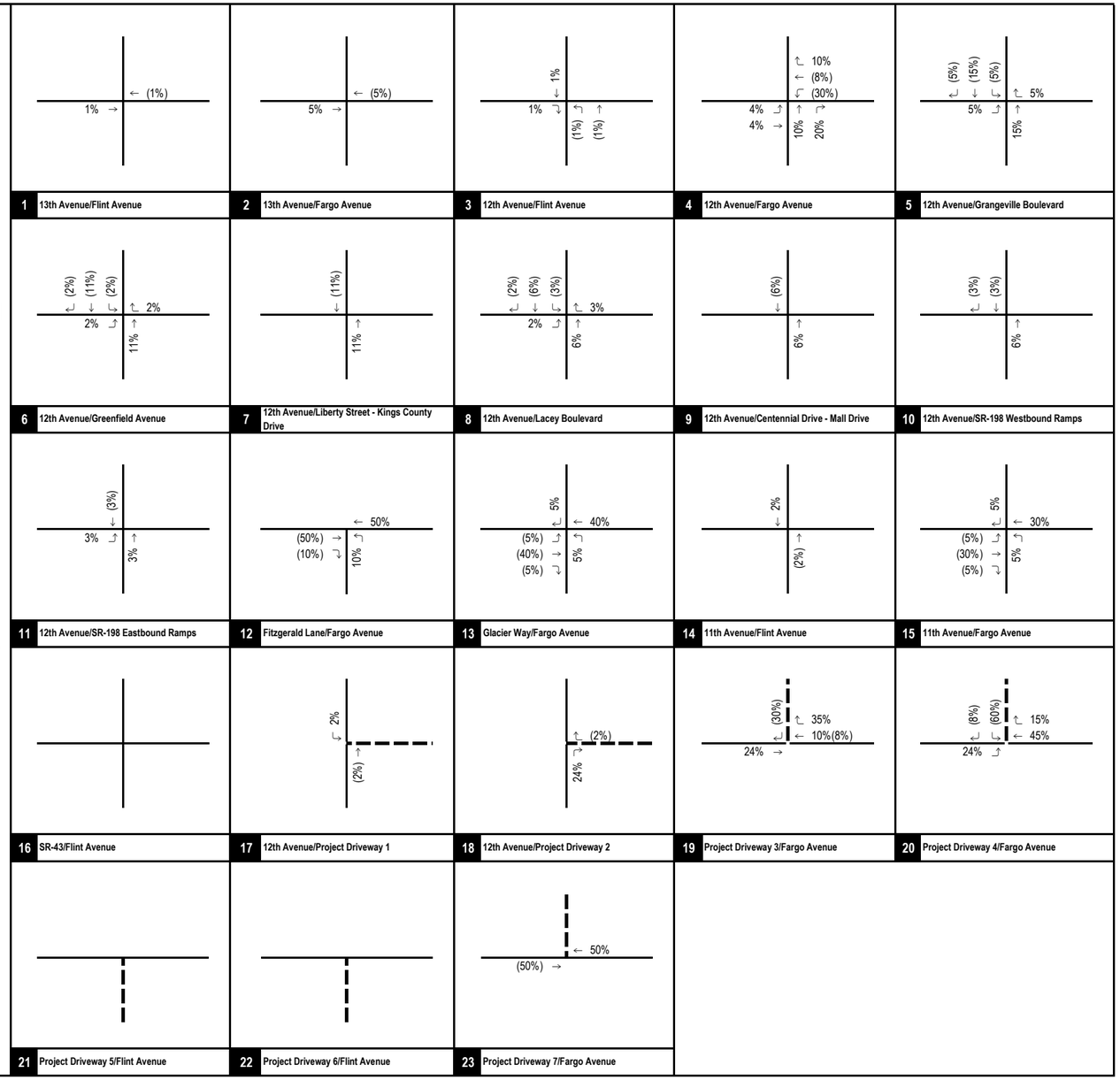
XX% (YY%)
Inbound (Outbound) Distribution
Project Driveway

Singh Development Project
Traffic Study

Project Trip Distribution - Residential

P:\FOC2203\Traffic\z45_Dist_Residential.xlsx 5/8/2023





LSA

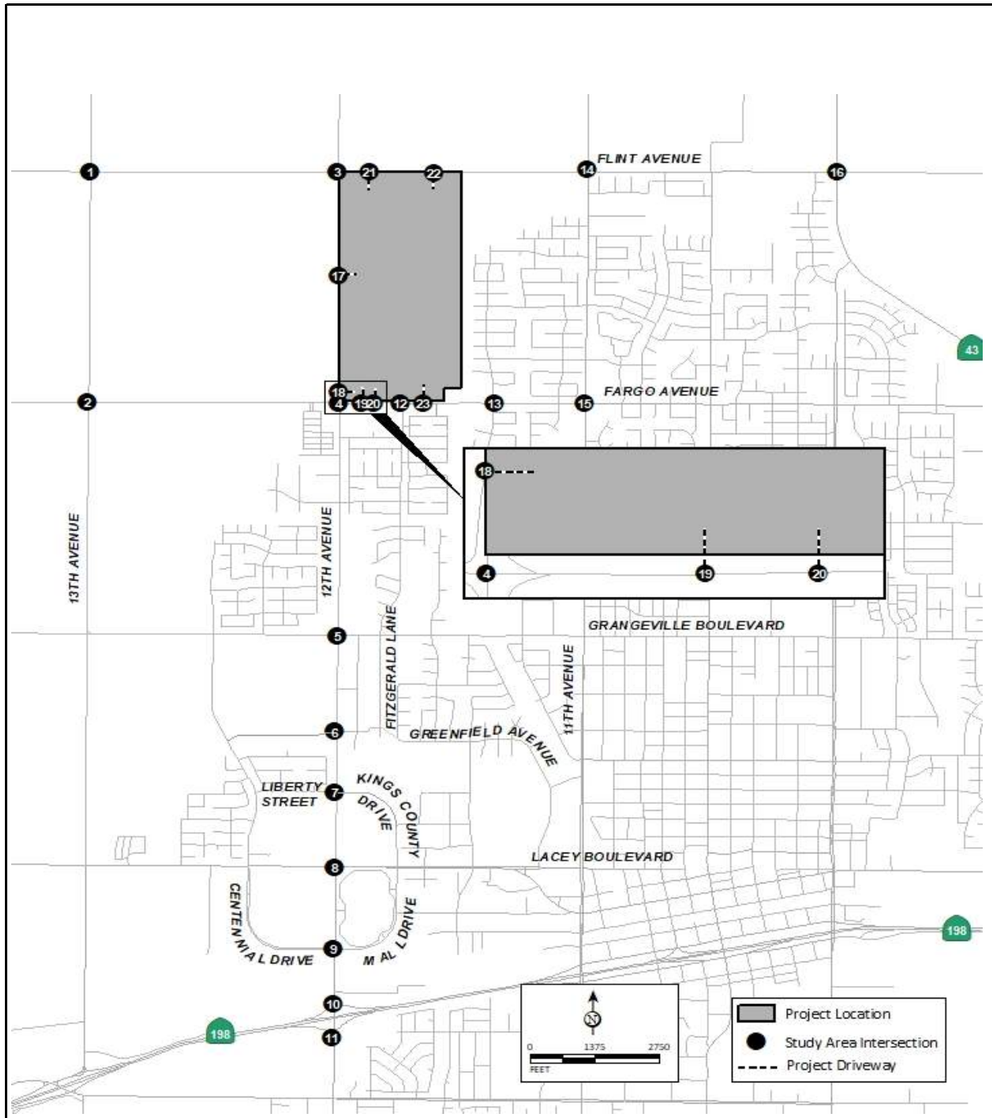
FIGURE 5-2

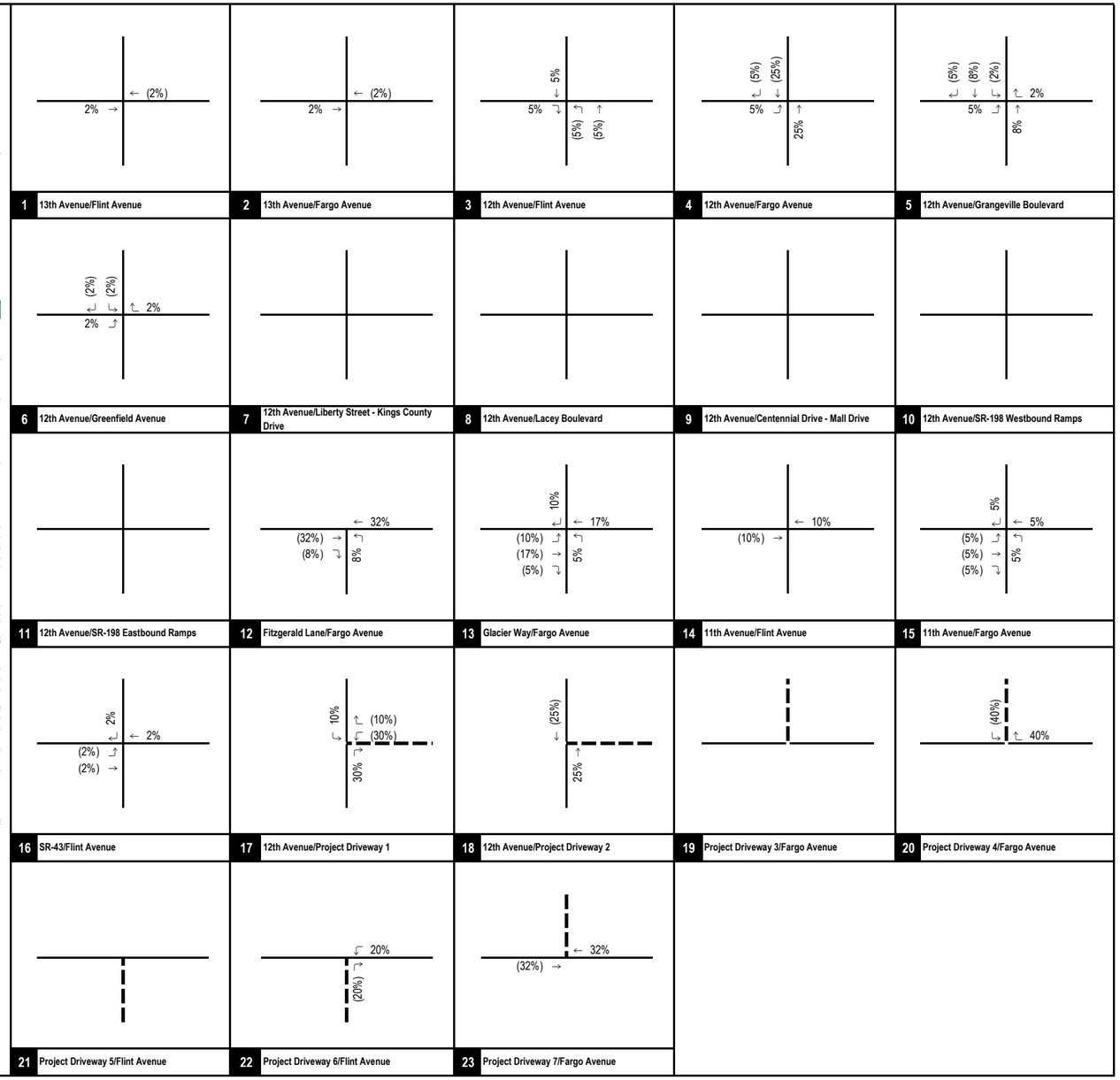
XX% (YY%)
Inbound (Outbound) Distribution
Project Driveway

Singh Development Project
Traffic Study

Project Trip Distribution - Retail/Commercial

P:\FOC2203\Traffic\z45_Dist_Retail.xlsx 5/8/2023





LSA

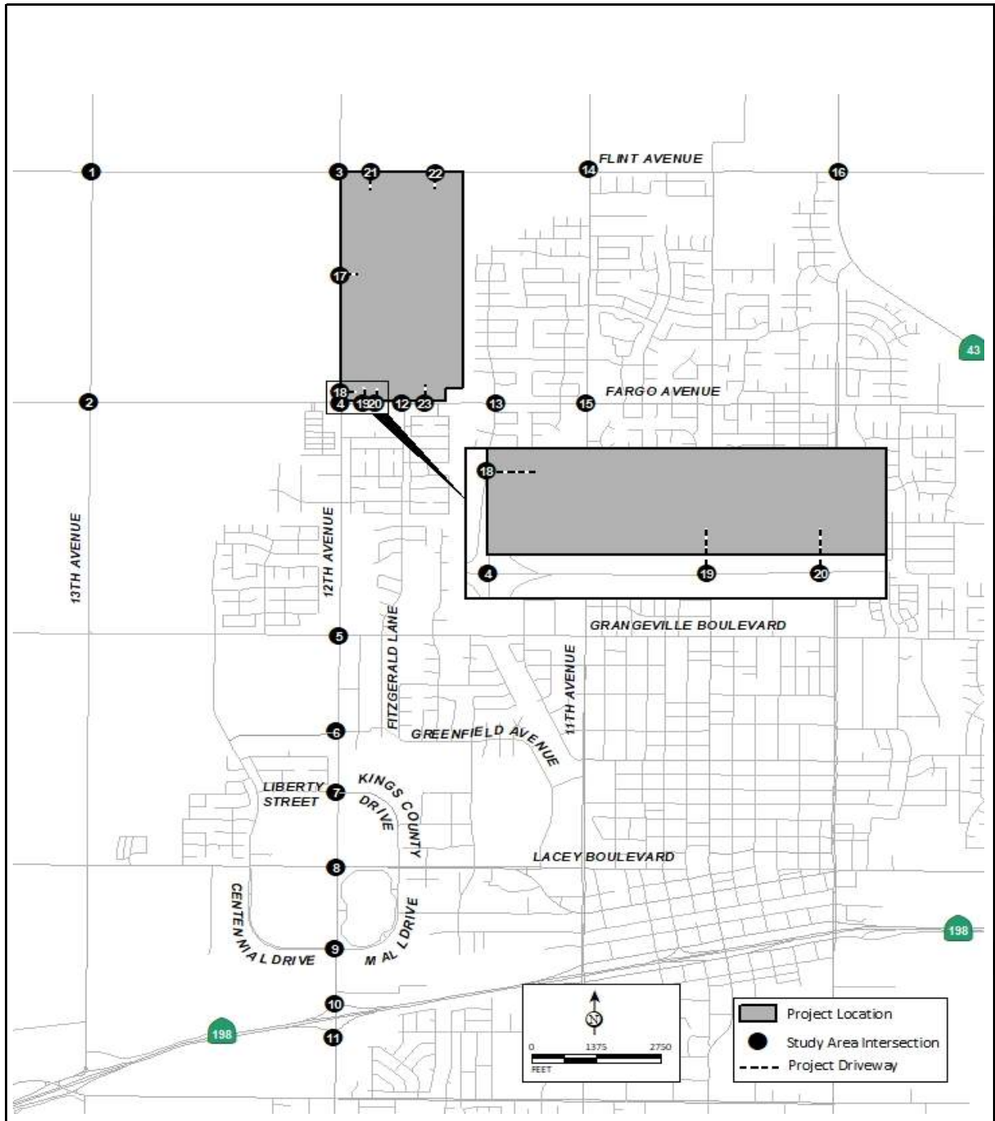
FIGURE 5-3

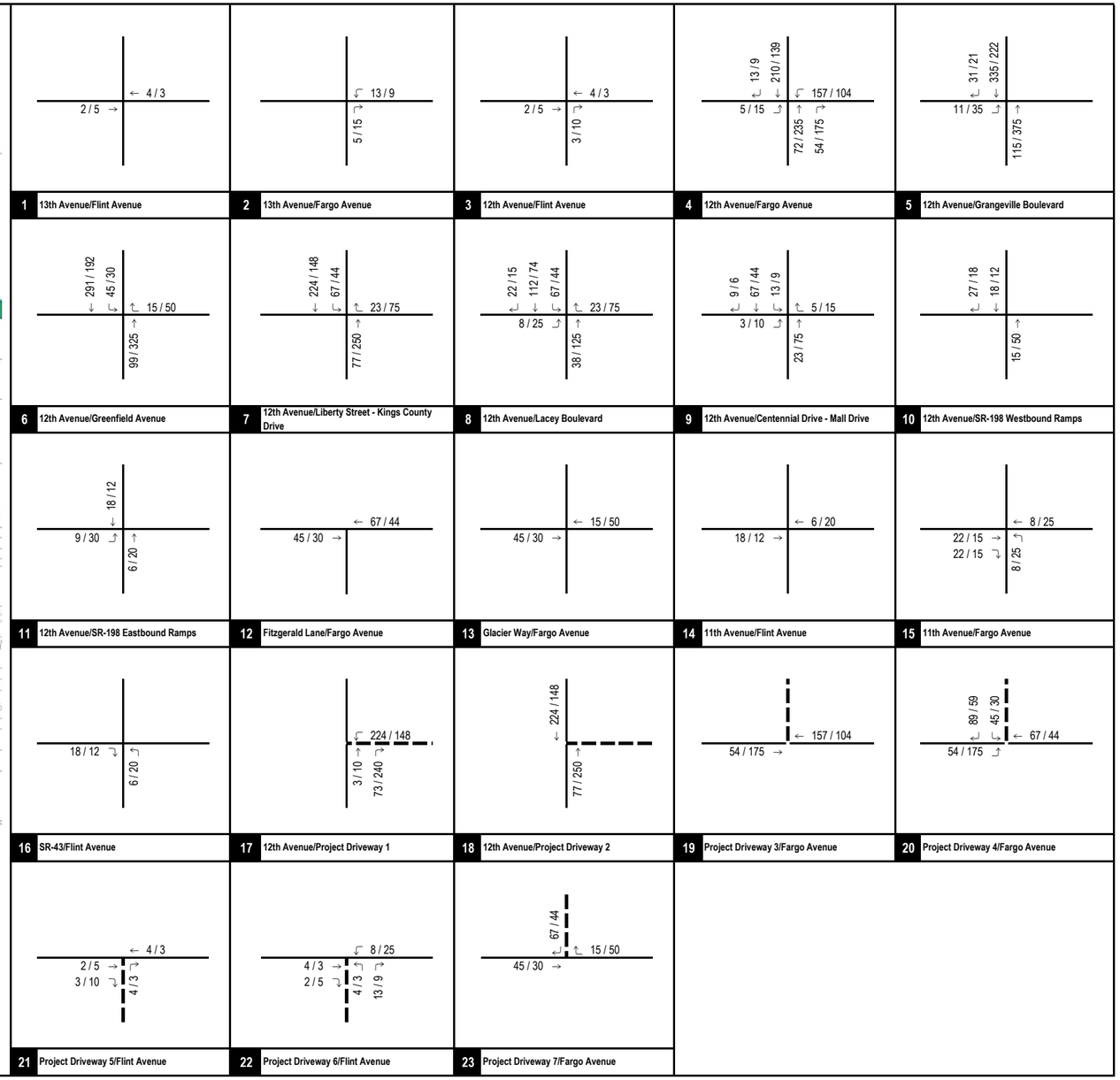
XX% (YY%)
Inbound (Outbound) Distribution
Project Driveway

Singh Development Project
Traffic Study

Project Trip Distribution - Elementary School

P:\FOC2203\Traffic\z45_Dist_School.xlsx 5/8/2023





LSA

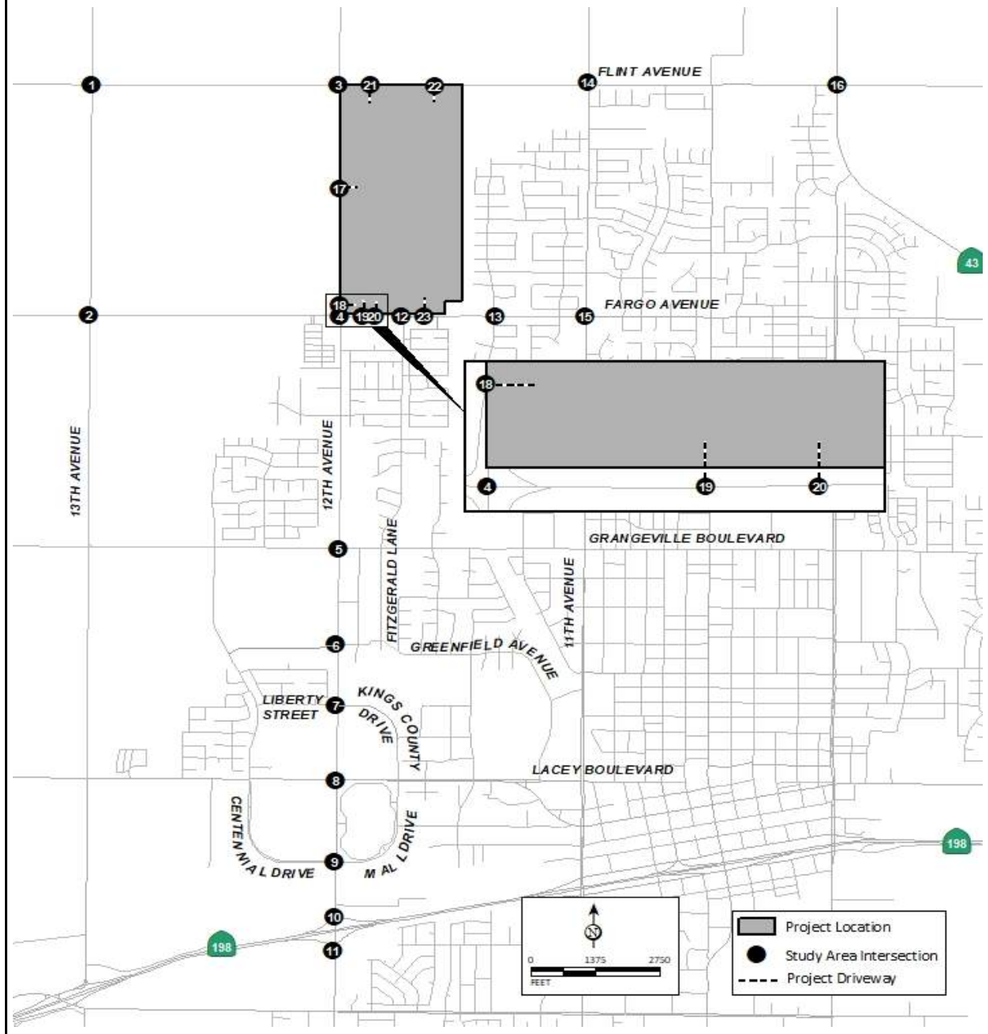
FIGURE 5-4

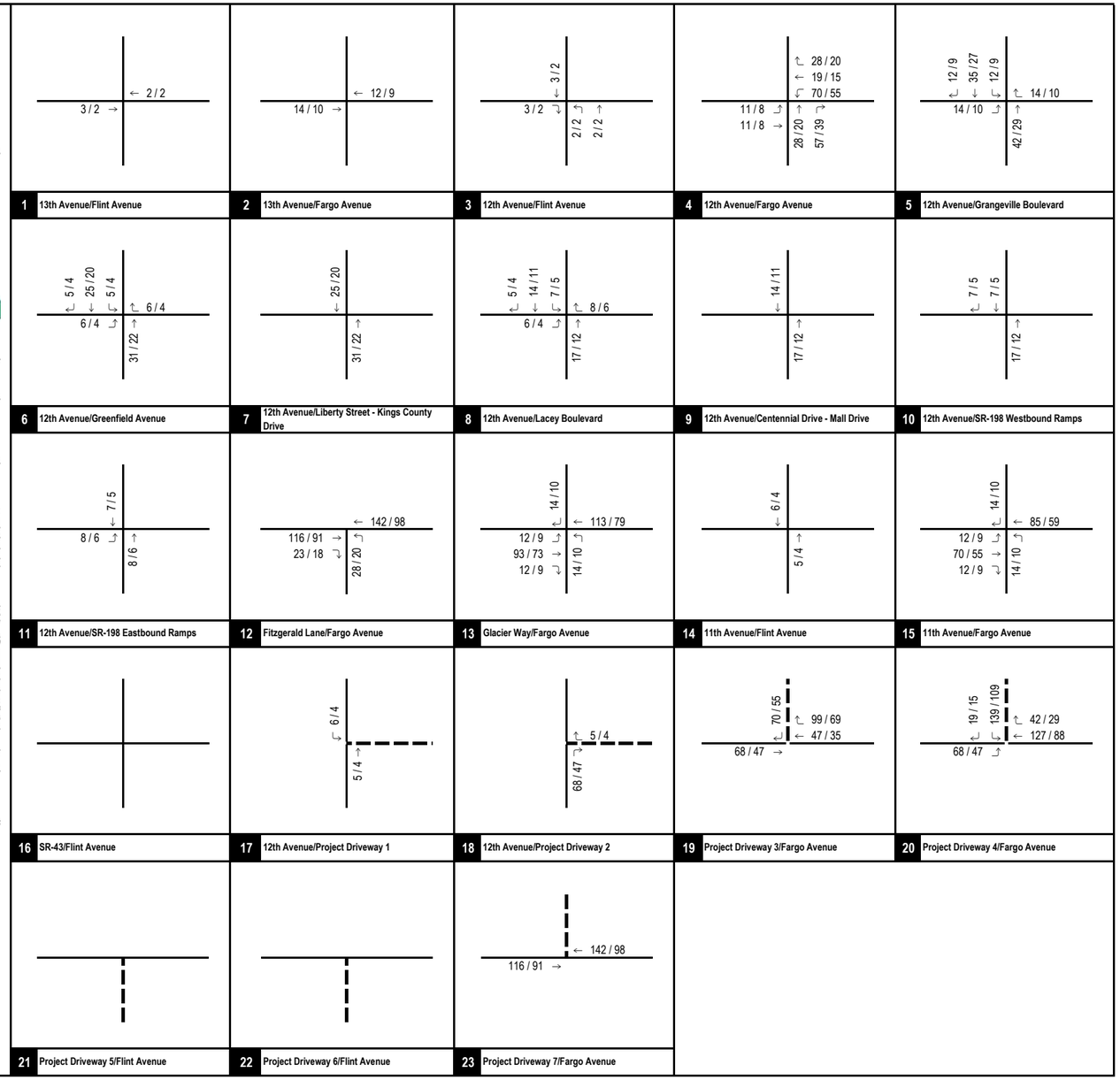
XXX / YYY
AM / PM Peak Hour Trips
Project Driveway

Singh Development Project
Traffic Study

Project Trip Assignment - Residential

P:\FOC2203\Traffic\z45_Assign_Residential.xlsx 5/8/2023





LSA

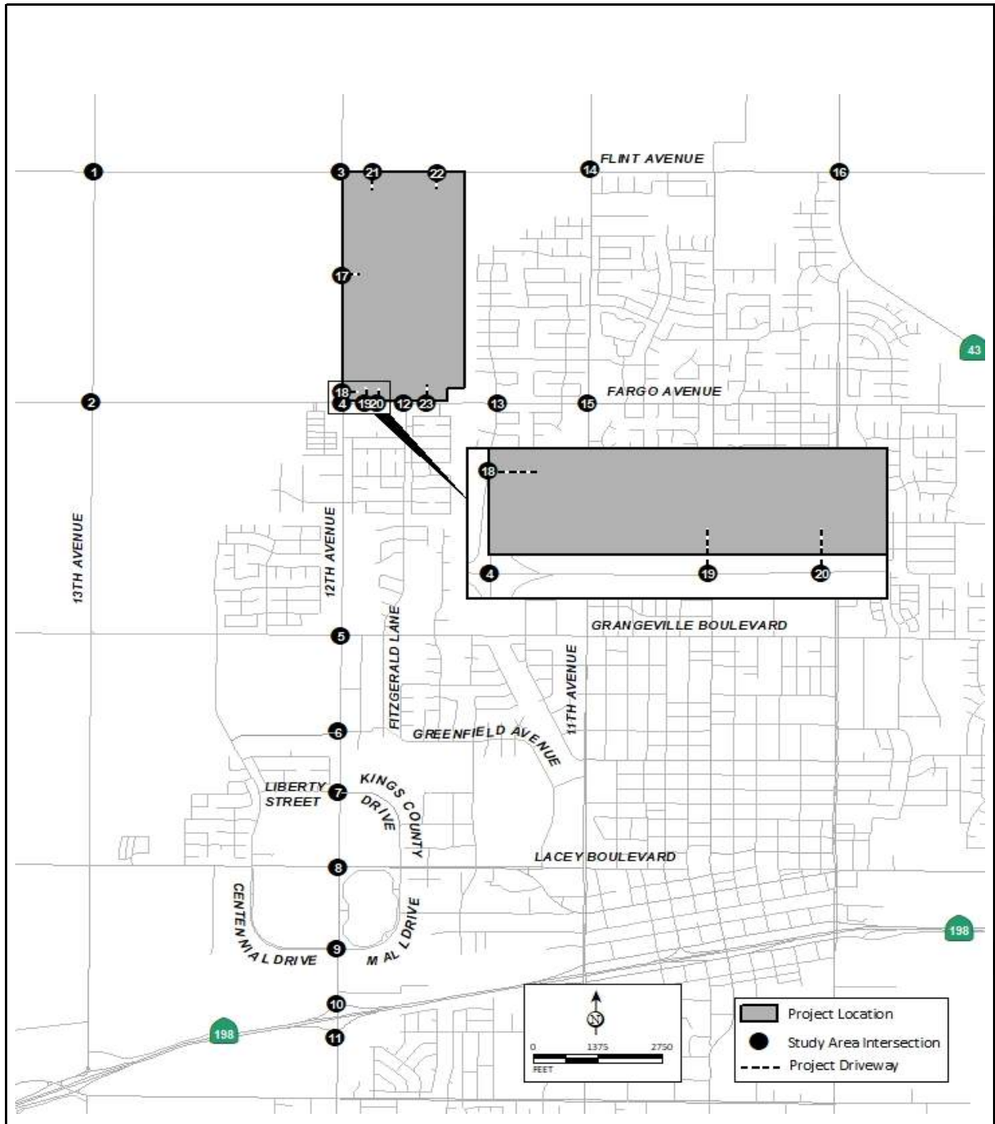
FIGURE 5-5

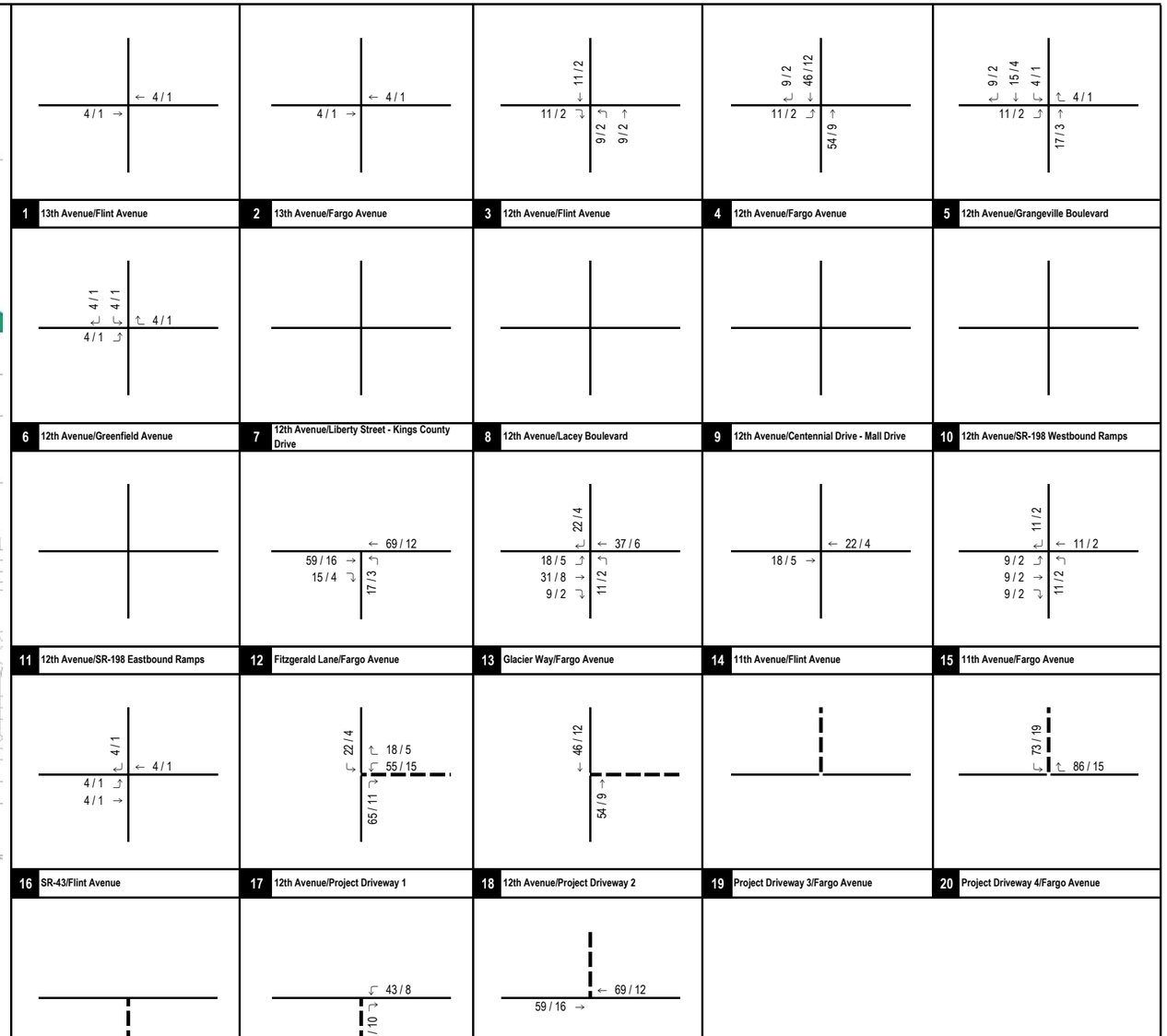
XXX / YYY
AM / PM Peak Hour Trips
Project Driveway

Singh Development Project
Traffic Study

Project Trip Assignment - Retail/Commercial

P:\FOC2203\Traffic\z45_Assign_Retail.xlsx 5/8/2023





LSA

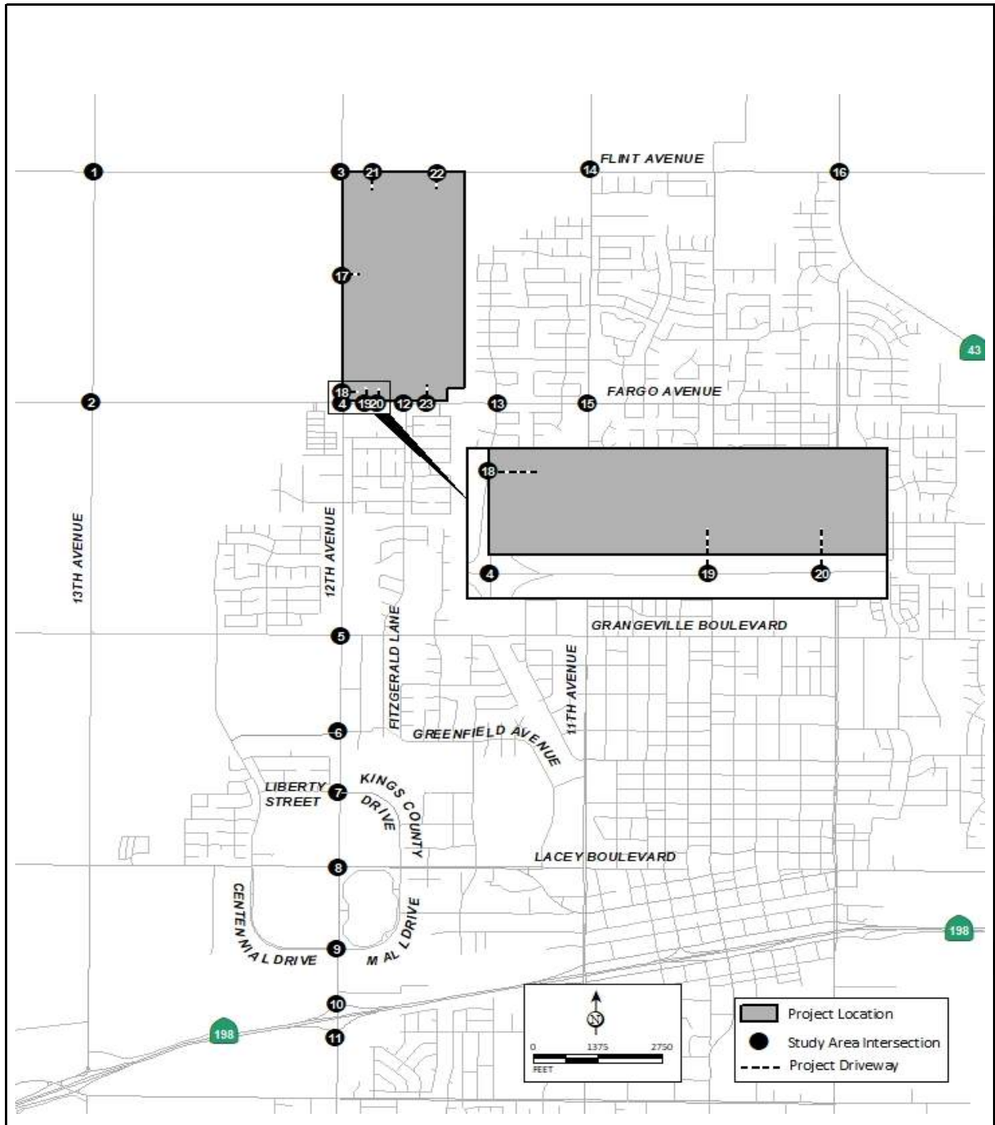
FIGURE 5-6

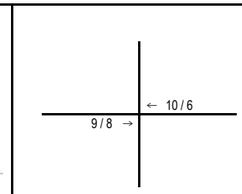
XX / YY
AM / PM Peak Hour Trips
Project Driveway

Singh Development Project
Traffic Study

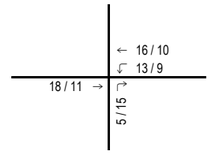
Project Trip Assignment - Elementary School

P:\FOC2203\Traffic\z45_Assign_School.xlsx 5/8/2023

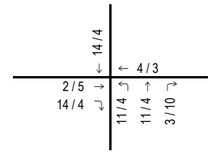




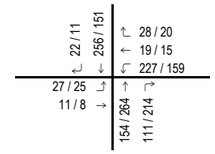
1 13th Avenue/Flint Avenue



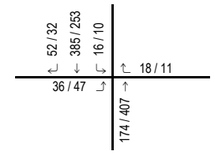
2 13th Avenue/Fargo Avenue



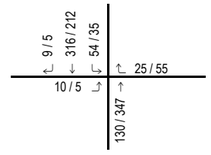
3 12th Avenue/Flint Avenue



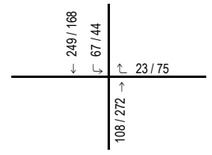
4 12th Avenue/Fargo Avenue



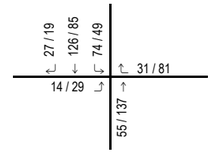
5 12th Avenue/Grangeville Boulevard



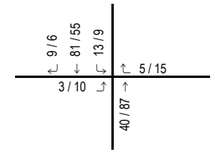
6 12th Avenue/Greenfield Avenue



7 12th Avenue/Liberty Street - Kings County Drive



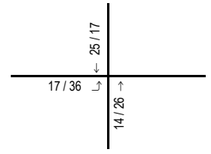
8 12th Avenue/Lacey Boulevard



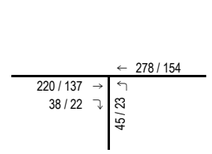
9 12th Avenue/Centennial Drive - Mall Drive



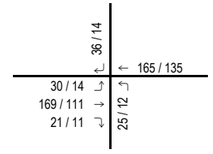
10 12th Avenue/SR-198 Westbound Ramps



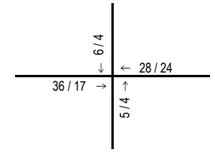
11 12th Avenue/SR-198 Eastbound Ramps



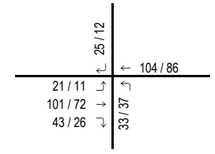
12 Fitzgerald Lane/Fargo Avenue



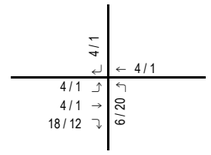
13 Glacier Way/Fargo Avenue



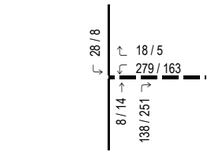
14 11th Avenue/Flint Avenue



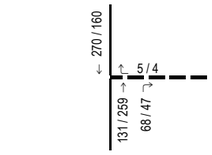
15 11th Avenue/Fargo Avenue



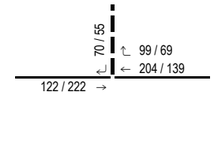
16 SR-43/Flint Avenue



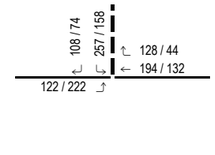
17 12th Avenue/Project Driveway 1



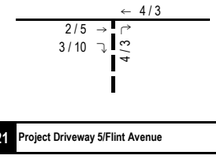
18 12th Avenue/Project Driveway 2



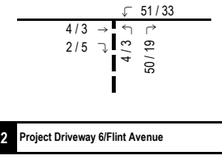
19 Project Driveway 3/Fargo Avenue



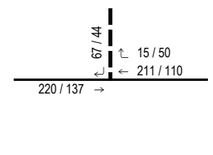
20 Project Driveway 4/Fargo Avenue



21 Project Driveway 5/Flint Avenue



22 Project Driveway 6/Flint Avenue



23 Project Driveway 7/Fargo Avenue

LSA

FIGURE 5-7

XXX / YYY
AM / PM Peak Hour Trips
Project Driveway

Singh Development Project
Traffic Study

Total Project Net Trip Assignment

LSA

Table 5-A - Project Trip Generation

Land Use	Units		A.M. Peak Hour In	A.M. Peak Hour Out	A.M. Peak Hour Total	P.M. Peak Hour In	P.M. Peak Hour Out	P.M. Peak Hour Total	Daily
Single-Family Detached Housing	697	DU							
Trips/Unit[1]			0.18	0.52	0.70	0.59	0.35	0.94	9.43
Gross Trips			125	362	487	411	244	655	6,573
Internal Capture[2]			(13)	(36)	(49)	(41)	(24)	(66)	(657)
External Trips			113	326	438	370	220	590	5,916
Multifamily Housing	449	DU							
Trips/Unit[3]			0.10	0.30	0.40	0.32	0.19	0.51	6.74
Gross Trips			45	135	180	144	85	229	3,026
Internal Capture[2]			(5)	(14)	(18)	(14)	(9)	(23)	(303)
External Trips			41	122	162	130	77	206	2,723
Elementary School	600	Students							
Trips/Unit[4]			0.40	0.34	0.74	0.07	0.09	0.16	2.27
Gross Trips			240	204	444	42	54	96	1,362
Internal Capture[2]			(24)	(20)	(44)	(4)	(5)	(10)	(136)
External Trips			216	184	400	38	49	86	1,226
Retail	12.50	TSF							
Trips/Unit[5]			1.42	0.94	2.36	3.30	3.30	6.59	54.45
Gross Trips			18	12	30	41	41	82	681
Internal Capture[2]			(2)	(1)	(3)	(4)	(4)	(8)	(68)
Total External Trips			16	11	27	37	37	74	613
Pass-by Trips[6]			0	0	0	(15)	(15)	(30)	(245)
Net External Trips			16	11	27	22	22	44	368
Sit-Down Restaurant	11.00	TSF							
Trips/Unit[7]			5.26	4.31	9.57	5.52	3.53	9.05	107.20
Gross Trips			58	47	105	61	39	100	1,179
Internal Capture[2]			(6)	(5)	(11)	(6)	(4)	(10)	(118)
Total External Trips			52	42	95	55	35	90	1,061
Pass-by Trips[8]			0	0	0	(24)	(15)	(39)	(456)
Net External Trips			52	42	95	31	20	51	605
Food Court with Outdoor Seating	10.50	TSF							
Trips/Unit[9]			25.04	18.14	43.18	16.61	16.61	33.21	450.49
Gross Trips			263	190	453	174	174	348	4,730
Internal Capture[2]			(26)	(19)	(45)	(17)	(17)	(35)	(473)
Total External Trips			237	171	408	157	157	313	4,257
Pass-by Trips[10]			(118)	(86)	(204)	(86)	(86)	(172)	(2,235)
Net External Trips			119	85	204	71	71	141	2,022

LSA

Land Use	Units	A.M. Peak Hour In	A.M. Peak Hour Out	A.M. Peak Hour Total	P.M. Peak Hour In	P.M. Peak Hour Out	P.M. Peak Hour Total	Daily
Restaurant with Drive-Through Window	6.00 TSF							
Trips/Unit[11]		22.75	21.86	44.61	17.18	15.85	33.03	467.48
Gross Trips		137	131	268	103	95	198	2,805
Internal Capture[2]		(14)	(13)	(27)	(10)	(10)	(20)	(281)
Total External Trips		123	118	241	93	86	178	2,525
Pass-by Trips[12]		(62)	(59)	(121)	(51)	(47)	(98)	(1,325)
Net External Trips		61	59	120	42	39	80	1,200
Gas Station with Convenience Store	12 VFP							
Trips/Unit[13]		13.52	13.52	27.04	11.38	11.38	22.76	257.13
Gross Trips		162	162	324	137	137	274	3,086
Internal Capture[2]		(16)	(16)	(32)	(14)	(14)	(27)	(309)
Total External Trips		146	146	292	123	123	247	2,777
Pass-by Trips[14]		(111)	(111)	(222)	(92)	(92)	(184)	(2,097)
Net External Trips		35	35	70	31	31	63	680
Total Gross Trips		**1,048**	**1,243**	**2,291**	**1,113**	**869**	**1,982**	**23,442**
Total Internal Trips		**(105)**	**(124)**	**(229)**	**(111)**	**(87)**	**(198)**	**(2,344)**
Total External Trips		**943**	**1,119**	**2,062**	**1,002**	**782**	**1,784**	**21,098**
Pass-By Trips		**(291)**	**(256)**	**(547)**	**(268)**	**(255)**	**(523)**	**(6,358)**
Total Net External Trips		**652**	**863**	**1,515**	**734**	**527**	**1,261**	**14,740**

Notes:

DU = Dwelling Units; TSF = Thousand Square Feet; VFP = Vehicle Fueling Positions

[1] Rates from the Institute of Transportation Engineers (ITE) *Trip Generation Manual* (11th Edition), Land Use 210 - "Single-Family Detached Housing", Setting/Location - "General Urban/Suburban."

[2] Internal Capture rates were capped at 10 percent.

[3] Rates from the ITE *Trip Generation Manual* (11th Edition), Land Use 220 - "Multifamily Housing (Low-Rise) Not Close to Rail Transit", Setting/Location - "General Urban/Suburban."

[4] Rates from the ITE *Trip Generation Manual* (11th Edition), Land Use 520 - "Elementary School", Setting/Location - "General Urban/Suburban."

[5] Rates from the ITE *Trip Generation Manual* (11th Edition), Land Use 822 - "Strip Retail Plaza (<40k)", Setting/Location - "General Urban/Suburban."

[6] Pass-by rates for Land Use 822 - "Strip Retail Plaza (<40k)" are not available in the ITE *Trip Generation Manual* (11th Edition). Therefore, pass-by rates for Land Use 821 - "Shopping Plaza (40-150k)" were used instead. An a.m. peak hour pass-by rate is not available for this land use. A pass-by rate of 40 percent was used for the p.m. peak hour. Since a daily pass-by rate is not available, the p.m. peak hour pass-by rate was used as the daily rate.

[7] Rates from the ITE *Trip Generation Manual* (11th Edition), Land Use 932 - "High-Turnover (Sit-Down) Restaurant", Setting/Location - "General Urban/Suburban."

[8] Pass-by rates from the ITE *Trip Generation Manual* (11th Edition) for Land Use 932 - "High-Turnover (Sit-Down) Restaurant." An a.m. peak hour pass-by rate is not available for this land use. A pass-by rate of 43 percent was used for the p.m. peak hour. Since a daily pass-by rate is not available, the p.m. peak hour pass-by rate was used as the dailv rate.

[9] Rates from the ITE *Trip Generation Manual* (11th Edition), Land Use 933 - "Fast-Food Restaurant without Drive-Through Window", Setting/Location - "General Urban/Suburban."

[10] Pass-by rates for Land Use 933 - "Fast-Food Restaurant without Drive-Through Window" are not available in the ITE *Trip Generation Manual* (11th Edition). Therefore, pass-by rates for Land Use 934 - "Fast-Food Restaurant with Drive-Through Window" were used instead. A pass-by rate of 50 percent was used for the a.m. peak hour and a pass-by rate of 55 percent was used for the p.m. peak hour. Since a daily pass-by rate is not available, the average of the a.m. and p.m. peak hour pass-by rates was used as the daily rate.

[11] Rates from the ITE *Trip Generation Manual* (11th Edition), Land Use 934 - "Fast-Food Restaurant with Drive-Through Window", Setting/Location - "General Urban/Suburban."

[12] Pass-by rates from the ITE *Trip Generation Manual* (11th Edition) for Land Use 934 - "Fast-Food Restaurant with Drive-Through Window." A pass-by rate of 50 percent was used for the a.m. peak hour and a pass-by rate of 55 percent was used for the p.m. peak hour. Since a daily pass-by rate is not available, the average of the a.m. and p.m. peak hour pass-by rates was used as the daily rate.

[13] Rates from the ITE *Trip Generation Manual* (11th Edition), Land Use 945 - "Convenience Store/Gas Station - GFA (4-5.5k)", Setting/Location - "General Urban/Suburban."

[14] Pass-by rates from the ITE *Trip Generation Manual* (11th Edition) for Land Use 945 - "Convenience Store/Gas Station." A pass-by rate of 76 percent was used for the a.m. peak hour and a pass-by rate of 75 percent was used for the p.m. peak hour. Since a daily pass-by rate is not available, the average of the a.m. and p.m. peak hour pass-by rates was used as the daily rate.

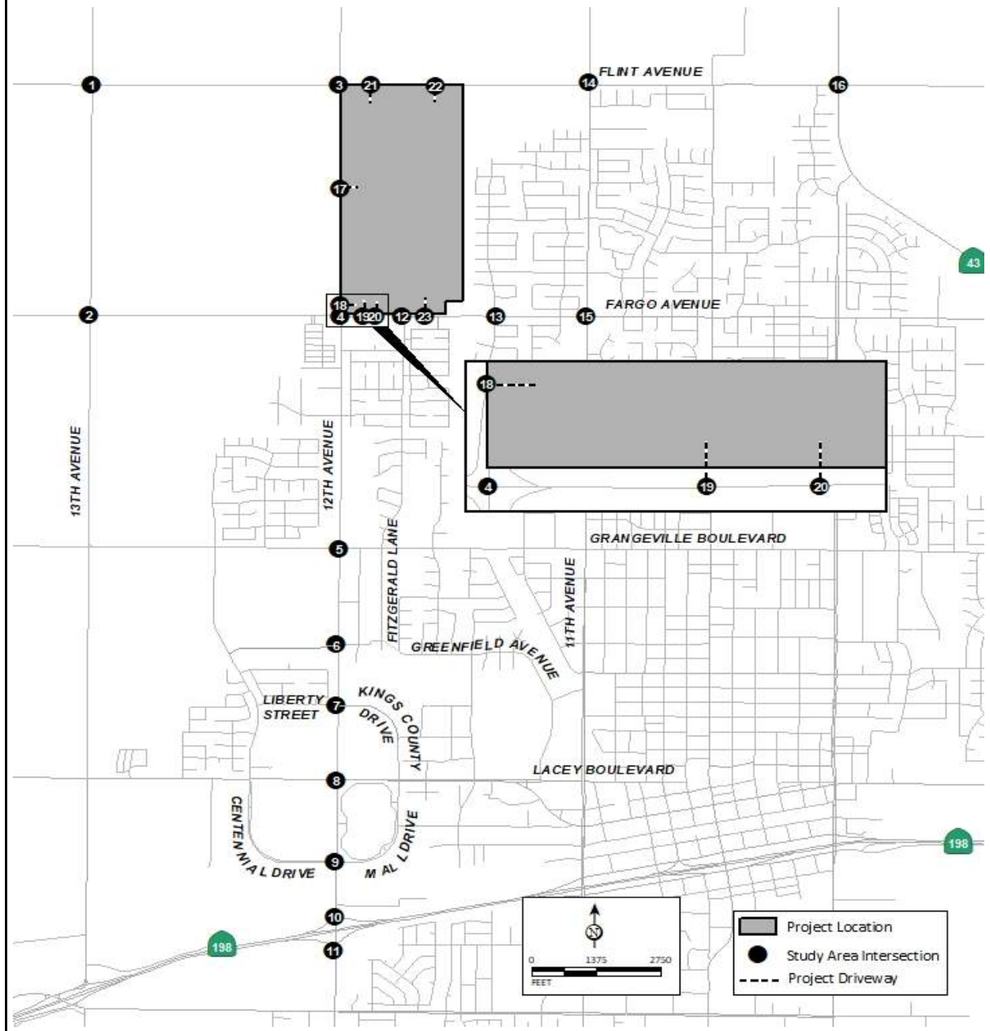
6.0 TRAFFIC VOLUMES FOR PLUS PROJECT SCENARIOS

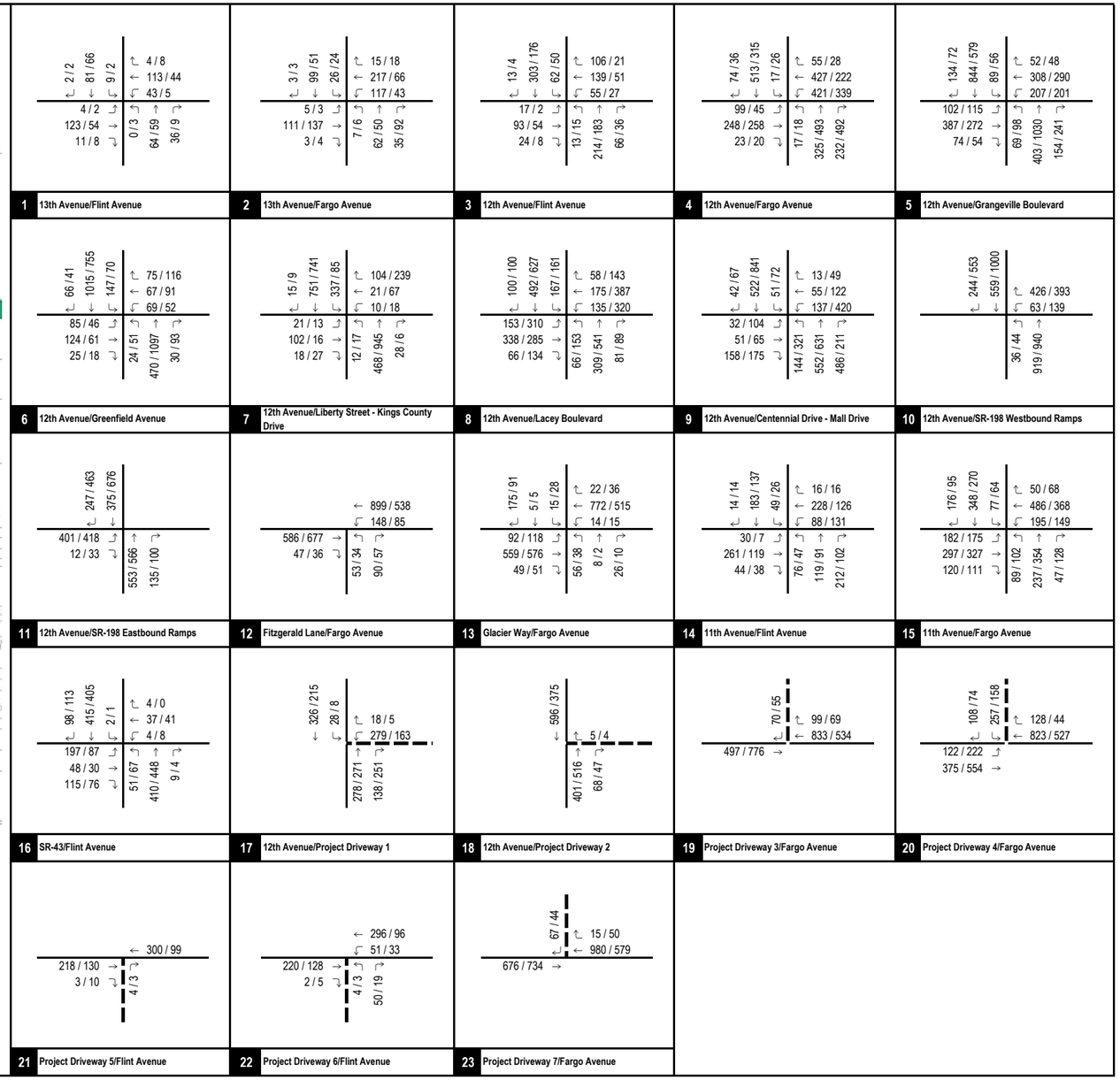
Existing, near-term, and cumulative plus project traffic volumes were developed by adding project traffic to the traffic volumes for the corresponding without project scenarios. Figures 6-1, 6-2 and 6-3 illustrate "plus project" peak-hour traffic volumes at study intersections under existing, near-term, and cumulative conditions, respectively.

Detailed volume development worksheets are included in Appendix C.

6.1 LIST OF CHAPTER 6.0 FIGURES

- Figure 6-1: Existing Plus Project Peak-Hour Traffic Volumes
- Figure 6-2: Near-Term Plus Project Peak-Hour Traffic Volumes
- Figure 6-3: Cumulative Year (2042) Plus Project Peak-Hour Traffic Volumes





LSA

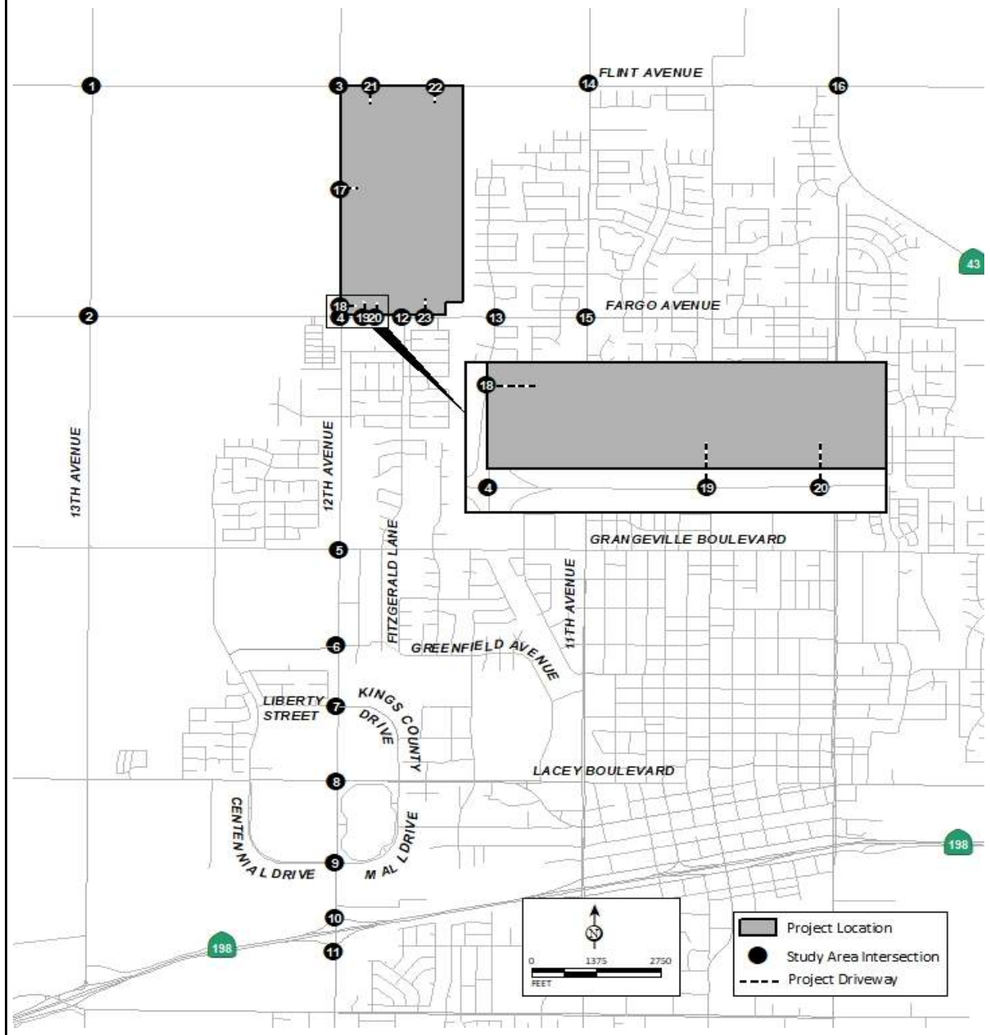
FIGURE 6-1

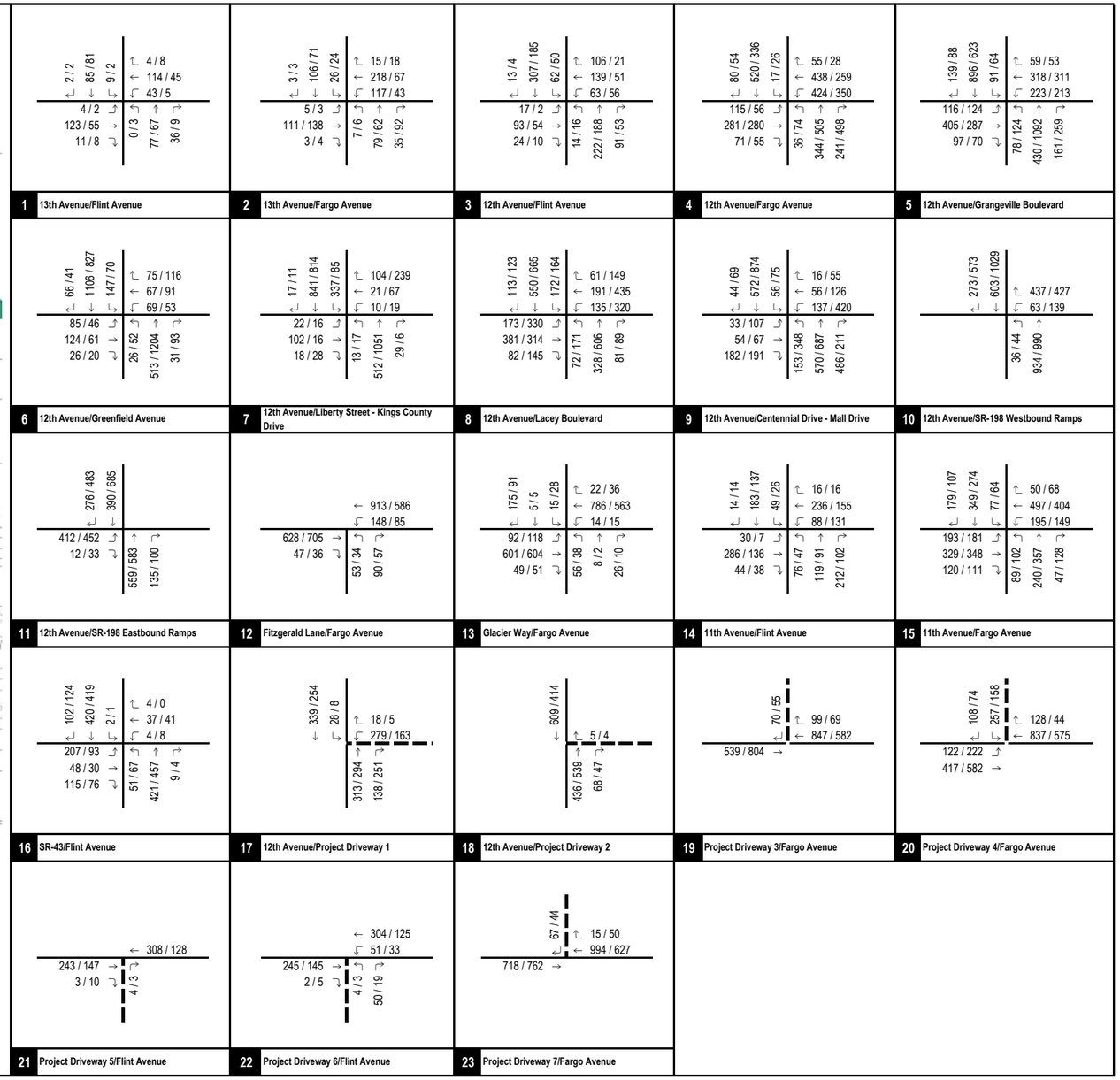
XXX / YYY
AM / PM Peak Hour Traffic Volumes
Project Driveway

Singh Development Project
Traffic Study

Existing Plus Project Peak Hour Traffic Volumes

P:\FOC2203\Traffic\z45_Vol_Exist_WP.xlsx 5/8/2023





LSA

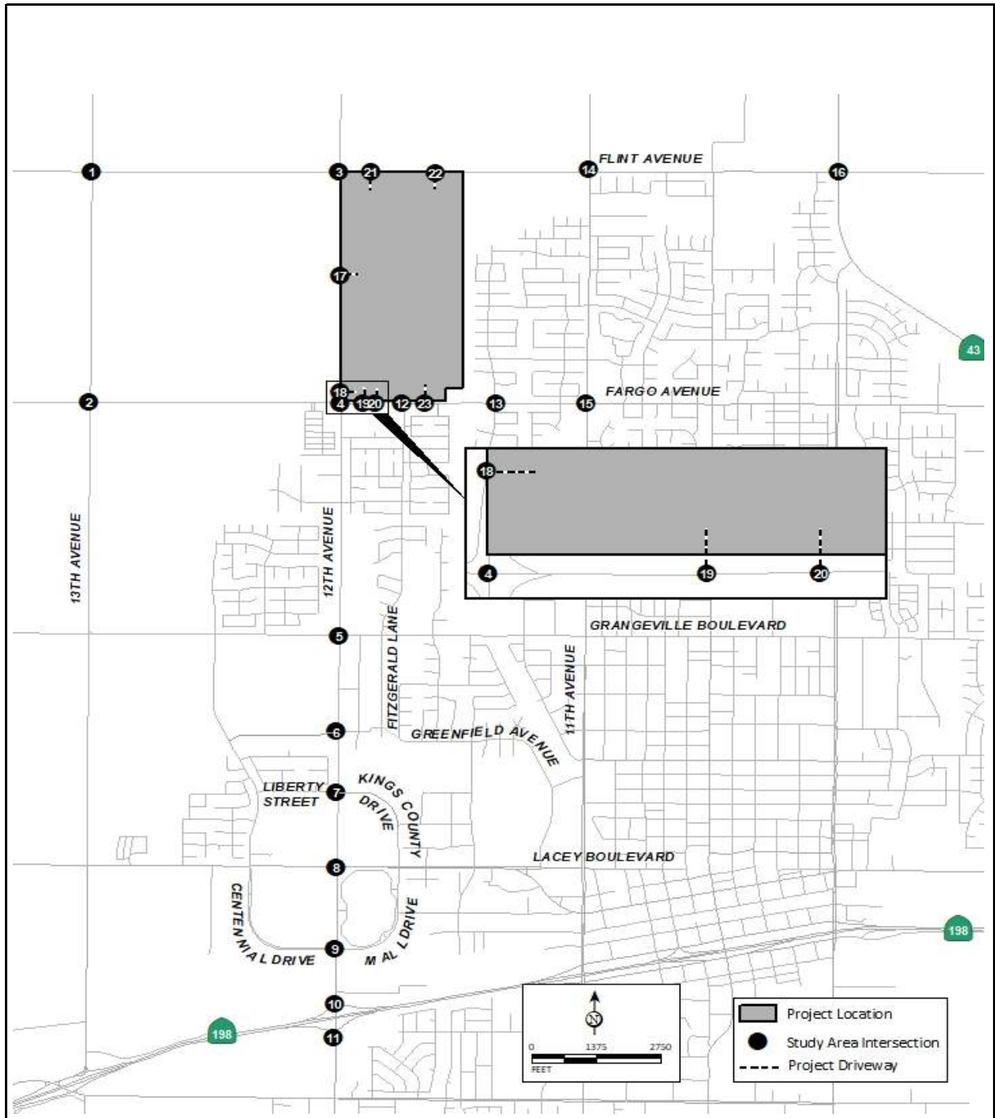
FIGURE 6-2

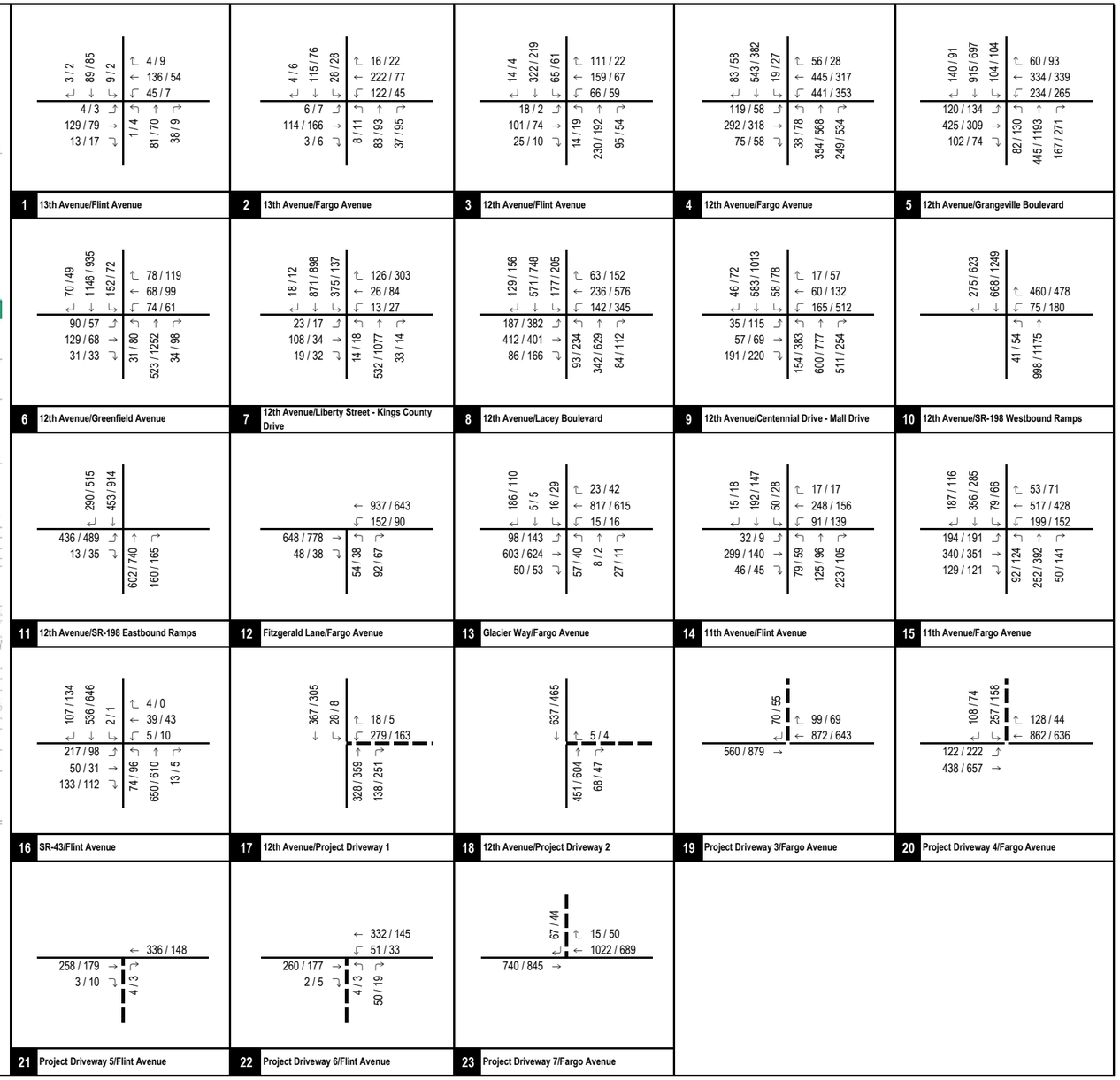
XXX / YYY
AM / PM Peak Hour Traffic Volumes
Project Driveway

Singh Development Project
Traffic Study

Near-Term Plus Project Peak Hour Traffic Volumes

P:\FOC2203\Traffic\z45_Vol_NT_WP.xlsx 5/8/2023





LSA

FIGURE 6-3

XXX / YYY
AM / PM Peak Hour Traffic Volumes
Project Driveway

Singh Development Project
Traffic Study

Cumulative Year (2042) Plus Project Peak Hour Traffic Volumes

P:\FOC2203\Traffic\z45_Vol_2042 Cum_WP.xlsx 5/8/2023

7.0 INTERSECTION LEVELS OF SERVICE

7.1 EXISTING LEVELS OF SERVICE

Figure 3-2 illustrates existing study intersection geometrics and traffic control.

An intersection LOS analysis was conducted for existing conditions using the methodologies previously discussed. Table 7-A summarizes the results of this analysis and shows that the following intersection is forecast to operate at a deficient LOS under existing conditions:

- 12th Avenue/Flint Avenue (a.m. peak hour only)
- Glacier Way/Fargo Avenue (a.m. and p.m. peak hours).

All other study intersections operate at a satisfactory LOS under existing conditions.

7.2 EXISTING PLUS PROJECT LEVELS OF SERVICE

Analysis of the existing with project scenario is provided to identify direct project-related operational deficiency if the project were to be built and in operation today. This scenario eliminates the effects of ambient growth and other cumulative projects and deals specifically with operational deficiencies only due to the project traffic. Figure 3-3 illustrates the study intersection geometrics and traffic control under all 'plus project' scenarios.

An intersection LOS analysis was conducted for existing plus project conditions using the methodologies previously discussed. Table 7-A summarizes the results of this analysis and shows that the following intersection is forecast to operate at a deficient LOS under existing plus project conditions:

- 12th Avenue/Flint Avenue (a.m. peak hour only)
- 12th Avenue/Fargo Avenue (a.m. and p.m. peak hours)
- Fitzgerald Lane/Fargo Avenue (a.m. peak hour only)
- Glacier Way/Fargo Avenue (a.m. and p.m. peak hours)
- 11th Avenue/Flint Avenue (a.m. peak hour only)
- 12th Avenue/Project Driveway 1 (a.m. peak hour only)
- Project Driveway 4/Fargo Avenue (a.m. and p.m. peak hours)

It should be noted that among these intersections two intersections are currently operating at a deficient LOS. As such, the project is forecast to add to the existing deficiencies at these intersections. All other study intersections are forecasted to operate at a satisfactory LOS under existing plus project conditions.

7.3 NEAR-TERM PLUS PROJECT LEVELS OF SERVICE

An intersection LOS analysis was conducted for near-term plus project conditions using the methodologies previously discussed. Table 7-B summarizes the results of this analysis and shows that the following intersections are forecasted to operate at a deficient LOS under near-term plus project conditions:

- 12th Avenue/Flint Avenue (a.m. peak hour only)
- 12th Avenue/Fargo Avenue (a.m. and p.m. peak hours)
- Fitzgerald Lane/Fargo Avenue (a.m. peak hour only)
- Glacier Way/Fargo Avenue (a.m. and p.m. peak hours)
- 11th Avenue/Flint Avenue (a.m. peak hour only)
- 12th Avenue/Project Driveway 1 (a.m. peak hour only)
- Project Driveway 4/Fargo Avenue (a.m. and p.m. peak hours)

Based on the operational deficiency criteria stated in Section 2.2 of this TIA, the project is forecasted to create an operational deficiency at these intersections. All other study intersections are forecasted to operate at a satisfactory LOS under near-term plus project conditions.

7.4 CUMULATIVE YEAR (2042) PLUS PROJECT LEVELS OF SERVICE

An intersection LOS analysis was conducted for cumulative year (2042) plus project conditions using the methodologies previously discussed. Table 7-C summarizes the results of this analysis and shows that the following intersection is forecasted to operate at a deficient LOS under cumulative year (2042) plus project conditions:

- 12th Avenue/Flint Avenue (a.m. peak hour only)
- 12th Avenue/Fargo Avenue (a.m. and p.m. peak hours)
- 12th Avenue/Liberty Street – Kings County Drive (a.m. peak hour only)
- Fitzgerald Lane/Fargo Avenue (a.m. peak hour only)
- Glacier Way/Fargo Avenue (a.m. and p.m. peak hours)
- 11th Avenue/Flint Avenue (a.m. peak hour only)
- 12th Avenue/Project Driveway 1 (a.m. peak hour only)
- Project Driveway 4/Fargo Avenue (a.m. and p.m. peak hours)

Based on the operational deficiency criteria stated in Section 2.2 of this TS, the project is forecasted to create an operational deficiency at these intersections. All other study intersections are forecasted to operate at a satisfactory LOS under cumulative plus project conditions.

Detailed intersection LOS worksheets are included in Appendix D.

7.5 LIST OF CHAPTER 7.0 TABLES

- Table 7-A: Existing Intersection Levels of Service
- Table 7-B: Near-Term Intersection Levels of Service
- Table 7-C: Cumulative Year (2042) Intersection Levels of Service

LSA

Table 7-A - Existing Intersection Levels of Service

Intersection	Jurisdiction	LOS Standard	Without Project					Plus Project					Improvement Required?
			Control	A.M. Peak Hour Delay (sec.)	A.M. Peak Hour LOS	P.M. Peak Hour Delay (sec.)	P.M. Peak Hour LOS	Control	A.M. Peak Hour Delay (sec.)	A.M. Peak Hour LOS	P.M. Peak Hour Delay (sec.)	P.M. Peak Hour LOS	
1 . 13th Avenue/Flint Avenue	Kings County	D	AWSC	10.5	B	7.7	A	AWSC	10.8	B	7.8	A	No
2 . 13th Avenue/Fargo Avenue	Kings County	D	AWSC	13.5	B	8.5	A	AWSC	15.3	C	8.7	A	No
3 . 12th Avenue/Flint Avenue	Hanford/Kings County	D	AWSC	56.4	**F** *	9.8	A	AWSC	73.2	**F** *	10.0	A	**Yes**
4 . 12th Avenue/Fargo Avenue	Hanford/Kings County	D	Signal	24.6	C	18.9	B	Signal	132.0	**F** *	61.4	**E** *	**Yes**
5 . 12th Avenue/Grangeville Boulevard	Hanford	D	Signal	18.4	B	16.5	B	Signal	23.9	C	19.1	B	No
6 . 12th Avenue/Greenfield Avenue	Hanford	D	Signal	17.5	B	14.1	B	Signal	39.6	D	31.3	C	No
7 . 12th Avenue/Liberty Street - Kings County Drive	Hanford	D	Signal	27.8	C	12.7	B	Signal	52.1	D	19.3	B	No
8 . 12th Avenue/Lacey Boulevard	Hanford	D	Signal	14.7	B	18.5	B	Signal	15.6	B	19.8	B	No
9 . 12th Avenue/Centennial Drive - Mall Drive	Hanford	D	Signal	20.0	C	23.3	C	Signal	20.3	C	23.8	C	No
10 . 12th Avenue/SR-198 WB Ramps	Caltrans	45 sec	Signal	23.9	C	23.5	C	Signal	23.9	C	23.9	C	No
11 . 12th Avenue/SR-198 EB Ramps	Caltrans	45 sec	Signal	16.4	B	21.5	C	Signal	16.8	B	23.4	C	No
12 . Fitzgerald Lane/Fargo Avenue	Hanford/Kings County	D	OWSC	16.8	C	15.3	C	OWSC	176.0	**F** *	23.7	C	**Yes**
13 . Glacier Way/Fargo Avenue	Hanford	D	TWSC	>200	**F** *	36.0	**E** *	TWSC	>200	**F** *	105.7	**F** *	**Yes**
14 . 11th Avenue/Flint Avenue	Hanford/Kings County	D	AWSC	29.3	D	10.8	B	AWSC	47.5	**E** *	11.3	B	**Yes**
15 . 11th Avenue/Fargo Avenue	Hanford	D	Signal	27.3	C	23.0	C	Signal	32.6	C	25.1	C	No
16 . SR-43/Flint Avenue	Caltrans	45 sec	Signal	33.2	C	24.7	C	Signal	33.9	C	25.2	C	No
17 . 12th Avenue/Project Driveway 1	Hanford/Kings County	D	-	*Future Intersection*		*Future Intersection*		OWSC	62.7	**F** *	21.1	C	**Yes**
18 . 12th Avenue/Project Driveway 2	Hanford/Kings County	D	-	*Future Intersection*		*Future Intersection*		OWSC	9.8	A	10.2	B	No
19 . Project Driveway 3/Fargo Avenue	Hanford/Kings County	D	-	*Future Intersection*		*Future Intersection*		OWSC	13.2	B	10.9	B	No
20 . Project Driveway 4/Fargo Avenue	Hanford/Kings County	D	-	*Future Intersection*		*Future Intersection*		OWSC	>200	**F** *	>200	**F** *	**Yes**
21 . Project Driveway 5/Flint Avenue	Hanford/Kings County	D	-	*Future Intersection*		*Future Intersection*		OWSC	9.0	A	8.7	A	No
22 . Project Driveway 6/Flint Avenue	Hanford/Kings County	D	-	*Future Intersection*		*Future Intersection*		OWSC	9.7	A	9.0	A	No
23 . Project Driveway 7/Fargo Avenue	Hanford/Kings County	D	-	*Future Intersection*		*Future Intersection*		OWSC	13.6	B	10.9	B	No

Notes:

AWSC= All-Way Stop Control; OWSC = One-Way Stop Control; TWSC = Two-Way Stop Control; LOS = Level of Service

Delay = Average control delay in seconds (For OWSC/TWSC intersections, reported delay is for worst-case movement).

* Exceeds LOS Standard

LSA

Table 7-B - Near-Term Intersection Levels of Service

Intersection	Jurisdiction	LOS Standard	Plus Project						Improvement Required?
			Control	A.M. Peak Hour			P.M. Peak Hour		
				Delay (sec.)	LOS		Delay (sec.)	LOS	
1 . 13th Avenue/Flint Avenue	Kings County	D	AWSC	11.1	B		7.9	A	No
2 . 13th Avenue/Fargo Avenue	Kings County	D	AWSC	16.0	C		8.9	A	No
3 . 12th Avenue/Flint Avenue	Hanford/Kings County	D	AWSC	80.8	**F**	*	10.3	B	**Yes**
4 . 12th Avenue/Fargo Avenue	Hanford/Kings County	D	Signal	96.4	**F**	*	67.1	**E**	* **Yes**
5 . 12th Avenue/Grangeville Boulevard	Hanford	D	Signal	24.4	C		20.5	C	No
6 . 12th Avenue/Greenfield Avenue	Hanford	D	Signal	50.6	D		48.7	D	No
7 . 12th Avenue/Liberty Street - Kings County Drive	Hanford	D	Signal	52.4	D		27.7	C	No
8 . 12th Avenue/Lacey Boulevard	Hanford	D	Signal	16.2	B		21.4	C	No
9 . 12th Avenue/Centennial Drive - Mall Drive	Hanford	D	Signal	21.6	C		25.1	C	No
10 . 12th Avenue/SR-198 WB Ramps	Caltrans	45 sec	Signal	24.0	C		24.4	C	No
11 . 12th Avenue/SR-198 EB Ramps	Caltrans	45 sec	Signal	16.9	B		23.8	C	No
12 . Fitzgerald Lane/Fargo Avenue	Hanford/Kings County	D	OWSC	>200	**F**	*	25.5	D	**Yes**
13 . Glacier Way/Fargo Avenue	Hanford	D	TWSC	>200	**F**	*	142.1	**F**	* **Yes**
14 . 11th Avenue/Flint Avenue	Hanford/Kings County	D	AWSC	56.3	**F**	*	12.0	B	**Yes**
15 . 11th Avenue/Fargo Avenue	Hanford	D	Signal	34.5	C		25.8	C	No
16 . SR-43/Flint Avenue	Caltrans	45 sec	Signal	35.0	D		25.4	C	No
17 . 12th Avenue/Project Driveway 1	Hanford/Kings County	D	OWSC	81.6	**F**	*	24.0	C	**Yes**
18 . 12th Avenue/Project Driveway 2	Hanford/Kings County	D	OWSC	10.0	A		10.3	B	No
19 . Project Driveway 3/Fargo Avenue	Hanford/Kings County	D	OWSC	13.3	B		11.1	B	No
20 . Project Driveway 4/Fargo Avenue	Hanford/Kings County	D	OWSC	>200	**F**	*	>200	**F**	* **Yes**
21 . Project Driveway 5/Flint Avenue	Hanford/Kings County	D	OWSC	9.0	A		8.8	A	No
22 . Project Driveway 6/Flint Avenue	Hanford/Kings County	D	OWSC	9.8	A		9.1	A	No
23 . Project Driveway 7/Fargo Avenue	Hanford/Kings County	D	OWSC	13.7	B		11.1	B	No

Notes:

AWSC= All-Way Stop Control; OWSC = One-Way Stop Control; TWSC = Two-Way Stop Control; LOS = Level of Service

Delay = Average control delay in seconds (For OWSC/TWSC intersections, reported delay is for worst-case movement).

* Exceeds LOS Standard

LSA

Table 7-C - Cumulative Year (2042) Intersection Levels of Service

Intersection	Jurisdiction	LOS Standard	Plus Project						Improvement Required?
			Control	A.M. Peak Hour			P.M. Peak Hour		
				Delay (sec.)	LOS		Delay (sec.)	LOS	
1 . 13th Avenue/Flint Avenue	Kings County	D	AWSC	12.1	B		8.0	A	No
2 . 13th Avenue/Fargo Avenue	Kings County	D	AWSC	17.5	C		9.4	A	No
3 . 12th Avenue/Flint Avenue	Hanford/Kings County	D	AWSC	100.0	**F**	*	11.5	B	**Yes**
4 . 12th Avenue/Fargo Avenue	Hanford/Kings County	D	Signal	144.7	**F**	*	87.2	**F**	* **Yes**
5 . 12th Avenue/Grangeville Boulevard	Hanford	D	Signal	33.1	C		23.7	C	No
6 . 12th Avenue/Greenfield Avenue	Hanford	D	Signal	52.1	D		54.9	D	No
7 . 12th Avenue/Liberty Street - Kings County Drive	Hanford	D	Signal	55.7	**E**	*	49.7	D	**Yes**
8 . 12th Avenue/Lacey Boulevard	Hanford	D	Signal	17.0	B		27.8	C	No
9 . 12th Avenue/Centennial Drive - Mall Drive	Hanford	D	Signal	22.1	C		30.7	C	No
10 . 12th Avenue/SR-198 WB Ramps	Caltrans	45 sec	Signal	24.1	C		26.1	C	No
11 . 12th Avenue/SR-198 EB Ramps	Caltrans	45 sec	Signal	16.9	B		24.8	C	No
12 . Fitzgerald Lane/Fargo Avenue	Hanford/Kings County	D	OWSC	91.3	**F**	*	33.0	D	**Yes**
13 . Glacier Way/Fargo Avenue	Hanford	D	TWSC	>200	**F**	*	>200	**F**	* **Yes**
14 . 11th Avenue/Flint Avenue	Hanford/Kings County	D	AWSC	67.0	**F**	*	12.7	B	**Yes**
15 . 11th Avenue/Fargo Avenue	Hanford	D	Signal	36.0	D		26.6	C	No
16 . SR-43/Flint Avenue	Caltrans	45 sec	Signal	40.0	D		32.4	C	No
17 . 12th Avenue/Project Driveway 1	Hanford/Kings County	D	OWSC	102.4	**F**	*	32.3	D	**Yes**
18 . 12th Avenue/Project Driveway 2	Hanford/Kings County	D	OWSC	10.0	A		10.6	B	No
19 . Project Driveway 3/Fargo Avenue	Hanford/Kings County	D	OWSC	13.5	B		11.5	B	No
20 . Project Driveway 4/Fargo Avenue	Hanford/Kings County	D	OWSC	>200	**F**	*	>200	**F**	* **Yes**
21 . Project Driveway 5/Flint Avenue	Hanford/Kings County	D	OWSC	9.1	A		8.9	A	No
22 . Project Driveway 6/Flint Avenue	Hanford/Kings County	D	OWSC	9.9	A		9.3	A	No
23 . Project Driveway 7/Fargo Avenue	Hanford/Kings County	D	OWSC	14.0	B		11.5	B	No

Notes:

AWSC= All-Way Stop Control; OWSC = One-Way Stop Control; TWSC = Two-Way Stop Control; LOS = Level of Service

Delay = Average control delay in seconds (For OWSC/TWSC intersections, reported delay is for worst-case movement).

* Exceeds LOS Standard

8.0 SIGNAL WARRANT ANALYSIS

A signal warrant analysis was conducted at study intersections where installing a signal could be an appropriate and potential operational improvement measure. A Peak Hour Warrant (Warrant 3) was conducted for such locations. Peak hour approach volumes for the study intersections were examined to determine whether signalization is warranted per the criteria defined in the latest version California supplement of the *Manual on Uniform Traffic Control Devices* (CA-MUTCD). Following is a brief summary of signal warrant analysis:

8.1 12TH AVENUE/FLINT AVENUE

Figures 8-1, 8-2, and 8-3 illustrate the Warrant 3 (peak hour) for this intersection under existing, near-term plus project, and cumulative year (2042) plus project conditions, respectively. As shown in these figures, this intersection meets the signal warrant under all scenarios. As such, a signal is warranted at this location and could be recommended as a potential operational improvement measure.

8.2 GLACIER WAY/FARGO AVENUE

Figures 8-4, 8-5, and 8-6 illustrate the Warrant 3 (peak hour) for this intersection under existing, near-term plus project, and cumulative year (2042) plus project conditions, respectively. As shown in these figures, this intersection meets the signal warrant under all scenarios. As such, a signal is warranted at this location and could be recommended as a potential operational improvement measure.

8.3 11TH AVENUE/FLINT AVENUE

Figures 8-7, 8-8, and 8-9 illustrate the Warrant 3 (peak hour) for this intersection under existing, near-term plus project, and cumulative year (2042) plus project conditions, respectively. As shown in these figures, this intersection meets the signal warrant under all scenarios. As such, a signal is warranted at this location and could be recommended as a potential operational improvement measure.

8.4 12TH AVENUE/PROJECT DRIVEWAY 1

Figures 8-10, 8-11, and 8-12 illustrate the Warrant 3 (peak hour) for this intersection under existing, near-term plus project, and cumulative year (2042) plus project conditions, respectively. As shown in these figures, this intersection meets the signal warrant under all scenarios. As such, a signal is warranted at this location and could be recommended as a potential operational improvement measure.

8.5 PROJECT DRIVEWAY 4/FARGO AVENUE

Figures 8-13, 8-14, and 8-15 illustrate the Warrant 3 (peak hour) for this intersection under existing, near-term plus project, and cumulative year (2042) plus project conditions, respectively. As shown in these figures, this intersection meets the signal warrant under all scenarios. As such, a signal is

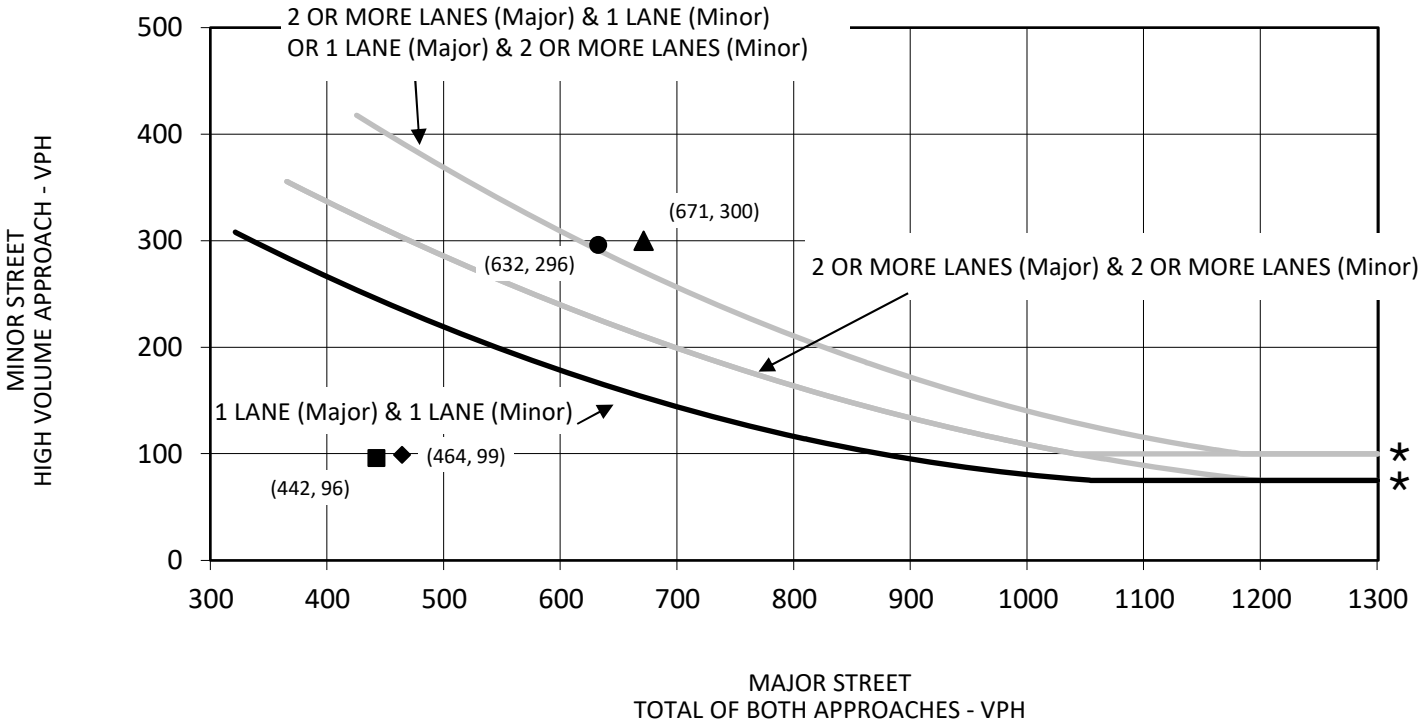
warranted at this location and could be recommended as a potential operational improvement measure.

8.6 LIST OF CHAPTER 8.0 FIGURES

- Figure 8-1: Warrant 3: Peak Hour - 12th Avenue/Flint Avenue - Existing Conditions
- Figure 8-2: Warrant 3: Peak Hour - 12th Avenue/Flint Avenue - Near-Term Plus Project Conditions
- Figure 8-3: Warrant 3: Peak Hour - 12th Avenue/Flint Avenue - Cumulative Year (2042) Plus Project Conditions
- Figure 8-4: Warrant 3: Peak Hour - Glacier Way/Fargo Avenue - Existing Conditions
- Figure 8-5: Warrant 3: Peak Hour - Glacier Way/Fargo Avenue - Near-Term Plus Project Conditions
- Figure 8-6: Warrant 3: Peak Hour - Glacier Way/Fargo Avenue - Cumulative Year (2042) Plus Project Conditions
- Figure 8-7: Warrant 3: Peak Hour - 11th Avenue/Flint Avenue - Existing Conditions
- Figure 8-8: Warrant 3: Peak Hour - 11th Avenue/Flint Avenue - Near-Term Plus Project Conditions
- Figure 8-9: Warrant 3: Peak Hour - 11th Avenue/Flint Avenue - Cumulative Year (2042) Plus Project Conditions
- Figure 8-10: Warrant 3: Peak Hour - 12th Avenue/Project Driveway 1 - Existing Conditions
- Figure 8-11: Warrant 3: Peak Hour - 12th Avenue/Project Driveway 1 - Near-Term Plus Project Conditions
- Figure 8-12: Warrant 3: Peak Hour - 12th Avenue/Project Driveway 1 - Cumulative Year (2042) Plus Project Conditions
- Figure 8-13: Warrant 3: Peak Hour - Project Driveway 4/Fargo Avenue - Existing Conditions
- Figure 8-14: Warrant 3: Peak Hour - Project Driveway 4/Fargo Avenue - Near-Term Plus Project Conditions
- Figure 8-15: Warrant 3: Peak Hour - Project Driveway 4/Fargo Avenue - Cumulative Year (2042) Plus Project Conditions

WARRANT 3, PEAK HOUR (70% FACTOR)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 mph ON MAJOR STREET)



* 100 VPH applies as the lower threshold volume for a minor street approach with two or more lanes and 75 VPH applies as the lower threshold volume for a minor street approaching with one lane.

LSA

FIGURE 8-1

● Without Project AM Peak Hour ▲ Plus Project AM Peak Hour

■ Without Project PM Peak Hour ◆ Plus Project PM Peak Hour

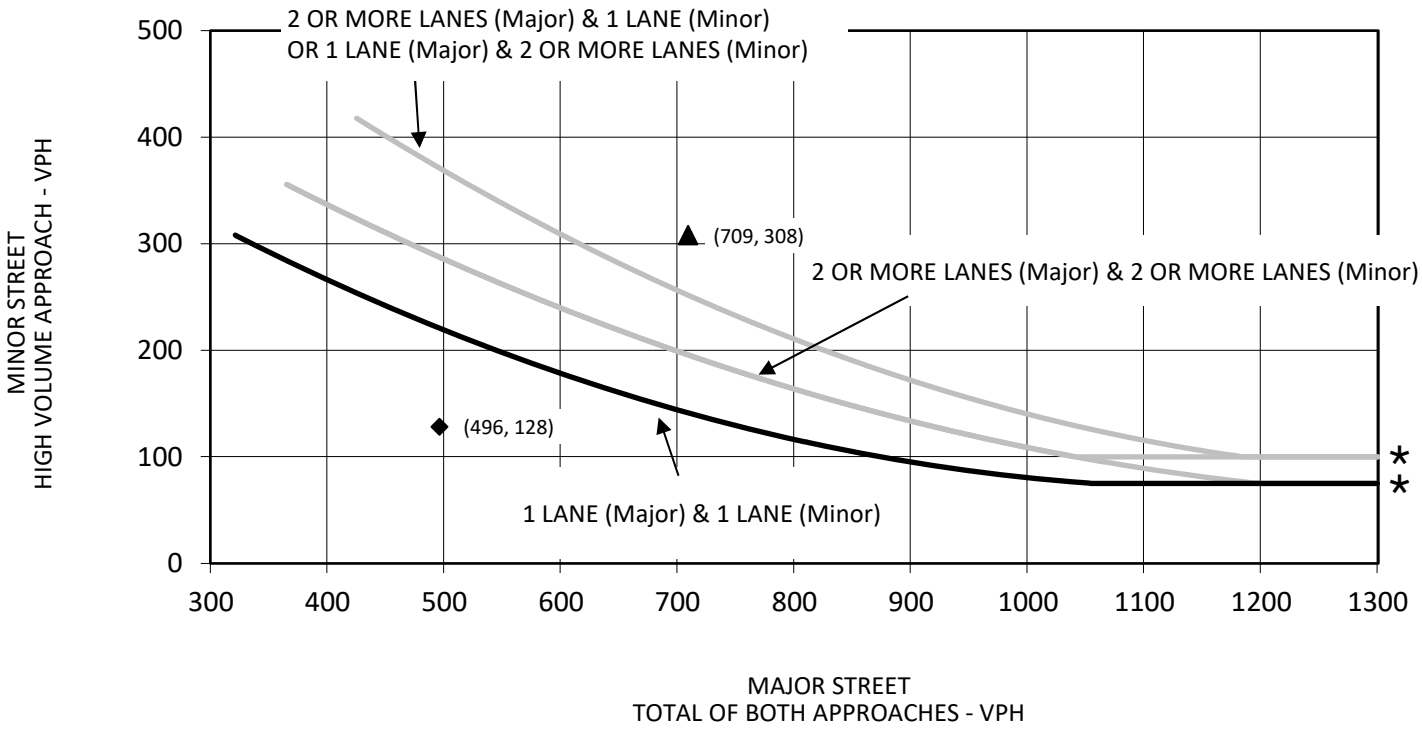
SOURCE: MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, FIGURE 4C-4

Singh Development Project
Traffic Study

Warrant 3: Peak Hour - 12th Avenue/Flint Avenue - Existing Conditions

WARRANT 3, PEAK HOUR (70% FACTOR)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 mph ON MAJOR STREET)



* 100 VPH applies as the lower threshold volume for a minor street approach with two or more lanes and 75 VPH applies as the lower threshold volume for a minor street approaching with one lane.

LSA

FIGURE 8-2

▲ Plus Project AM Peak Hour

◆ Plus Project PM Peak Hour

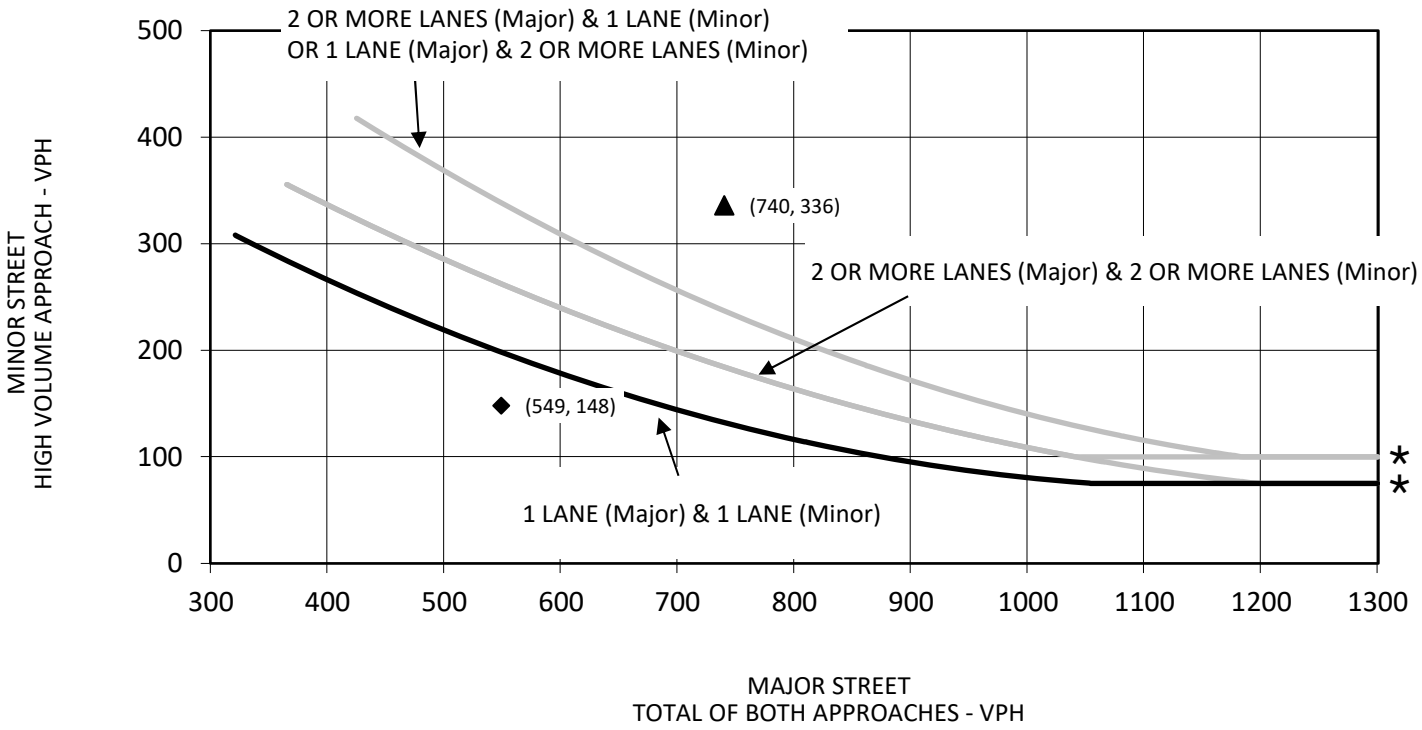
SOURCE: MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, FIGURE 4C-4

Singh Development Project
Traffic Study

Warrant 3: Peak Hour - 12th Avenue/Flint Avenue - Near-Term Plus Project Conditions

WARRANT 3, PEAK HOUR (70% FACTOR)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 mph ON MAJOR STREET)



* 100 VPH applies as the lower threshold volume for a minor street approach with two or more lanes and 75 VPH applies as the lower threshold volume for a minor street approaching with one lane.

LSA

FIGURE 8-3

▲ Plus Project AM Peak Hour

◆ Plus Project PM Peak Hour

SOURCE: MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, FIGURE 4C-4

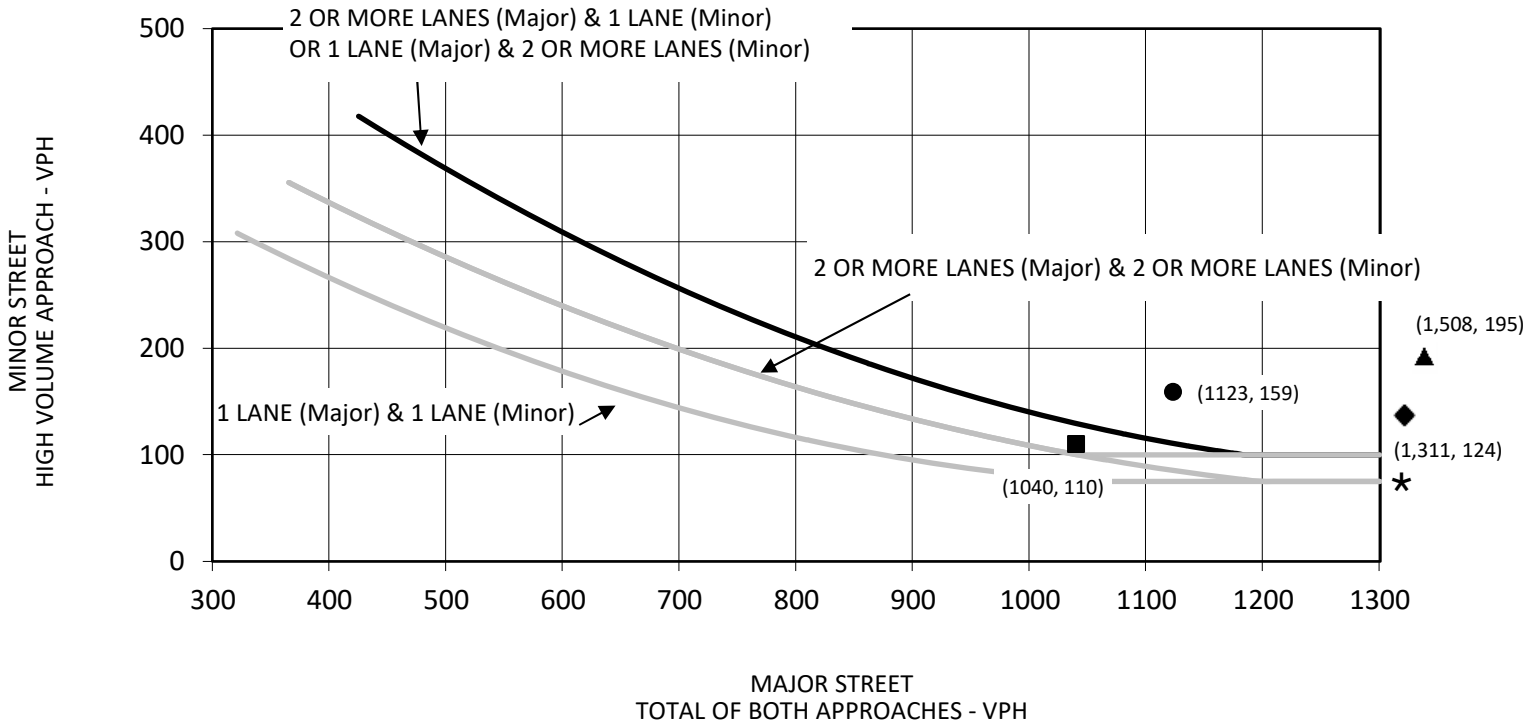
Singh Development Project
Traffic Study

Warrant 3: Peak Hour - 12th Avenue/Flint Avenue - Cumulative Year (2042) Plus Project Conditions

P:\FOC2203\Traffic\Warrants\8-3_Int3_zCum.xlsx (5/8/2023)

WARRANT 3, PEAK HOUR (70% FACTOR)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 mph ON MAJOR STREET)



* 100 VPH applies as the lower threshold volume for a minor street approach with two or more lanes and 75 VPH applies as the lower threshold volume for a minor street approaching with one lane.

LSA

FIGURE 8-4

● Without Project AM Peak Hour ▲ Plus Project AM Peak Hour

■ Without Project PM Peak Hour ◆ Plus Project PM Peak Hour

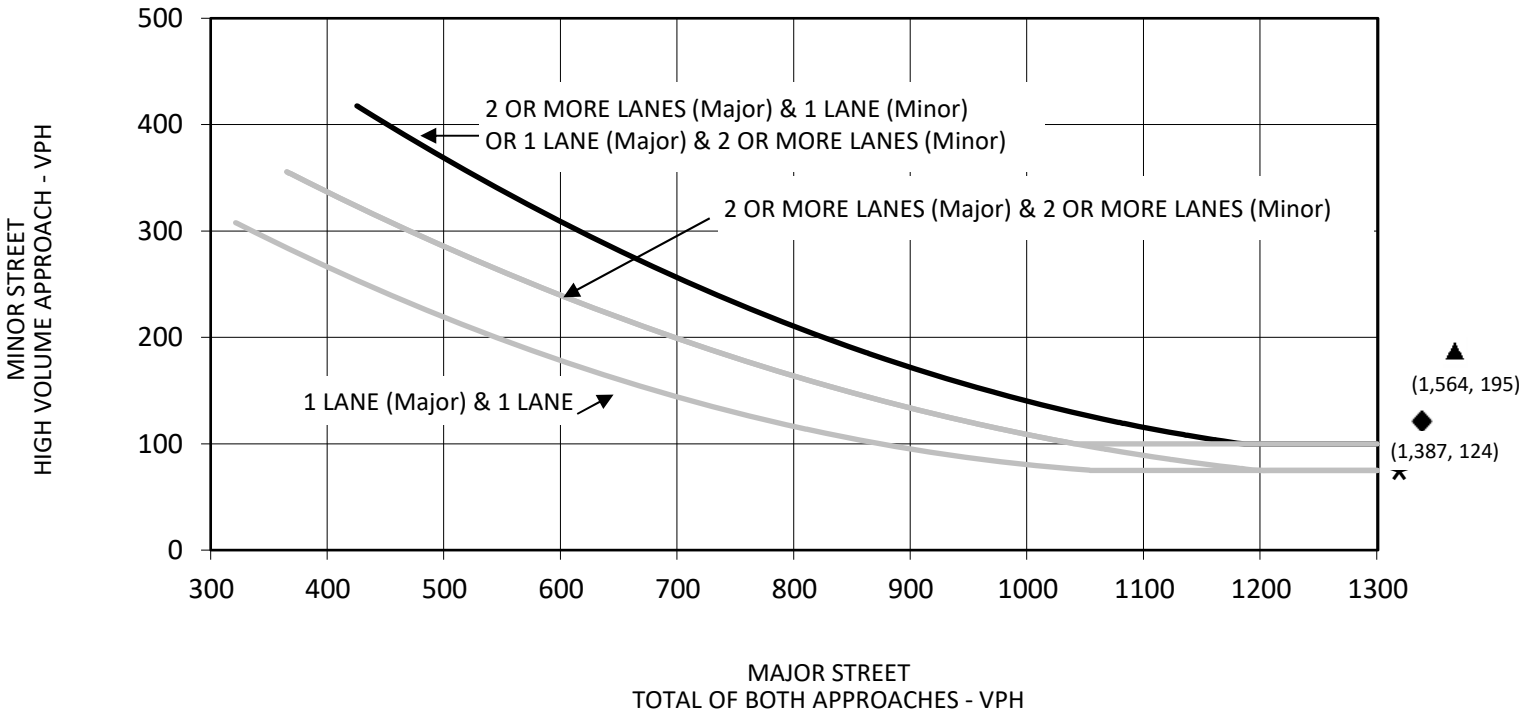
SOURCE: MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, FIGURE 4C-4

Singh Development Project
Traffic Study

Warrant 3: Peak Hour - Glacier Way/Fargo Avenue - Existing Conditions

WARRANT 3, PEAK HOUR (70% FACTOR)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 mph ON MAJOR STREET)



★ 100 VPH applies as the lower threshold volume for a minor street approach with two or more lanes and 75 VPH applies as the lower threshold volume for a minor street approaching with one lane.

LSA

FIGURE 8-5

▲ Plus Project AM Peak Hour

◆ Plus Project PM Peak Hour

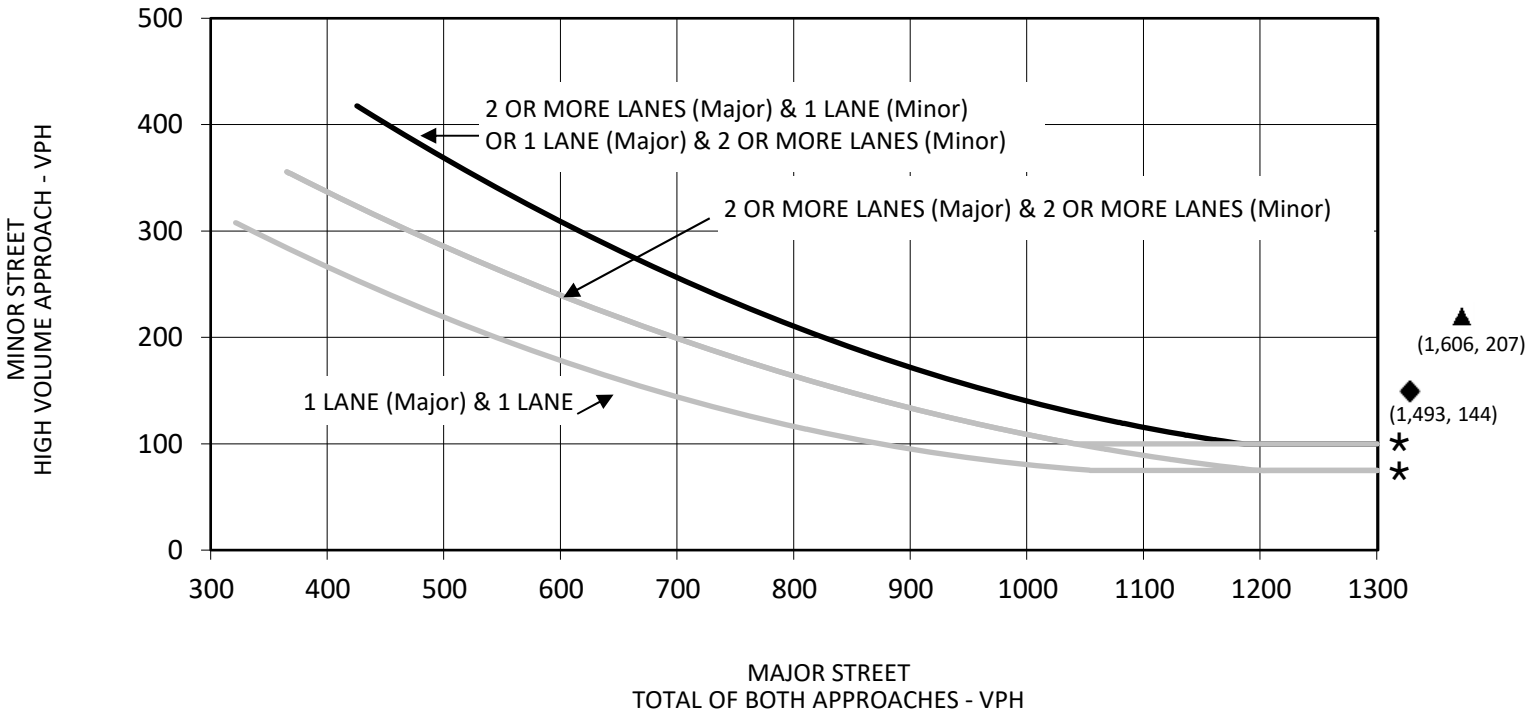
SOURCE: MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, FIGURE 4C-4

Singh Development Project
Traffic Study

Warrant 3: Peak Hour - Glacier Way/Fargo Avenue - Near-Term Plus Project Conditions

WARRANT 3, PEAK HOUR (70% FACTOR)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 mph ON MAJOR STREET)



* 100 VPH applies as the lower threshold volume for a minor street approach with two or more lanes and 75 VPH applies as the lower threshold volume for a minor street approaching with one lane.

LSA

FIGURE 8-6

▲ Plus Project AM Peak Hour

◆ Plus Project PM Peak Hour

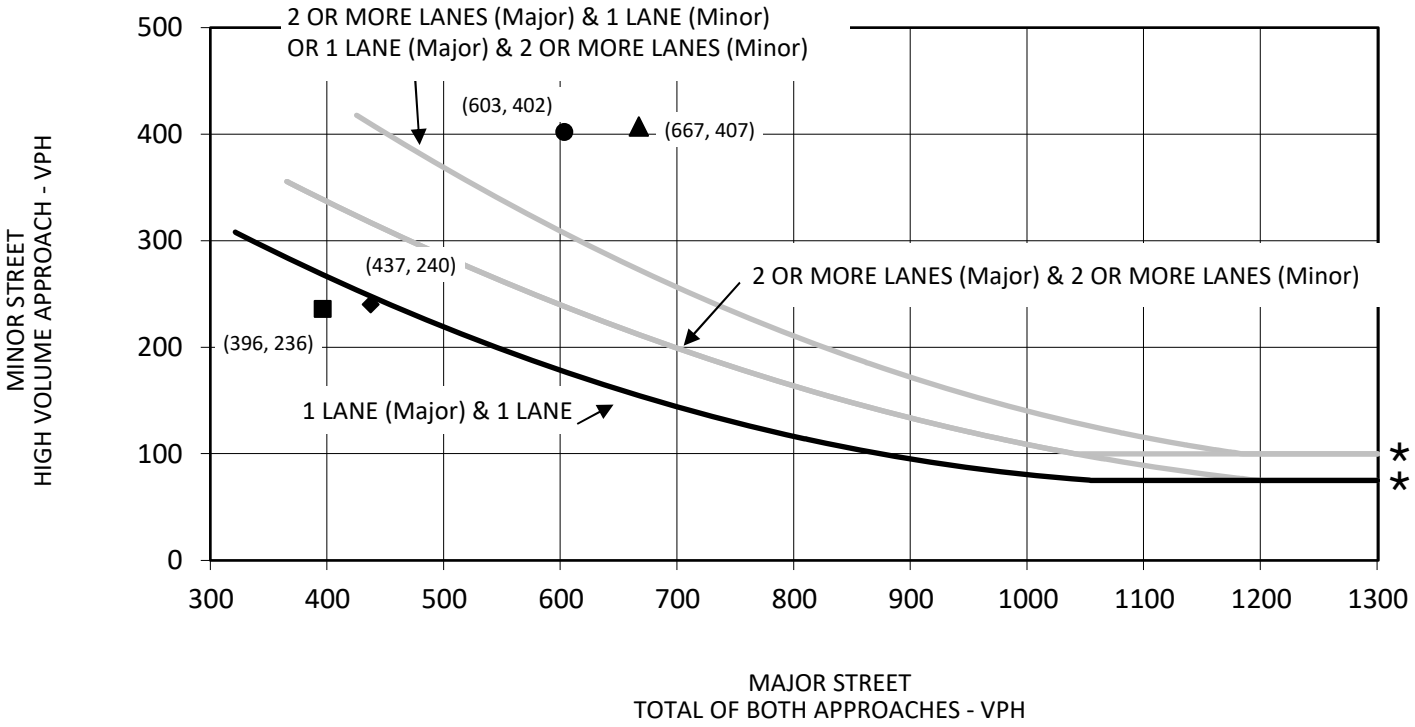
SOURCE: MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, FIGURE 4C-4

Singh Development Project
Traffic Study

Warrant 3: Peak Hour - Glacier Way/Fargo Avenue - Cumulative Year (2042) Plus Project Conditions

WARRANT 3, PEAK HOUR (70% FACTOR)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 mph ON MAJOR STREET)



* 100 VPH applies as the lower threshold volume for a minor street approach with two or more lanes and 75 VPH applies as the lower threshold volume for a minor street approaching with one lane.

LSA

FIGURE 8-7

● Without Project AM Peak Hour ▲ Plus Project AM Peak Hour

■ Without Project PM Peak Hour ◆ Plus Project PM Peak Hour

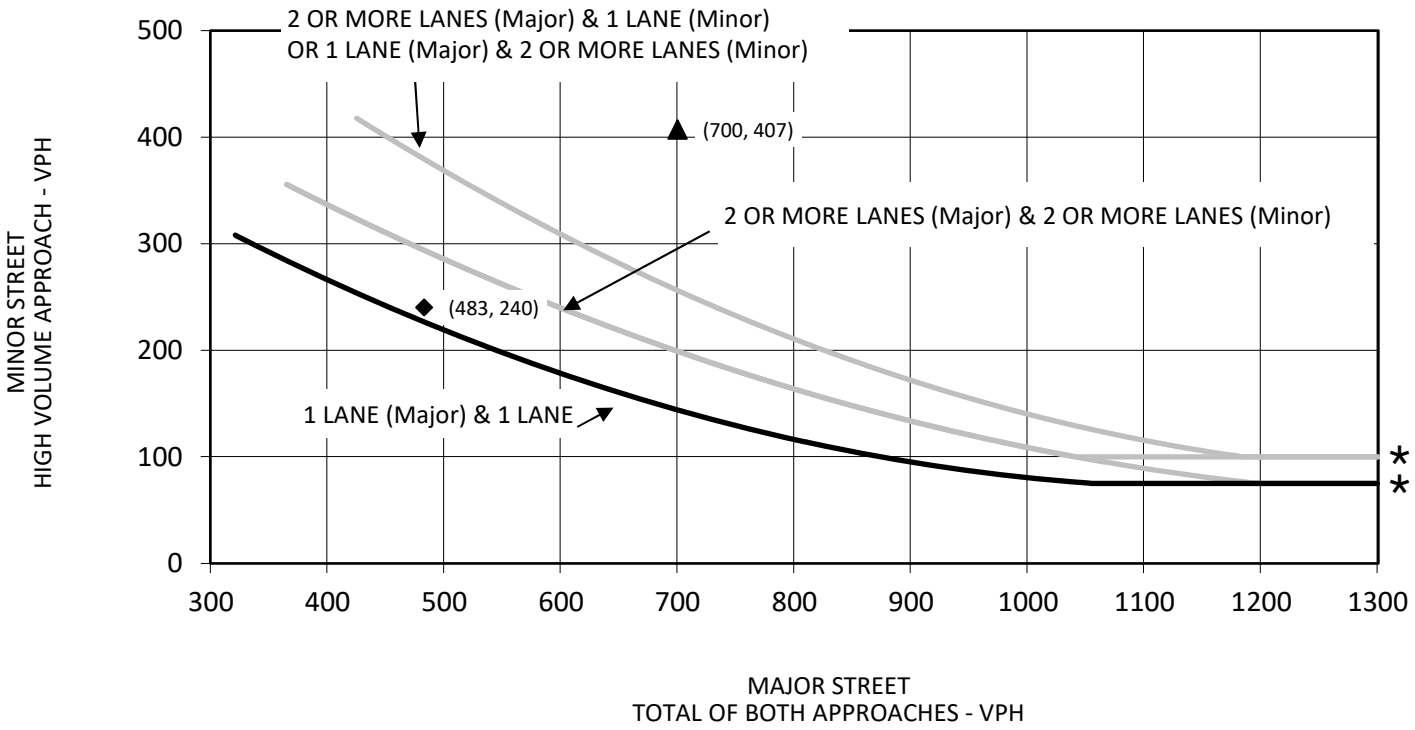
SOURCE: MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, FIGURE 4C-4

Singh Development Project
Traffic Study

Warrant 3: Peak Hour - 11th Avenue/Flint Avenue - Existing Conditions

WARRANT 3, PEAK HOUR (70% FACTOR)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 mph ON MAJOR STREET)



* 100 VPH applies as the lower threshold volume for a minor street approach with two or more lanes and 75 VPH applies as the lower threshold volume for a minor street approaching with one lane.

LSA

FIGURE 8-8

▲ Plus Project AM Peak Hour

◆ Plus Project PM Peak Hour

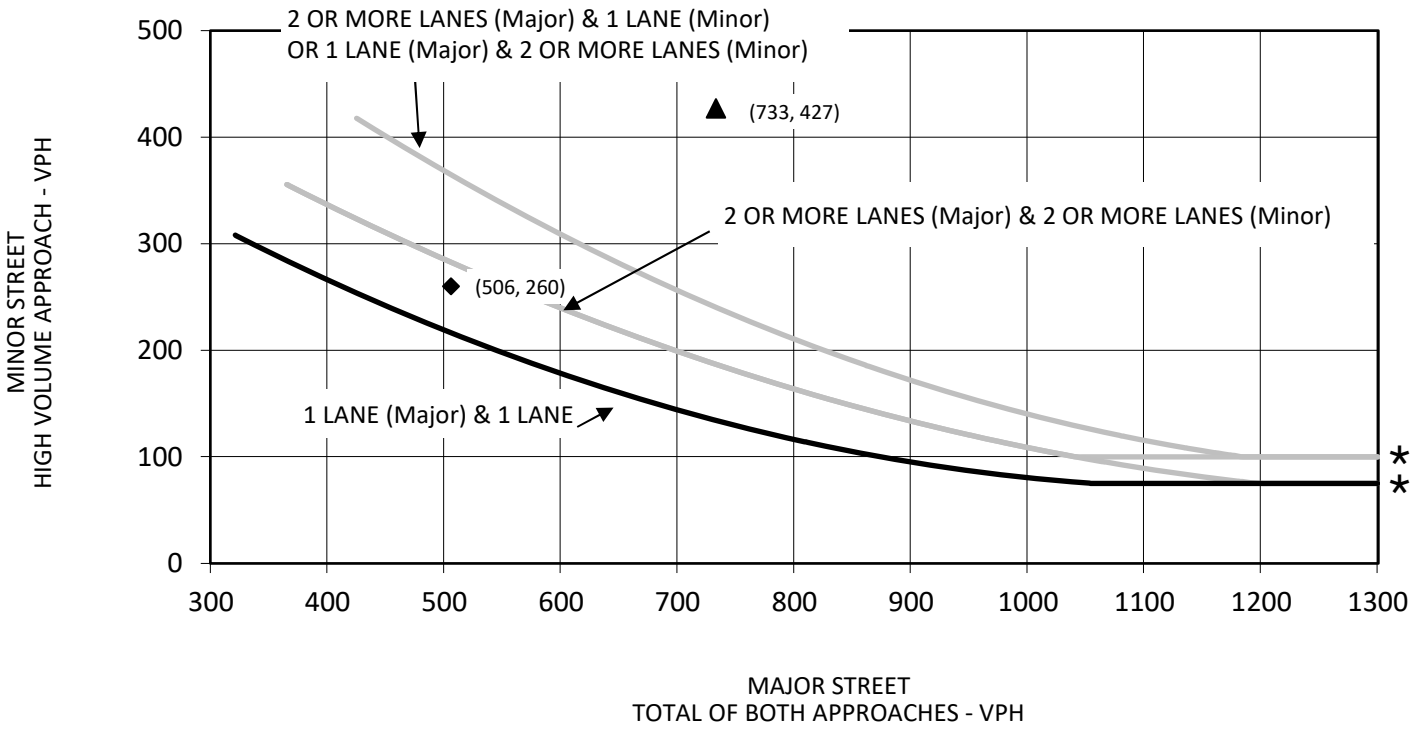
SOURCE: MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, FIGURE 4C-4

Singh Development Project
Traffic Study

Warrant 3: Peak Hour - 11th Avenue/Flint Avenue - Near-Term Plus Project Conditions

WARRANT 3, PEAK HOUR (70% FACTOR)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 mph ON MAJOR STREET)



* 100 VPH applies as the lower threshold volume for a minor street approach with two or more lanes and 75 VPH applies as the lower threshold volume for a minor street approaching with one lane.

LSA

FIGURE 8-9

▲ Plus Project AM Peak Hour

◆ Plus Project PM Peak Hour

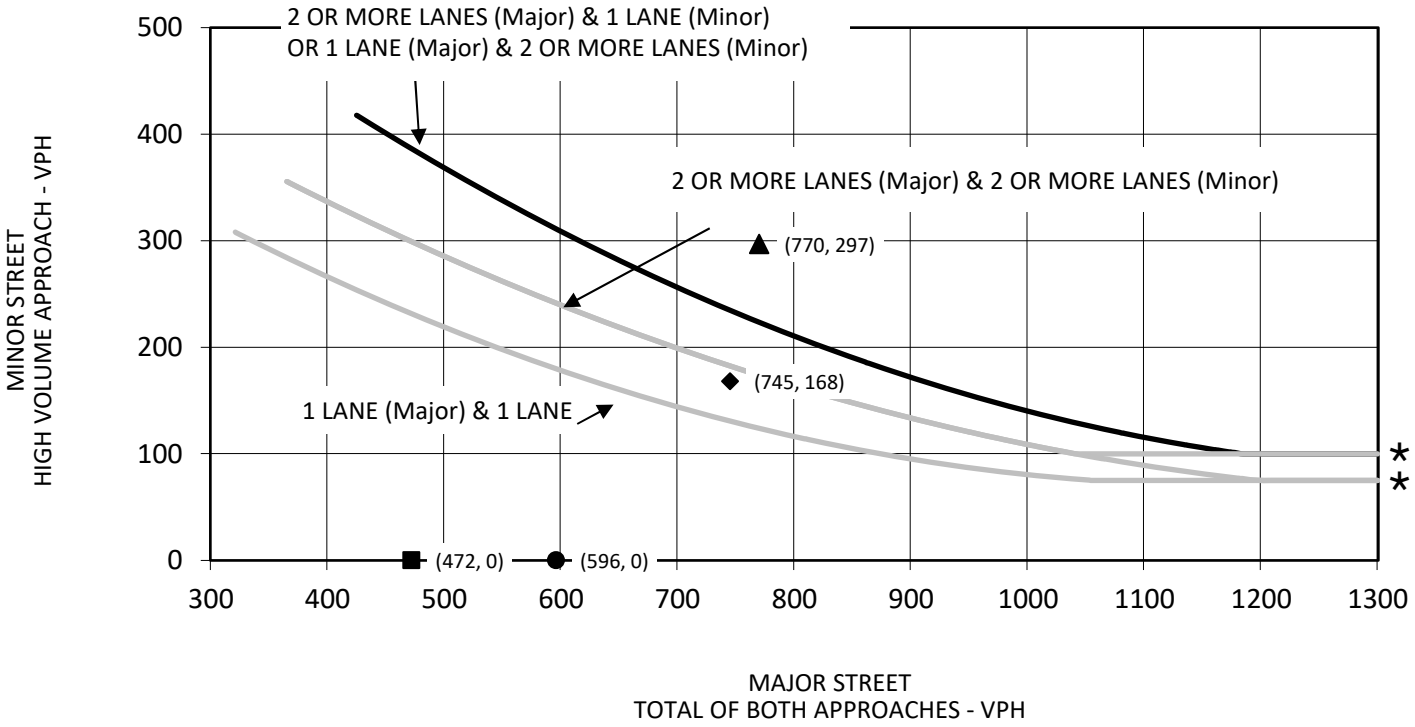
SOURCE: MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, FIGURE 4C-4

Singh Development Project
Traffic Study

Warrant 3: Peak Hour - 11th Avenue/Flint Avenue - Cumulative Year (2042) Plus Project Conditions

WARRANT 3, PEAK HOUR (70% FACTOR)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 mph ON MAJOR STREET)



* 100 VPH applies as the lower threshold volume for a minor street approach with two or more lanes and 75 VPH applies as the lower threshold volume for a minor street approaching with one lane.

LSA

FIGURE 8-10

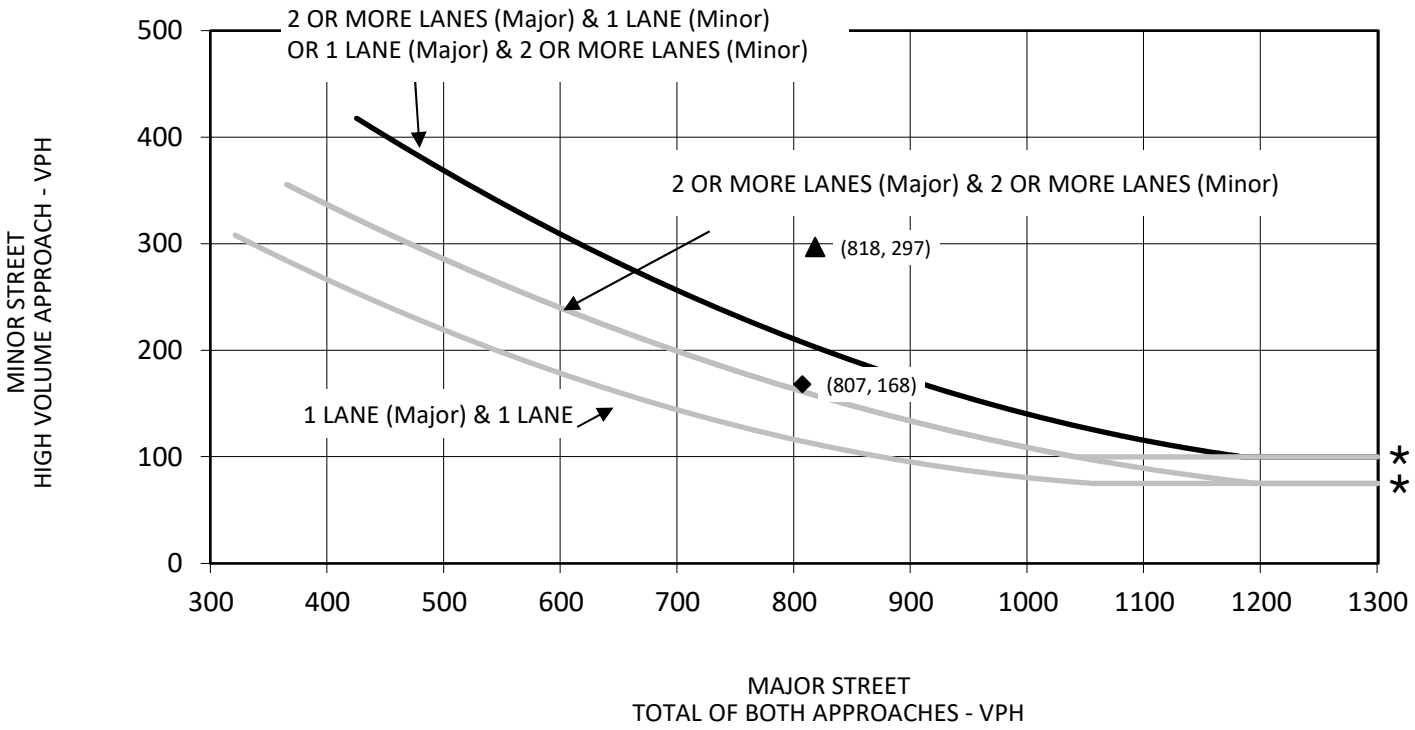
● Without Project AM Peak Hour ▲ Plus Project AM Peak Hour

■ Without Project PM Peak Hour ◆ Plus Project PM Peak Hour

SOURCE: MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, FIGURE 4C-4

WARRANT 3, PEAK HOUR (70% FACTOR)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 mph ON MAJOR STREET)



* 100 VPH applies as the lower threshold volume for a minor street approach with two or more lanes and 75 VPH applies as the lower threshold volume for a minor street approaching with one lane.

LSA

FIGURE 8-11

▲ Plus Project AM Peak Hour

◆ Plus Project PM Peak Hour

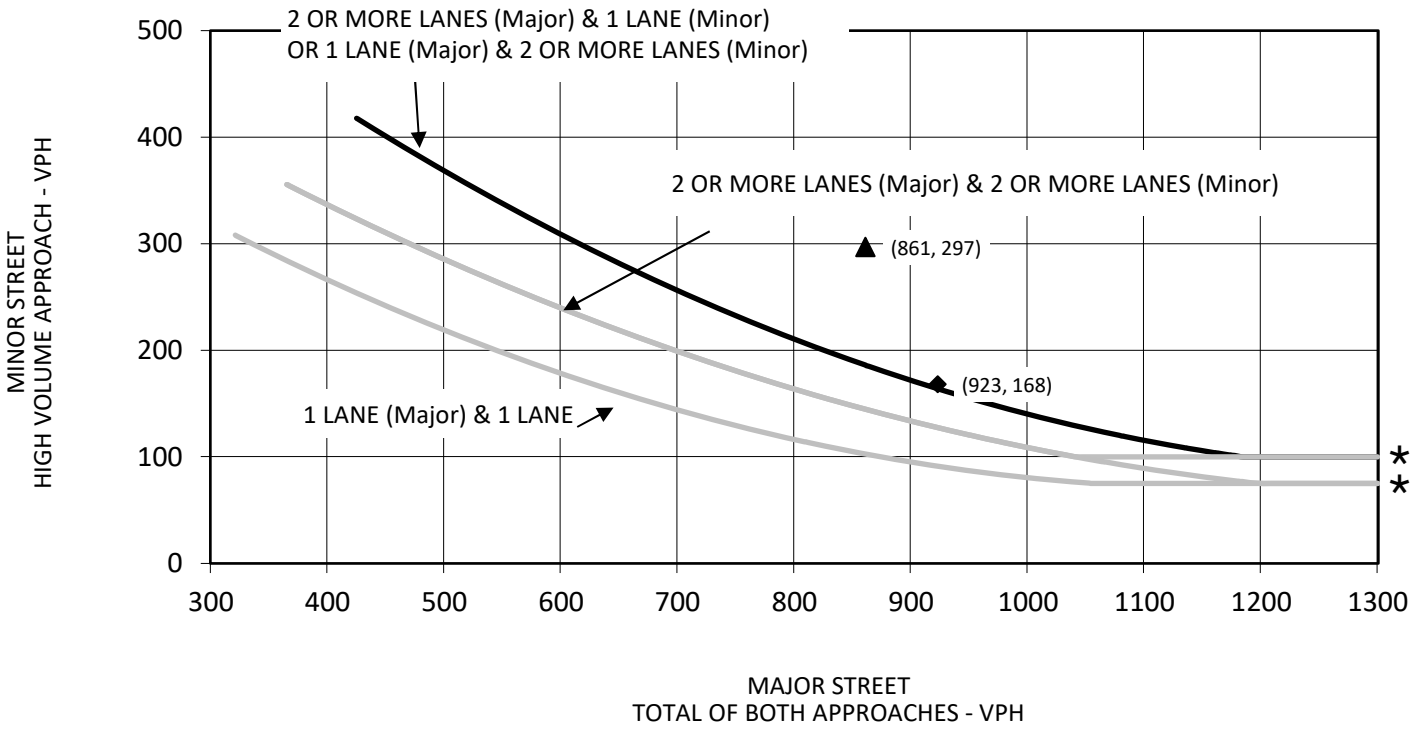
SOURCE: MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, FIGURE 4C-4

Singh Development Project
Traffic Study

Warrant 3: Peak Hour - 12th Avenue/Project Driveway 1 - Near-Term Plus Project Conditions

WARRANT 3, PEAK HOUR (70% FACTOR)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 mph ON MAJOR STREET)



* 100 VPH applies as the lower threshold volume for a minor street approach with two or more lanes and 75 VPH applies as the lower threshold volume for a minor street approaching with one lane.

LSA

FIGURE 8-12

▲ Plus Project AM Peak Hour

◆ Plus Project PM Peak Hour

SOURCE: MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, FIGURE 4C-4

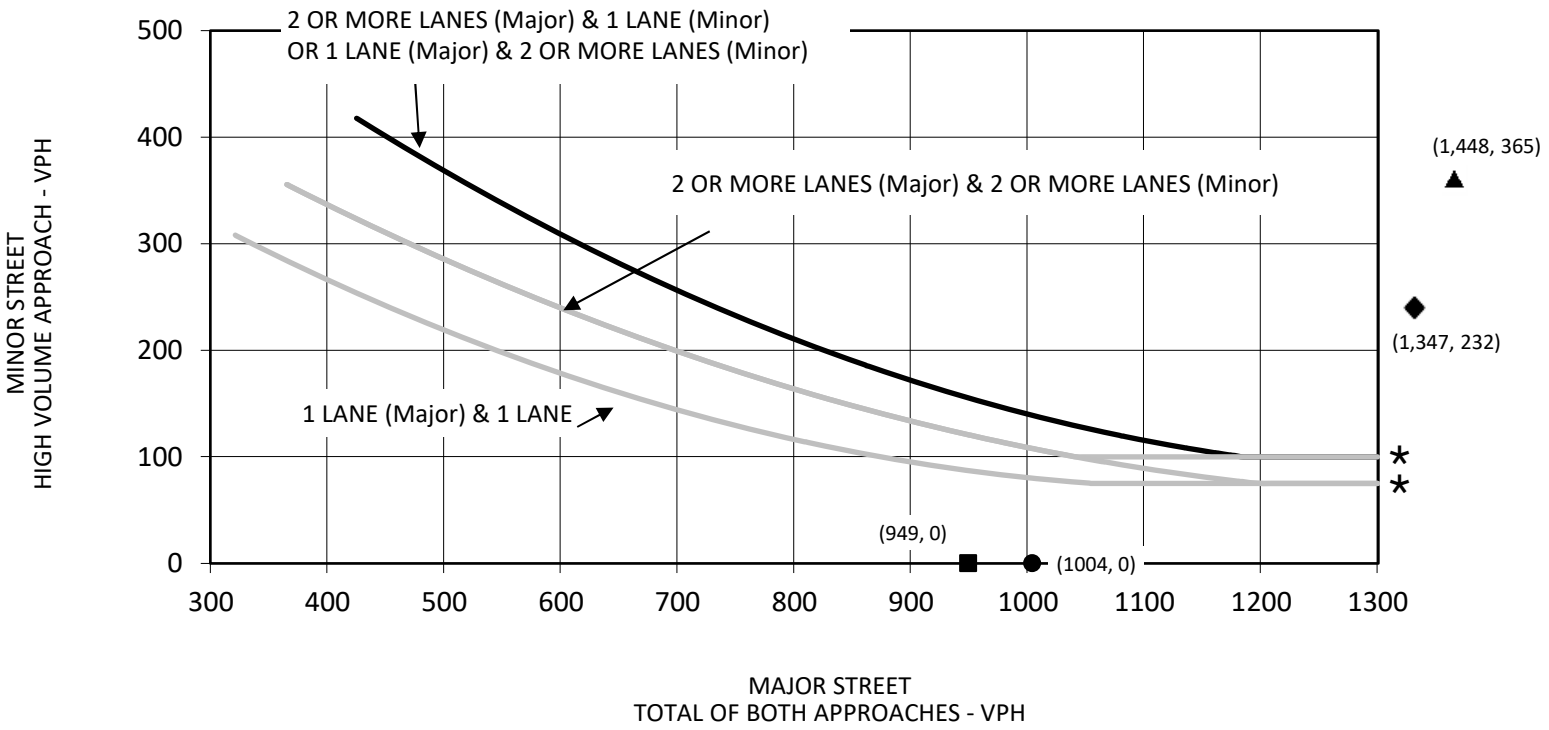
Singh Development Project
Traffic Study

Warrant 3: Peak Hour - 12th Avenue/Project Driveway 1 - Cumulative Year (2042) Plus Project Conditions

P:\FOC2203\Traffic\Warrants\8-12_Int17_zCum.xlsx (5/8/2023)

WARRANT 3, PEAK HOUR (70% FACTOR)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 mph ON MAJOR STREET)



* 100 VPH applies as the lower threshold volume for a minor street approach with two or more lanes and 75 VPH applies as the lower threshold volume for a minor street approaching with one lane.

LSA

FIGURE 8-13

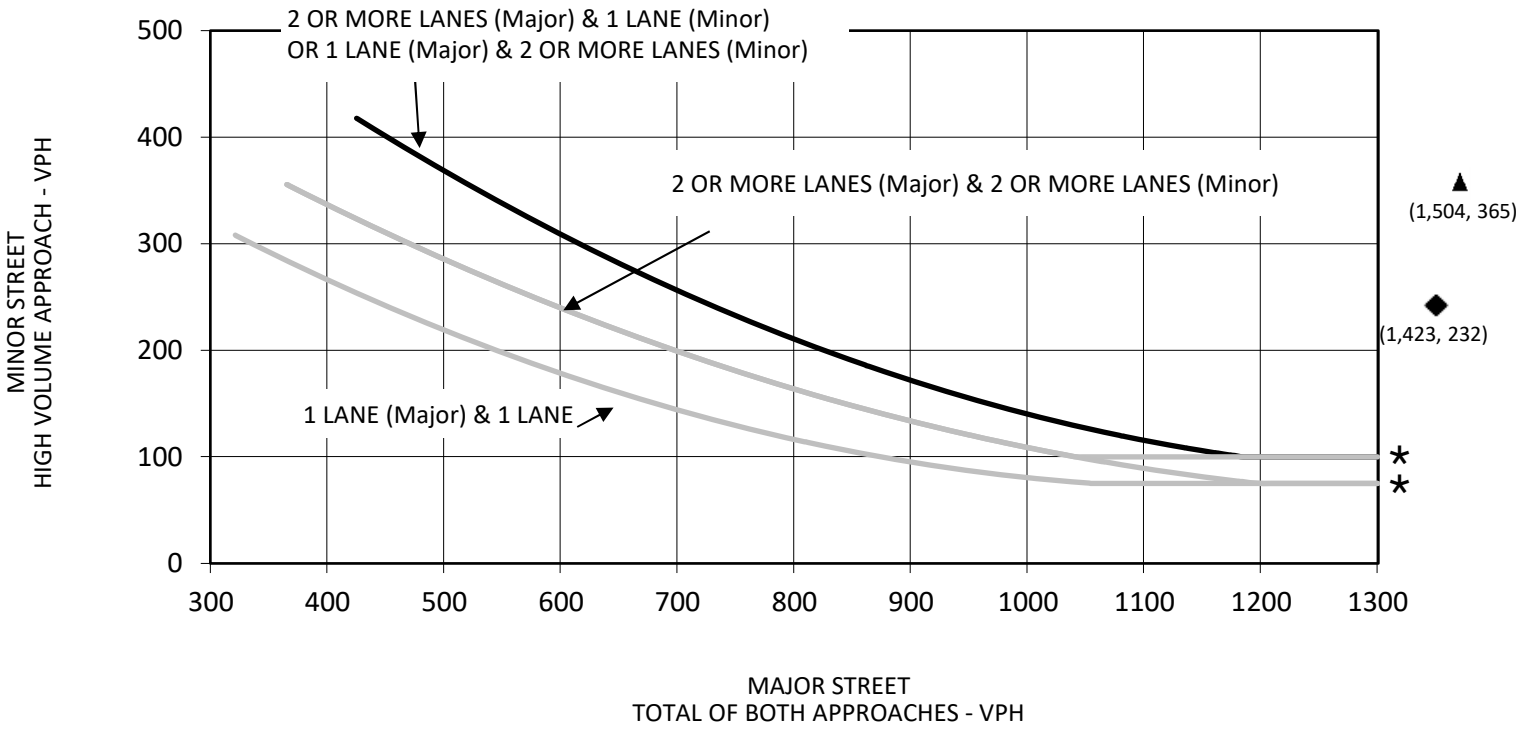
● Without Project AM Peak Hour ▲ Plus Project AM Peak Hour

■ Without Project PM Peak Hour ◆ Plus Project PM Peak Hour

SOURCE: MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, FIGURE 4C-4

WARRANT 3, PEAK HOUR (70% FACTOR)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 mph ON MAJOR STREET)



* 100 VPH applies as the lower threshold volume for a minor street approach with two or more lanes and 75 VPH applies as the lower threshold volume for a minor street approaching with one lane.

LSA

FIGURE 8-14

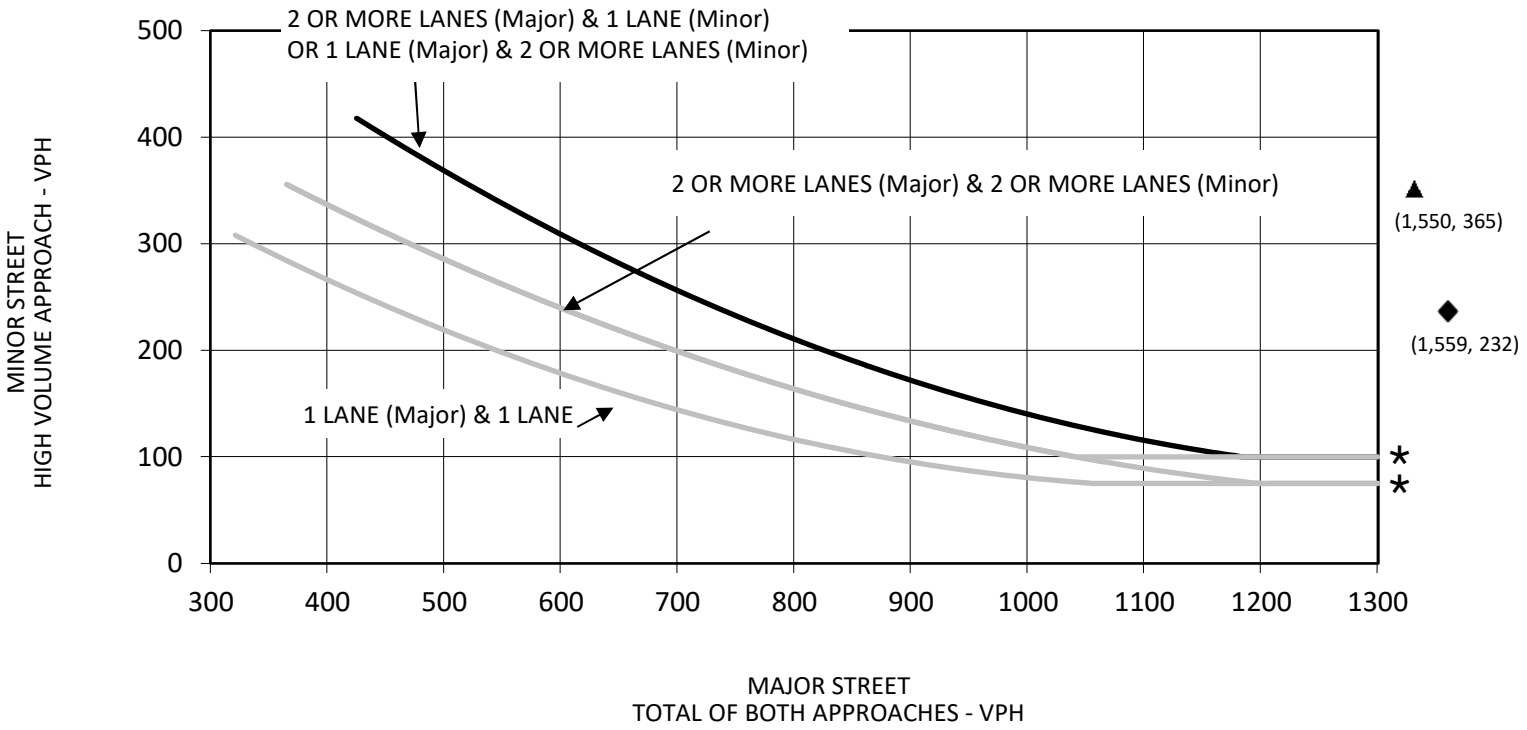
▲ Plus Project AM Peak Hour

◆ Plus Project PM Peak Hour

SOURCE: MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, FIGURE 4C-4

WARRANT 3, PEAK HOUR (70% FACTOR)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 mph ON MAJOR STREET)



* 100 VPH applies as the lower threshold volume for a minor street approach with two or more lanes and 75 VPH applies as the lower threshold volume for a minor street approaching with one lane.

LSA

FIGURE 8-15

▲ Plus Project AM Peak Hour

◆ Plus Project PM Peak Hour

SOURCE: MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, FIGURE 4C-4

Singh Development Project
Traffic Study

Warrant 3: Peak Hour - Project Driveway 4/Fargo Avenue - Cumulative Year (2042) Plus Project Conditions

9.0 CIRCULATION IMPROVEMENTS AND FUNDING SOURCES

9.1 RECOMMENDED IMPROVEMENTS

Improvements have been recommended at study intersections where an operational deficiency has been identified based on the results of the LOS analysis. Table 9-A summarizes the recommended improvements for study intersections for all analysis scenarios. Tables 9-B, 9-C, and 9-D summarize the post-improvement intersection LOS under existing, near-term, and cumulative conditions, respectively. Detailed LOS worksheets are included in Appendix D. Figure 9-1 illustrates the intersection geometrics and traffic control with recommended improvements under existing and near-term conditions. Figure 9-2 illustrates the intersection geometrics and traffic control with recommended improvements under cumulative year conditions.

It should be noted that peak-hour signal warrant analyses have been conducted for the intersections where a signal has been proposed. As such, a signal was only recommended as an improvement if it meets the peak-hour signal warrant. Chapter 8.0 of this report provides a detailed description of the signal warrant analysis.

Figures 9-3 through 9-7 illustrates conceptual striping plan along the project frontage at Flint Avenue, 12th Avenue and Fargo Avenue. The figures include project frontage improvements to be implemented by the project as well as recommended additional improvements recommended in Table 9-A along the project frontage.

9.2 FUNDING SOURCES AND MECHANISMS

Where there is a funding mechanism (fee program) for the recommended improvements, payment into the fee program would be considered sufficient project obligation to alleviate project-related operational deficiencies. At locations where the project adds to or creates a forecast deficiency and there is no funding mechanism in place, the project is responsible for its fair-share payment.

9.2.1 City of Hanford Development Impact Fee

The City adopted the City of Hanford General Plan in 2017. The City's Development Impact Fee (DIF) have been updated accordingly to be consistent with the City's updated General Plan and its policies, zoning ordinances and infrastructure master plan. The Cit's circulation Impact fee is determined based on the needs of circulation infrastructure to support the growth projected within the City. The City's General Plan Policy T36 also recommends to review and update the traffic impact fee program to ensure new developments contribute its fair-share.

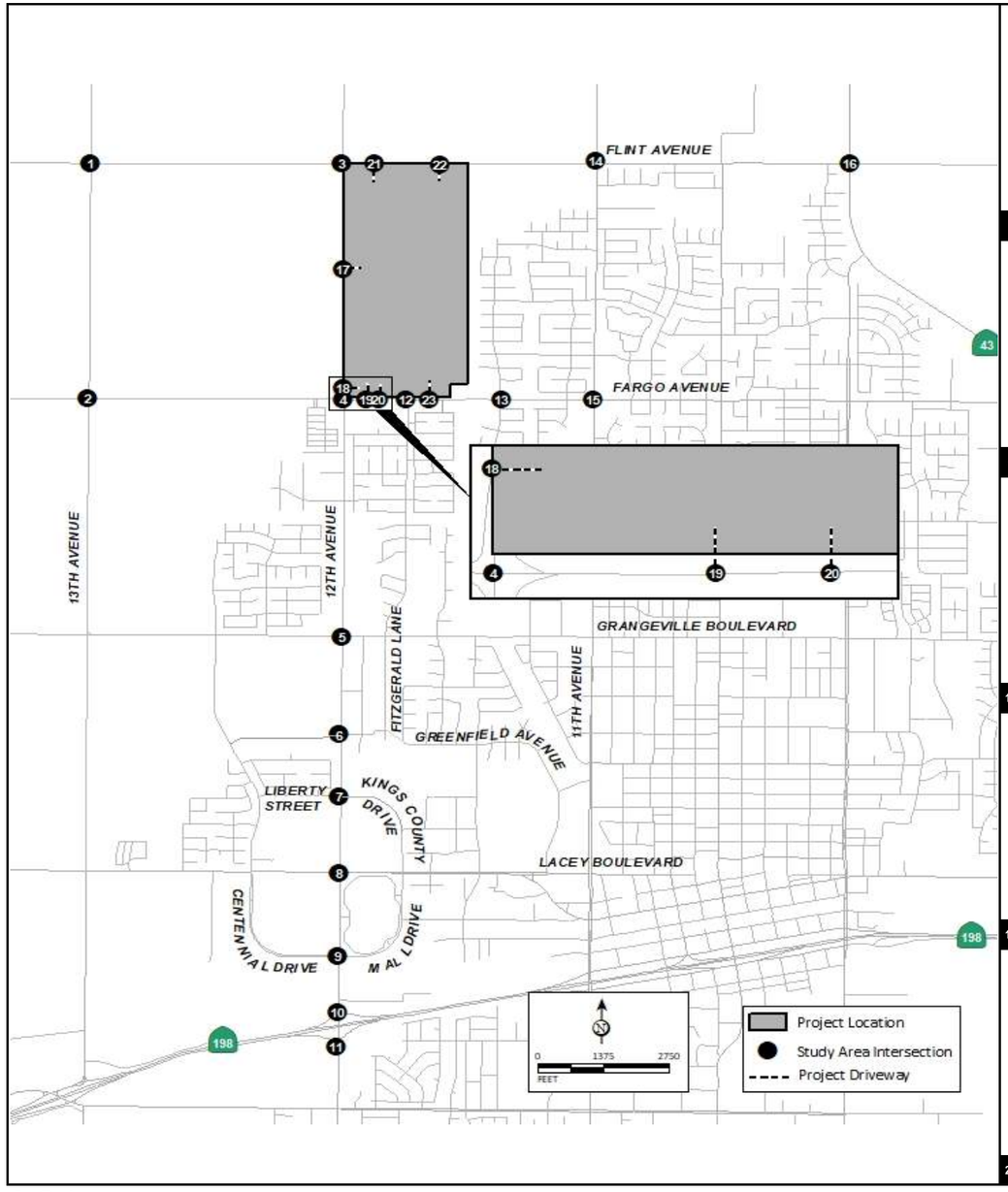
9.2.2 Project Fair Share

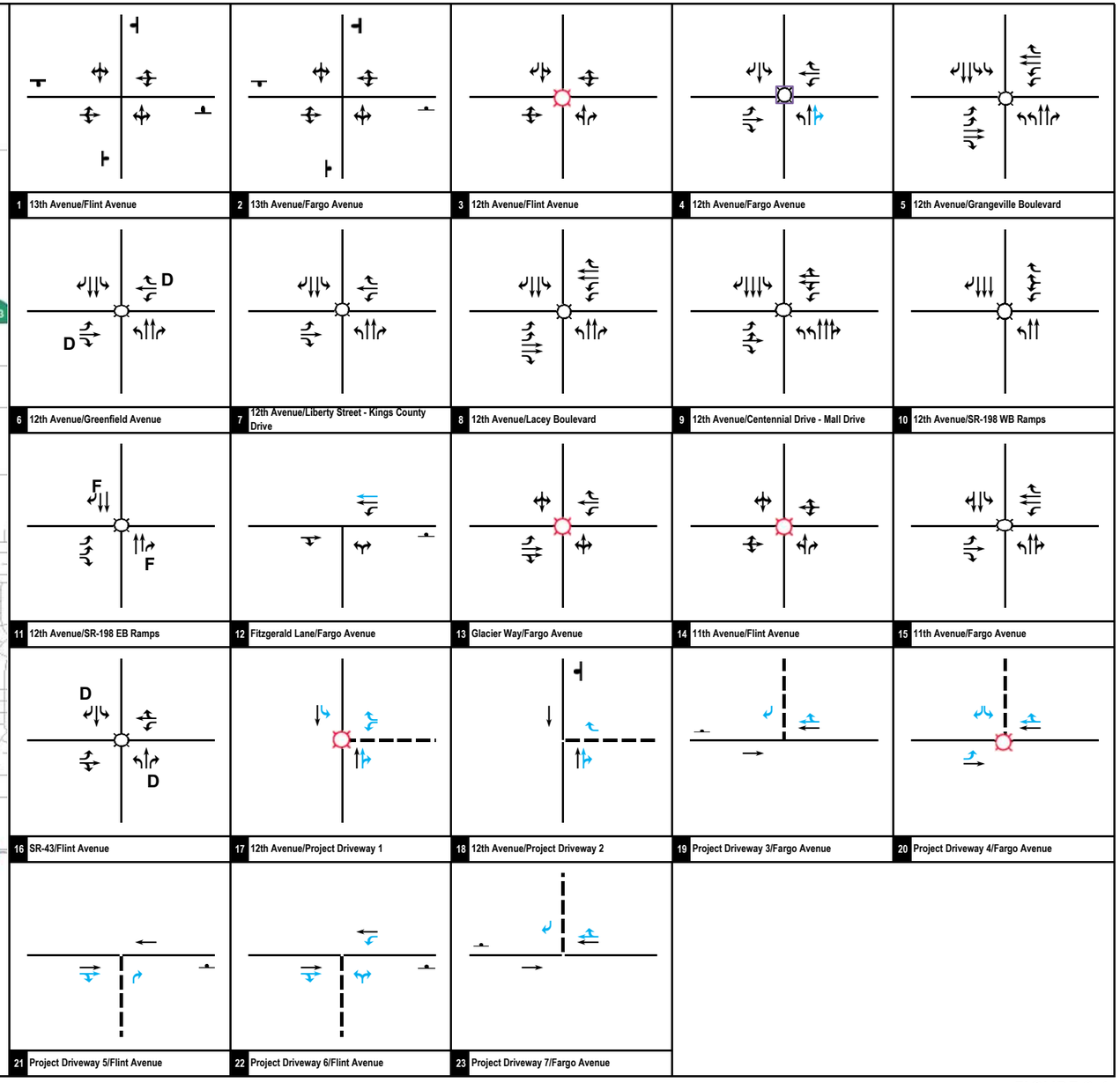
Upon review of the City's DIF it was determined that none of the proposed improvements are covered through the City's DIF program. In the absence of a fee program where the project has an impact on the roadway network, the project will need to pay its respective fair share for the proposed improvements. The project's fair share has been calculated based on project traffic as a percentage of total growth of existing traffic plus project volumes. Table 9-E summarizes the

recommended improvement for the deficient intersections, and the fair share percentage in case the project is not directly responsible for implementing those improvements.

9.3 LIST OF CHAPTER 9.0 FIGURES AND TABLES

- Figure 9-1: Existing and Near-Term Plus Project with Improvements Study Intersection Geometrics and Traffic Control
- Figure 9-2: Cumulative Year (2042) Plus Project with Improvements Study Intersection Geometrics and Traffic Control
- Figure 9-3: Conceptual Striping Plan at Project Frontage – Part 1
- Figure 9-4: Conceptual Striping Plan at Project Frontage – Part 2
- Figure 9-5: Conceptual Striping Plan at Project Frontage – Part 3
- Figure 9-6: Conceptual Striping Plan at Project Frontage – Part 4
- Figure 9-7: Conceptual Striping Plan at Project Frontage – Part 5
- Table 9-A: Recommended Improvements for Intersections
- Table 9-B: Existing Plus Project with Recommended Improvements Intersection Levels of Service
- Table 9-C: Near-Term Plus Project with Recommended Improvements Intersection Levels of Service
- Table 9-D: Cumulative Year (2042) Plus Project with Improvements with Recommended Improvements Intersection Levels of Service
- Table 9-E: Intersection Improvement Funding Mechanism and Fair Share





LSA

FIGURE 9-1

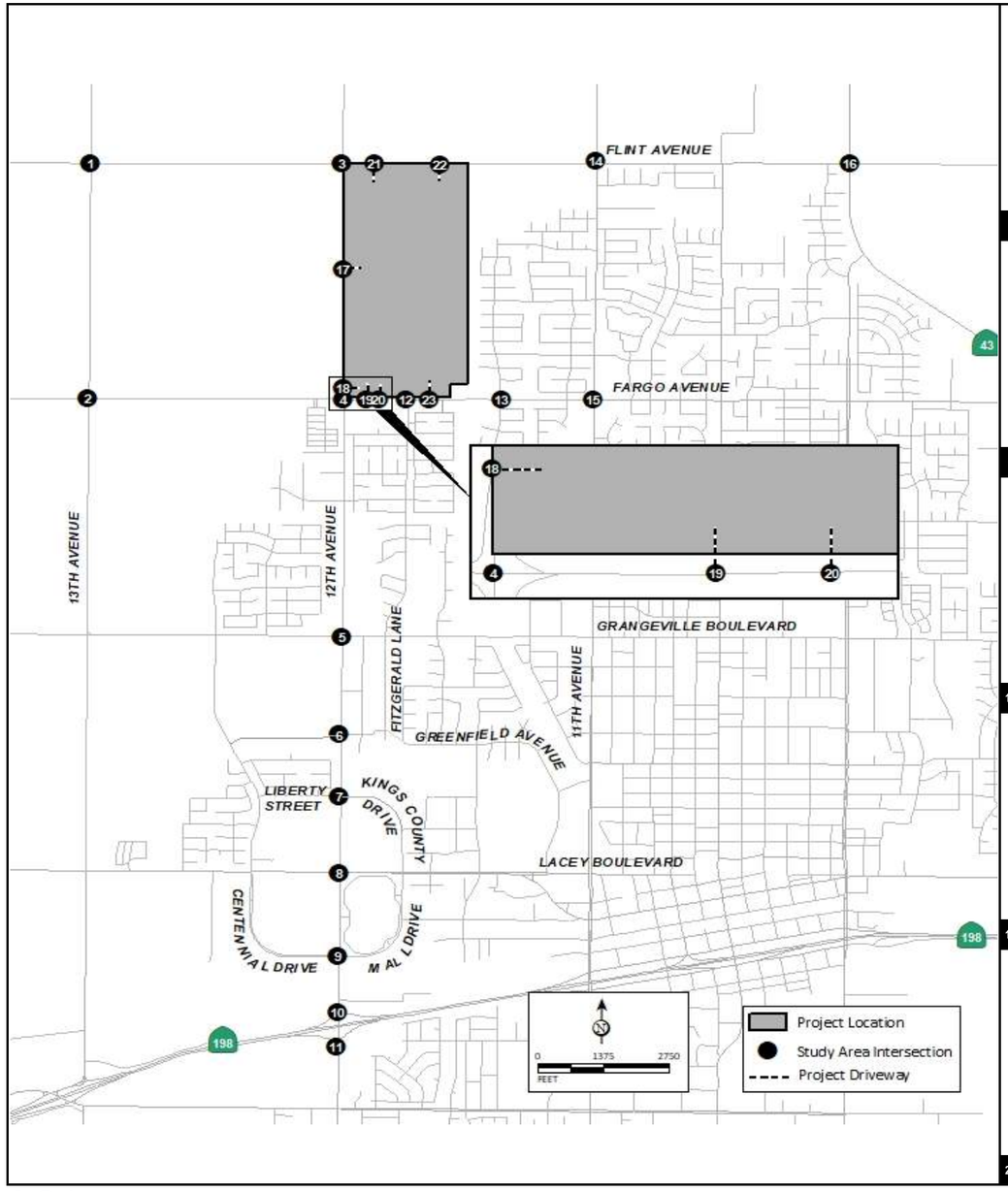
Legend

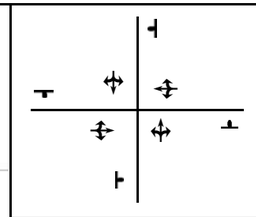
Signal
Stop Sign
F Free right-turn
D De-facto Right Turn
Project Driveway
Project Design Feature
Install Traffic Signal
Optimize Signal Timing

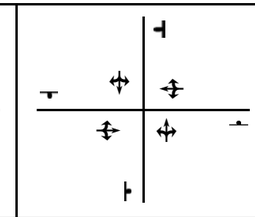
Singh Development Project
Traffic Study

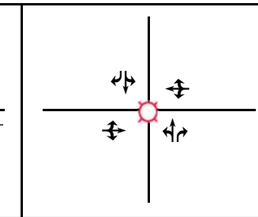
Existing and Near-Term Plus Project with Improvements Study Intersection Geometrics and Traffic Control

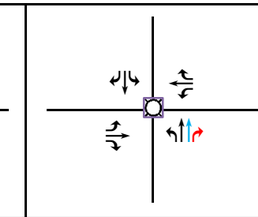
P:\FOC2203\Traffic\g45_Geo_Exist NT MIT.xlsx 5/8/2023

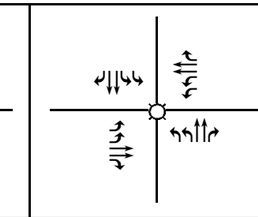


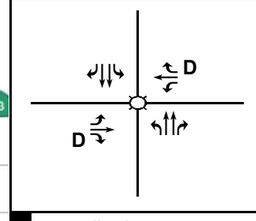


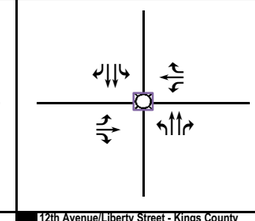


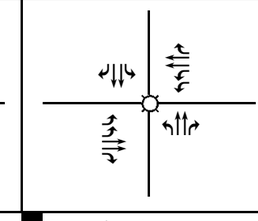


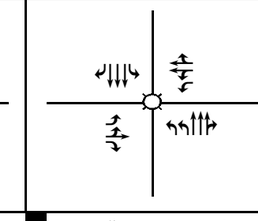


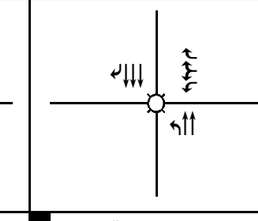


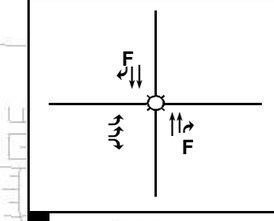


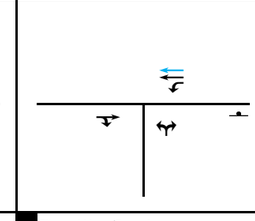


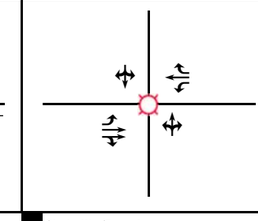


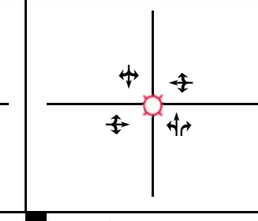


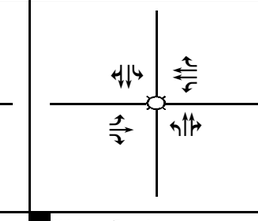


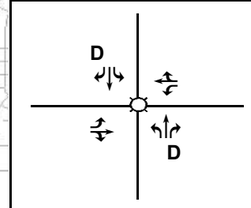


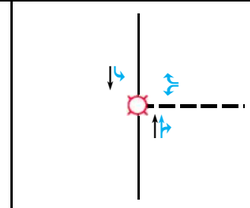


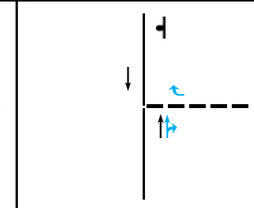


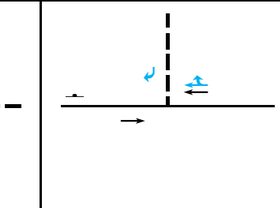


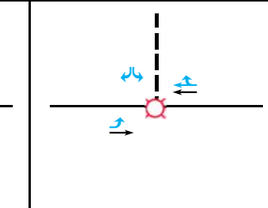


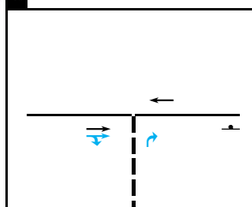


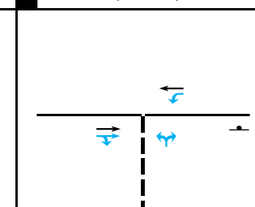


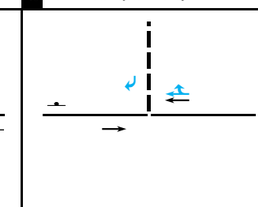












LSA

FIGURE 9-2

Legend

Signal
Stop Sign
F Free right-turn
D De-facto Right Turn
Project Driveway
Project Design Feature
Install Traffic Signal
Optimize Signal Timing
Recommended Improvements

Singh Development Project
Traffic Study

Cumulative Year (2042) Plus Project with Improvements Study Intersection Geometrics and Traffic Control

P:\FOC2203\Traffic\g45_Geo_Cum MIT.xlsx 5/8/2023



LSA

FIGURE 9-3

LEGEND

Proposed Striping

Proposed Signal

N

0 50 100

FEET

SOURCE: 4Creeks, May 2023

P:\FOC2203\Traffic\GIS\Autocad\21413_TSM_05.03.23\Striping.dwg (5/8/2023)

Singh Development Project

Traffic Study

Conceptual Striping Plan at Project Frontage - Part 1



LSA

FIGURE 9-4

LEGEND

Proposed Striping

Proposed Signal

N

0 68 135

FEET

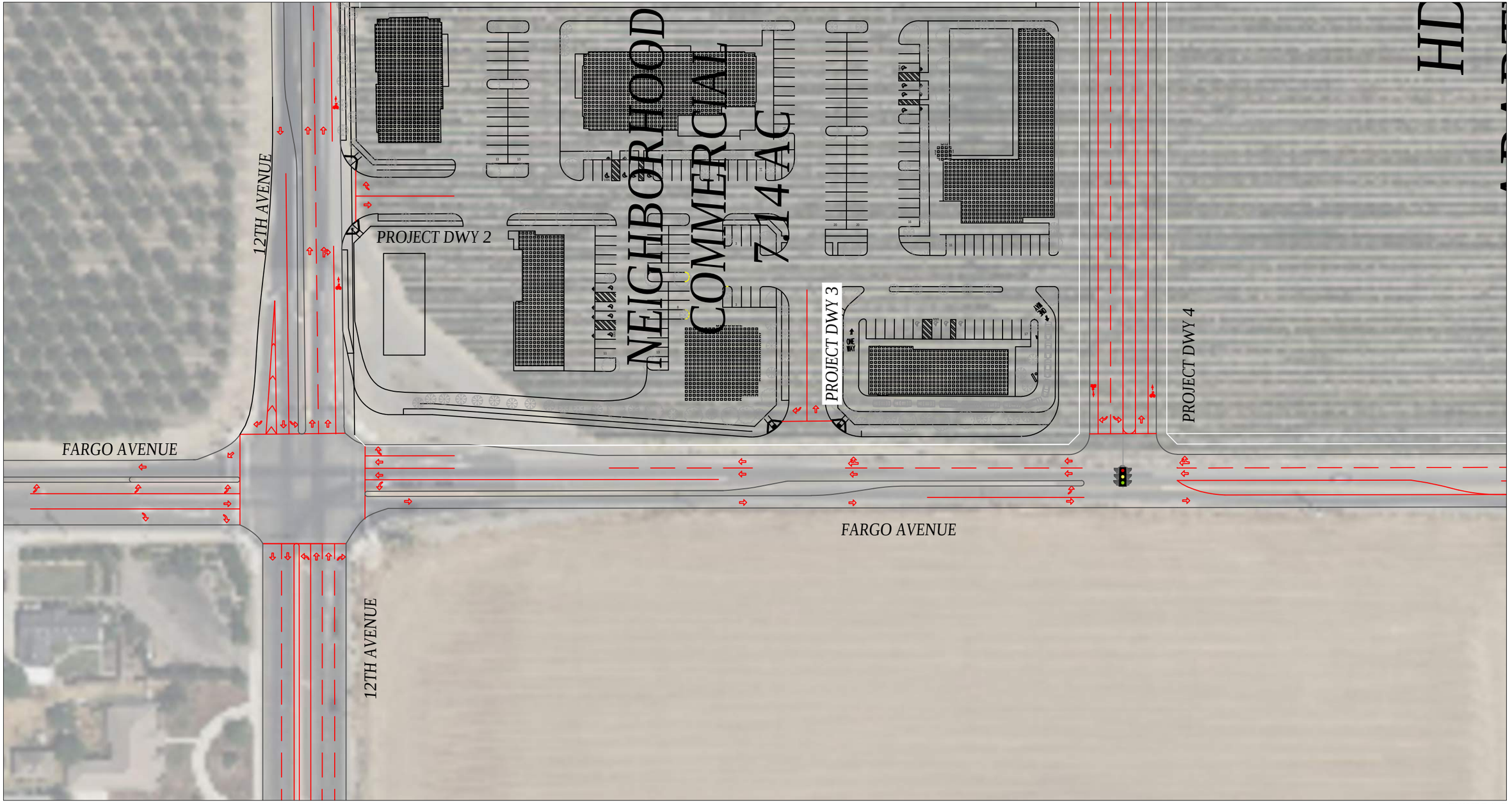
SOURCE: 4Creeks, May 2023

P:\FOC2203\Traffic\GIS\Autocad\21413_TSM_05.03.23\Striping.dwg (5/8/2023)

Singh Development Project

Traffic Study

Conceptual Striping Plan at Project Frontage - Part 2



LSA

FIGURE 9-5

LEGEND

Proposed Striping

Proposed Signal

0 60 120

FEET

SOURCE: 4Creeks, May 2023

P:\FOC2203\Traffic\GIS\Autocad\21413_TSM_05.03.23\Striping.dwg (5/8/2023)

Singh Development Project

Traffic Signal

Conceptual Striping Plan at Project Frontage - Part 3



LSA

FIGURE 9-6

LEGEND

Proposed Striping

Proposed Signal

N

0 50 100

FEET

SOURCE: 4Creeks, May 2023

P:\FOC2203\Traffic\GIS\Autocad\21413_TSM_05.03.23\Striping.dwg (5/8/2023)

Singh Development Project

Traffic Signal

Conceptual Striping Plan at Project Frontage - Part 4



LSA

FIGURE 9-7

LEGEND

Proposed Striping

Proposed Signal

N

0 55 110
FEET

SOURCE: 4Creeks, May 2023

P:\POC2203\Traffic\GIS\Autocad\21413_TSM_05.03.23\Striping.dwg (5/8/2023)

Singh Development Project

Traffic Signal

Conceptual Striping Plan at Project Frontage - Part 5

LSA

Table 9-A - Recommended Improvements for Intersections

Intersection	Jurisdiction	Existing Plus Project Improvements[1]	Near-Term Plus Project Improvements	Cumulative Year (2042) Plus Project Improvements
3 . 12th Avenue/Flint Avenue	Hanford/Kings County	Install traffic signal	Install traffic signal	Install traffic signal
4 . 12th Avenue/Fargo Avenue	Hanford/Kings County	Optimize signal timings	Optimize signal timings	Add NBR lane, optimize signal timings
7 . 12th Avenue/Liberty Street - Kings County Drive	Hanford			Optimize signal timings
12 . Fitzgerald Lane/Fargo Avenue	Hanford/Kings County	Install TWLTL median with provision of merging lane for NBL traffic from Fitzgerald Lane	Install TWLTL median with provision of merging lane for NBL traffic from Fitzgerald Lane	Install TWLTL median with provision of merging lane for NBL traffic from Fitzgerald Lane
13 . Glacier Way/Fargo Avenue	Hanford	Install traffic signal	Install traffic signal	Install traffic signal
14 . 11th Avenue/Flint Avenue	Hanford/Kings County	Install traffic signal	Install traffic signal	Install traffic signal
17 . 12th Avenue/Project Driveway 1	Hanford/Kings County	Install traffic signal	Install traffic signal	Install traffic signal
20 . Project Driveway 4/Fargo Avenue	Hanford/Kings County	Install traffic signal	Install traffic signal	Install traffic signal

Notes:

NB = Northbound, SB = Southbound, EB = Eastbound, WB = Westbound, TWLTL = Two-Way Left Turn Lane

L = Left, T = Through, R = Right

[1] Recommended improvements for Existing Plus Project is for informational purposes only. As such, the project will be required to implement the recommended improvements starting with completion of the project.

LSA

Table 9-B - Existing Plus Project with Recommended Improvements Intersection Levels of Service

Intersection	Jurisdiction	LOS Standard	Plus Project Without Improvements						Plus Project With Improvements				
			Control	A.M. Peak Hour Delay (sec.)	LOS		P.M. Peak Hour Delay (sec.)	LOS	Control	A.M. Peak Hour Delay (sec.)	LOS	P.M. Peak Hour Delay (sec.)	LOS
3 . 12th Avenue/Flint Avenue	Hanford/Kings County	D	AWSC	73.2	**F**	*	10.0	A	Signal	32.0	C	11.9	B
4 . 12th Avenue/Fargo Avenue	Hanford/Kings County	D	Signal	132.0	**F**	*	61.4	**E** *	Signal	39.6	D	34.8	C
12 . Fitzgerald Lane/Fargo Avenue	Hanford/Kings County	D	OWSC	176.0	**F**	*	23.7	C	OWSC	29.3	D	16.3	C
13 . Glacier Way/Fargo Avenue	Hanford	D	TWSC	>200	**F**	*	105.7	**F** *	Signal	20.8	C	10.4	B
14 . 11th Avenue/Flint Avenue	Hanford/Kings County	D	AWSC	47.5	**E**	*	11.3	B	Signal	7.8	A	6.2	A
17 . 12th Avenue/Project Driveway 1	Hanford/Kings County	D	OWSC	62.7	**F**	*	21.1	C	Signal	7.0	A	5.7	A
20 . Project Driveway 4/Fargo Avenue	Hanford/Kings County	D	OWSC	>200	**F**	*	>200	**F** *	Signal	8.1	A	6.3	A

Notes:

AWSC= All-Way Stop Control; OWSC = One-Way Stop Control; TWSC = Two-Way Stop Control; LOS = Level of Service

Delay = Average control delay in seconds (For OWSC/TWSC intersections, reported delay is for worst-case movement).

* Exceeds LOS Standard

LSA

Table 9-C - Near-Term Plus Project with Recommended Improvements Intersection Levels of Service

Intersection	Jurisdiction	LOS Standard	Plus Project Without Improvements						Plus Project With Improvements				
			Control	A.M. Peak Hour Delay (sec.)	LOS		P.M. Peak Hour Delay (sec.)	LOS	Control	A.M. Peak Hour Delay (sec.)	LOS	P.M. Peak Hour Delay (sec.)	LOS
3 . 12th Avenue/Flint Avenue	Hanford/Kings County	D	AWSC	80.8	F	*	10.3	B	Signal	34.6	C	12.2	B
4 . 12th Avenue/Fargo Avenue	Hanford/Kings County	D	Signal	96.4	F	*	67.1	E *	Signal	51.0	D	39.4	D
12 . Fitzgerald Lane/Fargo Avenue	Hanford/Kings County	D	OWSC	>200	F	*	25.5	D	OWSC	32.0	D	16.8	C
13 . Glacier Way/Fargo Avenue	Hanford	D	TWSC	>200	F	*	142.1	F *	Signal	21.4	C	10.6	B
14 . 11th Avenue/Flint Avenue	Hanford/Kings County	D	AWSC	56.3	F	*	12.0	B	Signal	7.9	A	6.3	A
17 . 12th Avenue/Project Driveway 1	Hanford/Kings County	D	OWSC	81.6	F	*	24.0	C	Signal	7.0	A	5.7	A
20 . Project Driveway 4/Fargo Avenue	Hanford/Kings County	D	OWSC	>200	F	*	>200	F *	Signal	8.1	A	6.4	A

Notes:

AWSC= All-Way Stop Control; OWSC = One-Way Stop Control; TWSC = Two-Way Stop Control; LOS = Level of Service

Delay = Average control delay in seconds (For OWSC/TWSC intersections, reported delay is for worst-case movement).

* Exceeds LOS Standard

LSA

Table 9-D - Cumulative Year (2042) Plus Project with Recommended Improvements Intersection Levels of Service

Intersection	Jurisdiction	LOS Standard	Plus Project Without Improvements						Plus Project With Improvements				
				A.M. Peak Hour			P.M. Peak Hour			A.M. Peak Hour		P.M. Peak Hour	
			Control	Delay (sec.)	LOS		Delay (sec.)	LOS	Control	Delay (sec.)	LOS	Delay (sec.)	LOS
3 . 12th Avenue/Flint Avenue	Hanford/Kings County	D	AWSC	100.0	F	*	11.5	B	Signal	41.7	D	13.2	B
4 . 12th Avenue/Fargo Avenue	Hanford/Kings County	D	Signal	144.7	F	*	87.2	F *	Signal	52.2	D	44.8	D
7 . 12th Avenue/Liberty Street - Kings County Drive	Hanford	D	Signal	55.7	E	*	49.7	D	Signal	15.4	B	37.4	D
12 . Fitzgerald Lane/Fargo Avenue	Hanford/Kings County	D	OWSC	91.3	F	*	33.0	D	OWSC	24.2	C	19.1	C
13 . Glacier Way/Fargo Avenue	Hanford	D	TWSC	>200	F	*	>200	F *	Signal	17.5	B	11.7	B
14 . 11th Avenue/Flint Avenue	Hanford/Kings County	D	AWSC	67.0	F	*	12.7	B	Signal	8.2	A	6.4	A
17 . 12th Avenue/Project Driveway 1	Hanford/Kings County	D	OWSC	102.4	F	*	32.3	D	Signal	7.1	A	5.7	A
20 . Project Driveway 4/Fargo Avenue	Hanford/Kings County	D	OWSC	>200	F	*	>200	F *	Signal	8.2	A	6.5	A

Notes:

AWSC= All-Way Stop Control; OWSC = One-Way Stop Control; TWSC = Two-Way Stop Control; LOS = Level of Service

Delay = Average control delay in seconds (For OWSC/TWSC intersections, reported delay is for worst-case movement).

* Exceeds LOS Standard

LSA

Table 9-E - Intersection Improvement Funding Mechanism and Fair Share

Intersection	Jurisdiction	Funding Mechanism	Project Responsibility	Improvements Covered by Fair Share	Fair Share Percentage[1]
3 . 12th Avenue/Flint Avenue	Hanford/Kings County	Fair Share		Install traffic signal	33.91%
4 . 12th Avenue/Fargo Avenue	Hanford/Kings County	Project Responsibility/Fair Share	Optimize signal timings	Add NBR lane	76.48%
7 . 12th Avenue/Liberty Street - Kings County Drive	Hanford	Fair Share		Optimize signal timings	62.26%
12 . Fitzgerald Lane/Fargo Avenue	Hanford/Kings County	Project Responsibility	Install TWLTL median with provision of merging lane for NBL traffic from Fitzgerald Lane		
13 . Glacier Way/Fargo Avenue	Hanford	Fair Share		Install traffic signal	79.93%
14 . 11th Avenue/Flint Avenue	Hanford/Kings County	Fair Share		Install traffic signal	43.60%
17 . 12th Avenue/Project Driveway 1	Hanford/Kings County	Project Responsibility	Install traffic signal		
20 . Project Driveway 4/Fargo Avenue	Hanford/Kings County	Project Responsibility	Install traffic signal		

Notes:

NB = Northbound, SB = Southbound, EB = Eastbound, WB = Westbound, TWLTL = Two-Way Left Turn Lane

L = Left, T = Through, R = Right

[1] Project Fair Share Percentage is the highest fair share value of the AM and PM peak hour when both peak hours require improvements, or only in the peak hour that require improvements.

10.0 INTERSECTION QUEUING ANALYSIS

Tables 10-A, 10-B, and 10-C list the available turn-pocket storage lengths and summarize the 95th percentile back-of-queue lengths at the study intersections under existing, near-term, and cumulative year without project and plus project conditions. The queues for the signalized intersections have been reported from Synchro, while for unsignalized intersections, the SimTraffic queues have been reported since Synchro does not appropriately report queues at unsignalized intersections.

Tables 10-D, 10-E, and 10-F lists the 95th percentile back-of-queue lengths at the study intersections for plus project and plus project with improvements conditions, under existing, near-term, and cumulative year scenarios. It also includes the recommended turn-pocket storage lengths at these intersections. The recommended turn pocket storage lengths have been calculated based on recommended lane geometry with improvements and availability of adequate right-of-way.

It should be noted that for some of the intersections, optimizing the signal timing eliminates the queuing related deficiencies. As such, no additional storage length expansion recommendation has been recommended for these locations.

Detailed queuing worksheets are included in Appendix E.

10.1 LIST OF CHAPTER 10.0 TABLES

- Table 10-A: Existing Queuing Analysis
- Table 10-B: Near-Term Queuing Analysis
- Table 10-C: Cumulative Year (2042) Queuing Analysis
- Table 10-D: Existing Plus Project with Improvements Queuing Analysis
- Table 10-E: Near-Term Plus Project with Improvements Queuing Analysis
- Table 10-F: Cumulative Year (2042) Plus Project with Improvements Queuing Analysis

LSA

Table 10-A - Existing Queuing Analysis

Intersection	Movement	Without Project Storage Length[1] (ft/ln)	Existing			
			Without Project[2]		Plus Project [2]	
			AM	PM	AM	PM
4 . 12th Avenue/Fargo Avenue	**NBL**	250	30	30	30	30
Signal	**SBL**	250	30	40	30	40
	SBR	130	0	0	0	0
	EBL	200	75	35	95	55
	EBR	100	0	0	0	0
	WBL	340	225	200	**520**	**405**
	WBR	100	0	0	0	0
5 . 12th Avenue/Grangeville Boulevard	**2x NBL**	250	40	50	45	55
Signal	**NBR**	200	35	55	35	100
	2x SBL	200	45	30	50	35
	SBR	150	15	0	45	10
	2x EBL	200	40	40	60	60
	EBR	125	10	0	5	0
	2x WBL	175	95	85	100	90
	WBR	150	0	5	0	10
6 . 12th Avenue/Greenfield Avenue	**NBL**	250	30	45	30	45
Signal	**NBR**	80	0	5	0	5
	SBL	255	90	35	155	60
	SBR	130	0	0	0	0
	EBL	185	60	40	70	45
	WBL	150	60	45	60	45
7 . 12th Avenue/Liberty Street - Kings County Drive	**NBL**	250	20	20	20	25
Signal	**NBR**	150	0	0	0	0
	SBL	250	250	40	**325**	65
	SBR	155	0	0	0	0
	EBL	80	25	20	25	20
	EBR	75	0	0	0	0
	WBL	190	15	25	15	25
	WBR	140	0	20	0	50
8 . 12th Avenue/Lacey Boulevard	**NBL**	240	60	145	65	150
Signal	**SBL**	240	75	115	130	155
	SBR	120	25	30	40	40
	2x EBL	265	55	120	65	135
	EBR	110	20	50	20	50
	2x WBL	270	55	130	60	140
	WBR	170	0	15	15	50
9 . 12th Avenue/Centennial Drive - Mall Drive	**2x NBL**	250	65	155	70	160
Signal	**SBL**	180	50	90	65	100
	SBR	180	0	15	5	20
	EBL	260	40	110	45	115
	WBL	230	80	**235**	85	**245**

LSA

Table 10-A - Existing Queuing Analysis

Intersection	Movement	Without Project Storage Length[1] (ft/ln)	Existing			
			Without Project[2]		Plus Project [2]	
			AM	PM	AM	PM
10 . 12th Avenue/SR-198 WB Ramps	**NBL**	400	55	70	55	65
Signal	**SBR**	130	40	60	45	80
	WBL	460	75	150	70	150
	WBR	270	125	110	135	125
11 . 12th Avenue/SR-198 EB Ramps	**NBR**	365	0	0	0	0
Signal	**EBL**	1000	170	180	180	195
	EBR	860	5	25	5	25
12 . Fitzgerald Lane/Fargo Avenue	**WBL**	120	60	55	85	60
OWSC						
13 . Glacier Way/Fargo Avenue	**EBL**	120	60	65	50	55
TWSC	**WBL**	110	25	30	30	25
14 . 11th Avenue/Flint Avenue	**NBR**	190	180	50	160	60
AWSC						
15 . 11th Avenue/Fargo Avenue	**NBL**	200	65	70	95	100
Signal	**SBL**	255	95	70	95	70
	EBL	180	150	140	180	150
	WBL	270	235	150	235	150
	WBR	150	0	5	0	5
16 . SR-43/Flint Avenue	**NBL**	430	70	70	75	90
Signal	**SBL**	330	10	10	10	10
	EBL	210	**270**	105	**280**	110
	WBL	280	15	25	15	25
17 . 12th Avenue/Project Driveway 1	**SBL**	150	-	-	30	20
OWSC	**WBL**	390	-	-	155	90
	WBR	390	-	-	40	25
18 . 12th Avenue/Project Driveway 2	**WBR**	105	-	-	15	20
OWSC						
19 . Project Driveway 3/Fargo Avenue	**SBR**	130	-	-	**350**	95
OWSC						
20 . Project Driveway 4/Fargo Avenue	**SBL**	800	-	-	305	390
OWSC	**SBR**	800	-	-	215	210
	EBL	150	-	-	90	85

LSA

Table 10-A - Existing Queuing Analysis

Intersection	Movement	Without Project Storage Length[1] (ft/ln)	Existing			
			Without Project[2]		Plus Project [2]	
			AM	PM	AM	PM
21 . Project Driveway 5/Flint Avenue	**NBR**	150	-	-	20	15
OWSC						
22 . Project Driveway 6/Flint Avenue	**NBLR**	120	-	-	50	45
OWSC	**WBL**	150	-	-	35	15
23 . Project Driveway 7/Fargo Avenue	**SBR**	485	-	-	55	45
OWSC						

Notes:

ft/ln = feet per lane

EB = Eastbound; WB = Westbound; NB = Northbound; SB = Southbound

L = Left; R = Right

Bold = Queue exceeds available storage.

[1] Storage length for all movements obtained from Google Earth measurements and conceptual site plan.

[2] All queues reported are 95th percentile queues. Queues for signalized intersections have been taken from Synchro and queues for stop controlled intersections have been taken from SimTraffic.

LSA

Table 10-B - Near-Term Queuing Analysis

Intersection	Movement	Without Project Storage Length[1] (ft/ln)	Near-Term Plus Project [2]	
			AM	PM
4 . 12th Avenue/Fargo Avenue	**NBL**	250	45	80
Signal	**SBL**	250	30	40
	SBR	130	0	0
	EBL	200	110	65
	EBR	100	0	0
	WBL	340	**535**	**435**
	WBR	100	0	0
5 . 12th Avenue/Grangeville Boulevard	**2x NBL**	250	50	65
Signal	**NBR**	200	35	115
	2x SBL	200	55	40
	SBR	150	50	20
	2x EBL	200	65	65
	EBR	125	25	10
	2x WBL	175	110	95
	WBR	150	15	15
6 . 12th Avenue/Greenfield Avenue	**NBL**	250	30	45
Signal	**NBR**	80	0	5
	SBL	255	155	60
	SBR	130	0	0
	EBL	185	70	45
	WBL	150	60	50
7 . 12th Avenue/Liberty Street - Kings County Drive	**NBL**	250	20	25
Signal	**NBR**	150	0	0
	SBL	250	**325**	65
	SBR	155	0	0
	EBL	80	25	20
	EBR	75	0	0
	WBL	190	15	25
	WBR	140	0	50
8 . 12th Avenue/Lacey Boulevard	**NBL**	240	75	170
Signal	**SBL**	240	140	165
	SBR	120	45	60
	2x EBL	265	75	150
	EBR	110	30	50
	2x WBL	270	60	145
	WBR	170	20	50

LSA

Table 10-B - Near-Term Queuing Analysis

Intersection	Movement	Without Project Storage Length[1] (ft/ln)	Near-Term Plus Project [2]	
			AM	PM
9 . 12th Avenue/Centennial Drive - Mall Drive	**2x NBL**	250	75	175
Signal	**SBL**	180	70	105
	SBR	180	5	20
	EBL	260	45	120
	WBL	230	85	**250**
10 . 12th Avenue/SR-198 WB Ramps	**NBL**	400	55	65
Signal	**SBR**	130	45	100
	WBL	460	70	145
	WBR	270	140	150
11 . 12th Avenue/SR-198 EB Ramps	**NBR**	365	0	0
Signal	**EBL**	1000	180	210
	EBR	860	5	25
12 . Fitzgerald Lane/Fargo Avenue	**WBL**	120	**180**	55
OWSC				
13 . Glacier Way/Fargo Avenue	**EBL**	120	55	80
TWSC	**WBL**	110	20	25
14 . 11th Avenue/Flint Avenue	**NBR**	190	190	60
AWSC				
15 . 11th Avenue/Fargo Avenue	**NBL**	200	95	100
Signal	**SBL**	255	95	70
	EBL	180	**195**	155
	WBL	270	235	150
	WBR	150	0	5
16 . SR-43/Flint Avenue	**NBL**	430	75	90
Signal	**SBL**	330	10	10
	EBL	210	**300**	115
	WBL	280	15	25

LSA

Table 10-B - Near-Term Queuing Analysis

Intersection	Movement	Without Project Storage Length[1] (ft/ln)	Near-Term Plus Project [2] AM	Near-Term Plus Project [2] PM
17 . 12th Avenue/Project Driveway 1	**SBL**	150	25	15
OWSC	**WBL**	390	155	80
	WBR	390	35	25
18 . 12th Avenue/Project Driveway 2	**WBR**	105	25	20
OWSC				
19 . Project Driveway 3/Fargo Avenue	**SBR**	130	**405**	65
OWSC				
20 . Project Driveway 4/Fargo Avenue	**SBL**	800	310	360
OWSC	**SBR**	800	155	215
	EBL	150	120	70
21 . Project Driveway 5/Flint Avenue	**NBR**	150	20	15
OWSC				
22 . Project Driveway 6/Flint Avenue	**NBLR**	120	55	40
OWSC	**WBL**	150	40	20
23 . Project Driveway 7/Fargo Avenue	**SBR**	485	450	50
OWSC				

Notes:

ft/ln = feet per lane

EB = Eastbound; WB = Westbound; NB = Northbound; SB = Southbound

L = Left; R = Right

Bold = Queue exceeds available storage.

[1] Storage length for all movements obtained from Google Earth measurements and conceptual site plan.

[2] All queues reported are 95th percentile queues. Queues for signalized intersections have been taken from Synchro and queues for stop controlled intersections have been taken from SimTraffic.

LSA

Table 10-C - Cumulative Year (2042) Queuing Analysis

Intersection	Movement	Without Project Storage Length[1] (ft/ln)	Cumulative Year (2042) Plus Project [2]	
			AM	PM
4 . 12th Avenue/Fargo Avenue	**NBL**	250	50	80
Signal	**SBL**	250	35	40
	SBR	130	5	0
	EBL	200	145	65
	EBR	100	0	0
	WBL	340	**580**	**440**
	WBR	100	0	0
5 . 12th Avenue/Grangeville Boulevard	**2x NBL**	250	55	70
Signal	**NBR**	200	55	135
	2x SBL	200	60	60
	SBR	150	55	20
	2x EBL	200	75	70
	EBR	125	25	10
	2x WBL	175	120	120
	WBR	150	0	40
6 . 12th Avenue/Greenfield Avenue	**NBL**	250	35	60
Signal	**NBR**	80	0	5
	SBL	255	160	60
	SBR	130	0	0
	EBL	185	70	50
	WBL	150	65	50
7 . 12th Avenue/Liberty Street - Kings County Drive	**NBL**	250	20	25
Signal	**NBR**	150	0	0
	SBL	250	**355**	135
	SBR	155	0	0
	EBL	80	30	25
	EBR	75	0	0
	WBL	190	20	30
	WBR	140	5	55
8 . 12th Avenue/Lacey Boulevard	**NBL**	240	95	**245**
Signal	**SBL**	240	150	215
	SBR	120	55	95
	2x EBL	265	85	180
	EBR	110	35	55
	2x WBL	270	70	165
	WBR	170	20	55

LSA

Table 10-C - Cumulative Year (2042) Queuing Analysis

Intersection	Movement	Without Project Storage Length[1] (ft/ln)	Cumulative Year (2042) Plus Project [2]	
			AM	PM
9 . 12th Avenue/Centennial Drive - Mall Drive	**2x NBL**	250	75	195
Signal	**SBL**	180	70	110
	SBR	180	5	20
	EBL	260	45	125
	WBL	230	95	**335**
10 . 12th Avenue/SR-198 WB Ramps	**NBL**	400	60	80
Signal	**SBR**	130	50	**220**
	WBL	460	80	175
	WBR	270	155	195
11 . 12th Avenue/SR-198 EB Ramps	**NBR**	365	0	0
Signal	**EBL**	1000	190	225
	EBR	860	5	30
12 . Fitzgerald Lane/Fargo Avenue	**WBL**	120	**200**	60
OWSC				
13 . Glacier Way/Fargo Avenue	**EBL**	120	70	55
TWSC	**WBL**	110	100	35
14 . 11th Avenue/Flint Avenue	**NBR**	190	145	60
AWSC				
15 . 11th Avenue/Fargo Avenue	**NBL**	200	95	130
Signal	**SBL**	255	95	75
	EBL	180	**220**	175
	WBL	270	260	155
	WBR	150	0	5
16 . SR-43/Flint Avenue	**NBL**	430	100	120
Signal	**SBL**	330	10	10
	EBL	210	**325**	125
	WBL	280	15	30

LSA

Table 10-C - Cumulative Year (2042) Queuing Analysis

Intersection	Movement	Without Project Storage Length[1] (ft/ln)	Cumulative Year (2042) Plus Project [2] AM	Cumulative Year (2042) Plus Project [2] PM
17 . 12th Avenue/Project Driveway 1	**SBL**	150	35	20
OWSC	**WBL**	390	170	150
	WBR	390	40	20
18 . 12th Avenue/Project Driveway 2	**WBR**	105	15	10
OWSC				
19 . Project Driveway 3/Fargo Avenue	**SBR**	130	**375**	**160**
OWSC				
20 . Project Driveway 4/Fargo Avenue	**SBL**	800	310	385
OWSC	**SBR**	800	215	200
	EBL	150	150	80
21 . Project Driveway 5/Flint Avenue	**NBR**	150	25	15
OWSC				
22 . Project Driveway 6/Flint Avenue	**NBLR**	120	55	40
OWSC	**WBL**	150	25	25
23 . Project Driveway 7/Fargo Avenue	**SBR**	485	400	50
OWSC				

Notes:

ft/ln = feet per lane

EB = Eastbound; WB = Westbound; NB = Northbound; SB = Southbound

L = Left; R = Right

Bold = Queue exceeds available storage.

[1] Storage length for all movements obtained from Google Earth measurements and conceptual site plan.

[2] All queues reported are 95th percentile queues. Queues for signalized intersections have been taken from Synchro and queues for stop controlled intersections have been taken from SimTraffic.

LSA

Table 10-D - Existing Plus Project with Improvements Queuing Analysis

Intersection	Movement	Without Project Storage Length[1] (ft/ln)	Plus Project Recommended Storage Length[1] (ft/ln)	Existing			
				Plus Project [2]		Plus Project with Improvements[2]	
				AM	PM	AM	PM
4 . 12th Avenue/Fargo Avenue	**NBL**	250	250	30	30	40	40
Signal	**SBL**	250	250	30	40	40	55
	SBR	130	130	0	0	0	0
	EBL	200	200	95	55	165	80
	EBR	100	100	0	0	0	0
	WBL	340	340	**520**	**405**	**555**	**425**
	WBR	100	100	0	0	5	0
5 . 12th Avenue/Grangeville Boulevard	**2x NBL**	250	250	45	55	45	55
Signal	**NBR**	200	200	35	100	35	100
	2x SBL	200	200	50	35	50	35
	SBR	150	150	45	10	45	10
	2x EBL	200	200	60	60	60	60
	EBR	125	125	5	0	5	0
	2x WBL	175	175	100	90	100	90
	WBR	150	150	0	10	0	10
6 . 12th Avenue/Greenfield Avenue	**NBL**	250	250	30	45	30	45
Signal	**NBR**	80	80	0	5	0	5
	SBL	255	255	155	60	155	60
	SBR	130	130	0	0	0	0
	EBL	185	185	70	45	70	45
	WBL	150	150	60	45	60	45
7 . 12th Avenue/Liberty Street - Kings County Drive	**NBL**	250	250	20	25	25	25
Signal	**NBR**	150	150	0	0	0	0
	SBL[3]	250	250	**325**	65	220	65
	SBR	155	155	0	0	0	0
	EBL	80	80	25	20	35	20
	EBR	75	75	0	0	0	0
	WBL	190	190	15	25	20	25
	WBR	140	140	0	50	5	50
8 . 12th Avenue/Lacey Boulevard	**NBL**	240	240	65	150	65	150
Signal	**SBL**	240	240	130	155	130	155
	SBR	120	120	40	40	40	40
	2x EBL	265	265	65	135	65	135
	EBR	110	110	20	50	20	50
	2x WBL	270	270	60	140	60	140
	WBR	170	170	15	50	15	50
9 . 12th Avenue/Centennial Drive - Mall Drive	**2x NBL**	250	250	70	160	70	160
Signal	**SBL**	180	180	65	100	65	100
	SBR	180	180	5	20	5	20
	EBL	260	260	45	115	45	115
	WBL	230	350	85	**245**	85	245
10 . 12th Avenue/SR-198 WB Ramps	**NBL**	400	400	55	65	55	65
Signal	**SBR**	130	130	45	80	45	80
	WBL	460	460	70	150	70	150
	WBR	270	270	135	125	135	125

LSA

Table 10-D - Existing Plus Project with Improvements Queuing Analysis

Intersection	Movement	Without Project Storage Length[1] (ft/ln)	Plus Project Recommended Storage Length[1] (ft/ln)	Existing			
				Plus Project [2]		Plus Project with Improvements[2]	
				AM	PM	AM	PM
11 . 12th Avenue/SR-198 EB Ramps	**NBR**	365	365	0	0	0	0
Signal	**EBL**	1000	1000	180	195	180	195
	EBR	860	860	5	25	5	25
12 . Fitzgerald Lane/Fargo Avenue	**WBL**	120	120	85	60	80	60
OWSC							
13 . Glacier Way/Fargo Avenue	**EBL**	120	120	50	55	120	100
Signal	**WBL**	110	110	30	25	30	25
14 . 11th Avenue/Flint Avenue	**NBR**	190	190	160	60	30	25
Signal							
15 . 11th Avenue/Fargo Avenue	**NBL**	200	200	95	100	95	100
Signal	**SBL**	255	255	95	70	95	70
	EBL	180	180	180	150	180	150
	WBL	270	270	235	150	235	150
	WBR	150	150	0	5	0	5
16 . SR-43/Flint Avenue	**NBL**	430	430	75	90	75	90
Signal	**SBL**	330	330	10	10	10	10
	EBL[3]	210	210	**280**	110	190	110
	WBL	280	280	15	25	15	25
17 . 12th Avenue/Project Driveway 1	**SBL**	150	150	30	20	15	5
Signal	**WBL**	390	390	155	90	105	45
	WBR	390	390	40	25	10	5
18 . 12th Avenue/Project Driveway 2	**WBR**	105	105	15	20	15	15
OWSC							
19 . Project Driveway 3/Fargo Avenue	**SBR**	130	130	**350**	95	70	50
OWSC							
20 . Project Driveway 4/Fargo Avenue	**SBL**	800	800	305	390	195	105
Signal	**SBR**	800	800	215	210	45	30
	EBL	150	150	90	85	100	100
21 . Project Driveway 5/Flint Avenue	**NBR**	150	150	20	15	30	10
OWSC							
22 . Project Driveway 6/Flint Avenue	**NBLR**	120	120	50	45	45	40
OWSC	**WBL**	150	150	35	15	40	25

LSA

Table 10-D - Existing Plus Project with Improvements Queuing Analysis

Intersection	Movement	Without Project Storage Length[1] (ft/ln)	Plus Project Recommended Storage Length[1] (ft/ln)	Existing			
				Plus Project [2]		Plus Project with Improvements[2]	
				AM	PM	AM	PM
23 . Project Driveway 7/Fargo Avenue	**SBR**	485	485	55	45	55	60
OWSC							

Notes:

ft/ln = feet per lane

EB = Eastbound; WB = Westbound; NB = Northbound; SB = Southbound

L = Left; R = Right

Bold = Queue exceeds available storage.

[1] Storage length for all movements obtained from Google Earth measurements and conceptual site plan.

[2] All queues reported are 95th percentile queues. Queues for signalized intersections have been taken from Synchro and queues for stop controlled intersections have been taken from SimTraffic.

[3] Optimized signal timings at these intersections eliminates the queuing related deficiencies. As such, no additional improvements will be required at these locations.

LSA

Table 10-E - Near-Term Plus Project with Improvements Queuing Analysis

Intersection	Movement	Without Project Storage Length[1] (ft/ln)	Plus Project Recommended Storage Length[1] (ft/ln)	Near-Term			
				Plus Project [2]		Plus Project with Improvements[2]	
				AM	PM	AM	PM
4 . 12th Avenue/Fargo Avenue	**NBL**	250	250	45	80	80	135
Signal	**SBL**	250	250	30	40	40	55
	SBR	130	130	0	0	0	0
	EBL	200	200	110	65	195	90
	EBR	100	100	0	0	0	0
	WBL	340	340	**535**	**435**	**715**	**450**
	WBR	100	100	0	0	5	0
5 . 12th Avenue/Grangeville Boulevard	**2x NBL**	250	250	50	65	50	65
Signal	**NBR**	200	200	35	115	35	115
	2x SBL	200	200	55	40	55	40
	SBR	150	150	50	20	50	20
	2x EBL	200	200	65	65	65	65
	EBR	125	125	25	10	25	10
	2x WBL	175	175	110	95	110	95
	WBR	150	150	15	15	15	15
6 . 12th Avenue/Greenfield Avenue	**NBL**	250	250	30	45	30	45
Signal	**NBR**	80	80	0	5	0	5
	SBL	255	255	155	60	155	60
	SBR	130	130	0	0	0	0
	EBL	185	185	70	45	70	45
	WBL	150	150	60	50	60	50
7 . 12th Avenue/Liberty Street - Kings County Drive	**NBL**	250	250	20	25	25	25
Signal	**NBR**	150	150	0	0	0	0
	SBL[3]	250	250	**325**	65	220	65
	SBR	155	155	0	0	0	0
	EBL	80	80	25	20	35	20
	EBR	75	75	0	0	0	0
	WBL	190	190	15	25	20	25
	WBR	140	140	0	50	5	50
8 . 12th Avenue/Lacey Boulevard	**NBL**	240	240	75	170	75	170
Signal	**SBL**	240	240	140	165	140	165
	SBR	120	120	45	60	45	60
	2x EBL	265	265	75	150	75	150
	EBR	110	110	30	50	30	50
	2x WBL	270	270	60	145	60	145
	WBR	170	170	20	50	20	50
9 . 12th Avenue/Centennial Drive - Mall Drive	**2x NBL**	250	250	75	175	75	175
Signal	**SBL**	180	180	70	105	70	105
	SBR	180	180	5	20	5	20
	EBL	260	260	45	120	45	120
	WBL	230	350	85	**250**	85	250
10 . 12th Avenue/SR-198 WB Ramps	**NBL**	400	400	55	65	55	65
Signal	**SBR**	130	130	45	100	45	60
	WBL	460	460	70	145	70	145
	WBR	270	270	140	150	140	150

LSA

Table 10-E - Near-Term Plus Project with Improvements Queuing Analysis

Intersection	Movement	Without Project Storage Length[1] (ft/ln)	Plus Project Recommended Storage Length[1] (ft/ln)	Near-Term			
				Plus Project [2]		Plus Project with Improvements[2]	
				AM	PM	AM	PM
11 . 12th Avenue/SR-198 EB Ramps	**NBR**	365	365	0	0	0	0
Signal	**EBL**	1000	1000	180	210	180	210
	EBR	860	860	5	25	5	25
12 . Fitzgerald Lane/Fargo Avenue	**WBL**	120	120	**180**	55	80	65
OWSC							
13 . Glacier Way/Fargo Avenue	**EBL**	120	120	55	80	120	105
Signal	**WBL**	110	110	20	25	30	30
14 . 11th Avenue/Flint Avenue	**NBR**	190	190	190	60	35	25
Signal							
15 . 11th Avenue/Fargo Avenue	**NBL**	200	200	95	100	95	100
Signal	**SBL**	255	255	95	70	95	70
	EBL[3]	180	180	**195**	155	170	155
	WBL	270	270	235	150	210	150
	WBR	150	150	0	5	0	5
16 . SR-43/Flint Avenue	**NBL**	430	430	75	90	75	90
Signal	**SBL**	330	330	10	10	10	10
	EBL[3]	210	210	**300**	115	200	115
	WBL	280	280	15	25	15	25
17 . 12th Avenue/Project Driveway 1	**SBL**	150	150	25	15	20	5
Signal	**WBL**	390	390	155	80	115	50
	WBR	390	390	35	25	10	5
18 . 12th Avenue/Project Driveway 2	**WBR**	105	105	25	20	25	25
OWSC							
19 . Project Driveway 3/Fargo Avenue	**SBR**	130	130	**405**	65	**385**	45
OWSC							
20 . Project Driveway 4/Fargo Avenue	**SBL**	800	800	310	360	200	110
Signal	**SBR**	800	800	155	215	45	30
	EBL	150	150	120	70	100	105
21 . Project Driveway 5/Flint Avenue	**NBR**	150	150	20	15	15	10
OWSC							
22 . Project Driveway 6/Flint Avenue	**NBLR**	120	120	55	40	45	35
OWSC	**WBL**	150	150	40	20	35	25

LSA

Table 10-E - Near-Term Plus Project with Improvements Queuing Analysis

Intersection	Movement	Without Project Storage Length[1] (ft/ln)	Plus Project Recommended Storage Length[1] (ft/ln)	Near-Term			
				Plus Project [2]		Plus Project with Improvements[2]	
				AM	PM	AM	PM
23 . Project Driveway 7/Fargo Avenue	**SBR**	485	485	450	50	60	50
OWSC							

Notes:

ft/ln = feet per lane

EB = Eastbound; WB = Westbound; NB = Northbound; SB = Southbound

L = Left; R = Right

Bold = Queue exceeds available storage.

[1] Storage length for all movements obtained from Google Earth measurements and conceptual site plan.

[2] All queues reported are 95th percentile queues. Queues for signalized intersections have been taken from Synchro and queues for stop controlled intersections have been taken from SimTraffic.

[3] Optimized signal timings at these intersections eliminates the queuing related deficiencies. As such, no additional improvements will be required at these locations.

LSA

Table 10-F - Cumulative Year (2042) Plus Project with Improvements Queuing Analysis

Intersection	Movement	Without Project Storage Length[1] (ft/ln)	Plus Project Recommended Storage Length[1] (ft/ln)	Cumulative Year (2042)			
				Plus Project [2]		Plus Project with Improvements[2]	
				AM	PM	AM	PM
4 . 12th Avenue/Fargo Avenue	**NBL**	250	250	50	80	85	145
Signal	**NBR**	-	100	-	-	60	100
	SBL	250	250	35	40	45	55
	SBR	130	130	5	0	0	0
	EBL	200	200	145	65	195	95
	EBR	100	100	0	0	0	0
	WBL	340	340	**580**	**440**	**600**	**440**
	WBR	100	100	0	0	5	0
5 . 12th Avenue/Grangeville Boulevard	**2x NBL**	250	250	55	70	55	70
Signal	**NBR**	200	200	55	135	55	135
	2x SBL	200	200	60	60	60	60
	SBR	150	150	55	20	55	20
	2x EBL	200	200	75	70	75	70
	EBR	125	125	25	10	25	10
	2x WBL	175	175	120	120	120	120
	WBR	150	150	0	40	0	40
6 . 12th Avenue/Greenfield Avenue	**NBL**	250	250	35	60	35	60
Signal	**NBR**	80	80	0	5	0	5
	SBL	255	255	160	60	160	60
	SBR	130	130	0	0	0	0
	EBL	185	185	70	50	70	50
	WBL	150	150	65	50	65	50
7 . 12th Avenue/Liberty Street - Kings County Drive	**NBL**	250	250	20	25	25	25
Signal	**NBR**	150	150	0	0	0	0
	SBL[3]	250	250	**355**	135	245	100
	SBR	155	155	0	0	0	0
	EBL	80	80	30	25	35	25
	EBR	75	75	0	0	0	0
	WBL	190	190	20	30	25	35
	WBR	140	140	5	55	20	70
8 . 12th Avenue/Lacey Boulevard	**NBL**[3]	240	240	95	**245**	95	240
Signal	**SBL**	240	240	150	215	150	210
	SBR	120	120	55	95	55	95
	2x EBL	265	265	85	180	85	180
	EBR	110	110	35	55	35	55
	2x WBL	270	270	70	165	70	165
	WBR	170	170	20	55	20	55
9 . 12th Avenue/Centennial Drive - Mall Drive	**2x NBL**	250	250	75	195	75	195
Signal	**SBL**	180	180	70	110	70	110
	SBR	180	180	5	20	5	20
	EBL	260	260	45	125	45	125
	WBL	230	350	95	**335**	95	335
10 . 12th Avenue/SR-198 WB Ramps	**NBL**	400	400	60	80	60	80
Signal	**SBR**[3]	130	130	50	**220**	50	120
	WBL	460	460	80	175	80	185
	WBR	270	270	155	195	155	210

LSA

Table 10-F - Cumulative Year (2042) Plus Project with Improvements Queuing Analysis

Intersection	Movement	Without Project Storage Length[1] (ft/ln)	Plus Project Recommended Storage Length[1] (ft/ln)	Cumulative Year (2042)			
				Plus Project [2]		Plus Project with Improvements[2]	
				AM	PM	AM	PM
11 . 12th Avenue/SR-198 EB Ramps	**NBR**	365	365	0	0	0	0
Signal	**EBL**	1000	1000	190	225	190	225
	EBR	860	860	5	30	5	30
12 . Fitzgerald Lane/Fargo Avenue	**WBL**	120	120	**200**	60	70	75
OWSC							
13 . Glacier Way/Fargo Avenue	**EBL**	120	120	70	55	100	115
Signal	**WBL**	110	110	100	35	30	30
14 . 11th Avenue/Flint Avenue	**NBR**	190	190	145	60	35	25
Signal							
15 . 11th Avenue/Fargo Avenue	**NBL**	200	200	95	130	95	130
Signal	**SBL**	255	255	95	75	95	75
	EBL[3]	180	180	**220**	175	170	175
	WBL	270	270	260	155	215	155
	WBR	150	150	0	5	0	5
16 . SR-43/Flint Avenue	**NBL**	430	430	100	120	100	120
Signal	**SBL**	330	330	10	10	10	10
	EBL[3]	210	210	**325**	125	210	125
	WBL	280	280	15	30	15	30
17 . 12th Avenue/Project Driveway 1	**SBL**	150	150	35	20	20	5
Signal	**WBL**	390	390	170	150	120	55
	WBR	390	390	40	20	10	5
18 . 12th Avenue/Project Driveway 2	**WBR**	105	105	15	10	25	15
OWSC							
19 . Project Driveway 3/Fargo Avenue	**SBR**	130	130	**375**	**160**	80	55
OWSC							
20 . Project Driveway 4/Fargo Avenue	**SBL**	800	800	310	385	210	125
Signal	**SBR**	800	800	215	200	45	35
	EBL	150	150	150	80	110	115
21 . Project Driveway 5/Flint Avenue	**NBR**	150	150	25	15	20	30
OWSC							
22 . Project Driveway 6/Flint Avenue	**NBLR**	120	120	55	40	45	45
OWSC	**WBL**	150	150	25	25	40	20

LSA

Table 10-F - Cumulative Year (2042) Plus Project with Improvements Queuing Analysis

Intersection	Movement	Without Project Storage Length[1] (ft/ln)	Plus Project Recommended Storage Length[1] (ft/ln)	Cumulative Year (2042)			
				Plus Project [2]		Plus Project with Improvements[2]	
				AM	PM	AM	PM
23 . Project Driveway 7/Fargo Avenue	**SBR**	485	485	400	50	75	60
OWSC							

Notes:

ft/ln = feet per lane

EB = Eastbound; WB = Westbound; NB = Northbound; SB = Southbound

L = Left; R = Right

Bold = Queue exceeds available storage.

[1] Storage length for all movements obtained from Google Earth measurements and conceptual site plan.

[2] All queues reported are 95th percentile queues. Queues for signalized intersections have been taken from Synchro and queues for stop controlled intersections have been taken from SimTraffic.

[3] Optimized signal timings at these intersections eliminates the queuing related deficiencies. As such, no additional improvements will be required at these locations.

11.0 SITE DISTANCE ANALYSIS

As discussed previously and shown on Figure 1-2, access to the project will be provided by seven driveways: two on 12th Avenue, two on Flint Avenue, and three on Fargo Avenue. For the purposes of this analysis, only the full-access driveways were analyzed.

11.1 SIGHT DISTANCE ANALYSIS

A sight distance analysis was conducted at the full-access project driveways along 12th Avenue, Fargo Avenue, and Flint Avenue. Sight distance is the length of the visible roadway a driver can see approaching vehicles before their line of sight is blocked by any object. For purposes of this analysis, only the stopping sight distance and corner sight distance have been evaluated.

According to the Caltrans *Highway Design Manual* (HDM) (dated July 2020), the stopping sight distance is the minimum sight distance along a roadway required to allow a driver to decrease their speed from the design speed to a complete stop. The corner sight distance is the minimum sight distance in which a driver at a stop-controlled approach can see oncoming traffic on the major street to safely maneuver onto the roadway.

The stopping sight distance was evaluated on the roadways along the project frontage. For purposes of this analysis, the posted speed limit of 45 mph has been considered as the design speed for 12th Avenue. For Fargo Avenue and Flint Avenue, the posted speed limit of 50 mph has been considered as the design speed. As stated in Table 201.1 if the HDM, the minimum stopping sight distance is 360 feet for a design speed of 45 mph and 430 feet for a design speed of 50 mph. Therefore, the minimum stopping sight distance has been considered as 360 feet for Project Driveway 1 (along 12th Avenue), and 430 feet for Project Driveway 4 (along Fargo Avenue) and Project Driveway 6 (along Flint Avenue).

As for corner sight distance, Section 405.1 of the HDM states that corner sight distance requirements are not applicable for urban driveways unless signalized. However, as a conservative approach, corner sight distances were also evaluated for the project driveways. The minimum corner sight distance was based on design speed, time gap, and type of vehicles from the minor roads (project driveways) to enter the major roads (12th Avenue, Fargo Avenue, and Flint Avenue).

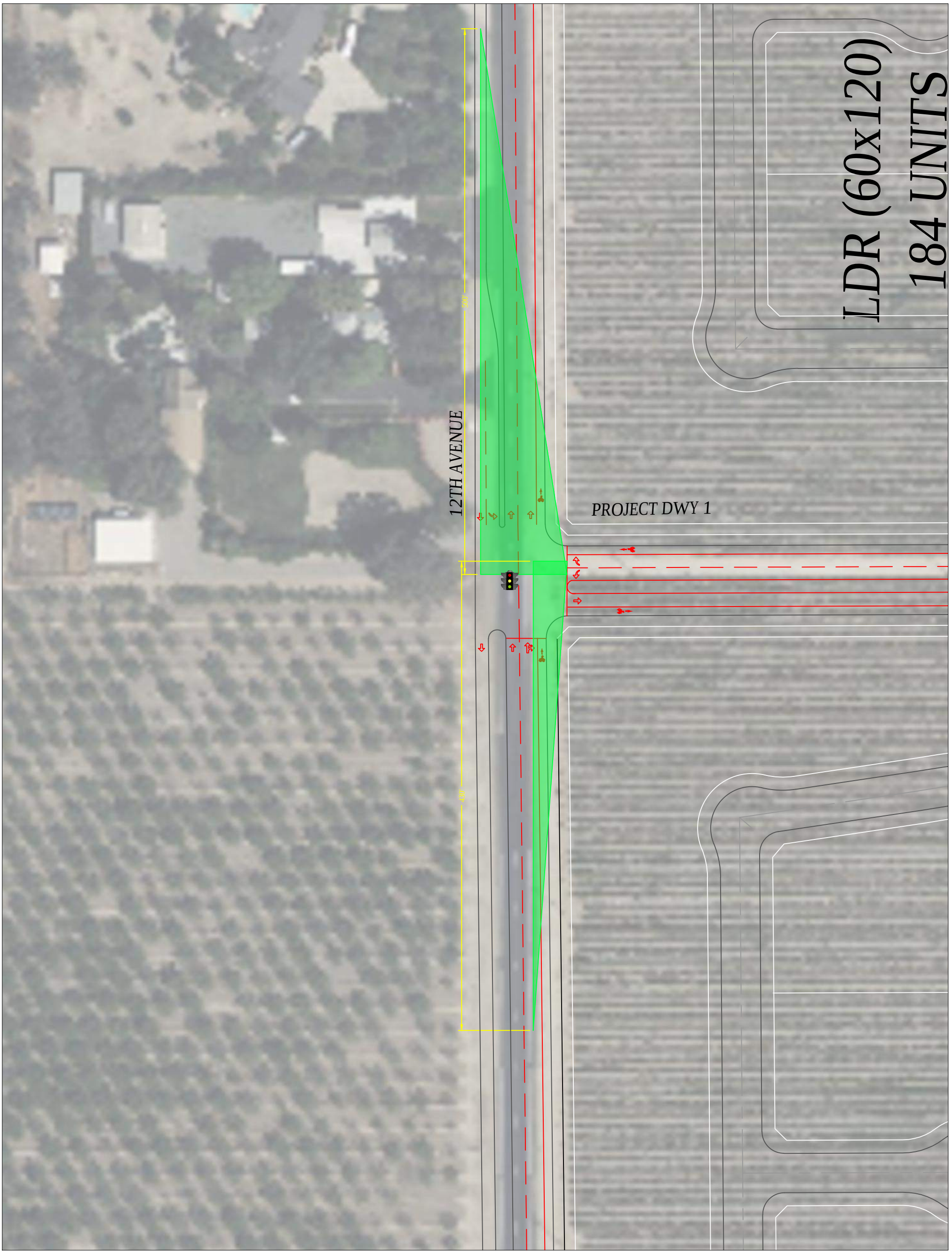
Based on the requirements established in the HDM, it was determined that a minimum corner sight distance of 500 feet would be required for left-turn maneuvers coming out of Project Driveway 1 and a minimum corner sight distance of 555 feet would be required for left-turn maneuvers coming out of Project Driveway 4 and Project Driveway 6. Furthermore, a minimum corner sight distance of 430 feet would be required for right-turn maneuvers coming out of Project Driveway 1 and a minimum corner sight distance of 480 feet would be required for right-turn maneuvers coming out of Project Driveway 4 and Project Driveway 6.

Since the corner sight distances required at the project driveways would be greater than the stopping sight distances (500 feet compared to 360 feet for Project Driveway 1 and 555 feet compared to 430 feet for Project Driveway 4 and Project Driveway 6), sight triangle figures were created using corner sight distances. As a conservative measure, left-turn corner sight distances

were used for both right- and left-turn sight triangles for both project driveways. As illustrated in Figure 11-1, Project Driveway 1 will provide adequate sight distance for left- and right-turn maneuvers onto 12th Avenue. As illustrated in Figure 11-2, Project Driveway 4 will provide adequate sight distance for left- and right-turn maneuvers onto Fargo Avenue. As illustrated in Figure 11-3, Project Driveway 6 will provide adequate sight distance for left- and right-turn maneuvers onto Flint Avenue.

11.2 LIST OF CHAPTER 11.0 FIGURES

- Figure 11-1: Sight Distance at Project Driveway 1
- Figure 11-2: Sight Distance at Project Driveway 4
- Figure 11-3: Sight Distance at Project Driveway 6



LSA

FIGURE 11-1

LEGEND

= Sight Distance Triangle

Proposed Striping

Proposed Signal

N

0 63 125

FEET

SOURCE: 4Creeks, May 2023

P:\FOC2203\Traffic\GIS\Autocad\21413_TSM_05.03.23\Striping.dwg (5/8/2023)

Singh Development Project

Traffic Study

Sight Distance at Project Driveway 1

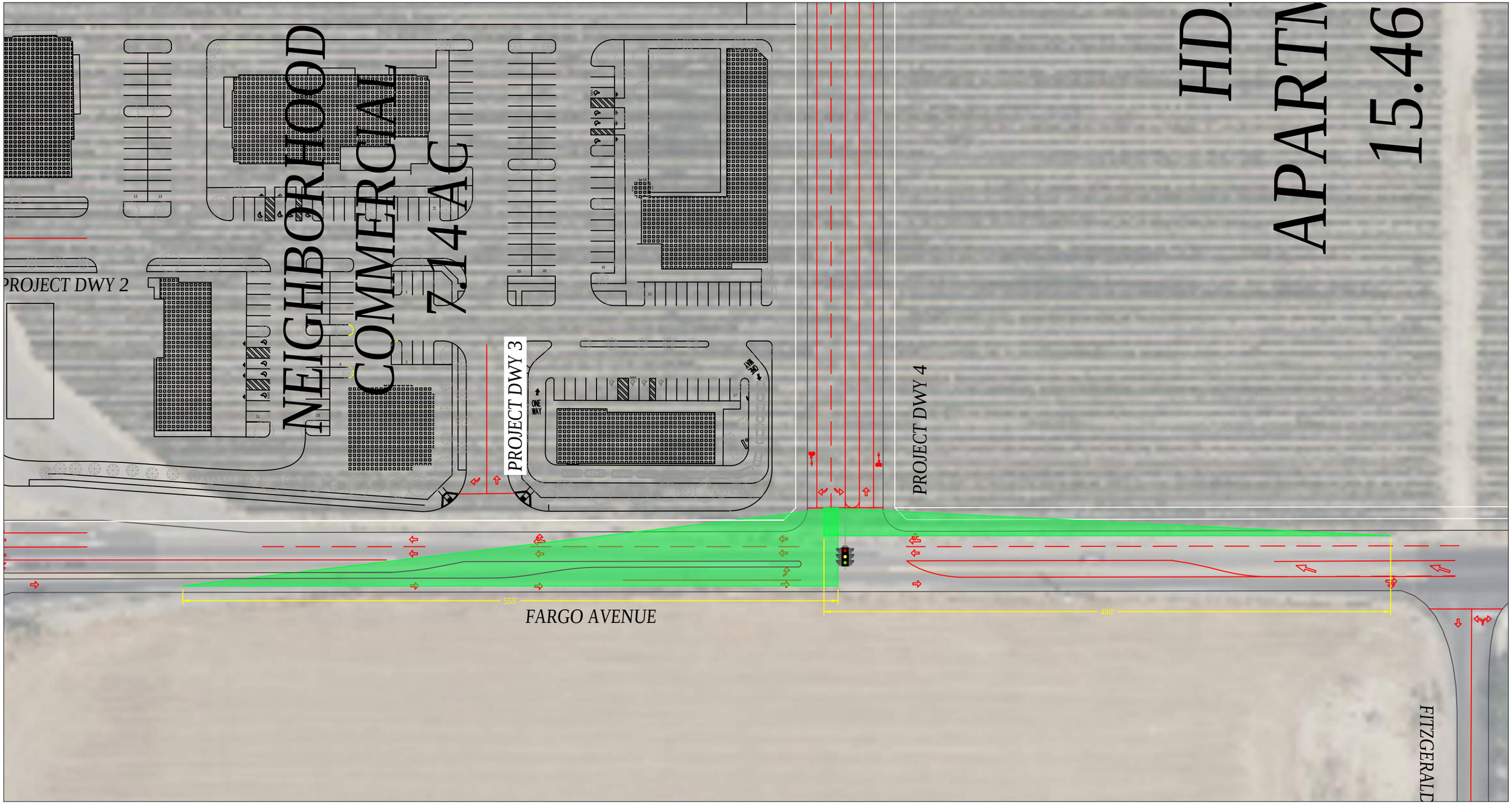


FIGURE 11-2

LSA

LEGEND

= Sight Distance Triangle

Proposed Striping

Proposed Signal

0 40 80

FEET

SOURCE: 4Creeks, May 2023

P:\FOC2203\Traffic\GIS\Autocad\21413_TSM_05.03.23\Striping.dwg (5/8/2023)

Singh Development Project

Traffic Study

Sight Distance at Project Driveway 4

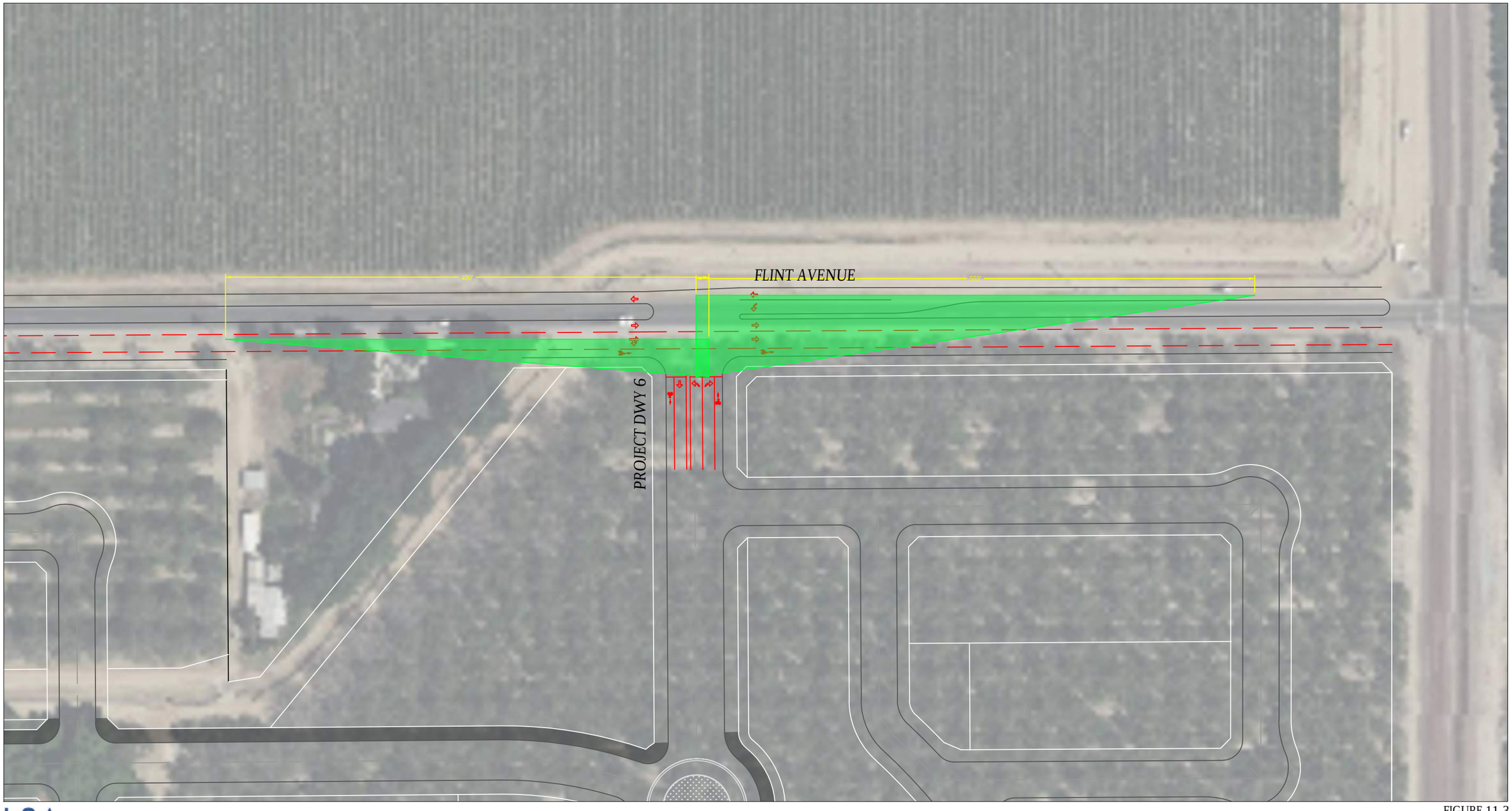


FIGURE 11-3

LSA

LEGEND

= Sight Distance Triangle

Proposed Striping

0 55 110

FEET

SOURCE: 4Creeks, May 2023

P:\FOC2203\Traffic\GIS\Autocad\21413_TSM_05.03.23\Striping.dwg (5/8/2023)

Singh Development Project

Traffic Study

Sight Distance Analysis at Project Driveway 6/Flint Avenue

12.0 SUMMARY AND CONCLUSIONS

The proposed project will be a mixed-use development including 697 single-family homes, 214 apartments, 235 townhomes, one elementary school with 600 students, 12,500 square feet (sf) of retail, a 11,000 sf sit-down restaurant, a 10,500 sf food court with outdoor seating, a 6,000 sf restaurant with drive-through window, and a gasoline station with 12 vehicle fueling positions and a 5,000 sf convenience store. Access to the project will be provided by seven driveways: three full-access and four RIRO driveways.

12.1 EXISTING CONDITIONS SUMMARY

All study intersections operate at a satisfactory LOS under existing without and plus project conditions with the exception of 7 intersections.

12.2 NEAR-TERM CONDITIONS SUMMARY

All intersections are forecast to operate at a satisfactory LOS under near-term plus project conditions with the exception of 7 intersections.

12.3 CUMULATIVE YEAR (2042) CONDITIONS SUMMARY

All intersections are forecast to operate at a satisfactory LOS under cumulative (2042) plus project conditions with the exception of 8 intersections.

12.4 IMPROVEMENTS SUMMARY

Based on the improvements discussed in Section 9.1, Recommended Improvements, all intersections are estimated to operate satisfactorily with implementation of the proposed improvements. Table 9-E summarizes the implementation strategy for each identified improvement – project responsibility versus fair share contributions.

12.5 QUEUEING ANALYSIS SUMMARY

The recommended storage lengths have been proposed at intersections based on the availability of right-of-way and 95th percentile back-of-queue lengths at the study intersections.

12.6 SIGHT DISTANCE ANALYSIS SUMMARY

A sight distance analysis was conducted at the full-access project driveways. Based on the sight distance analysis, the proposed full-access driveways achieve adequate sight distances and have clear sight triangles for the drivers.

APPENDIX A

SCOPING AGREEMENT

CARLSBAD
CLOVIS
IRVINE
LOS ANGELES
PALM SPRINGS
POINT RICHMOND
RIVERSIDE
ROSEVILLE
SAN LUIS OBISPO

February 28, 2023

Mr. Jason Waters
City of Hanford
317 N. Douty Street
Hanford, California 93230

Subject: Scope of Work for the Singh Development Project Traffic Study (LSA Project No. FOC2203)

Dear Mr. Waters:

LSA will be preparing a Traffic Study (TS) for the Singh Development Project (project) in the City of Hanford (City) in Kings County (County). The approximately 304-acre project site is located at the southeast corner of the intersection of 12th Avenue and Flint Avenue. The project site is currently vacant. Figure 1 (all figures, tables, and appendices attached) illustrates the regional and project location.

The project will be a mixed-use development including 697 single-family homes, 214 apartments, 235 townhomes, one elementary school with 600 students, 12,500 square feet (sf) of retail, a 11,000 sf sit-down restaurant, a 10,500 sf food court with outdoor seating, a 6,000 sf restaurant with drive-through window, and a gasoline station with 12 vehicle fueling positions and a 5,000 sf convenience store. It is to be noted that the commercial uses are tentative and conceptual, but under all circumstances will remain under 50,000 sf cumulatively. Additionally, the project will include passive use/open space areas that will offer playgrounds for children and high-end seating and communal areas allowing families to gather and socialize. Figure 2 illustrates the conceptual land use plan for the project. Access to the project site will be provided via seven driveways – two on 12th Avenue, two on Flint Avenue, and three on Fargo Avenue. Figure 2 shows all project driveways minus the driveway for the apartment use. For purposes of this analysis, the following driveways were considered as full-access driveways:

- 12th Avenue/Project Driveway 1;
- Project Driveway 4/Fargo Avenue;
- Project Driveway 6/Flint Avenue; and
- Project Driveway 7/Fargo Avenue.

Additionally, the following driveways were considered as a right-in/right-out (RIRO) only driveways because of their proximity to the signalized intersections of12th Avenue/Flint Avenue, and 12th Avenue/Fargo Avenue:

- 12th Avenue/Project Driveway 2;

1500 Iowa Avenue, Suite 200, Riverside, California 92507 951.781.9310 www.lsa.net

- Project Driveway 3/Fargo Avenue; and
- Project Driveway 5/Flint Avenue.

LSA anticipates that the following scope of work will be required to prepare the TS for the proposed project. This includes a Levels of Service (LOS) based traffic operations and safety analysis for consistency with City's General Plan goals and policies and a Vehicle Miles Traveled (VMT) Evaluation for California Environmental Quality Act (CEQA) purposes.

SCOPE OF WORK- LOS Analysis

Project Trip Generation

The trip generation for the proposed project was developed using rates from the Institute of Transportation Engineers (ITE) *Trip Generation Manual* (11th Edition) for Land Uses 210 - "Single-Family Detached Housing", 220 – "Multifamily Housing (Low-Rise)", 520 – "Elementary School", 822 – "Strip Retail Plaza (<40k)". 932 – "High-Turnover (Sit-Down Restaurant), 933 – "Fast-Food Restaurant without Drive-Through Window", 934 – "Fast-Food Restaurant with Drive-Through Window", and 945 – "Convenience Store/Gas Station." The project trip generation is summarized in Table A. As shown in Table A, the project is anticipated to generate 23,442 gross daily trips, with 2,291 gross trips occurring during the a.m. peak hour and 1,982 gross trips occurring during the p.m. peak hour.

Since the project is a mixed-use development, it is estimated that a certain percentage of trips between the land uses will be made on-site and these internal trips do not utilize the major street system. The internal trips can be made either by walking or by vehicles using internal roadways without using external streets. Internal capture was limited to 10 percent for the project land uses as per recommendations from City staff. The internal capture rate was applied to each land uses' respective trip generation to determine the number of internal trips. The internal trips were then subtracted from the total trip generation for the land use to establish the total external trips. Internal trip distribution and assignment at study area intersections will be accounted for during preparation of the TS.

For the retail/commercial uses, a certain percentage of external trips will be pass-by trips. A pass-by trip is a trip where an intermediate stop is made on the way from the origin to the primary destination of the trip without making a route diversion. It is not actually a "new" trip added to the surrounding circulation system. Pass-by rates were obtained from (ITE) *Trip Generation Manual* (11th Edition). After deducting the pass-by trips from the total external trips for the retail/commercial uses, the net external trips for the retail/commercial uses were obtained. Further, the net external trips for the non-residential uses were added to the external trips for the residential uses to obtain the total net trip generation for the project. As shown in Table A, the project is anticipated to generate 14,740 net daily trips, with 1,515 net trips occurring during the a.m. peak hour and 1,261 net trips occurring during the p.m. peak hour.

External trip distribution patterns were obtained using the select zone model runs obtained from the Kings County Association of Governments' (KCAG's) Travel Demand Model (TDM). However, keeping the same regional distribution as the select zone runs, manual adjustments were made to

the trip distributions within the study area based on location of local land uses within the vicinity of the project and the existing circulation network. Select zone model plots are included in Appendix A. Because the project has three different land uses, separate external trip distributions were prepared for each land uses. Figures 4, 5 and 6 illustrate the project trip distributions for the residential, retail/commercial and school components, respectively. The project trip assignment at the study intersections is the product of the project trip generation and the corresponding trip distribution percentages. Figures 7, 8 and 9 illustrate the project trip assignments for the residential, retail/commercial and school components, respectively. Figure 10 illustrates the total net trip assignment for the project at the study area intersections.

Study Intersections

While LOS analysis is no longer a determinant of CEQA impacts, consistency with the City's General Plan goals, policies requires an LOS evaluation for traffic operations and safety purposes. Additionally, the TS will also address requirements established by the California Department of Transportation (Caltrans). The City does not have its own TS guidelines. However, based on our understanding of the project study area and as per discussion with City staff, the following intersections are being proposed to be included in the TS:

1. 13th Avenue/Flint Avenue;
2. 13th Avenue/Fargo Avenue;
3. 12th Avenue/Flint Avenue;
4. 12th Avenue/Fargo Avenue;
5. 12th Avenue/Grangeville Boulevard;
6. 12th Avenue/Greenfield Avenue;
7. 12th Avenue/Liberty Street - Kings County Drive;
8. 12th Avenue/Lacey Boulevard;
9. 12th Avenue/Centennial Drive - Mall Drive;
10. 12th Avenue/State Route 198 (SR-198) Westbound Ramps;
11. 12th Avenue/SR-198 Eastbound Ramps;
12. Fitzgerald Lane/Fargo Avenue;
13. Glacier Way/Fargo Avenue;
14. 11th Avenue/Flint Avenue;
15. 11th Avenue/Fargo Avenue;
16. SR-43/Flint Avenue;
17. 12th Avenue/Project Driveway 1;
18. 12th Avenue/Project Driveway 2;

19. Project Driveway 3/Fargo Avenue;
20. Project Driveway 4/Fargo Avenue;
21. Project Driveway 5/Flint Avenue;
22. Project Driveway 6/Flint Avenue; and
23. Project Driveway 7/Fargo Avenue.

Figure 3 illustrates the study area intersections.

Analysis Scenarios

The TS will be prepared to meet the requirements of the City. LSA proposes to analyze a.m. and p.m. peak hour traffic operations at the study area intersections under the following scenarios:

- Existing Conditions;
- Existing Plus Project Conditions;
- Near-Term Plus Project Conditions; and
- Cumulative Year Plus Project Conditions.

Volume Development and Analysis Methodology

Traffic volumes for existing conditions are typically developed using existing count data collected at study intersections. LSA anticipates that at present, traffic is operating at pre-pandemic levels, and therefore, adjustments to traffic counts will not be required. Existing plus project traffic volumes will be developed by adding project traffic to existing traffic volumes.

Traffic volumes for near-term plus project conditions will be developed by adding project traffic as well as traffic volumes from approved and pending projects located near the study area to existing traffic volumes. A list of such projects will be obtained from City staff and adjacent jurisdictions.

Traffic volumes for cumulative year plus project conditions will be developed by using forecast volumes obtained from the KCAG's TDM, applying appropriate NCHRP post-processing methodologies, and adding project traffic.

Traffic operations at all study intersections will be analyzed during the a.m. and p.m. peak hours. The a.m. peak hour is defined as the one-hour period occurring between 7:00 and 9:00 a.m. which experiences the highest traffic volumes, while the p.m. peak hour is defined as the one-hour period occurring between 4:00 and 6:00 p.m. which experiences the highest traffic volumes. Intersection LOS will be calculated using the *Highway Capacity* Manual 6th Edition (HCM 6) analysis methodologies and by using the Synchro 11 software.

Intersection Queuing Analysis

An intersection queuing analysis will be performed at all study intersections. The queuing analysis will be performed using Synchro for signalized intersections and using SimTraffic for unsignalized intersections.

Analysis of Traffic Operations and Recommended Circulation Improvements

Levels of service without the project will be compared to levels of service with the project for all analysis scenarios to determine operational deficiencies based on the LOS standards and operational deficiency criteria as applicable for the City and Caltrans. Further, necessary improvements will be recommended to offset these deficiencies. Improvements may include addition of intersection turn lanes, segment lane additions, signalization, etc. The LOS with the proposed improvements will be calculated and summarized, along with a comparison of the LOS without improvements.

Signal Warrant Analysis (if required)

A signal warrant analysis would be conducted at unsignalized intersections if a signal is recommended as an improvement. Peak hour approach volumes for study intersections will be examined to determine whether signalization may be warranted per the criteria defined in the California supplement of the *Manual on Uniform Traffic Control Devices* (CA-MUTCD).

Fair-Share Contributions (if required)

A fair share percentage will be calculated for study intersection improvements recommended in the TS that are not included in the City's Development Impact Fee (DIF) program or any other funding program. The percentage of fair share for the project will be calculated at each location using the total trips generated by the project divided by the total "new" traffic, which is the net increase in traffic volumes from existing to cumulative year conditions.

SCOPE OF WORK- VMT Analysis

The City recently adopted Senate Bill 743 (SB 743) guidelines, and therefore, the VMT analysis will be based upon the methodology and significant threshold criteria identified in *the City of Hanford - VMT Thresholds and Implementation Guidelines*, dated November 2022" (VMT guidelines).

As indicated before, the project is a mixed-use project primarily consisting of residential, retail and school land uses. As per the guidelines, mixed-use projects shall be evaluated separately by each component of the project using the most appropriate VMT metric. Based on the screening criteria included in the guideline, the retail component could be screened out as a local-serving retail with an area less than 50,000 sf. Similarly, the school component could be screened out as an institutional/government and public services land use.

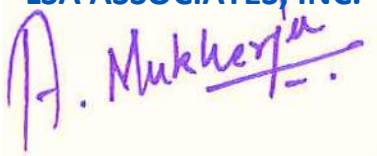
However, based on the project size, the residential component cannot be screened out from a VMT analysis. Therefore, a detailed VMT analysis is required for the project. The VMT guidelines established use of the regional travel model for VMT evaluation of projects that do not meet the screening criteria. The Kings County Association of Governments (KCAG) Travel Demand Model (TDM) is the regional travel demand model applicable to jurisdictions within Kings County including

the City for evaluating project VMT. Therefore, based on the guidelines, KCAG TDM will be used to conduct project VMT analysis. The VMT guidelines establishes "VMT per capita" metric to evaluate residential land uses. The guidelines also identified Kings County as the "region" and a threshold of 13% for comparison of project VMT metrics. As such, the project would constitute a significant VMT impact if the project "VMT per capita" is greater than 87% of Kings County average "VMT per capita".

Should you have any questions, please do not hesitate to contact me at (951) 781-9310 or email me at Ambarish.Mukherjee@lsa.net.

Sincerely,

LSA ASSOCIATES, INC.



Ambarish Mukherjee, AICP, PE
Principal

Attachments

Table A: Project Trip Generation
Figure 1: Regional and Project Location
Figure 2: Conceptual Land Use Plan
Figure 3: Study Area Intersections
Figure 4: Project Trip Distribution – Residential
Figure 5: Project Trip Distribution – Retail/Commercial
Figure 6: Project Trip Distribution – Elementary School
Figure 7: Project Trip Assignment – Residential
Figure 8: Project Net Trip Assignment – Retail/Commercial
Figure 9: Project Net Trip Assignment – Elementary School
Figure 10: Total Project Net Trip Assignment
Appendix A: KCAG TDM Select Zone Model Plots

LSA

Table A - Project Trip Generation

Land Use	Units		A.M. Peak Hour In	A.M. Peak Hour Out	A.M. Peak Hour Total	P.M. Peak Hour In	P.M. Peak Hour Out	P.M. Peak Hour Total	Daily
Single-Family Detached Housing	697	DU							
Trips/Unit[1]			0.18	0.52	0.70	0.59	0.35	0.94	9.43
Gross Trips			125	362	487	411	244	655	6,573
Internal Capture[2]			(13)	(36)	(49)	(41)	(24)	(66)	(657)
External Trips			113	326	438	370	220	590	5,916
Multifamily Housing	449	DU							
Trips/Unit[3]			0.10	0.30	0.40	0.32	0.19	0.51	6.74
Gross Trips			45	135	180	144	85	229	3,026
Internal Capture[2]			(5)	(14)	(18)	(14)	(9)	(23)	(303)
External Trips			41	122	162	130	77	206	2,723
Elementary School	600	Students							
Trips/Unit[4]			0.40	0.34	0.74	0.07	0.09	0.16	2.27
Gross Trips			240	204	444	42	54	96	1,362
Internal Capture[2]			(24)	(20)	(44)	(4)	(5)	(10)	(136)
External Trips			216	184	400	38	49	86	1,226
Retail	12.50	TSF							
Trips/Unit[5]			1.42	0.94	2.36	3.30	3.30	6.59	54.45
Gross Trips			18	12	30	41	41	82	681
Internal Capture[2]			(2)	(1)	(3)	(4)	(4)	(8)	(68)
Total External Trips			16	11	27	37	37	74	613
Pass-by Trips[6]			0	0	0	(15)	(15)	(30)	(245)
Net External Trips			16	11	27	22	22	44	368
Sit-Down Restaurant	11.00	TSF							
Trips/Unit[7]			5.26	4.31	9.57	5.52	3.53	9.05	107.20
Gross Trips			58	47	105	61	39	100	1,179
Internal Capture[2]			(6)	(5)	(11)	(6)	(4)	(10)	(118)
Total External Trips			52	42	95	55	35	90	1,061
Pass-by Trips[8]			0	0	0	(24)	(15)	(39)	(456)
Net External Trips			52	42	95	31	20	51	605
Food Court with Outdoor Seating	10.50	TSF							
Trips/Unit[9]			25.04	18.14	43.18	16.61	16.61	33.21	450.49
Gross Trips			263	190	453	174	174	348	4,730
Internal Capture[2]			(26)	(19)	(45)	(17)	(17)	(35)	(473)
Total External Trips			237	171	408	157	157	313	4,257
Pass-by Trips[10]			(118)	(86)	(204)	(86)	(86)	(172)	(2,235)
Net External Trips			119	85	204	71	71	141	2,022

LSA

Land Use	Units	A.M. Peak Hour In	A.M. Peak Hour Out	A.M. Peak Hour Total	P.M. Peak Hour In	P.M. Peak Hour Out	P.M. Peak Hour Total	Daily
Restaurant with Drive-Through Window	6.00 TSF							
Trips/Unit[11]		22.75	21.86	44.61	17.18	15.85	33.03	467.48
Gross Trips		137	131	268	103	95	198	2,805
Internal Capture[2]		(14)	(13)	(27)	(10)	(10)	(20)	(281)
Total External Trips		123	118	241	93	86	178	2,525
Pass-by Trips[12]		(62)	(59)	(121)	(51)	(47)	(98)	(1,325)
Net External Trips		61	59	120	42	39	80	1,200
Gas Station with Convenience Store	12 VFP							
Trips/Unit[13]		13.52	13.52	27.04	11.38	11.38	22.76	257.13
Gross Trips		162	162	324	137	137	274	3,086
Internal Capture[2]		(16)	(16)	(32)	(14)	(14)	(27)	(309)
Total External Trips		146	146	292	123	123	247	2,777
Pass-by Trips[14]		(111)	(111)	(222)	(92)	(92)	(184)	(2,097)
Net External Trips		35	35	70	31	31	63	680
Total Gross Trips		**1,048**	**1,243**	**2,291**	**1,113**	**869**	**1,982**	**23,442**
Total Internal Trips		**(105)**	**(124)**	**(229)**	**(111)**	**(87)**	**(198)**	**(2,344)**
Total External Trips		**943**	**1,119**	**2,062**	**1,002**	**782**	**1,784**	**21,098**
Pass-By Trips		**(291)**	**(256)**	**(547)**	**(268)**	**(255)**	**(523)**	**(6,358)**
Total Net External Trips		**652**	**863**	**1,515**	**734**	**527**	**1,261**	**14,740**

Notes:

DU = Dwelling Units; TSF = Thousand Square Feet; VFP = Vehicle Fueling Positions

[1] Rates from the Institute of Transportation Engineers (ITE) *Trip Generation Manual* (11th Edition), Land Use 210 - "Single-Family Detached Housing", Setting/Location - "General Urban/Suburban."

[2] Internal Capture rates were capped at 10 percent.

[3] Rates from the ITE *Trip Generation Manual* (11th Edition), Land Use 220 - "Multifamily Housing (Low-Rise) Not Close to Rail Transit", Setting/Location - "General Urban/Suburban."

[4] Rates from the ITE *Trip Generation Manual* (11th Edition), Land Use 520 - "Elementary School", Setting/Location - "General Urban/Suburban."

[5] Rates from the ITE *Trip Generation Manual* (11th Edition), Land Use 822 - "Strip Retail Plaza (<40k)", Setting/Location - "General Urban/Suburban."

[6] Pass-by rates for Land Use 822 - "Strip Retail Plaza (<40k)" are not available in the ITE *Trip Generation Manual* (11th Edition). Therefore, pass-by rates for Land Use 821 - "Shopping Plaza (40-150k)" were used instead. An a.m. peak hour pass-by rate is not available for this land use. A pass-by rate of 40 percent was used for the p.m. peak hour. Since a daily pass-by rate is not available, the p.m. peak hour pass-by rate was used as the daily rate.

[7] Rates from the ITE *Trip Generation Manual* (11th Edition), Land Use 932 - "High-Turnover (Sit-Down) Restaurant", Setting/Location - "General Urban/Suburban."

[8] Pass-by rates from the ITE *Trip Generation Manual* (11th Edition) for Land Use 932 - "High-Turnover (Sit-Down) Restaurant." An a.m. peak hour pass-by rate is not available for this land use. A pass-by rate of 43 percent was used for the p.m. peak hour. Since a daily pass-by rate is not available, the p.m. peak hour pass-by rate was used as the daily rate.

[9] Rates from the ITE *Trip Generation Manual* (11th Edition), Land Use 933 - "Fast-Food Restaurant without Drive-Through Window", Setting/Location - "General Urban/Suburban."

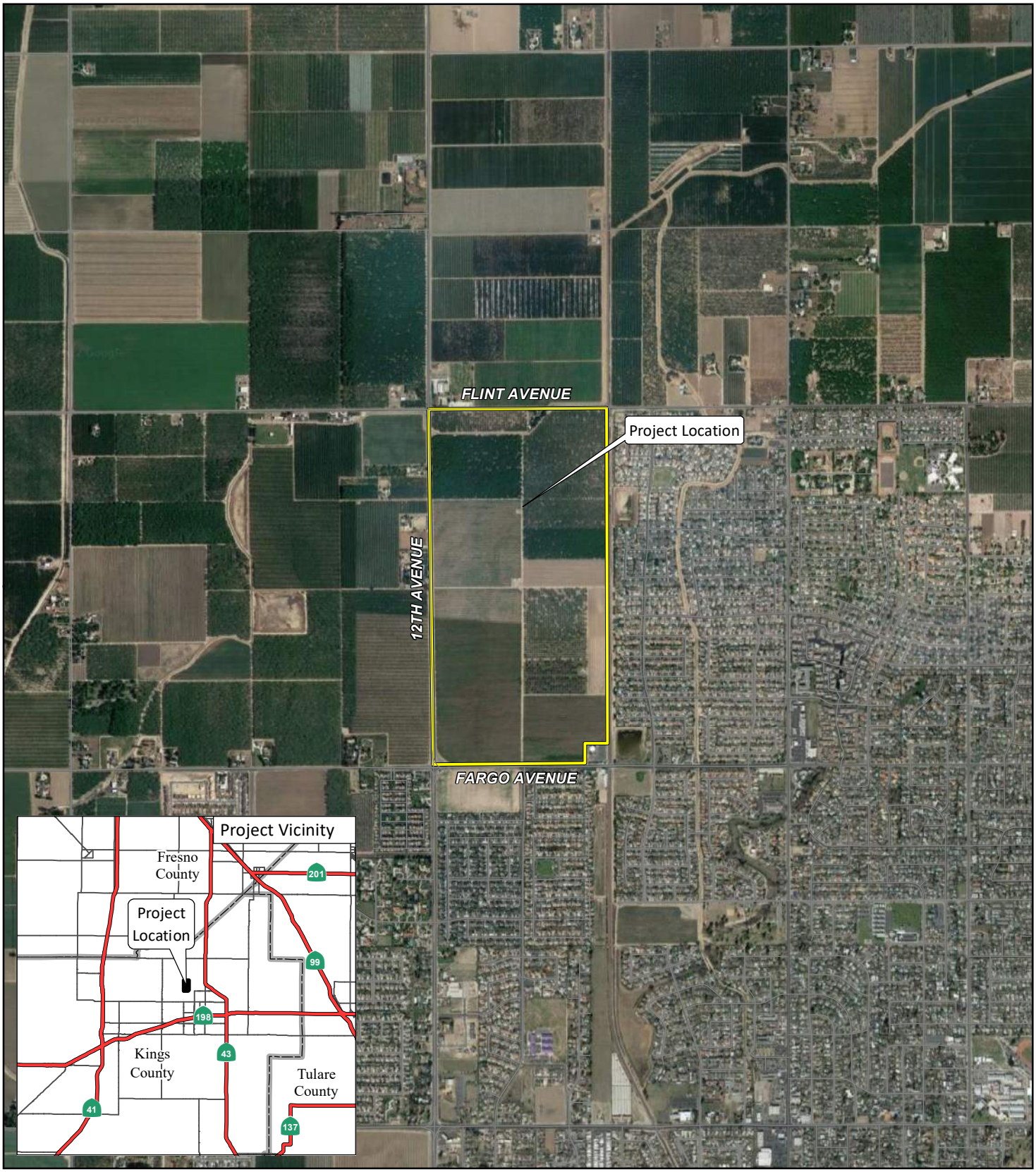
[10] Pass-by rates for Land Use 933 - "Fast-Food Restaurant without Drive-Through Window" are not available in the ITE *Trip Generation Manual* (11th Edition). Therefore, pass-by rates for Land Use 934 - "Fast-Food Restaurant with Drive-Through Window" were used instead. A pass-by rate of 50 percent was used for the a.m. peak hour and a pass-by rate of 55 percent was used for the p.m. peak hour. Since a daily pass-by rate is not available, the average of the a.m. and p.m. peak hour pass-by rates was used as the daily rate.

[11] Rates from the ITE *Trip Generation Manual* (11th Edition), Land Use 934 - "Fast-Food Restaurant with Drive-Through Window", Setting/Location - "General Urban/Suburban."

[12] Pass-by rates from the ITE *Trip Generation Manual* (11th Edition) for Land Use 934 - "Fast-Food Restaurant with Drive-Through Window." A pass-by rate of 50 percent was used for the a.m. peak hour and a pass-by rate of 55 percent was used for the p.m. peak hour. Since a daily pass-by rate is not available, the average of the a.m. and p.m. peak hour pass-by rates was used as the daily rate.

[13] Rates from the ITE *Trip Generation Manual* (11th Edition), Land Use 945 - "Convenience Store/Gas Station - GFA (4-5.5k)", Setting/Location - "General Urban/Suburban."

[14] Pass-by rates from the ITE *Trip Generation Manual* (11th Edition) for Land Use 945 - "Convenience Store/Gas Station." A pass-by rate of 76 percent was used for the a.m. peak hour and a pass-by rate of 75 percent was used for the p.m. peak hour. Since a daily pass-by rate is not available, the average of the a.m. and p.m. peak hour pass-by rates was used as the daily rate.



LSA

FIGURE 1

N

0 1000 2000

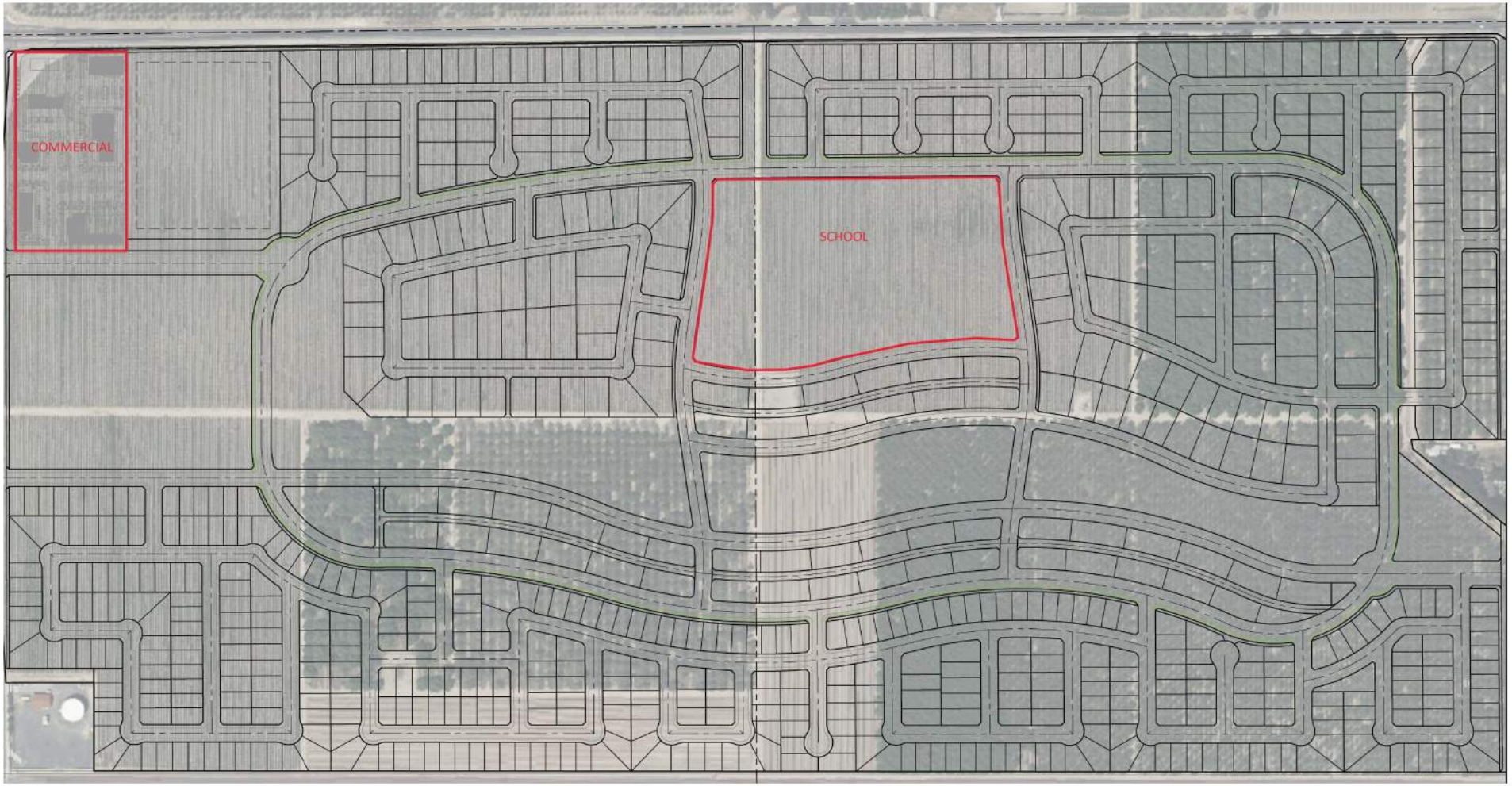
FEET

SOURCE: ESRI Streetmap, 2013; Google Earth, 2018.

P:\FOC2203\Traffic\GIS\Reports\fig1_Reg_ProjLoc.mxd (1/13/2023)

Singh Development Project
Traffic Study

Regional and Project Location



LSA

FIGURE 2

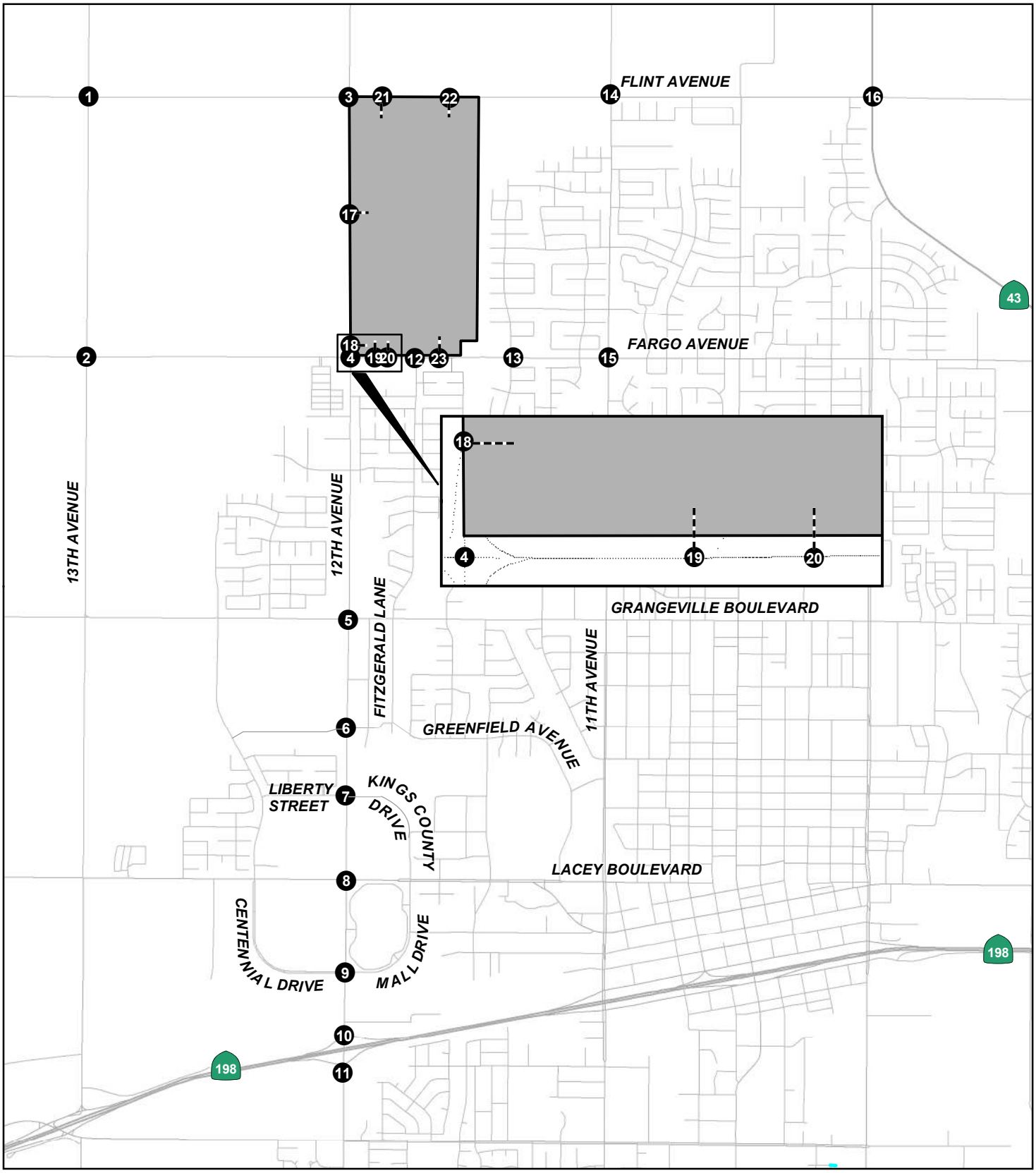
N

0 300 600
FEET

SOURCE: 4Creeks, January 2023
P:\FOC2203\Traffic\GIS\Reports\fig2_Siteplan.ai (01/16/2023)

Singh Hanford Project
Traffic Study

Conceptual Land Use Plan



LSA

LEGEND

Project Location

Study Area Intersection

Project Driveway

FIGURE 3

0 1375 2750

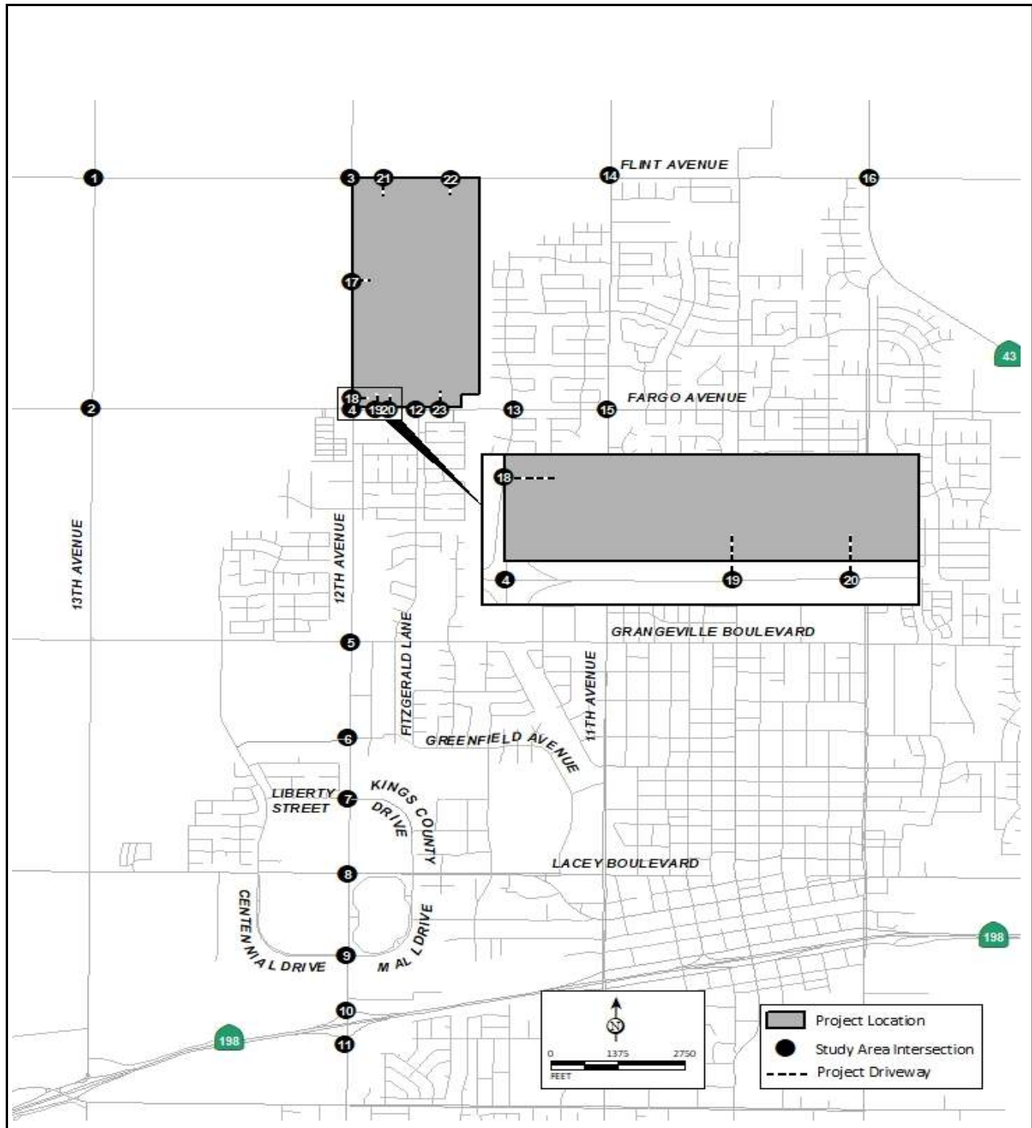
FEET

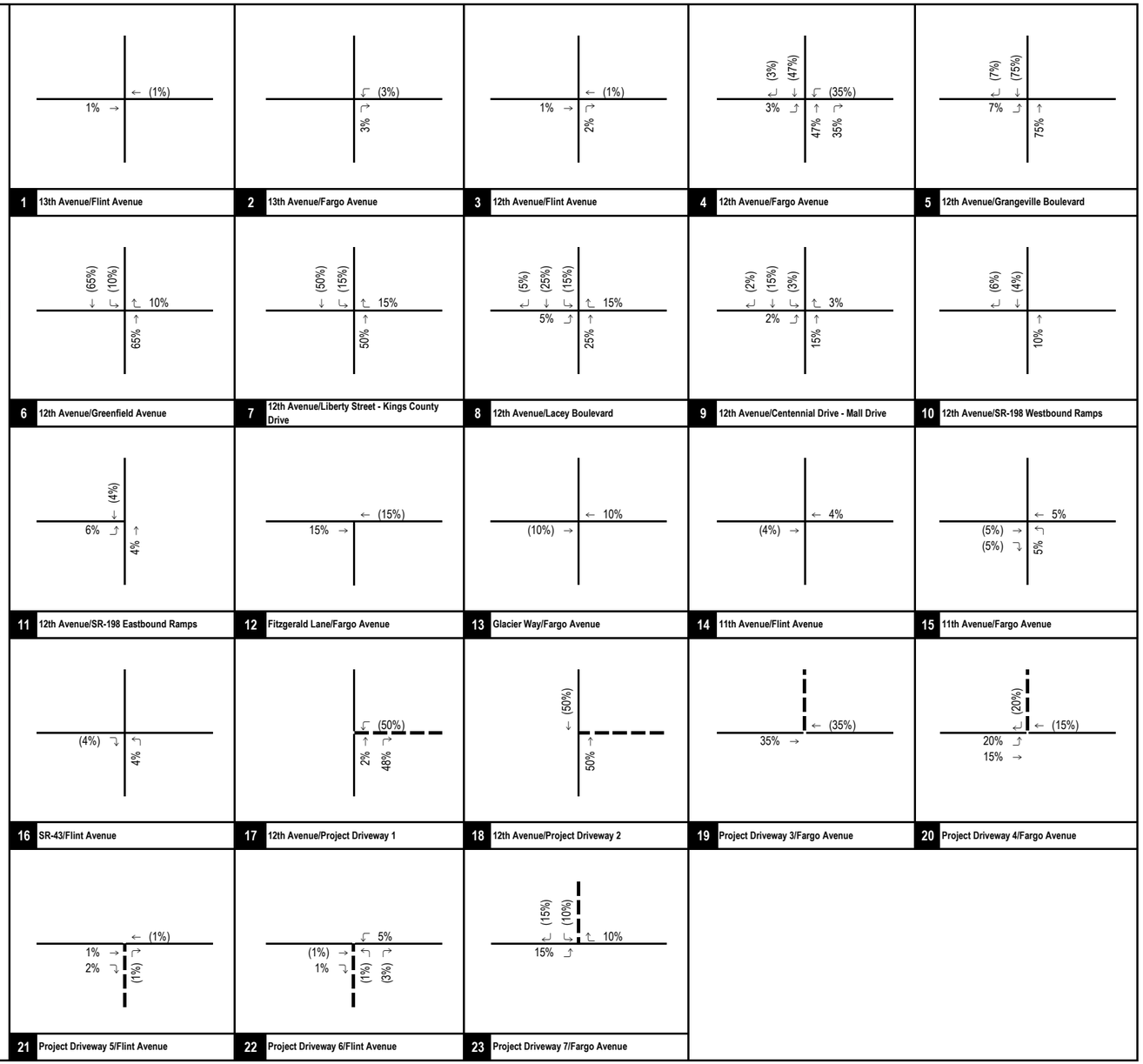
SOURCE: ESRI Streetmap, 2013.

P:\FOC2203\Traffic\GIS\Reports\fig3_Intersections.mxd (2/27/2023)

Singh-Hanford Project
Traffic Study

Study Area Intersections





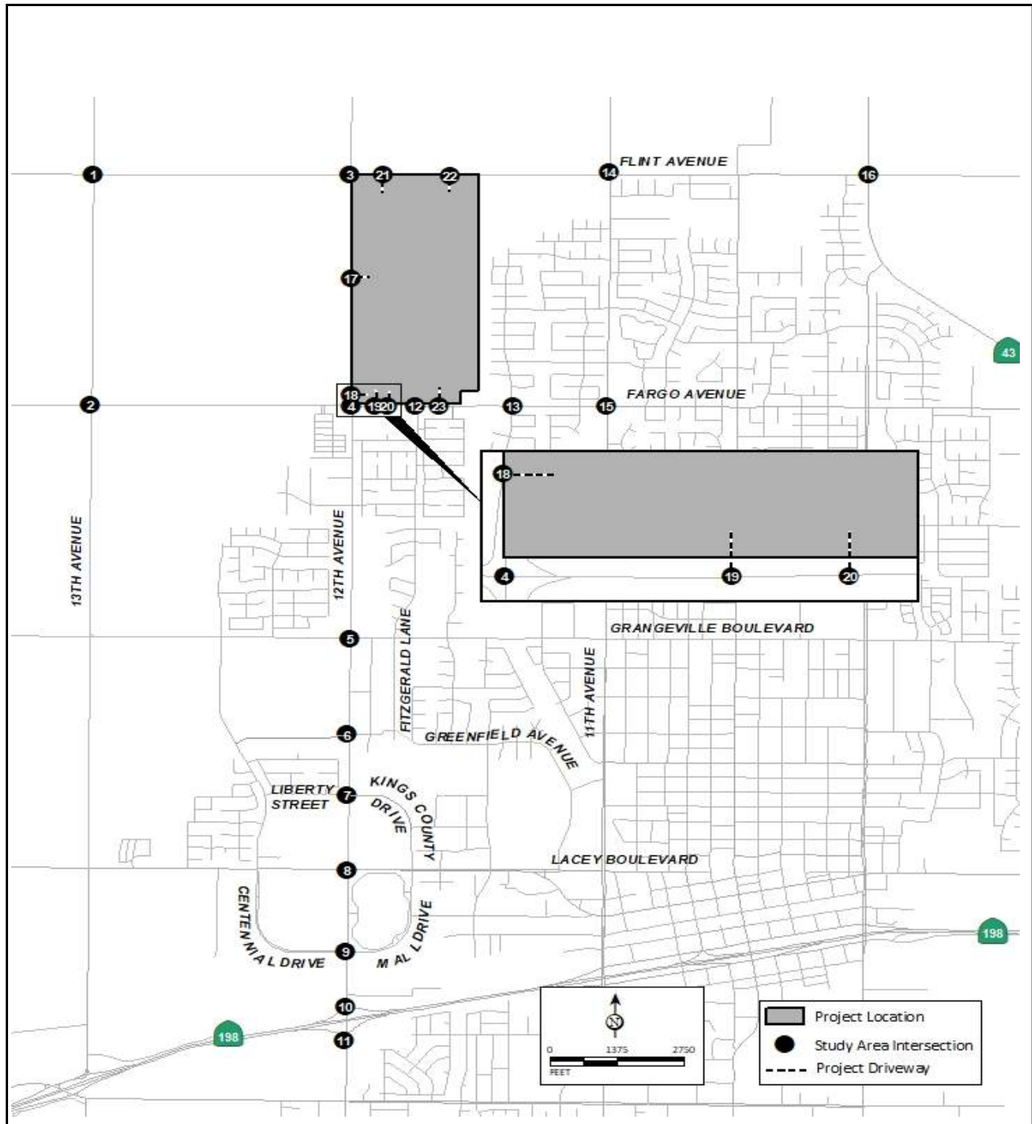
LSA

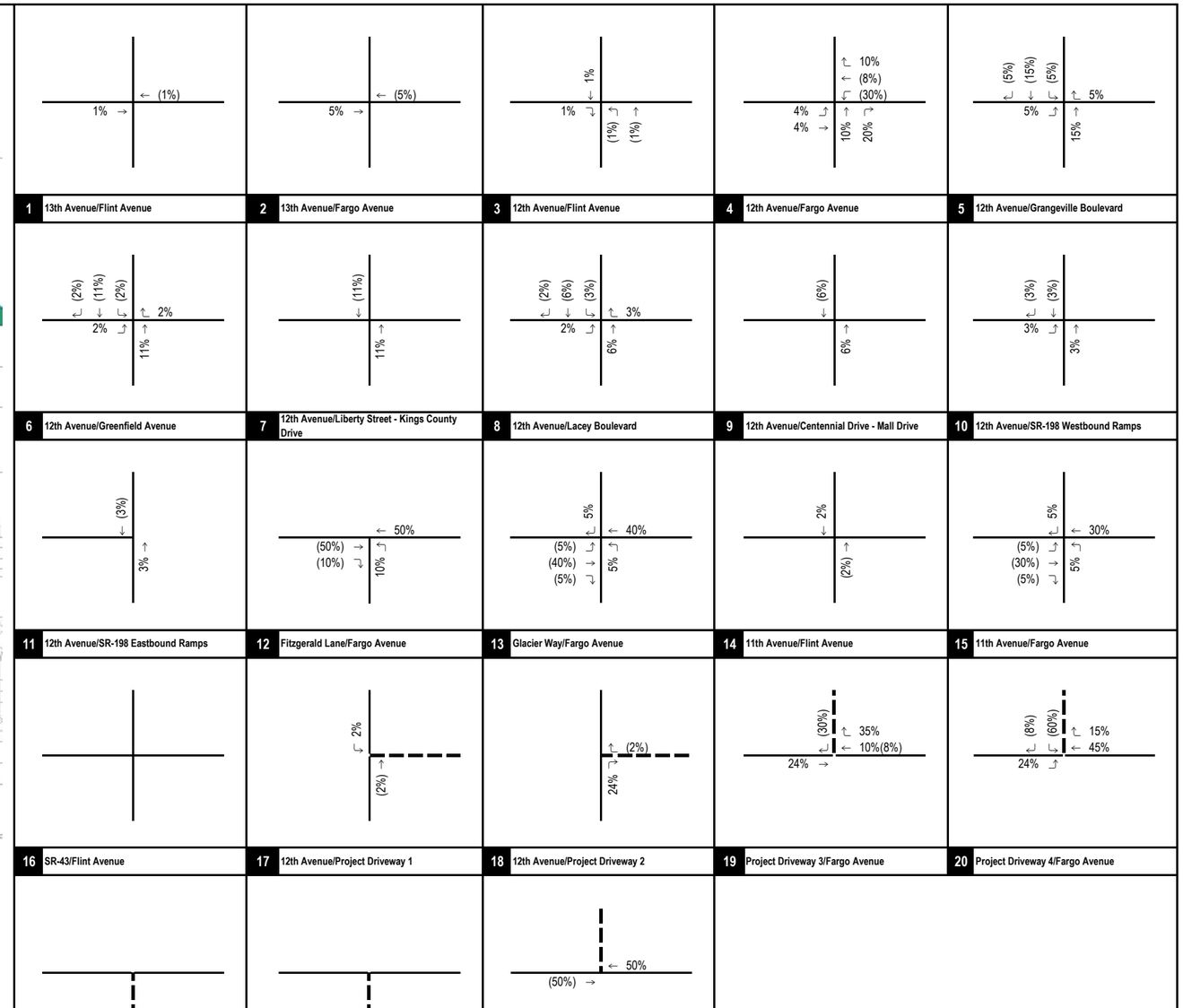
FIGURE 4

XX% (YY%)
Inbound (Outbound) Distribution
▬ ▬ ▬. Project Driveway

Singh Development Project
Traffic Study

Project Trip Distribution - Residential





LSA

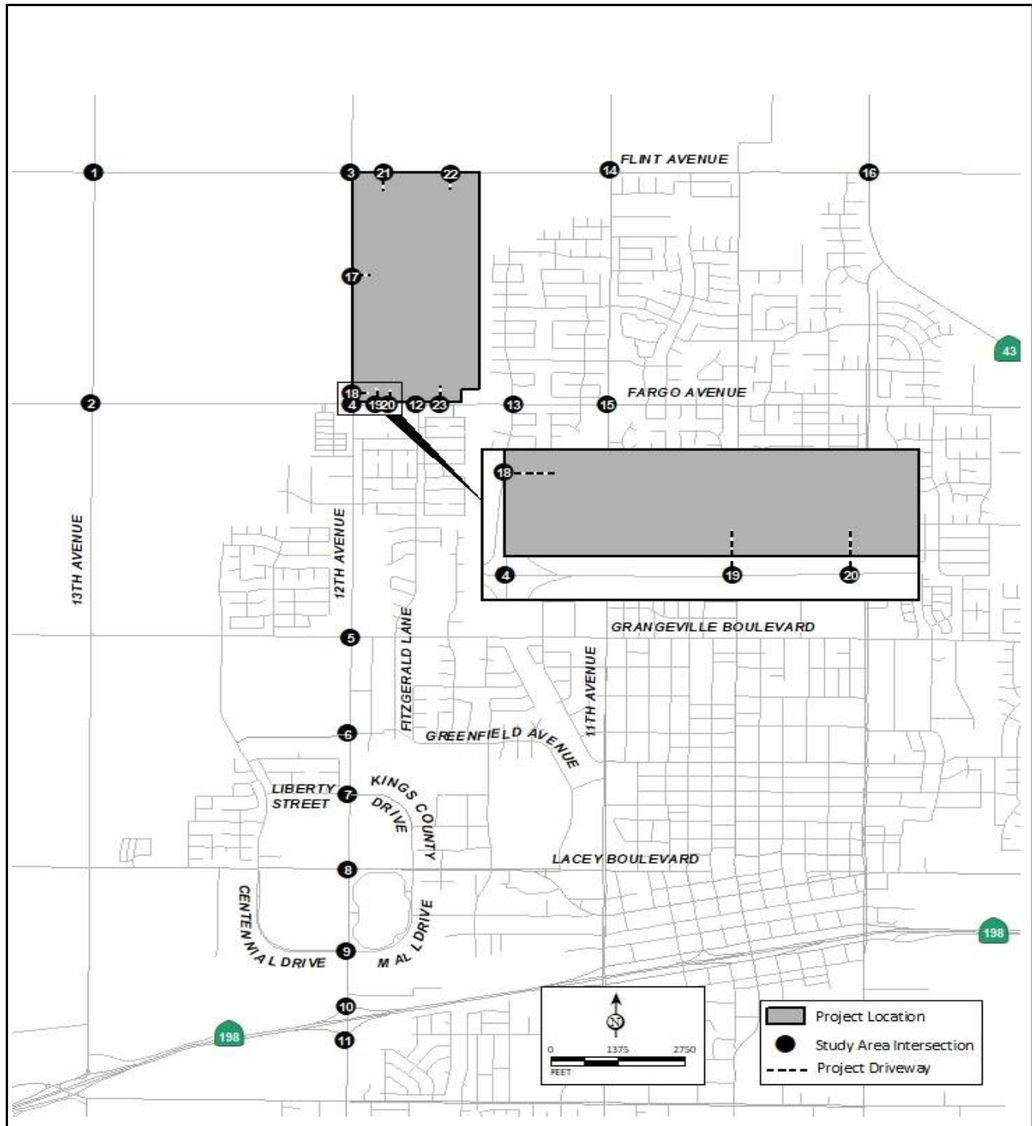
FIGURE 5

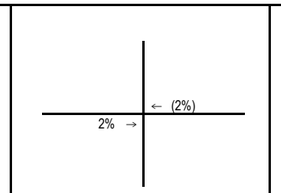
XX% (YY%)
Inbound (Outbound) Distribution
Project Driveway

Singh Development Project
Traffic Study

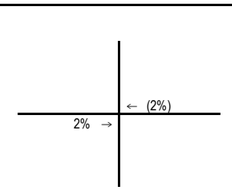
Project Trip Distribution - Retail/Commercial

P:\FOC2203\Traffic\z45_Dist_Retail.xlsx 2/28/2023

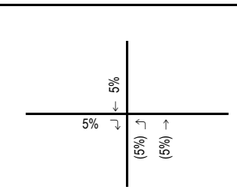




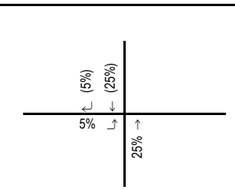
1 13th Avenue/Flint Avenue



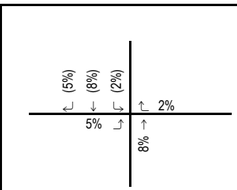
2 13th Avenue/Fargo Avenue



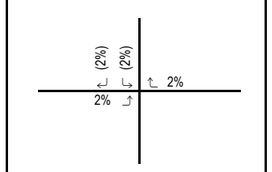
3 12th Avenue/Flint Avenue



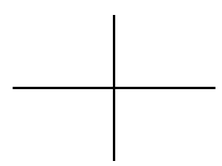
4 12th Avenue/Fargo Avenue



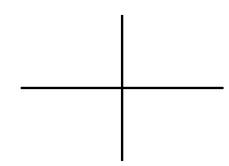
5 12th Avenue/Grangeville Boulevard



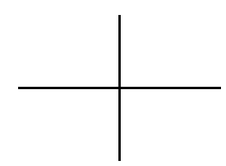
6 12th Avenue/Greenfield Avenue



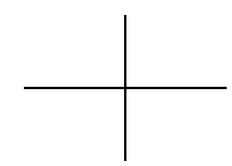
7 12th Avenue/Liberty Street - Kings County Drive



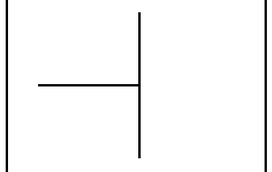
8 12th Avenue/Lacey Boulevard



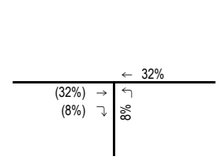
9 12th Avenue/Centennial Drive - Mall Drive



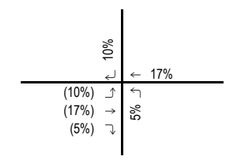
10 12th Avenue/SR-198 Westbound Ramps



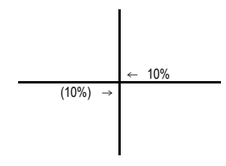
11 12th Avenue/SR-198 Eastbound Ramps



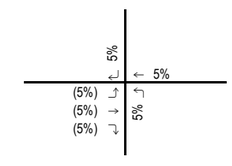
12 Fitzgerald Lane/Fargo Avenue



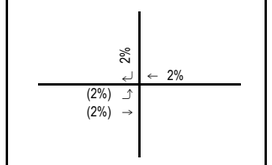
13 Glacier Way/Fargo Avenue



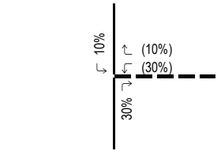
14 11th Avenue/Flint Avenue



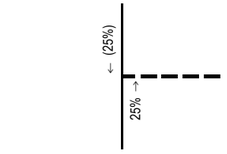
15 11th Avenue/Fargo Avenue



16 SR-43/Flint Avenue



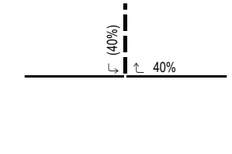
17 12th Avenue/Project Driveway 1



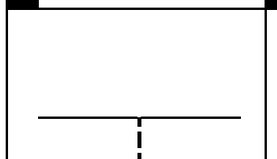
18 12th Avenue/Project Driveway 2



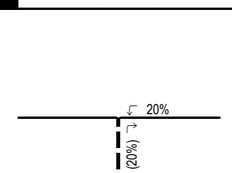
19 Project Driveway 3/Fargo Avenue



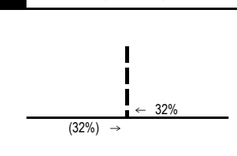
20 Project Driveway 4/Fargo Avenue



21 Project Driveway 5/Flint Avenue



22 Project Driveway 6/Flint Avenue



23 Project Driveway 7/Fargo Avenue

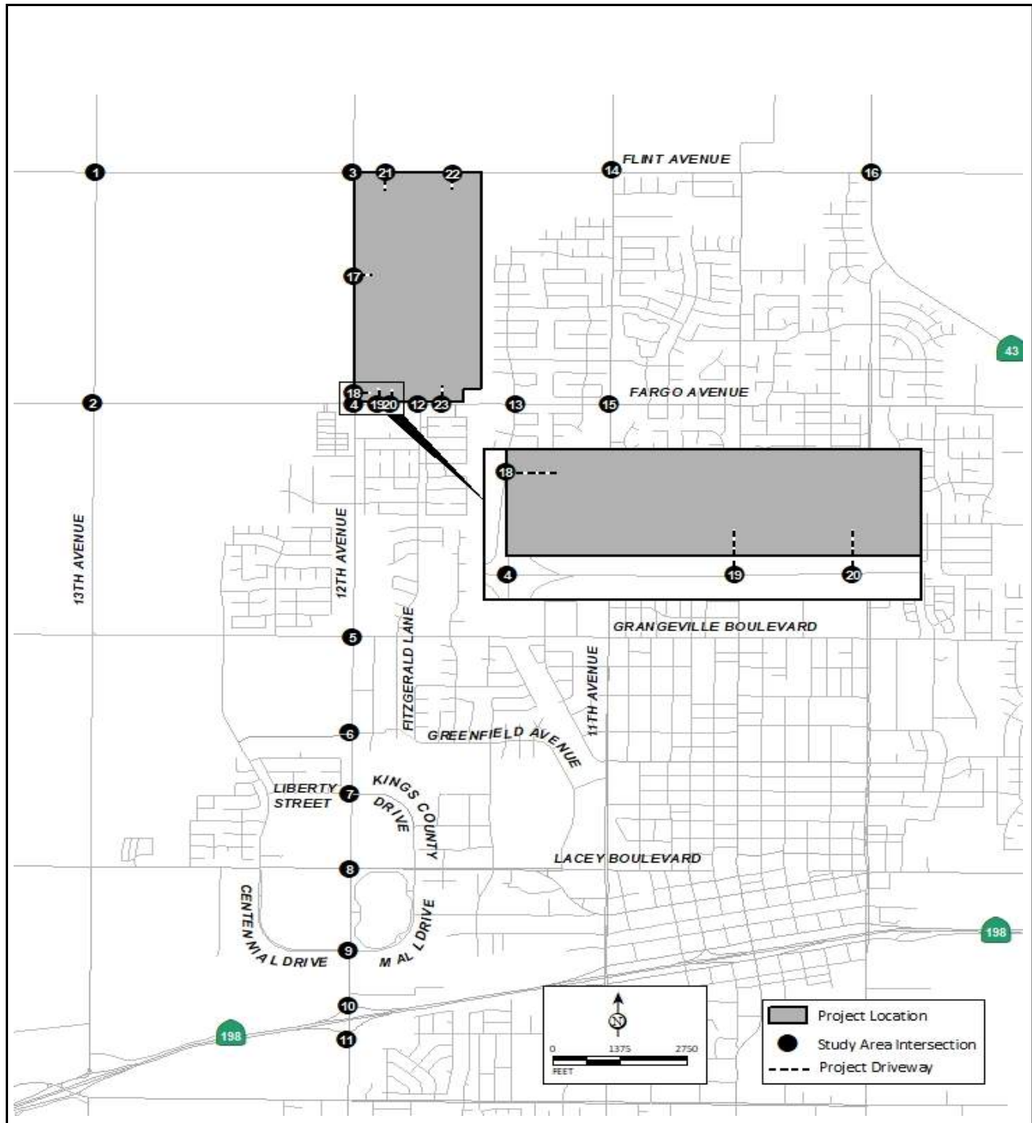
LSA

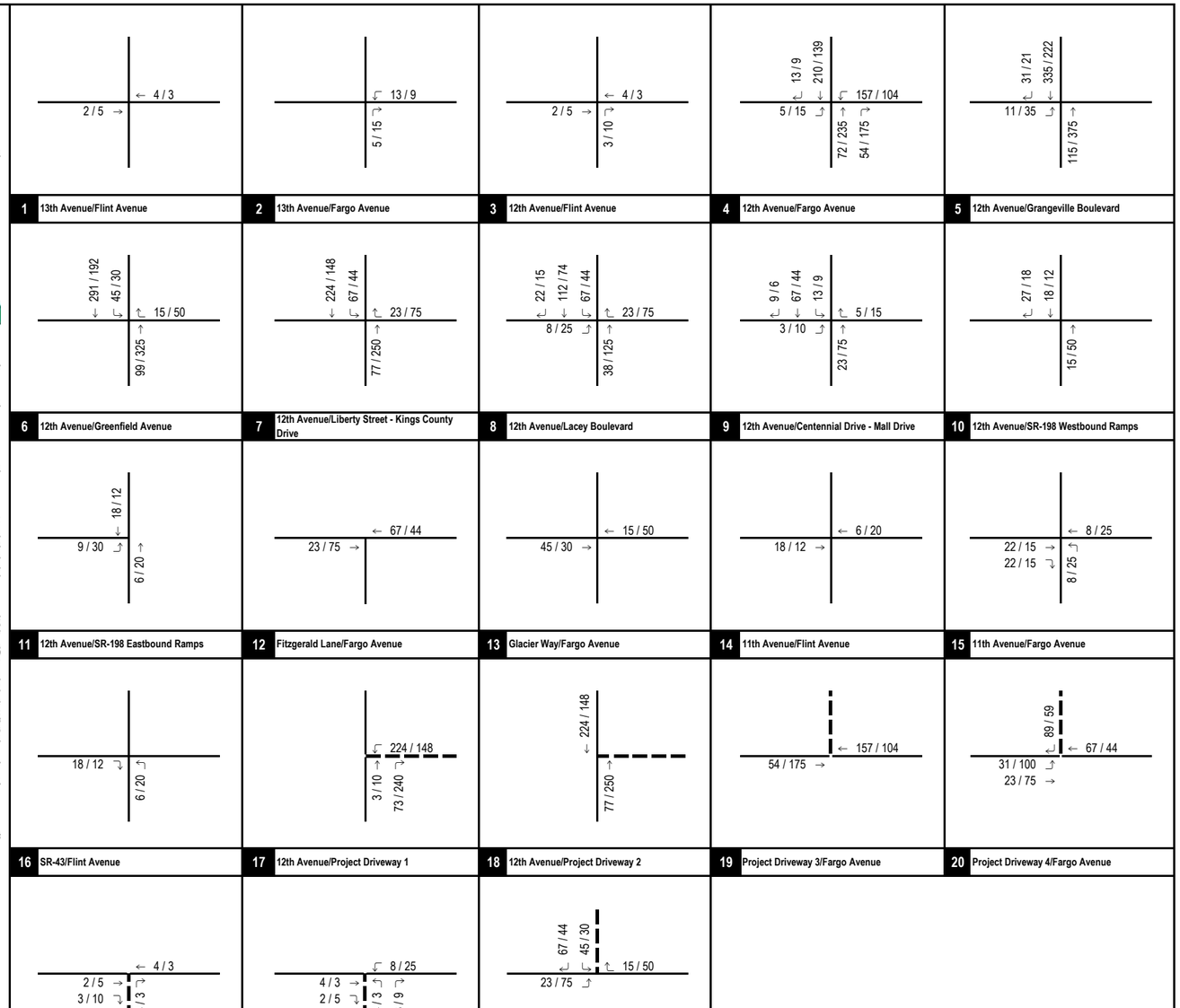
FIGURE 6

XX% (YY%)
Inbound (Outbound) Distribution
Project Driveway

Singh Development Project
Traffic Study

Project Trip Distribution - Elementary School





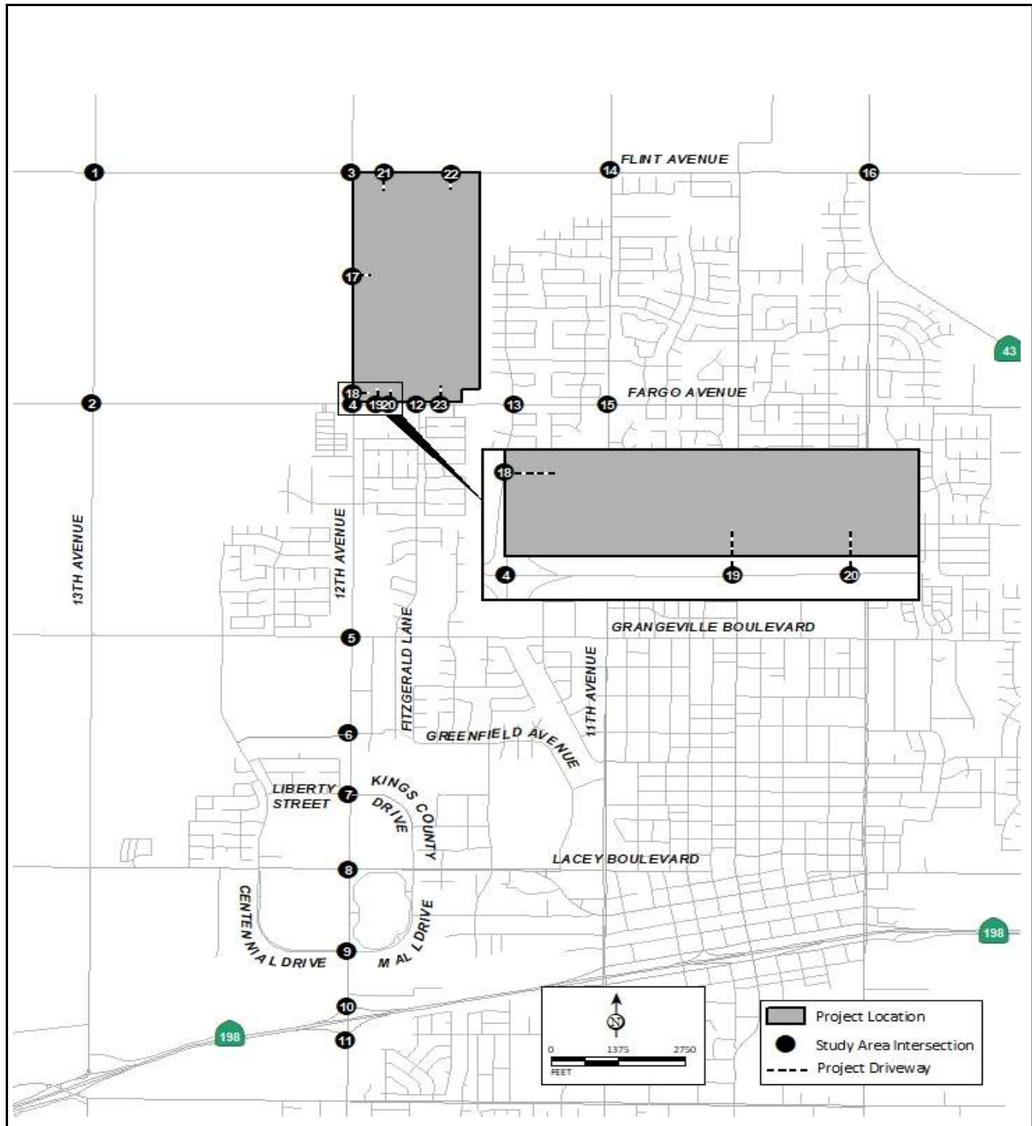
LSA

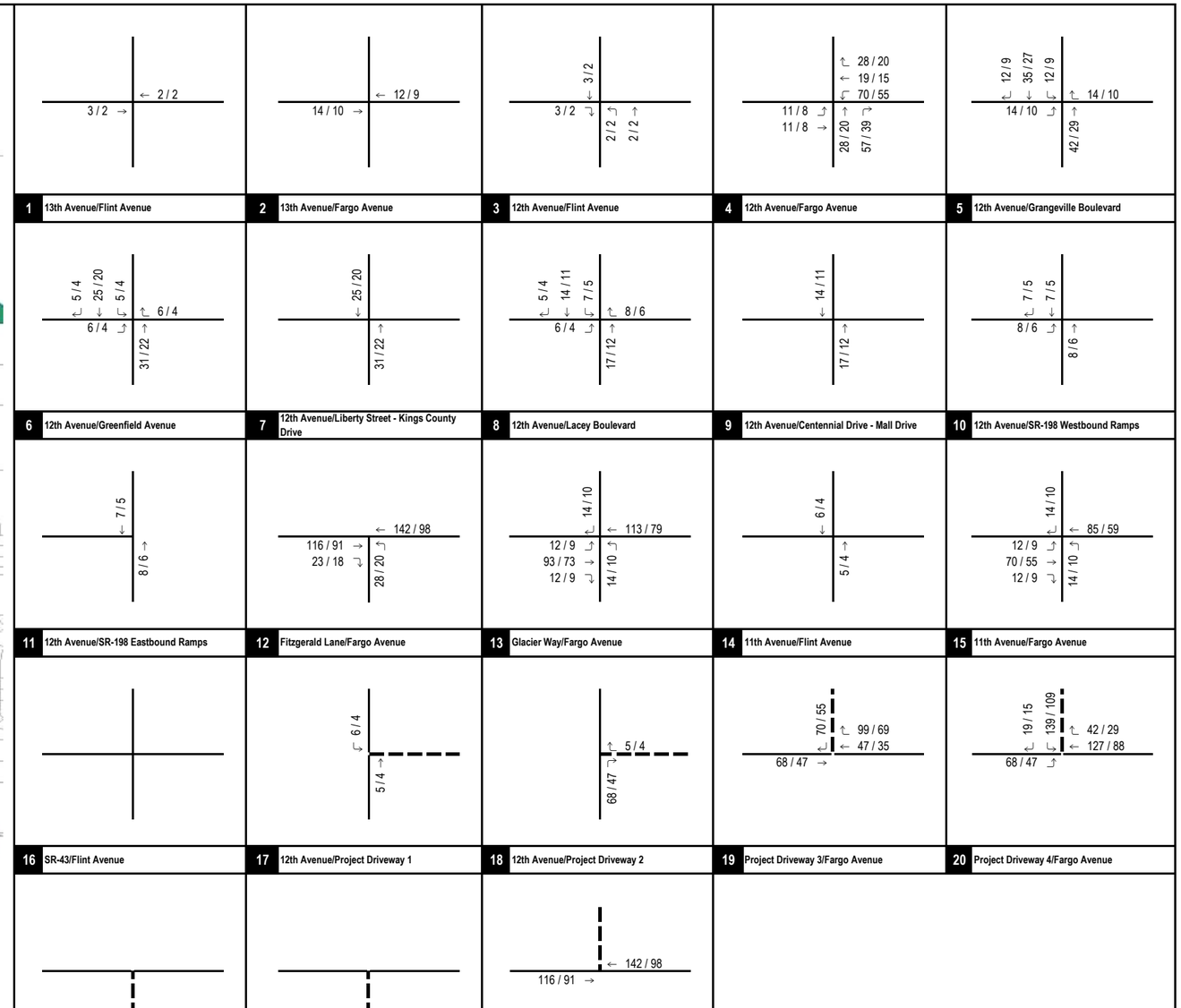
FIGURE 7

XXX / YYY
AM / PM Peak Hour Trips
Project Driveway

Singh Development Project
Traffic Study

Project Trip Assignment - Residential





LSA

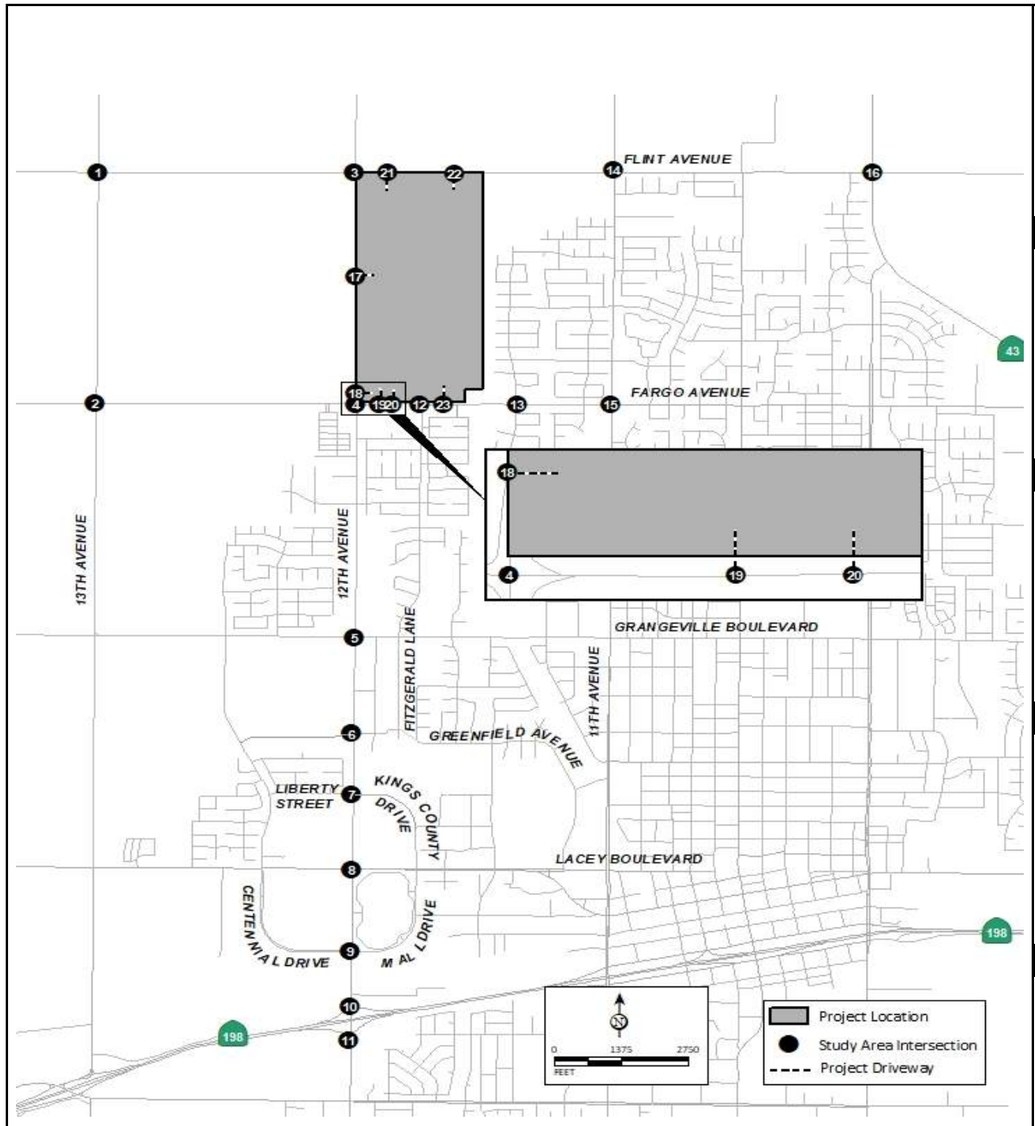
FIGURE 8

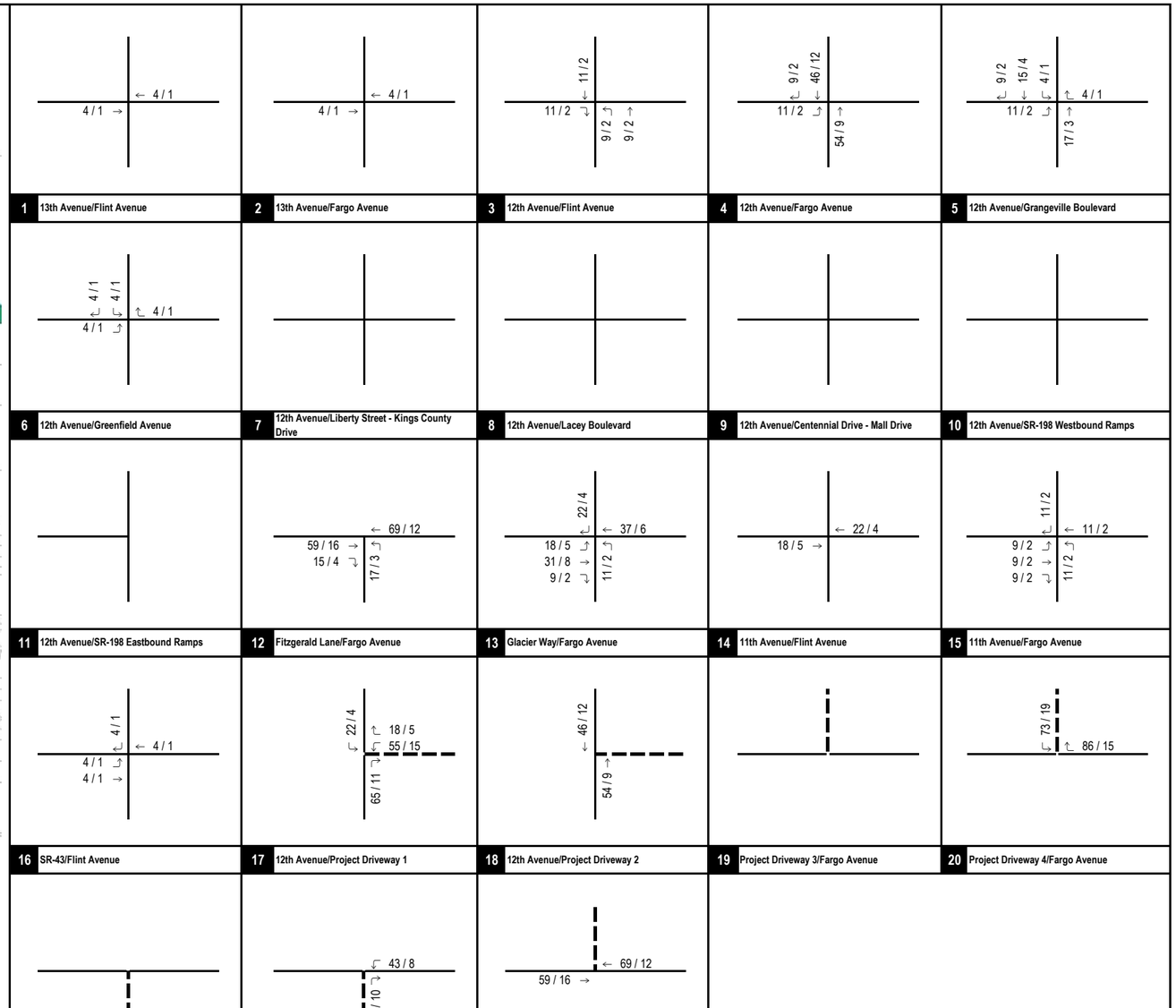
XXX / YYY
AM / PM Peak Hour Trips
Project Driveway

Singh Development Project
Traffic Study

Project Net Trip Assignment - Retail/Commercial

P:\FOC2203\Traffic\z45_Assign_Retail.xlsx 2/28/2023





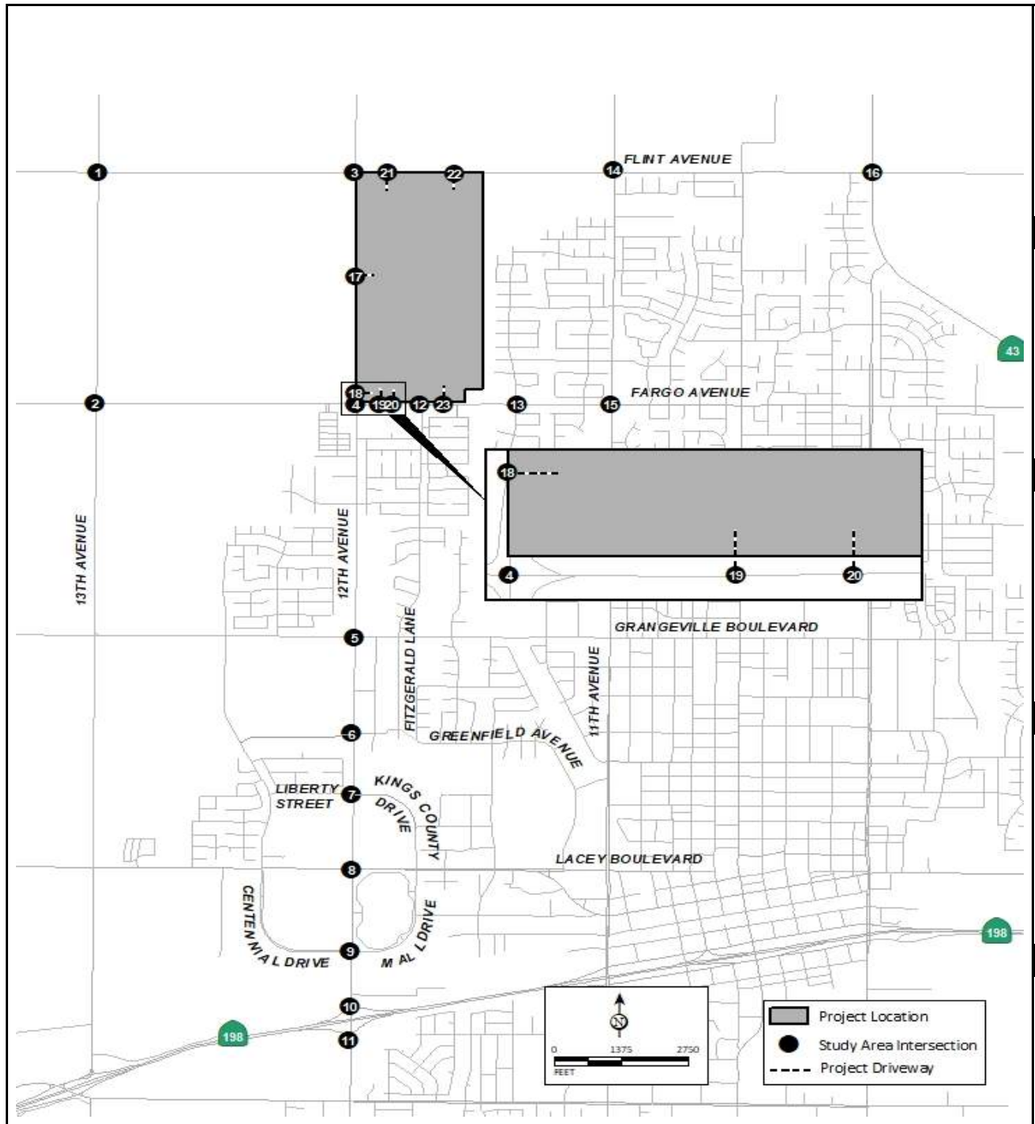
LSA

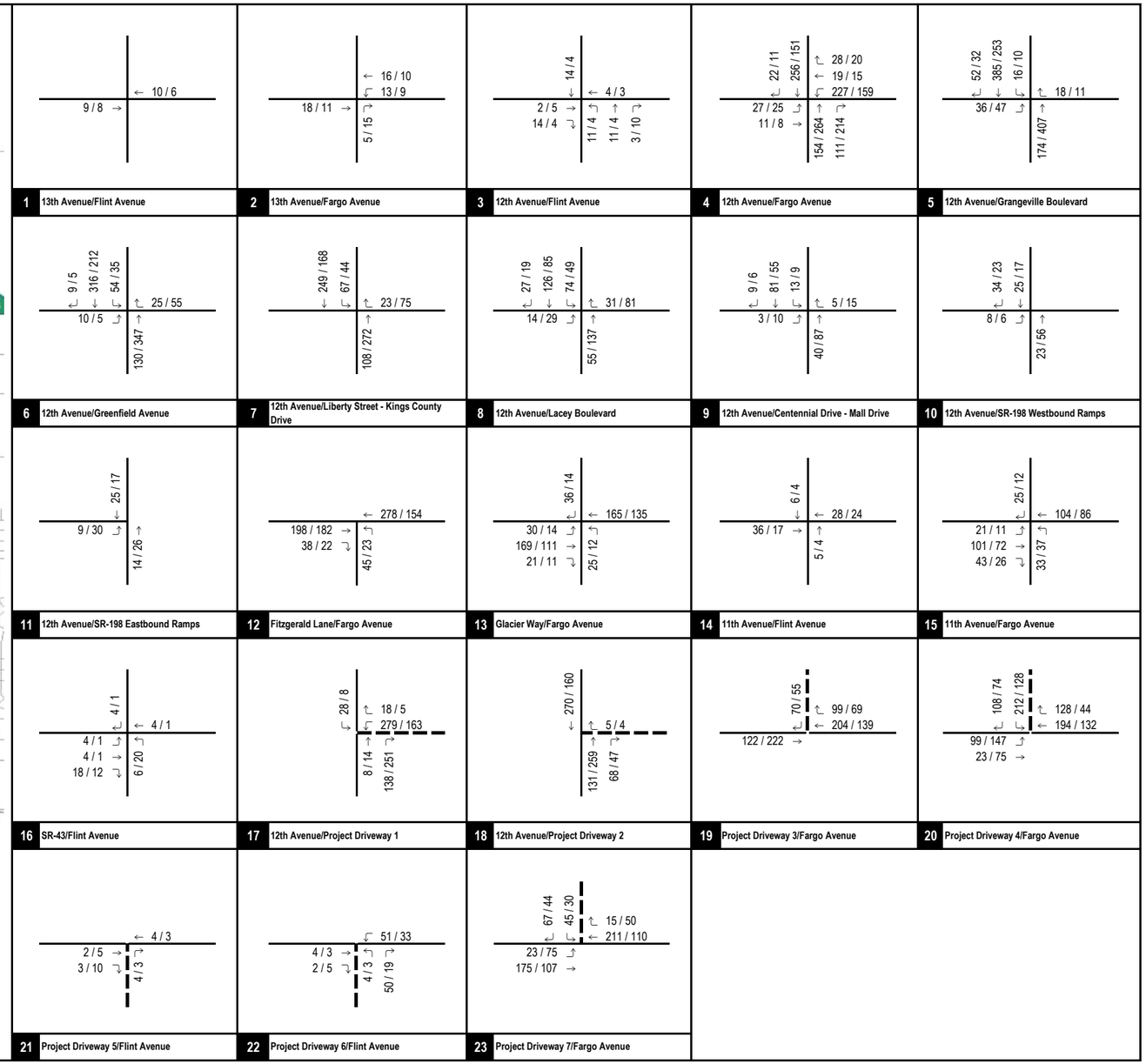
FIGURE 9

XX / YY
AM / PM Peak Hour Trips
Project Driveway

Singh Development Project
Traffic Study

Project Net Trip Assignment - Elementary School





LSA

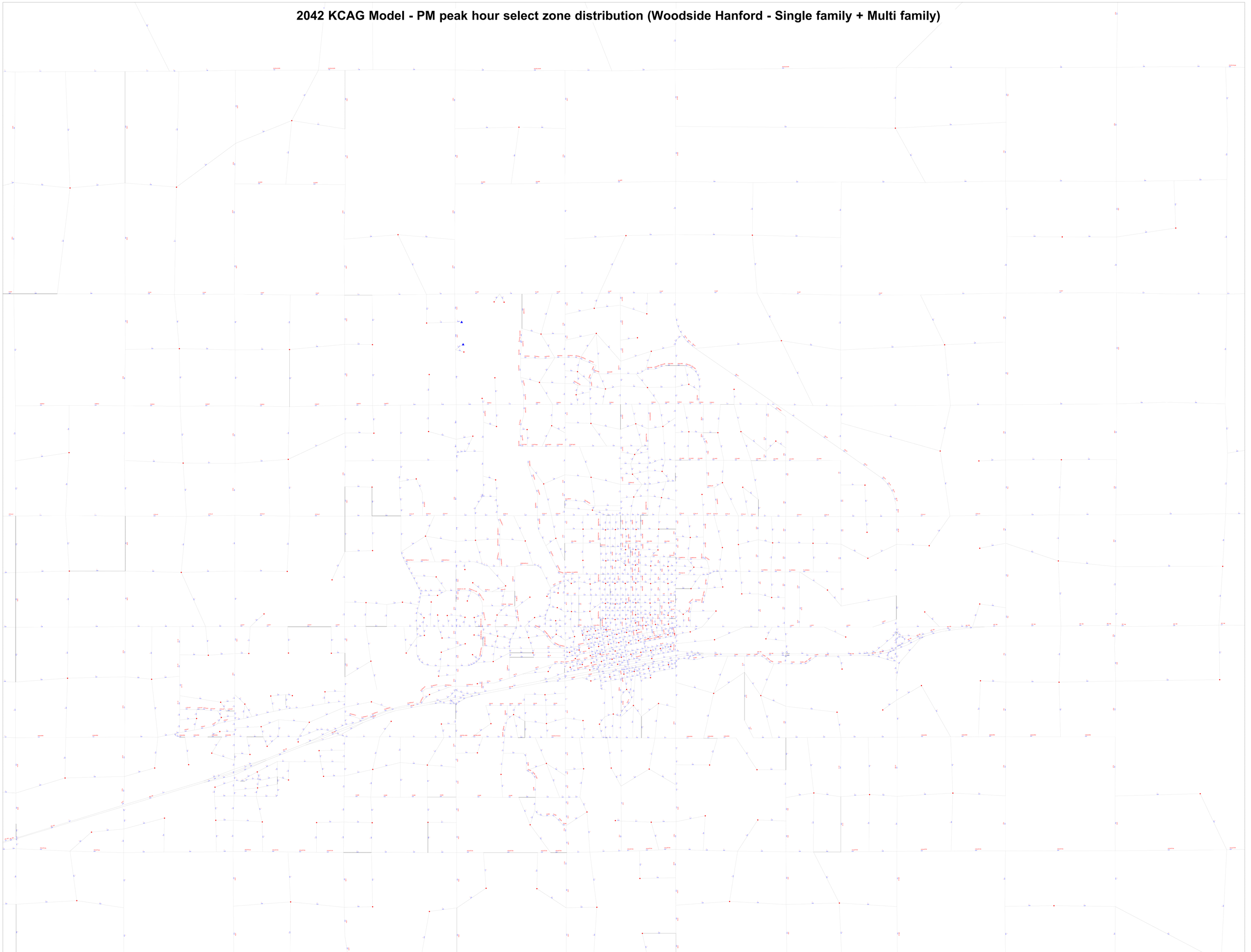
FIGURE 10

XXX / YYY
AM / PM Peak Hour Trips
Project Driveway

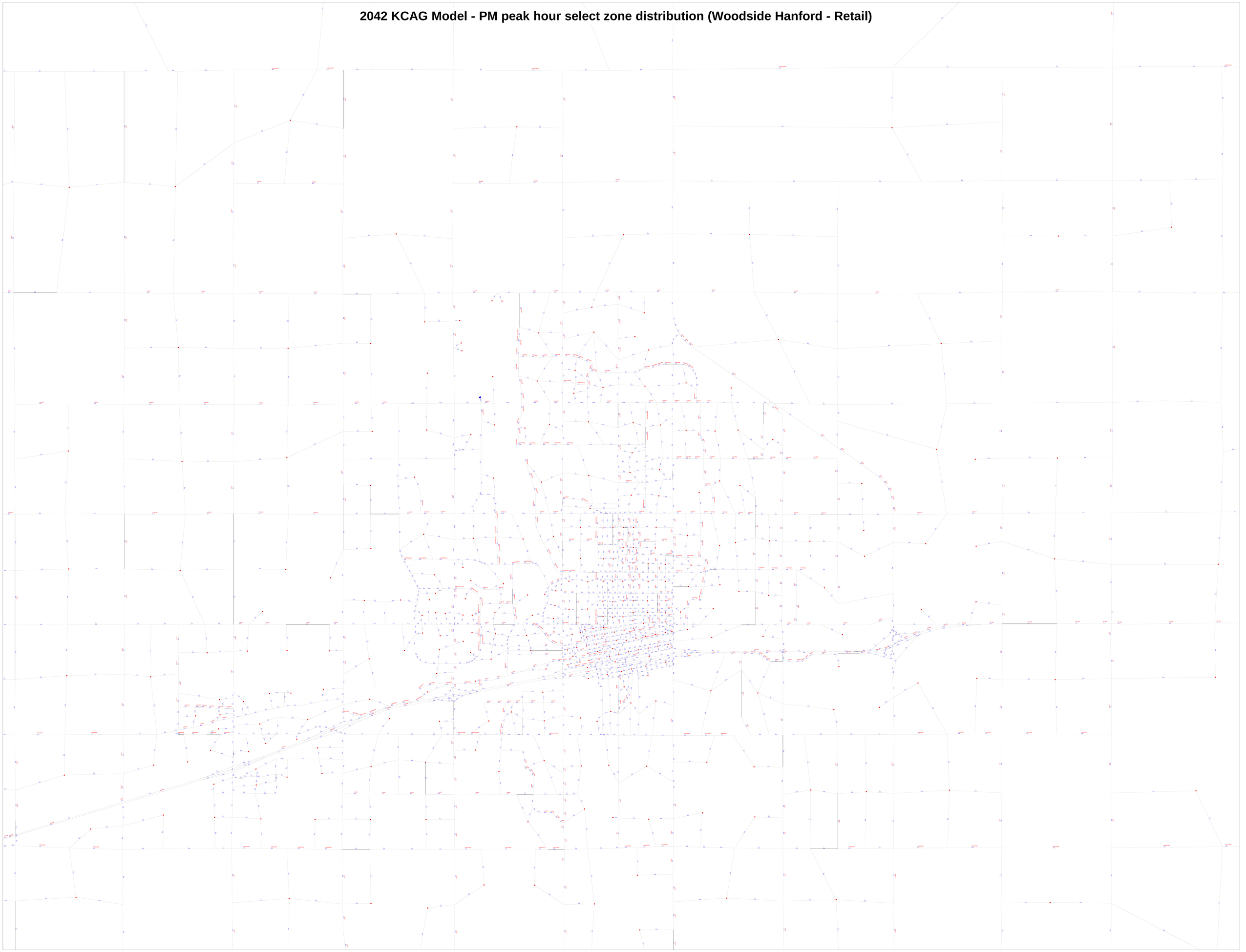
Singh Development Project
Traffic Study

Total Project Net Trip Assignment

2042 KCAG Model - PM peak hour select zone distribution (Woodside Hanford - Single family + Multi family)



2042 KCAG Model - PM peak hour select zone distribution (Woodside Hanford - Retail)



KCAG 2042 Travel Model - AM peak hour select sone distribution (Singh-Hanford Elementary School)



(Licensed to Temp Bentley CUBE license)

APPENDIX B

TRAFFIC COUNT SHEETS AND SIGNAL TIMING SHEETS

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

County of Kings
N/S: 13th Avenue
E/W: Flint Avenue
Weather: Clear

File Name : 01_CKS_13th_Flint AM
Site Code : 00323251
Start Date : 3/23/2023
Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

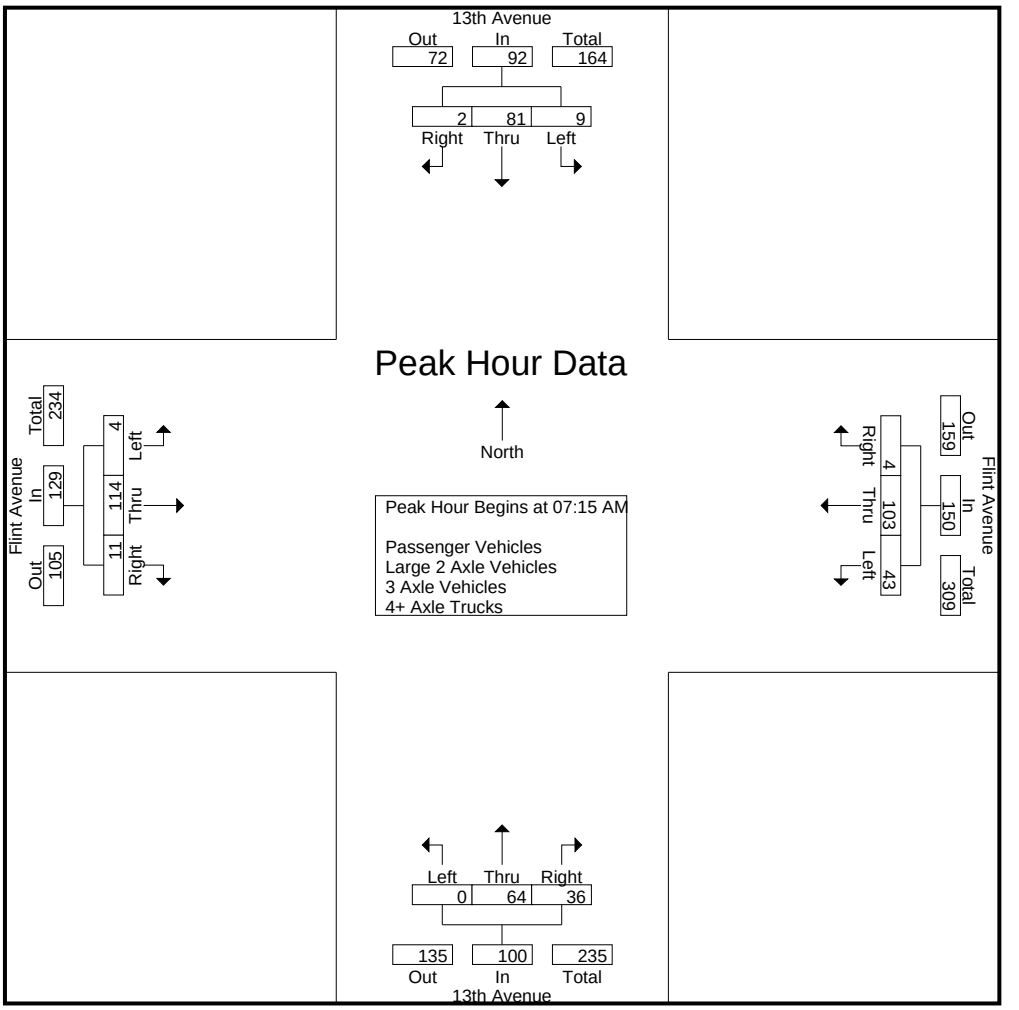
	13th Avenue Southbound				Flint Avenue Westbound				13th Avenue Northbound				Flint Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	12	0	12	3	9	2	14	1	13	3	17	2	4	0	6	49
07:15 AM	0	13	0	13	5	18	0	23	0	16	5	21	1	7	1	9	66
07:30 AM	6	23	0	29	9	37	1	47	0	13	5	18	1	27	3	31	125
07:45 AM	2	25	1	28	14	34	1	49	0	28	24	52	2	60	6	68	197
Total	8	73	1	82	31	98	4	133	1	70	37	108	6	98	10	114	437
08:00 AM	1	20	1	22	15	14	2	31	0	7	2	9	0	20	1	21	83
08:15 AM	0	10	0	10	4	11	0	15	0	11	4	15	3	3	1	7	47
08:30 AM	1	9	0	10	3	5	0	8	1	7	4	12	0	3	0	3	33
08:45 AM	0	10	3	13	7	6	0	13	1	7	1	9	2	10	1	13	48
Total	2	49	4	55	29	36	2	67	2	32	11	45	5	36	3	44	211
Grand Total	10	122	5	137	60	134	6	200	3	102	48	153	11	134	13	158	648
Apprch %	7.3	89.1	3.6		30	67	3		2	66.7	31.4		7	84.8	8.2		
Total %	1.5	18.8	0.8	21.1	9.3	20.7	0.9	30.9	0.5	15.7	7.4	23.6	1.7	20.7	2	24.4	
Passenger Vehicles	10	121	5	136	58	128	6	192	3	99	45	147	10	126	13	149	624
% Passenger Vehicles	100	99.2	100	99.3	96.7	95.5	100	96	100	97.1	93.8	96.1	90.9	94	100	94.3	96.3
Large 2 Axle Vehicles	0	1	0	1	2	5	0	7	0	1	3	4	1	5	0	6	18
% Large 2 Axle Vehicles	0	0.8	0	0.7	3.3	3.7	0	3.5	0	1	6.2	2.6	9.1	3.7	0	3.8	2.8
3 Axle Vehicles	0	0	0	0	0	0	0	0	0	1	0	1	0	1	0	1	2
% 3 Axle Vehicles	0	0	0	0	0	0	0	0	0	1	0	0.7	0	0.7	0	0.6	0.3
4+ Axle Trucks	0	0	0	0	0	1	0	1	0	1	0	1	0	2	0	2	4
% 4+ Axle Trucks	0	0	0	0	0	0.7	0	0.5	0	1	0	0.7	0	1.5	0	1.3	0.6

	13th Avenue Southbound				Flint Avenue Westbound				13th Avenue Northbound				Flint Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	13	0	13	5	18	0	23	0	16	5	21	1	7	1	9	66
07:30 AM	**6**	23	0	**29**	9	**37**	1	47	0	13	5	18	1	27	3	31	125
07:45 AM	2	**25**	**1**	28	14	34	1	**49**	0	**28**	**24**	**52**	**2**	**60**	**6**	**68**	**197**
08:00 AM	1	20	1	22	**15**	14	**2**	31	0	7	2	9	0	20	1	21	83
Total Volume	9	81	2	92	43	103	4	150	0	64	36	100	4	114	11	129	471
% App. Total	9.8	88	2.2		28.7	68.7	2.7		0	64	36		3.1	88.4	8.5		
PHF	.375	.810	.500	.793	.717	.696	.500	.765	.000	.571	.375	.481	.500	.475	.458	.474	.598

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

County of Kings
N/S: 13th Avenue
E/W: Flint Avenue
Weather: Clear

File Name : 01_CKS_13th_Flint AM
Site Code : 00323251
Start Date : 3/23/2023
Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:00 AM				07:15 AM			
+0 mins.	0	13	0	13	5	18	0	23	**1**	13	3	17	1	7	1	9
+15 mins.	**6**	23	0	**29**	9	**37**	1	47	0	16	5	21	1	27	3	31
+30 mins.	2	**25**	**1**	28	14	34	1	**49**	0	13	5	18	**2**	**60**	**6**	**68**
+45 mins.	1	20	1	22	**15**	14	**2**	31	0	**28**	**24**	**52**	0	20	1	21
Total Volume	9	81	2	92	43	103	4	150	1	70	37	108	4	114	11	129
% App. Total	9.8	88	2.2		28.7	68.7	2.7		0.9	64.8	34.3		3.1	88.4	8.5	
PHF	.375	.810	.500	.793	.717	.696	.500	.765	.250	.625	.385	.519	.500	.475	.458	.474

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

County of Kings
N/S: 13th Avenue
E/W: Flint Avenue
Weather: Clear

File Name : 01_CKS_13th_Flint AM
Site Code : 00323251
Start Date : 3/23/2023
Page No : 1

Groups Printed- Passenger Vehicles

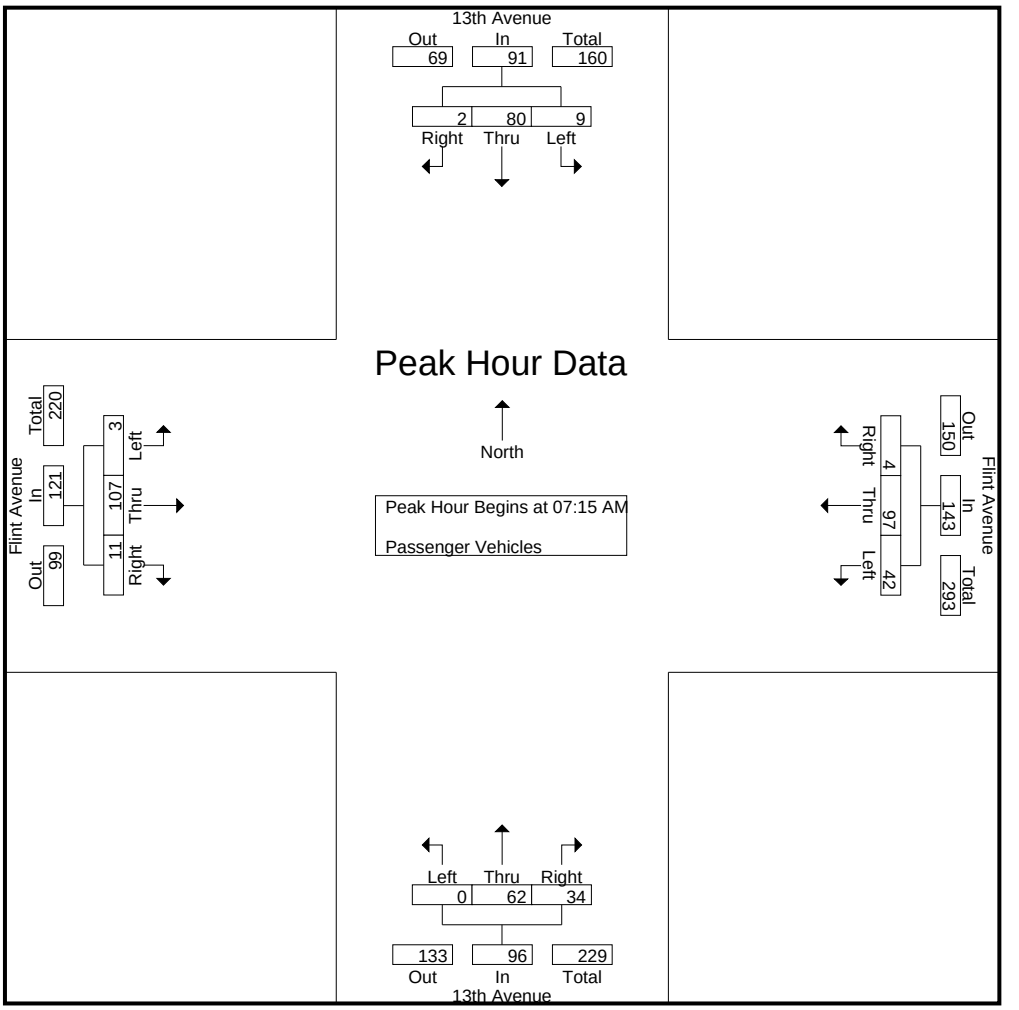
	13th Avenue Southbound				Flint Avenue Westbound				13th Avenue Northbound				Flint Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	12	0	12	3	9	2	14	1	13	3	17	2	3	0	5	48
07:15 AM	0	12	0	12	5	17	0	22	0	15	5	20	0	6	1	7	61
07:30 AM	6	23	0	29	9	37	1	47	0	13	4	17	1	24	3	28	121
07:45 AM	2	25	1	28	13	33	1	47	0	27	23	50	2	59	6	67	192
Total	8	72	1	81	30	96	4	130	1	68	35	104	5	92	10	107	422
08:00 AM	1	20	1	22	15	10	2	27	0	7	2	9	0	18	1	19	77
08:15 AM	0	10	0	10	4	11	0	15	0	11	3	14	3	3	1	7	46
08:30 AM	1	9	0	10	2	5	0	7	1	6	4	11	0	3	0	3	31
08:45 AM	0	10	3	13	7	6	0	13	1	7	1	9	2	10	1	13	48
Total	2	49	4	55	28	32	2	62	2	31	10	43	5	34	3	42	202
Grand Total	10	121	5	136	58	128	6	192	3	99	45	147	10	126	13	149	624
Apprch %	7.4	89	3.7		30.2	66.7	3.1		2	67.3	30.6		6.7	84.6	8.7		
Total %	1.6	19.4	0.8	21.8	9.3	20.5	1	30.8	0.5	15.9	7.2	23.6	1.6	20.2	2.1	23.9	

	13th Avenue Southbound				Flint Avenue Westbound				13th Avenue Northbound				Flint Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	12	0	12	5	17	0	22	0	15	5	20	0	6	1	7	61
07:30 AM	**6**	23	0	**29**	9	**37**	1	**47**	0	13	4	17	1	24	3	28	121
07:45 AM	2	**25**	**1**	28	13	33	1	47	0	**27**	**23**	**50**	**2**	**59**	**6**	**67**	**192**
08:00 AM	1	20	1	22	**15**	10	**2**	27	0	7	2	9	0	18	1	19	77
Total Volume	9	80	2	91	42	97	4	143	0	62	34	96	3	107	11	121	451
% App. Total	9.9	87.9	2.2		29.4	67.8	2.8		0	64.6	35.4		2.5	88.4	9.1		
PHF	.375	.800	.500	.784	.700	.655	.500	.761	.000	.574	.370	.480	.375	.453	.458	.451	.587

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

County of Kings
N/S: 13th Avenue
E/W: Flint Avenue
Weather: Clear

File Name : 01_CKS_13th_Flint AM
Site Code : 00323251
Start Date : 3/23/2023
Page No : 2



Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	0	12	0	12	5	17	0	22	0	15	5	20	0	6	1	7
+15 mins.	**6**	23	0	**29**	9	**37**	1	**47**	0	13	4	17	1	24	3	28
+30 mins.	2	**25**	**1**	28	13	33	1	47	0	**27**	**23**	**50**	**2**	**59**	**6**	**67**
+45 mins.	1	20	1	22	**15**	10	**2**	27	0	7	2	9	0	18	1	19
Total Volume	9	80	2	91	42	97	4	143	0	62	34	96	3	107	11	121
% App. Total	9.9	87.9	2.2		29.4	67.8	2.8		0	64.6	35.4		2.5	88.4	9.1	
PHF	.375	.800	.500	.784	.700	.655	.500	.761	.000	.574	.370	.480	.375	.453	.458	.451

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

County of Kings
N/S: 13th Avenue
E/W: Flint Avenue
Weather: Clear

File Name : 01_CKS_13th_Flint AM
Site Code : 00323251
Start Date : 3/23/2023
Page No : 1

Groups Printed- Large 2 Axle Vehicles

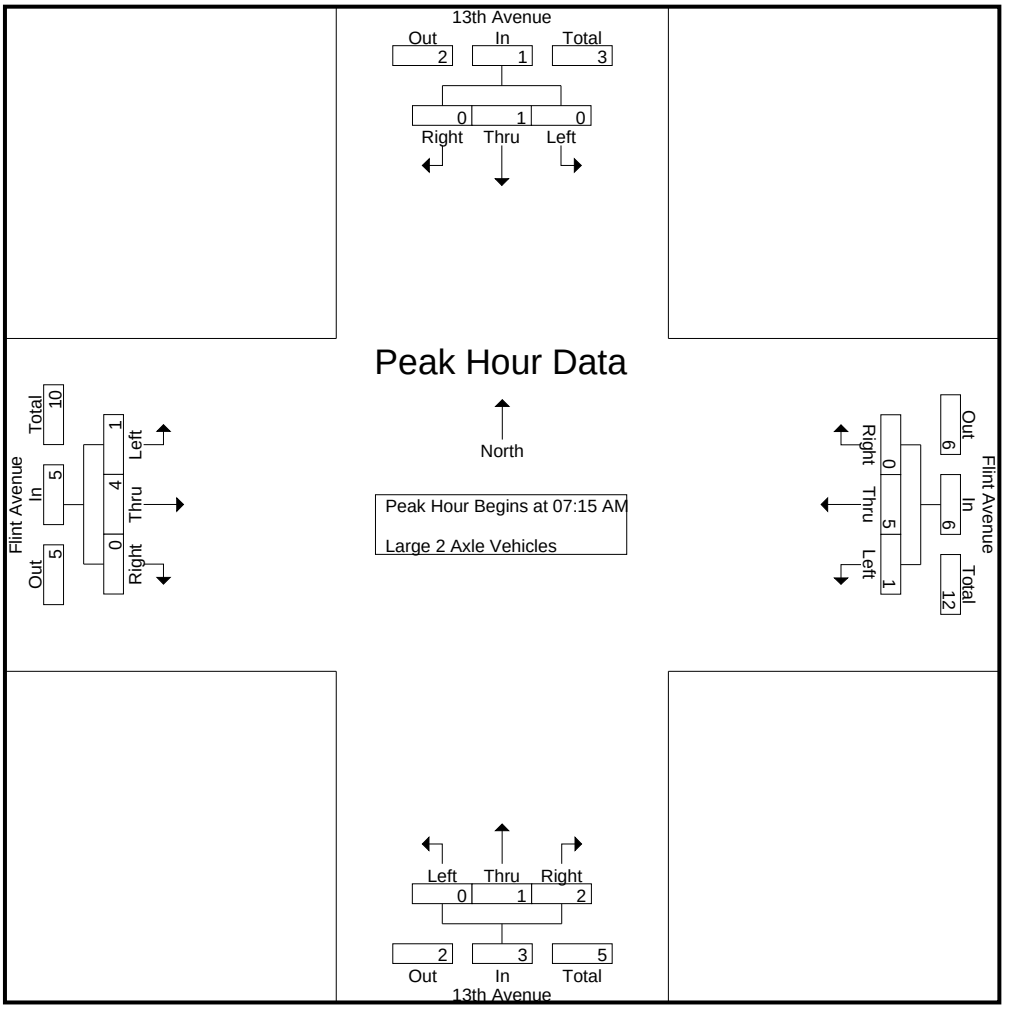
	13th Avenue Southbound				Flint Avenue Westbound				13th Avenue Northbound				Flint Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
07:15 AM	0	1	0	1	0	0	0	0	0	1	0	1	1	1	0	2	4
07:30 AM	0	0	0	0	0	0	0	0	0	0	1	1	0	1	0	1	2
07:45 AM	0	0	0	0	1	1	0	2	0	0	1	1	0	1	0	1	4
Total	0	1	0	1	1	1	0	2	0	1	2	3	1	4	0	5	11
08:00 AM	0	0	0	0	0	4	0	4	0	0	0	0	0	1	0	1	5
08:15 AM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1
08:30 AM	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	1	4	0	5	0	0	1	1	0	1	0	1	7
Grand Total	0	1	0	1	2	5	0	7	0	1	3	4	1	5	0	6	18
Apprch %	0	100	0		28.6	71.4	0		0	25	75		16.7	83.3	0		
Total %	0	5.6	0	5.6	11.1	27.8	0	38.9	0	5.6	16.7	22.2	5.6	27.8	0	33.3	

	13th Avenue Southbound				Flint Avenue Westbound				13th Avenue Northbound				Flint Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	**1**	0	**1**	0	0	0	0	0	**1**	0	**1**	**1**	**1**	0	**2**	4
07:30 AM	0	0	0	0	0	0	0	0	0	0	**1**	1	0	1	0	1	2
07:45 AM	0	0	0	0	**1**	1	0	2	0	0	1	1	0	1	0	1	4
08:00 AM	0	0	0	0	0	**4**	0	**4**	0	0	0	0	0	1	0	1	**5**
Total Volume	0	1	0	1	1	5	0	6	0	1	2	3	1	4	0	5	15
% App. Total	0	100	0		16.7	83.3	0		0	33.3	66.7		20	80	0		
PHF	.000	.250	.000	.250	.250	.313	.000	.375	.000	.250	.500	.750	.250	1.00	.000	.625	.750

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

County of Kings
N/S: 13th Avenue
E/W: Flint Avenue
Weather: Clear

File Name : 01_CKS_13th_Flint AM
Site Code : 00323251
Start Date : 3/23/2023
Page No : 2



Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	0	**1**	0	**1**	0	0	0	0	0	**1**	0	**1**	**1**	**1**	0	**2**
+15 mins.	0	0	0	0	0	0	0	0	0	0	**1**	1	0	1	0	1
+30 mins.	0	0	0	0	**1**	1	0	2	0	0	1	1	0	1	0	1
+45 mins.	0	0	0	0	0	**4**	0	**4**	0	0	0	0	0	1	0	1
Total Volume	0	1	0	1	1	5	0	6	0	1	2	3	1	4	0	5
% App. Total	0	100	0		16.7	83.3	0		0	33.3	66.7		20	80	0	
PHF	.000	.250	.000	.250	.250	.313	.000	.375	.000	.250	.500	.750	.250	1.000	.000	.625

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

County of Kings
N/S: 13th Avenue
E/W: Flint Avenue
Weather: Clear

File Name : 01_CKS_13th_Flint AM
Site Code : 00323251
Start Date : 3/23/2023
Page No : 1

Groups Printed- 3 Axle Vehicles

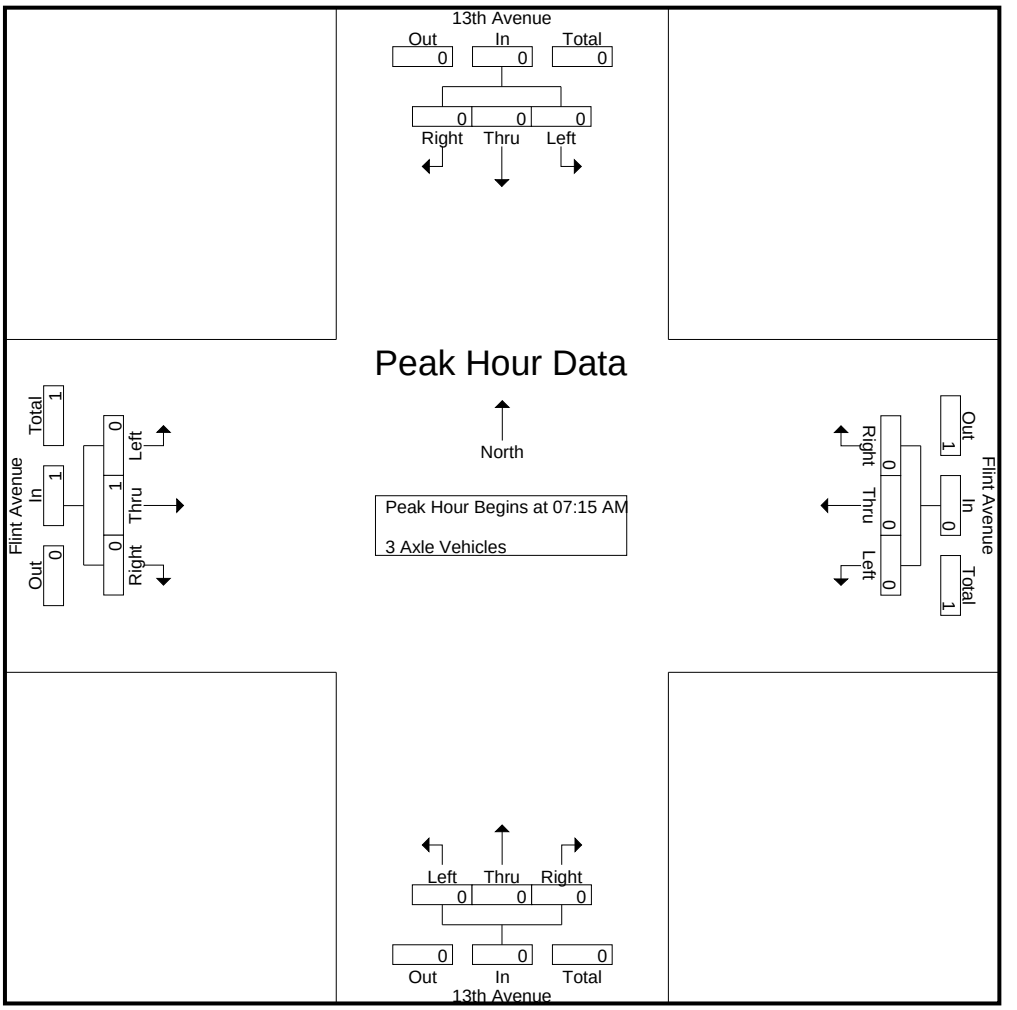
	13th Avenue Southbound				Flint Avenue Westbound				13th Avenue Northbound				Flint Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	1	0	1	0	1	0	1	2
Grand Total	0	0	0	0	0	0	0	0	0	1	0	1	0	1	0	1	2
Apprch %	0	0	0		0	0	0		0	100	0		0	100	0		
Total %	0	0	0	0	0	0	0	0	0	50	0	50	0	50	0	50	

	13th Avenue Southbound				Flint Avenue Westbound				13th Avenue Northbound				Flint Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**	0	**1**	**1**
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
% App. Total	0	0	0		0	0	0		0	0	0		0	100	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250	.000	.250	.250

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

County of Kings
N/S: 13th Avenue
E/W: Flint Avenue
Weather: Clear

File Name : 01_CKS_13th_Flint AM
Site Code : 00323251
Start Date : 3/23/2023
Page No : 2



Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**	0	**1**
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
% App. Total	0	0	0		0	0	0		0	0	0		0	100	0	
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250	.000	.250

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

County of Kings
N/S: 13th Avenue
E/W: Flint Avenue
Weather: Clear

File Name : 01_CKS_13th_Flint AM
Site Code : 00323251
Start Date : 3/23/2023
Page No : 1

Groups Printed- 4+ Axle Trucks

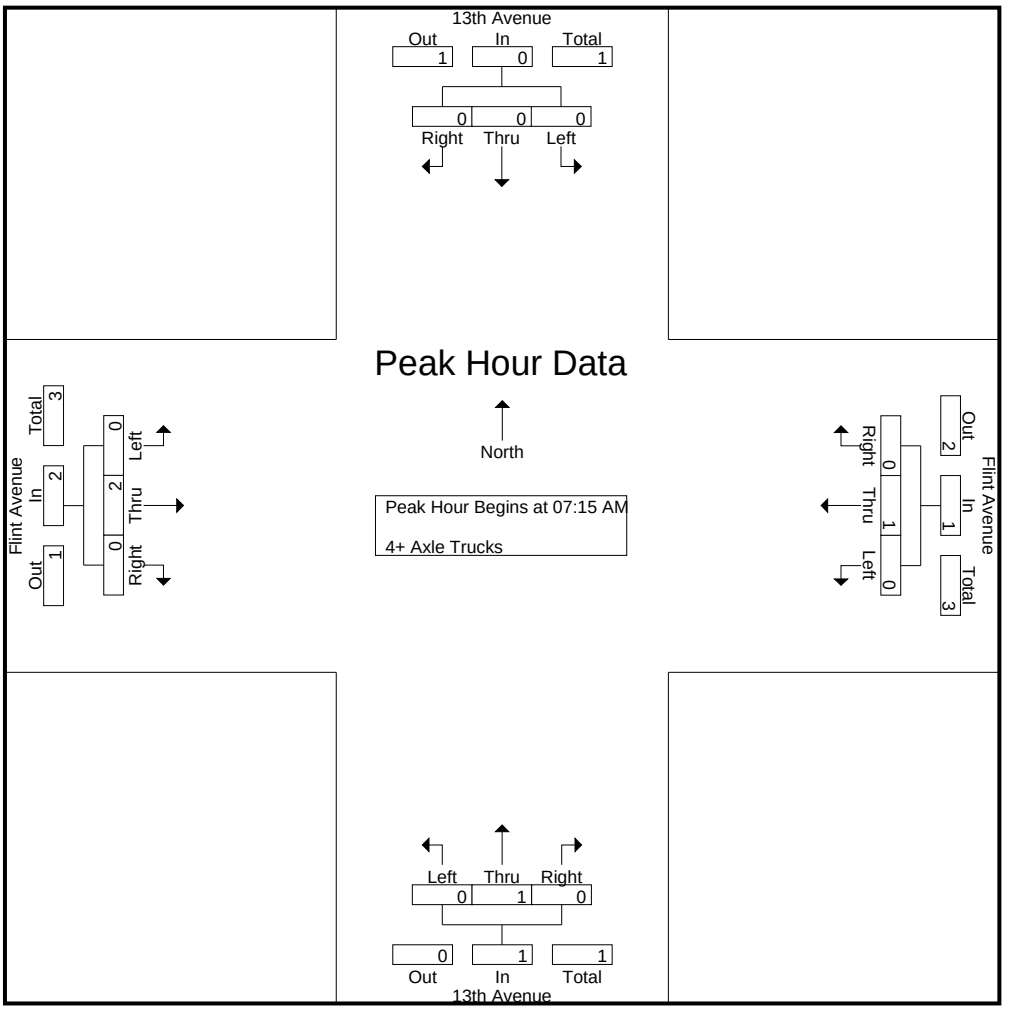
	13th Avenue Southbound				Flint Avenue Westbound				13th Avenue Northbound				Flint Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	2
07:45 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
Total	0	0	0	0	0	1	0	1	0	1	0	1	0	2	0	2	4
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	1	0	1	0	1	0	1	0	2	0	2	4
Apprch %	0	0	0		0	100	0		0	100	0		0	100	0		
Total %	0	0	0	0	0	25	0	25	0	25	0	25	0	50	0	50	

	13th Avenue Southbound				Flint Avenue Westbound				13th Avenue Northbound				Flint Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	0	0	0	0	**1**	0	**1**	0	0	0	0	0	0	0	0	1
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**2**	0	**2**	**2**
07:45 AM	0	0	0	0	0	0	0	0	0	**1**	0	**1**	0	0	0	0	1
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	1	0	1	0	1	0	1	0	2	0	2	4
% App. Total	0	0	0		0	100	0		0	100	0		0	100	0		
PHF	.000	.000	.000	.000	.000	.250	.000	.250	.000	.250	.000	.250	.000	.250	.000	.250	.500

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

County of Kings
N/S: 13th Avenue
E/W: Flint Avenue
Weather: Clear

File Name : 01_CKS_13th_Flint AM
Site Code : 00323251
Start Date : 3/23/2023
Page No : 2



Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	0	0	0	0	0	**1**	0	**1**	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	**2**	0	**2**
+30 mins.	0	0	0	0	0	0	0	0	0	**1**	0	**1**	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	1	0	1	0	1	0	1	0	2	0	2
% App. Total	0	0	0		0	100	0		0	100	0		0	100	0	
PHF	.000	.000	.000	.000	.000	.250	.000	.250	.000	.250	.000	.250	.000	.250	.000	.250

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

County of Kings
N/S: 13th Avenue
E/W: Flint Avenue
Weather: Clear

File Name : 01_CKS_13th_Flint PM
Site Code : 00323251
Start Date : 3/23/2023
Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

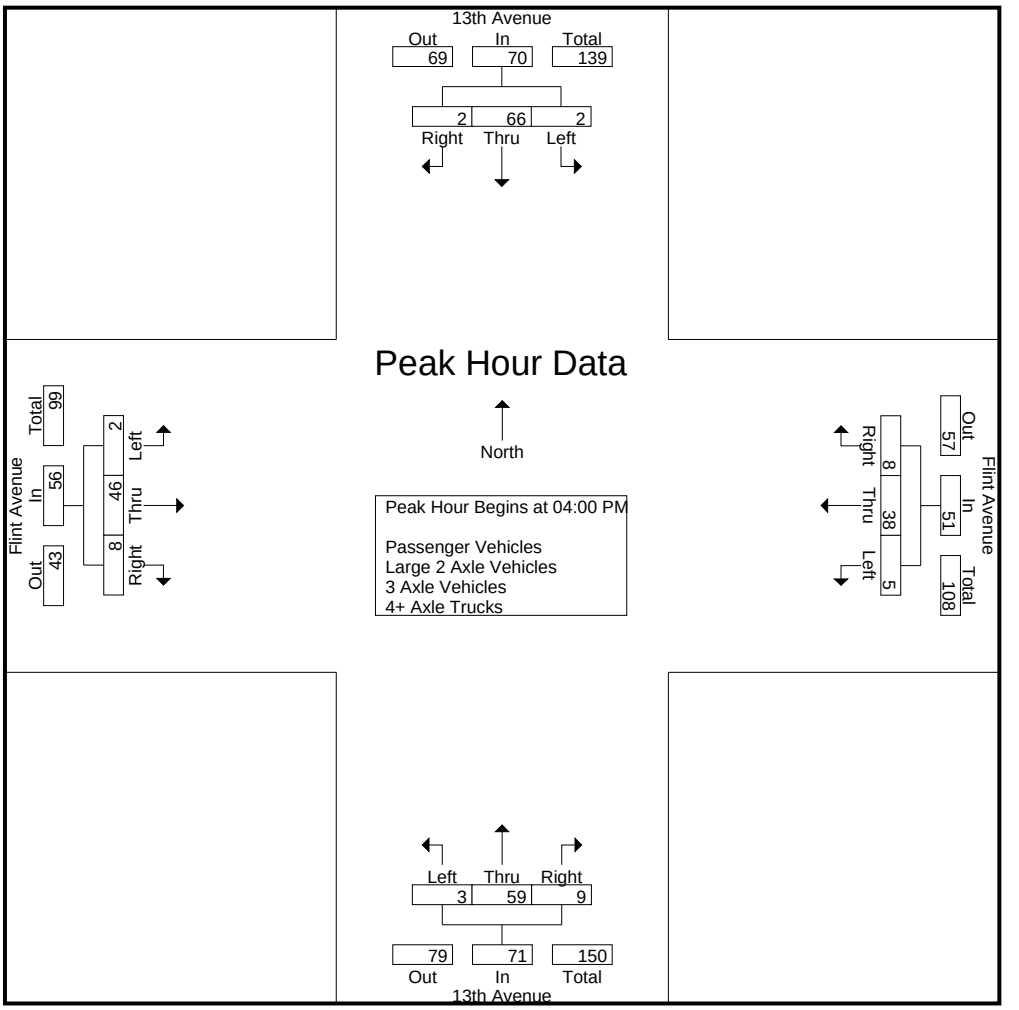
	13th Avenue Southbound				Flint Avenue Westbound				13th Avenue Northbound				Flint Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	1	16	0	17	2	10	3	15	1	23	3	27	0	13	1	14	73
04:15 PM	1	18	0	19	3	13	2	18	0	14	2	16	0	11	4	15	68
04:30 PM	0	18	2	20	0	10	1	11	1	11	2	14	2	11	0	13	58
04:45 PM	0	14	0	14	0	5	2	7	1	11	2	14	0	11	3	14	49
Total	2	66	2	70	5	38	8	51	3	59	9	71	2	46	8	56	248
05:00 PM	1	11	0	12	4	13	4	21	1	16	5	22	0	6	1	7	62
05:15 PM	2	15	0	17	2	5	4	11	0	10	6	16	0	8	0	8	52
05:30 PM	2	14	1	17	4	6	1	11	0	7	2	9	1	8	1	10	47
05:45 PM	0	16	1	17	1	6	0	7	1	7	2	10	0	4	0	4	38
Total	5	56	2	63	11	30	9	50	2	40	15	57	1	26	2	29	199
Grand Total	7	122	4	133	16	68	17	101	5	99	24	128	3	72	10	85	447
Apprch %	5.3	91.7	3		15.8	67.3	16.8		3.9	77.3	18.8		3.5	84.7	11.8		
Total %	1.6	27.3	0.9	29.8	3.6	15.2	3.8	22.6	1.1	22.1	5.4	28.6	0.7	16.1	2.2	19	
Passenger Vehicles	7	122	4	133	16	67	16	99	5	97	24	126	3	71	10	84	442
% Passenger Vehicles	100	100	100	100	100	98.5	94.1	98	100	98	100	98.4	100	98.6	100	98.8	98.9
Large 2 Axle Vehicles	0	0	0	0	0	1	1	2	0	2	0	2	0	1	0	1	5
% Large 2 Axle Vehicles	0	0	0	0	0	1.5	5.9	2	0	2	0	1.6	0	1.4	0	1.2	1.1
3 Axle Vehicles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% 3 Axle Vehicles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4+ Axle Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% 4+ Axle Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

	13th Avenue Southbound				Flint Avenue Westbound				13th Avenue Northbound				Flint Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	**1**	16	0	17	2	10	**3**	15	**1**	**23**	**3**	**27**	0	**13**	1	14	**73**
04:15 PM	1	**18**	0	19	**3**	**13**	2	**18**	0	14	2	16	0	11	**4**	**15**	68
04:30 PM	0	18	**2**	**20**	0	10	1	11	1	11	2	14	**2**	11	0	13	58
04:45 PM	0	14	0	14	0	5	2	7	1	11	2	14	0	11	3	14	49
Total Volume	2	66	2	70	5	38	8	51	3	59	9	71	2	46	8	56	248
% App. Total	2.9	94.3	2.9		9.8	74.5	15.7		4.2	83.1	12.7		3.6	82.1	14.3		
PHF	.500	.917	.250	.875	.417	.731	.667	.708	.750	.641	.750	.657	.250	.885	.500	.933	.849

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

County of Kings
N/S: 13th Avenue
E/W: Flint Avenue
Weather: Clear

File Name : 01_CKS_13th_Flint PM
Site Code : 00323251
Start Date : 3/23/2023
Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:00 PM				04:15 PM				04:00 PM				04:00 PM			
+0 mins.	**1**	16	0	17	3	**13**	2	18	**1**	**23**	**3**	**27**	0	**13**	1	14
+15 mins.	1	**18**	0	19	0	10	1	11	0	14	2	16	0	11	**4**	**15**
+30 mins.	0	18	**2**	**20**	0	5	2	7	1	11	2	14	**2**	11	0	13
+45 mins.	0	14	0	14	**4**	13	**4**	**21**	1	11	2	14	0	11	3	14
Total Volume	2	66	2	70	7	41	9	57	3	59	9	71	2	46	8	56
% App. Total	2.9	94.3	2.9		12.3	71.9	15.8		4.2	83.1	12.7		3.6	82.1	14.3	
PHF	.500	.917	.250	.875	.438	.788	.563	.679	.750	.641	.750	.657	.250	.885	.500	.933

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

County of Kings
N/S: 13th Avenue
E/W: Flint Avenue
Weather: Clear

File Name : 01_CKS_13th_Flint PM
Site Code : 00323251
Start Date : 3/23/2023
Page No : 1

Groups Printed- Passenger Vehicles

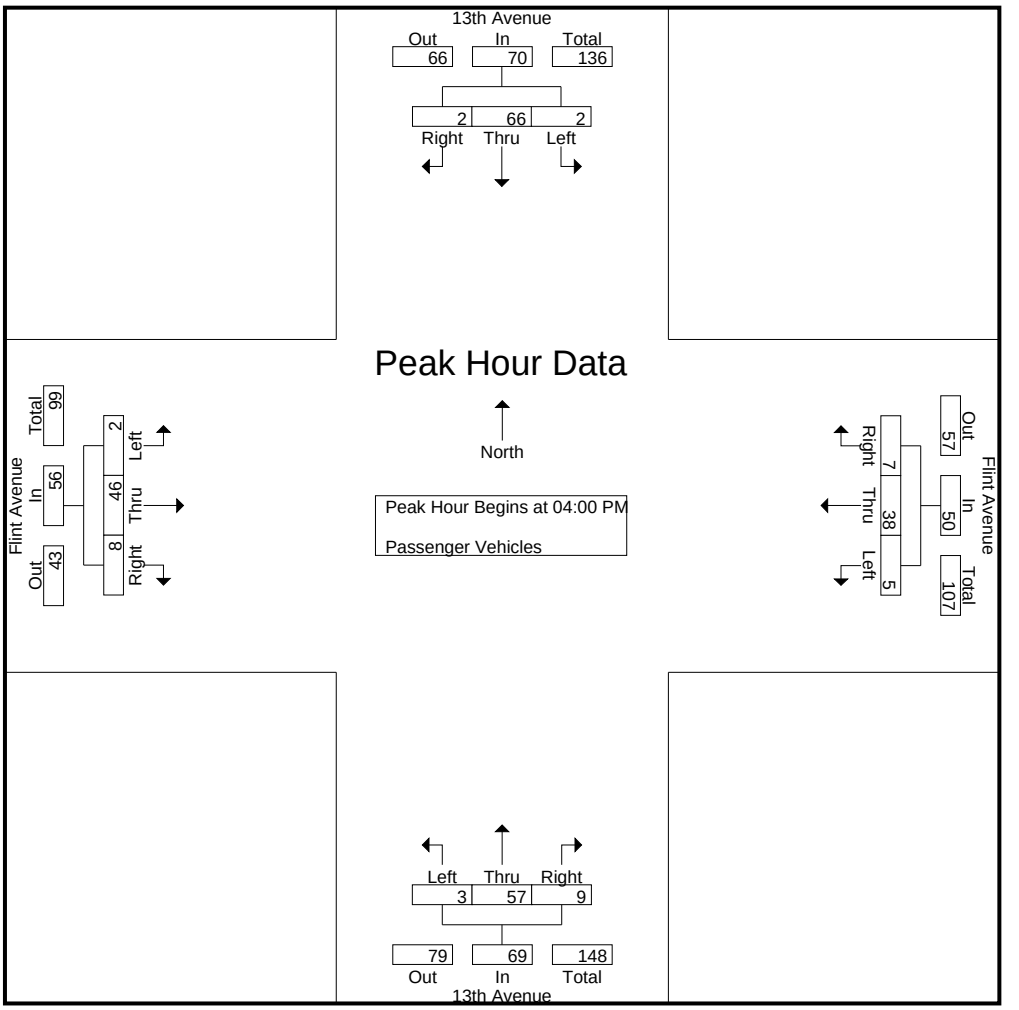
	13th Avenue Southbound				Flint Avenue Westbound				13th Avenue Northbound				Flint Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	1	16	0	17	2	10	2	14	1	21	3	25	0	13	1	14	70
04:15 PM	1	18	0	19	3	13	2	18	0	14	2	16	0	11	4	15	68
04:30 PM	0	18	2	20	0	10	1	11	1	11	2	14	2	11	0	13	58
04:45 PM	0	14	0	14	0	5	2	7	1	11	2	14	0	11	3	14	49
Total	2	66	2	70	5	38	7	50	3	57	9	69	2	46	8	56	245
05:00 PM	1	11	0	12	4	12	4	20	1	16	5	22	0	6	1	7	61
05:15 PM	2	15	0	17	2	5	4	11	0	10	6	16	0	7	0	7	51
05:30 PM	2	14	1	17	4	6	1	11	0	7	2	9	1	8	1	10	47
05:45 PM	0	16	1	17	1	6	0	7	1	7	2	10	0	4	0	4	38
Total	5	56	2	63	11	29	9	49	2	40	15	57	1	25	2	28	197
Grand Total	7	122	4	133	16	67	16	99	5	97	24	126	3	71	10	84	442
Apprch %	5.3	91.7	3		16.2	67.7	16.2		4	77	19		3.6	84.5	11.9		
Total %	1.6	27.6	0.9	30.1	3.6	15.2	3.6	22.4	1.1	21.9	5.4	28.5	0.7	16.1	2.3	19	

	13th Avenue Southbound				Flint Avenue Westbound				13th Avenue Northbound				Flint Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	**1**	16	0	17	2	10	**2**	14	**1**	**21**	**3**	**25**	0	**13**	1	14	**70**
04:15 PM	1	**18**	0	19	**3**	**13**	2	**18**	0	14	2	16	0	11	**4**	**15**	68
04:30 PM	0	18	**2**	**20**	0	10	1	11	1	11	2	14	**2**	11	0	13	58
04:45 PM	0	14	0	14	0	5	2	7	1	11	2	14	0	11	3	14	49
Total Volume	2	66	2	70	5	38	7	50	3	57	9	69	2	46	8	56	245
% App. Total	2.9	94.3	2.9		10	76	14		4.3	82.6	13		3.6	82.1	14.3		
PHF	.500	.917	.250	.875	.417	.731	.875	.694	.750	.679	.750	.690	.250	.885	.500	.933	.875

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

County of Kings
N/S: 13th Avenue
E/W: Flint Avenue
Weather: Clear

File Name : 01_CKS_13th_Flint PM
Site Code : 00323251
Start Date : 3/23/2023
Page No : 2



Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:00 PM				04:00 PM				04:00 PM				04:00 PM			
+0 mins.	**1**	16	0	17	2	10	**2**	14	**1**	**21**	**3**	**25**	0	**13**	1	14
+15 mins.	1	**18**	0	19	**3**	**13**	2	**18**	0	14	2	16	0	11	**4**	**15**
+30 mins.	0	18	**2**	**20**	0	10	1	11	1	11	2	14	**2**	11	0	13
+45 mins.	0	14	0	14	0	5	2	7	1	11	2	14	0	11	3	14
Total Volume	2	66	2	70	5	38	7	50	3	57	9	69	2	46	8	56
% App. Total	2.9	94.3	2.9		10	76	14		4.3	82.6	13		3.6	82.1	14.3	
PHF	.500	.917	.250	.875	.417	.731	.875	.694	.750	.679	.750	.690	.250	.885	.500	.933

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

County of Kings
N/S: 13th Avenue
E/W: Flint Avenue
Weather: Clear

File Name : 01_CKS_13th_Flint PM
Site Code : 00323251
Start Date : 3/23/2023
Page No : 1

Groups Printed- Large 2 Axle Vehicles

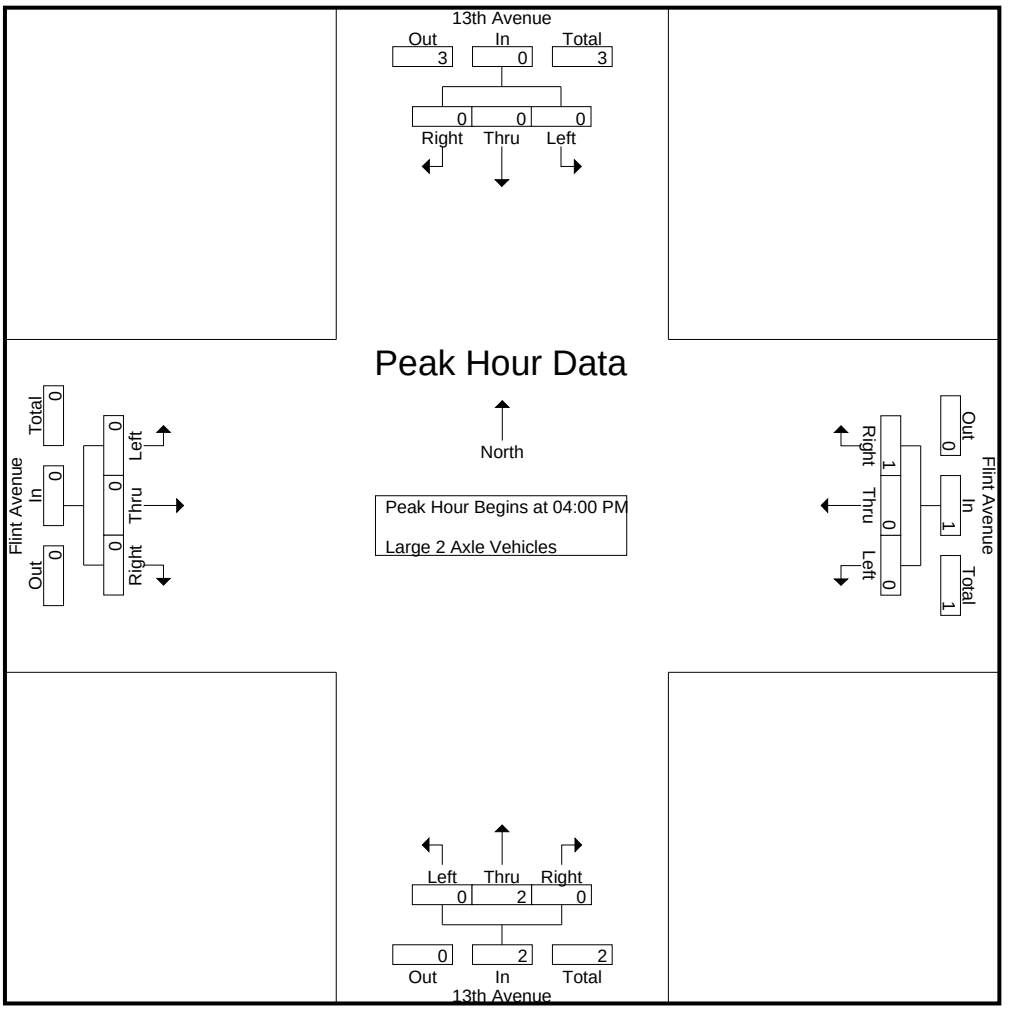
	13th Avenue Southbound				Flint Avenue Westbound				13th Avenue Northbound				Flint Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	1	1	0	2	0	2	0	0	0	0	3
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	1	1	0	2	0	2	0	0	0	0	3
05:00 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
Grand Total	0	0	0	0	0	1	1	2	0	2	0	2	0	1	0	1	5
Apprch %	0	0	0		0	50	50		0	100	0		0	100	0		
Total %	0	0	0	0	0	20	20	40	0	40	0	40	0	20	0	20	

	13th Avenue Southbound				Flint Avenue Westbound				13th Avenue Northbound				Flint Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	0	0	0	0	0	0	**1**	**1**	0	**2**	0	**2**	0	0	0	0	**3**
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	1	1	0	2	0	2	0	0	0	0	3
% App. Total	0	0	0		0	0	100		0	100	0		0	0	0		
PHF	.000	.000	.000	.000	.000	.000	.250	.250	.000	.250	.000	.250	.000	.000	.000	.000	.250

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

County of Kings
N/S: 13th Avenue
E/W: Flint Avenue
Weather: Clear

File Name : 01_CKS_13th_Flint PM
Site Code : 00323251
Start Date : 3/23/2023
Page No : 2



Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:00 PM				04:00 PM				04:00 PM				04:00 PM			
+0 mins.	0	0	0	0	0	0	**1**	**1**	0	**2**	0	**2**	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	1	1	0	2	0	2	0	0	0	0
% App. Total	0	0	0		0	0	100		0	100	0		0	0	0	
PHF	.000	.000	.000	.000	.000	.000	.250	.250	.000	.250	.000	.250	.000	.000	.000	.000

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

County of Kings
N/S: 13th Avenue
E/W: Flint Avenue
Weather: Clear

File Name : 01_CKS_13th_Flint PM
Site Code : 00323251
Start Date : 3/23/2023
Page No : 1

Groups Printed- 3 Axle Vehicles

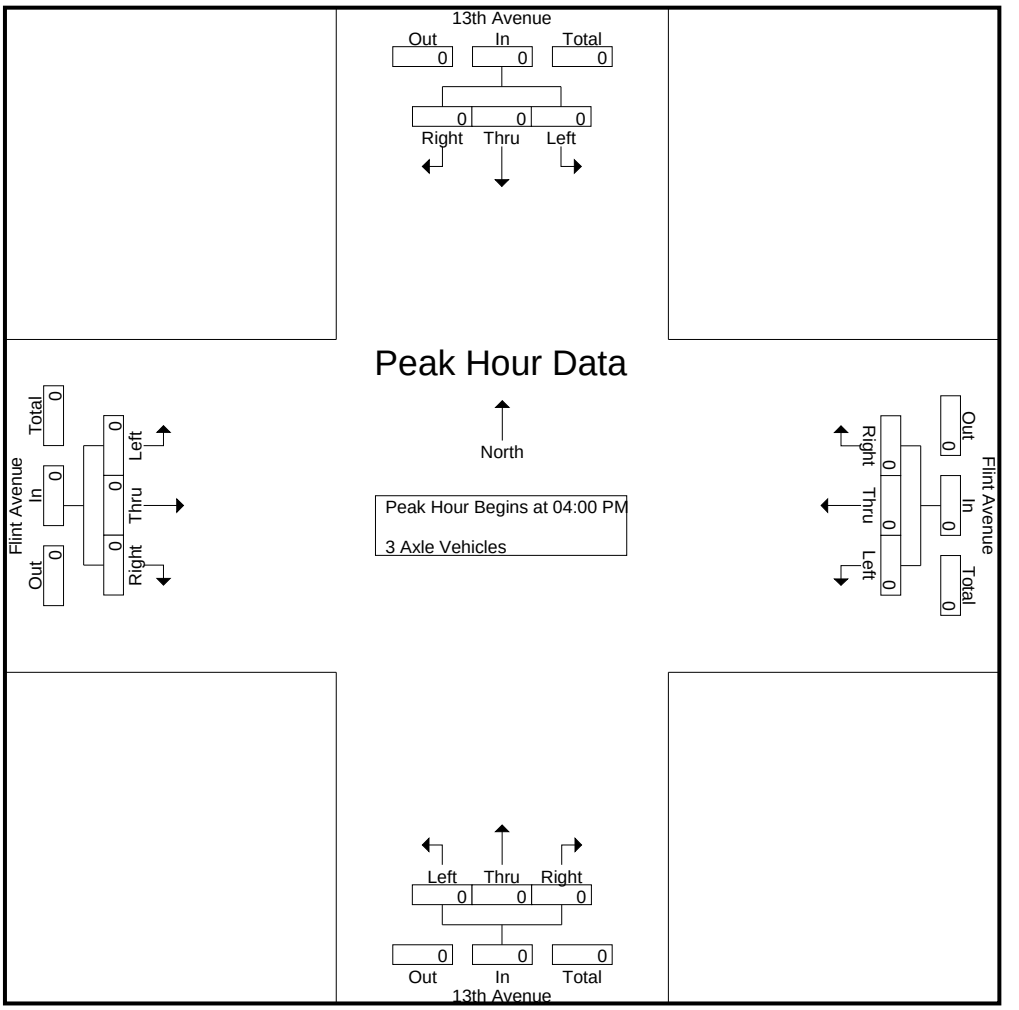
	13th Avenue Southbound				Flint Avenue Westbound				13th Avenue Northbound				Flint Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Apprch %	0	0	0		0	0	0		0	0	0		0	0	0		
Total %																	

	13th Avenue Southbound				Flint Avenue Westbound				13th Avenue Northbound				Flint Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0		0	0	0		0	0	0		0	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

County of Kings
N/S: 13th Avenue
E/W: Flint Avenue
Weather: Clear

File Name : 01_CKS_13th_Flint PM
Site Code : 00323251
Start Date : 3/23/2023
Page No : 2



Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:00 PM				04:00 PM				04:00 PM				04:00 PM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0		0	0	0		0	0	0		0	0	0	
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

County of Kings
N/S: 13th Avenue
E/W: Flint Avenue
Weather: Clear

File Name : 01_CKS_13th_Flint PM
Site Code : 00323251
Start Date : 3/23/2023
Page No : 1

Groups Printed- 4+ Axle Trucks

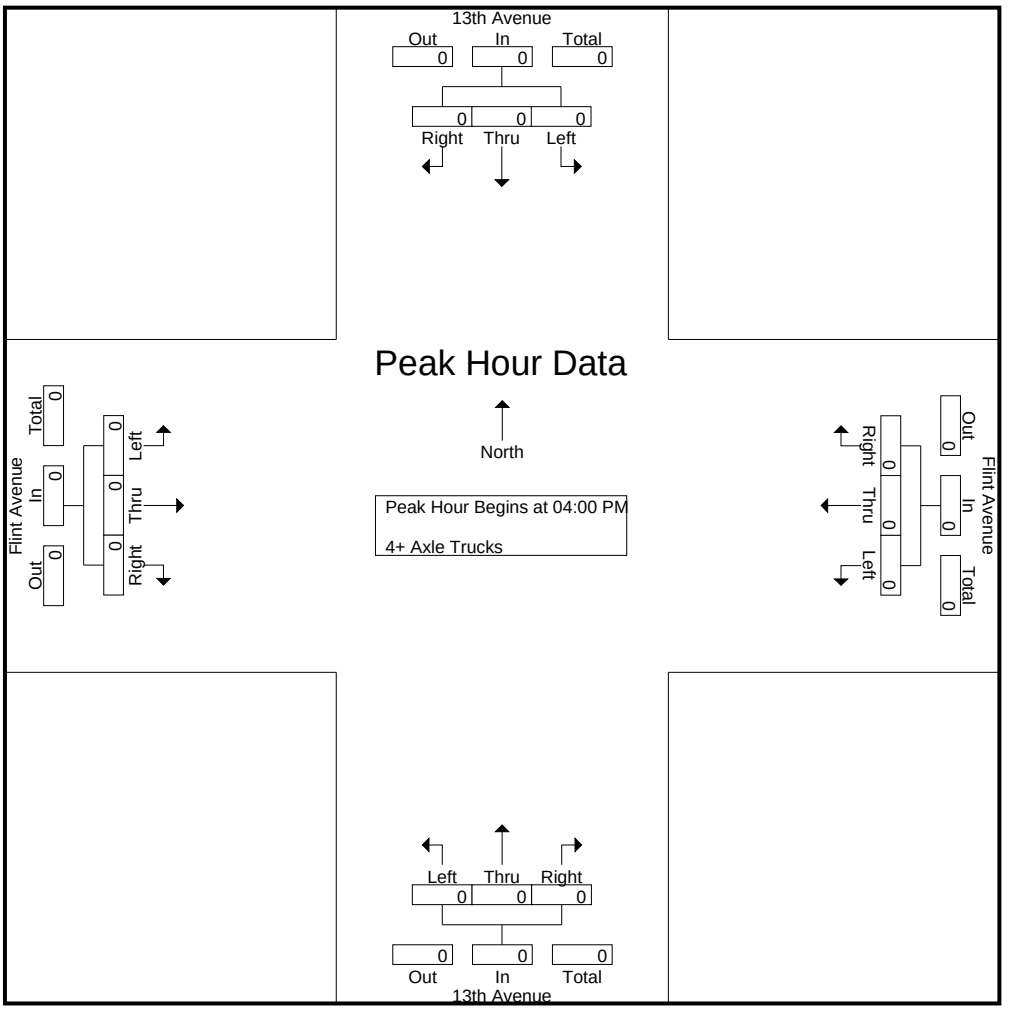
	13th Avenue Southbound				Flint Avenue Westbound				13th Avenue Northbound				Flint Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Apprch %	0	0	0		0	0	0		0	0	0		0	0	0		
Total %																	

	13th Avenue Southbound				Flint Avenue Westbound				13th Avenue Northbound				Flint Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0		0	0	0		0	0	0		0	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

County of Kings
N/S: 13th Avenue
E/W: Flint Avenue
Weather: Clear

File Name : 01_CKS_13th_Flint PM
Site Code : 00323251
Start Date : 3/23/2023
Page No : 2



Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:00 PM				04:00 PM				04:00 PM				04:00 PM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0		0	0	0		0	0	0		0	0	0	
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

County of Kings
N/S: 13th Avenue
E/W: Fargo Avenue
Weather: Clear

File Name : 02_CKS_13th_Fargo AM
Site Code : 00323251
Start Date : 3/23/2023
Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

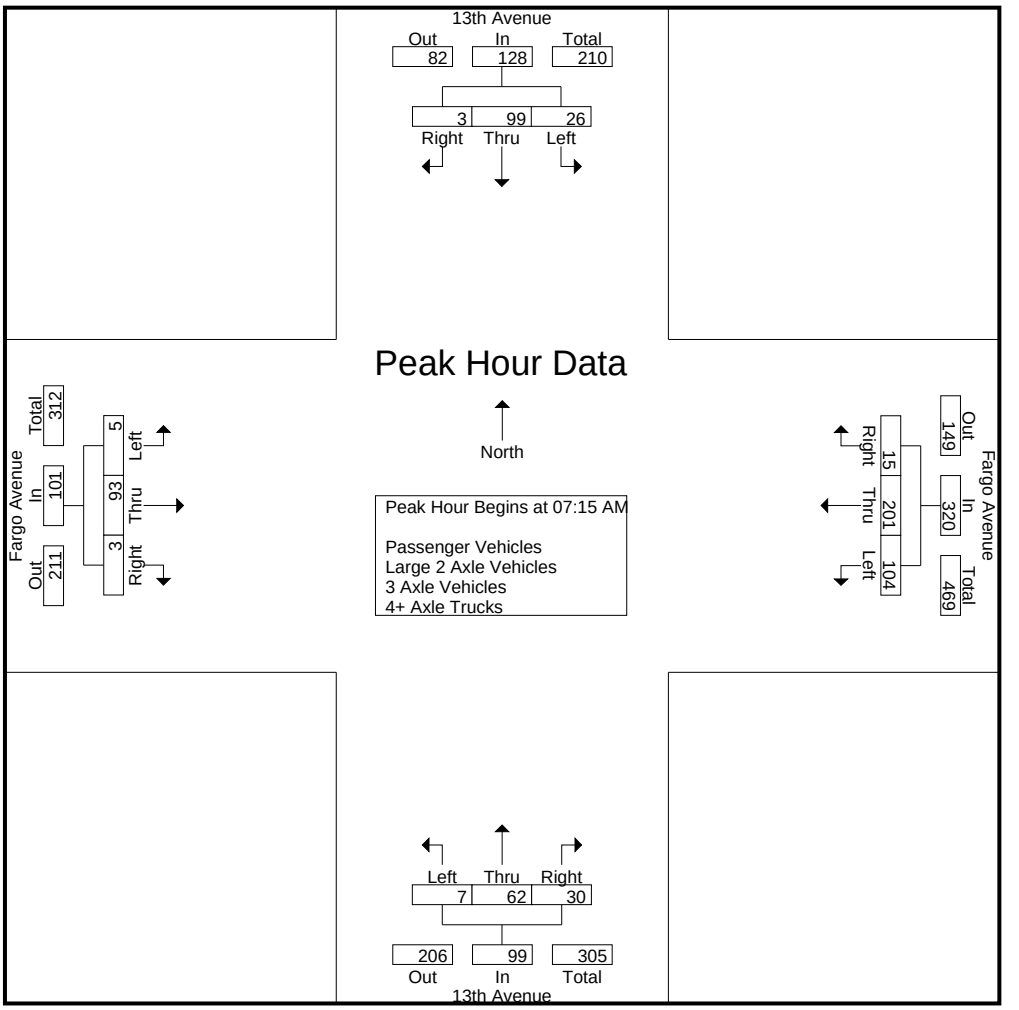
	13th Avenue Southbound				Fargo Avenue Westbound				13th Avenue Northbound				Fargo Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	2	14	0	16	14	36	7	57	1	10	3	14	0	8	0	8	95
07:15 AM	6	14	0	20	27	45	7	79	2	14	3	19	0	6	0	6	124
07:30 AM	5	23	0	28	25	75	3	103	2	11	6	19	1	25	0	26	176
07:45 AM	11	34	1	46	27	58	5	90	3	27	12	42	4	41	2	47	225
Total	24	85	1	110	93	214	22	329	8	62	24	94	5	80	2	87	620
08:00 AM	4	28	2	34	25	23	0	48	0	10	9	19	0	21	1	22	123
08:15 AM	3	16	0	19	14	11	3	28	1	11	14	26	0	15	0	15	88
08:30 AM	0	11	0	11	12	15	5	32	0	9	5	14	0	16	1	17	74
08:45 AM	4	12	0	16	16	8	4	28	2	4	5	11	0	8	0	8	63
Total	11	67	2	80	67	57	12	136	3	34	33	70	0	60	2	62	348
Grand Total	35	152	3	190	160	271	34	465	11	96	57	164	5	140	4	149	968
Apprch %	18.4	80	1.6		34.4	58.3	7.3		6.7	58.5	34.8		3.4	94	2.7		
Total %	3.6	15.7	0.3	19.6	16.5	28	3.5	48	1.1	9.9	5.9	16.9	0.5	14.5	0.4	15.4	
Passenger Vehicles	34	152	3	189	156	270	33	459	10	93	57	160	5	134	4	143	951
% Passenger Vehicles	97.1	100	100	99.5	97.5	99.6	97.1	98.7	90.9	96.9	100	97.6	100	95.7	100	96	98.2
Large 2 Axle Vehicles	1	0	0	1	4	1	0	5	1	2	0	3	0	6	0	6	15
% Large 2 Axle Vehicles	2.9	0	0	0.5	2.5	0.4	0	1.1	9.1	2.1	0	1.8	0	4.3	0	4	1.5
3 Axle Vehicles	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
% 3 Axle Vehicles	0	0	0	0	0	0	0	0	0	1	0	0.6	0	0	0	0	0.1
4+ Axle Trucks	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1
% 4+ Axle Trucks	0	0	0	0	0	0	2.9	0.2	0	0	0	0	0	0	0	0	0.1

	13th Avenue Southbound				Fargo Avenue Westbound				13th Avenue Northbound				Fargo Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	6	14	0	20	**27**	45	**7**	79	2	14	3	19	0	6	0	6	124
07:30 AM	5	23	0	28	25	**75**	3	**103**	2	11	6	19	1	25	0	26	176
07:45 AM	**11**	**34**	1	**46**	27	58	5	90	**3**	**27**	**12**	**42**	**4**	**41**	**2**	**47**	**225**
08:00 AM	4	28	**2**	34	25	23	0	48	0	10	9	19	0	21	1	22	123
Total Volume	26	99	3	128	104	201	15	320	7	62	30	99	5	93	3	101	648
% App. Total	20.3	77.3	2.3		32.5	62.8	4.7		7.1	62.6	30.3		5	92.1	3		
PHF	.591	.728	.375	.696	.963	.670	.536	.777	.583	.574	.625	.589	.313	.567	.375	.537	.720

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

County of Kings
N/S: 13th Avenue
E/W: Fargo Avenue
Weather: Clear

File Name : 02_CKS_13th_Fargo AM
Site Code : 00323251
Start Date : 3/23/2023



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:00 AM				07:30 AM				07:30 AM			
+0 mins.	6	14	0	20	14	36	**7**	57	2	11	6	19	1	25	0	26
+15 mins.	5	23	0	28	**27**	45	7	79	**3**	**27**	12	**42**	**4**	**41**	**2**	**47**
+30 mins.	**11**	**34**	1	**46**	25	**75**	3	**103**	0	10	9	19	0	21	1	22
+45 mins.	4	28	**2**	34	27	58	5	90	1	11	**14**	26	0	15	0	15
Total Volume	26	99	3	128	93	214	22	329	6	59	41	106	5	102	3	110
% App. Total	20.3	77.3	2.3		28.3	65	6.7		5.7	55.7	38.7		4.5	92.7	2.7	
PHF	.591	.728	.375	.696	.861	.713	.786	.799	.500	.546	.732	.631	.313	.622	.375	.585

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

County of Kings
N/S: 13th Avenue
E/W: Fargo Avenue
Weather: Clear

File Name : 02_CKS_13th_Fargo AM
Site Code : 00323251
Start Date : 3/23/2023
Page No : 1

Groups Printed- Passenger Vehicles

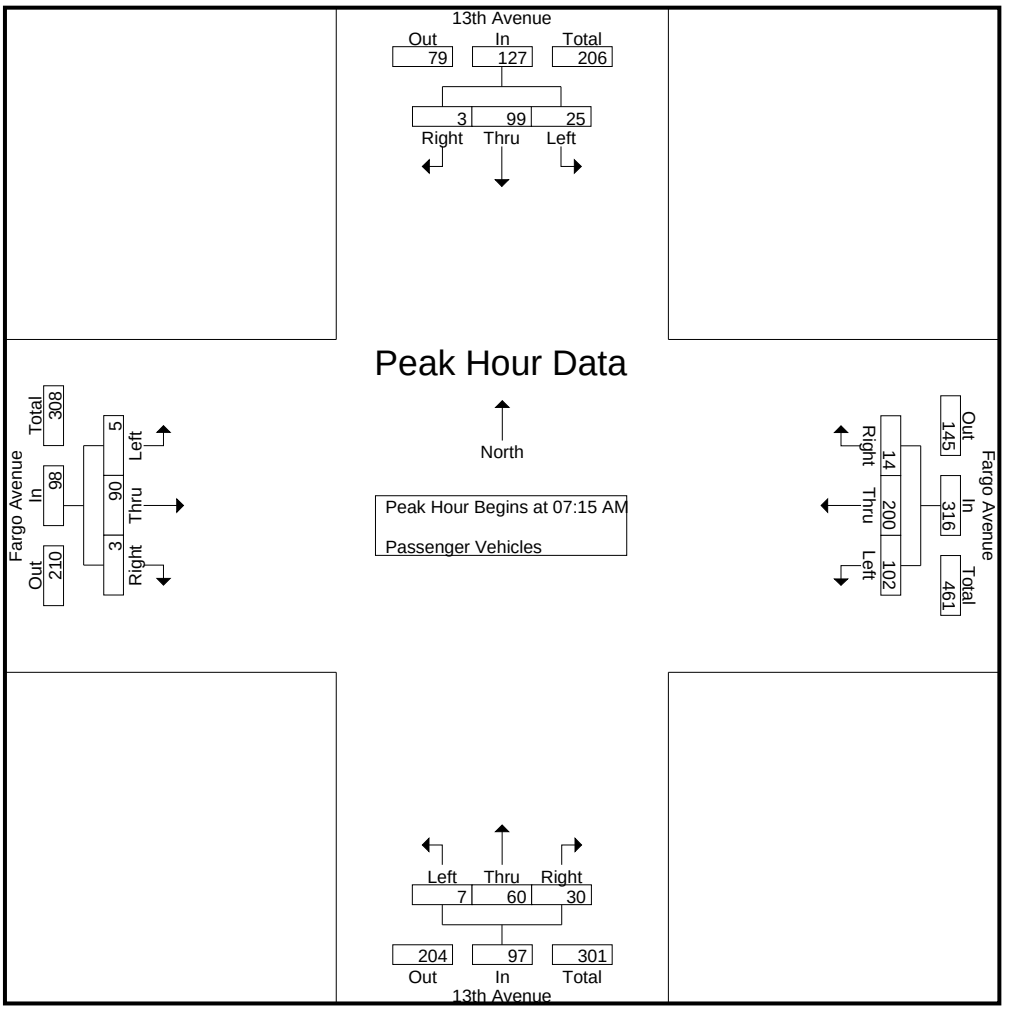
	13th Avenue Southbound				Fargo Avenue Westbound				13th Avenue Northbound				Fargo Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	2	14	0	16	14	36	7	57	0	10	3	13	0	5	0	5	91
07:15 AM	5	14	0	19	26	45	7	78	2	13	3	18	0	6	0	6	121
07:30 AM	5	23	0	28	24	74	3	101	2	11	6	19	1	23	0	24	172
07:45 AM	11	34	1	46	27	58	4	89	3	26	12	41	4	40	2	46	222
Total	23	85	1	109	91	213	21	325	7	60	24	91	5	74	2	81	606
08:00 AM	4	28	2	34	25	23	0	48	0	10	9	19	0	21	1	22	123
08:15 AM	3	16	0	19	12	11	3	26	1	11	14	26	0	15	0	15	86
08:30 AM	0	11	0	11	12	15	5	32	0	8	5	13	0	16	1	17	73
08:45 AM	4	12	0	16	16	8	4	28	2	4	5	11	0	8	0	8	63
Total	11	67	2	80	65	57	12	134	3	33	33	69	0	60	2	62	345
Grand Total	34	152	3	189	156	270	33	459	10	93	57	160	5	134	4	143	951
Apprch %	18	80.4	1.6		34	58.8	7.2		6.2	58.1	35.6		3.5	93.7	2.8		
Total %	3.6	16	0.3	19.9	16.4	28.4	3.5	48.3	1.1	9.8	6	16.8	0.5	14.1	0.4	15	

	13th Avenue Southbound				Fargo Avenue Westbound				13th Avenue Northbound				Fargo Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	5	14	0	19	26	45	**7**	78	2	13	3	18	0	6	0	6	121
07:30 AM	5	23	0	28	24	**74**	3	**101**	2	11	6	19	1	23	0	24	172
07:45 AM	**11**	**34**	1	**46**	**27**	58	4	89	**3**	**26**	**12**	**41**	**4**	**40**	**2**	**46**	**222**
08:00 AM	4	28	**2**	34	25	23	0	48	0	10	9	19	0	21	1	22	123
Total Volume	25	99	3	127	102	200	14	316	7	60	30	97	5	90	3	98	638
% App. Total	19.7	78	2.4		32.3	63.3	4.4		7.2	61.9	30.9		5.1	91.8	3.1		
PHF	.568	.728	.375	.690	.944	.676	.500	.782	.583	.577	.625	.591	.313	.563	.375	.533	.718

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

County of Kings
N/S: 13th Avenue
E/W: Fargo Avenue
Weather: Clear

File Name : 02_CKS_13th_Fargo AM
Site Code : 00323251
Start Date : 3/23/2023
Page No : 2



Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	5	14	0	19	26	45	**7**	78	2	13	3	18	0	6	0	6
+15 mins.	5	23	0	28	24	**74**	3	**101**	2	11	6	19	1	23	0	24
+30 mins.	**11**	**34**	1	**46**	**27**	58	4	89	**3**	**26**	**12**	**41**	**4**	**40**	**2**	**46**
+45 mins.	4	28	**2**	34	25	23	0	48	0	10	9	19	0	21	1	22
Total Volume	25	99	3	127	102	200	14	316	7	60	30	97	5	90	3	98
% App. Total	19.7	78	2.4		32.3	63.3	4.4		7.2	61.9	30.9		5.1	91.8	3.1	
PHF	.568	.728	.375	.690	.944	.676	.500	.782	.583	.577	.625	.591	.313	.563	.375	.533

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

County of Kings
N/S: 13th Avenue
E/W: Fargo Avenue
Weather: Clear

File Name : 02_CKS_13th_Fargo AM
Site Code : 00323251
Start Date : 3/23/2023
Page No : 1

Groups Printed- Large 2 Axle Vehicles

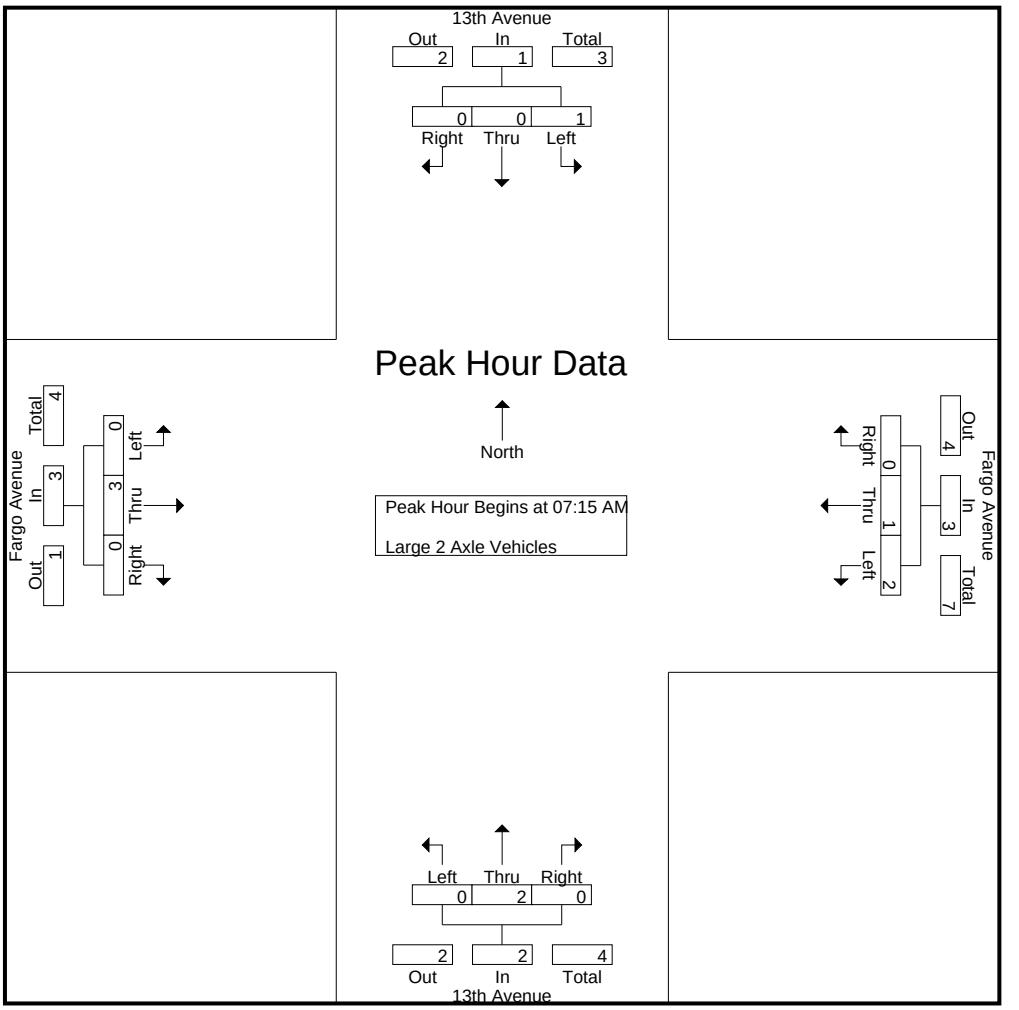
	13th Avenue Southbound				Fargo Avenue Westbound				13th Avenue Northbound				Fargo Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	1	0	0	1	0	3	0	3	4
07:15 AM	1	0	0	1	1	0	0	1	0	1	0	1	0	0	0	0	3
07:30 AM	0	0	0	0	1	1	0	2	0	0	0	0	0	2	0	2	4
07:45 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	1	0	1	2
Total	1	0	0	1	2	1	0	3	1	2	0	3	0	6	0	6	13
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	2
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	2
Grand Total	1	0	0	1	4	1	0	5	1	2	0	3	0	6	0	6	15
Apprch %	100	0	0		80	20	0		33.3	66.7	0		0	100	0		
Total %	6.7	0	0	6.7	26.7	6.7	0	33.3	6.7	13.3	0	20	0	40	0	40	

	13th Avenue Southbound				Fargo Avenue Westbound				13th Avenue Northbound				Fargo Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	**1**	0	0	**1**	**1**	0	0	1	0	**1**	0	**1**	0	0	0	0	3
07:30 AM	0	0	0	0	1	**1**	0	**2**	0	0	0	0	0	**2**	0	**2**	**4**
07:45 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	1	0	1	2
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	1	0	0	1	2	1	0	3	0	2	0	2	0	3	0	3	9
% App. Total	100	0	0		66.7	33.3	0		0	100	0		0	100	0		
PHF	.250	.000	.000	.250	.500	.250	.000	.375	.000	.500	.000	.500	.000	.375	.000	.375	.563

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

County of Kings
N/S: 13th Avenue
E/W: Fargo Avenue
Weather: Clear

File Name : 02_CKS_13th_Fargo AM
Site Code : 00323251
Start Date : 3/23/2023



Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	**1**	0	0	**1**	**1**	0	0	1	0	**1**	0	**1**	0	0	0	0
+15 mins.	0	0	0	0	1	**1**	0	**2**	0	0	0	0	0	**2**	0	**2**
+30 mins.	0	0	0	0	0	0	0	0	0	1	0	1	0	1	0	1
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	1	0	0	1	2	1	0	3	0	2	0	2	0	3	0	3
% App. Total	100	0	0		66.7	33.3	0		0	100	0		0	100	0	
PHF	.250	.000	.000	.250	.500	.250	.000	.375	.000	.500	.000	.500	.000	.375	.000	.375

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

County of Kings
N/S: 13th Avenue
E/W: Fargo Avenue
Weather: Clear

File Name : 02_CKS_13th_Fargo AM
Site Code : 00323251
Start Date : 3/23/2023
Page No : 1

Groups Printed- 3 Axle Vehicles

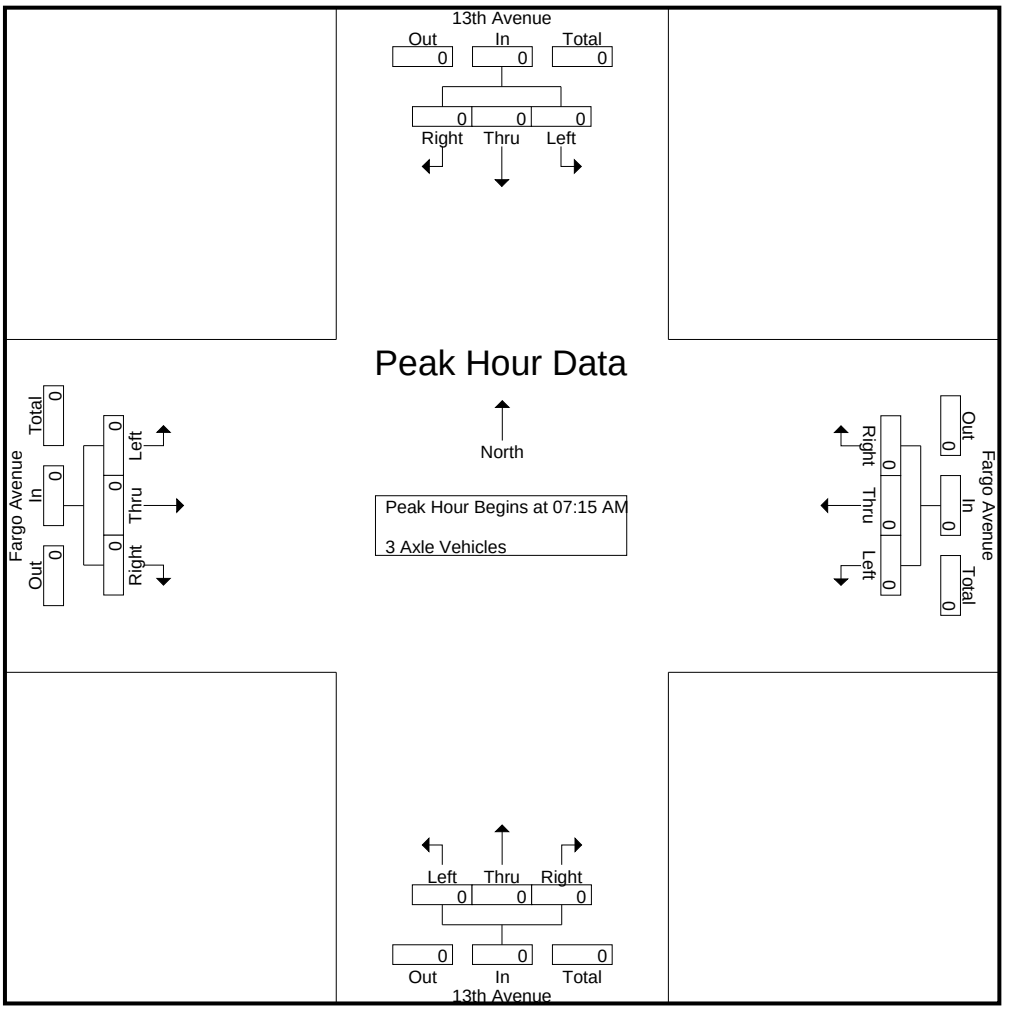
	13th Avenue Southbound				Fargo Avenue Westbound				13th Avenue Northbound				Fargo Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
Grand Total	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
Apprch %	0	0	0		0	0	0		0	100	0		0	0	0		
Total %	0	0	0	0	0	0	0	0	0	100	0	100	0	0	0	0	

	13th Avenue Southbound				Fargo Avenue Westbound				13th Avenue Northbound				Fargo Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0		0	0	0		0	0	0		0	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

County of Kings
N/S: 13th Avenue
E/W: Fargo Avenue
Weather: Clear

File Name : 02_CKS_13th_Fargo AM
Site Code : 00323251
Start Date : 3/23/2023



Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0		0	0	0		0	0	0		0	0	0	
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

County of Kings
N/S: 13th Avenue
E/W: Fargo Avenue
Weather: Clear

File Name : 02_CKS_13th_Fargo AM
Site Code : 00323251
Start Date : 3/23/2023
Page No : 1

Groups Printed- 4+ Axle Trucks

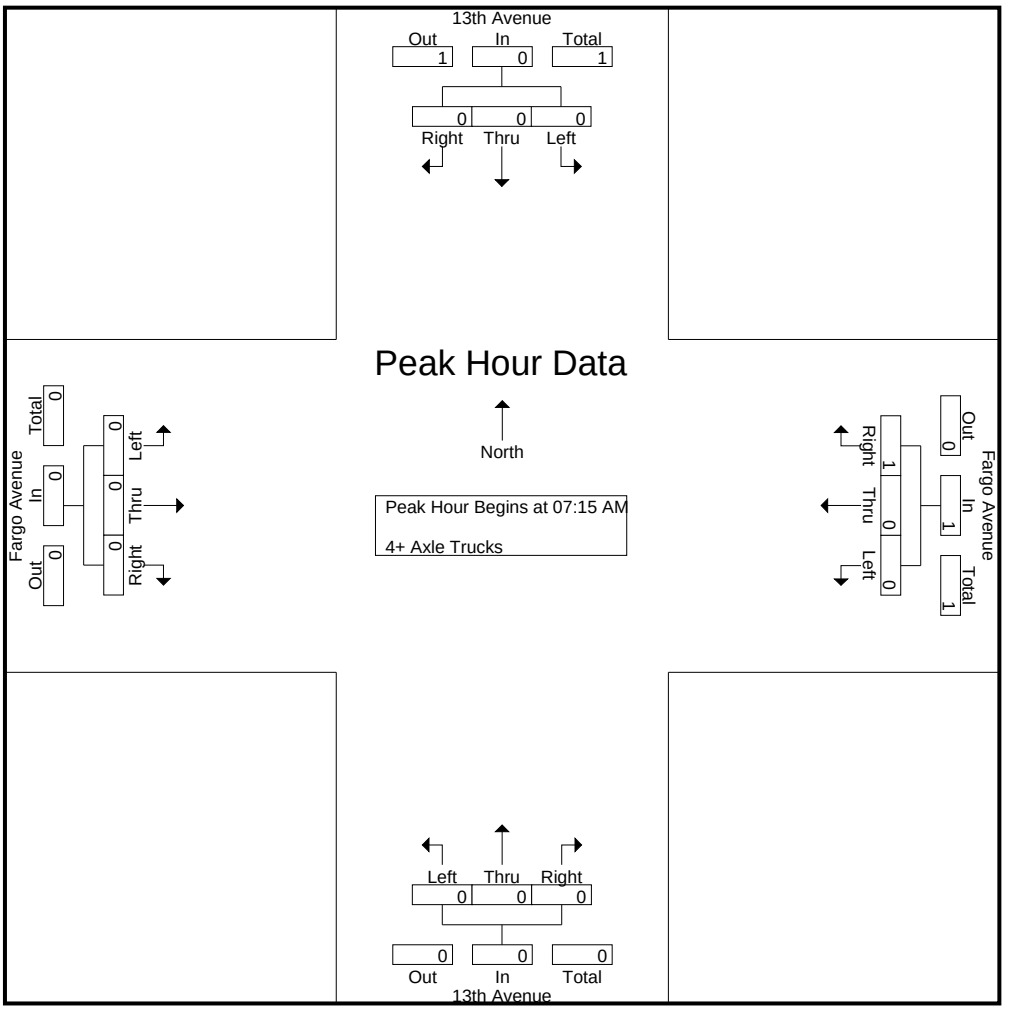
	13th Avenue Southbound				Fargo Avenue Westbound				13th Avenue Northbound				Fargo Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1
Total	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1
Apprch %	0	0	0		0	0	100		0	0	0		0	0	0		
Total %	0	0	0	0	0	0	100	100	0	0	0	0	0	0	0	0	

	13th Avenue Southbound				Fargo Avenue Westbound				13th Avenue Northbound				Fargo Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	**1**	**1**	0	0	0	0	0	0	0	0	**1**
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1
% App. Total	0	0	0		0	0	100		0	0	0		0	0	0		
PHF	.000	.000	.000	.000	.000	.000	.250	.250	.000	.000	.000	.000	.000	.000	.000	.000	.250

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

County of Kings
N/S: 13th Avenue
E/W: Fargo Avenue
Weather: Clear

File Name : 02_CKS_13th_Fargo AM
Site Code : 00323251
Start Date : 3/23/2023



Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	**1**	**1**	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0
% App. Total	0	0	0		0	0	100		0	0	0		0	0	0	
PHF	.000	.000	.000	.000	.000	.000	.250	.250	.000	.000	.000	.000	.000	.000	.000	.000

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

County of Kings
N/S: 13th Avenue
E/W: Fargo Avenue
Weather: Clear

File Name : 02_CKS_13th_Fargo PM
Site Code : 00323251
Start Date : 3/23/2023
Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

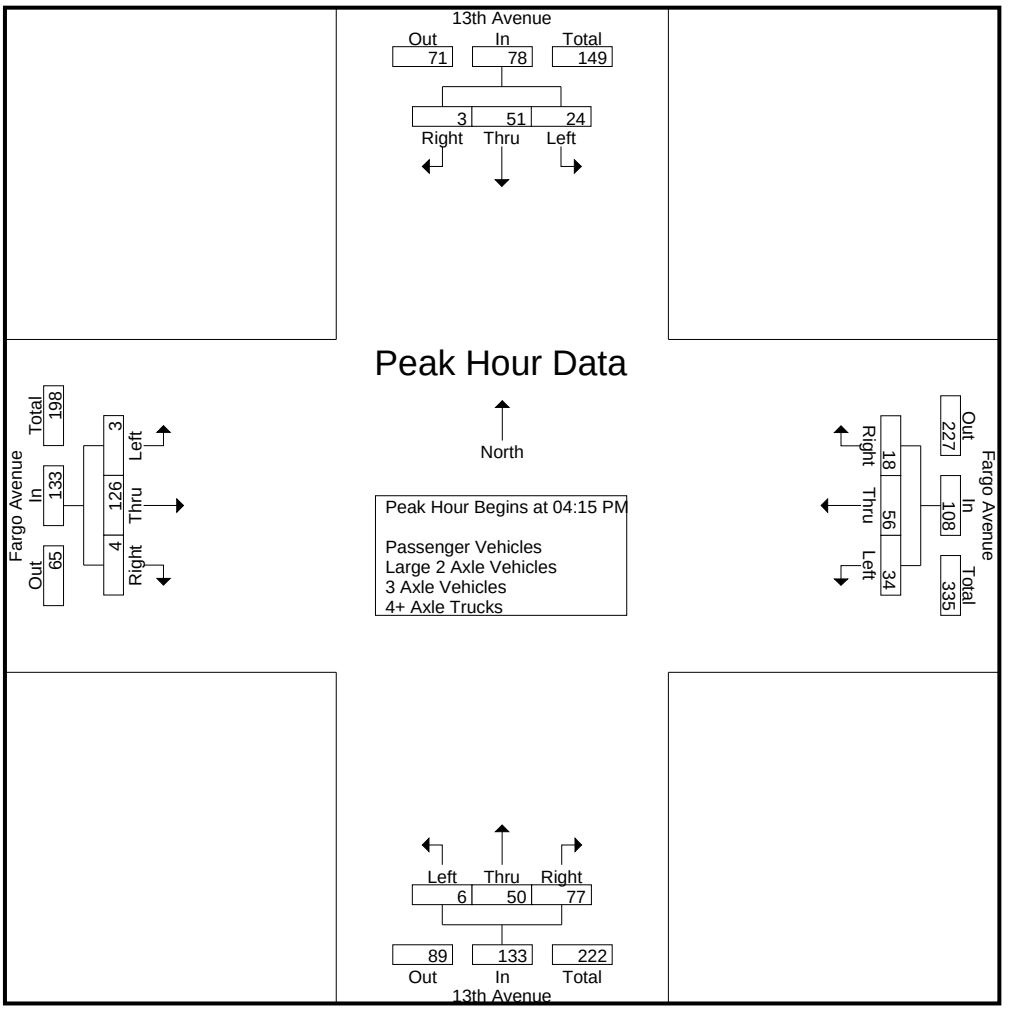
	13th Avenue Southbound				Fargo Avenue Westbound				13th Avenue Northbound				Fargo Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	4	11	0	15	11	15	4	30	1	21	15	37	0	19	1	20	102
04:15 PM	9	19	2	30	7	20	6	33	0	12	18	30	0	34	0	34	127
04:30 PM	5	10	1	16	9	2	4	15	1	11	17	29	0	28	1	29	89
04:45 PM	7	13	0	20	10	11	1	22	3	13	27	43	3	36	1	40	125
Total	25	53	3	81	37	48	15	100	5	57	77	139	3	117	3	123	443
05:00 PM	3	9	0	12	8	23	7	38	2	14	15	31	0	28	2	30	111
05:15 PM	5	15	1	21	16	11	1	28	0	15	20	35	0	27	1	28	112
05:30 PM	4	15	1	20	8	21	0	29	1	9	16	26	0	16	1	17	92
05:45 PM	7	8	0	15	5	20	1	26	1	10	13	24	0	18	1	19	84
Total	19	47	2	68	37	75	9	121	4	48	64	116	0	89	5	94	399
Grand Total	44	100	5	149	74	123	24	221	9	105	141	255	3	206	8	217	842
Apprch %	29.5	67.1	3.4		33.5	55.7	10.9		3.5	41.2	55.3		1.4	94.9	3.7		
Total %	5.2	11.9	0.6	17.7	8.8	14.6	2.9	26.2	1.1	12.5	16.7	30.3	0.4	24.5	1	25.8	
Passenger Vehicles	44	100	5	149	74	123	24	221	8	105	141	254	3	206	8	217	841
% Passenger Vehicles	100	100	100	100	100	100	100	100	88.9	100	100	99.6	100	100	100	100	99.9
Large 2 Axle Vehicles	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	1
% Large 2 Axle Vehicles	0	0	0	0	0	0	0	0	11.1	0	0	0.4	0	0	0	0	0.1
3 Axle Vehicles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% 3 Axle Vehicles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4+ Axle Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% 4+ Axle Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

	13th Avenue Southbound				Fargo Avenue Westbound				13th Avenue Northbound				Fargo Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:15 PM																	
04:15 PM	**9**	**19**	**2**	**30**	7	20	6	33	0	12	18	30	0	34	0	34	**127**
04:30 PM	5	10	1	16	9	2	4	15	1	11	17	29	0	28	1	29	89
04:45 PM	7	13	0	20	**10**	11	1	22	**3**	13	**27**	**43**	**3**	**36**	1	**40**	125
05:00 PM	3	9	0	12	8	**23**	**7**	**38**	2	**14**	15	31	0	28	**2**	30	111
Total Volume	24	51	3	78	34	56	18	108	6	50	77	133	3	126	4	133	452
% App. Total	30.8	65.4	3.8		31.5	51.9	16.7		4.5	37.6	57.9		2.3	94.7	3		
PHF	.667	.671	.375	.650	.850	.609	.643	.711	.500	.893	.713	.773	.250	.875	.500	.831	.890

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

County of Kings
N/S: 13th Avenue
E/W: Fargo Avenue
Weather: Clear

File Name : 02_CKS_13th_Fargo PM
Site Code : 00323251
Start Date : 3/23/2023



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:00 PM				05:00 PM				04:00 PM				04:15 PM			
+0 mins.	4	11	0	15	8	**23**	**7**	**38**	1	**21**	15	37	0	34	0	34
+15 mins.	**9**	**19**	**2**	**30**	**16**	11	1	28	0	12	18	30	0	28	1	29
+30 mins.	5	10	1	16	8	21	0	29	1	11	17	29	**3**	**36**	1	**40**
+45 mins.	7	13	0	20	5	20	1	26	**3**	13	**27**	**43**	0	28	**2**	30
Total Volume	25	53	3	81	37	75	9	121	5	57	77	139	3	126	4	133
% App. Total	30.9	65.4	3.7		30.6	62	7.4		3.6	41	55.4		2.3	94.7	3	
PHF	.694	.697	.375	.675	.578	.815	.321	.796	.417	.679	.713	.808	.250	.875	.500	.831

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

County of Kings
N/S: 13th Avenue
E/W: Fargo Avenue
Weather: Clear

File Name : 02_CKS_13th_Fargo PM
Site Code : 00323251
Start Date : 3/23/2023
Page No : 1

Groups Printed- Passenger Vehicles

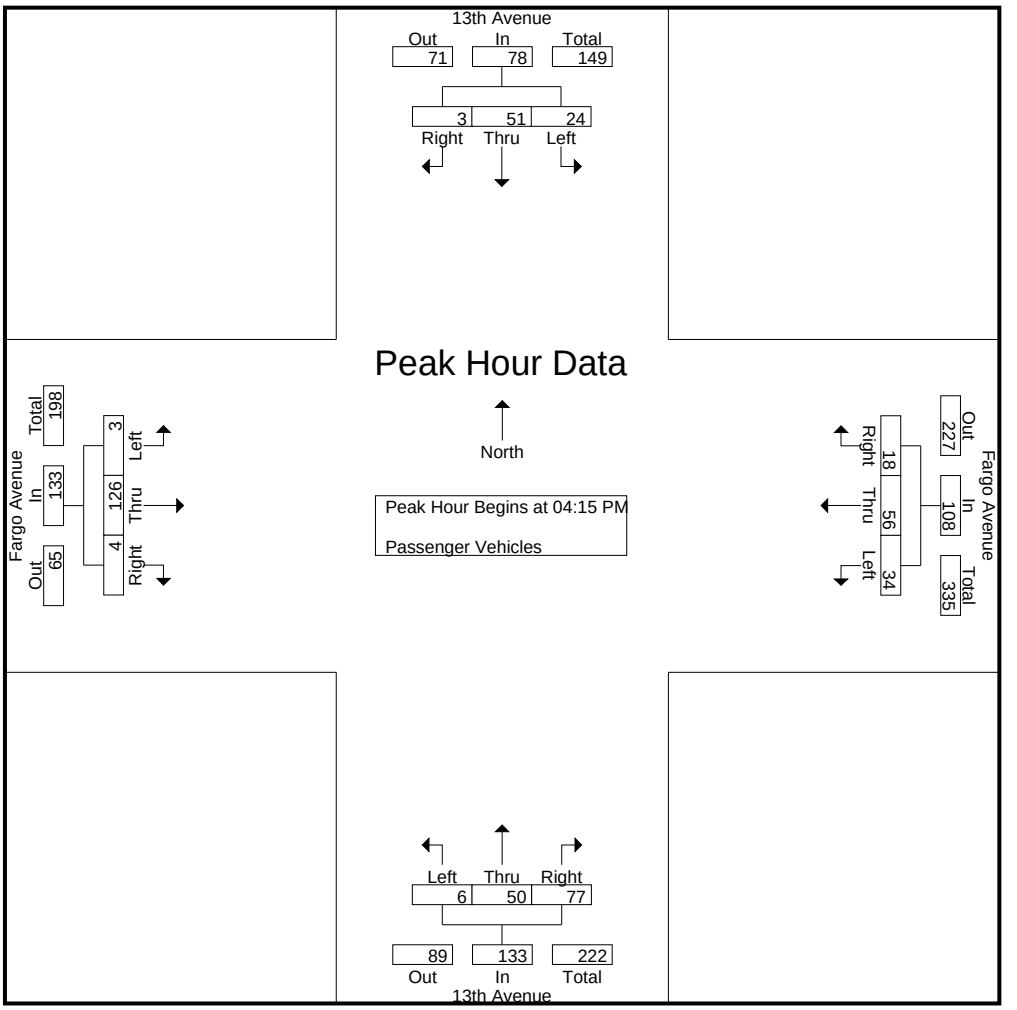
	13th Avenue Southbound				Fargo Avenue Westbound				13th Avenue Northbound				Fargo Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	4	11	0	15	11	15	4	30	0	21	15	36	0	19	1	20	101
04:15 PM	9	19	2	30	7	20	6	33	0	12	18	30	0	34	0	34	127
04:30 PM	5	10	1	16	9	2	4	15	1	11	17	29	0	28	1	29	89
04:45 PM	7	13	0	20	10	11	1	22	3	13	27	43	3	36	1	40	125
Total	25	53	3	81	37	48	15	100	4	57	77	138	3	117	3	123	442
05:00 PM	3	9	0	12	8	23	7	38	2	14	15	31	0	28	2	30	111
05:15 PM	5	15	1	21	16	11	1	28	0	15	20	35	0	27	1	28	112
05:30 PM	4	15	1	20	8	21	0	29	1	9	16	26	0	16	1	17	92
05:45 PM	7	8	0	15	5	20	1	26	1	10	13	24	0	18	1	19	84
Total	19	47	2	68	37	75	9	121	4	48	64	116	0	89	5	94	399
Grand Total	44	100	5	149	74	123	24	221	8	105	141	254	3	206	8	217	841
Apprch %	29.5	67.1	3.4		33.5	55.7	10.9		3.1	41.3	55.5		1.4	94.9	3.7		
Total %	5.2	11.9	0.6	17.7	8.8	14.6	2.9	26.3	1	12.5	16.8	30.2	0.4	24.5	1	25.8	

	13th Avenue Southbound				Fargo Avenue Westbound				13th Avenue Northbound				Fargo Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:15 PM																	
04:15 PM	**9**	**19**	**2**	**30**	7	20	6	33	0	12	18	30	0	34	0	34	**127**
04:30 PM	5	10	1	16	9	2	4	15	1	11	17	29	0	28	1	29	89
04:45 PM	7	13	0	20	**10**	11	1	22	**3**	13	**27**	**43**	**3**	**36**	1	**40**	125
05:00 PM	3	9	0	12	8	**23**	**7**	**38**	2	**14**	15	31	0	28	**2**	30	111
Total Volume	24	51	3	78	34	56	18	108	6	50	77	133	3	126	4	133	452
% App. Total	30.8	65.4	3.8		31.5	51.9	16.7		4.5	37.6	57.9		2.3	94.7	3		
PHF	.667	.671	.375	.650	.850	.609	.643	.711	.500	.893	.713	.773	.250	.875	.500	.831	.890

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

County of Kings
N/S: 13th Avenue
E/W: Fargo Avenue
Weather: Clear

File Name : 02_CKS_13th_Fargo PM
Site Code : 00323251
Start Date : 3/23/2023



Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:15 PM				04:15 PM				04:15 PM				04:15 PM			
+0 mins.	**9**	**19**	**2**	**30**	7	20	6	33	0	12	18	30	0	34	0	34
+15 mins.	5	10	1	16	9	2	4	15	1	11	17	29	0	28	1	29
+30 mins.	7	13	0	20	**10**	11	1	22	**3**	13	**27**	**43**	**3**	**36**	1	**40**
+45 mins.	3	9	0	12	8	**23**	**7**	**38**	2	**14**	15	31	0	28	**2**	30
Total Volume	24	51	3	78	34	56	18	108	6	50	77	133	3	126	4	133
% App. Total	30.8	65.4	3.8		31.5	51.9	16.7		4.5	37.6	57.9		2.3	94.7	3	
PHF	.667	.671	.375	.650	.850	.609	.643	.711	.500	.893	.713	.773	.250	.875	.500	.831

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

County of Kings
N/S: 13th Avenue
E/W: Fargo Avenue
Weather: Clear

File Name : 02_CKS_13th_Fargo PM
Site Code : 00323251
Start Date : 3/23/2023
Page No : 1

Groups Printed- Large 2 Axle Vehicles

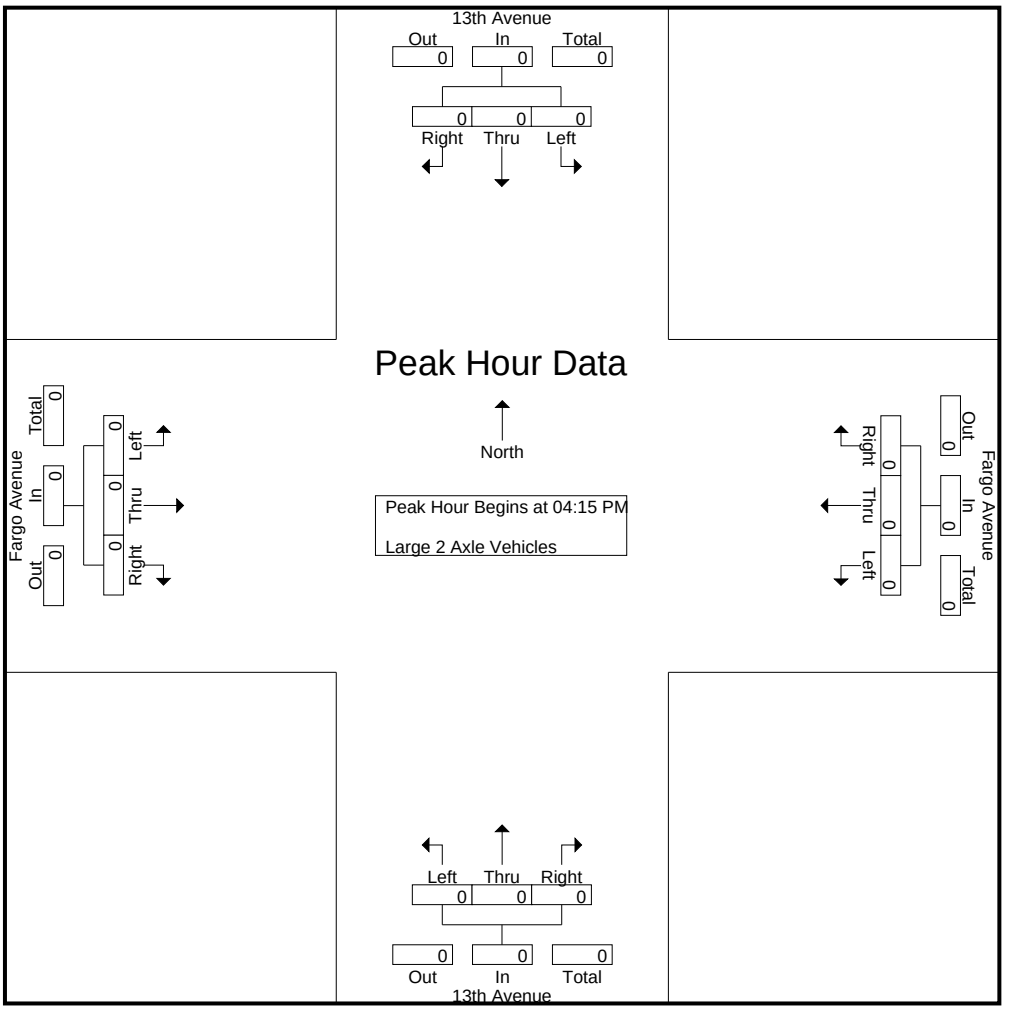
	13th Avenue Southbound				Fargo Avenue Westbound				13th Avenue Northbound				Fargo Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	1
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	1
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	1
Apprch %	0	0	0		0	0	0		100	0	0		0	0	0		
Total %	0	0	0	0	0	0	0	0	100	0	0	100	0	0	0	0	

	13th Avenue Southbound				Fargo Avenue Westbound				13th Avenue Northbound				Fargo Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:15 PM																	
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0		0	0	0		0	0	0		0	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

County of Kings
N/S: 13th Avenue
E/W: Fargo Avenue
Weather: Clear

File Name : 02_CKS_13th_Fargo PM
Site Code : 00323251
Start Date : 3/23/2023



Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:15 PM				04:15 PM				04:15 PM				04:15 PM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0		0	0	0		0	0	0		0	0	0	
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

County of Kings
N/S: 13th Avenue
E/W: Fargo Avenue
Weather: Clear

File Name : 02_CKS_13th_Fargo PM
Site Code : 00323251
Start Date : 3/23/2023
Page No : 1

Groups Printed- 3 Axle Vehicles

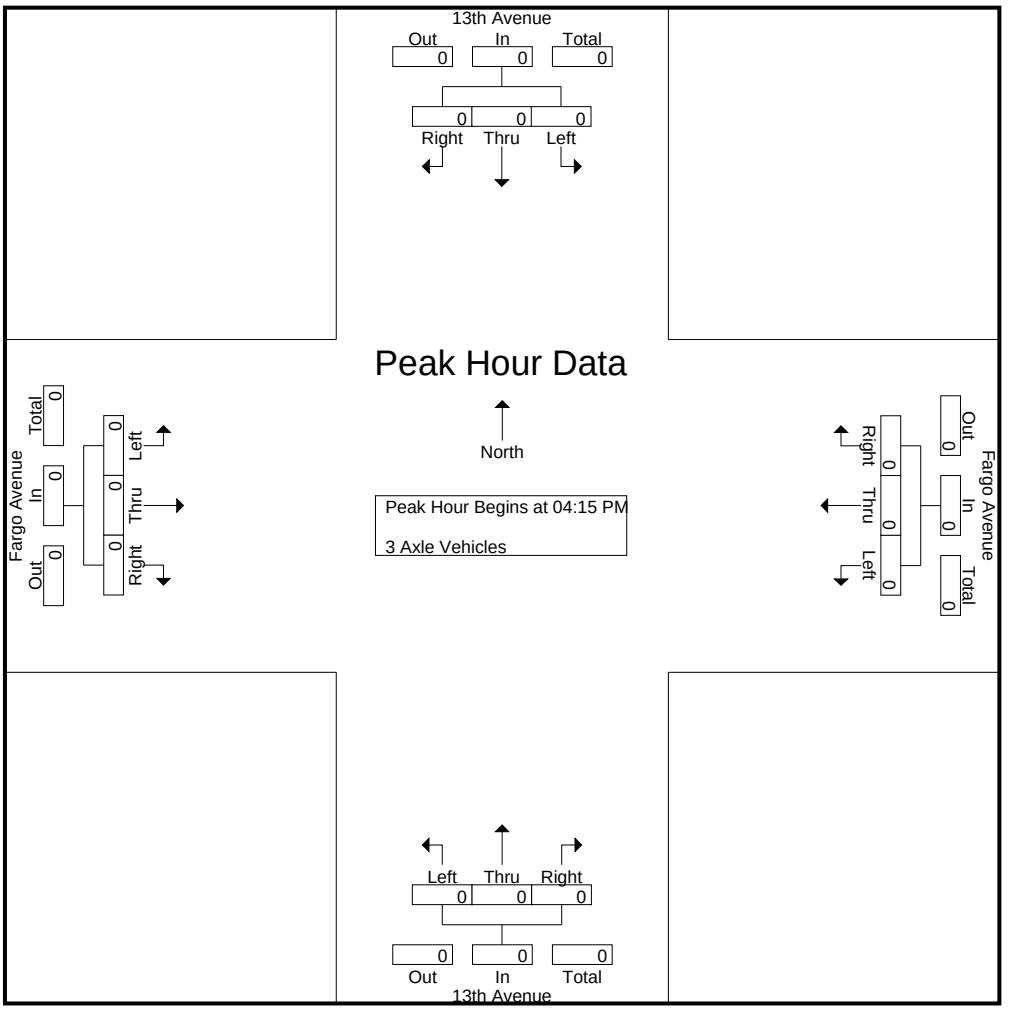
	13th Avenue Southbound				Fargo Avenue Westbound				13th Avenue Northbound				Fargo Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Apprch %	0	0	0		0	0	0		0	0	0		0	0	0		
Total %																	

	13th Avenue Southbound				Fargo Avenue Westbound				13th Avenue Northbound				Fargo Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:15 PM																	
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0		0	0	0		0	0	0		0	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

County of Kings
N/S: 13th Avenue
E/W: Fargo Avenue
Weather: Clear

File Name : 02_CKS_13th_Fargo PM
Site Code : 00323251
Start Date : 3/23/2023



Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:15 PM				04:15 PM				04:15 PM				04:15 PM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0		0	0	0		0	0	0		0	0	0	
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

County of Kings
N/S: 13th Avenue
E/W: Fargo Avenue
Weather: Clear

File Name : 02_CKS_13th_Fargo PM
Site Code : 00323251
Start Date : 3/23/2023
Page No : 1

Groups Printed- 4+ Axle Trucks

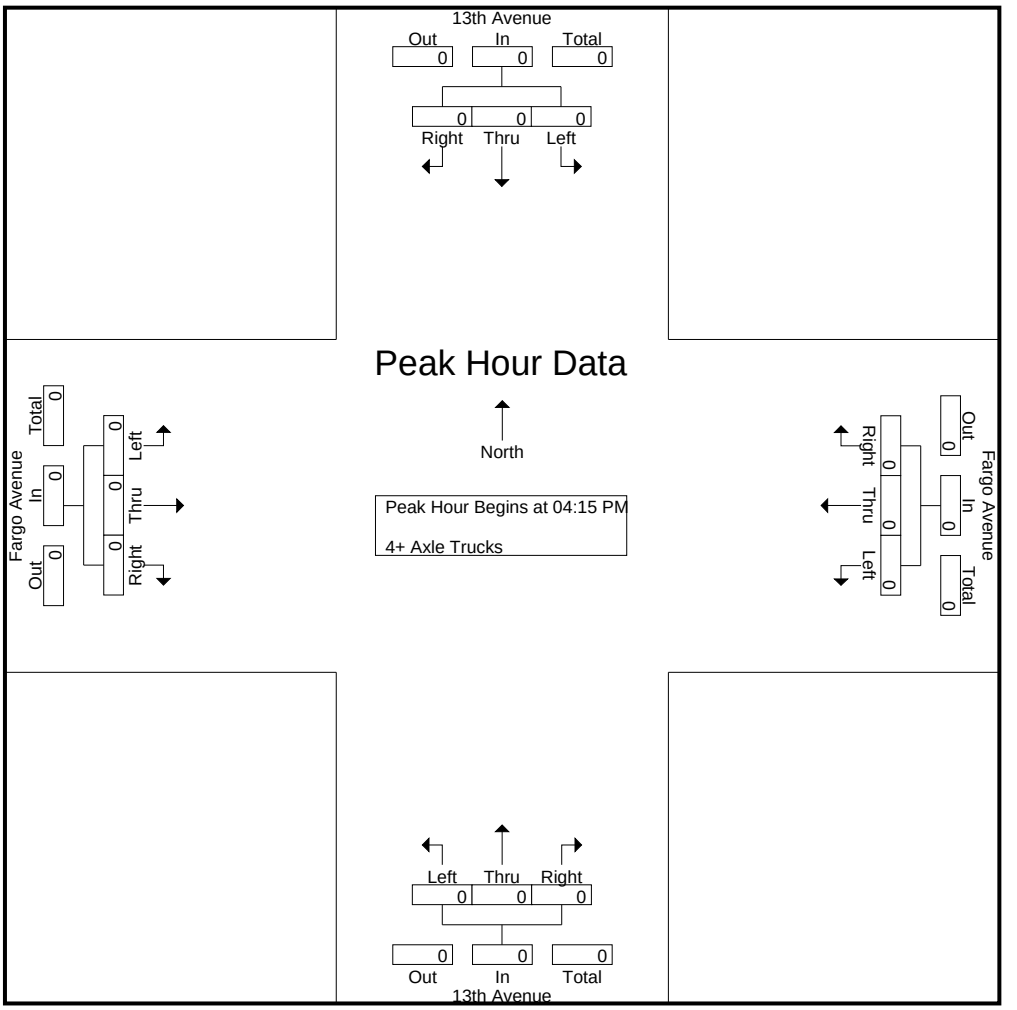
	13th Avenue Southbound				Fargo Avenue Westbound				13th Avenue Northbound				Fargo Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Apprch %	0	0	0		0	0	0		0	0	0		0	0	0		
Total %																	

	13th Avenue Southbound				Fargo Avenue Westbound				13th Avenue Northbound				Fargo Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:15 PM																	
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0		0	0	0		0	0	0		0	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

County of Kings
N/S: 13th Avenue
E/W: Fargo Avenue
Weather: Clear

File Name : 02_CKS_13th_Fargo PM
Site Code : 00323251
Start Date : 3/23/2023



Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:15 PM				04:15 PM				04:15 PM				04:15 PM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0		0	0	0		0	0	0		0	0	0	
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 12th Avenue
E/W: Flint Avenue
Weather: Clear

File Name : 01_HFD_12th_Flint AM
Site Code : 00322472
Start Date : 5/17/2022
Page No : 1

Groups Printed- Total Volume

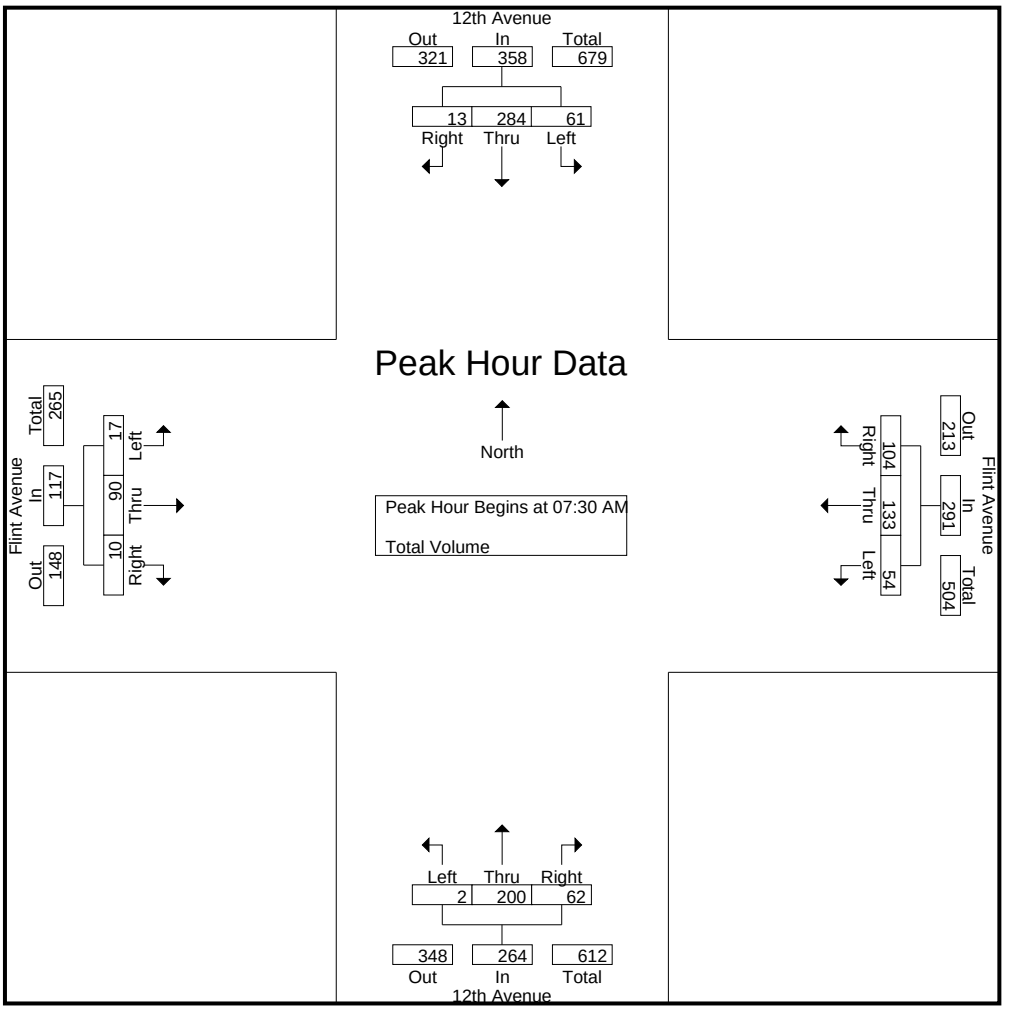
	12th Avenue Southbound				Flint Avenue Westbound				12th Avenue Northbound				Flint Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	6	22	1	29	2	10	9	21	1	29	6	36	2	7	1	10	96
07:15 AM	6	39	2	47	6	16	7	29	3	37	4	44	1	10	1	12	132
07:30 AM	9	66	2	77	7	32	25	64	0	73	8	81	2	15	5	22	244
07:45 AM	25	94	7	126	7	48	46	101	2	71	26	99	10	29	1	40	366
Total	46	221	12	279	22	106	87	215	6	210	44	260	15	61	8	84	838
08:00 AM	21	82	2	105	18	34	22	74	0	32	22	54	3	37	1	41	274
08:15 AM	6	42	2	50	22	19	11	52	0	24	6	30	2	9	3	14	146
08:30 AM	6	49	0	55	6	3	3	12	0	27	4	31	1	14	0	15	113
08:45 AM	3	32	1	36	9	4	9	22	0	17	3	20	0	8	1	9	87
Total	36	205	5	246	55	60	45	160	0	100	35	135	6	68	5	79	620
Grand Total	82	426	17	525	77	166	132	375	6	310	79	395	21	129	13	163	1458
Apprch %	15.6	81.1	3.2		20.5	44.3	35.2		1.5	78.5	20		12.9	79.1	8		
Total %	5.6	29.2	1.2	36	5.3	11.4	9.1	25.7	0.4	21.3	5.4	27.1	1.4	8.8	0.9	11.2	

	12th Avenue Southbound				Flint Avenue Westbound				12th Avenue Northbound				Flint Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	9	66	2	77	7	32	25	64	0	**73**	8	81	2	15	**5**	22	244
07:45 AM	**25**	**94**	**7**	**126**	7	**48**	**46**	**101**	**2**	71	**26**	**99**	**10**	29	1	40	**366**
08:00 AM	21	82	2	105	18	34	22	74	0	32	22	54	3	**37**	1	**41**	274
08:15 AM	6	42	2	50	**22**	19	11	52	0	24	6	30	2	9	3	14	146
Total Volume	61	284	13	358	54	133	104	291	2	200	62	264	17	90	10	117	1030
% App. Total	17	79.3	3.6		18.6	45.7	35.7		0.8	75.8	23.5		14.5	76.9	8.5		
PHF	.610	.755	.464	.710	.614	.693	.565	.720	.250	.685	.596	.667	.425	.608	.500	.713	.704

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 12th Avenue
E/W: Flint Avenue
Weather: Clear

File Name : 01_HFD_12th_Flint AM
Site Code : 00322472
Start Date : 5/17/2022
Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:15 AM				07:30 AM			
+0 mins.	9	66	2	77	7	32	25	64	**3**	37	4	44	2	15	**5**	22
+15 mins.	**25**	**94**	**7**	**126**	7	**48**	**46**	**101**	0	**73**	8	81	**10**	29	1	40
+30 mins.	21	82	2	105	18	34	22	74	2	71	**26**	**99**	3	**37**	1	**41**
+45 mins.	6	42	2	50	**22**	19	11	52	0	32	22	54	2	9	3	14
Total Volume	61	284	13	358	54	133	104	291	5	213	60	278	17	90	10	117
% App. Total	17	79.3	3.6		18.6	45.7	35.7		1.8	76.6	21.6		14.5	76.9	8.5	
PHF	.610	.755	.464	.710	.614	.693	.565	.720	.417	.729	.577	.702	.425	.608	.500	.713

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 12th Avenue
E/W: Flint Avenue
Weather: Clear

File Name : 01_HFD_12th_Flint PM
Site Code : 00322472
Start Date : 5/17/2022
Page No : 1

Groups Printed- Total Volume

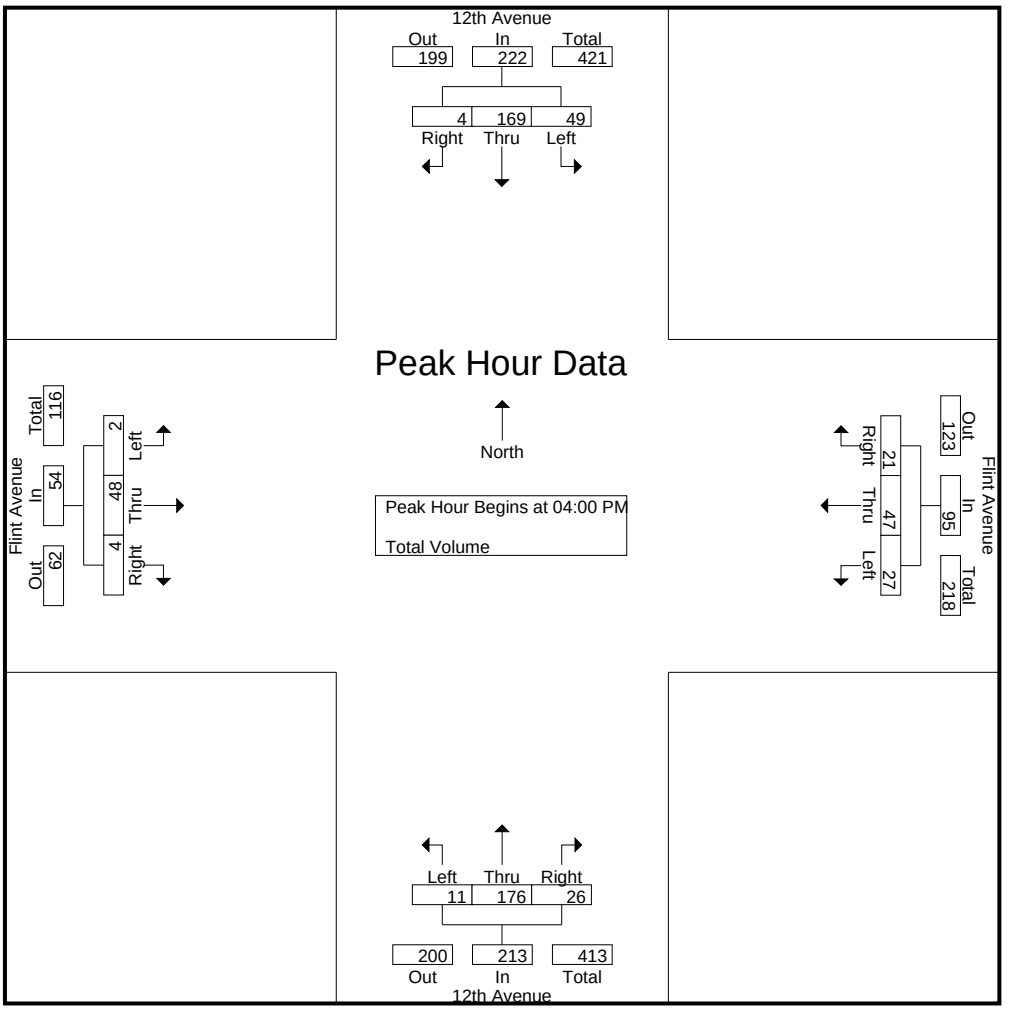
	12th Avenue Southbound				Flint Avenue Westbound				12th Avenue Northbound				Flint Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	17	47	1	65	3	15	4	22	3	44	4	51	2	11	2	15	153
04:15 PM	6	46	0	52	8	12	7	27	0	43	7	50	0	16	0	16	145
04:30 PM	15	44	2	61	4	7	7	18	3	41	10	54	0	14	1	15	148
04:45 PM	11	32	1	44	12	13	3	28	5	48	5	58	0	7	1	8	138
Total	49	169	4	222	27	47	21	95	11	176	26	213	2	48	4	54	584
05:00 PM	9	40	1	50	4	5	3	12	4	61	7	72	0	11	0	11	145
05:15 PM	9	37	2	48	9	7	8	24	4	38	11	53	0	12	1	13	138
05:30 PM	4	53	1	58	7	12	3	22	1	46	11	58	1	14	2	17	155
05:45 PM	6	45	0	51	11	6	6	23	1	34	15	50	1	13	2	16	140
Total	28	175	4	207	31	30	20	81	10	179	44	233	2	50	5	57	578
Grand Total	77	344	8	429	58	77	41	176	21	355	70	446	4	98	9	111	1162
Apprch %	17.9	80.2	1.9		33	43.8	23.3		4.7	79.6	15.7		3.6	88.3	8.1		
Total %	6.6	29.6	0.7	36.9	5	6.6	3.5	15.1	1.8	30.6	6	38.4	0.3	8.4	0.8	9.6	

	12th Avenue Southbound				Flint Avenue Westbound				12th Avenue Northbound				Flint Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	**17**	**47**	1	**65**	3	**15**	4	22	3	44	4	51	**2**	11	**2**	15	**153**
04:15 PM	6	46	0	52	8	12	**7**	27	0	43	7	50	0	**16**	0	**16**	145
04:30 PM	15	44	**2**	61	4	7	7	18	3	41	**10**	54	0	14	1	15	148
04:45 PM	11	32	1	44	**12**	13	3	**28**	**5**	**48**	5	**58**	0	7	1	8	138
Total Volume	49	169	4	222	27	47	21	95	11	176	26	213	2	48	4	54	584
% App. Total	22.1	76.1	1.8		28.4	49.5	22.1		5.2	82.6	12.2		3.7	88.9	7.4		
PHF	.721	.899	.500	.854	.563	.783	.750	.848	.550	.917	.650	.918	.250	.750	.500	.844	.954

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 12th Avenue
E/W: Flint Avenue
Weather: Clear

File Name : 01_HFD_12th_Flint PM
Site Code : 00322472
Start Date : 5/17/2022
Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:00 PM				04:00 PM				04:45 PM				05:00 PM			
+0 mins.	**17**	**47**	1	**65**	3	**15**	4	22	**5**	48	5	58	0	11	0	11
+15 mins.	6	46	0	52	8	12	**7**	27	4	**61**	7	**72**	0	12	1	13
+30 mins.	15	44	**2**	61	4	7	7	18	4	38	**11**	53	**1**	**14**	**2**	**17**
+45 mins.	11	32	1	44	**12**	13	3	**28**	1	46	11	58	1	13	2	16
Total Volume	49	169	4	222	27	47	21	95	14	193	34	241	2	50	5	57
% App. Total	22.1	76.1	1.8		28.4	49.5	22.1		5.8	80.1	14.1		3.5	87.7	8.8	
PHF	.721	.899	.500	.854	.563	.783	.750	.848	.700	.791	.773	.837	.500	.893	.625	.838

Location: Hanford
N/S: 12th Avenue
E/W: Flint Avenue

Date: 5/17/2022
Day: Tuesday

PEDESTRIANS

	North Leg 12th Avenue Pedestrians	East Leg Flint Avenue Pedestrians	South Leg 12th Avenue Pedestrians	West Leg Flint Avenue Pedestrians	
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0

	North Leg 12th Avenue Pedestrians	East Leg Flint Avenue Pedestrians	South Leg 12th Avenue Pedestrians	West Leg Flint Avenue Pedestrians	
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
951-268-6268

Location: Hanford
N/S: 12th Avenue
E/W: Flint Avenue

Date: 5/17/2022
Day: Tuesday

BICYCLES

	Southbound 12th Avenue			Westbound Flint Avenue			Northbound 12th Avenue			Eastbound Flint Avenue			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	6	0	0	0	0	6
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	0	0	6	0	0	0	0	6

	Southbound 12th Avenue			Westbound Flint Avenue			Northbound 12th Avenue			Eastbound Flint Avenue			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	0	0	0	0	0	0	0	0

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
951-268-6268

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 12th Avenue
E/W: Fargo Avenue
Weather: Clear

File Name : 02_HFD_12th_Fargo AM
Site Code : 00322472
Start Date : 5/17/2022
Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

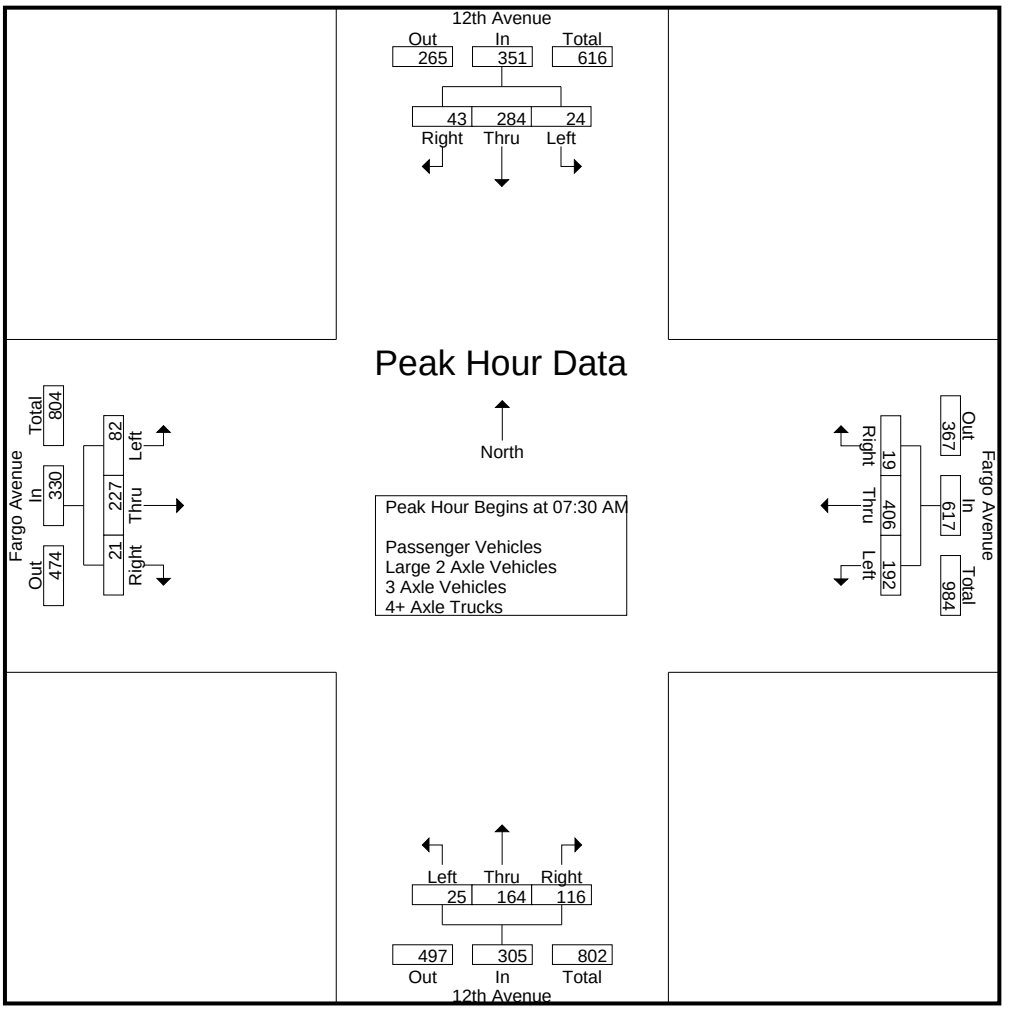
	12th Avenue Southbound				Fargo Avenue Westbound				12th Avenue Northbound				Fargo Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	3	23	1	27	25	48	7	80	3	22	12	37	6	19	3	28	172
07:15 AM	3	33	3	39	32	69	6	107	3	29	13	45	12	32	4	48	239
07:30 AM	4	62	7	73	41	96	8	145	7	57	18	82	26	45	6	77	377
07:45 AM	6	89	10	105	44	124	6	174	11	50	27	88	37	62	10	109	476
Total	16	207	21	244	142	337	27	506	24	158	70	252	81	158	23	262	1264
08:00 AM	6	88	14	108	59	118	3	180	3	32	30	65	16	68	2	86	439
08:15 AM	8	45	12	65	48	68	2	118	4	25	41	70	3	52	3	58	311
08:30 AM	4	51	6	61	36	36	3	75	4	26	36	66	3	27	4	34	236
08:45 AM	2	34	4	40	29	36	1	66	1	15	29	45	3	22	3	28	179
Total	20	218	36	274	172	258	9	439	12	98	136	246	25	169	12	206	1165
Grand Total	36	425	57	518	314	595	36	945	36	256	206	498	106	327	35	468	2429
Apprch %	6.9	82	11		33.2	63	3.8		7.2	51.4	41.4		22.6	69.9	7.5		
Total %	1.5	17.5	2.3	21.3	12.9	24.5	1.5	38.9	1.5	10.5	8.5	20.5	4.4	13.5	1.4	19.3	
Passenger Vehicles	35	413	57	505	309	589	36	934	34	252	204	490	104	319	34	457	2386
% Passenger Vehicles	97.2	97.2	100	97.5	98.4	99	100	98.8	94.4	98.4	99	98.4	98.1	97.6	97.1	97.6	98.2
Large 2 Axle Vehicles	0	6	0	6	3	6	0	9	2	2	2	6	1	7	1	9	30
% Large 2 Axle Vehicles	0	1.4	0	1.2	1	1	0	1	5.6	0.8	1	1.2	0.9	2.1	2.9	1.9	1.2
3 Axle Vehicles	0	2	0	2	0	0	0	0	0	0	0	0	0	1	0	1	3
% 3 Axle Vehicles	0	0.5	0	0.4	0	0	0	0	0	0	0	0	0	0.3	0	0.2	0.1
4+ Axle Trucks	1	4	0	5	2	0	0	2	0	2	0	2	1	0	0	1	10
% 4+ Axle Trucks	2.8	0.9	0	1	0.6	0	0	0.2	0	0.8	0	0.4	0.9	0	0	0.2	0.4

	12th Avenue Southbound				Fargo Avenue Westbound				12th Avenue Northbound				Fargo Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	4	62	7	73	41	96	**8**	145	7	**57**	18	82	26	45	6	77	377
07:45 AM	6	**89**	10	105	44	**124**	6	174	**11**	50	27	**88**	**37**	62	**10**	**109**	**476**
08:00 AM	6	88	**14**	**108**	**59**	118	3	**180**	3	32	30	65	16	**68**	2	86	439
08:15 AM	**8**	45	12	65	48	68	2	118	4	25	**41**	70	3	52	3	58	311
Total Volume	24	284	43	351	192	406	19	617	25	164	116	305	82	227	21	330	1603
% App. Total	6.8	80.9	12.3		31.1	65.8	3.1		8.2	53.8	38		24.8	68.8	6.4		
PHF	.750	.798	.768	.813	.814	.819	.594	.857	.568	.719	.707	.866	.554	.835	.525	.757	.842

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 12th Avenue
E/W: Fargo Avenue
Weather: Clear

File Name : 02_HFD_12th_Fargo AM
Site Code : 00322472
Start Date : 5/17/2022



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	4	62	7	73	41	96	**8**	145	7	**57**	18	82	26	45	6	77
+15 mins.	6	**89**	10	105	44	**124**	6	174	**11**	50	27	**88**	**37**	62	**10**	**109**
+30 mins.	6	88	**14**	**108**	**59**	118	3	**180**	3	32	30	65	16	**68**	2	86
+45 mins.	**8**	45	12	65	48	68	2	118	4	25	**41**	70	3	52	3	58
Total Volume	24	284	43	351	192	406	19	617	25	164	116	305	82	227	21	330
% App. Total	6.8	80.9	12.3		31.1	65.8	3.1		8.2	53.8	38		24.8	68.8	6.4	
PHF	.750	.798	.768	.813	.814	.819	.594	.857	.568	.719	.707	.866	.554	.835	.525	.757

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 12th Avenue
E/W: Fargo Avenue
Weather: Clear

File Name : 02_HFD_12th_Fargo AM
Site Code : 00322472
Start Date : 5/17/2022
Page No : 1

Groups Printed- Passenger Vehicles

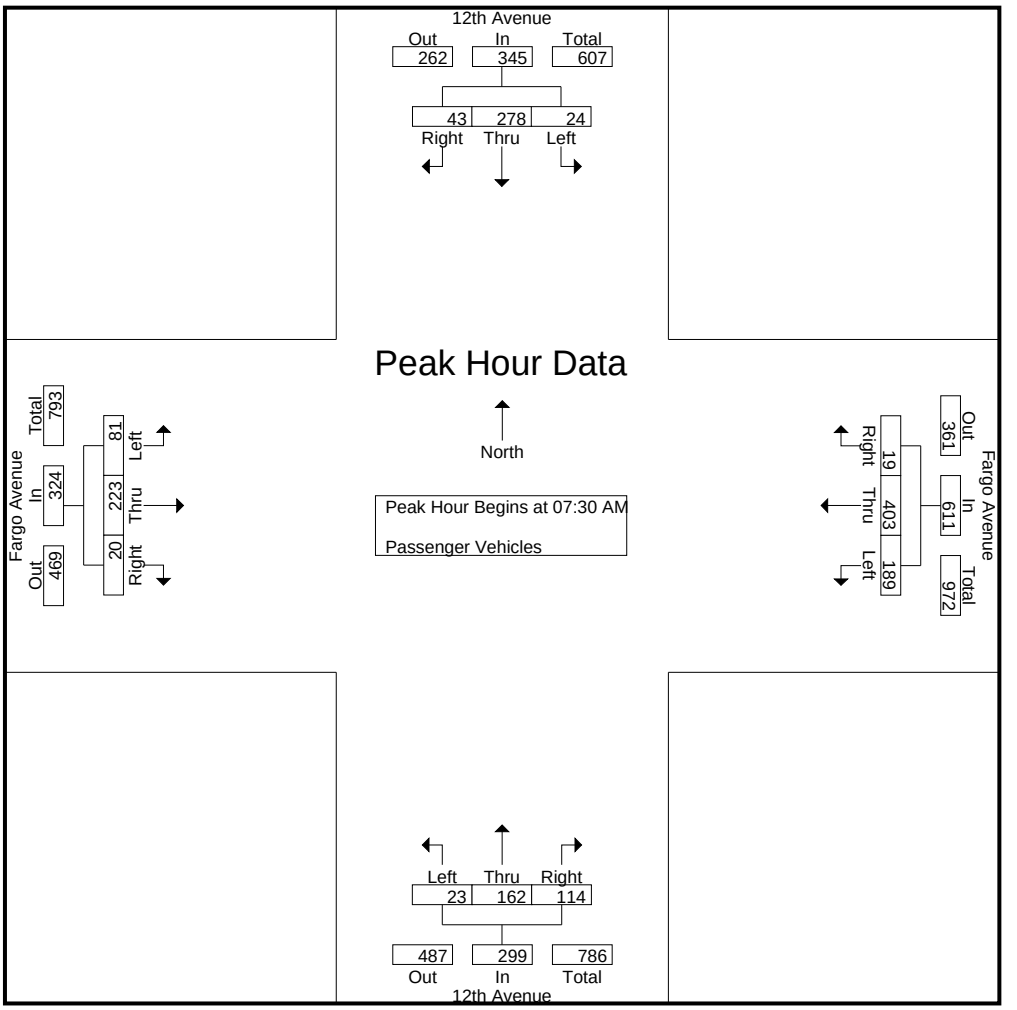
	12th Avenue Southbound				Fargo Avenue Westbound				12th Avenue Northbound				Fargo Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	2	22	1	25	25	47	7	79	3	22	12	37	6	19	3	28	169
07:15 AM	3	31	3	37	31	68	6	105	3	28	13	44	12	29	4	45	231
07:30 AM	4	59	7	70	39	95	8	142	6	57	18	81	26	45	6	77	370
07:45 AM	6	88	10	104	44	123	6	173	10	50	27	87	37	58	9	104	468
Total	15	200	21	236	139	333	27	499	22	157	70	249	81	151	22	254	1238
08:00 AM	6	86	14	106	58	118	3	179	3	32	29	64	15	68	2	85	434
08:15 AM	8	45	12	65	48	67	2	117	4	23	40	67	3	52	3	58	307
08:30 AM	4	50	6	60	36	36	3	75	4	25	36	65	2	26	4	32	232
08:45 AM	2	32	4	38	28	35	1	64	1	15	29	45	3	22	3	28	175
Total	20	213	36	269	170	256	9	435	12	95	134	241	23	168	12	203	1148
Grand Total	35	413	57	505	309	589	36	934	34	252	204	490	104	319	34	457	2386
Apprch %	6.9	81.8	11.3		33.1	63.1	3.9		6.9	51.4	41.6		22.8	69.8	7.4		
Total %	1.5	17.3	2.4	21.2	13	24.7	1.5	39.1	1.4	10.6	8.5	20.5	4.4	13.4	1.4	19.2	

	12th Avenue Southbound				Fargo Avenue Westbound				12th Avenue Northbound				Fargo Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	4	59	7	70	39	95	**8**	142	6	**57**	18	81	26	45	6	77	370
07:45 AM	6	**88**	10	104	44	**123**	6	173	**10**	50	27	**87**	**37**	58	**9**	**104**	**468**
08:00 AM	6	86	**14**	**106**	**58**	118	3	**179**	3	32	29	64	15	**68**	2	85	434
08:15 AM	**8**	45	12	65	48	67	2	117	4	23	**40**	67	3	52	3	58	307
Total Volume	24	278	43	345	189	403	19	611	23	162	114	299	81	223	20	324	1579
% App. Total	7	80.6	12.5		30.9	66	3.1		7.7	54.2	38.1		25	68.8	6.2		
PHF	.750	.790	.768	.814	.815	.819	.594	.853	.575	.711	.713	.859	.547	.820	.556	.779	.843

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 12th Avenue
E/W: Fargo Avenue
Weather: Clear

File Name : 02_HFD_12th_Fargo AM
Site Code : 00322472
Start Date : 5/17/2022



Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	4	59	7	70	39	95	**8**	142	6	**57**	18	81	26	45	6	77
+15 mins.	6	**88**	10	104	44	**123**	6	173	**10**	50	27	**87**	**37**	58	**9**	**104**
+30 mins.	6	86	**14**	**106**	**58**	118	3	**179**	3	32	29	64	15	**68**	2	85
+45 mins.	**8**	45	12	65	48	67	2	117	4	23	**40**	67	3	52	3	58
Total Volume	24	278	43	345	189	403	19	611	23	162	114	299	81	223	20	324
% App. Total	7	80.6	12.5		30.9	66	3.1		7.7	54.2	38.1		25	68.8	6.2	
PHF	.750	.790	.768	.814	.815	.819	.594	.853	.575	.711	.713	.859	.547	.820	.556	.779

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 12th Avenue
E/W: Fargo Avenue
Weather: Clear

File Name : 02_HFD_12th_Fargo AM
Site Code : 00322472
Start Date : 5/17/2022
Page No : 1

Groups Printed- Large 2 Axle Vehicles

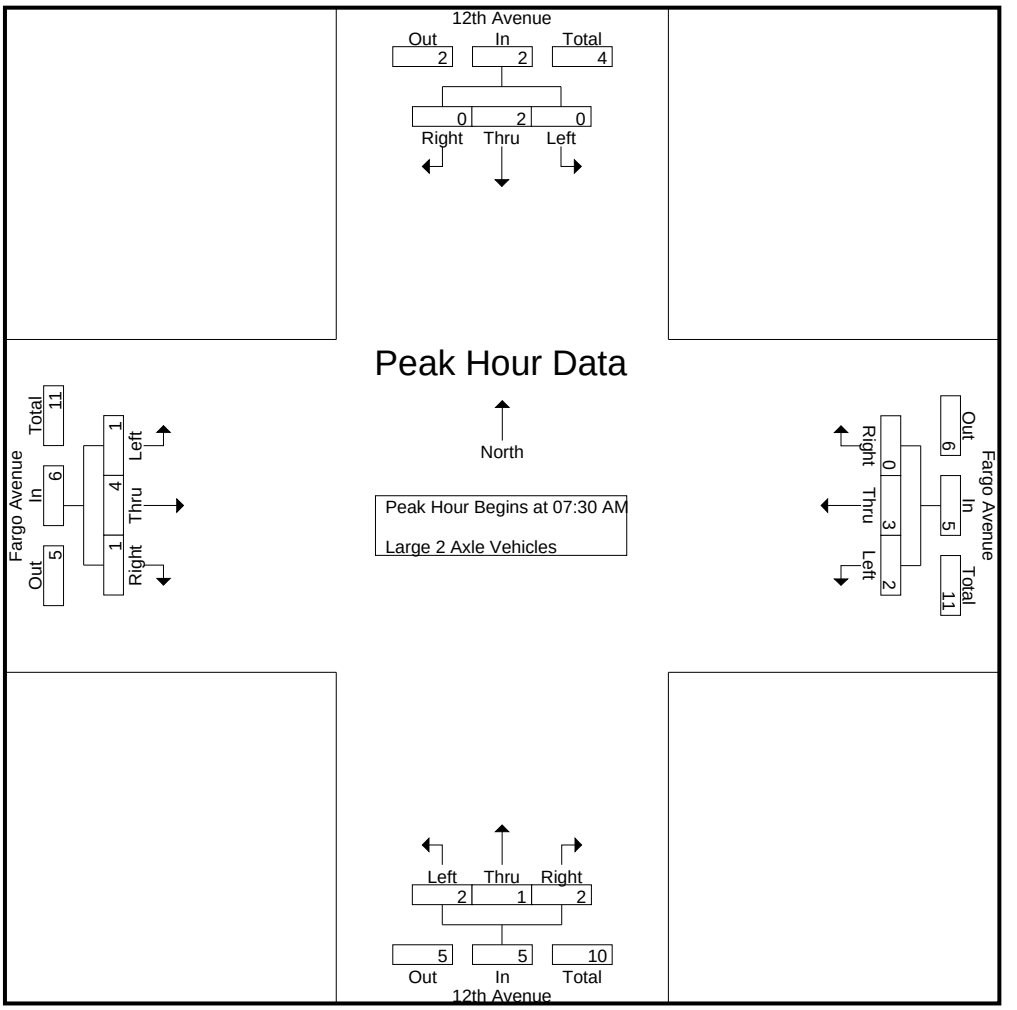
	12th Avenue Southbound				Fargo Avenue Westbound				12th Avenue Northbound				Fargo Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	1	0	1	0	1	0	1	0	0	0	0	0	0	0	0	2
07:15 AM	0	1	0	1	1	1	0	2	0	0	0	0	0	3	0	3	6
07:30 AM	0	1	0	1	2	1	0	3	1	0	0	1	0	0	0	0	5
07:45 AM	0	0	0	0	0	1	0	1	1	0	0	1	0	4	1	5	7
Total	0	3	0	3	3	4	0	7	2	0	0	2	0	7	1	8	20
08:00 AM	0	1	0	1	0	0	0	0	0	0	1	1	1	0	0	1	3
08:15 AM	0	0	0	0	0	1	0	1	0	1	1	2	0	0	0	0	3
08:30 AM	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	2
08:45 AM	0	1	0	1	0	1	0	1	0	0	0	0	0	0	0	0	2
Total	0	3	0	3	0	2	0	2	0	2	2	4	1	0	0	1	10
Grand Total	0	6	0	6	3	6	0	9	2	2	2	6	1	7	1	9	30
Apprch %	0	100	0		33.3	66.7	0		33.3	33.3	33.3		11.1	77.8	11.1		
Total %	0	20	0	20	10	20	0	30	6.7	6.7	6.7	20	3.3	23.3	3.3	30	

	12th Avenue Southbound				Fargo Avenue Westbound				12th Avenue Northbound				Fargo Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	**1**	0	**1**	**2**	**1**	0	**3**	**1**	0	0	1	0	0	0	0	5
07:45 AM	0	0	0	0	0	1	0	1	1	0	0	1	0	**4**	**1**	**5**	**7**
08:00 AM	0	1	0	1	0	0	0	0	0	0	**1**	1	**1**	0	0	1	3
08:15 AM	0	0	0	0	0	1	0	1	0	**1**	1	**2**	0	0	0	0	3
Total Volume	0	2	0	2	2	3	0	5	2	1	2	5	1	4	1	6	18
% App. Total	0	100	0		40	60	0		40	20	40		16.7	66.7	16.7		
PHF	.000	.500	.000	.500	.250	.750	.000	.417	.500	.250	.500	.625	.250	.250	.250	.300	.643

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 12th Avenue
E/W: Fargo Avenue
Weather: Clear

File Name : 02_HFD_12th_Fargo AM
Site Code : 00322472
Start Date : 5/17/2022
Page No : 2



Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	0	**1**	0	**1**	**2**	**1**	0	**3**	**1**	0	0	1	0	0	0	0
+15 mins.	0	0	0	0	0	1	0	1	1	0	0	1	0	**4**	**1**	**5**
+30 mins.	0	1	0	1	0	0	0	0	0	0	**1**	1	**1**	0	0	1
+45 mins.	0	0	0	0	0	1	0	1	0	**1**	1	**2**	0	0	0	0
Total Volume	0	2	0	2	2	3	0	5	2	1	2	5	1	4	1	6
% App. Total	0	100	0		40	60	0		40	20	40		16.7	66.7	16.7	
PHF	.000	.500	.000	.500	.250	.750	.000	.417	.500	.250	.500	.625	.250	.250	.250	.300

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 12th Avenue
E/W: Fargo Avenue
Weather: Clear

File Name : 02_HFD_12th_Fargo AM
Site Code : 00322472
Start Date : 5/17/2022
Page No : 1

Groups Printed- 3 Axle Vehicles

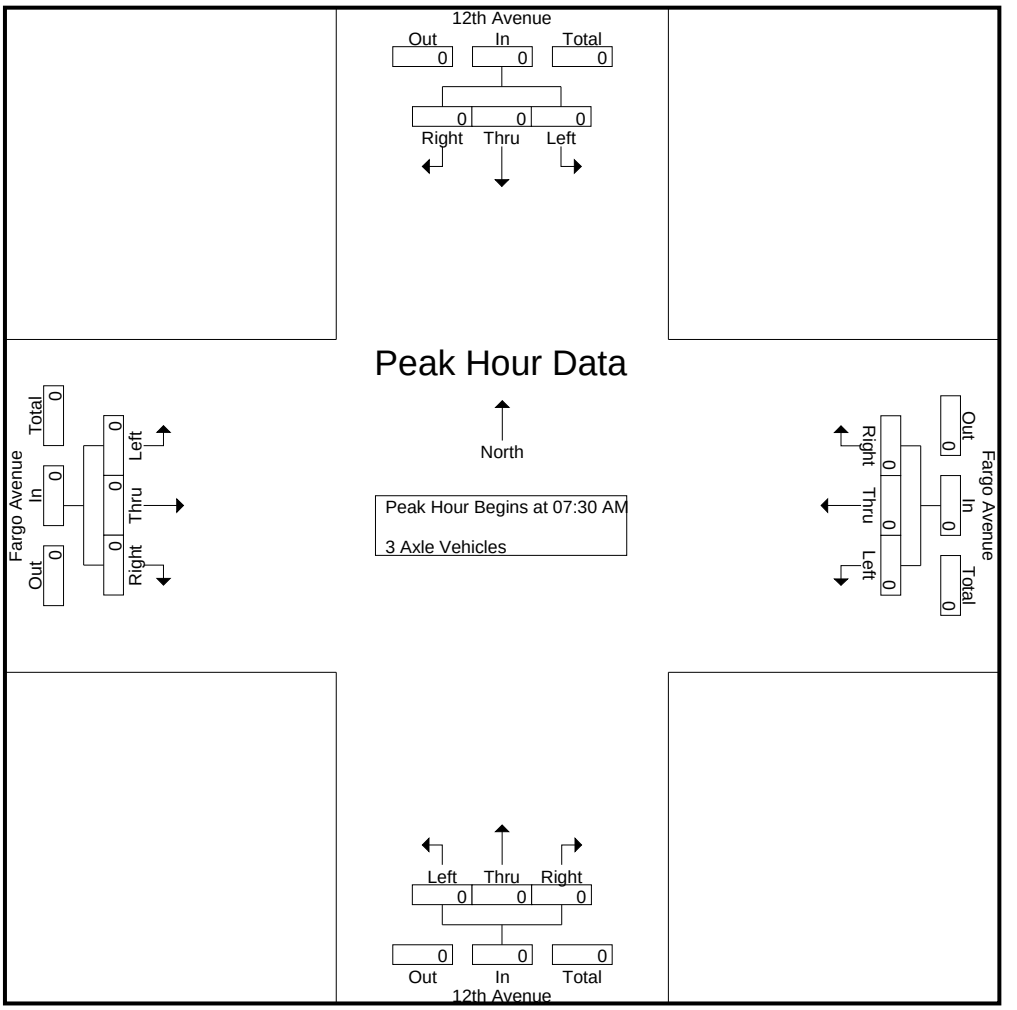
	12th Avenue Southbound				Fargo Avenue Westbound				12th Avenue Northbound				Fargo Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
08:45 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	1	0	1	0	0	0	0	0	0	0	0	0	1	0	1	2
Grand Total	0	2	0	2	0	0	0	0	0	0	0	0	0	1	0	1	3
Apprch %	0	100	0		0	0	0		0	0	0		0	100	0		
Total %	0	66.7	0	66.7	0	0	0	0	0	0	0	0	0	33.3	0	33.3	

	12th Avenue Southbound				Fargo Avenue Westbound				12th Avenue Northbound				Fargo Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0		0	0	0		0	0	0		0	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 12th Avenue
E/W: Fargo Avenue
Weather: Clear

File Name : 02_HFD_12th_Fargo AM
Site Code : 00322472
Start Date : 5/17/2022



Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0		0	0	0		0	0	0		0	0	0	
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 12th Avenue
E/W: Fargo Avenue
Weather: Clear

File Name : 02_HFD_12th_Fargo AM
Site Code : 00322472
Start Date : 5/17/2022
Page No : 1

Groups Printed- 4+ Axle Trucks

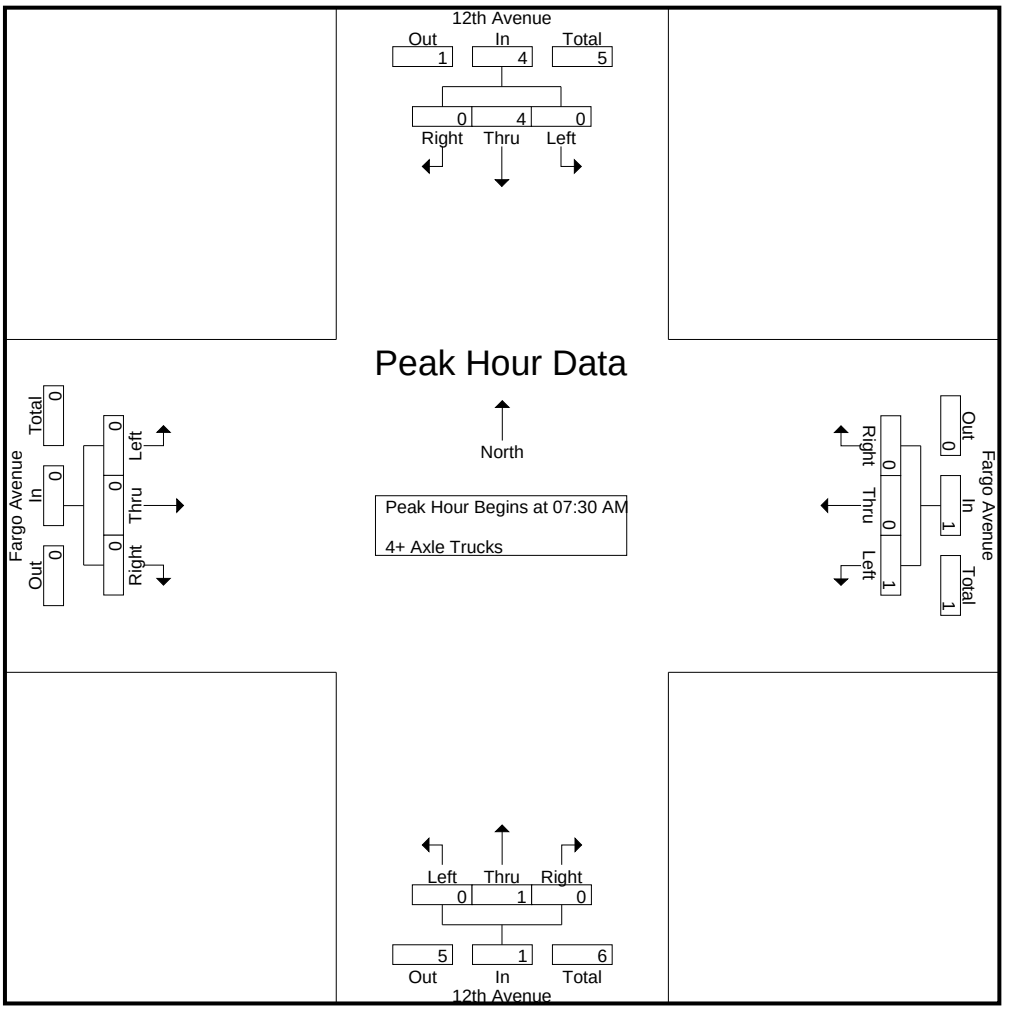
	12th Avenue Southbound				Fargo Avenue Westbound				12th Avenue Northbound				Fargo Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
07:15 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
07:30 AM	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
07:45 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	1	3	0	4	0	0	0	0	0	1	0	1	0	0	0	0	5
08:00 AM	0	1	0	1	1	0	0	1	0	0	0	0	0	0	0	0	2
08:15 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
08:45 AM	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1
Total	0	1	0	1	2	0	0	2	0	1	0	1	1	0	0	1	5
Grand Total	1	4	0	5	2	0	0	2	0	2	0	2	1	0	0	1	10
Apprch %	20	80	0		100	0	0		0	100	0		100	0	0		
Total %	10	40	0	50	20	0	0	20	0	20	0	20	10	0	0	10	

	12th Avenue Southbound				Fargo Avenue Westbound				12th Avenue Northbound				Fargo Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	**2**	0	**2**	0	0	0	0	0	0	0	0	0	0	0	0	**2**
07:45 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
08:00 AM	0	1	0	1	**1**	0	0	**1**	0	0	0	0	0	0	0	0	2
08:15 AM	0	0	0	0	0	0	0	0	0	**1**	0	**1**	0	0	0	0	1
Total Volume	0	4	0	4	1	0	0	1	0	1	0	1	0	0	0	0	6
% App. Total	0	100	0		100	0	0		0	100	0		0	0	0		
PHF	.000	.500	.000	.500	.250	.000	.000	.250	.000	.250	.000	.250	.000	.000	.000	.000	.750

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 12th Avenue
E/W: Fargo Avenue
Weather: Clear

File Name : 02_HFD_12th_Fargo AM
Site Code : 00322472
Start Date : 5/17/2022
Page No : 2



Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	0	**2**	0	**2**	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	1	0	1	**1**	0	0	**1**	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	**1**	0	**1**	0	0	0	0
Total Volume	0	4	0	4	1	0	0	1	0	1	0	1	0	0	0	0
% App. Total	0	100	0		100	0	0		0	100	0		0	0	0	
PHF	.000	.500	.000	.500	.250	.000	.000	.250	.000	.250	.000	.250	.000	.000	.000	.000

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 12th Avenue
E/W: Fargo Avenue
Weather: Clear

File Name : 02_HFD_12th_Fargo PM
Site Code : 00322472
Start Date : 5/17/2022
Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

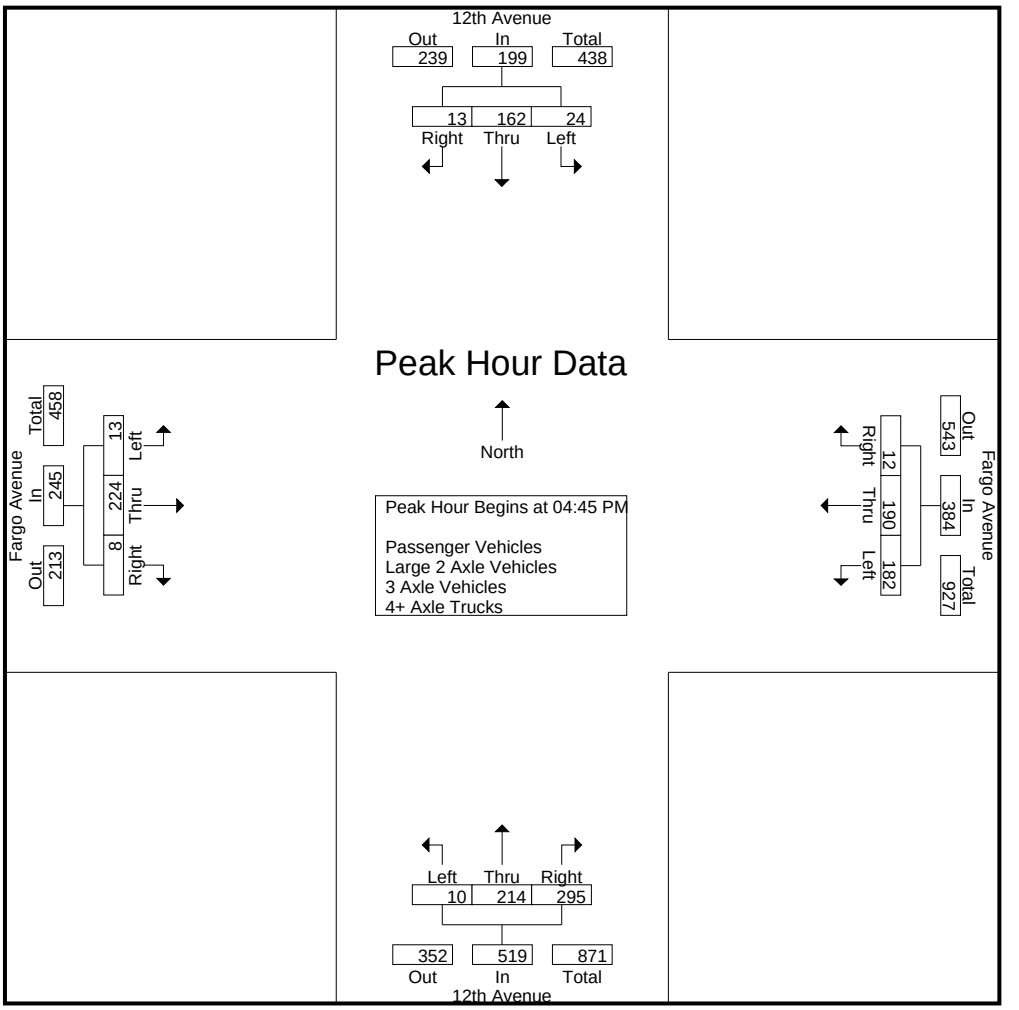
	12th Avenue Southbound				Fargo Avenue Westbound				12th Avenue Northbound				Fargo Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	6	33	8	47	39	37	2	78	2	44	71	117	4	66	1	71	313
04:15 PM	5	46	5	56	47	42	1	90	1	42	63	106	6	60	3	69	321
04:30 PM	6	46	6	58	47	49	6	102	1	47	51	99	4	44	7	55	314
04:45 PM	7	39	1	47	39	45	3	87	2	51	75	128	2	62	2	66	328
Total	24	164	20	208	172	173	12	357	6	184	260	450	16	232	13	261	1276
05:00 PM	4	35	3	42	40	42	3	85	4	68	89	161	2	54	2	58	346
05:15 PM	6	36	4	46	42	49	2	93	2	52	74	128	2	68	2	72	339
05:30 PM	7	52	5	64	61	54	4	119	2	43	57	102	7	40	2	49	334
05:45 PM	10	41	4	55	38	48	2	88	2	47	64	113	7	51	3	61	317
Total	27	164	16	207	181	193	11	385	10	210	284	504	18	213	9	240	1336
Grand Total	51	328	36	415	353	366	23	742	16	394	544	954	34	445	22	501	2612
Apprch %	12.3	79	8.7		47.6	49.3	3.1		1.7	41.3	57		6.8	88.8	4.4		
Total %	2	12.6	1.4	15.9	13.5	14	0.9	28.4	0.6	15.1	20.8	36.5	1.3	17	0.8	19.2	
Passenger Vehicles	50	323	36	409	352	365	22	739	16	391	541	948	34	444	21	499	2595
% Passenger Vehicles	98	98.5	100	98.6	99.7	99.7	95.7	99.6	100	99.2	99.4	99.4	100	99.8	95.5	99.6	99.3
Large 2 Axle Vehicles	1	3	0	4	1	1	0	2	0	0	3	3	0	1	1	2	11
% Large 2 Axle Vehicles	2	0.9	0	1	0.3	0.3	0	0.3	0	0	0.6	0.3	0	0.2	4.5	0.4	0.4
3 Axle Vehicles	0	1	0	1	0	0	1	1	0	0	0	0	0	0	0	0	2
% 3 Axle Vehicles	0	0.3	0	0.2	0	0	4.3	0.1	0	0	0	0	0	0	0	0	0.1
4+ Axle Trucks	0	1	0	1	0	0	0	0	0	3	0	3	0	0	0	0	4
% 4+ Axle Trucks	0	0.3	0	0.2	0	0	0	0	0	0.8	0	0.3	0	0	0	0	0.2

	12th Avenue Southbound				Fargo Avenue Westbound				12th Avenue Northbound				Fargo Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	**7**	39	1	47	39	45	3	87	2	51	75	128	2	62	**2**	66	328
05:00 PM	4	35	3	42	40	42	3	85	**4**	**68**	**89**	**161**	2	54	2	58	**346**
05:15 PM	6	36	4	46	42	49	2	93	2	52	74	128	2	**68**	2	**72**	339
05:30 PM	7	**52**	**5**	**64**	**61**	**54**	**4**	**119**	2	43	57	102	**7**	40	2	49	334
Total Volume	24	162	13	199	182	190	12	384	10	214	295	519	13	224	8	245	1347
% App. Total	12.1	81.4	6.5		47.4	49.5	3.1		1.9	41.2	56.8		5.3	91.4	3.3		
PHF	.857	.779	.650	.777	.746	.880	.750	.807	.625	.787	.829	.806	.464	.824	1.00	.851	.973

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 12th Avenue
E/W: Fargo Avenue
Weather: Clear

File Name : 02_HFD_12th_Fargo PM
Site Code : 00322472
Start Date : 5/17/2022



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:00 PM				05:00 PM				04:45 PM				04:00 PM			
+0 mins.	6	33	**8**	47	40	42	3	85	2	51	75	128	4	**66**	1	**71**
+15 mins.	5	**46**	5	56	42	49	2	93	**4**	**68**	**89**	**161**	**6**	60	3	69
+30 mins.	6	46	6	**58**	**61**	**54**	**4**	**119**	2	52	74	128	4	44	**7**	55
+45 mins.	**7**	39	1	47	38	48	2	88	2	43	57	102	2	62	2	66
Total Volume	24	164	20	208	181	193	11	385	10	214	295	519	16	232	13	261
% App. Total	11.5	78.8	9.6		47	50.1	2.9		1.9	41.2	56.8		6.1	88.9	5	
PHF	.857	.891	.625	.897	.742	.894	.688	.809	.625	.787	.829	.806	.667	.879	.464	.919

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 12th Avenue
E/W: Fargo Avenue
Weather: Clear

File Name : 02_HFD_12th_Fargo PM
Site Code : 00322472
Start Date : 5/17/2022
Page No : 1

Groups Printed- Passenger Vehicles

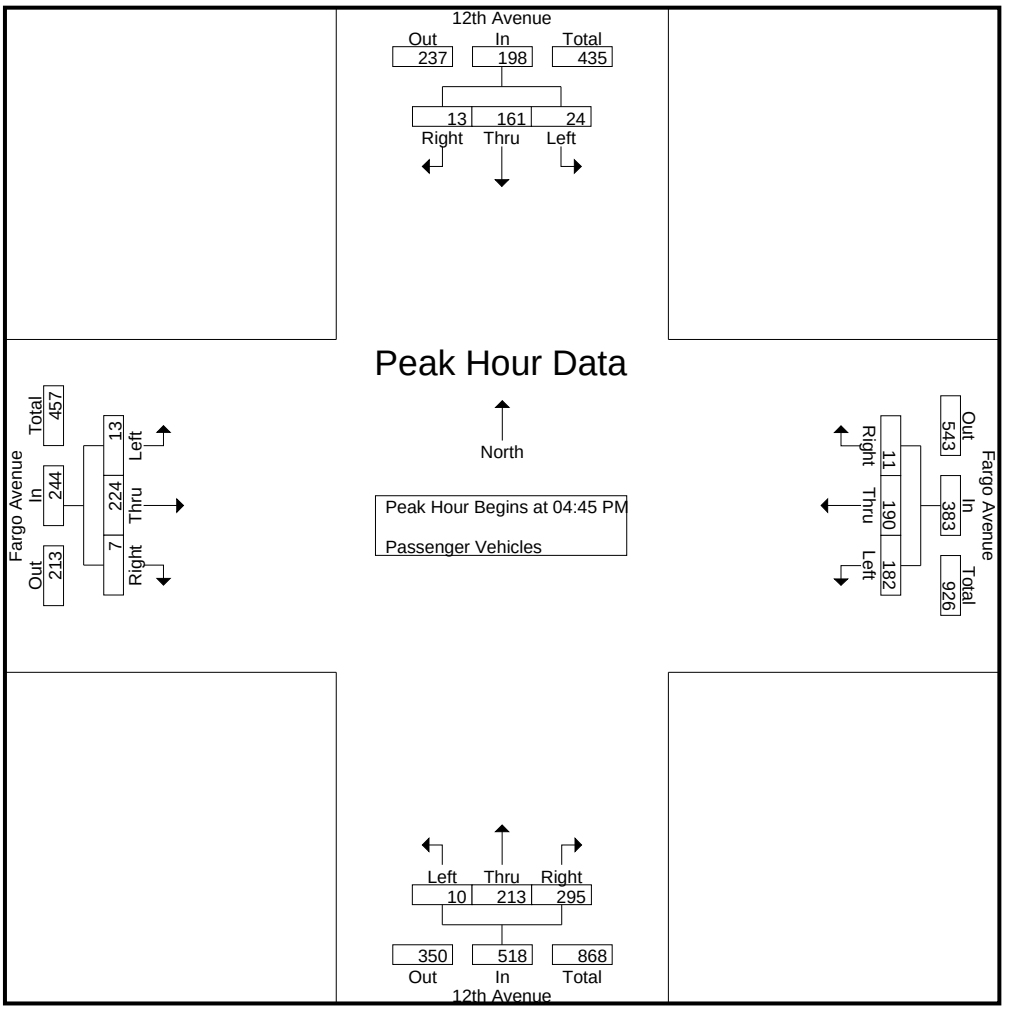
	12th Avenue Southbound				Fargo Avenue Westbound				12th Avenue Northbound				Fargo Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	6	33	8	47	39	36	2	77	2	44	69	115	4	66	1	71	310
04:15 PM	5	43	5	53	46	42	1	89	1	42	62	105	6	59	3	68	315
04:30 PM	6	45	6	57	47	49	6	102	1	45	51	97	4	44	7	55	311
04:45 PM	7	39	1	47	39	45	2	86	2	51	75	128	2	62	1	65	326
Total	24	160	20	204	171	172	11	354	6	182	257	445	16	231	12	259	1262
05:00 PM	4	34	3	41	40	42	3	85	4	67	89	160	2	54	2	58	344
05:15 PM	6	36	4	46	42	49	2	93	2	52	74	128	2	68	2	72	339
05:30 PM	7	52	5	64	61	54	4	119	2	43	57	102	7	40	2	49	334
05:45 PM	9	41	4	54	38	48	2	88	2	47	64	113	7	51	3	61	316
Total	26	163	16	205	181	193	11	385	10	209	284	503	18	213	9	240	1333
Grand Total	50	323	36	409	352	365	22	739	16	391	541	948	34	444	21	499	2595
Apprch %	12.2	79	8.8		47.6	49.4	3		1.7	41.2	57.1		6.8	89	4.2		
Total %	1.9	12.4	1.4	15.8	13.6	14.1	0.8	28.5	0.6	15.1	20.8	36.5	1.3	17.1	0.8	19.2	

	12th Avenue Southbound				Fargo Avenue Westbound				12th Avenue Northbound				Fargo Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	**7**	39	1	47	39	45	2	86	2	51	75	128	2	62	1	65	326
05:00 PM	4	34	3	41	40	42	3	85	**4**	**67**	**89**	**160**	2	54	**2**	58	**344**
05:15 PM	6	36	4	46	42	49	2	93	2	52	74	128	2	**68**	2	**72**	339
05:30 PM	7	**52**	**5**	**64**	**61**	**54**	**4**	**119**	2	43	57	102	**7**	40	2	49	334
Total Volume	24	161	13	198	182	190	11	383	10	213	295	518	13	224	7	244	1343
% App. Total	12.1	81.3	6.6		47.5	49.6	2.9		1.9	41.1	56.9		5.3	91.8	2.9		
PHF	.857	.774	.650	.773	.746	.880	.688	.805	.625	.795	.829	.809	.464	.824	.875	.847	.976

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 12th Avenue
E/W: Fargo Avenue
Weather: Clear

File Name : 02_HFD_12th_Fargo PM
Site Code : 00322472
Start Date : 5/17/2022
Page No : 2



Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	**7**	39	1	47	39	45	2	86	2	51	75	128	2	62	1	65
+15 mins.	4	34	3	41	40	42	3	85	**4**	**67**	**89**	**160**	2	54	**2**	58
+30 mins.	6	36	4	46	42	49	2	93	2	52	74	128	2	**68**	2	**72**
+45 mins.	7	**52**	**5**	**64**	**61**	**54**	**4**	**119**	2	43	57	102	**7**	40	2	49
Total Volume	24	161	13	198	182	190	11	383	10	213	295	518	13	224	7	244
% App. Total	12.1	81.3	6.6		47.5	49.6	2.9		1.9	41.1	56.9		5.3	91.8	2.9	
PHF	.857	.774	.650	.773	.746	.880	.688	.805	.625	.795	.829	.809	.464	.824	.875	.847

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 12th Avenue
E/W: Fargo Avenue
Weather: Clear

File Name : 02_HFD_12th_Fargo PM
Site Code : 00322472
Start Date : 5/17/2022
Page No : 1

Groups Printed- Large 2 Axle Vehicles

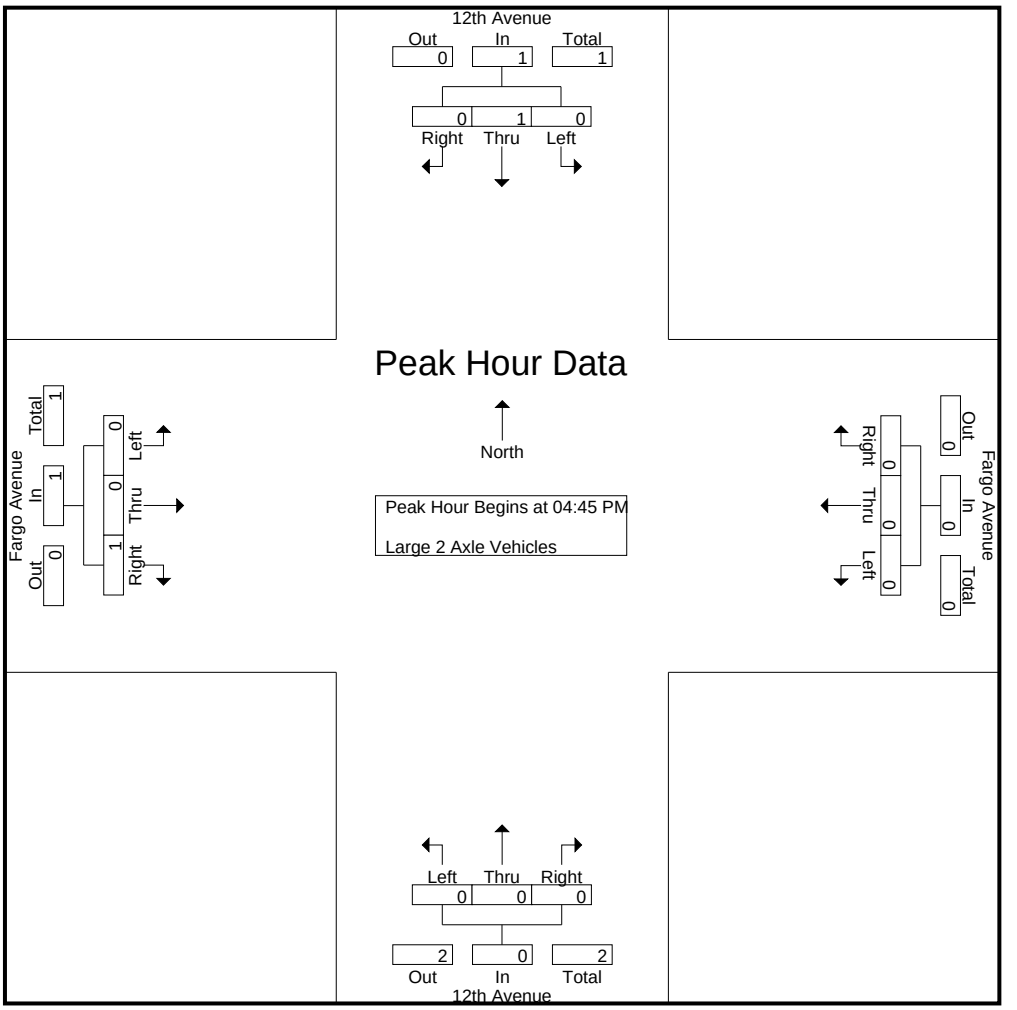
	12th Avenue Southbound				Fargo Avenue Westbound				12th Avenue Northbound				Fargo Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	0	0	1	0	1	0	0	2	2	0	0	0	0	3
04:15 PM	0	2	0	2	1	0	0	1	0	0	1	1	0	1	0	1	5
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
Total	0	2	0	2	1	1	0	2	0	0	3	3	0	1	1	2	9
05:00 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	1	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
Grand Total	1	3	0	4	1	1	0	2	0	0	3	3	0	1	1	2	11
Apprch %	25	75	0		50	50	0		0	0	100		0	50	50		
Total %	9.1	27.3	0	36.4	9.1	9.1	0	18.2	0	0	27.3	27.3	0	9.1	9.1	18.2	

	12th Avenue Southbound				Fargo Avenue Westbound				12th Avenue Northbound				Fargo Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**	**1**	**1**
05:00 PM	0	**1**	0	**1**	0	0	0	0	0	0	0	0	0	0	0	0	1
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1	1	2
% App. Total	0	100	0		0	0	0		0	0	0		0	0	100		
PHF	.000	.250	.000	.250	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250	.250	.500

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 12th Avenue
E/W: Fargo Avenue
Weather: Clear

File Name : 02_HFD_12th_Fargo PM
Site Code : 00322472
Start Date : 5/17/2022
Page No : 2



Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**	**1**
+15 mins.	0	**1**	0	**1**	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1	1
% App. Total	0	100	0		0	0	0		0	0	0		0	0	100	
PHF	.000	.250	.000	.250	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250	.250

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 12th Avenue
E/W: Fargo Avenue
Weather: Clear

File Name : 02_HFD_12th_Fargo PM
Site Code : 00322472
Start Date : 5/17/2022
Page No : 1

Groups Printed- 3 Axle Vehicles

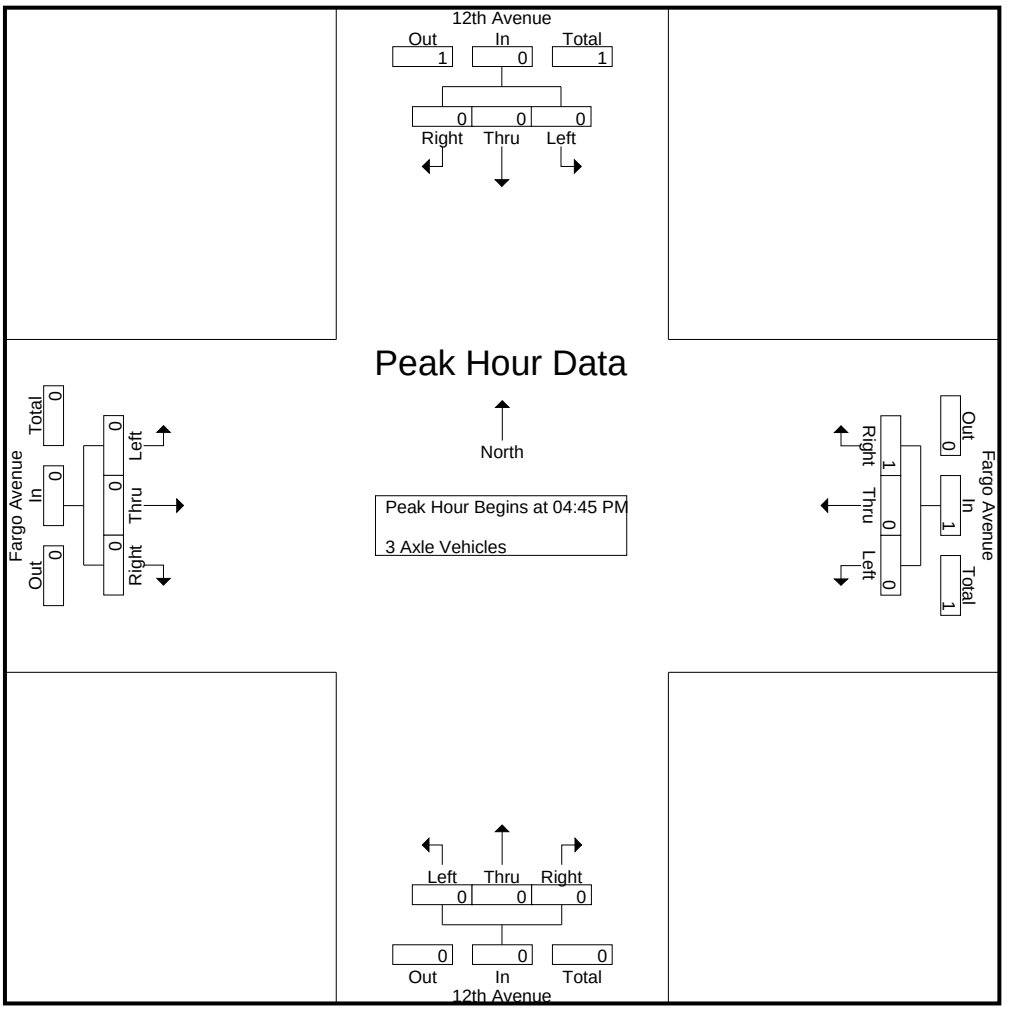
	12th Avenue Southbound				Fargo Avenue Westbound				12th Avenue Northbound				Fargo Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
04:45 PM	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1
Total	0	1	0	1	0	0	1	1	0	0	0	0	0	0	0	0	2
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	1	0	1	0	0	1	1	0	0	0	0	0	0	0	0	2
Apprch %	0	100	0		0	0	100		0	0	0		0	0	0		
Total %	0	50	0	50	0	0	50	50	0	0	0	0	0	0	0	0	

	12th Avenue Southbound				Fargo Avenue Westbound				12th Avenue Northbound				Fargo Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	0	0	0	0	0	**1**	**1**	0	0	0	0	0	0	0	0	**1**
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1
% App. Total	0	0	0		0	0	100		0	0	0		0	0	0		
PHF	.000	.000	.000	.000	.000	.000	.250	.250	.000	.000	.000	.000	.000	.000	.000	.000	.250

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 12th Avenue
E/W: Fargo Avenue
Weather: Clear

File Name : 02_HFD_12th_Fargo PM
Site Code : 00322472
Start Date : 5/17/2022
Page No : 2



Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	0	0	0	0	0	0	**1**	**1**	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0
% App. Total	0	0	0		0	0	100		0	0	0		0	0	0	
PHF	.000	.000	.000	.000	.000	.000	.250	.250	.000	.000	.000	.000	.000	.000	.000	.000

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 12th Avenue
E/W: Fargo Avenue
Weather: Clear

File Name : 02_HFD_12th_Fargo PM
Site Code : 00322472
Start Date : 5/17/2022
Page No : 1

Groups Printed- 4+ Axle Trucks

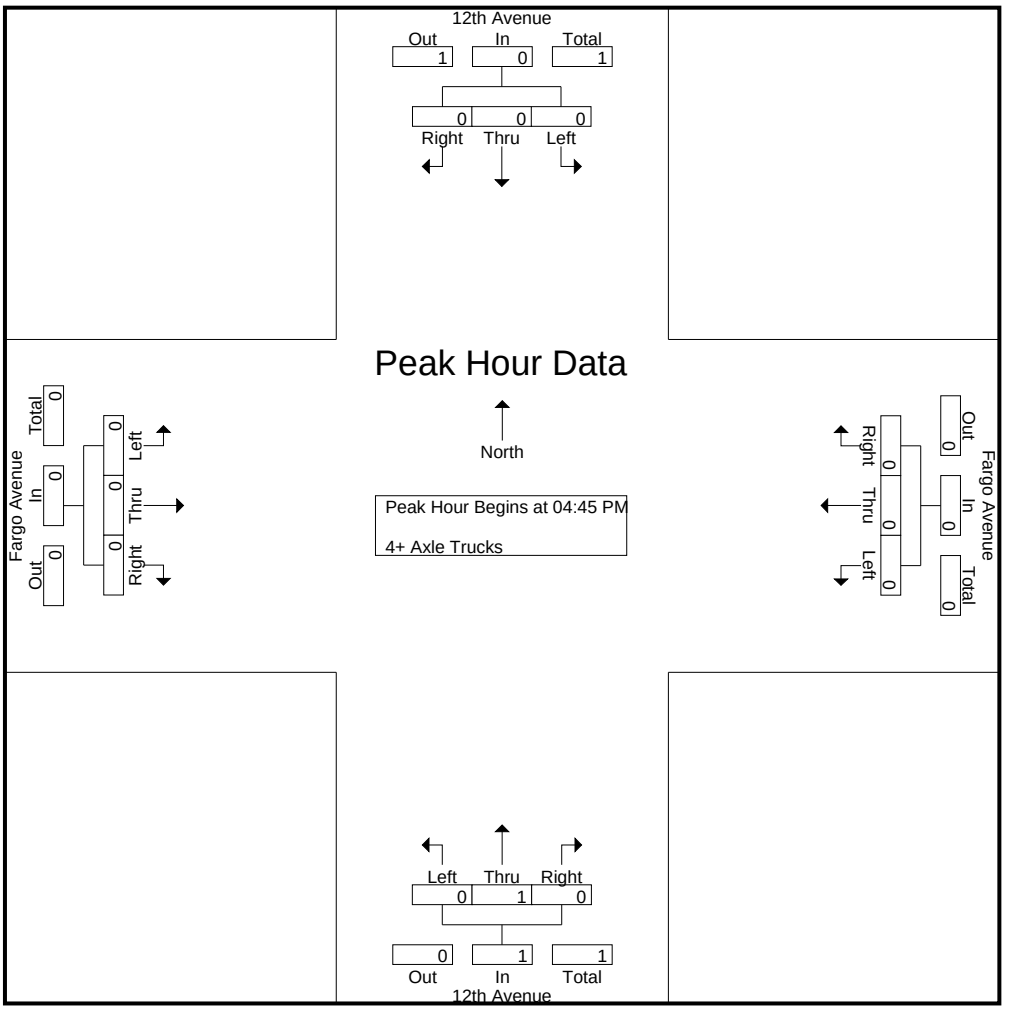
	12th Avenue Southbound				Fargo Avenue Westbound				12th Avenue Northbound				Fargo Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
04:30 PM	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	2
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	1	0	0	0	0	0	2	0	2	0	0	0	0	3
05:00 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
Grand Total	0	1	0	1	0	0	0	0	0	3	0	3	0	0	0	0	4
Apprch %	0	100	0		0	0	0		0	100	0		0	0	0		
Total %	0	25	0	25	0	0	0	0	0	75	0	75	0	0	0	0	

	12th Avenue Southbound				Fargo Avenue Westbound				12th Avenue Northbound				Fargo Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	**1**	0	**1**	0	0	0	0	**1**
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
% App. Total	0	0	0		0	0	0		0	100	0		0	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250	.000	.250	.000	.000	.000	.000	.250

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 12th Avenue
E/W: Fargo Avenue
Weather: Clear

File Name : 02_HFD_12th_Fargo PM
Site Code : 00322472
Start Date : 5/17/2022
Page No : 2



Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	**1**	0	**1**	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0
% App. Total	0	0	0		0	0	0		0	100	0		0	0	0	
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250	.000	.250	.000	.000	.000	.000

Location: Hanford
N/S: 12th Avenue
E/W: Fargo Avenue

Date: 5/17/2022
Day: Tuesday

PEDESTRIANS

	North Leg 12th Avenue	East Leg Fargo Avenue	South Leg 12th Avenue	West Leg Fargo Avenue	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	1	1
TOTAL VOLUMES:	0	0	0	1	1

	North Leg 12th Avenue	East Leg Fargo Avenue	South Leg 12th Avenue	West Leg Fargo Avenue	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	1	0	0	1	2
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	1	1
5:45 PM	0	0	0	0	0
TOTAL VOLUMES:	1	0	0	2	3

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
951-268-6268

Location: Hanford
N/S: 12th Avenue
E/W: Fargo Avenue

Date: 5/17/2022
Day: Tuesday

BICYCLES

	Southbound 12th Avenue			Westbound Fargo Avenue			Northbound 12th Avenue			Eastbound Fargo Avenue			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	1	0	1
7:45 AM	0	0	0	0	0	0	0	0	0	0	1	0	1
8:00 AM	0	0	0	0	0	6	0	0	0	0	0	0	6
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	6	0	0	0	0	2	0	8

	Southbound 12th Avenue			Westbound Fargo Avenue			Northbound 12th Avenue			Eastbound Fargo Avenue			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	0	0	0	0	0	0	0	0

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
951-268-6268

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

County of Kings
N/S: 12th Avenue
E/W: Fargo Avenue
Weather: Clear

File Name : 04_CKS_12th_Fargo AM
Site Code : 00323251
Start Date : 3/23/2023
Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

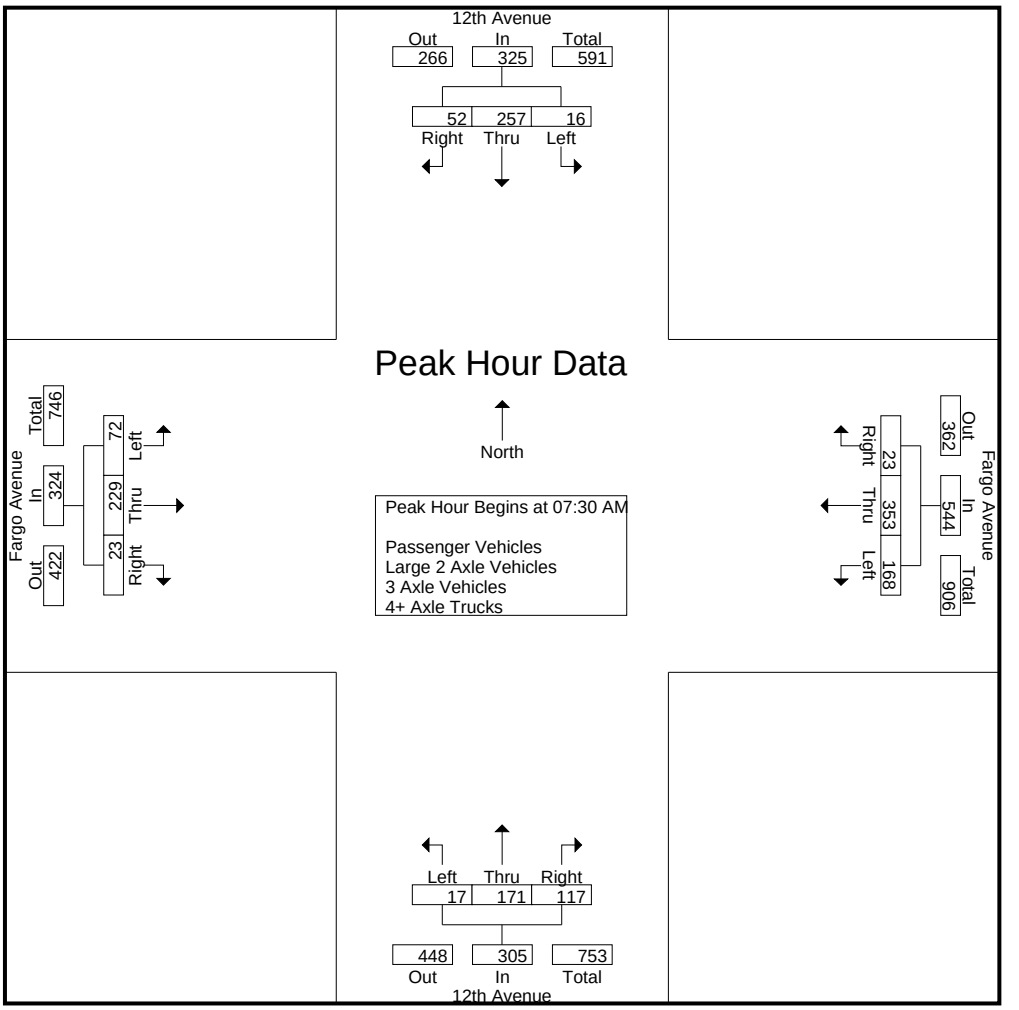
	12th Avenue Southbound				Fargo Avenue Westbound				12th Avenue Northbound				Fargo Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	2	33	4	39	28	47	2	77	3	26	8	37	3	22	6	31	184
07:15 AM	4	45	1	50	26	76	6	108	4	33	22	59	14	17	3	34	251
07:30 AM	2	53	8	63	46	105	9	160	6	64	24	94	31	45	6	82	399
07:45 AM	8	84	18	110	59	121	5	185	5	53	21	79	22	66	9	97	471
Total	16	215	31	262	159	349	22	530	18	176	75	269	70	150	24	244	1305
08:00 AM	5	73	16	94	35	70	6	111	5	29	38	72	15	76	5	96	373
08:15 AM	1	47	10	58	28	57	3	88	1	25	34	60	4	42	3	49	255
08:30 AM	6	43	2	51	35	38	3	76	2	21	28	51	4	36	3	43	221
08:45 AM	3	42	3	48	33	36	0	69	0	22	17	39	2	23	5	30	186
Total	15	205	31	251	131	201	12	344	8	97	117	222	25	177	16	218	1035
Grand Total	31	420	62	513	290	550	34	874	26	273	192	491	95	327	40	462	2340
Apprch %	6	81.9	12.1		33.2	62.9	3.9		5.3	55.6	39.1		20.6	70.8	8.7		
Total %	1.3	17.9	2.6	21.9	12.4	23.5	1.5	37.4	1.1	11.7	8.2	21	4.1	14	1.7	19.7	
Passenger Vehicles	30	411	61	502	286	542	34	862	26	269	190	485	95	320	39	454	2303
% Passenger Vehicles	96.8	97.9	98.4	97.9	98.6	98.5	100	98.6	100	98.5	99	98.8	100	97.9	97.5	98.3	98.4
Large 2 Axle Vehicles	1	6	1	8	2	6	0	8	0	1	1	2	0	7	1	8	26
% Large 2 Axle Vehicles	3.2	1.4	1.6	1.6	0.7	1.1	0	0.9	0	0.4	0.5	0.4	0	2.1	2.5	1.7	1.1
3 Axle Vehicles	0	0	0	0	1	2	0	3	0	2	1	3	0	0	0	0	6
% 3 Axle Vehicles	0	0	0	0	0.3	0.4	0	0.3	0	0.7	0.5	0.6	0	0	0	0	0.3
4+ Axle Trucks	0	3	0	3	1	0	0	1	0	1	0	1	0	0	0	0	5
% 4+ Axle Trucks	0	0.7	0	0.6	0.3	0	0	0.1	0	0.4	0	0.2	0	0	0	0	0.2

	12th Avenue Southbound				Fargo Avenue Westbound				12th Avenue Northbound				Fargo Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	2	53	8	63	46	105	**9**	160	**6**	**64**	24	**94**	**31**	45	6	82	399
07:45 AM	**8**	**84**	**18**	**110**	**59**	**121**	5	**185**	5	53	21	79	22	66	**9**	**97**	**471**
08:00 AM	5	73	16	94	35	70	6	111	5	29	**38**	72	15	**76**	5	96	373
08:15 AM	1	47	10	58	28	57	3	88	1	25	34	60	4	42	3	49	255
Total Volume	16	257	52	325	168	353	23	544	17	171	117	305	72	229	23	324	1498
% App. Total	4.9	79.1	16		30.9	64.9	4.2		5.6	56.1	38.4		22.2	70.7	7.1		
PHF	.500	.765	.722	.739	.712	.729	.639	.735	.708	.668	.770	.811	.581	.753	.639	.835	.795

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

County of Kings
N/S: 12th Avenue
E/W: Fargo Avenue
Weather: Clear

File Name : 04_CKS_12th_Fargo AM
Site Code : 00323251
Start Date : 3/23/2023



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:15 AM				07:30 AM				07:30 AM			
+0 mins.	2	53	8	63	26	76	6	108	**6**	**64**	24	**94**	**31**	45	6	82
+15 mins.	**8**	**84**	**18**	**110**	46	105	**9**	160	5	53	21	79	22	66	**9**	**97**
+30 mins.	5	73	16	94	**59**	**121**	5	**185**	5	29	**38**	72	15	**76**	5	96
+45 mins.	1	47	10	58	35	70	6	111	1	25	34	60	4	42	3	49
Total Volume	16	257	52	325	166	372	26	564	17	171	117	305	72	229	23	324
% App. Total	4.9	79.1	16		29.4	66	4.6		5.6	56.1	38.4		22.2	70.7	7.1	
PHF	.500	.765	.722	.739	.703	.769	.722	.762	.708	.668	.770	.811	.581	.753	.639	.835

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

County of Kings
N/S: 12th Avenue
E/W: Fargo Avenue
Weather: Clear

File Name : 04_CKS_12th_Fargo AM
Site Code : 00323251
Start Date : 3/23/2023
Page No : 1

Groups Printed- Passenger Vehicles

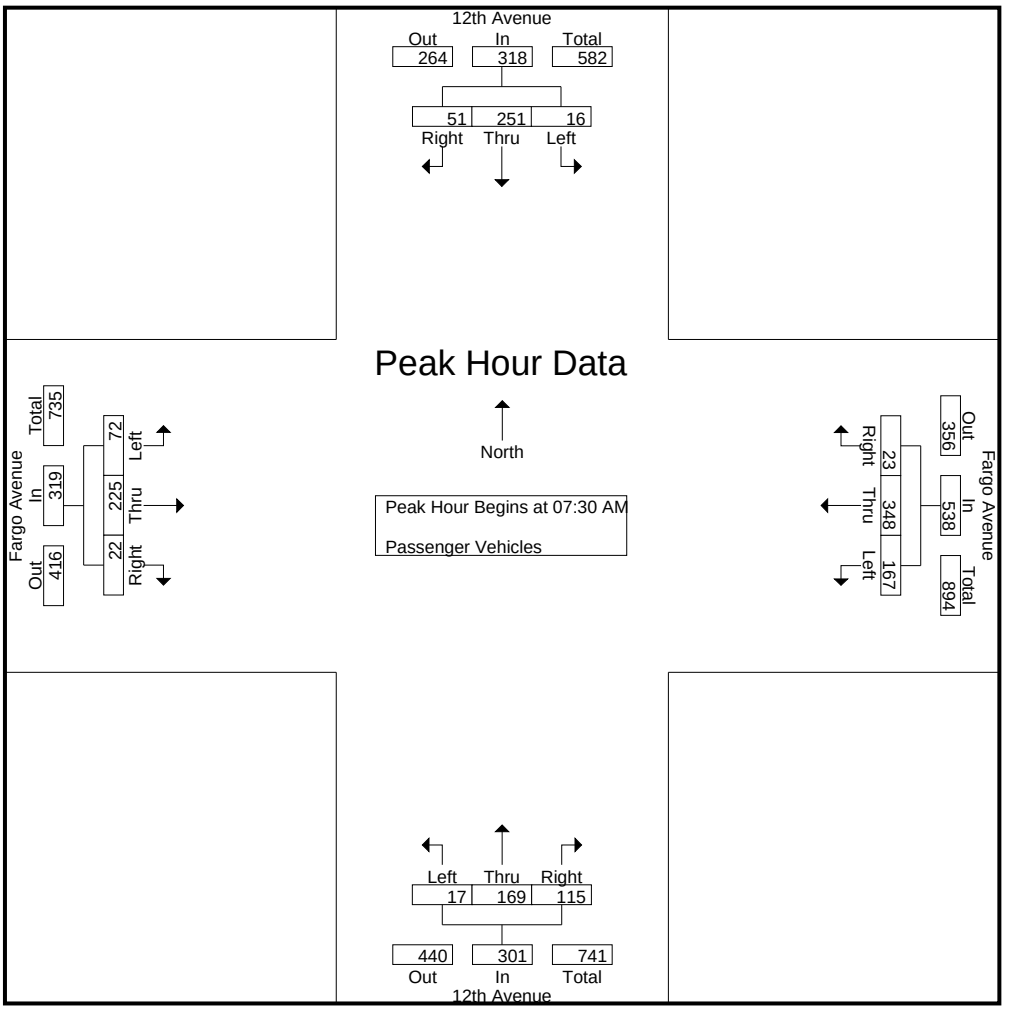
	12th Avenue Southbound				Fargo Avenue Westbound				12th Avenue Northbound				Fargo Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	2	33	4	39	27	47	2	76	3	26	8	37	3	22	6	31	183
07:15 AM	3	43	1	47	25	74	6	105	4	33	22	59	14	14	3	31	242
07:30 AM	2	51	8	61	45	102	9	156	6	64	24	94	31	44	6	81	392
07:45 AM	8	83	18	109	59	120	5	184	5	52	21	78	22	64	8	94	465
Total	15	210	31	256	156	343	22	521	18	175	75	268	70	144	23	237	1282
08:00 AM	5	71	15	91	35	70	6	111	5	29	38	72	15	75	5	95	369
08:15 AM	1	46	10	57	28	56	3	87	1	24	32	57	4	42	3	49	250
08:30 AM	6	42	2	50	35	38	3	76	2	20	28	50	4	36	3	43	219
08:45 AM	3	42	3	48	32	35	0	67	0	21	17	38	2	23	5	30	183
Total	15	201	30	246	130	199	12	341	8	94	115	217	25	176	16	217	1021
Grand Total	30	411	61	502	286	542	34	862	26	269	190	485	95	320	39	454	2303
Apprch %	6	81.9	12.2		33.2	62.9	3.9		5.4	55.5	39.2		20.9	70.5	8.6		
Total %	1.3	17.8	2.6	21.8	12.4	23.5	1.5	37.4	1.1	11.7	8.3	21.1	4.1	13.9	1.7	19.7	

	12th Avenue Southbound				Fargo Avenue Westbound				12th Avenue Northbound				Fargo Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	2	51	8	61	45	102	**9**	156	**6**	**64**	24	**94**	**31**	44	6	81	392
07:45 AM	**8**	**83**	**18**	**109**	**59**	**120**	5	**184**	5	52	21	78	22	64	**8**	94	**465**
08:00 AM	5	71	15	91	35	70	6	111	5	29	**38**	72	15	**75**	5	**95**	369
08:15 AM	1	46	10	57	28	56	3	87	1	24	32	57	4	42	3	49	250
Total Volume	16	251	51	318	167	348	23	538	17	169	115	301	72	225	22	319	1476
% App. Total	5	78.9	16		31	64.7	4.3		5.6	56.1	38.2		22.6	70.5	6.9		
PHF	.500	.756	.708	.729	.708	.725	.639	.731	.708	.660	.757	.801	.581	.750	.688	.839	.794

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

County of Kings
N/S: 12th Avenue
E/W: Fargo Avenue
Weather: Clear

File Name : 04_CKS_12th_Fargo AM
Site Code : 00323251
Start Date : 3/23/2023



Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	2	51	8	61	45	102	**9**	156	**6**	**64**	24	**94**	**31**	44	6	81
+15 mins.	**8**	**83**	**18**	**109**	**59**	**120**	5	**184**	5	52	21	78	22	64	**8**	94
+30 mins.	5	71	15	91	35	70	6	111	5	29	**38**	72	15	**75**	5	**95**
+45 mins.	1	46	10	57	28	56	3	87	1	24	32	57	4	42	3	49
Total Volume	16	251	51	318	167	348	23	538	17	169	115	301	72	225	22	319
% App. Total	5	78.9	16		31	64.7	4.3		5.6	56.1	38.2		22.6	70.5	6.9	
PHF	.500	.756	.708	.729	.708	.725	.639	.731	.708	.660	.757	.801	.581	.750	.688	.839

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

County of Kings
N/S: 12th Avenue
E/W: Fargo Avenue
Weather: Clear

File Name : 04_CKS_12th_Fargo AM
Site Code : 00323251
Start Date : 3/23/2023
Page No : 1

Groups Printed- Large 2 Axle Vehicles

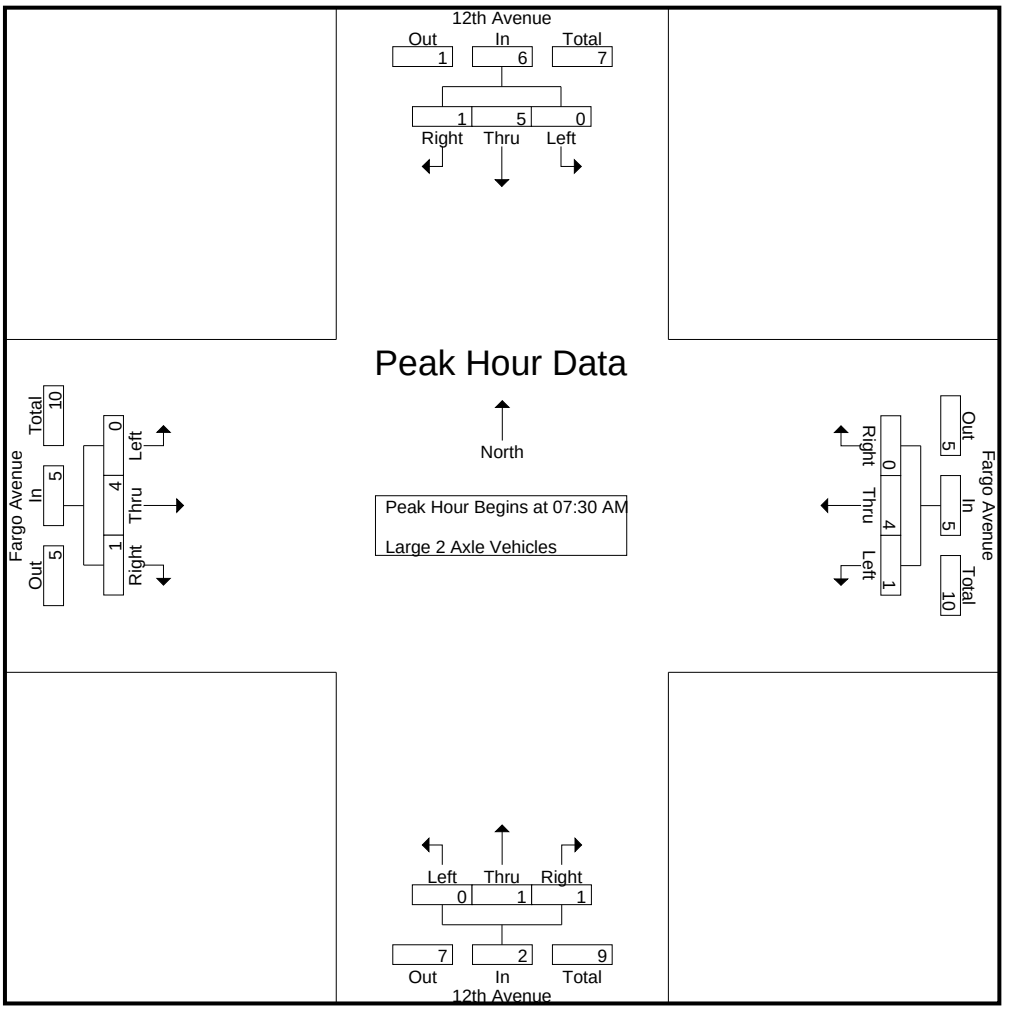
	12th Avenue Southbound				Fargo Avenue Westbound				12th Avenue Northbound				Fargo Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	1	1	0	2	1	2	0	3	0	0	0	0	0	3	0	3	8
07:30 AM	0	1	0	1	1	3	0	4	0	0	0	0	0	1	0	1	6
07:45 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	2	1	3	4
Total	1	3	0	4	2	5	0	7	0	0	0	0	0	6	1	7	18
08:00 AM	0	2	1	3	0	0	0	0	0	0	0	0	0	1	0	1	4
08:15 AM	0	1	0	1	0	1	0	1	0	1	1	2	0	0	0	0	4
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	3	1	4	0	1	0	1	0	1	1	2	0	1	0	1	8
Grand Total	1	6	1	8	2	6	0	8	0	1	1	2	0	7	1	8	26
Apprch %	12.5	75	12.5		25	75	0		0	50	50		0	87.5	12.5		
Total %	3.8	23.1	3.8	30.8	7.7	23.1	0	30.8	0	3.8	3.8	7.7	0	26.9	3.8	30.8	

	12th Avenue Southbound				Fargo Avenue Westbound				12th Avenue Northbound				Fargo Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	1	0	1	**1**	**3**	0	**4**	0	0	0	0	0	1	0	1	**6**
07:45 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	**2**	**1**	**3**	4
08:00 AM	0	**2**	**1**	**3**	0	0	0	0	0	0	0	0	0	1	0	1	4
08:15 AM	0	1	0	1	0	1	0	1	0	**1**	**1**	**2**	0	0	0	0	4
Total Volume	0	5	1	6	1	4	0	5	0	1	1	2	0	4	1	5	18
% App. Total	0	83.3	16.7		20	80	0		0	50	50		0	80	20		
PHF	.000	.625	.250	.500	.250	.333	.000	.313	.000	.250	.250	.250	.000	.500	.250	.417	.750

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

County of Kings
N/S: 12th Avenue
E/W: Fargo Avenue
Weather: Clear

File Name : 04_CKS_12th_Fargo AM
Site Code : 00323251
Start Date : 3/23/2023
Page No : 2



Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	0	1	0	1	**1**	**3**	0	**4**	0	0	0	0	0	1	0	1
+15 mins.	0	1	0	1	0	0	0	0	0	0	0	0	0	**2**	**1**	**3**
+30 mins.	0	**2**	**1**	**3**	0	0	0	0	0	0	0	0	0	1	0	1
+45 mins.	0	1	0	1	0	1	0	1	0	**1**	**1**	**2**	0	0	0	0
Total Volume	0	5	1	6	1	4	0	5	0	1	1	2	0	4	1	5
% App. Total	0	83.3	16.7		20	80	0		0	50	50		0	80	20	
PHF	.000	.625	.250	.500	.250	.333	.000	.313	.000	.250	.250	.250	.000	.500	.250	.417

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

County of Kings
N/S: 12th Avenue
E/W: Fargo Avenue
Weather: Clear

File Name : 04_CKS_12th_Fargo AM
Site Code : 00323251
Start Date : 3/23/2023
Page No : 1

Groups Printed- 3 Axle Vehicles

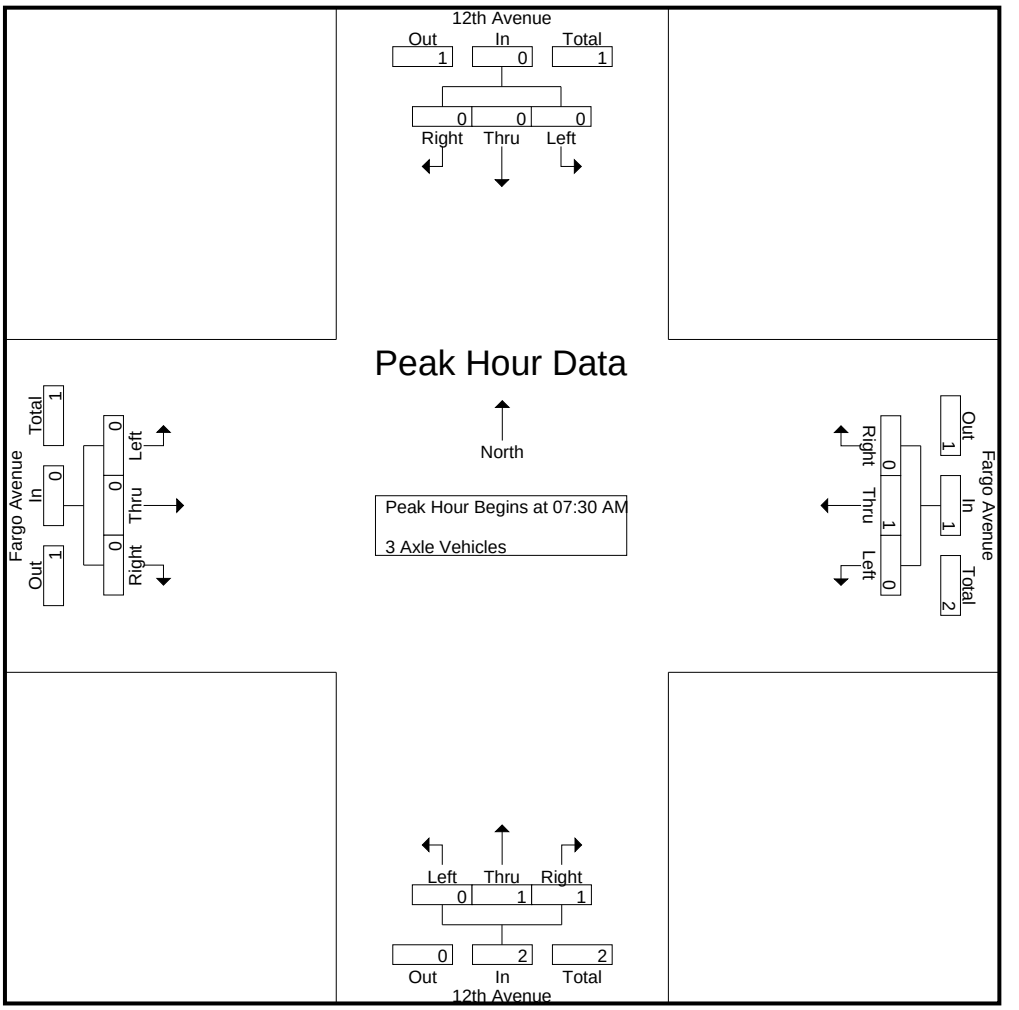
	12th Avenue Southbound				Fargo Avenue Westbound				12th Avenue Northbound				Fargo Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	1	0	1	0	1	0	1	0	0	0	0	2
Total	0	0	0	0	1	1	0	2	0	1	0	1	0	0	0	0	3
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	1	0	1	0	1	0	1	0	0	0	0	2
Total	0	0	0	0	0	1	0	1	0	1	1	2	0	0	0	0	3
Grand Total	0	0	0	0	1	2	0	3	0	2	1	3	0	0	0	0	6
Apprch %	0	0	0		33.3	66.7	0		0	66.7	33.3		0	0	0		
Total %	0	0	0	0	16.7	33.3	0	50	0	33.3	16.7	50	0	0	0	0	

	12th Avenue Southbound				Fargo Avenue Westbound				12th Avenue Northbound				Fargo Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	**1**	0	**1**	0	**1**	0	**1**	0	0	0	0	**2**
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	**1**	1	0	0	0	0	1
Total Volume	0	0	0	0	0	1	0	1	0	1	1	2	0	0	0	0	3
% App. Total	0	0	0		0	100	0		0	50	50		0	0	0		
PHF	.000	.000	.000	.000	.000	.250	.000	.250	.000	.250	.250	.500	.000	.000	.000	.000	.375

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

County of Kings
N/S: 12th Avenue
E/W: Fargo Avenue
Weather: Clear

File Name : 04_CKS_12th_Fargo AM
Site Code : 00323251
Start Date : 3/23/2023
Page No : 2



Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	**1**	0	**1**	0	**1**	0	**1**	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	**1**	1	0	0	0	0
Total Volume	0	0	0	0	0	1	0	1	0	1	1	2	0	0	0	0
% App. Total	0	0	0		0	100	0		0	50	50		0	0	0	
PHF	.000	.000	.000	.000	.000	.250	.000	.250	.000	.250	.250	.500	.000	.000	.000	.000

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

County of Kings
N/S: 12th Avenue
E/W: Fargo Avenue
Weather: Clear

File Name : 04_CKS_12th_Fargo AM
Site Code : 00323251
Start Date : 3/23/2023
Page No : 1

Groups Printed- 4+ Axle Trucks

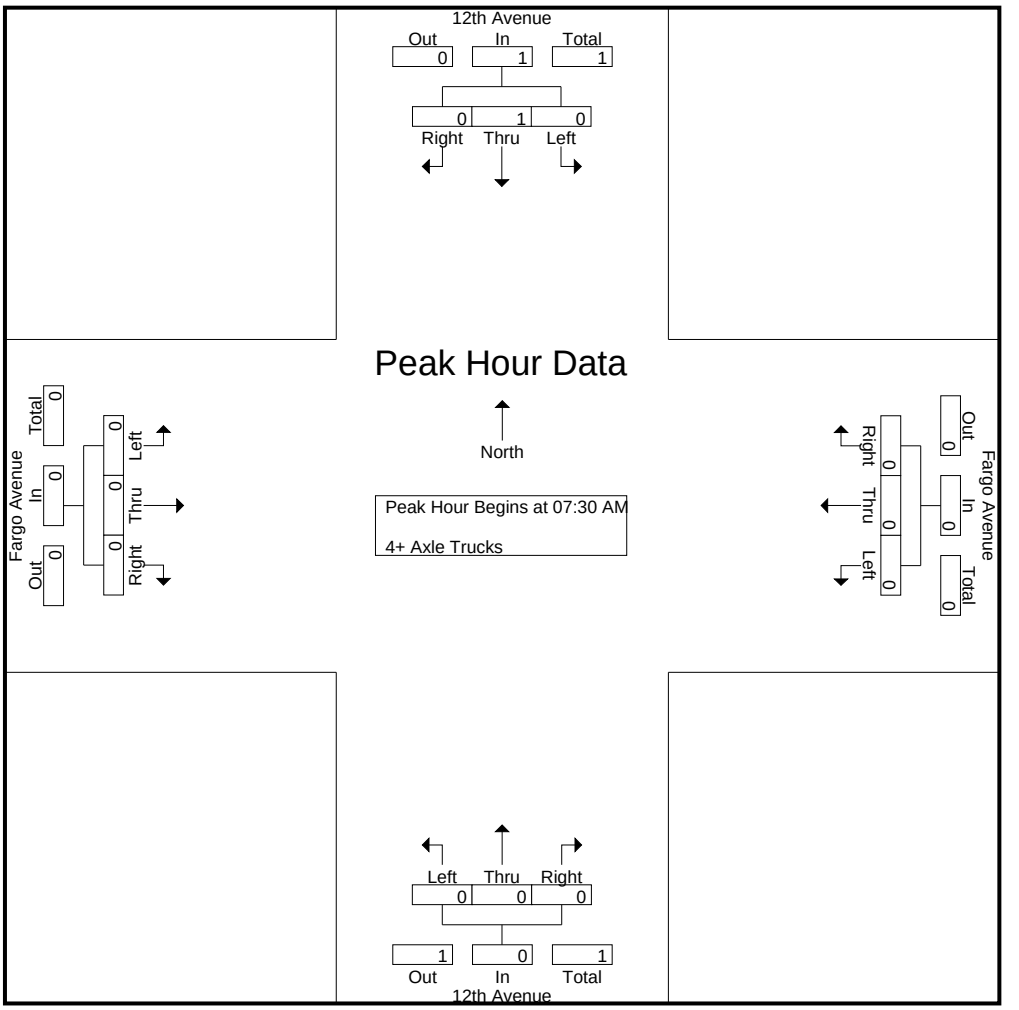
	12th Avenue Southbound				Fargo Avenue Westbound				12th Avenue Northbound				Fargo Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
07:30 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	2
08:45 AM	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1
Total	0	1	0	1	1	0	0	1	0	1	0	1	0	0	0	0	3
Grand Total	0	3	0	3	1	0	0	1	0	1	0	1	0	0	0	0	5
Apprch %	0	100	0		100	0	0		0	100	0		0	0	0		
Total %	0	60	0	60	20	0	0	20	0	20	0	20	0	0	0	0	

	12th Avenue Southbound				Fargo Avenue Westbound				12th Avenue Northbound				Fargo Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	**1**	0	**1**	0	0	0	0	0	0	0	0	0	0	0	0	**1**
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
% App. Total	0	100	0		0	0	0		0	0	0		0	0	0		
PHF	.000	.250	.000	.250	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

County of Kings
N/S: 12th Avenue
E/W: Fargo Avenue
Weather: Clear

File Name : 04_CKS_12th_Fargo AM
Site Code : 00323251
Start Date : 3/23/2023



Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	0	**1**	0	**1**	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	100	0		0	0	0		0	0	0		0	0	0	
PHF	.000	.250	.000	.250	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

County of Kings
N/S: 12th Avenue
E/W: Fargo Avenue
Weather: Clear

File Name : 04_CKS_12th_Fargo PM
Site Code : 00323251
Start Date : 3/23/2023
Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

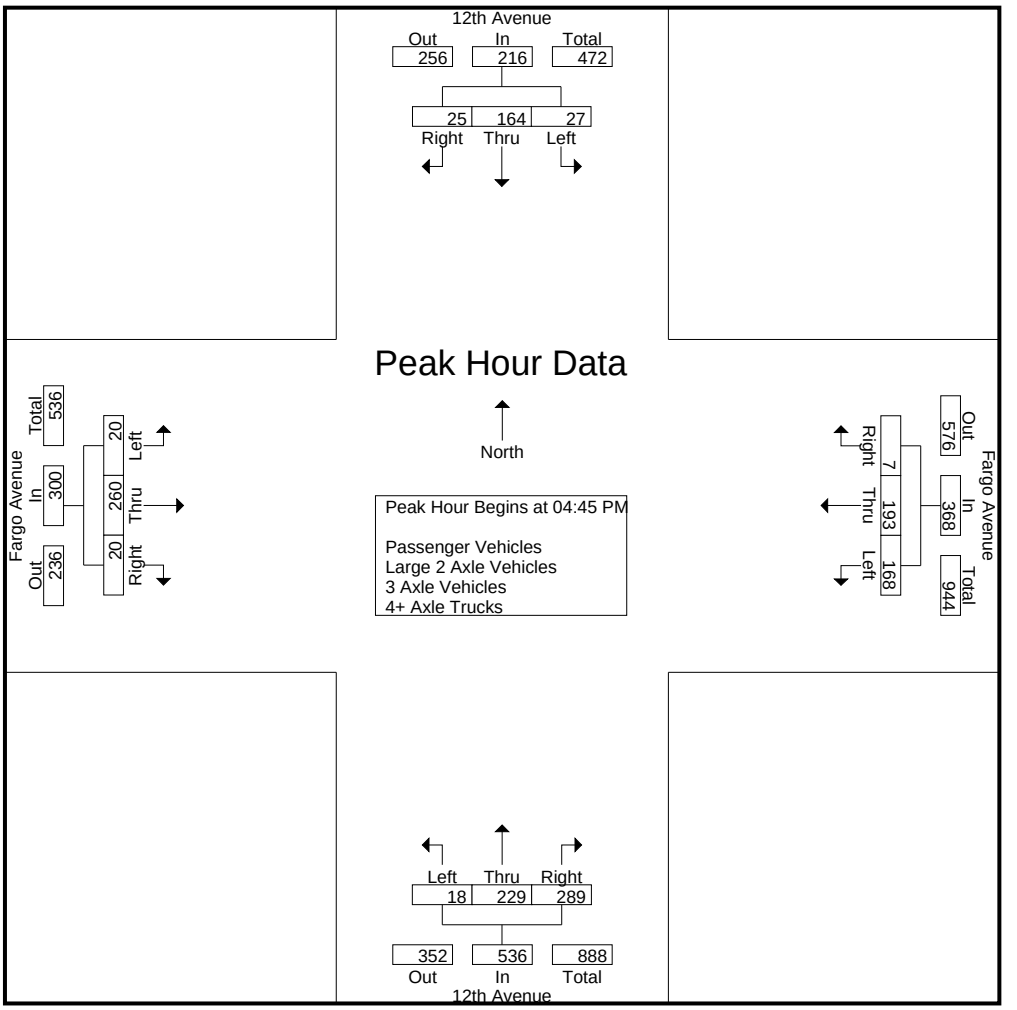
	12th Avenue Southbound				Fargo Avenue Westbound				12th Avenue Northbound				Fargo Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	4	39	7	50	50	50	6	106	5	57	65	127	4	50	3	57	340
04:15 PM	5	55	14	74	42	46	3	91	4	52	68	124	3	70	3	76	365
04:30 PM	4	46	3	53	42	48	3	93	3	38	53	94	0	67	4	71	311
04:45 PM	10	40	5	55	43	40	1	84	4	42	71	117	7	91	5	103	359
Total	23	180	29	232	177	184	13	374	16	189	257	462	14	278	15	307	1375
05:00 PM	4	37	8	49	31	52	3	86	4	92	84	180	1	58	1	60	375
05:15 PM	7	37	6	50	56	50	2	108	4	45	71	120	6	70	9	85	363
05:30 PM	6	50	6	62	38	51	1	90	6	50	63	119	6	41	5	52	323
05:45 PM	7	46	3	56	43	51	1	95	4	36	48	88	3	57	2	62	301
Total	24	170	23	217	168	204	7	379	18	223	266	507	16	226	17	259	1362
Grand Total	47	350	52	449	345	388	20	753	34	412	523	969	30	504	32	566	2737
Apprch %	10.5	78	11.6		45.8	51.5	2.7		3.5	42.5	54		5.3	89	5.7		
Total %	1.7	12.8	1.9	16.4	12.6	14.2	0.7	27.5	1.2	15.1	19.1	35.4	1.1	18.4	1.2	20.7	
Passenger Vehicles	46	347	52	445	345	388	20	753	34	407	522	963	29	502	32	563	2724
% Passenger Vehicles	97.9	99.1	100	99.1	100	100	100	100	100	98.8	99.8	99.4	96.7	99.6	100	99.5	99.5
Large 2 Axle Vehicles	1	3	0	4	0	0	0	0	0	2	1	3	1	2	0	3	10
% Large 2 Axle Vehicles	2.1	0.9	0	0.9	0	0	0	0	0	0.5	0.2	0.3	3.3	0.4	0	0.5	0.4
3 Axle Vehicles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% 3 Axle Vehicles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4+ Axle Trucks	0	0	0	0	0	0	0	0	0	3	0	3	0	0	0	0	3
% 4+ Axle Trucks	0	0	0	0	0	0	0	0	0	0.7	0	0.3	0	0	0	0	0.1

	12th Avenue Southbound				Fargo Avenue Westbound				12th Avenue Northbound				Fargo Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	**10**	40	5	55	43	40	1	84	4	42	71	117	**7**	**91**	5	**103**	359
05:00 PM	4	37	**8**	49	31	**52**	**3**	86	4	**92**	**84**	**180**	1	58	1	60	**375**
05:15 PM	7	37	6	50	**56**	50	2	**108**	4	45	71	120	6	70	**9**	85	363
05:30 PM	6	**50**	6	**62**	38	51	1	90	**6**	50	63	119	6	41	5	52	323
Total Volume	27	164	25	216	168	193	7	368	18	229	289	536	20	260	20	300	1420
% App. Total	12.5	75.9	11.6		45.7	52.4	1.9		3.4	42.7	53.9		6.7	86.7	6.7		
PHF	.675	.820	.781	.871	.750	.928	.583	.852	.750	.622	.860	.744	.714	.714	.556	.728	.947

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

County of Kings
N/S: 12th Avenue
E/W: Fargo Avenue
Weather: Clear

File Name : 04_CKS_12th_Fargo PM
Site Code : 00323251
Start Date : 3/23/2023



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:00 PM				05:00 PM				04:45 PM				04:30 PM			
+0 mins.	4	39	7	50	31	**52**	**3**	86	4	42	71	117	0	67	4	71
+15 mins.	5	**55**	**14**	**74**	**56**	50	2	**108**	4	**92**	**84**	**180**	**7**	**91**	5	**103**
+30 mins.	4	46	3	53	38	51	1	90	4	45	71	120	1	58	1	60
+45 mins.	**10**	40	5	55	43	51	1	95	**6**	50	63	119	6	70	**9**	85
Total Volume	23	180	29	232	168	204	7	379	18	229	289	536	14	286	19	319
% App. Total	9.9	77.6	12.5		44.3	53.8	1.8		3.4	42.7	53.9		4.4	89.7	6	
PHF	.575	.818	.518	.784	.750	.981	.583	.877	.750	.622	.860	.744	.500	.786	.528	.774

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

County of Kings
N/S: 12th Avenue
E/W: Fargo Avenue
Weather: Clear

File Name : 04_CKS_12th_Fargo PM
Site Code : 00323251
Start Date : 3/23/2023
Page No : 1

Groups Printed- Passenger Vehicles

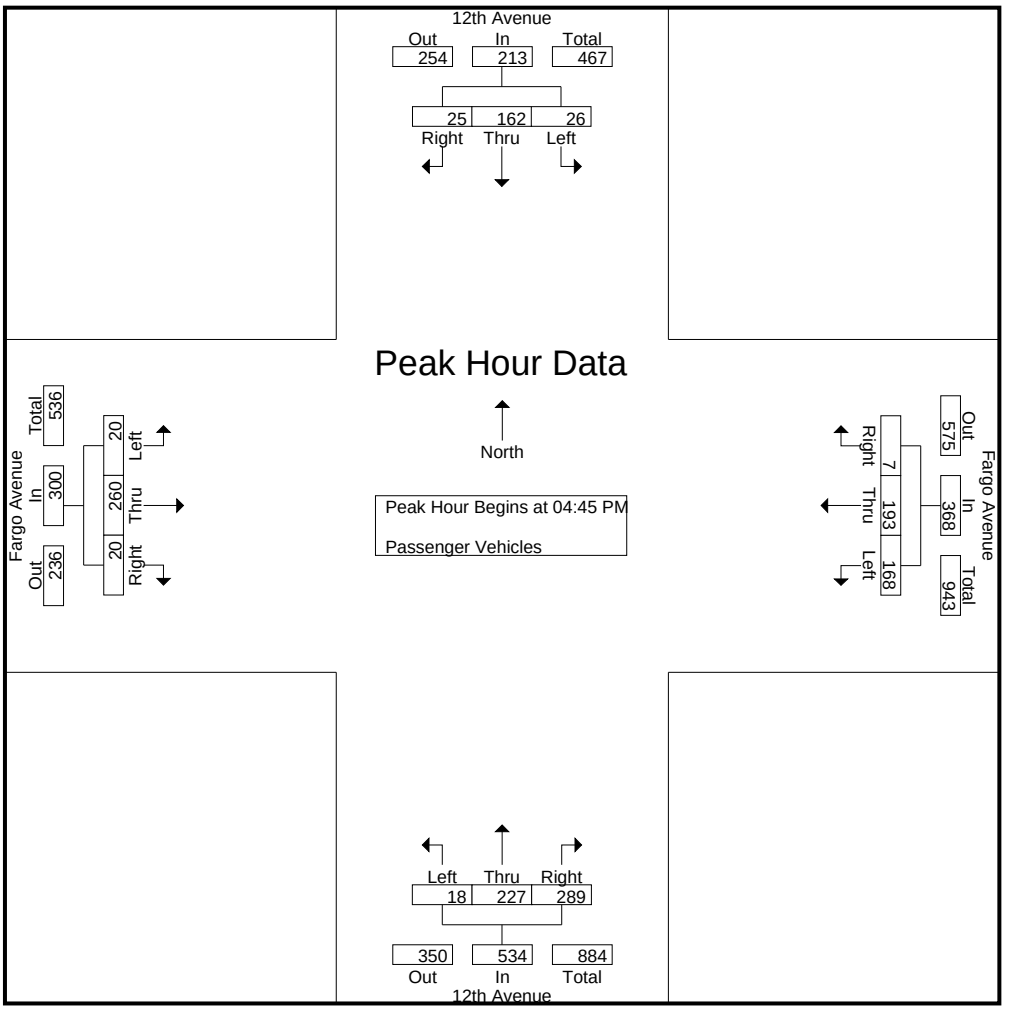
	12th Avenue Southbound				Fargo Avenue Westbound				12th Avenue Northbound				Fargo Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	4	39	7	50	50	50	6	106	5	55	64	124	3	49	3	55	335
04:15 PM	5	55	14	74	42	46	3	91	4	52	68	124	3	70	3	76	365
04:30 PM	4	45	3	52	42	48	3	93	3	37	53	93	0	66	4	70	308
04:45 PM	10	39	5	54	43	40	1	84	4	42	71	117	7	91	5	103	358
Total	23	178	29	230	177	184	13	374	16	186	256	458	13	276	15	304	1366
05:00 PM	4	36	8	48	31	52	3	86	4	91	84	179	1	58	1	60	373
05:15 PM	7	37	6	50	56	50	2	108	4	44	71	119	6	70	9	85	362
05:30 PM	5	50	6	61	38	51	1	90	6	50	63	119	6	41	5	52	322
05:45 PM	7	46	3	56	43	51	1	95	4	36	48	88	3	57	2	62	301
Total	23	169	23	215	168	204	7	379	18	221	266	505	16	226	17	259	1358
Grand Total	46	347	52	445	345	388	20	753	34	407	522	963	29	502	32	563	2724
Apprch %	10.3	78	11.7		45.8	51.5	2.7		3.5	42.3	54.2		5.2	89.2	5.7		
Total %	1.7	12.7	1.9	16.3	12.7	14.2	0.7	27.6	1.2	14.9	19.2	35.4	1.1	18.4	1.2	20.7	

	12th Avenue Southbound				Fargo Avenue Westbound				12th Avenue Northbound				Fargo Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	**10**	39	5	54	43	40	1	84	4	42	71	117	**7**	**91**	5	**103**	358
05:00 PM	4	36	**8**	48	31	**52**	**3**	86	4	**91**	**84**	**179**	1	58	1	60	**373**
05:15 PM	7	37	6	50	**56**	50	2	**108**	4	44	71	119	6	70	**9**	85	362
05:30 PM	5	**50**	6	**61**	38	51	1	90	**6**	50	63	119	6	41	5	52	322
Total Volume	26	162	25	213	168	193	7	368	18	227	289	534	20	260	20	300	1415
% App. Total	12.2	76.1	11.7		45.7	52.4	1.9		3.4	42.5	54.1		6.7	86.7	6.7		
PHF	.650	.810	.781	.873	.750	.928	.583	.852	.750	.624	.860	.746	.714	.714	.556	.728	.948

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

County of Kings
N/S: 12th Avenue
E/W: Fargo Avenue
Weather: Clear

File Name : 04_CKS_12th_Fargo PM
Site Code : 00323251
Start Date : 3/23/2023



Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	**10**	39	5	54	43	40	1	84	4	42	71	117	**7**	**91**	5	**103**
+15 mins.	4	36	**8**	48	31	**52**	**3**	86	4	**91**	**84**	**179**	1	58	1	60
+30 mins.	7	37	6	50	**56**	50	2	**108**	4	44	71	119	6	70	**9**	85
+45 mins.	5	**50**	6	**61**	38	51	1	90	**6**	50	63	119	6	41	5	52
Total Volume	26	162	25	213	168	193	7	368	18	227	289	534	20	260	20	300
% App. Total	12.2	76.1	11.7		45.7	52.4	1.9		3.4	42.5	54.1		6.7	86.7	6.7	
PHF	.650	.810	.781	.873	.750	.928	.583	.852	.750	.624	.860	.746	.714	.714	.556	.728

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

County of Kings
N/S: 12th Avenue
E/W: Fargo Avenue
Weather: Clear

File Name : 04_CKS_12th_Fargo PM
Site Code : 00323251
Start Date : 3/23/2023
Page No : 1

Groups Printed- Large 2 Axle Vehicles

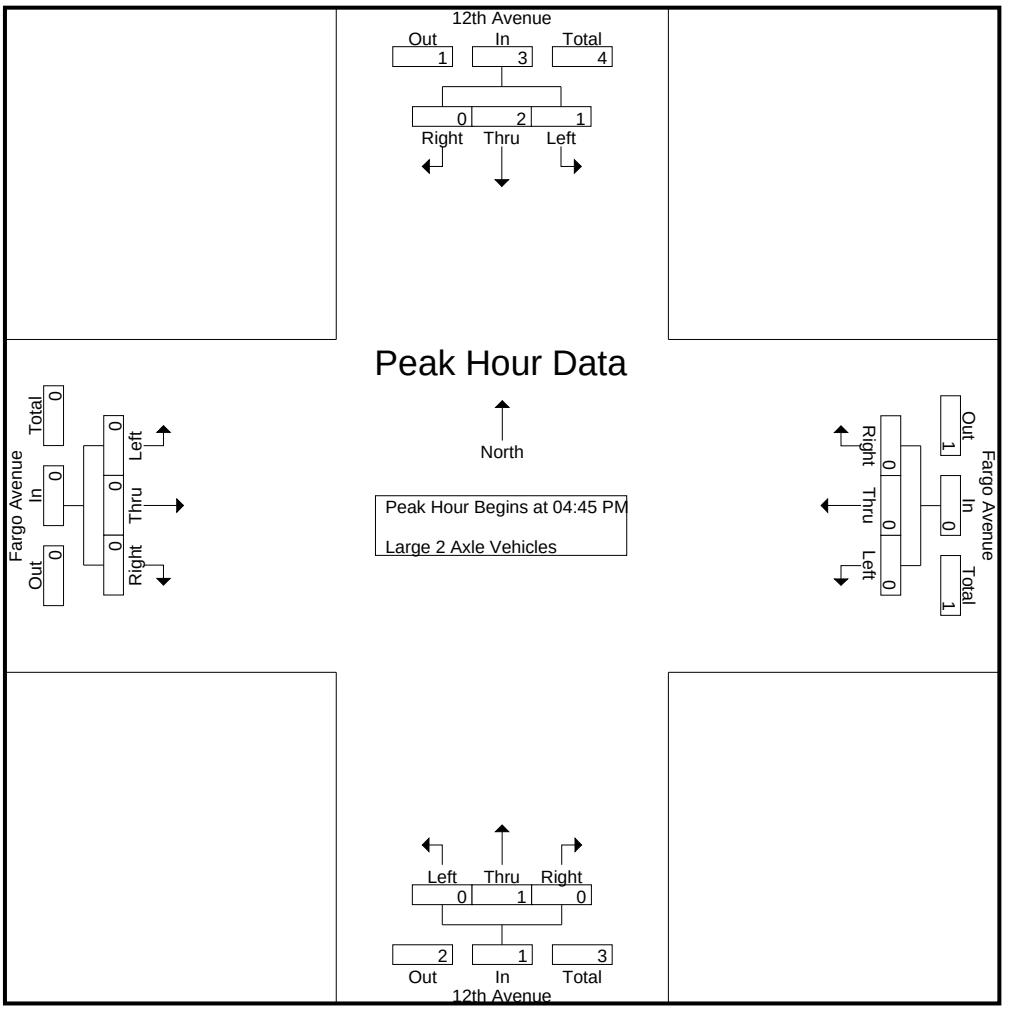
	12th Avenue Southbound				Fargo Avenue Westbound				12th Avenue Northbound				Fargo Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	1	1	2	1	1	0	2	4
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	1	0	1	2
04:45 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	2	0	2	0	0	0	0	0	1	1	2	1	2	0	3	7
05:00 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
05:15 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
05:30 PM	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	1	1	0	2	0	0	0	0	0	1	0	1	0	0	0	0	3
Grand Total	1	3	0	4	0	0	0	0	0	2	1	3	1	2	0	3	10
Apprch %	25	75	0		0	0	0		0	66.7	33.3		33.3	66.7	0		
Total %	10	30	0	40	0	0	0	0	0	20	10	30	10	20	0	30	

	12th Avenue Southbound				Fargo Avenue Westbound				12th Avenue Northbound				Fargo Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	**1**	0	**1**	0	0	0	0	0	0	0	0	0	0	0	0	**1**
05:00 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
05:15 PM	0	0	0	0	0	0	0	0	0	**1**	0	**1**	0	0	0	0	1
05:30 PM	**1**	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Total Volume	1	2	0	3	0	0	0	0	0	1	0	1	0	0	0	0	4
% App. Total	33.3	66.7	0		0	0	0		0	100	0		0	0	0		
PHF	.250	.500	.000	.750	.000	.000	.000	.000	.000	.250	.000	.250	.000	.000	.000	.000	1.00

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

County of Kings
N/S: 12th Avenue
E/W: Fargo Avenue
Weather: Clear

File Name : 04_CKS_12th_Fargo PM
Site Code : 00323251
Start Date : 3/23/2023



Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	0	**1**	0	**1**	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	**1**	0	**1**	0	0	0	0
+45 mins.	**1**	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	1	2	0	3	0	0	0	0	0	1	0	1	0	0	0	0
% App. Total	33.3	66.7	0		0	0	0		0	100	0		0	0	0	
PHF	.250	.500	.000	.750	.000	.000	.000	.000	.000	.250	.000	.250	.000	.000	.000	.000

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

County of Kings
N/S: 12th Avenue
E/W: Fargo Avenue
Weather: Clear

File Name : 04_CKS_12th_Fargo PM
Site Code : 00323251
Start Date : 3/23/2023
Page No : 1

Groups Printed- 3 Axle Vehicles

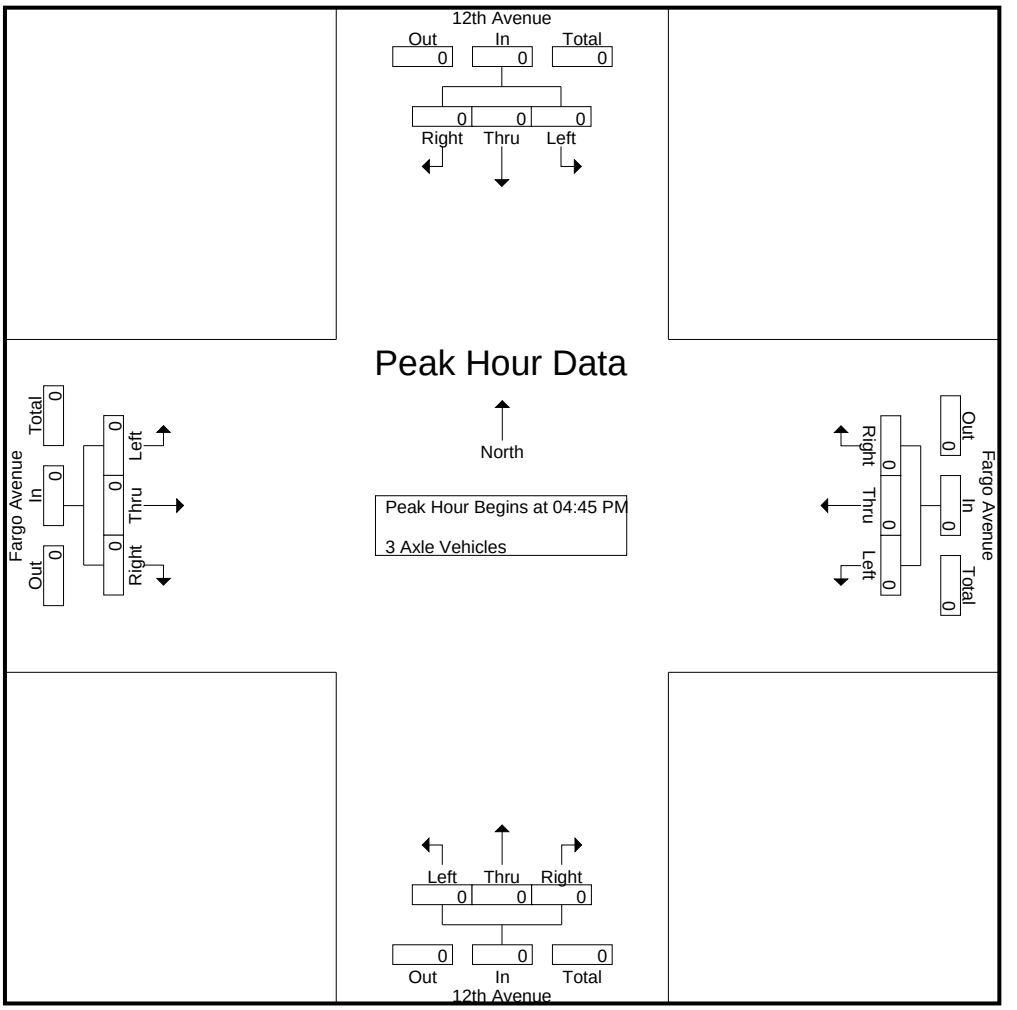
	12th Avenue Southbound				Fargo Avenue Westbound				12th Avenue Northbound				Fargo Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Apprch %	0	0	0		0	0	0		0	0	0		0	0	0		
Total %																	

	12th Avenue Southbound				Fargo Avenue Westbound				12th Avenue Northbound				Fargo Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0		0	0	0		0	0	0		0	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

County of Kings
N/S: 12th Avenue
E/W: Fargo Avenue
Weather: Clear

File Name : 04_CKS_12th_Fargo PM
Site Code : 00323251
Start Date : 3/23/2023



Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0		0	0	0		0	0	0		0	0	0	
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

County of Kings
N/S: 12th Avenue
E/W: Fargo Avenue
Weather: Clear

File Name : 04_CKS_12th_Fargo PM
Site Code : 00323251
Start Date : 3/23/2023
Page No : 1

Groups Printed- 4+ Axle Trucks

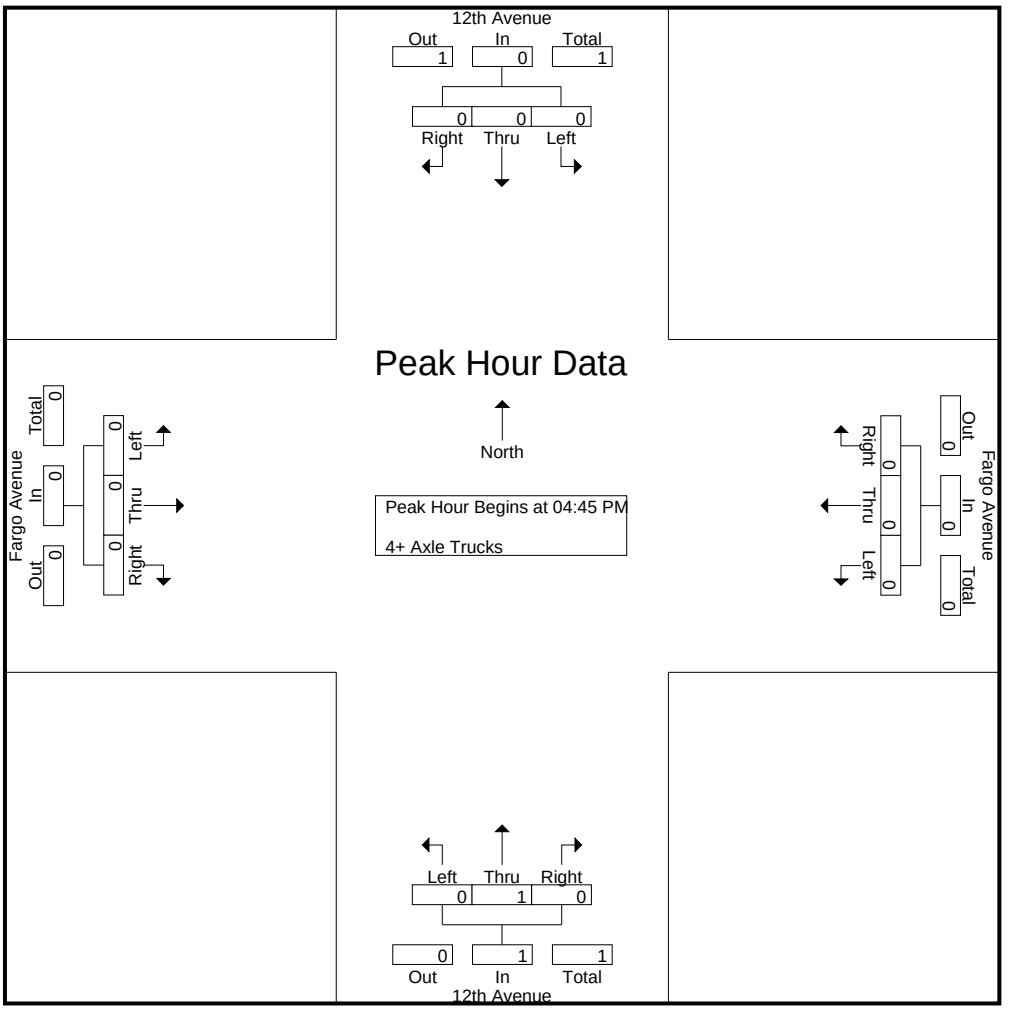
	12th Avenue Southbound				Fargo Avenue Westbound				12th Avenue Northbound				Fargo Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	2
05:00 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
Grand Total	0	0	0	0	0	0	0	0	0	3	0	3	0	0	0	0	3
Apprch %	0	0	0		0	0	0		0	100	0		0	0	0		
Total %	0	0	0	0	0	0	0	0	0	100	0	100	0	0	0	0	

	12th Avenue Southbound				Fargo Avenue Westbound				12th Avenue Northbound				Fargo Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	**1**	0	**1**	0	0	0	0	**1**
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
% App. Total	0	0	0		0	0	0		0	100	0		0	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250	.000	.250	.000	.000	.000	.000	.250

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

County of Kings
N/S: 12th Avenue
E/W: Fargo Avenue
Weather: Clear

File Name : 04_CKS_12th_Fargo PM
Site Code : 00323251
Start Date : 3/23/2023
Page No : 2



Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	**1**	0	**1**	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0
% App. Total	0	0	0		0	0	0		0	100	0		0	0	0	
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250	.000	.250	.000	.000	.000	.000

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 12th Avenue
E/W: Grangevile Boulevard
Weather: Clear

File Name : 03_HFD_12th_Gran AM
Site Code : 00322472
Start Date : 5/17/2022
Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

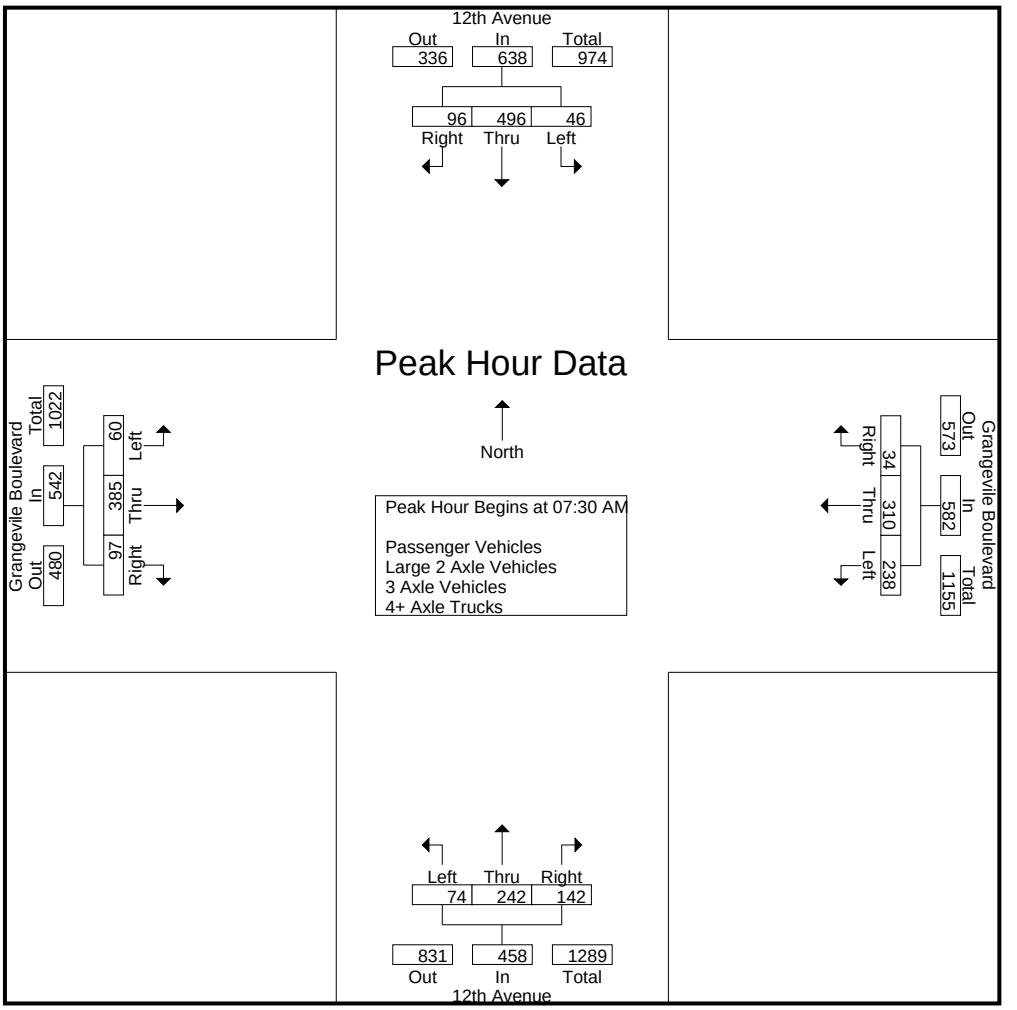
	12th Avenue Southbound				Grangevile Boulevard Westbound				12th Avenue Northbound				Grangevile Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	11	47	14	72	21	31	5	57	16	35	19	70	8	30	11	49	248
07:15 AM	14	68	12	94	36	54	13	103	23	36	25	84	4	44	8	56	337
07:30 AM	11	94	18	123	45	79	10	134	14	60	43	117	8	82	21	111	485
07:45 AM	16	164	20	200	79	105	10	194	12	58	35	105	16	122	28	166	665
Total	52	373	64	489	181	269	38	488	65	189	122	376	36	278	68	382	1735
08:00 AM	9	148	30	187	70	68	8	146	24	57	21	102	19	91	26	136	571
08:15 AM	10	90	28	128	44	58	6	108	24	67	43	134	17	90	22	129	499
08:30 AM	17	78	12	107	39	49	9	97	20	54	25	99	19	80	21	120	423
08:45 AM	14	65	6	85	31	38	6	75	12	48	29	89	3	58	13	74	323
Total	50	381	76	507	184	213	29	426	80	226	118	424	58	319	82	459	1816
Grand Total	102	754	140	996	365	482	67	914	145	415	240	800	94	597	150	841	3551
Apprch %	10.2	75.7	14.1		39.9	52.7	7.3		18.1	51.9	30		11.2	71	17.8		
Total %	2.9	21.2	3.9	28	10.3	13.6	1.9	25.7	4.1	11.7	6.8	22.5	2.6	16.8	4.2	23.7	
Passenger Vehicles	100	743	138	981	361	473	67	901	142	408	236	786	91	580	150	821	3489
% Passenger Vehicles	98	98.5	98.6	98.5	98.9	98.1	100	98.6	97.9	98.3	98.3	98.2	96.8	97.2	100	97.6	98.3
Large 2 Axle Vehicles	2	4	2	8	2	7	0	9	2	4	4	10	3	15	0	18	45
% Large 2 Axle Vehicles	2	0.5	1.4	0.8	0.5	1.5	0	1	1.4	1	1.7	1.2	3.2	2.5	0	2.1	1.3
3 Axle Vehicles	0	1	0	1	2	2	0	4	0	0	0	0	0	1	0	1	6
% 3 Axle Vehicles	0	0.1	0	0.1	0.5	0.4	0	0.4	0	0	0	0	0	0.2	0	0.1	0.2
4+ Axle Trucks	0	6	0	6	0	0	0	0	1	3	0	4	0	1	0	1	11
% 4+ Axle Trucks	0	0.8	0	0.6	0	0	0	0	0.7	0.7	0	0.5	0	0.2	0	0.1	0.3

	12th Avenue Southbound				Grangevile Boulevard Westbound				12th Avenue Northbound				Grangevile Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	11	94	18	123	45	79	**10**	134	14	60	**43**	117	8	82	21	111	485
07:45 AM	**16**	**164**	20	**200**	**79**	**105**	10	**194**	12	58	35	105	16	**122**	**28**	**166**	**665**
08:00 AM	9	148	**30**	187	70	68	8	146	**24**	57	21	102	**19**	91	26	136	571
08:15 AM	10	90	28	128	44	58	6	108	24	**67**	43	**134**	17	90	22	129	499
Total Volume	46	496	96	638	238	310	34	582	74	242	142	458	60	385	97	542	2220
% App. Total	7.2	77.7	15		40.9	53.3	5.8		16.2	52.8	31		11.1	71	17.9		
PHF	.719	.756	.800	.798	.753	.738	.850	.750	.771	.903	.826	.854	.789	.789	.866	.816	.835

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 12th Avenue
E/W: Grangevile Boulevard
Weather: Clear

File Name : 03_HFD_12th_Gran AM
Site Code : 00322472
Start Date : 5/17/2022
Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:45 AM			
+0 mins.	11	94	18	123	45	79	**10**	134	14	60	**43**	117	16	**122**	**28**	**166**
+15 mins.	**16**	**164**	20	**200**	**79**	**105**	10	**194**	12	58	35	105	**19**	91	26	136
+30 mins.	9	148	**30**	187	70	68	8	146	**24**	57	21	102	17	90	22	129
+45 mins.	10	90	28	128	44	58	6	108	24	**67**	43	**134**	19	80	21	120
Total Volume	46	496	96	638	238	310	34	582	74	242	142	458	71	383	97	551
% App. Total	7.2	77.7	15		40.9	53.3	5.8		16.2	52.8	31		12.9	69.5	17.6	
PHF	.719	.756	.800	.798	.753	.738	.850	.750	.771	.903	.826	.854	.934	.785	.866	.830

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 12th Avenue
E/W: Grangevile Boulevard
Weather: Clear

File Name : 03_HFD_12th_Gran AM
Site Code : 00322472
Start Date : 5/17/2022
Page No : 1

Groups Printed- Passenger Vehicles

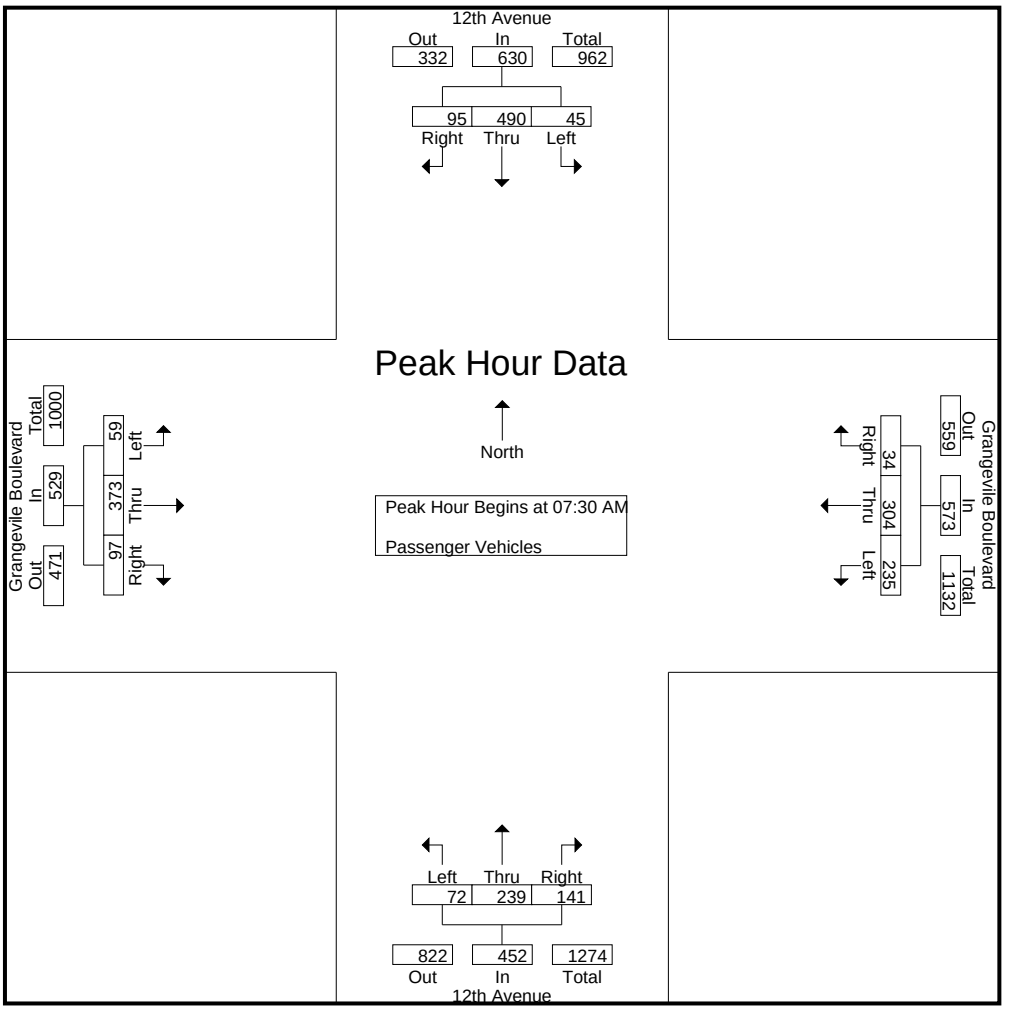
	12th Avenue Southbound				Grangevile Boulevard Westbound				12th Avenue Northbound				Grangevile Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	11	46	13	70	21	30	5	56	16	34	18	68	7	29	11	47	241
07:15 AM	13	66	12	91	36	53	13	102	22	36	24	82	4	44	8	56	331
07:30 AM	10	91	17	118	44	77	10	131	14	60	43	117	8	80	21	109	475
07:45 AM	16	163	20	199	78	103	10	191	11	57	35	103	16	120	28	164	657
Total	50	366	62	478	179	263	38	480	63	187	120	370	35	273	68	376	1704
08:00 AM	9	146	30	185	70	67	8	145	23	55	21	99	19	87	26	132	561
08:15 AM	10	90	28	128	43	57	6	106	24	67	42	133	16	86	22	124	491
08:30 AM	17	76	12	105	39	49	9	97	20	53	25	98	18	76	21	115	415
08:45 AM	14	65	6	85	30	37	6	73	12	46	28	86	3	58	13	74	318
Total	50	377	76	503	182	210	29	421	79	221	116	416	56	307	82	445	1785
Grand Total	100	743	138	981	361	473	67	901	142	408	236	786	91	580	150	821	3489
Apprch %	10.2	75.7	14.1		40.1	52.5	7.4		18.1	51.9	30		11.1	70.6	18.3		
Total %	2.9	21.3	4	28.1	10.3	13.6	1.9	25.8	4.1	11.7	6.8	22.5	2.6	16.6	4.3	23.5	

	12th Avenue Southbound				Grangevile Boulevard Westbound				12th Avenue Northbound				Grangevile Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	10	91	17	118	44	77	**10**	131	14	60	**43**	117	8	80	21	109	475
07:45 AM	**16**	**163**	20	**199**	**78**	**103**	10	**191**	11	57	35	103	16	**120**	**28**	**164**	**657**
08:00 AM	9	146	**30**	185	70	67	8	145	23	55	21	99	**19**	87	26	132	561
08:15 AM	10	90	28	128	43	57	6	106	**24**	**67**	42	**133**	16	86	22	124	491
Total Volume	45	490	95	630	235	304	34	573	72	239	141	452	59	373	97	529	2184
% App. Total	7.1	77.8	15.1		41	53.1	5.9		15.9	52.9	31.2		11.2	70.5	18.3		
PHF	.703	.752	.792	.791	.753	.738	.850	.750	.750	.892	.820	.850	.776	.777	.866	.806	.831

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 12th Avenue
E/W: Grangevile Boulevard
Weather: Clear

File Name : 03_HFD_12th_Gran AM
Site Code : 00322472
Start Date : 5/17/2022
Page No : 2



Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	10	91	17	118	44	77	**10**	131	14	60	**43**	117	8	80	21	109
+15 mins.	**16**	**163**	20	**199**	**78**	**103**	10	**191**	11	57	35	103	16	**120**	**28**	**164**
+30 mins.	9	146	**30**	185	70	67	8	145	23	55	21	99	**19**	87	26	132
+45 mins.	10	90	28	128	43	57	6	106	**24**	**67**	42	**133**	16	86	22	124
Total Volume	45	490	95	630	235	304	34	573	72	239	141	452	59	373	97	529
% App. Total	7.1	77.8	15.1		41	53.1	5.9		15.9	52.9	31.2		11.2	70.5	18.3	
PHF	.703	.752	.792	.791	.753	.738	.850	.750	.750	.892	.820	.850	.776	.777	.866	.806

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 12th Avenue
E/W: Grangevile Boulevard
Weather: Clear

File Name : 03_HFD_12th_Gran AM
Site Code : 00322472
Start Date : 5/17/2022
Page No : 1

Groups Printed- Large 2 Axle Vehicles

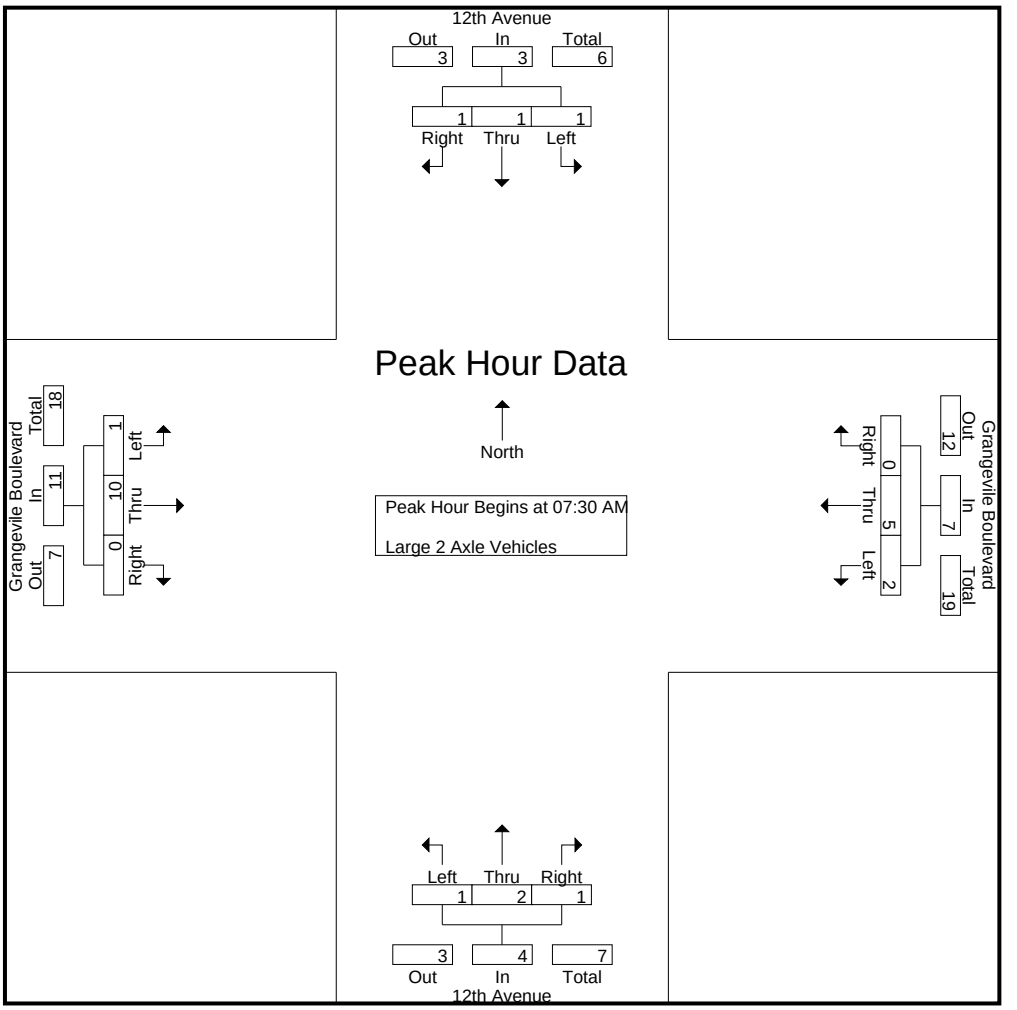
	12th Avenue Southbound				Grangevile Boulevard Westbound				12th Avenue Northbound				Grangevile Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	1	1	2	0	0	0	0	0	0	1	1	1	1	0	2	5
07:15 AM	1	1	0	2	0	1	0	1	1	0	1	2	0	0	0	0	5
07:30 AM	1	1	1	3	1	2	0	3	0	0	0	0	0	1	0	1	7
07:45 AM	0	0	0	0	0	2	0	2	1	1	0	2	0	2	0	2	6
Total	2	3	2	7	1	5	0	6	2	1	2	5	1	4	0	5	23
08:00 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	3	0	3	4
08:15 AM	0	0	0	0	1	1	0	2	0	0	1	1	1	4	0	5	8
08:30 AM	0	1	0	1	0	0	0	0	0	1	0	1	1	4	0	5	7
08:45 AM	0	0	0	0	0	1	0	1	0	1	1	2	0	0	0	0	3
Total	0	1	0	1	1	2	0	3	0	3	2	5	2	11	0	13	22
Grand Total	2	4	2	8	2	7	0	9	2	4	4	10	3	15	0	18	45
Apprch %	25	50	25		22.2	77.8	0		20	40	40		16.7	83.3	0		
Total %	4.4	8.9	4.4	17.8	4.4	15.6	0	20	4.4	8.9	8.9	22.2	6.7	33.3	0	40	

	12th Avenue Southbound				Grangevile Boulevard Westbound				12th Avenue Northbound				Grangevile Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	**1**	**1**	**1**	**3**	**1**	**2**	0	**3**	0	0	0	0	0	1	0	1	7
07:45 AM	0	0	0	0	0	2	0	2	**1**	**1**	0	**2**	0	2	0	2	6
08:00 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	3	0	3	4
08:15 AM	0	0	0	0	1	1	0	2	0	0	**1**	1	**1**	**4**	0	**5**	**8**
Total Volume	1	1	1	3	2	5	0	7	1	2	1	4	1	10	0	11	25
% App. Total	33.3	33.3	33.3		28.6	71.4	0		25	50	25		9.1	90.9	0		
PHF	.250	.250	.250	.250	.500	.625	.000	.583	.250	.500	.250	.500	.250	.625	.000	.550	.781

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 12th Avenue
E/W: Grangevile Boulevard
Weather: Clear

File Name : 03_HFD_12th_Gran AM
Site Code : 00322472
Start Date : 5/17/2022
Page No : 2



Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	**1**	**1**	**1**	**3**	**1**	**2**	0	**3**	0	0	0	0	0	1	0	1
+15 mins.	0	0	0	0	0	2	0	2	**1**	**1**	0	**2**	0	2	0	2
+30 mins.	0	0	0	0	0	0	0	0	0	1	0	1	0	3	0	3
+45 mins.	0	0	0	0	1	1	0	2	0	0	**1**	1	**1**	**4**	0	**5**
Total Volume	1	1	1	3	2	5	0	7	1	2	1	4	1	10	0	11
% App. Total	33.3	33.3	33.3		28.6	71.4	0		25	50	25		9.1	90.9	0	
PHF	.250	.250	.250	.250	.500	.625	.000	.583	.250	.500	.250	.500	.250	.625	.000	.550

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 12th Avenue
E/W: Grangevile Boulevard
Weather: Clear

File Name : 03_HFD_12th_Gran AM
Site Code : 00322472
Start Date : 5/17/2022
Page No : 1

Groups Printed- 3 Axle Vehicles

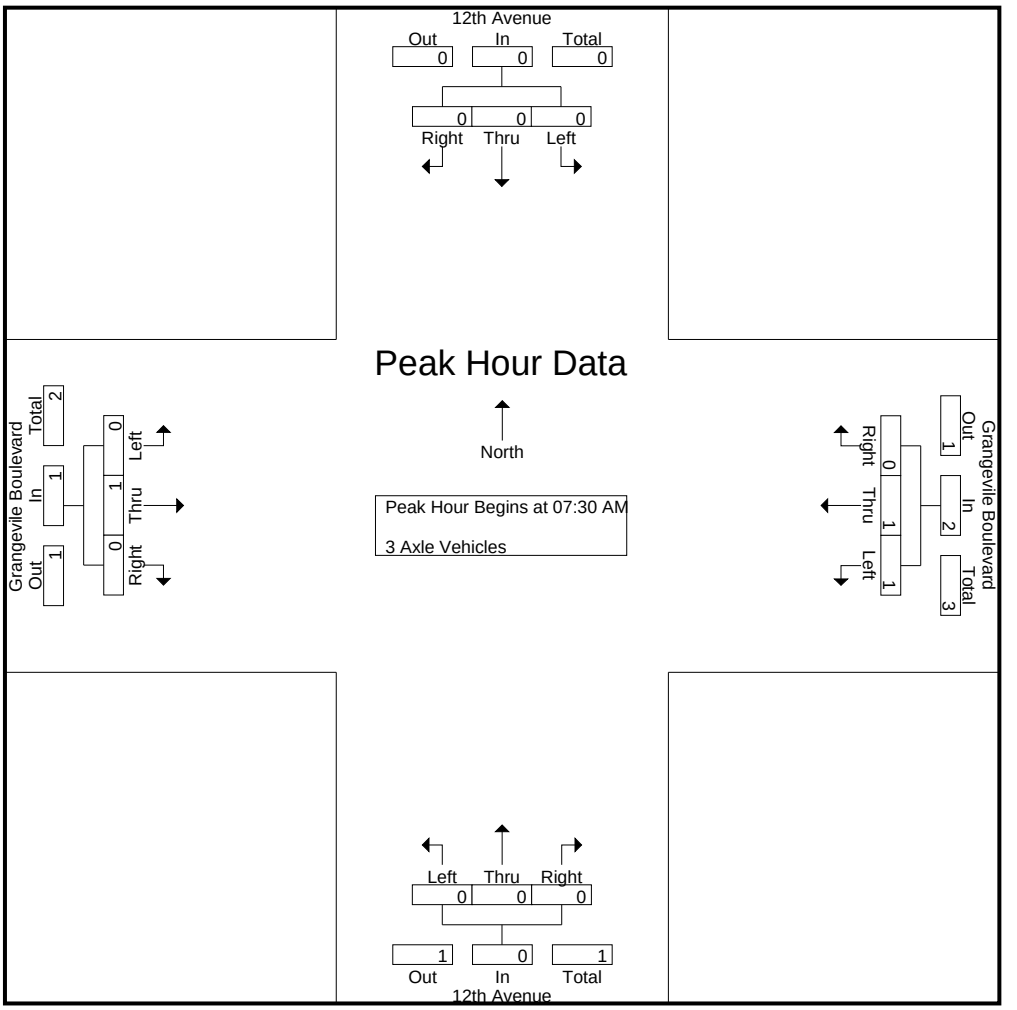
	12th Avenue Southbound				Grangevile Boulevard Westbound				12th Avenue Northbound				Grangevile Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
07:15 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1
Total	0	1	0	1	1	1	0	2	0	0	0	0	0	0	0	0	3
08:00 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1
Total	0	0	0	0	1	1	0	2	0	0	0	0	0	1	0	1	3
Grand Total	0	1	0	1	2	2	0	4	0	0	0	0	0	1	0	1	6
Apprch %	0	100	0		50	50	0		0	0	0		0	100	0		
Total %	0	16.7	0	16.7	33.3	33.3	0	66.7	0	0	0	0	0	16.7	0	16.7	

	12th Avenue Southbound				Grangevile Boulevard Westbound				12th Avenue Northbound				Grangevile Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	**1**	0	0	**1**	0	0	0	0	0	0	0	0	1
08:00 AM	0	0	0	0	0	**1**	0	1	0	0	0	0	0	**1**	0	**1**	**2**
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	1	1	0	2	0	0	0	0	0	1	0	1	3
% App. Total	0	0	0		50	50	0		0	0	0		0	100	0		
PHF	.000	.000	.000	.000	.250	.250	.000	.500	.000	.000	.000	.000	.000	.250	.000	.250	.375

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 12th Avenue
E/W: Grangevile Boulevard
Weather: Clear

File Name : 03_HFD_12th_Gran AM
Site Code : 00322472
Start Date : 5/17/2022
Page No : 2



Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	**1**	0	0	**1**	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	**1**	0	1	0	0	0	0	0	**1**	0	**1**
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	1	1	0	2	0	0	0	0	0	1	0	1
% App. Total	0	0	0		50	50	0		0	0	0		0	100	0	
PHF	.000	.000	.000	.000	.250	.250	.000	.500	.000	.000	.000	.000	.000	.250	.000	.250

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 12th Avenue
E/W: Grangevile Boulevard
Weather: Clear

File Name : 03_HFD_12th_Gran AM
Site Code : 00322472
Start Date : 5/17/2022
Page No : 1

Groups Printed- 4+ Axle Trucks

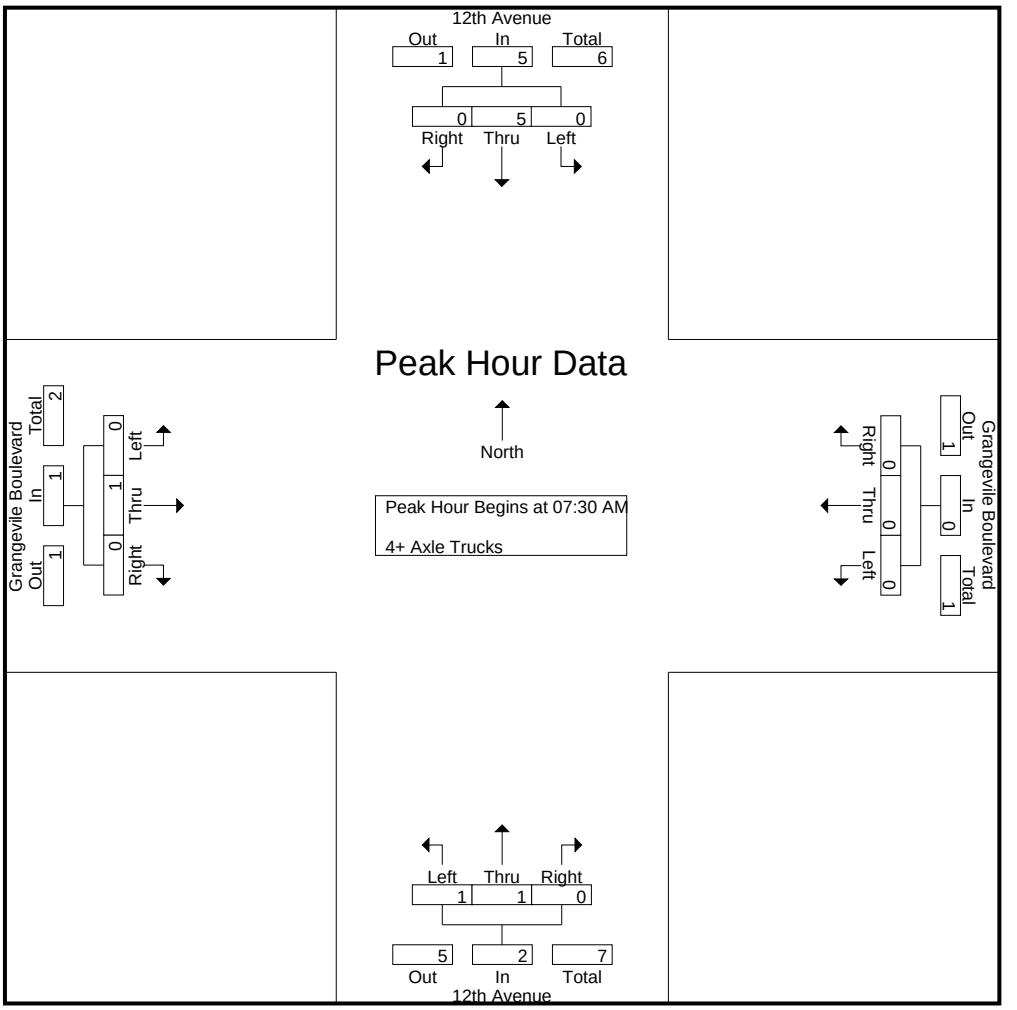
	12th Avenue Southbound				Grangevile Boulevard Westbound				12th Avenue Northbound				Grangevile Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	2	0	2	0	0	0	0	0	0	0	0	0	1	0	1	3
07:45 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	3	0	3	0	0	0	0	0	1	0	1	0	1	0	1	5
08:00 AM	0	2	0	2	0	0	0	0	1	1	0	2	0	0	0	0	4
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
08:45 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
Total	0	3	0	3	0	0	0	0	1	2	0	3	0	0	0	0	6
Grand Total	0	6	0	6	0	0	0	0	1	3	0	4	0	1	0	1	11
Apprch %	0	100	0		0	0	0		25	75	0		0	100	0		
Total %	0	54.5	0	54.5	0	0	0	0	9.1	27.3	0	36.4	0	9.1	0	9.1	

	12th Avenue Southbound				Grangevile Boulevard Westbound				12th Avenue Northbound				Grangevile Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	**2**	0	**2**	0	0	0	0	0	0	0	0	0	**1**	0	**1**	3
07:45 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
08:00 AM	0	2	0	2	0	0	0	0	**1**	**1**	0	**2**	0	0	0	0	**4**
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	5	0	5	0	0	0	0	1	1	0	2	0	1	0	1	8
% App. Total	0	100	0		0	0	0		50	50	0		0	100	0		
PHF	.000	.625	.000	.625	.000	.000	.000	.000	.250	.250	.000	.250	.000	.250	.000	.250	.500

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 12th Avenue
E/W: Grangevile Boulevard
Weather: Clear

File Name : 03_HFD_12th_Gran AM
Site Code : 00322472
Start Date : 5/17/2022
Page No : 2



Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	0	**2**	0	**2**	0	0	0	0	0	0	0	0	0	**1**	0	**1**
+15 mins.	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	2	0	2	0	0	0	0	**1**	**1**	0	**2**	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	5	0	5	0	0	0	0	1	1	0	2	0	1	0	1
% App. Total	0	100	0		0	0	0		50	50	0		0	100	0	
PHF	.000	.625	.000	.625	.000	.000	.000	.000	.250	.250	.000	.250	.000	.250	.000	.250

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 12th Avenue
E/W: Grangevile Boulevard
Weather: Clear

File Name : 03_HFD_12th_Gran PM
Site Code : 00322472
Start Date : 5/17/2022
Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

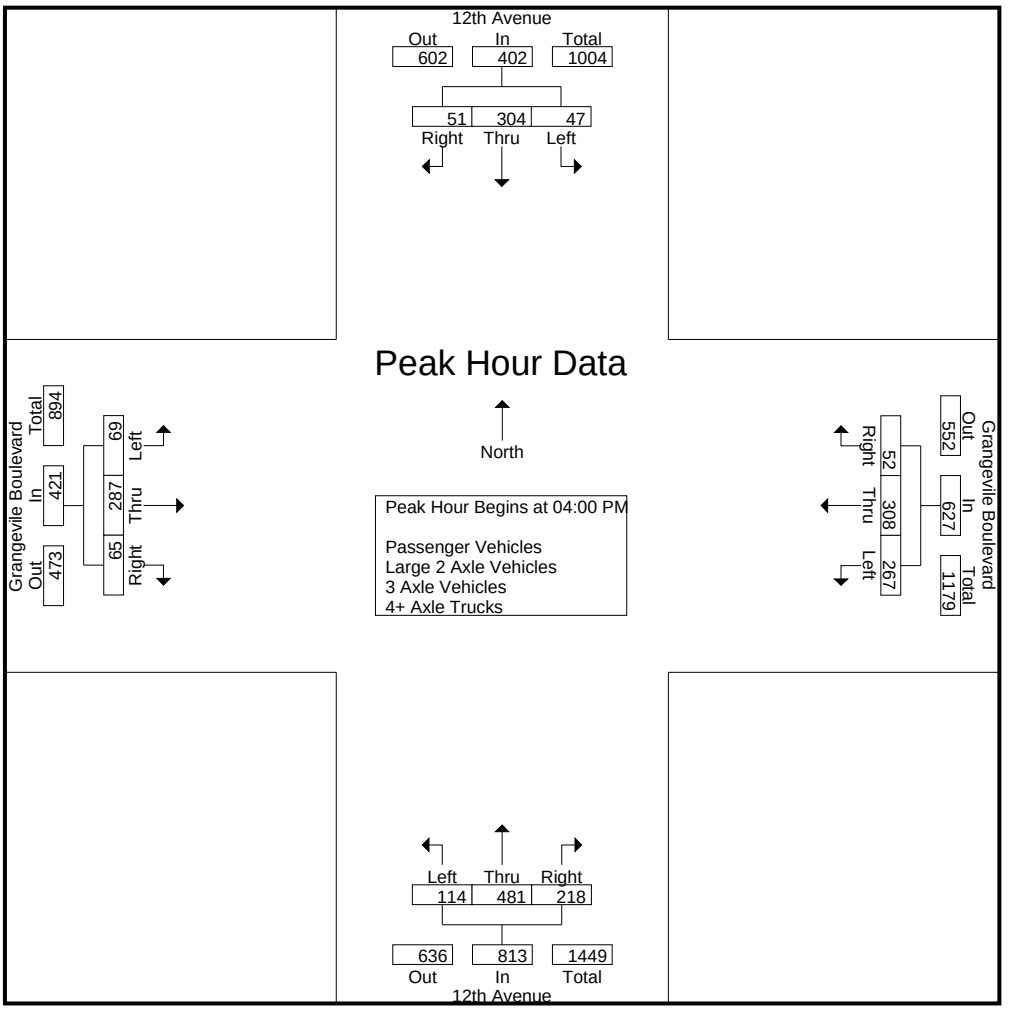
	12th Avenue Southbound				Grangevile Boulevard Westbound				12th Avenue Northbound				Grangevile Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	4	63	11	78	59	70	11	140	36	134	71	241	18	71	12	101	560
04:15 PM	16	84	14	114	107	129	20	256	26	120	46	192	18	76	11	105	667
04:30 PM	19	82	12	113	46	51	10	107	32	99	52	183	7	61	14	82	485
04:45 PM	8	75	14	97	55	58	11	124	20	128	49	197	26	79	28	133	551
Total	47	304	51	402	267	308	52	627	114	481	218	813	69	287	65	421	2263
05:00 PM	7	76	4	87	34	76	6	116	45	163	58	266	10	59	5	74	543
05:15 PM	4	83	9	96	57	55	15	127	27	124	51	202	17	73	17	107	532
05:30 PM	14	118	15	147	46	54	12	112	26	108	56	190	20	66	13	99	548
05:45 PM	13	79	15	107	66	49	6	121	24	109	62	195	19	66	8	93	516
Total	38	356	43	437	203	234	39	476	122	504	227	853	66	264	43	373	2139
Grand Total	85	660	94	839	470	542	91	1103	236	985	445	1666	135	551	108	794	4402
Apprch %	10.1	78.7	11.2		42.6	49.1	8.3		14.2	59.1	26.7		17	69.4	13.6		
Total %	1.9	15	2.1	19.1	10.7	12.3	2.1	25.1	5.4	22.4	10.1	37.8	3.1	12.5	2.5	18	
Passenger Vehicles	85	654	94	833	469	537	91	1097	235	981	444	1660	134	550	106	790	4380
% Passenger Vehicles	100	99.1	100	99.3	99.8	99.1	100	99.5	99.6	99.6	99.8	99.6	99.3	99.8	98.1	99.5	99.5
Large 2 Axle Vehicles	0	4	0	4	1	5	0	6	1	1	1	3	1	0	1	2	15
% Large 2 Axle Vehicles	0	0.6	0	0.5	0.2	0.9	0	0.5	0.4	0.1	0.2	0.2	0.7	0	0.9	0.3	0.3
3 Axle Vehicles	0	1	0	1	0	0	0	0	0	0	0	0	0	1	1	2	3
% 3 Axle Vehicles	0	0.2	0	0.1	0	0	0	0	0	0	0	0	0	0.2	0.9	0.3	0.1
4+ Axle Trucks	0	1	0	1	0	0	0	0	0	3	0	3	0	0	0	0	4
% 4+ Axle Trucks	0	0.2	0	0.1	0	0	0	0	0	0.3	0	0.2	0	0	0	0	0.1

	12th Avenue Southbound				Grangevile Boulevard Westbound				12th Avenue Northbound				Grangevile Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	4	63	11	78	59	70	11	140	**36**	**134**	**71**	**241**	18	71	12	101	560
04:15 PM	16	**84**	**14**	**114**	**107**	**129**	**20**	**256**	26	120	46	192	18	76	11	105	**667**
04:30 PM	**19**	82	12	113	46	51	10	107	32	99	52	183	7	61	14	82	485
04:45 PM	8	75	14	97	55	58	11	124	20	128	49	197	**26**	**79**	**28**	**133**	551
Total Volume	47	304	51	402	267	308	52	627	114	481	218	813	69	287	65	421	2263
% App. Total	11.7	75.6	12.7		42.6	49.1	8.3		14	59.2	26.8		16.4	68.2	15.4		
PHF	.618	.905	.911	.882	.624	.597	.650	.612	.792	.897	.768	.843	.663	.908	.580	.791	.848

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 12th Avenue
E/W: Grangevile Boulevard
Weather: Clear

File Name : 03_HFD_12th_Gran PM
Site Code : 00322472
Start Date : 5/17/2022
Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	05:00 PM				04:00 PM				04:45 PM				04:00 PM			
+0 mins.	7	76	4	87	59	70	11	140	20	128	49	197	18	71	12	101
+15 mins.	4	83	9	96	**107**	**129**	**20**	**256**	**45**	**163**	**58**	**266**	18	76	11	105
+30 mins.	**14**	**118**	**15**	**147**	46	51	10	107	27	124	51	202	7	61	14	82
+45 mins.	13	79	15	107	55	58	11	124	26	108	56	190	**26**	**79**	**28**	**133**
Total Volume	38	356	43	437	267	308	52	627	118	523	214	855	69	287	65	421
% App. Total	8.7	81.5	9.8		42.6	49.1	8.3		13.8	61.2	25		16.4	68.2	15.4	
PHF	.679	.754	.717	.743	.624	.597	.650	.612	.656	.802	.922	.804	.663	.908	.580	.791

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 12th Avenue
E/W: Grangevile Boulevard
Weather: Clear

File Name : 03_HFD_12th_Gran PM
Site Code : 00322472
Start Date : 5/17/2022
Page No : 1

Groups Printed- Passenger Vehicles

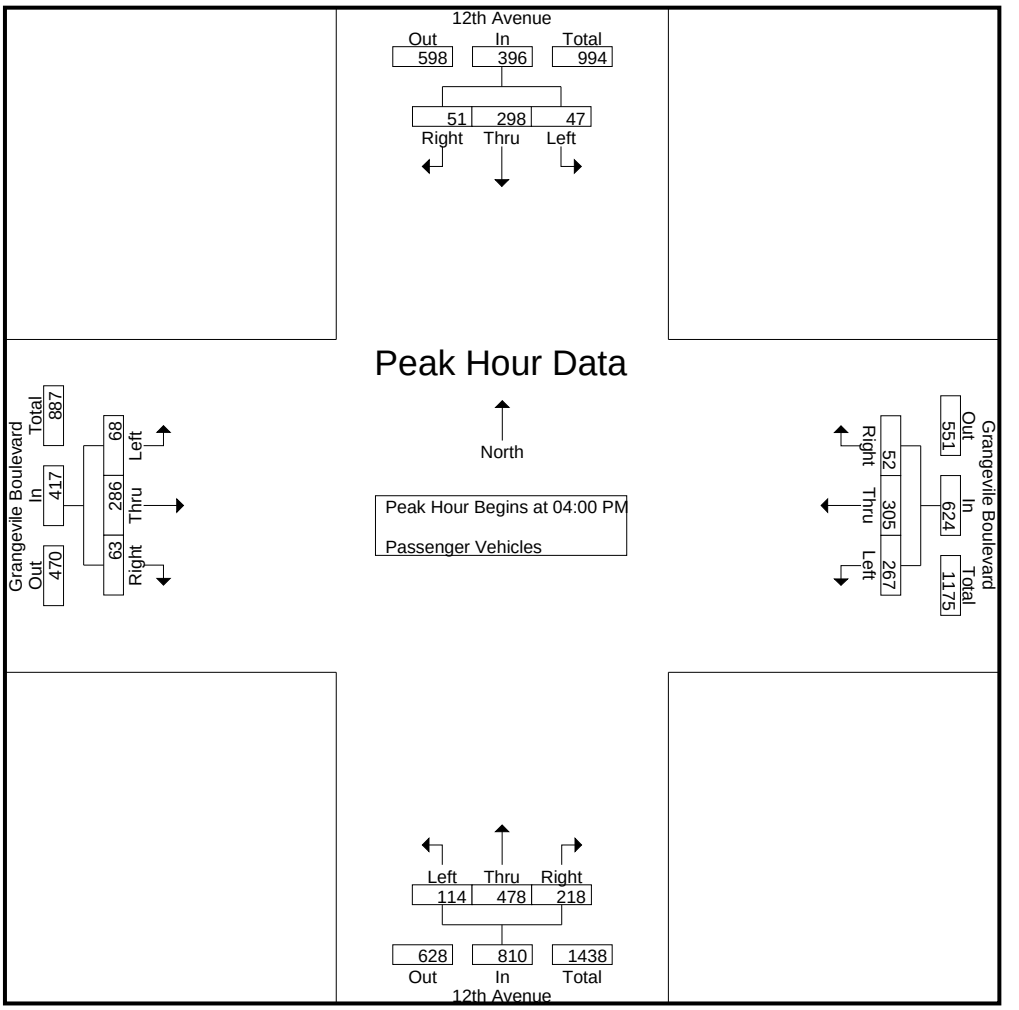
	12th Avenue Southbound				Grangevile Boulevard Westbound				12th Avenue Northbound				Grangevile Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	4	63	11	78	59	70	11	140	36	134	71	241	17	71	12	100	559
04:15 PM	16	80	14	110	107	128	20	255	26	119	46	191	18	75	11	104	660
04:30 PM	19	81	12	112	46	50	10	106	32	97	52	181	7	61	12	80	479
04:45 PM	8	74	14	96	55	57	11	123	20	128	49	197	26	79	28	133	549
Total	47	298	51	396	267	305	52	624	114	478	218	810	68	286	63	417	2247
05:00 PM	7	76	4	87	34	76	6	116	45	162	58	265	10	59	5	74	542
05:15 PM	4	83	9	96	56	54	15	125	27	124	51	202	17	73	17	107	530
05:30 PM	14	118	15	147	46	54	12	112	26	108	55	189	20	66	13	99	547
05:45 PM	13	79	15	107	66	48	6	120	23	109	62	194	19	66	8	93	514
Total	38	356	43	437	202	232	39	473	121	503	226	850	66	264	43	373	2133
Grand Total	85	654	94	833	469	537	91	1097	235	981	444	1660	134	550	106	790	4380
Apprch %	10.2	78.5	11.3		42.8	49	8.3		14.2	59.1	26.7		17	69.6	13.4		
Total %	1.9	14.9	2.1	19	10.7	12.3	2.1	25	5.4	22.4	10.1	37.9	3.1	12.6	2.4	18	

	12th Avenue Southbound				Grangevile Boulevard Westbound				12th Avenue Northbound				Grangevile Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	4	63	11	78	59	70	11	140	**36**	**134**	**71**	**241**	17	71	12	100	559
04:15 PM	16	80	**14**	110	**107**	**128**	**20**	**255**	26	119	46	191	18	75	11	104	**660**
04:30 PM	**19**	**81**	12	**112**	46	50	10	106	32	97	52	181	7	61	12	80	479
04:45 PM	8	74	14	96	55	57	11	123	20	128	49	197	**26**	**79**	**28**	**133**	549
Total Volume	47	298	51	396	267	305	52	624	114	478	218	810	68	286	63	417	2247
% App. Total	11.9	75.3	12.9		42.8	48.9	8.3		14.1	59	26.9		16.3	68.6	15.1		
PHF	.618	.920	.911	.884	.624	.596	.650	.612	.792	.892	.768	.840	.654	.905	.563	.784	.851

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 12th Avenue
E/W: Grangevile Boulevard
Weather: Clear

File Name : 03_HFD_12th_Gran PM
Site Code : 00322472
Start Date : 5/17/2022
Page No : 2



Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:00 PM				04:00 PM				04:00 PM				04:00 PM			
+0 mins.	4	63	11	78	59	70	11	140	**36**	**134**	**71**	**241**	17	71	12	100
+15 mins.	16	80	**14**	110	**107**	**128**	**20**	**255**	26	119	46	191	18	75	11	104
+30 mins.	**19**	**81**	12	**112**	46	50	10	106	32	97	52	181	7	61	12	80
+45 mins.	8	74	14	96	55	57	11	123	20	128	49	197	**26**	**79**	**28**	**133**
Total Volume	47	298	51	396	267	305	52	624	114	478	218	810	68	286	63	417
% App. Total	11.9	75.3	12.9		42.8	48.9	8.3		14.1	59	26.9		16.3	68.6	15.1	
PHF	.618	.920	.911	.884	.624	.596	.650	.612	.792	.892	.768	.840	.654	.905	.563	.784

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 12th Avenue
E/W: Grangevile Boulevard
Weather: Clear

File Name : 03_HFD_12th_Gran PM
Site Code : 00322472
Start Date : 5/17/2022
Page No : 1

Groups Printed- Large 2 Axle Vehicles

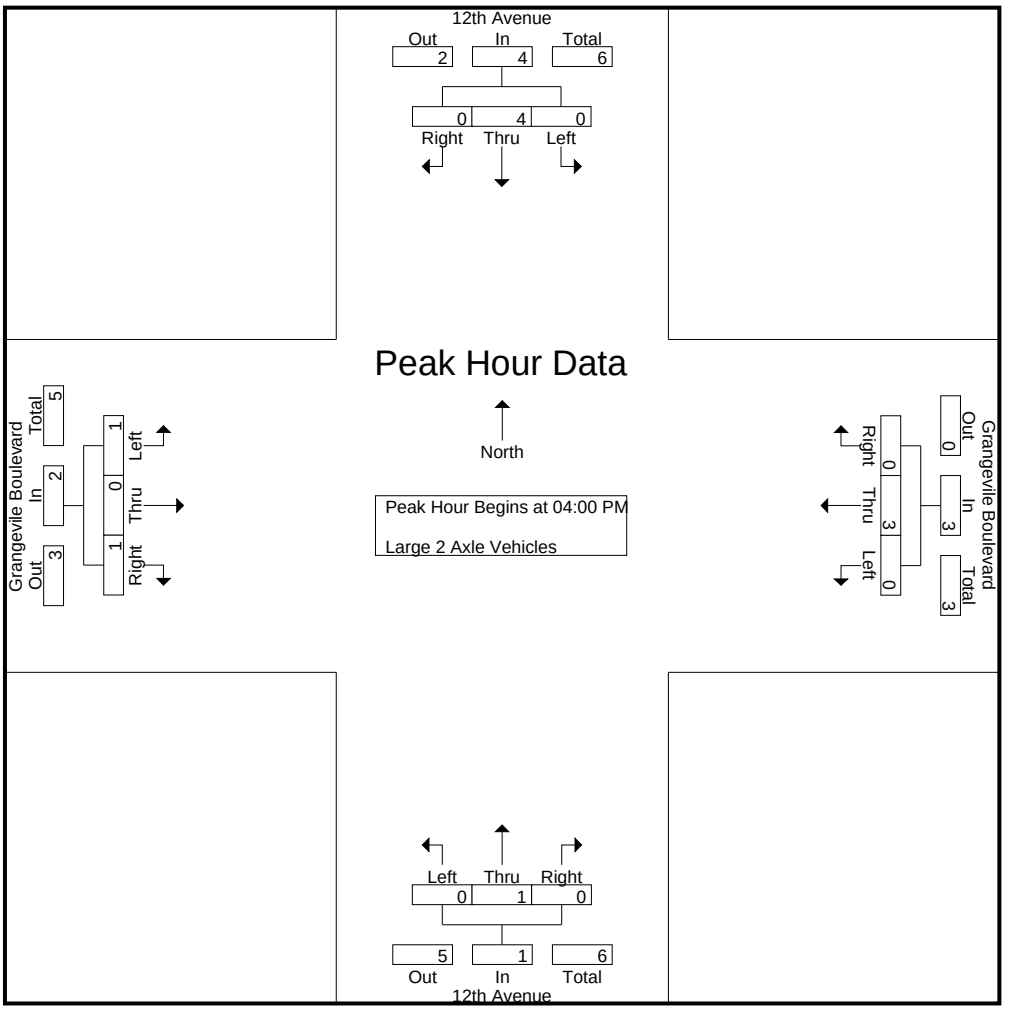
	12th Avenue Southbound				Grangevile Boulevard Westbound				12th Avenue Northbound				Grangevile Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
04:15 PM	0	3	0	3	0	1	0	1	0	1	0	1	0	0	0	0	5
04:30 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1	1	2
04:45 PM	0	1	0	1	0	1	0	1	0	0	0	0	0	0	0	0	2
Total	0	4	0	4	0	3	0	3	0	1	0	1	1	0	1	2	10
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	1	1	0	2	0	0	0	0	0	0	0	0	2
05:30 PM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1
05:45 PM	0	0	0	0	0	1	0	1	1	0	0	1	0	0	0	0	2
Total	0	0	0	0	1	2	0	3	1	0	1	2	0	0	0	0	5
Grand Total	0	4	0	4	1	5	0	6	1	1	1	3	1	0	1	2	15
Apprch %	0	100	0		16.7	83.3	0		33.3	33.3	33.3		50	0	50		
Total %	0	26.7	0	26.7	6.7	33.3	0	40	6.7	6.7	6.7	20	6.7	0	6.7	13.3	

	12th Avenue Southbound				Grangevile Boulevard Westbound				12th Avenue Northbound				Grangevile Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	**1**	0	0	**1**	1
04:15 PM	0	**3**	0	**3**	0	**1**	0	**1**	0	**1**	0	**1**	0	0	0	0	**5**
04:30 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	**1**	1	2
04:45 PM	0	1	0	1	0	1	0	1	0	0	0	0	0	0	0	0	2
Total Volume	0	4	0	4	0	3	0	3	0	1	0	1	1	0	1	2	10
% App. Total	0	100	0		0	100	0		0	100	0		50	0	50		
PHF	.000	.333	.000	.333	.000	.750	.000	.750	.000	.250	.000	.250	.250	.000	.250	.500	.500

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 12th Avenue
E/W: Grangevile Boulevard
Weather: Clear

File Name : 03_HFD_12th_Gran PM
Site Code : 00322472
Start Date : 5/17/2022
Page No : 2



Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:00 PM				04:00 PM				04:00 PM				04:00 PM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	**1**	0	0	**1**
+15 mins.	0	**3**	0	**3**	0	**1**	0	**1**	0	**1**	0	**1**	0	0	0	0
+30 mins.	0	0	0	0	0	1	0	1	0	0	0	0	0	0	**1**	1
+45 mins.	0	1	0	1	0	1	0	1	0	0	0	0	0	0	0	0
Total Volume	0	4	0	4	0	3	0	3	0	1	0	1	1	0	1	2
% App. Total	0	100	0		0	100	0		0	100	0		50	0	50	
PHF	.000	.333	.000	.333	.000	.750	.000	.750	.000	.250	.000	.250	.250	.000	.250	.500

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 12th Avenue
E/W: Grangevile Boulevard
Weather: Clear

File Name : 03_HFD_12th_Gran PM
Site Code : 00322472
Start Date : 5/17/2022
Page No : 1

Groups Printed- 3 Axle Vehicles

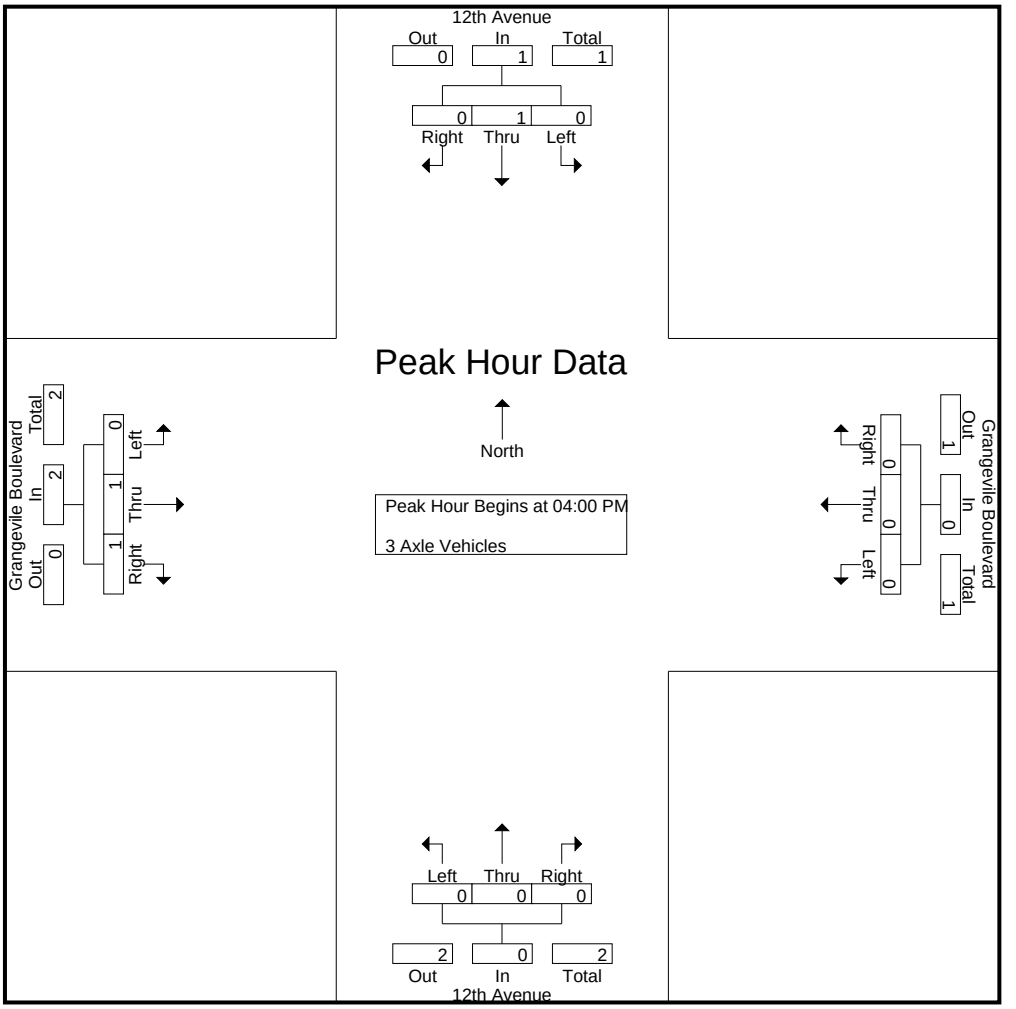
	12th Avenue Southbound				Grangevile Boulevard Westbound				12th Avenue Northbound				Grangevile Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
04:30 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1	1	2
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	1	0	0	0	0	0	0	0	0	0	1	1	2	3
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	1	0	1	0	0	0	0	0	0	0	0	0	1	1	2	3
Apprch %	0	100	0		0	0	0		0	0	0		0	50	50		
Total %	0	33.3	0	33.3	0	0	0	0	0	0	0	0	0	33.3	33.3	66.7	

	12th Avenue Southbound				Grangevile Boulevard Westbound				12th Avenue Northbound				Grangevile Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**	0	**1**	1
04:30 PM	0	**1**	0	**1**	0	0	0	0	0	0	0	0	0	0	**1**	1	**2**
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	1	0	1	0	0	0	0	0	0	0	0	0	1	1	2	3
% App. Total	0	100	0		0	0	0		0	0	0		0	50	50		
PHF	.000	.250	.000	.250	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250	.250	.500	.375

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 12th Avenue
E/W: Grangevile Boulevard
Weather: Clear

File Name : 03_HFD_12th_Gran PM
Site Code : 00322472
Start Date : 5/17/2022
Page No : 2



Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:00 PM				04:00 PM				04:00 PM				04:00 PM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**	0	**1**
+30 mins.	0	**1**	0	**1**	0	0	0	0	0	0	0	0	0	0	**1**	1
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	1	0	1	0	0	0	0	0	0	0	0	0	1	1	2
% App. Total	0	100	0		0	0	0		0	0	0		0	50	50	
PHF	.000	.250	.000	.250	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250	.250	.500

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 12th Avenue
E/W: Grangevile Boulevard
Weather: Clear

File Name : 03_HFD_12th_Gran PM
Site Code : 00322472
Start Date : 5/17/2022
Page No : 1

Groups Printed- 4+ Axle Trucks

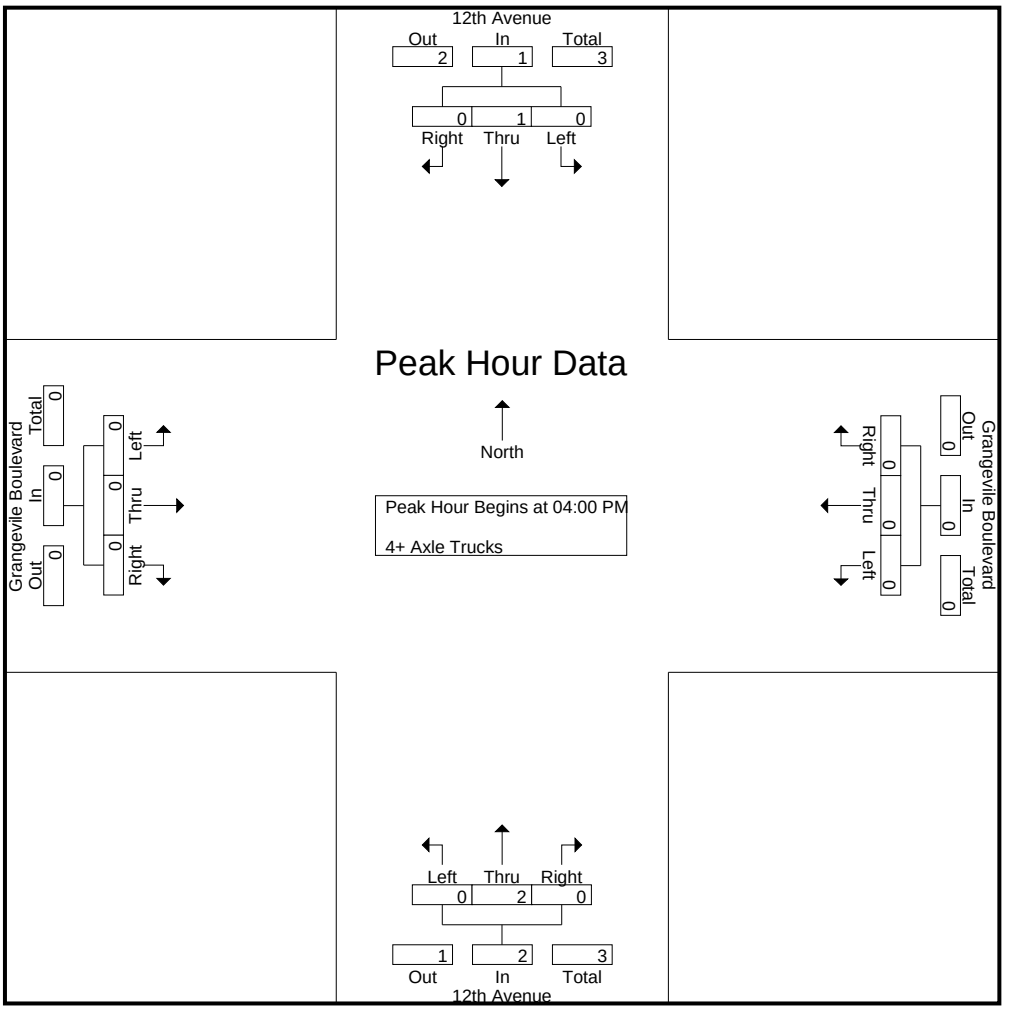
	12th Avenue Southbound				Grangevile Boulevard Westbound				12th Avenue Northbound				Grangevile Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
04:30 PM	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	2
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	1	0	0	0	0	0	2	0	2	0	0	0	0	3
05:00 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
Grand Total	0	1	0	1	0	0	0	0	0	3	0	3	0	0	0	0	4
Apprch %	0	100	0		0	0	0		0	100	0		0	0	0		
Total %	0	25	0	25	0	0	0	0	0	75	0	75	0	0	0	0	

	12th Avenue Southbound				Grangevile Boulevard Westbound				12th Avenue Northbound				Grangevile Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	**1**	0	**1**	0	0	0	0	0	0	0	0	0	0	0	0	1
04:30 PM	0	0	0	0	0	0	0	0	0	**2**	0	**2**	0	0	0	0	**2**
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	1	0	1	0	0	0	0	0	2	0	2	0	0	0	0	3
% App. Total	0	100	0		0	0	0		0	100	0		0	0	0		
PHF	.000	.250	.000	.250	.000	.000	.000	.000	.000	.250	.000	.250	.000	.000	.000	.000	.375

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 12th Avenue
E/W: Grangevile Boulevard
Weather: Clear

File Name : 03_HFD_12th_Gran PM
Site Code : 00322472
Start Date : 5/17/2022
Page No : 2



Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:00 PM				04:00 PM				04:00 PM				04:00 PM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	**1**	0	**1**	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	**2**	0	**2**	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	1	0	1	0	0	0	0	0	2	0	2	0	0	0	0
% App. Total	0	100	0		0	0	0		0	100	0		0	0	0	
PHF	.000	.250	.000	.250	.000	.000	.000	.000	.000	.250	.000	.250	.000	.000	.000	.000

Location: Hanford
N/S: 12th Avenue
E/W: Grangevile Boulevard

Date: 5/17/2022
Day: Tuesday

PEDESTRIANS

	North Leg 12th Avenue	East Leg Grangevile Boulevard	South Leg 12th Avenue	West Leg Grangevile Boulevard	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
7:00 AM	0	0	0	0	0
7:15 AM	1	0	0	0	1
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	2	0	0	0	2
8:30 AM	3	0	0	0	3
8:45 AM	0	0	0	0	0
TOTAL VOLUMES:	6	0	0	0	6

	North Leg 12th Avenue	East Leg Grangevile Boulevard	South Leg 12th Avenue	West Leg Grangevile Boulevard	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
4:00 PM	1	0	0	0	1
4:15 PM	0	1	0	0	1
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
TOTAL VOLUMES:	1	1	0	0	2

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
951-268-6268

Location: Hanford
N/S: 12th Avenue
E/W: Grangevile Boulevard

Date: 5/17/2022
Day: Tuesday

BICYCLES

	Southbound 12th Avenue			Westbound Grangevile Boulevard			Northbound 12th Avenue			Eastbound Grangevile Boulevard			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	1	0	0	0	0	0	0	0	0	0	1
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	1	0	0	0	0	0	0	0	0	0	1

	Southbound 12th Avenue			Westbound Grangevile Boulevard			Northbound 12th Avenue			Eastbound Grangevile Boulevard			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	1	0	0	0	1
5:30 PM	0	0	0	0	0	0	0	0	1	0	0	0	1
5:45 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
TOTAL VOLUMES:	0	0	0	0	1	0	0	0	2	0	0	0	3

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
951-268-6268

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 12th Avenue
E/W: Grangeville Boulevard
Weather: Clear

File Name : 05_HFD_12th_Gran AM
Site Code : 00323251
Start Date : 3/23/2023
Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

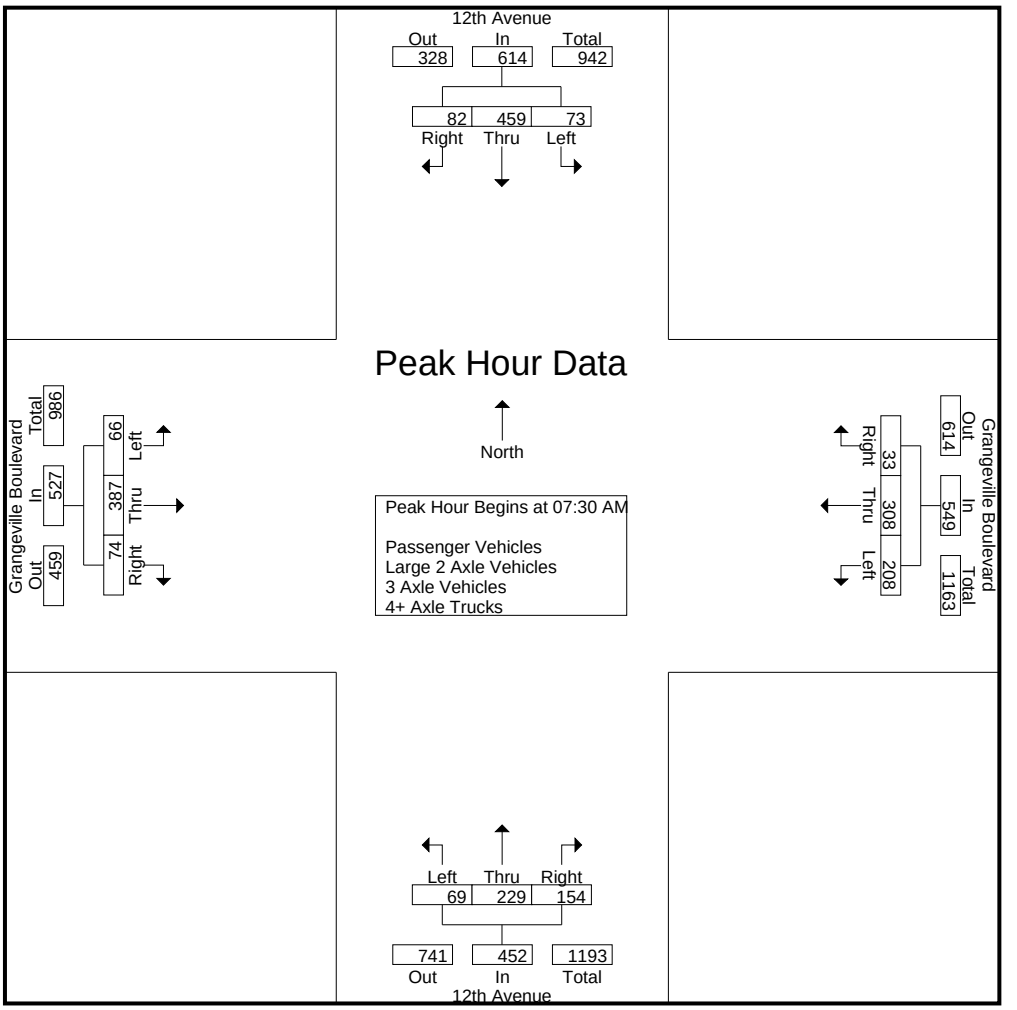
	12th Avenue Southbound				Grangeville Boulevard Westbound				12th Avenue Northbound				Grangeville Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	5	69	14	88	21	44	4	69	12	34	24	70	2	38	12	52	279
07:15 AM	16	84	14	114	43	49	8	100	12	42	23	77	8	44	7	59	350
07:30 AM	23	107	14	144	52	87	11	150	21	61	39	121	10	103	10	123	538
07:45 AM	29	156	23	208	70	97	10	177	22	64	57	143	19	107	22	148	676
Total	73	416	65	554	186	277	33	496	67	201	143	411	39	292	51	382	1843
08:00 AM	11	121	28	160	54	77	5	136	12	58	32	102	25	104	24	153	551
08:15 AM	10	75	17	102	32	47	7	86	14	46	26	86	12	73	18	103	377
08:30 AM	8	80	3	91	41	47	5	93	28	45	27	100	10	39	15	64	348
08:45 AM	12	80	8	100	37	43	7	87	16	36	34	86	5	41	18	64	337
Total	41	356	56	453	164	214	24	402	70	185	119	374	52	257	75	384	1613
Grand Total	114	772	121	1007	350	491	57	898	137	386	262	785	91	549	126	766	3456
Apprch %	11.3	76.7	12		39	54.7	6.3		17.5	49.2	33.4		11.9	71.7	16.4		
Total %	3.3	22.3	3.5	29.1	10.1	14.2	1.6	26	4	11.2	7.6	22.7	2.6	15.9	3.6	22.2	
Passenger Vehicles	111	761	117	989	348	479	57	884	134	375	256	765	91	541	122	754	3392
% Passenger Vehicles	97.4	98.6	96.7	98.2	99.4	97.6	100	98.4	97.8	97.2	97.7	97.5	100	98.5	96.8	98.4	98.1
Large 2 Axle Vehicles	1	4	2	7	1	6	0	7	1	5	3	9	0	4	2	6	29
% Large 2 Axle Vehicles	0.9	0.5	1.7	0.7	0.3	1.2	0	0.8	0.7	1.3	1.1	1.1	0	0.7	1.6	0.8	0.8
3 Axle Vehicles	1	4	2	7	1	6	0	7	1	5	3	9	0	4	2	6	29
% 3 Axle Vehicles	0.9	0.5	1.7	0.7	0.3	1.2	0	0.8	0.7	1.3	1.1	1.1	0	0.7	1.6	0.8	0.8
4+ Axle Trucks	1	3	0	4	0	0	0	0	1	1	0	2	0	0	0	0	6
% 4+ Axle Trucks	0.9	0.4	0	0.4	0	0	0	0	0.7	0.3	0	0.3	0	0	0	0	0.2

	12th Avenue Southbound				Grangeville Boulevard Westbound				12th Avenue Northbound				Grangeville Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	23	107	14	144	52	87	**11**	150	21	61	39	121	10	103	10	123	538
07:45 AM	**29**	**156**	23	**208**	**70**	**97**	10	**177**	**22**	**64**	**57**	**143**	19	**107**	22	148	**676**
08:00 AM	11	121	**28**	160	54	77	5	136	12	58	32	102	**25**	104	**24**	**153**	551
08:15 AM	10	75	17	102	32	47	7	86	14	46	26	86	12	73	18	103	377
Total Volume	73	459	82	614	208	308	33	549	69	229	154	452	66	387	74	527	2142
% App. Total	11.9	74.8	13.4		37.9	56.1	6		15.3	50.7	34.1		12.5	73.4	14		
PHF	.629	.736	.732	.738	.743	.794	.750	.775	.784	.895	.675	.790	.660	.904	.771	.861	.792

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 12th Avenue
E/W: Grangeville Boulevard
Weather: Clear

File Name : 05_HFD_12th_Gran AM
Site Code : 00323251
Start Date : 3/23/2023
Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:30 AM				07:30 AM			
+0 mins.	16	84	14	114	43	49	8	100	21	61	39	121	10	103	10	123
+15 mins.	23	107	14	144	52	87	**11**	150	**22**	**64**	**57**	**143**	19	**107**	22	148
+30 mins.	**29**	**156**	23	**208**	**70**	**97**	10	**177**	12	58	32	102	**25**	104	**24**	**153**
+45 mins.	11	121	**28**	160	54	77	5	136	14	46	26	86	12	73	18	103
Total Volume	79	468	79	626	219	310	34	563	69	229	154	452	66	387	74	527
% App. Total	12.6	74.8	12.6		38.9	55.1	6		15.3	50.7	34.1		12.5	73.4	14	
PHF	.681	.750	.705	.752	.782	.799	.773	.795	.784	.895	.675	.790	.660	.904	.771	.861

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 12th Avenue
E/W: Grangeville Boulevard
Weather: Clear

File Name : 05_HFD_12th_Gran AM
Site Code : 00323251
Start Date : 3/23/2023
Page No : 1

Groups Printed- Passenger Vehicles

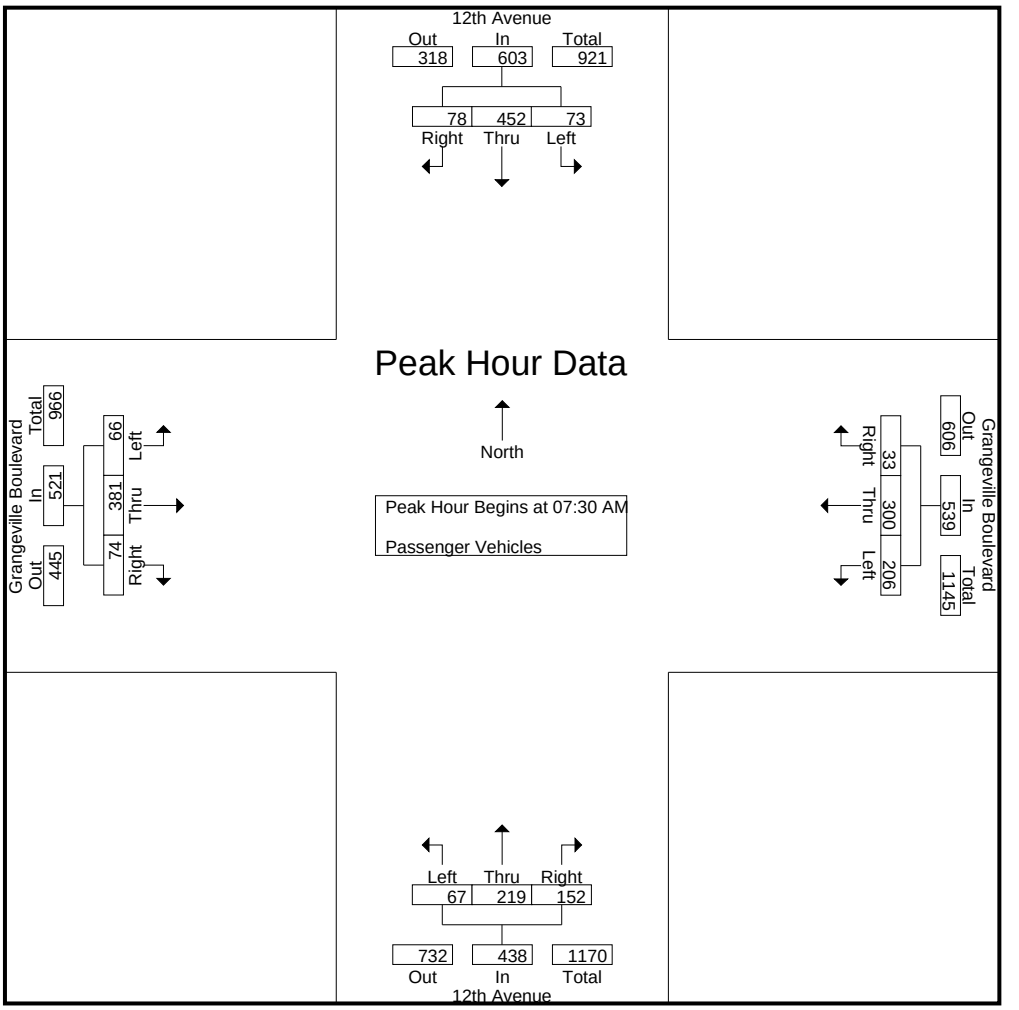
	12th Avenue Southbound				Grangeville Boulevard Westbound				12th Avenue Northbound				Grangeville Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	5	69	14	88	21	44	4	69	12	34	22	68	2	36	10	48	273
07:15 AM	13	82	14	109	43	47	8	98	12	42	21	75	8	44	7	59	341
07:30 AM	23	104	12	139	50	85	11	146	19	61	39	119	10	99	10	119	523
07:45 AM	29	154	23	206	70	93	10	173	22	60	55	137	19	105	22	146	662
Total	70	409	63	542	184	269	33	486	65	197	137	399	39	284	49	372	1799
08:00 AM	11	121	26	158	54	77	5	136	12	54	32	98	25	104	24	153	545
08:15 AM	10	73	17	100	32	45	7	84	14	44	26	84	12	73	18	103	371
08:30 AM	8	79	3	90	41	47	5	93	27	44	27	98	10	39	13	62	343
08:45 AM	12	79	8	99	37	41	7	85	16	36	34	86	5	41	18	64	334
Total	41	352	54	447	164	210	24	398	69	178	119	366	52	257	73	382	1593
Grand Total	111	761	117	989	348	479	57	884	134	375	256	765	91	541	122	754	3392
Apprch %	11.2	76.9	11.8		39.4	54.2	6.4		17.5	49	33.5		12.1	71.8	16.2		
Total %	3.3	22.4	3.4	29.2	10.3	14.1	1.7	26.1	4	11.1	7.5	22.6	2.7	15.9	3.6	22.2	

	12th Avenue Southbound				Grangeville Boulevard Westbound				12th Avenue Northbound				Grangeville Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	23	104	12	139	50	85	**11**	146	19	**61**	39	119	10	99	10	119	523
07:45 AM	**29**	**154**	23	**206**	**70**	**93**	10	**173**	**22**	60	**55**	**137**	19	**105**	22	146	**662**
08:00 AM	11	121	**26**	158	54	77	5	136	12	54	32	98	**25**	104	**24**	**153**	545
08:15 AM	10	73	17	100	32	45	7	84	14	44	26	84	12	73	18	103	371
Total Volume	73	452	78	603	206	300	33	539	67	219	152	438	66	381	74	521	2101
% App. Total	12.1	75	12.9		38.2	55.7	6.1		15.3	50	34.7		12.7	73.1	14.2		
PHF	.629	.734	.750	.732	.736	.806	.750	.779	.761	.898	.691	.799	.660	.907	.771	.851	.793

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 12th Avenue
E/W: Grangeville Boulevard
Weather: Clear

File Name : 05_HFD_12th_Gran AM
Site Code : 00323251
Start Date : 3/23/2023
Page No : 2



Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	23	104	12	139	50	85	**11**	146	19	**61**	39	119	10	99	10	119
+15 mins.	**29**	**154**	23	**206**	**70**	**93**	10	**173**	**22**	60	**55**	**137**	19	**105**	22	146
+30 mins.	11	121	**26**	158	54	77	5	136	12	54	32	98	**25**	104	**24**	**153**
+45 mins.	10	73	17	100	32	45	7	84	14	44	26	84	12	73	18	103
Total Volume	73	452	78	603	206	300	33	539	67	219	152	438	66	381	74	521
% App. Total	12.1	75	12.9		38.2	55.7	6.1		15.3	50	34.7		12.7	73.1	14.2	
PHF	.629	.734	.750	.732	.736	.806	.750	.779	.761	.898	.691	.799	.660	.907	.771	.851

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 12th Avenue
E/W: Grangeville Boulevard
Weather: Clear

File Name : 05_HFD_12th_Gran AM
Site Code : 00323251
Start Date : 3/23/2023
Page No : 1

Groups Printed- Large 2 Axle Vehicles

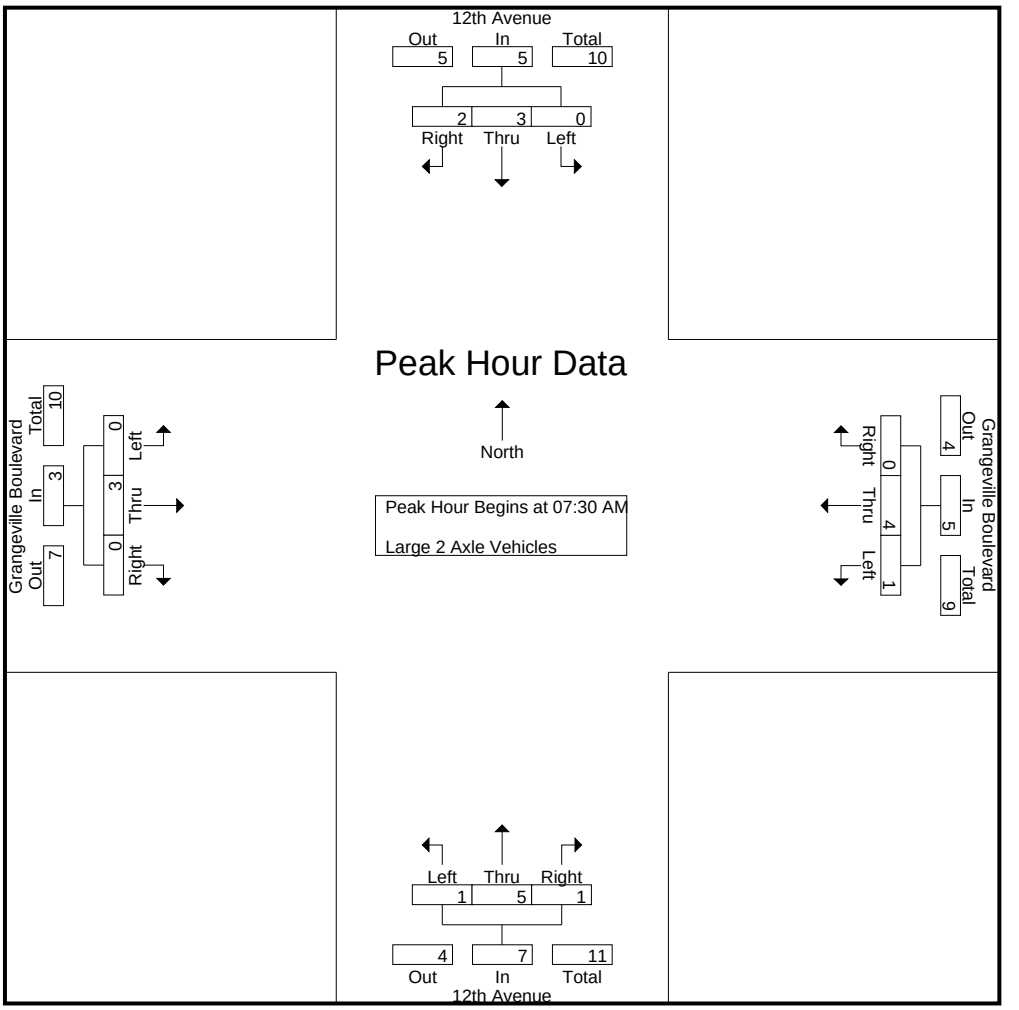
	12th Avenue Southbound				Grangeville Boulevard Westbound				12th Avenue Northbound				Grangeville Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	1	1	0	1	1	2	3
07:15 AM	1	1	0	2	0	1	0	1	0	0	1	1	0	0	0	0	4
07:30 AM	0	1	1	2	1	1	0	2	1	0	0	1	0	2	0	2	7
07:45 AM	0	1	0	1	0	2	0	2	0	2	1	3	0	1	0	1	7
Total	1	3	1	5	1	4	0	5	1	2	3	6	0	4	1	5	21
08:00 AM	0	0	1	1	0	0	0	0	0	2	0	2	0	0	0	0	3
08:15 AM	0	1	0	1	0	1	0	1	0	1	0	1	0	0	0	0	3
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
08:45 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
Total	0	1	1	2	0	2	0	2	0	3	0	3	0	0	1	1	8
Grand Total	1	4	2	7	1	6	0	7	1	5	3	9	0	4	2	6	29
Apprch %	14.3	57.1	28.6		14.3	85.7	0		11.1	55.6	33.3		0	66.7	33.3		
Total %	3.4	13.8	6.9	24.1	3.4	20.7	0	24.1	3.4	17.2	10.3	31	0	13.8	6.9	20.7	

	12th Avenue Southbound				Grangeville Boulevard Westbound				12th Avenue Northbound				Grangeville Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	**1**	**1**	**2**	**1**	1	0	**2**	**1**	0	0	1	0	**2**	0	**2**	**7**
07:45 AM	0	1	0	1	0	**2**	0	2	0	**2**	**1**	**3**	0	1	0	1	7
08:00 AM	0	0	1	1	0	0	0	0	0	2	0	2	0	0	0	0	3
08:15 AM	0	1	0	1	0	1	0	1	0	1	0	1	0	0	0	0	3
Total Volume	0	3	2	5	1	4	0	5	1	5	1	7	0	3	0	3	20
% App. Total	0	60	40		20	80	0		14.3	71.4	14.3		0	100	0		
PHF	.000	.750	.500	.625	.250	.500	.000	.625	.250	.625	.250	.583	.000	.375	.000	.375	.714

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 12th Avenue
E/W: Grangeville Boulevard
Weather: Clear

File Name : 05_HFD_12th_Gran AM
Site Code : 00323251
Start Date : 3/23/2023
Page No : 2



Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	0	**1**	**1**	**2**	**1**	1	0	**2**	**1**	0	0	1	0	**2**	0	**2**
+15 mins.	0	1	0	1	0	**2**	0	2	0	**2**	**1**	**3**	0	1	0	1
+30 mins.	0	0	1	1	0	0	0	0	0	2	0	2	0	0	0	0
+45 mins.	0	1	0	1	0	1	0	1	0	1	0	1	0	0	0	0
Total Volume	0	3	2	5	1	4	0	5	1	5	1	7	0	3	0	3
% App. Total	0	60	40		20	80	0		14.3	71.4	14.3		0	100	0	
PHF	.000	.750	.500	.625	.250	.500	.000	.625	.250	.625	.250	.583	.000	.375	.000	.375

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 12th Avenue
E/W: Grangeville Boulevard
Weather: Clear

File Name : 05_HFD_12th_Gran AM
Site Code : 00323251
Start Date : 3/23/2023
Page No : 1

Groups Printed- 3 Axle Vehicles

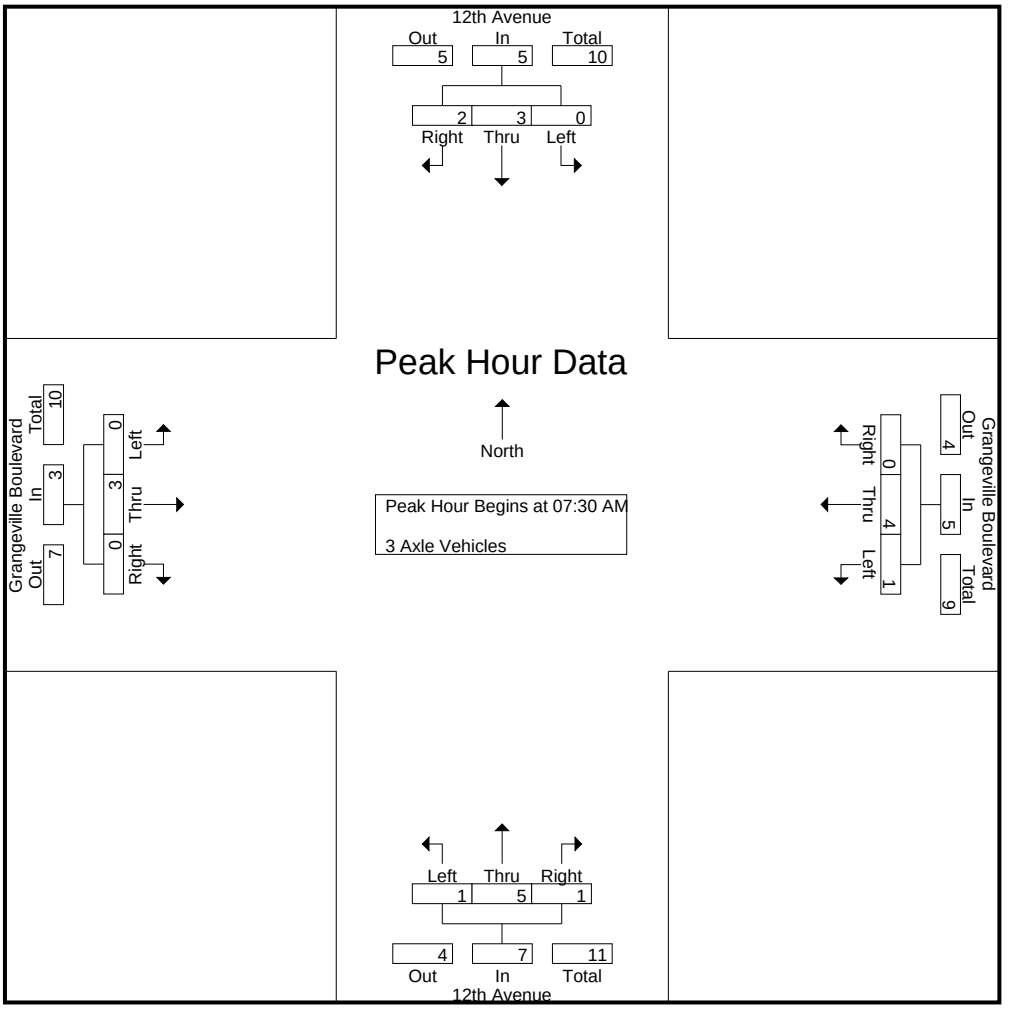
	12th Avenue Southbound				Grangeville Boulevard Westbound				12th Avenue Northbound				Grangeville Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	1	1	0	1	1	2	3
07:15 AM	1	1	0	2	0	1	0	1	0	0	1	1	0	0	0	0	4
07:30 AM	0	1	1	2	1	1	0	2	1	0	0	1	0	2	0	2	7
07:45 AM	0	1	0	1	0	2	0	2	0	2	1	3	0	1	0	1	7
Total	1	3	1	5	1	4	0	5	1	2	3	6	0	4	1	5	21
08:00 AM	0	0	1	1	0	0	0	0	0	2	0	2	0	0	0	0	3
08:15 AM	0	1	0	1	0	1	0	1	0	1	0	1	0	0	0	0	3
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
08:45 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
Total	0	1	1	2	0	2	0	2	0	3	0	3	0	0	1	1	8
Grand Total	1	4	2	7	1	6	0	7	1	5	3	9	0	4	2	6	29
Apprch %	14.3	57.1	28.6		14.3	85.7	0		11.1	55.6	33.3		0	66.7	33.3		
Total %	3.4	13.8	6.9	24.1	3.4	20.7	0	24.1	3.4	17.2	10.3	31	0	13.8	6.9	20.7	

	12th Avenue Southbound				Grangeville Boulevard Westbound				12th Avenue Northbound				Grangeville Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	**1**	**1**	**2**	**1**	1	0	**2**	**1**	0	0	1	0	**2**	0	**2**	**7**
07:45 AM	0	1	0	1	0	**2**	0	2	0	**2**	**1**	**3**	0	1	0	1	7
08:00 AM	0	0	1	1	0	0	0	0	0	2	0	2	0	0	0	0	3
08:15 AM	0	1	0	1	0	1	0	1	0	1	0	1	0	0	0	0	3
Total Volume	0	3	2	5	1	4	0	5	1	5	1	7	0	3	0	3	20
% App. Total	0	60	40		20	80	0		14.3	71.4	14.3		0	100	0		
PHF	.000	.750	.500	.625	.250	.500	.000	.625	.250	.625	.250	.583	.000	.375	.000	.375	.714

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 12th Avenue
E/W: Grangeville Boulevard
Weather: Clear

File Name : 05_HFD_12th_Gran AM
Site Code : 00323251
Start Date : 3/23/2023
Page No : 2



Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	0	**1**	**1**	**2**	**1**	1	0	**2**	**1**	0	0	1	0	**2**	0	**2**
+15 mins.	0	1	0	1	0	**2**	0	2	0	**2**	**1**	**3**	0	1	0	1
+30 mins.	0	0	1	1	0	0	0	0	0	2	0	2	0	0	0	0
+45 mins.	0	1	0	1	0	1	0	1	0	1	0	1	0	0	0	0
Total Volume	0	3	2	5	1	4	0	5	1	5	1	7	0	3	0	3
% App. Total	0	60	40		20	80	0		14.3	71.4	14.3		0	100	0	
PHF	.000	.750	.500	.625	.250	.500	.000	.625	.250	.625	.250	.583	.000	.375	.000	.375

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 12th Avenue
E/W: Grangeville Boulevard
Weather: Clear

File Name : 05_HFD_12th_Gran AM
Site Code : 00323251
Start Date : 3/23/2023
Page No : 1

Groups Printed- 4+ Axle Trucks

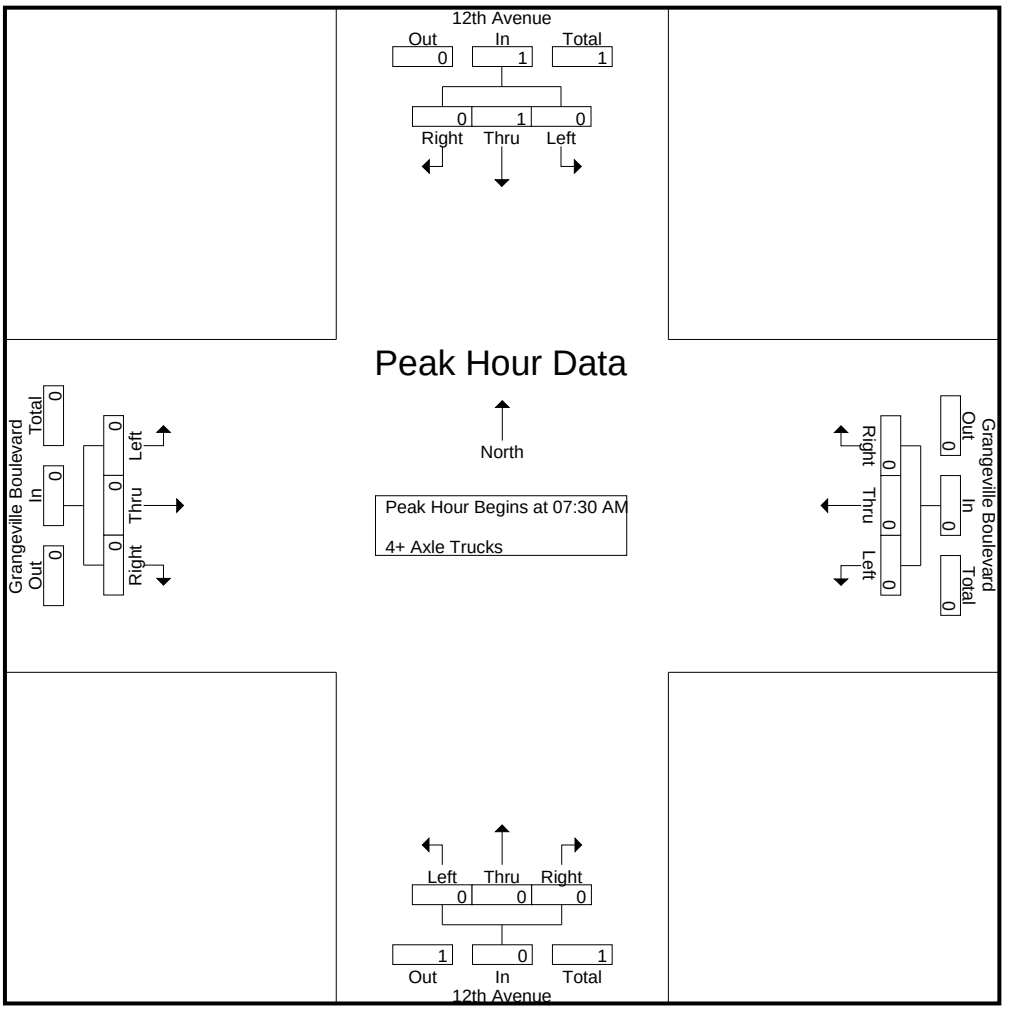
	12th Avenue Southbound				Grangeville Boulevard Westbound				12th Avenue Northbound				Grangeville Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
07:30 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	1	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	1	0	1	0	0	0	0	1	1	0	2	0	0	0	0	3
08:45 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	2	0	2	0	0	0	0	1	1	0	2	0	0	0	0	4
Grand Total	1	3	0	4	0	0	0	0	1	1	0	2	0	0	0	0	6
Apprch %	25	75	0		0	0	0		50	50	0		0	0	0		
Total %	16.7	50	0	66.7	0	0	0	0	16.7	16.7	0	33.3	0	0	0	0	

	12th Avenue Southbound				Grangeville Boulevard Westbound				12th Avenue Northbound				Grangeville Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	**1**	0	**1**	0	0	0	0	0	0	0	0	0	0	0	0	**1**
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
% App. Total	0	100	0		0	0	0		0	0	0		0	0	0		
PHF	.000	.250	.000	.250	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 12th Avenue
E/W: Grangeville Boulevard
Weather: Clear

File Name : 05_HFD_12th_Gran AM
Site Code : 00323251
Start Date : 3/23/2023
Page No : 2



Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	0	**1**	0	**1**	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	100	0		0	0	0		0	0	0		0	0	0	
PHF	.000	.250	.000	.250	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 12th Avenue
E/W: Grangeville Boulevard
Weather: Clear

File Name : 05_HFD_12th_Gran PM
Site Code : 00323251
Start Date : 3/23/2023
Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

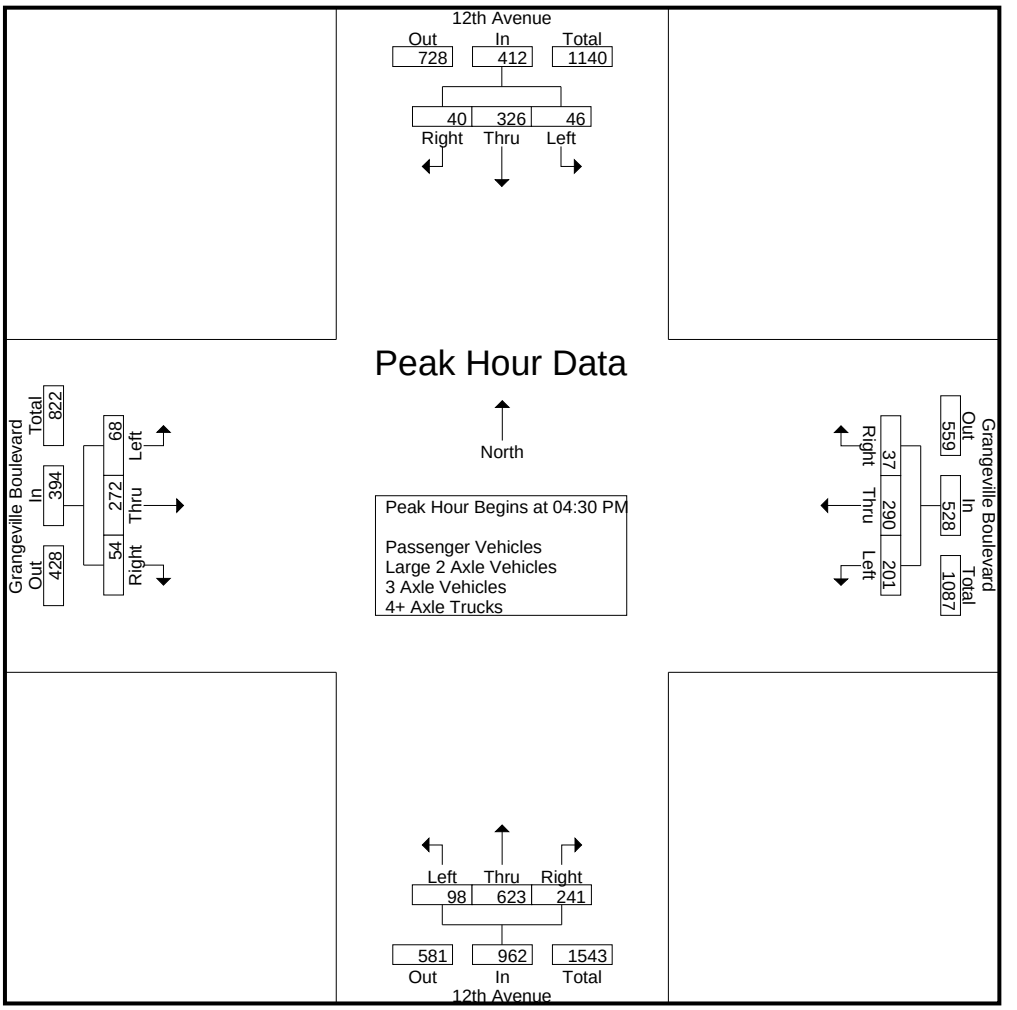
	12th Avenue Southbound				Grangeville Boulevard Westbound				12th Avenue Northbound				Grangeville Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	15	81	15	111	45	54	13	112	18	120	47	185	17	123	14	154	562
04:15 PM	7	89	12	108	46	58	11	115	16	114	63	193	14	70	10	94	510
04:30 PM	10	93	14	117	50	80	8	138	12	124	56	192	16	72	15	103	550
04:45 PM	17	88	6	111	54	71	8	133	25	121	50	196	21	67	15	103	543
Total	49	351	47	447	195	263	40	498	71	479	216	766	68	332	54	454	2165
05:00 PM	10	59	10	79	52	63	13	128	32	188	62	282	15	62	6	83	572
05:15 PM	9	86	10	105	45	76	8	129	29	190	73	292	16	71	18	105	631
05:30 PM	15	89	10	114	47	69	5	121	23	112	60	195	15	61	10	86	516
05:45 PM	12	76	8	96	56	49	11	116	19	87	51	157	15	63	20	98	467
Total	46	310	38	394	200	257	37	494	103	577	246	926	61	257	54	372	2186
Grand Total	95	661	85	841	395	520	77	992	174	1056	462	1692	129	589	108	826	4351
Apprch %	11.3	78.6	10.1		39.8	52.4	7.8		10.3	62.4	27.3		15.6	71.3	13.1		
Total %	2.2	15.2	2	19.3	9.1	12	1.8	22.8	4	24.3	10.6	38.9	3	13.5	2.5	19	
Passenger Vehicles	95	657	83	835	394	513	76	983	173	1050	461	1684	129	588	107	824	4326
% Passenger Vehicles	100	99.4	97.6	99.3	99.7	98.7	98.7	99.1	99.4	99.4	99.8	99.5	100	99.8	99.1	99.8	99.4
Large 2 Axle Vehicles	0	4	2	6	1	6	1	8	1	2	1	4	0	1	1	2	20
% Large 2 Axle Vehicles	0	0.6	2.4	0.7	0.3	1.2	1.3	0.8	0.6	0.2	0.2	0.2	0	0.2	0.9	0.2	0.5
3 Axle Vehicles	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
% 3 Axle Vehicles	0	0	0	0	0	0.2	0	0.1	0	0	0	0	0	0	0	0	0
4+ Axle Trucks	0	0	0	0	0	0	0	0	0	4	0	4	0	0	0	0	4
% 4+ Axle Trucks	0	0	0	0	0	0	0	0	0	0.4	0	0.2	0	0	0	0	0.1

	12th Avenue Southbound				Grangeville Boulevard Westbound				12th Avenue Northbound				Grangeville Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	10	**93**	**14**	**117**	50	**80**	8	**138**	12	124	56	192	16	**72**	15	103	550
04:45 PM	**17**	88	6	111	**54**	71	8	133	25	121	50	196	**21**	67	15	103	543
05:00 PM	10	59	10	79	52	63	**13**	128	**32**	188	62	282	15	62	6	83	572
05:15 PM	9	86	10	105	45	76	8	129	29	**190**	**73**	**292**	16	71	**18**	**105**	**631**
Total Volume	46	326	40	412	201	290	37	528	98	623	241	962	68	272	54	394	2296
% App. Total	11.2	79.1	9.7		38.1	54.9	7		10.2	64.8	25.1		17.3	69	13.7		
PHF	.676	.876	.714	.880	.931	.906	.712	.957	.766	.820	.825	.824	.810	.944	.750	.938	.910

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 12th Avenue
E/W: Grangeville Boulevard
Weather: Clear

File Name : 05_HFD_12th_Gran PM
Site Code : 00323251
Start Date : 3/23/2023
Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:00 PM				04:30 PM				04:45 PM				04:00 PM			
+0 mins.	15	81	**15**	111	50	**80**	8	**138**	25	121	50	196	17	**123**	14	**154**
+15 mins.	7	89	12	108	**54**	71	8	133	**32**	188	62	282	14	70	10	94
+30 mins.	10	**93**	14	**117**	52	63	**13**	128	29	**190**	**73**	**292**	16	72	**15**	103
+45 mins.	**17**	88	6	111	45	76	8	129	23	112	60	195	**21**	67	15	103
Total Volume	49	351	47	447	201	290	37	528	109	611	245	965	68	332	54	454
% App. Total	11	78.5	10.5		38.1	54.9	7		11.3	63.3	25.4		15	73.1	11.9	
PHF	.721	.944	.783	.955	.931	.906	.712	.957	.852	.804	.839	.826	.810	.675	.900	.737

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 12th Avenue
E/W: Grangeville Boulevard
Weather: Clear

File Name : 05_HFD_12th_Gran PM
Site Code : 00323251
Start Date : 3/23/2023
Page No : 1

Groups Printed- Passenger Vehicles

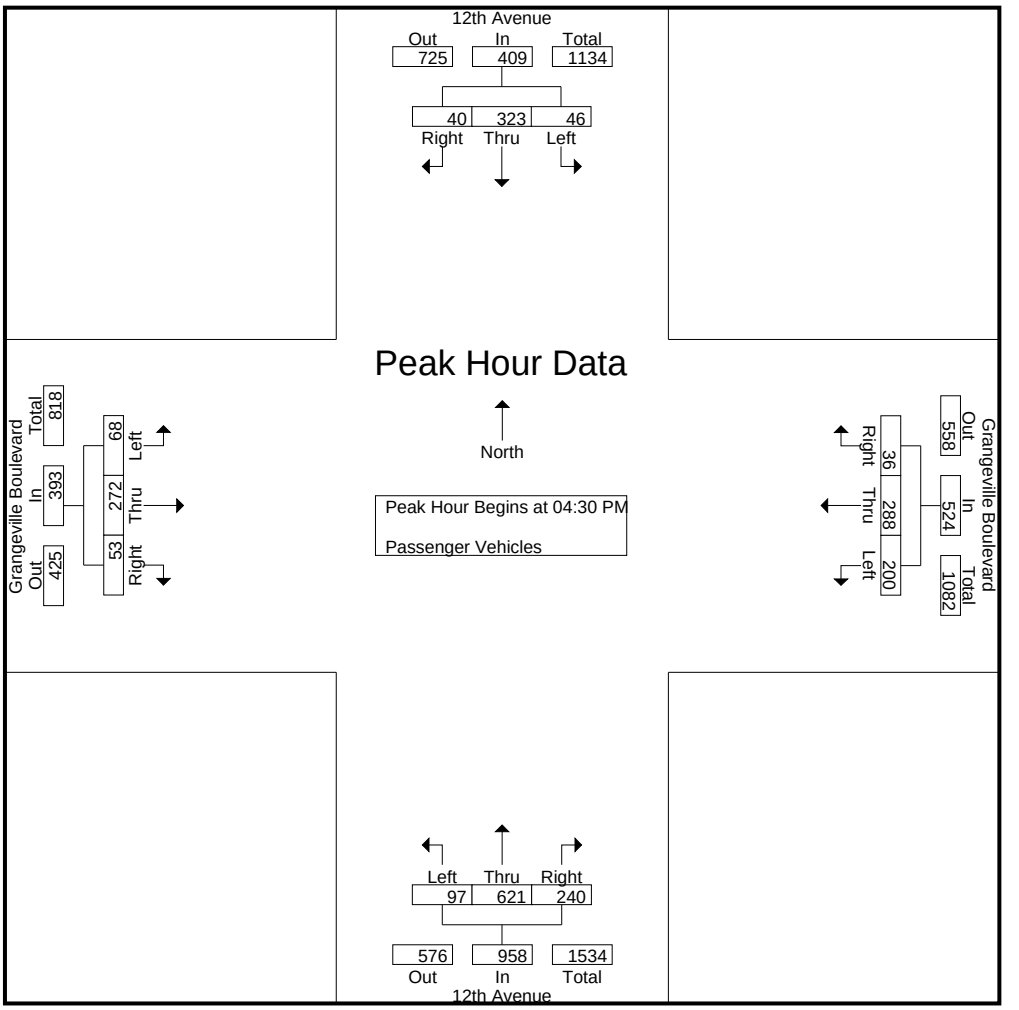
	12th Avenue Southbound				Grangeville Boulevard Westbound				12th Avenue Northbound				Grangeville Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	15	80	14	109	45	53	13	111	18	116	47	181	17	122	14	153	554
04:15 PM	7	89	12	108	46	56	11	113	16	114	63	193	14	70	10	94	508
04:30 PM	10	92	14	116	50	80	8	138	11	123	56	190	16	72	15	103	547
04:45 PM	17	87	6	110	53	70	8	131	25	121	50	196	21	67	15	103	540
Total	49	348	46	443	194	259	40	493	70	474	216	760	68	331	54	453	2149
05:00 PM	10	58	10	78	52	63	13	128	32	187	61	280	15	62	5	82	568
05:15 PM	9	86	10	105	45	75	7	127	29	190	73	292	16	71	18	105	629
05:30 PM	15	89	9	113	47	69	5	121	23	112	60	195	15	61	10	86	515
05:45 PM	12	76	8	96	56	47	11	114	19	87	51	157	15	63	20	98	465
Total	46	309	37	392	200	254	36	490	103	576	245	924	61	257	53	371	2177
Grand Total	95	657	83	835	394	513	76	983	173	1050	461	1684	129	588	107	824	4326
Apprch %	11.4	78.7	9.9		40.1	52.2	7.7		10.3	62.4	27.4		15.7	71.4	13		
Total %	2.2	15.2	1.9	19.3	9.1	11.9	1.8	22.7	4	24.3	10.7	38.9	3	13.6	2.5	19	

	12th Avenue Southbound				Grangeville Boulevard Westbound				12th Avenue Northbound				Grangeville Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	10	**92**	**14**	**116**	50	**80**	8	**138**	11	123	56	190	16	**72**	15	103	547
04:45 PM	**17**	87	6	110	**53**	70	8	131	25	121	50	196	**21**	67	15	103	540
05:00 PM	10	58	10	78	52	63	**13**	128	**32**	187	61	280	15	62	5	82	568
05:15 PM	9	86	10	105	45	75	7	127	29	**190**	**73**	**292**	16	71	**18**	**105**	**629**
Total Volume	46	323	40	409	200	288	36	524	97	621	240	958	68	272	53	393	2284
% App. Total	11.2	79	9.8		38.2	55	6.9		10.1	64.8	25.1		17.3	69.2	13.5		
PHF	.676	.878	.714	.881	.943	.900	.692	.949	.758	.817	.822	.820	.810	.944	.736	.936	.908

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 12th Avenue
E/W: Grangeville Boulevard
Weather: Clear

File Name : 05_HFD_12th_Gran PM
Site Code : 00323251
Start Date : 3/23/2023
Page No : 2



Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM				04:30 PM				04:30 PM				04:30 PM			
+0 mins.	10	**92**	**14**	**116**	50	**80**	8	**138**	11	123	56	190	16	**72**	15	103
+15 mins.	**17**	87	6	110	**53**	70	8	131	25	121	50	196	**21**	67	15	103
+30 mins.	10	58	10	78	52	63	**13**	128	**32**	187	61	280	15	62	5	82
+45 mins.	9	86	10	105	45	75	7	127	29	**190**	**73**	**292**	16	71	**18**	**105**
Total Volume	46	323	40	409	200	288	36	524	97	621	240	958	68	272	53	393
% App. Total	11.2	79	9.8		38.2	55	6.9		10.1	64.8	25.1		17.3	69.2	13.5	
PHF	.676	.878	.714	.881	.943	.900	.692	.949	.758	.817	.822	.820	.810	.944	.736	.936

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 12th Avenue
E/W: Grangeville Boulevard
Weather: Clear

File Name : 05_HFD_12th_Gran PM
Site Code : 00323251
Start Date : 3/23/2023
Page No : 1

Groups Printed- Large 2 Axle Vehicles

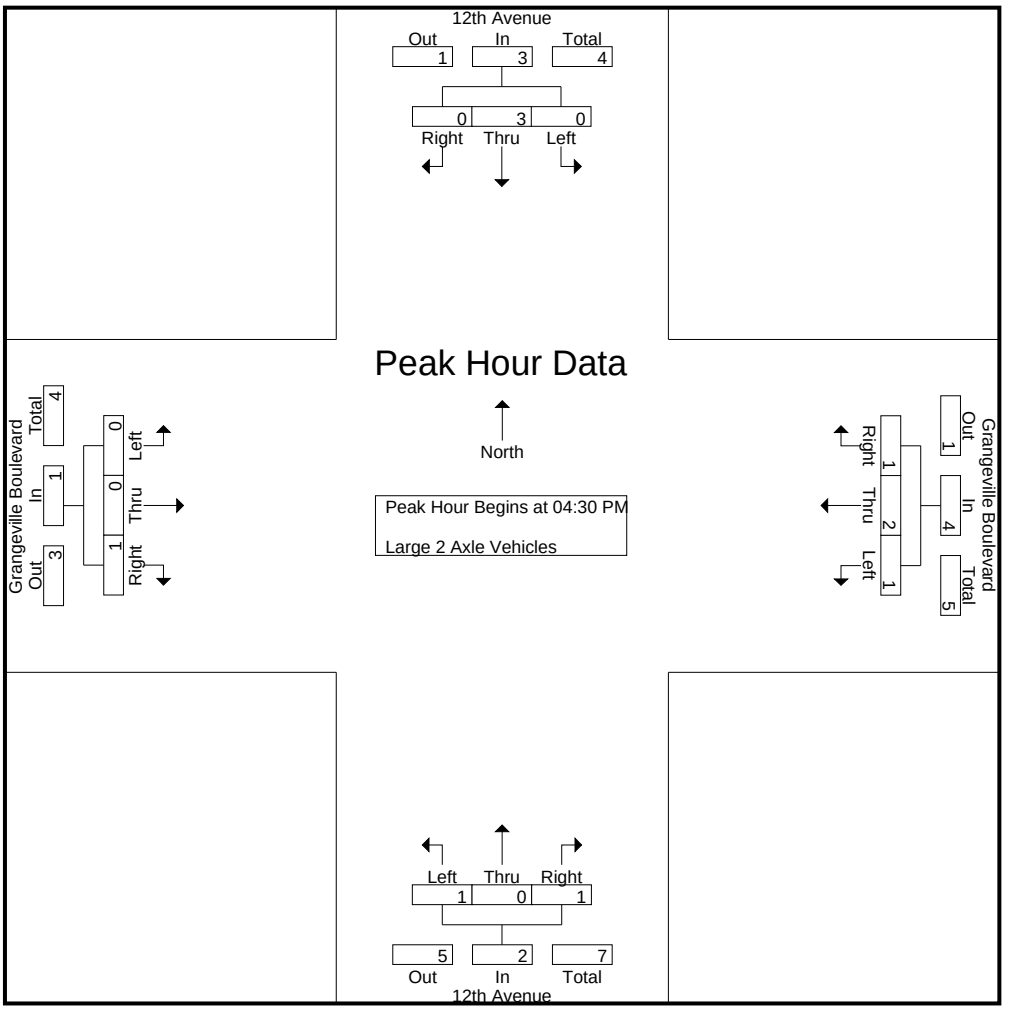
	12th Avenue Southbound				Grangeville Boulevard Westbound				12th Avenue Northbound				Grangeville Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	1	1	2	0	1	0	1	0	2	0	2	0	1	0	1	6
04:15 PM	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	2
04:30 PM	0	1	0	1	0	0	0	0	1	0	0	1	0	0	0	0	2
04:45 PM	0	1	0	1	1	1	0	2	0	0	0	0	0	0	0	0	3
Total	0	3	1	4	1	4	0	5	1	2	0	3	0	1	0	1	13
05:00 PM	0	1	0	1	0	0	0	0	0	0	1	1	0	0	1	1	3
05:15 PM	0	0	0	0	0	1	1	2	0	0	0	0	0	0	0	0	2
05:30 PM	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1
05:45 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
Total	0	1	1	2	0	2	1	3	0	0	1	1	0	0	1	1	7
Grand Total	0	4	2	6	1	6	1	8	1	2	1	4	0	1	1	2	20
Apprch %	0	66.7	33.3		12.5	75	12.5		25	50	25		0	50	50		
Total %	0	20	10	30	5	30	5	40	5	10	5	20	0	5	5	10	

	12th Avenue Southbound				Grangeville Boulevard Westbound				12th Avenue Northbound				Grangeville Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	0	**1**	0	**1**	0	0	0	0	**1**	0	0	**1**	0	0	0	0	2
04:45 PM	0	1	0	1	**1**	**1**	0	**2**	0	0	0	0	0	0	0	0	**3**
05:00 PM	0	1	0	1	0	0	0	0	0	0	**1**	1	0	0	**1**	**1**	3
05:15 PM	0	0	0	0	0	1	**1**	2	0	0	0	0	0	0	0	0	2
Total Volume	0	3	0	3	1	2	1	4	1	0	1	2	0	0	1	1	10
% App. Total	0	100	0		25	50	25		50	0	50		0	0	100		
PHF	.000	.750	.000	.750	.250	.500	.250	.500	.250	.000	.250	.500	.000	.000	.250	.250	.833

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 12th Avenue
E/W: Grangeville Boulevard
Weather: Clear

File Name : 05_HFD_12th_Gran PM
Site Code : 00323251
Start Date : 3/23/2023
Page No : 2



Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM				04:30 PM				04:30 PM				04:30 PM			
+0 mins.	0	**1**	0	**1**	0	0	0	0	**1**	0	0	**1**	0	0	0	0
+15 mins.	0	1	0	1	**1**	**1**	0	**2**	0	0	0	0	0	0	0	0
+30 mins.	0	1	0	1	0	0	0	0	0	0	**1**	1	0	0	**1**	**1**
+45 mins.	0	0	0	0	0	1	**1**	2	0	0	0	0	0	0	0	0
Total Volume	0	3	0	3	1	2	1	4	1	0	1	2	0	0	1	1
% App. Total	0	100	0		25	50	25		50	0	50		0	0	100	
PHF	.000	.750	.000	.750	.250	.500	.250	.500	.250	.000	.250	.500	.000	.000	.250	.250

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 12th Avenue
E/W: Grangeville Boulevard
Weather: Clear

File Name : 05_HFD_12th_Gran PM
Site Code : 00323251
Start Date : 3/23/2023
Page No : 1

Groups Printed- 3 Axle Vehicles

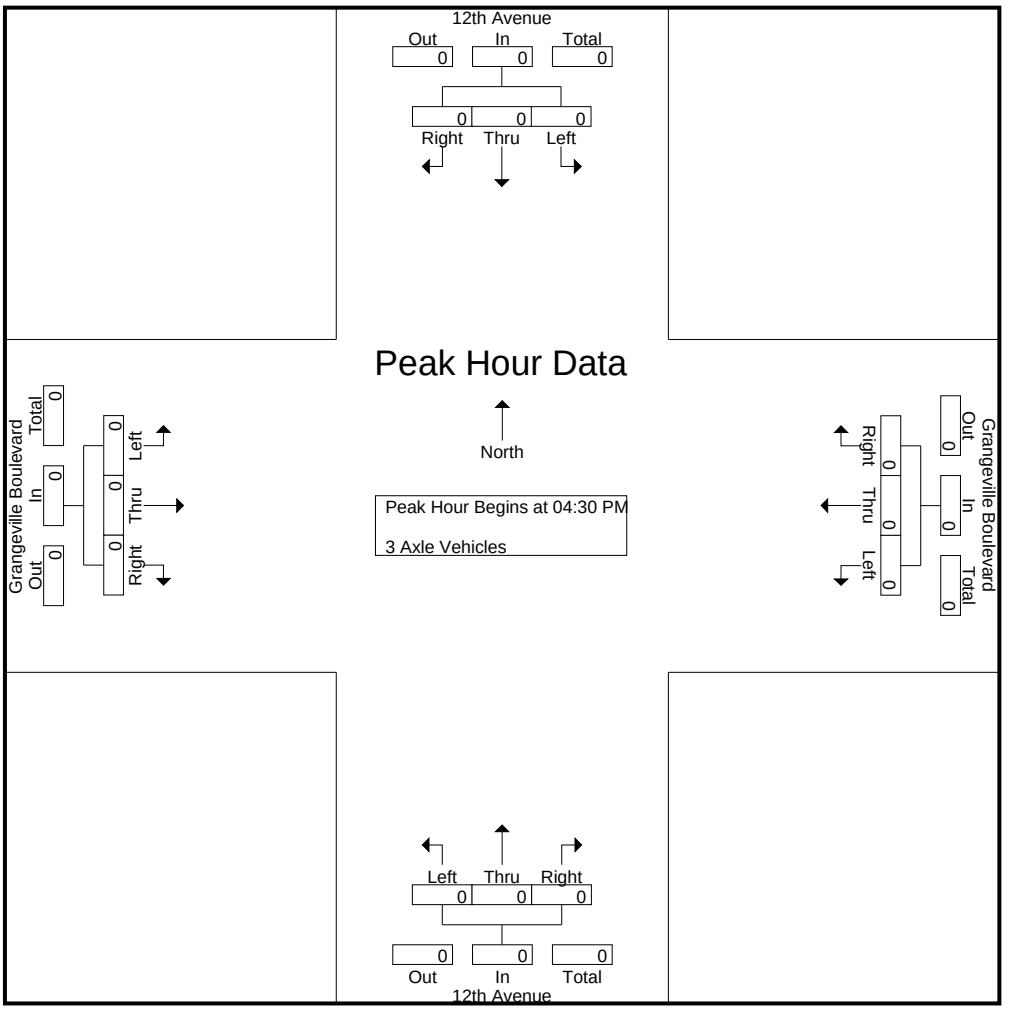
	12th Avenue Southbound				Grangeville Boulevard Westbound				12th Avenue Northbound				Grangeville Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
Total	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
Grand Total	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
Apprch %	0	0	0		0	100	0		0	0	0		0	0	0		
Total %	0	0	0	0	0	100	0	100	0	0	0	0	0	0	0	0	

	12th Avenue Southbound				Grangeville Boulevard Westbound				12th Avenue Northbound				Grangeville Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0		0	0	0		0	0	0		0	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 12th Avenue
E/W: Grangeville Boulevard
Weather: Clear

File Name : 05_HFD_12th_Gran PM
Site Code : 00323251
Start Date : 3/23/2023
Page No : 2



Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM				04:30 PM				04:30 PM				04:30 PM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0		0	0	0		0	0	0		0	0	0	
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 12th Avenue
E/W: Grangeville Boulevard
Weather: Clear

File Name : 05_HFD_12th_Gran PM
Site Code : 00323251
Start Date : 3/23/2023
Page No : 1

Groups Printed- 4+ Axle Trucks

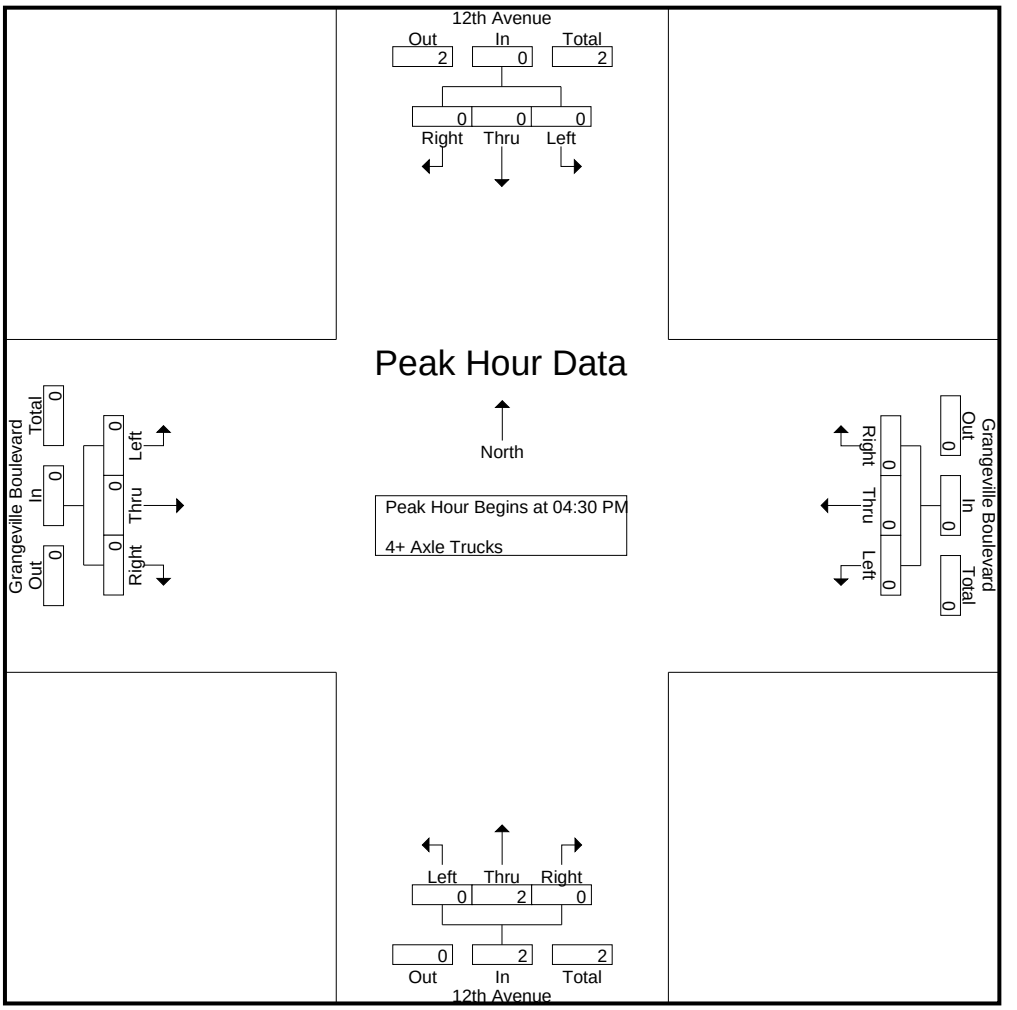
	12th Avenue Southbound				Grangeville Boulevard Westbound				12th Avenue Northbound				Grangeville Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	2
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	3	0	3	0	0	0	0	3
05:00 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
Grand Total	0	0	0	0	0	0	0	0	0	4	0	4	0	0	0	0	4
Apprch %	0	0	0		0	0	0		0	100	0		0	0	0		
Total %	0	0	0	0	0	0	0	0	0	100	0	100	0	0	0	0	

	12th Avenue Southbound				Grangeville Boulevard Westbound				12th Avenue Northbound				Grangeville Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	0	0	0	0	0	0	0	0	0	**1**	0	**1**	0	0	0	0	**1**
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	2
% App. Total	0	0	0		0	0	0		0	100	0		0	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.500	.000	.500	.000	.000	.000	.000	.500

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 12th Avenue
E/W: Grangeville Boulevard
Weather: Clear

File Name : 05_HFD_12th_Gran PM
Site Code : 00323251
Start Date : 3/23/2023
Page No : 2



Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM				04:30 PM				04:30 PM				04:30 PM			
+0 mins.	0	0	0	0	0	0	0	0	0	**1**	0	**1**	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0
% App. Total	0	0	0		0	0	0		0	100	0		0	0	0	
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.500	.000	.500	.000	.000	.000	.000

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 12th Avenue
E/W: Greenfield Avenue
Weather: Clear

File Name : 04_HFD_12th_Green AM
Site Code : 00322472
Start Date : 5/17/2022
Page No : 1

Groups Printed- Total Volume

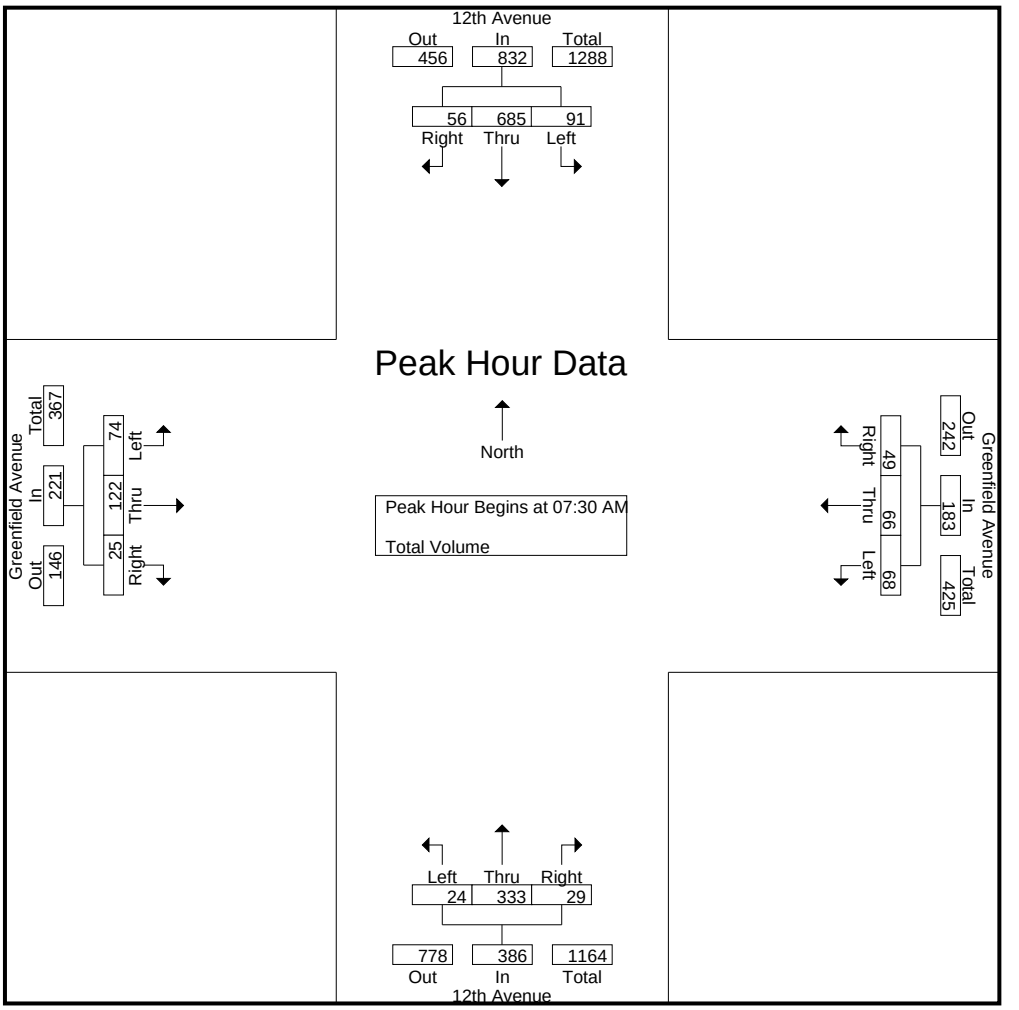
	12th Avenue Southbound				Greenfield Avenue Westbound				12th Avenue Northbound				Greenfield Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	2	79	6	87	10	6	5	21	1	51	3	55	10	9	9	28	191
07:15 AM	6	102	5	113	13	9	6	28	4	67	9	80	11	19	9	39	260
07:30 AM	15	140	6	161	16	14	14	44	8	64	4	76	27	30	6	63	344
07:45 AM	33	205	20	258	27	18	11	56	4	71	9	84	29	42	11	82	480
Total	56	526	37	619	66	47	36	149	17	253	25	295	77	100	35	212	1275
08:00 AM	25	200	20	245	9	12	12	33	7	74	9	90	7	30	5	42	410
08:15 AM	18	140	10	168	16	22	12	50	5	124	7	136	11	20	3	34	388
08:30 AM	8	105	4	117	5	11	7	23	14	68	16	98	2	16	2	20	258
08:45 AM	10	116	3	129	10	7	7	24	9	78	9	96	4	10	7	21	270
Total	61	561	37	659	40	52	38	130	35	344	41	420	24	76	17	117	1326
Grand Total	117	1087	74	1278	106	99	74	279	52	597	66	715	101	176	52	329	2601
Apprch %	9.2	85.1	5.8		38	35.5	26.5		7.3	83.5	9.2		30.7	53.5	15.8		
Total %	4.5	41.8	2.8	49.1	4.1	3.8	2.8	10.7	2	23	2.5	27.5	3.9	6.8	2	12.6	

	12th Avenue Southbound				Greenfield Avenue Westbound				12th Avenue Northbound				Greenfield Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	15	140	6	161	16	14	**14**	44	**8**	64	4	76	27	30	6	63	344
07:45 AM	**33**	**205**	**20**	**258**	**27**	18	11	**56**	4	71	**9**	84	**29**	**42**	**11**	**82**	**480**
08:00 AM	25	200	20	245	9	12	12	33	7	74	9	90	7	30	5	42	410
08:15 AM	18	140	10	168	16	**22**	12	50	5	**124**	7	**136**	11	20	3	34	388
Total Volume	91	685	56	832	68	66	49	183	24	333	29	386	74	122	25	221	1622
% App. Total	10.9	82.3	6.7		37.2	36.1	26.8		6.2	86.3	7.5		33.5	55.2	11.3		
PHF	.689	.835	.700	.806	.630	.750	.875	.817	.750	.671	.806	.710	.638	.726	.568	.674	.845

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 12th Avenue
E/W: Greenfield Avenue
Weather: Clear

File Name : 04_HFD_12th_Green AM
Site Code : 00322472
Start Date : 5/17/2022
Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				08:00 AM				07:15 AM			
+0 mins.	15	140	6	161	16	14	**14**	44	7	74	9	90	11	19	9	39
+15 mins.	**33**	**205**	**20**	**258**	**27**	18	11	**56**	5	**124**	7	**136**	27	30	6	63
+30 mins.	25	200	20	245	9	12	12	33	**14**	68	**16**	98	**29**	**42**	**11**	**82**
+45 mins.	18	140	10	168	16	**22**	12	50	9	78	9	96	7	30	5	42
Total Volume	91	685	56	832	68	66	49	183	35	344	41	420	74	121	31	226
% App. Total	10.9	82.3	6.7		37.2	36.1	26.8		8.3	81.9	9.8		32.7	53.5	13.7	
PHF	.689	.835	.700	.806	.630	.750	.875	.817	.625	.694	.641	.772	.638	.720	.705	.689

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 12th Avenue
E/W: Greenfield Avenue
Weather: Clear

File Name : 04_HFD_12th_Green PM
Site Code : 00322472
Start Date : 5/17/2022
Page No : 1

Groups Printed- Total Volume

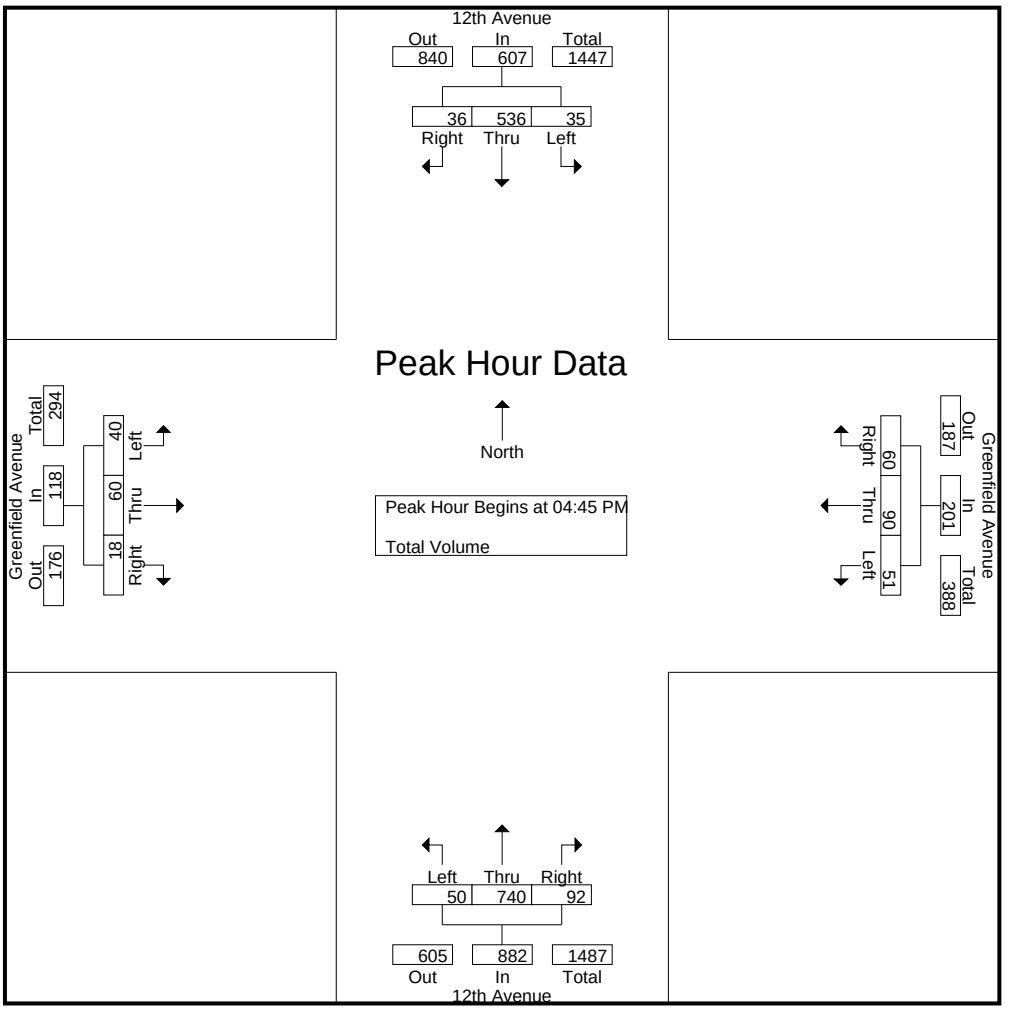
	12th Avenue Southbound				Greenfield Avenue Westbound				12th Avenue Northbound				Greenfield Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	2	129	13	144	13	15	22	50	14	202	22	238	7	16	6	29	461
04:15 PM	9	126	9	144	5	11	12	28	7	173	22	202	8	20	1	29	403
04:30 PM	6	113	13	132	10	20	14	44	5	153	12	170	6	25	6	37	383
04:45 PM	10	139	11	160	11	18	11	40	15	184	17	216	7	13	7	27	443
Total	27	507	46	580	39	64	59	162	41	712	73	826	28	74	20	122	1690
05:00 PM	8	105	7	120	15	31	23	69	23	243	36	302	12	13	2	27	518
05:15 PM	8	136	11	155	13	17	11	41	5	155	16	176	9	17	5	31	403
05:30 PM	9	156	7	172	12	24	15	51	7	158	23	188	12	17	4	33	444
05:45 PM	9	144	8	161	12	18	9	39	7	182	13	202	11	16	3	30	432
Total	34	541	33	608	52	90	58	200	42	738	88	868	44	63	14	121	1797
Grand Total	61	1048	79	1188	91	154	117	362	83	1450	161	1694	72	137	34	243	3487
Apprch %	5.1	88.2	6.6		25.1	42.5	32.3		4.9	85.6	9.5		29.6	56.4	14		
Total %	1.7	30.1	2.3	34.1	2.6	4.4	3.4	10.4	2.4	41.6	4.6	48.6	2.1	3.9	1	7	

	12th Avenue Southbound				Greenfield Avenue Westbound				12th Avenue Northbound				Greenfield Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	**10**	139	**11**	160	11	18	11	40	15	184	17	216	7	13	**7**	27	443
05:00 PM	8	105	7	120	**15**	**31**	**23**	**69**	**23**	**243**	**36**	**302**	**12**	13	2	27	**518**
05:15 PM	8	136	11	155	13	17	11	41	5	155	16	176	9	**17**	5	31	403
05:30 PM	9	**156**	7	**172**	12	24	15	51	7	158	23	188	12	17	4	**33**	444
Total Volume	35	536	36	607	51	90	60	201	50	740	92	882	40	60	18	118	1808
% App. Total	5.8	88.3	5.9		25.4	44.8	29.9		5.7	83.9	10.4		33.9	50.8	15.3		
PHF	.875	.859	.818	.882	.850	.726	.652	.728	.543	.761	.639	.730	.833	.882	.643	.894	.873

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 12th Avenue
E/W: Greenfield Avenue
Weather: Clear

File Name : 04_HFD_12th_Green PM
Site Code : 00322472
Start Date : 5/17/2022
Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	05:00 PM				04:45 PM				04:15 PM				04:00 PM			
+0 mins.	8	105	7	120	11	18	11	40	7	173	22	202	7	16	6	29
+15 mins.	8	136	**11**	155	**15**	**31**	**23**	**69**	5	153	12	170	**8**	20	1	29
+30 mins.	**9**	**156**	7	**172**	13	17	11	41	15	184	17	216	6	**25**	6	**37**
+45 mins.	9	144	8	161	12	24	15	51	**23**	**243**	**36**	**302**	7	13	**7**	27
Total Volume	34	541	33	608	51	90	60	201	50	753	87	890	28	74	20	122
% App. Total	5.6	89	5.4		25.4	44.8	29.9		5.6	84.6	9.8		23	60.7	16.4	
PHF	.944	.867	.750	.884	.850	.726	.652	.728	.543	.775	.604	.737	.875	.740	.714	.824

Location: Hanford
N/S: 12th Avenue
E/W: Greenfield Avenue

Date: 5/17/2022
Day: Tuesday

PEDESTRIANS

	North Leg 12th Avenue	East Leg Greenfield Avenue	South Leg 12th Avenue	West Leg Greenfield Avenue	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	1	1
7:30 AM	1	0	0	1	2
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
TOTAL VOLUMES:	1	0	0	2	3

	North Leg 12th Avenue	East Leg Greenfield Avenue	South Leg 12th Avenue	West Leg Greenfield Avenue	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	0	2	0	2
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	1	1
TOTAL VOLUMES:	0	0	2	1	3

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
951-268-6268

Location: Hanford
N/S: 12th Avenue
E/W: Greenfield Avenue

Date: 5/17/2022
Day: Tuesday

BICYCLES

	Southbound 12th Avenue			Westbound Greenfield Avenue			Northbound 12th Avenue			Eastbound Greenfield Avenue			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	1	0	0	0	0	0	0	0	0	0	0	1
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	1	0	0	0	0	0	0	0	0	0	0	1

	Southbound 12th Avenue			Westbound Greenfield Avenue			Northbound 12th Avenue			Eastbound Greenfield Avenue			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	1	0	0	1	0	2
5:30 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	0	0	2	0	0	1	0	3

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
951-268-6268

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 12th Avenue
E/W: Liberty Street/King's County Drive
Weather: Clear

File Name : 05_HFD_12th_Lib AM
Site Code : 00322472
Start Date : 5/17/2022
Page No : 1

Groups Printed- Total Volume

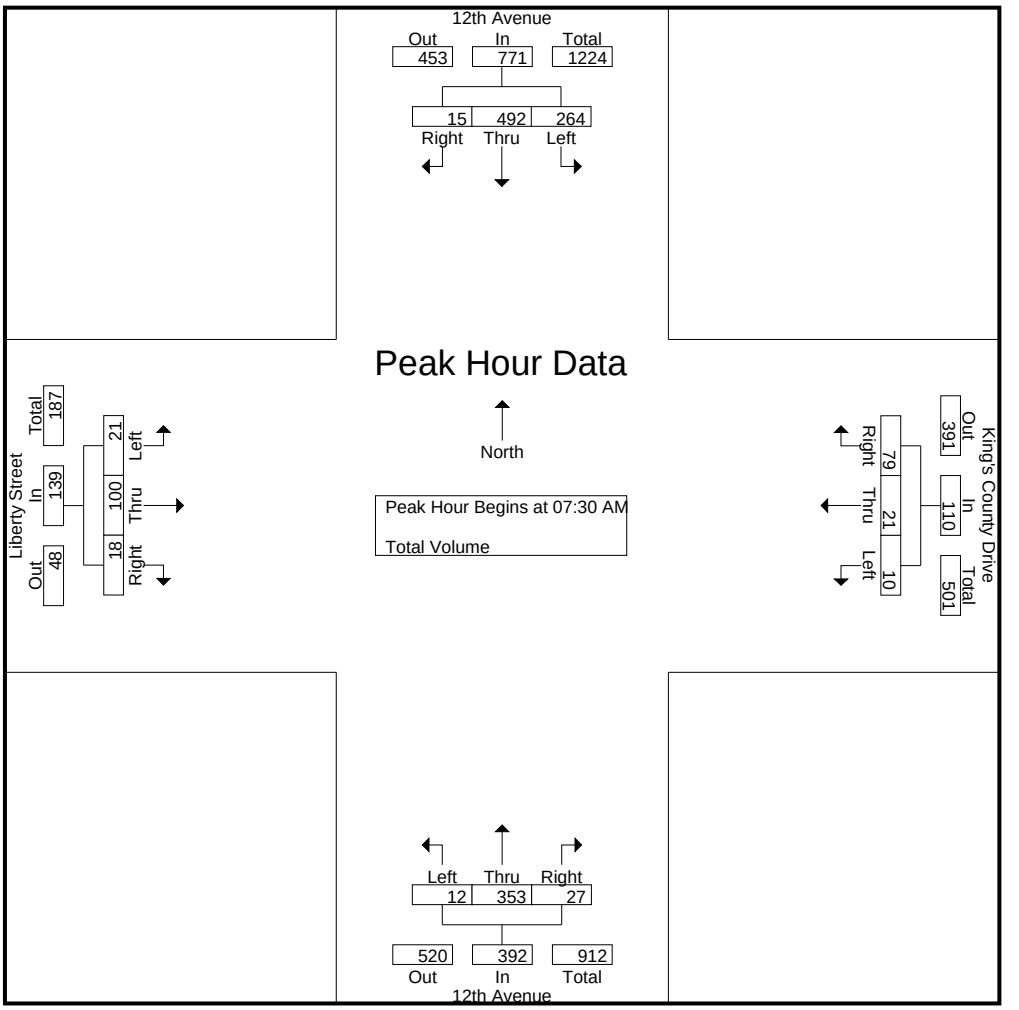
	12th Avenue Southbound				King's County Drive Westbound				12th Avenue Northbound				Liberty Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	14	88	1	103	1	0	4	5	1	45	2	48	2	6	5	13	169
07:15 AM	23	96	2	121	1	3	4	8	2	71	1	74	4	12	4	20	223
07:30 AM	52	109	2	163	2	3	10	15	2	73	6	81	6	15	4	25	284
07:45 AM	106	128	5	239	3	4	12	19	1	98	10	109	3	44	5	52	419
Total	195	421	10	626	7	10	30	47	6	287	19	312	15	77	18	110	1095
08:00 AM	73	141	7	221	4	7	28	39	6	80	7	93	7	22	4	33	386
08:15 AM	33	114	1	148	1	7	29	37	3	102	4	109	5	19	5	29	323
08:30 AM	27	104	2	133	1	5	13	19	3	74	6	83	5	10	2	17	252
08:45 AM	24	112	2	138	2	4	11	17	1	85	6	92	1	16	5	22	269
Total	157	471	12	640	8	23	81	112	13	341	23	377	18	67	16	101	1230
Grand Total	352	892	22	1266	15	33	111	159	19	628	42	689	33	144	34	211	2325
Apprch %	27.8	70.5	1.7		9.4	20.8	69.8		2.8	91.1	6.1		15.6	68.2	16.1		
Total %	15.1	38.4	0.9	54.5	0.6	1.4	4.8	6.8	0.8	27	1.8	29.6	1.4	6.2	1.5	9.1	

	12th Avenue Southbound				King's County Drive Westbound				12th Avenue Northbound				Liberty Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	52	109	2	163	2	3	10	15	2	73	6	81	6	15	4	25	284
07:45 AM	**106**	128	5	**239**	3	4	12	19	1	98	**10**	**109**	3	**44**	**5**	**52**	**419**
08:00 AM	73	**141**	**7**	221	**4**	**7**	28	**39**	**6**	80	7	93	**7**	22	4	33	386
08:15 AM	33	114	1	148	1	7	**29**	37	3	**102**	4	109	5	19	5	29	323
Total Volume	264	492	15	771	10	21	79	110	12	353	27	392	21	100	18	139	1412
% App. Total	34.2	63.8	1.9		9.1	19.1	71.8		3.1	90.1	6.9		15.1	71.9	12.9		
PHF	.623	.872	.536	.806	.625	.750	.681	.705	.500	.865	.675	.899	.750	.568	.900	.668	.842

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 12th Avenue
E/W: Liberty Street/King's County Drive
Weather: Clear

File Name : 05_HFD_12th_Lib AM
Site Code : 00322472
Start Date : 5/17/2022
Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:45 AM				07:45 AM				07:30 AM			
+0 mins.	52	109	2	163	3	4	12	19	1	98	**10**	**109**	6	15	4	25
+15 mins.	**106**	128	5	**239**	**4**	**7**	28	**39**	**6**	80	7	93	3	**44**	**5**	**52**
+30 mins.	73	**141**	**7**	221	1	7	**29**	37	3	**102**	4	109	**7**	22	4	33
+45 mins.	33	114	1	148	1	5	13	19	3	74	6	83	5	19	5	29
Total Volume	264	492	15	771	9	23	82	114	13	354	27	394	21	100	18	139
% App. Total	34.2	63.8	1.9		7.9	20.2	71.9		3.3	89.8	6.9		15.1	71.9	12.9	
PHF	.623	.872	.536	.806	.563	.821	.707	.731	.542	.868	.675	.904	.750	.568	.900	.668

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 12th Avenue
E/W: Liberty Street/King's County Drive
Weather: Clear

File Name : 05_HFD_12th_Lib PM
Site Code : 00322472
Start Date : 5/17/2022

Groups Printed- Total Volume

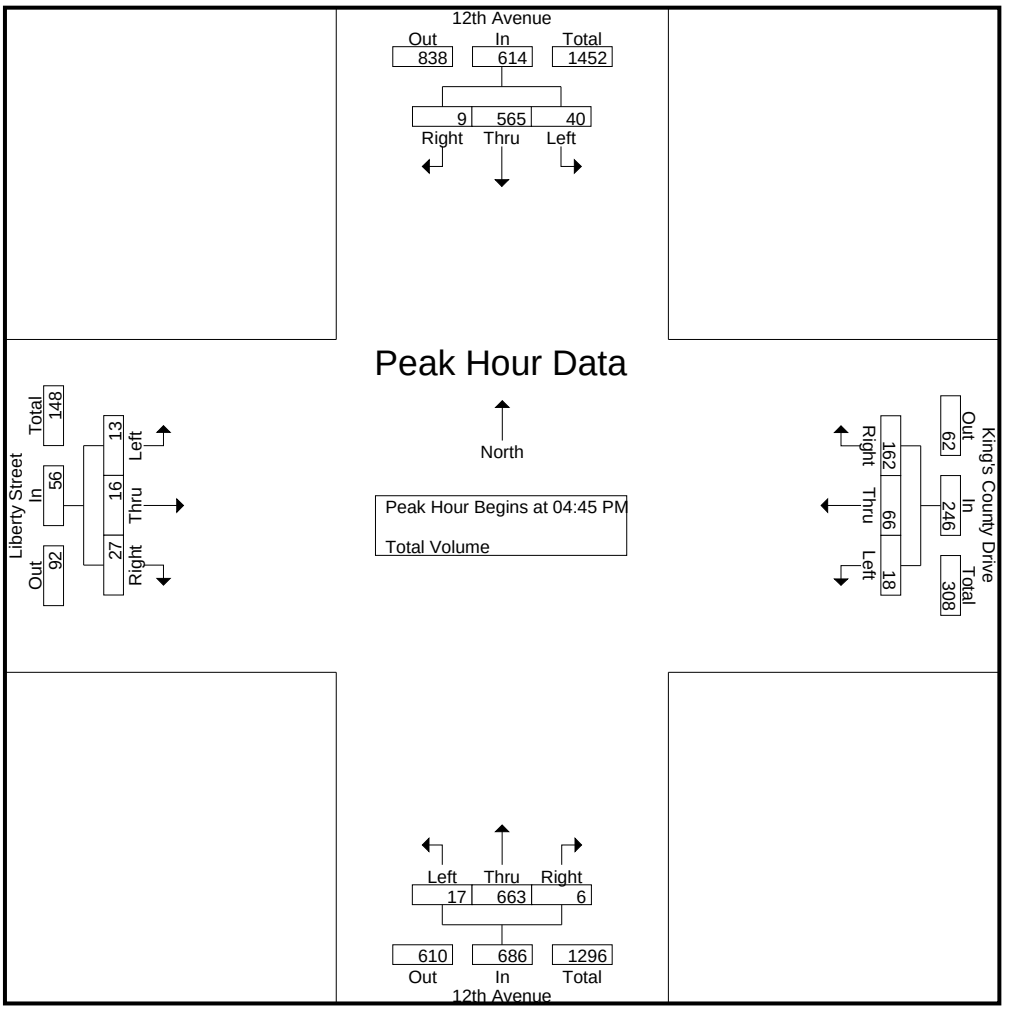
	12th Avenue Southbound				King's County Drive Westbound				12th Avenue Northbound				Liberty Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	10	136	7	153	7	19	43	69	7	181	2	190	1	7	3	11	423
04:15 PM	11	124	3	138	1	4	22	27	5	180	4	189	0	8	9	17	371
04:30 PM	6	125	0	131	3	16	29	48	3	137	2	142	1	3	4	8	329
04:45 PM	12	142	2	156	2	12	27	41	4	182	2	188	2	3	5	10	395
Total	39	527	12	578	13	51	121	185	19	680	10	709	4	21	21	46	1518
05:00 PM	5	118	3	126	12	33	80	125	1	167	1	169	5	1	8	14	434
05:15 PM	12	150	1	163	2	12	26	40	7	143	3	153	2	9	8	19	375
05:30 PM	11	155	3	169	2	9	29	40	5	171	0	176	4	3	6	13	398
05:45 PM	6	148	2	156	2	9	27	38	3	152	0	155	1	7	2	10	359
Total	34	571	9	614	18	63	162	243	16	633	4	653	12	20	24	56	1566
Grand Total	73	1098	21	1192	31	114	283	428	35	1313	14	1362	16	41	45	102	3084
Apprch %	6.1	92.1	1.8		7.2	26.6	66.1		2.6	96.4	1		15.7	40.2	44.1		
Total %	2.4	35.6	0.7	38.7	1	3.7	9.2	13.9	1.1	42.6	0.5	44.2	0.5	1.3	1.5	3.3	

	12th Avenue Southbound				King's County Drive Westbound				12th Avenue Northbound				Liberty Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	**12**	142	2	156	2	12	27	41	4	**182**	2	**188**	2	3	5	10	395
05:00 PM	5	118	**3**	126	**12**	**33**	**80**	**125**	1	167	1	169	**5**	1	**8**	14	**434**
05:15 PM	12	150	1	163	2	12	26	40	**7**	143	**3**	153	2	**9**	8	**19**	375
05:30 PM	11	**155**	3	**169**	2	9	29	40	5	171	0	176	4	3	6	13	398
Total Volume	40	565	9	614	18	66	162	246	17	663	6	686	13	16	27	56	1602
% App. Total	6.5	92	1.5		7.3	26.8	65.9		2.5	96.6	0.9		23.2	28.6	48.2		
PHF	.833	.911	.750	.908	.375	.500	.506	.492	.607	.911	.500	.912	.650	.444	.844	.737	.923

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 12th Avenue
E/W: Liberty Street/King's County Drive
Weather: Clear

File Name : 05_HFD_12th_Lib PM
Site Code : 00322472
Start Date : 5/17/2022
Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:30 PM				04:00 PM				04:45 PM			
+0 mins.	**12**	142	2	156	3	16	29	48	**7**	181	2	**190**	2	3	5	10
+15 mins.	5	118	**3**	126	2	12	27	41	5	180	**4**	189	**5**	1	**8**	14
+30 mins.	12	150	1	163	**12**	**33**	**80**	**125**	3	137	2	142	2	**9**	8	**19**
+45 mins.	11	**155**	3	**169**	2	12	26	40	4	**182**	2	188	4	3	6	13
Total Volume	40	565	9	614	19	73	162	254	19	680	10	709	13	16	27	56
% App. Total	6.5	92	1.5		7.5	28.7	63.8		2.7	95.9	1.4		23.2	28.6	48.2	
PHF	.833	.911	.750	.908	.396	.553	.506	.508	.679	.934	.625	.933	.650	.444	.844	.737

Location: Hanford
N/S: 12th Avenue
E/W: Liberty St/King's County Dr

Date: 5/17/2022
Day: Tuesday

PEDESTRIANS

	North Leg 12th Avenue	East Leg King's County Drive	South Leg 12th Avenue	West Leg Liberty Street	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	1	1
7:45 AM	1	0	0	0	1
8:00 AM	0	0	0	0	0
8:15 AM	0	1	0	0	1
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
TOTAL VOLUMES:	1	1	0	1	3

	North Leg 12th Avenue	East Leg King's County Drive	South Leg 12th Avenue	West Leg Liberty Street	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
5:00 PM	0	0	1	0	1
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
TOTAL VOLUMES:	0	0	1	0	1

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
951-268-6268

Location: Hanford
N/S: 12th Avenue
E/W: Liberty St/King's County Dr

Date: 5/17/2022
Day: Tuesday

BICYCLES

	Southbound 12th Avenue			Westbound King's County Drive			Northbound 12th Avenue			Eastbound Liberty Street			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	1	0	0	1	2
8:15 AM	0	1	0	0	0	0	0	0	0	0	0	0	1
8:30 AM	0	0	0	1	0	0	0	0	0	0	0	0	1
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	1	0	1	0	0	0	0	1	0	0	1	4

	Southbound 12th Avenue			Westbound King's County Drive			Northbound 12th Avenue			Eastbound Liberty Street			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	1	0	0	1
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
5:30 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	1	0	0	1	0	1	0	0	3

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
951-268-6268

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 12th Avenue
E/W: Lacey Boulevard
Weather: Clear

File Name : 06_HFD_12th_Lacey AM
Site Code : 00322472
Start Date : 5/17/2022
Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

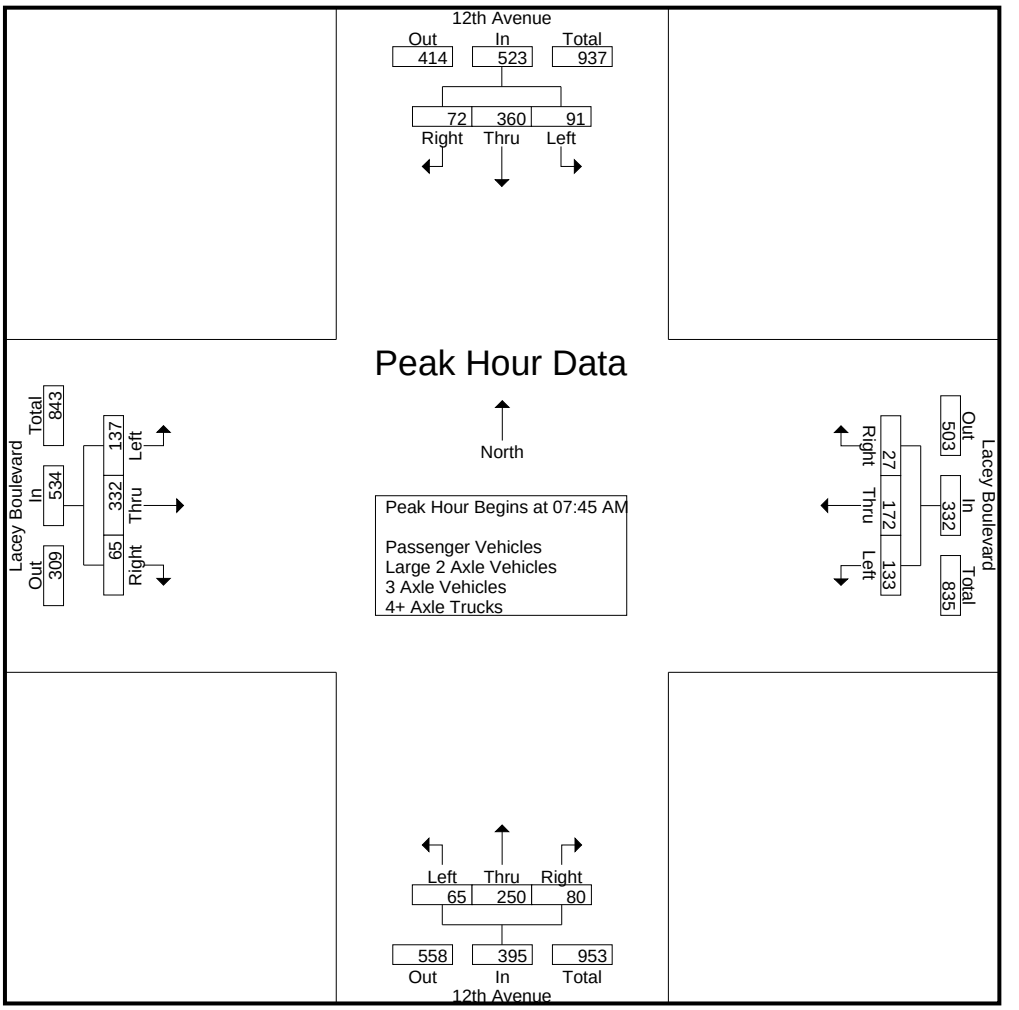
	12th Avenue Southbound				Lacey Boulevard Westbound				12th Avenue Northbound				Lacey Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	3	88	8	99	12	14	2	28	14	32	2	48	13	17	13	43	218
07:15 AM	14	76	13	103	15	19	5	39	8	58	8	74	11	37	10	58	274
07:30 AM	17	82	16	115	23	20	3	46	16	66	22	104	21	63	17	101	366
07:45 AM	23	91	17	131	33	41	3	77	18	78	28	124	34	101	14	149	481
Total	57	337	54	448	83	94	13	190	56	234	60	350	79	218	54	351	1339
08:00 AM	26	95	21	142	35	45	9	89	11	51	14	76	31	95	22	148	455
08:15 AM	19	83	13	115	26	40	5	71	16	67	22	105	43	76	12	131	422
08:30 AM	23	91	21	135	39	46	10	95	20	54	16	90	29	60	17	106	426
08:45 AM	27	91	21	139	29	57	9	95	19	66	26	111	35	56	15	106	451
Total	95	360	76	531	129	188	33	350	66	238	78	382	138	287	66	491	1754
Grand Total	152	697	130	979	212	282	46	540	122	472	138	732	217	505	120	842	3093
Apprch %	15.5	71.2	13.3		39.3	52.2	8.5		16.7	64.5	18.9		25.8	60	14.3		
Total %	4.9	22.5	4.2	31.7	6.9	9.1	1.5	17.5	3.9	15.3	4.5	23.7	7	16.3	3.9	27.2	
Passenger Vehicles	150	684	125	959	198	276	44	518	120	461	136	717	215	494	119	828	3022
% Passenger Vehicles	98.7	98.1	96.2	98	93.4	97.9	95.7	95.9	98.4	97.7	98.6	98	99.1	97.8	99.2	98.3	97.7
Large 2 Axle Vehicles	2	8	4	14	8	6	0	14	2	8	2	12	1	9	0	10	50
% Large 2 Axle Vehicles	1.3	1.1	3.1	1.4	3.8	2.1	0	2.6	1.6	1.7	1.4	1.6	0.5	1.8	0	1.2	1.6
3 Axle Vehicles	0	3	1	4	0	0	0	0	0	1	0	1	0	1	0	1	6
% 3 Axle Vehicles	0	0.4	0.8	0.4	0	0	0	0	0	0.2	0	0.1	0	0.2	0	0.1	0.2
4+ Axle Trucks	0	2	0	2	6	0	2	8	0	2	0	2	1	1	1	3	15
% 4+ Axle Trucks	0	0.3	0	0.2	2.8	0	4.3	1.5	0	0.4	0	0.3	0.5	0.2	0.8	0.4	0.5

	12th Avenue Southbound				Lacey Boulevard Westbound				12th Avenue Northbound				Lacey Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	23	91	17	131	33	41	3	77	18	**78**	**28**	**124**	34	**101**	14	**149**	**481**
08:00 AM	**26**	**95**	**21**	**142**	35	45	9	89	11	51	14	76	31	95	**22**	148	455
08:15 AM	19	83	13	115	26	40	5	71	16	67	22	105	**43**	76	12	131	422
08:30 AM	23	91	21	135	**39**	**46**	**10**	**95**	**20**	54	16	90	29	60	17	106	426
Total Volume	91	360	72	523	133	172	27	332	65	250	80	395	137	332	65	534	1784
% App. Total	17.4	68.8	13.8		40.1	51.8	8.1		16.5	63.3	20.3		25.7	62.2	12.2		
PHF	.875	.947	.857	.921	.853	.935	.675	.874	.813	.801	.714	.796	.797	.822	.739	.896	.927

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 12th Avenue
E/W: Lacey Boulevard
Weather: Clear

File Name : 06_HFD_12th_Lacey AM
Site Code : 00322472
Start Date : 5/17/2022
Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	08:00 AM				08:00 AM				07:30 AM				07:45 AM			
+0 mins.	26	**95**	**21**	**142**	35	45	9	89	16	66	22	104	34	**101**	14	**149**
+15 mins.	19	83	13	115	26	40	5	71	**18**	**78**	**28**	**124**	31	95	**22**	148
+30 mins.	23	91	21	135	**39**	46	**10**	**95**	11	51	14	76	**43**	76	12	131
+45 mins.	**27**	91	21	139	29	**57**	9	95	16	67	22	105	29	60	17	106
Total Volume	95	360	76	531	129	188	33	350	61	262	86	409	137	332	65	534
% App. Total	17.9	67.8	14.3		36.9	53.7	9.4		14.9	64.1	21		25.7	62.2	12.2	
PHF	.880	.947	.905	.935	.827	.825	.825	.921	.847	.840	.768	.825	.797	.822	.739	.896

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 12th Avenue
E/W: Lacey Boulevard
Weather: Clear

File Name : 06_HFD_12th_Lacey AM
Site Code : 00322472
Start Date : 5/17/2022
Page No : 1

Groups Printed- Passenger Vehicles

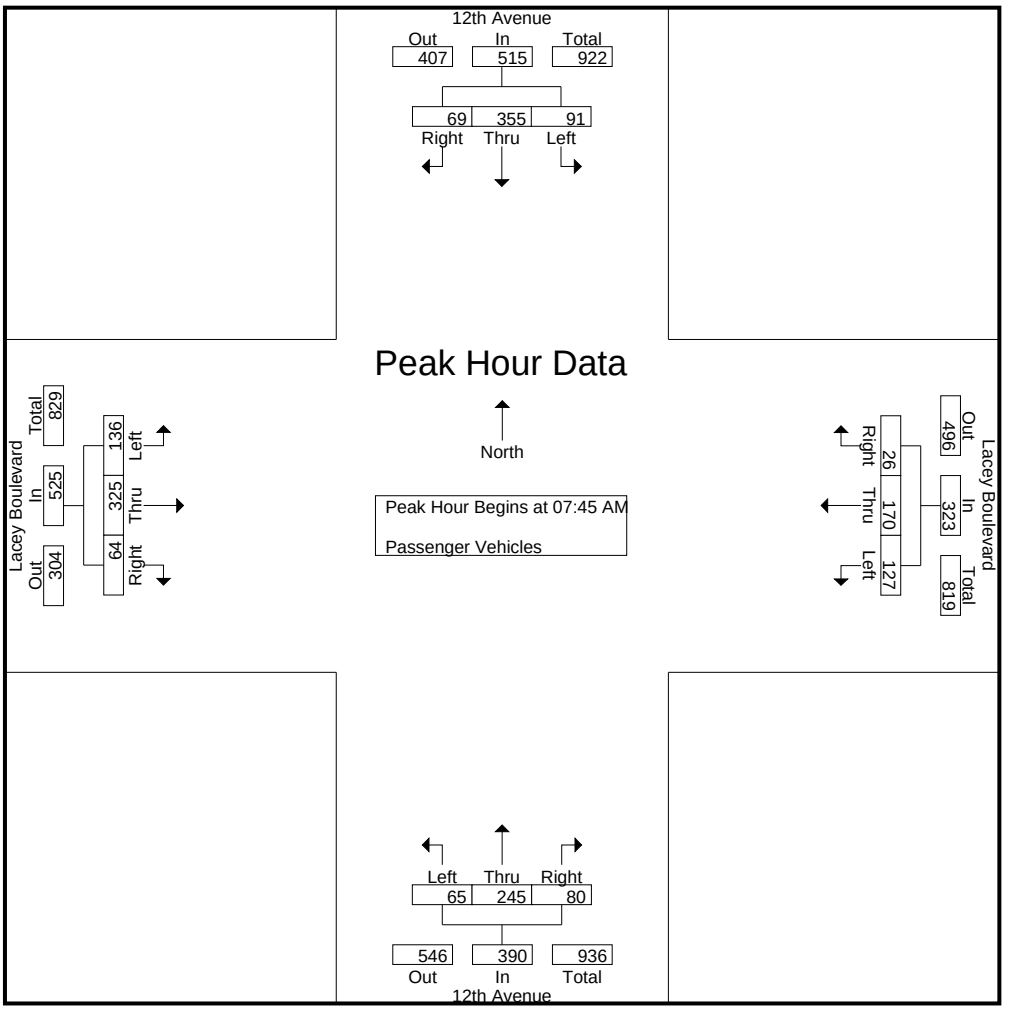
	12th Avenue Southbound				Lacey Boulevard Westbound				12th Avenue Northbound				Lacey Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	3	87	7	97	10	14	2	26	13	32	2	47	12	17	13	42	212
07:15 AM	14	75	13	102	11	18	5	34	8	55	8	71	11	36	10	57	264
07:30 AM	17	78	15	110	21	19	3	43	16	66	21	103	21	63	17	101	357
07:45 AM	23	88	17	128	32	40	3	75	18	78	28	124	34	99	14	147	474
Total	57	328	52	437	74	91	13	178	55	231	59	345	78	215	54	347	1307
08:00 AM	26	94	19	139	33	45	9	87	11	51	14	76	30	94	22	146	448
08:15 AM	19	83	13	115	25	40	5	70	16	65	22	103	43	75	12	130	418
08:30 AM	23	90	20	133	37	45	9	91	20	51	16	87	29	57	16	102	413
08:45 AM	25	89	21	135	29	55	8	92	18	63	25	106	35	53	15	103	436
Total	93	356	73	522	124	185	31	340	65	230	77	372	137	279	65	481	1715
Grand Total	150	684	125	959	198	276	44	518	120	461	136	717	215	494	119	828	3022
Apprch %	15.6	71.3	13		38.2	53.3	8.5		16.7	64.3	19		26	59.7	14.4		
Total %	5	22.6	4.1	31.7	6.6	9.1	1.5	17.1	4	15.3	4.5	23.7	7.1	16.3	3.9	27.4	

	12th Avenue Southbound				Lacey Boulevard Westbound				12th Avenue Northbound				Lacey Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:45 AM to 08:30 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	23	88	17	128	32	40	3	75	18	**78**	**28**	**124**	34	**99**	14	**147**	**474**
08:00 AM	**26**	**94**	19	**139**	33	**45**	**9**	87	11	51	14	76	30	94	**22**	146	448
08:15 AM	19	83	13	115	25	40	5	70	16	65	22	103	**43**	75	12	130	418
08:30 AM	23	90	**20**	133	**37**	45	9	**91**	**20**	51	16	87	29	57	16	102	413
Total Volume	91	355	69	515	127	170	26	323	65	245	80	390	136	325	64	525	1753
% App. Total	17.7	68.9	13.4		39.3	52.6	8		16.7	62.8	20.5		25.9	61.9	12.2		
PHF	.875	.944	.863	.926	.858	.944	.722	.887	.813	.785	.714	.786	.791	.821	.727	.893	.925

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 12th Avenue
E/W: Lacey Boulevard
Weather: Clear

File Name : 06_HFD_12th_Lacey AM
Site Code : 00322472
Start Date : 5/17/2022
Page No : 2



Peak Hour Analysis From 07:45 AM to 08:30 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:45 AM				07:45 AM				07:45 AM				07:45 AM			
+0 mins.	23	88	17	128	32	40	3	75	18	**78**	**28**	**124**	34	**99**	14	**147**
+15 mins.	**26**	**94**	19	**139**	33	**45**	**9**	87	11	51	14	76	30	94	**22**	146
+30 mins.	19	83	13	115	25	40	5	70	16	65	22	103	**43**	75	12	130
+45 mins.	23	90	**20**	133	**37**	45	9	**91**	**20**	51	16	87	29	57	16	102
Total Volume	91	355	69	515	127	170	26	323	65	245	80	390	136	325	64	525
% App. Total	17.7	68.9	13.4		39.3	52.6	8		16.7	62.8	20.5		25.9	61.9	12.2	
PHF	.875	.944	.863	.926	.858	.944	.722	.887	.813	.785	.714	.786	.791	.821	.727	.893

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 12th Avenue
E/W: Lacey Boulevard
Weather: Clear

File Name : 06_HFD_12th_Lacey AM
Site Code : 00322472
Start Date : 5/17/2022
Page No : 1

Groups Printed- Large 2 Axle Vehicles

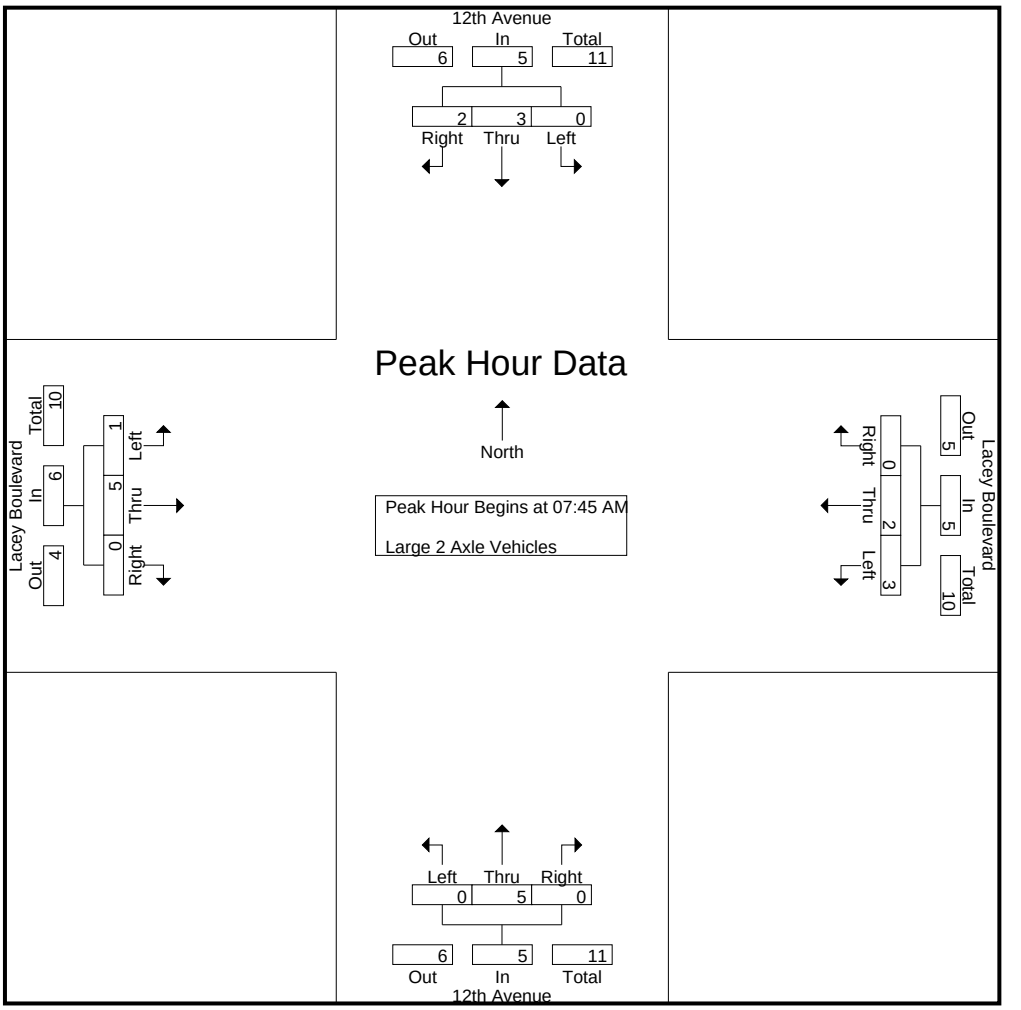
	12th Avenue Southbound				Lacey Boulevard Westbound				12th Avenue Northbound				Lacey Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	1	1	2	1	0	0	1	1	0	0	1	0	0	0	0	4
07:15 AM	0	1	0	1	3	1	0	4	0	2	0	2	0	1	0	1	8
07:30 AM	0	2	1	3	1	1	0	2	0	0	1	1	0	0	0	0	6
07:45 AM	0	2	0	2	0	1	0	1	0	0	0	0	0	1	0	1	4
Total	0	6	2	8	5	3	0	8	1	2	1	4	0	2	0	2	22
08:00 AM	0	0	1	1	2	0	0	2	0	0	0	0	1	1	0	2	5
08:15 AM	0	0	0	0	0	0	0	0	0	2	0	2	0	1	0	1	3
08:30 AM	0	1	1	2	1	1	0	2	0	3	0	3	0	2	0	2	9
08:45 AM	2	1	0	3	0	2	0	2	1	1	1	3	0	3	0	3	11
Total	2	2	2	6	3	3	0	6	1	6	1	8	1	7	0	8	28
Grand Total	2	8	4	14	8	6	0	14	2	8	2	12	1	9	0	10	50
Apprch %	14.3	57.1	28.6		57.1	42.9	0		16.7	66.7	16.7		10	90	0		
Total %	4	16	8	28	16	12	0	28	4	16	4	24	2	18	0	20	

	12th Avenue Southbound				Lacey Boulevard Westbound				12th Avenue Northbound				Lacey Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:45 AM to 08:30 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	0	**2**	0	**2**	0	**1**	0	1	0	0	0	0	0	1	0	1	4
08:00 AM	0	0	**1**	1	**2**	0	0	**2**	0	0	0	0	**1**	1	0	**2**	5
08:15 AM	0	0	0	0	0	0	0	0	0	2	0	2	0	1	0	1	3
08:30 AM	0	1	1	2	1	1	0	2	0	**3**	0	**3**	0	**2**	0	2	**9**
Total Volume	0	3	2	5	3	2	0	5	0	5	0	5	1	5	0	6	21
% App. Total	0	60	40		60	40	0		0	100	0		16.7	83.3	0		
PHF	.000	.375	.500	.625	.375	.500	.000	.625	.000	.417	.000	.417	.250	.625	.000	.750	.583

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 12th Avenue
E/W: Lacey Boulevard
Weather: Clear

File Name : 06_HFD_12th_Lacey AM
Site Code : 00322472
Start Date : 5/17/2022



Peak Hour Analysis From 07:45 AM to 08:30 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:45 AM				07:45 AM				07:45 AM				07:45 AM			
+0 mins.	0	**2**	0	**2**	0	**1**	0	1	0	0	0	0	0	1	0	1
+15 mins.	0	0	**1**	1	**2**	0	0	**2**	0	0	0	0	**1**	1	0	**2**
+30 mins.	0	0	0	0	0	0	0	0	0	2	0	2	0	1	0	1
+45 mins.	0	1	1	2	1	1	0	2	0	**3**	0	**3**	0	**2**	0	2
Total Volume	0	3	2	5	3	2	0	5	0	5	0	5	1	5	0	6
% App. Total	0	60	40		60	40	0		0	100	0		16.7	83.3	0	
PHF	.000	.375	.500	.625	.375	.500	.000	.625	.000	.417	.000	.417	.250	.625	.000	.750

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 12th Avenue
E/W: Lacey Boulevard
Weather: Clear

File Name : 06_HFD_12th_Lacey AM
Site Code : 00322472
Start Date : 5/17/2022
Page No : 1

Groups Printed- 3 Axle Vehicles

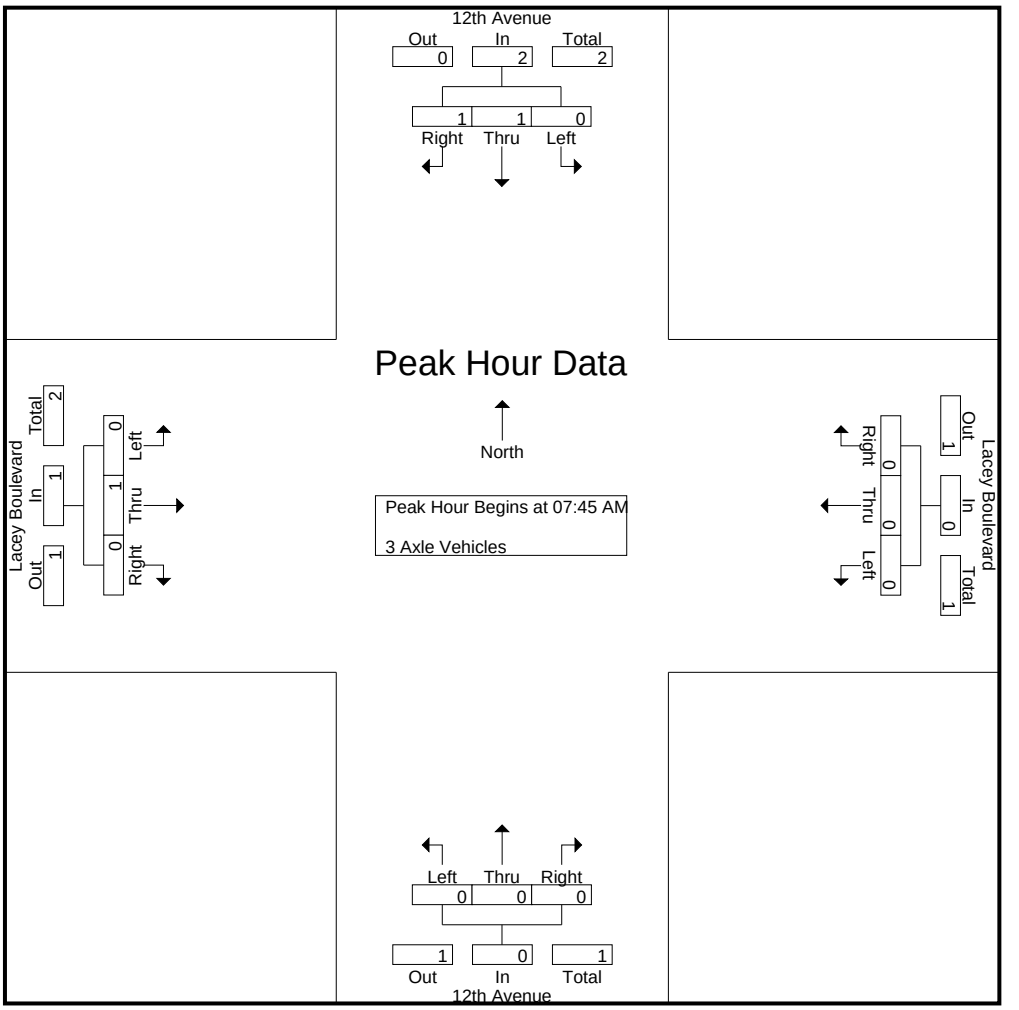
	12th Avenue Southbound				Lacey Boulevard Westbound				12th Avenue Northbound				Lacey Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
07:45 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
08:00 AM	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
08:45 AM	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	2
Total	0	1	1	2	0	0	0	0	0	1	0	1	0	1	0	1	4
Grand Total	0	3	1	4	0	0	0	0	0	1	0	1	0	1	0	1	6
Apprch %	0	75	25		0	0	0		0	100	0		0	100	0		
Total %	0	50	16.7	66.7	0	0	0	0	0	16.7	0	16.7	0	16.7	0	16.7	

	12th Avenue Southbound				Lacey Boulevard Westbound				12th Avenue Northbound				Lacey Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:45 AM to 08:30 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	0	**1**	0	**1**	0	0	0	0	0	0	0	0	0	0	0	0	**1**
08:00 AM	0	0	**1**	1	0	0	0	0	0	0	0	0	0	0	0	0	1
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**	0	**1**	1
Total Volume	0	1	1	2	0	0	0	0	0	0	0	0	0	1	0	1	3
% App. Total	0	50	50		0	0	0		0	0	0		0	100	0		
PHF	.000	.250	.250	.500	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250	.000	.250	.750

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 12th Avenue
E/W: Lacey Boulevard
Weather: Clear

File Name : 06_HFD_12th_Lacey AM
Site Code : 00322472
Start Date : 5/17/2022



Peak Hour Analysis From 07:45 AM to 08:30 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:45 AM				07:45 AM				07:45 AM				07:45 AM			
+0 mins.	0	**1**	0	**1**	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	**1**	1	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**	0	**1**
Total Volume	0	1	1	2	0	0	0	0	0	0	0	0	0	1	0	1
% App. Total	0	50	50		0	0	0		0	0	0		0	100	0	
PHF	.000	.250	.250	.500	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250	.000	.250

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 12th Avenue
E/W: Lacey Boulevard
Weather: Clear

File Name : 06_HFD_12th_Lacey AM
Site Code : 00322472
Start Date : 5/17/2022
Page No : 1

Groups Printed- 4+ Axle Trucks

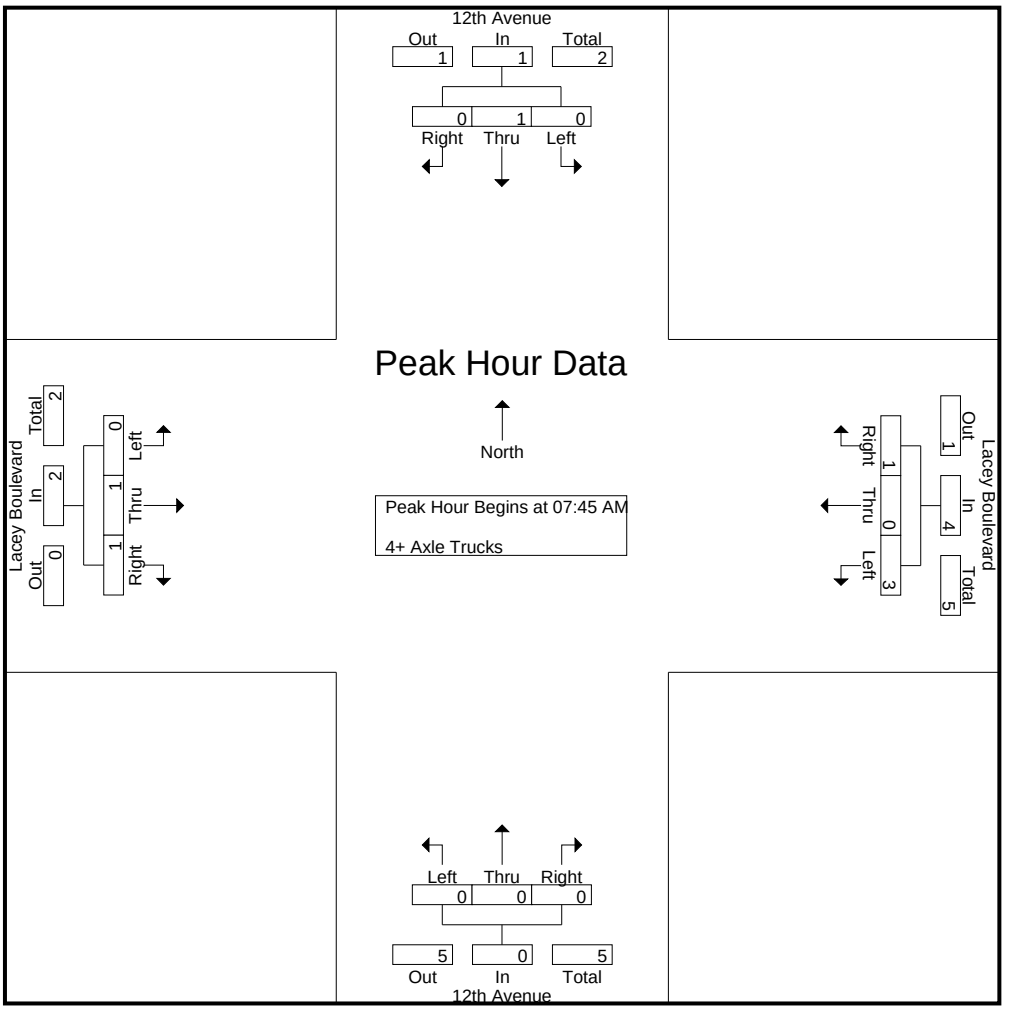
	12th Avenue Southbound				Lacey Boulevard Westbound				12th Avenue Northbound				Lacey Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	1	0	0	1	0	0	0	0	1	0	0	1	2
07:15 AM	0	0	0	0	1	0	0	1	0	1	0	1	0	0	0	0	2
07:30 AM	0	1	0	1	1	0	0	1	0	0	0	0	0	0	0	0	2
07:45 AM	0	0	0	0	1	0	0	1	0	0	0	0	0	1	0	1	2
Total	0	1	0	1	4	0	0	4	0	1	0	1	1	1	0	2	8
08:00 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
08:15 AM	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1
08:30 AM	0	0	0	0	1	0	1	2	0	0	0	0	0	0	1	1	3
08:45 AM	0	0	0	0	0	0	1	1	0	1	0	1	0	0	0	0	2
Total	0	1	0	1	2	0	2	4	0	1	0	1	0	0	1	1	7
Grand Total	0	2	0	2	6	0	2	8	0	2	0	2	1	1	1	3	15
Apprch %	0	100	0		75	0	25		0	100	0		33.3	33.3	33.3		
Total %	0	13.3	0	13.3	40	0	13.3	53.3	0	13.3	0	13.3	6.7	6.7	6.7	20	

	12th Avenue Southbound				Lacey Boulevard Westbound				12th Avenue Northbound				Lacey Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:45 AM to 08:30 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	0	0	0	0	**1**	0	0	1	0	0	0	0	0	**1**	0	**1**	2
08:00 AM	0	**1**	0	**1**	0	0	0	0	0	0	0	0	0	0	0	0	1
08:15 AM	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1
08:30 AM	0	0	0	0	1	0	**1**	**2**	0	0	0	0	0	0	**1**	1	**3**
Total Volume	0	1	0	1	3	0	1	4	0	0	0	0	0	1	1	2	7
% App. Total	0	100	0		75	0	25		0	0	0		0	50	50		
PHF	.000	.250	.000	.250	.750	.000	.250	.500	.000	.000	.000	.000	.000	.250	.250	.500	.583

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 12th Avenue
E/W: Lacey Boulevard
Weather: Clear

File Name : 06_HFD_12th_Lacey AM
Site Code : 00322472
Start Date : 5/17/2022
Page No : 2



Peak Hour Analysis From 07:45 AM to 08:30 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:45 AM				07:45 AM				07:45 AM				07:45 AM			
+0 mins.	0	0	0	0	**1**	0	0	1	0	0	0	0	0	**1**	0	**1**
+15 mins.	0	**1**	0	**1**	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	1	0	**1**	**2**	0	0	0	0	0	0	**1**	1
Total Volume	0	1	0	1	3	0	1	4	0	0	0	0	0	1	1	2
% App. Total	0	100	0		75	0	25		0	0	0		0	50	50	
PHF	.000	.250	.000	.250	.750	.000	.250	.500	.000	.000	.000	.000	.000	.250	.250	.500

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 12th Avenue
E/W: Lacey Boulevard
Weather: Clear

File Name : 06_HFD_12th_Lacey PM
Site Code : 00322472
Start Date : 5/17/2022
Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

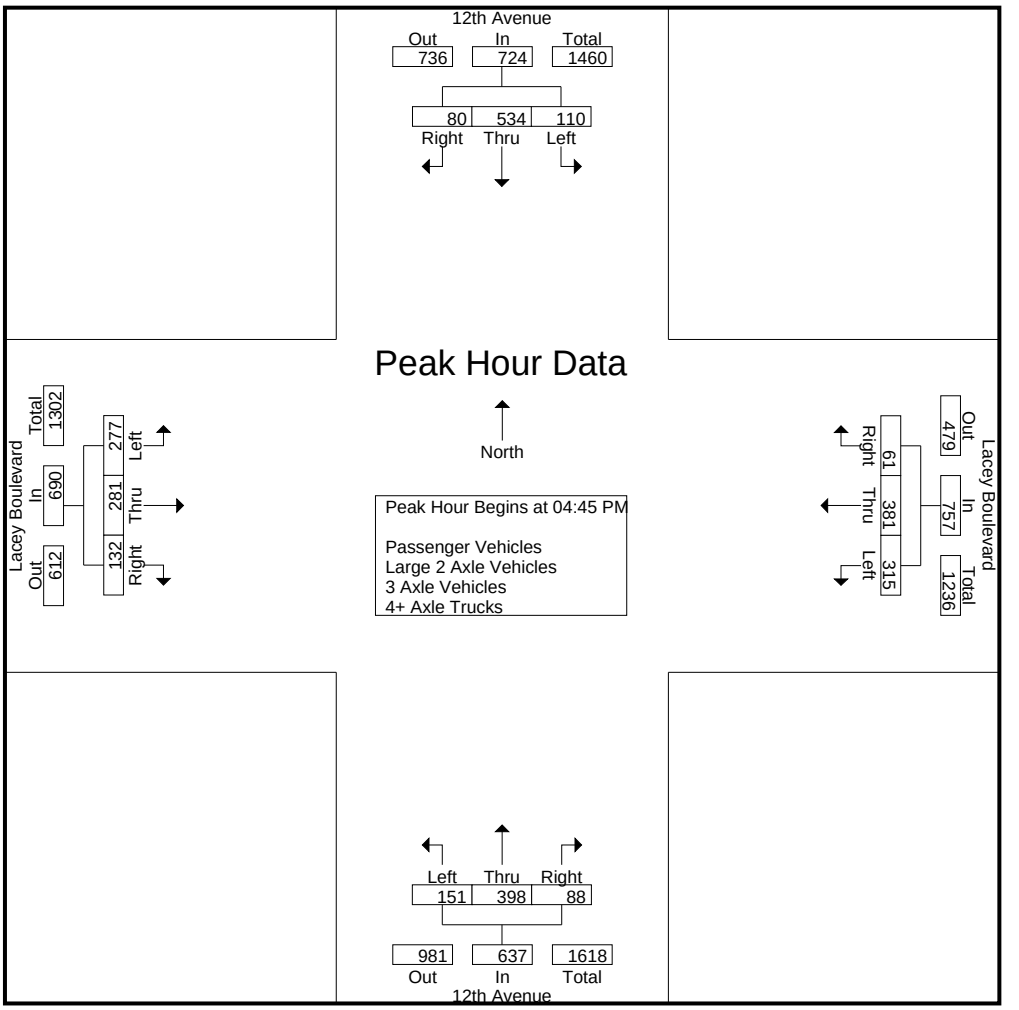
	12th Avenue Southbound				Lacey Boulevard Westbound				12th Avenue Northbound				Lacey Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	36	114	16	166	69	78	9	156	32	118	17	167	70	74	26	170	659
04:15 PM	30	112	13	155	77	83	18	178	33	116	21	170	62	85	31	178	681
04:30 PM	29	100	16	145	80	116	19	215	35	85	25	145	71	74	24	169	674
04:45 PM	31	125	20	176	83	87	17	187	42	116	22	180	72	68	23	163	706
Total	126	451	65	642	309	364	63	736	142	435	85	662	275	301	104	680	2720
05:00 PM	17	119	21	157	93	126	14	233	36	115	15	166	68	45	31	144	700
05:15 PM	30	136	16	182	64	84	15	163	36	90	19	145	72	95	34	201	691
05:30 PM	32	154	23	209	75	84	15	174	37	77	32	146	65	73	44	182	711
05:45 PM	19	129	15	163	67	67	14	148	30	85	29	144	75	88	41	204	659
Total	98	538	75	711	299	361	58	718	139	367	95	601	280	301	150	731	2761
Grand Total	224	989	140	1353	608	725	121	1454	281	802	180	1263	555	602	254	1411	5481
Apprch %	16.6	73.1	10.3		41.8	49.9	8.3		22.2	63.5	14.3		39.3	42.7	18		
Total %	4.1	18	2.6	24.7	11.1	13.2	2.2	26.5	5.1	14.6	3.3	23	10.1	11	4.6	25.7	
Passenger Vehicles	223	983	136	1342	606	720	120	1446	280	800	178	1258	555	593	253	1401	5447
% Passenger Vehicles	99.6	99.4	97.1	99.2	99.7	99.3	99.2	99.4	99.6	99.8	98.9	99.6	100	98.5	99.6	99.3	99.4
Large 2 Axle Vehicles	1	4	4	9	1	5	1	7	0	1	2	3	0	9	0	9	28
% Large 2 Axle Vehicles	0.4	0.4	2.9	0.7	0.2	0.7	0.8	0.5	0	0.1	1.1	0.2	0	1.5	0	0.6	0.5
3 Axle Vehicles	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
% 3 Axle Vehicles	0	0.1	0	0.1	0	0	0	0	0	0	0	0	0	0	0	0	0
4+ Axle Trucks	0	1	0	1	1	0	0	1	1	1	0	2	0	0	1	1	5
% 4+ Axle Trucks	0	0.1	0	0.1	0.2	0	0	0.1	0.4	0.1	0	0.2	0	0	0.4	0.1	0.1

	12th Avenue Southbound				Lacey Boulevard Westbound				12th Avenue Northbound				Lacey Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	31	125	20	176	83	87	**17**	187	**42**	**116**	22	**180**	**72**	68	23	163	706
05:00 PM	17	119	21	157	**93**	**126**	14	**233**	36	115	15	166	68	45	31	144	700
05:15 PM	30	136	16	182	64	84	15	163	36	90	19	145	72	**95**	34	**201**	691
05:30 PM	**32**	**154**	**23**	**209**	75	84	15	174	37	77	**32**	146	65	73	**44**	182	**711**
Total Volume	110	534	80	724	315	381	61	757	151	398	88	637	277	281	132	690	2808
% App. Total	15.2	73.8	11		41.6	50.3	8.1		23.7	62.5	13.8		40.1	40.7	19.1		
PHF	.859	.867	.870	.866	.847	.756	.897	.812	.899	.858	.688	.885	.962	.739	.750	.858	.987

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 12th Avenue
E/W: Lacey Boulevard
Weather: Clear

File Name : 06_HFD_12th_Lacey PM
Site Code : 00322472
Start Date : 5/17/2022



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:15 PM				04:00 PM				05:00 PM			
+0 mins.	31	125	20	176	77	83	18	178	32	**118**	17	167	68	45	31	144
+15 mins.	17	119	21	157	80	116	**19**	215	33	116	21	170	72	**95**	34	201
+30 mins.	30	136	16	182	83	87	17	187	35	85	**25**	145	65	73	**44**	182
+45 mins.	**32**	**154**	**23**	**209**	**93**	**126**	14	**233**	**42**	116	22	**180**	**75**	88	41	**204**
Total Volume	110	534	80	724	333	412	68	813	142	435	85	662	280	301	150	731
% App. Total	15.2	73.8	11		41	50.7	8.4		21.5	65.7	12.8		38.3	41.2	20.5	
PHF	.859	.867	.870	.866	.895	.817	.895	.872	.845	.922	.850	.919	.933	.792	.852	.896

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 12th Avenue
E/W: Lacey Boulevard
Weather: Clear

File Name : 06_HFD_12th_Lacey PM
Site Code : 00322472
Start Date : 5/17/2022
Page No : 1

Groups Printed- Passenger Vehicles

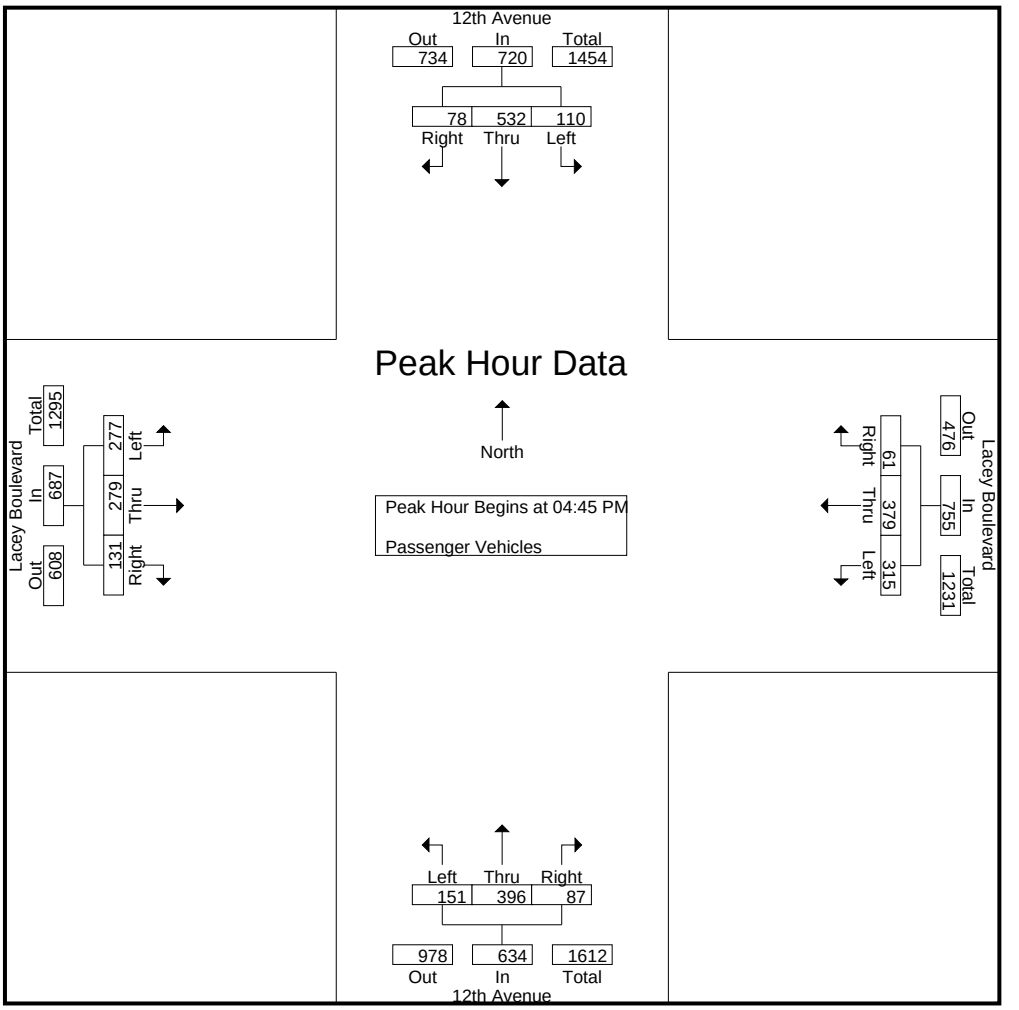
	12th Avenue Southbound				Lacey Boulevard Westbound				12th Avenue Northbound				Lacey Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	36	113	15	164	68	78	9	155	32	118	17	167	70	73	26	169	655
04:15 PM	29	110	13	152	76	82	18	176	32	116	21	169	62	81	31	174	671
04:30 PM	29	99	15	143	80	115	19	214	35	85	25	145	71	74	24	169	671
04:45 PM	31	124	20	175	83	86	17	186	42	116	22	180	72	67	23	162	703
Total	125	446	63	634	307	361	63	731	141	435	85	661	275	295	104	674	2700
05:00 PM	17	119	20	156	93	126	14	233	36	114	15	165	68	45	31	144	698
05:15 PM	30	135	16	181	64	83	15	162	36	90	18	144	72	94	34	200	687
05:30 PM	32	154	22	208	75	84	15	174	37	76	32	145	65	73	43	181	708
05:45 PM	19	129	15	163	67	66	13	146	30	85	28	143	75	86	41	202	654
Total	98	537	73	708	299	359	57	715	139	365	93	597	280	298	149	727	2747
Grand Total	223	983	136	1342	606	720	120	1446	280	800	178	1258	555	593	253	1401	5447
Apprch %	16.6	73.2	10.1		41.9	49.8	8.3		22.3	63.6	14.1		39.6	42.3	18.1		
Total %	4.1	18	2.5	24.6	11.1	13.2	2.2	26.5	5.1	14.7	3.3	23.1	10.2	10.9	4.6	25.7	

	12th Avenue Southbound				Lacey Boulevard Westbound				12th Avenue Northbound				Lacey Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	31	124	20	175	83	86	**17**	186	**42**	**116**	22	**180**	**72**	67	23	162	703
05:00 PM	17	119	20	156	**93**	**126**	14	**233**	36	114	15	165	68	45	31	144	698
05:15 PM	30	135	16	181	64	83	15	162	36	90	18	144	72	**94**	34	**200**	687
05:30 PM	**32**	**154**	**22**	**208**	75	84	15	174	37	76	**32**	145	65	73	**43**	181	**708**
Total Volume	110	532	78	720	315	379	61	755	151	396	87	634	277	279	131	687	2796
% App. Total	15.3	73.9	10.8		41.7	50.2	8.1		23.8	62.5	13.7		40.3	40.6	19.1		
PHF	.859	.864	.886	.865	.847	.752	.897	.810	.899	.853	.680	.881	.962	.742	.762	.859	.987

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 12th Avenue
E/W: Lacey Boulevard
Weather: Clear

File Name : 06_HFD_12th_Lacey PM
Site Code : 00322472
Start Date : 5/17/2022



Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	31	124	20	175	83	86	**17**	186	**42**	**116**	22	**180**	**72**	67	23	162
+15 mins.	17	119	20	156	**93**	**126**	14	**233**	36	114	15	165	68	45	31	144
+30 mins.	30	135	16	181	64	83	15	162	36	90	18	144	72	**94**	34	**200**
+45 mins.	**32**	**154**	**22**	**208**	75	84	15	174	37	76	**32**	145	65	73	**43**	181
Total Volume	110	532	78	720	315	379	61	755	151	396	87	634	277	279	131	687
% App. Total	15.3	73.9	10.8		41.7	50.2	8.1		23.8	62.5	13.7		40.3	40.6	19.1	
PHF	.859	.864	.886	.865	.847	.752	.897	.810	.899	.853	.680	.881	.962	.742	.762	.859

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 12th Avenue
E/W: Lacey Boulevard
Weather: Clear

File Name : 06_HFD_12th_Lacey PM
Site Code : 00322472
Start Date : 5/17/2022
Page No : 1

Groups Printed- Large 2 Axle Vehicles

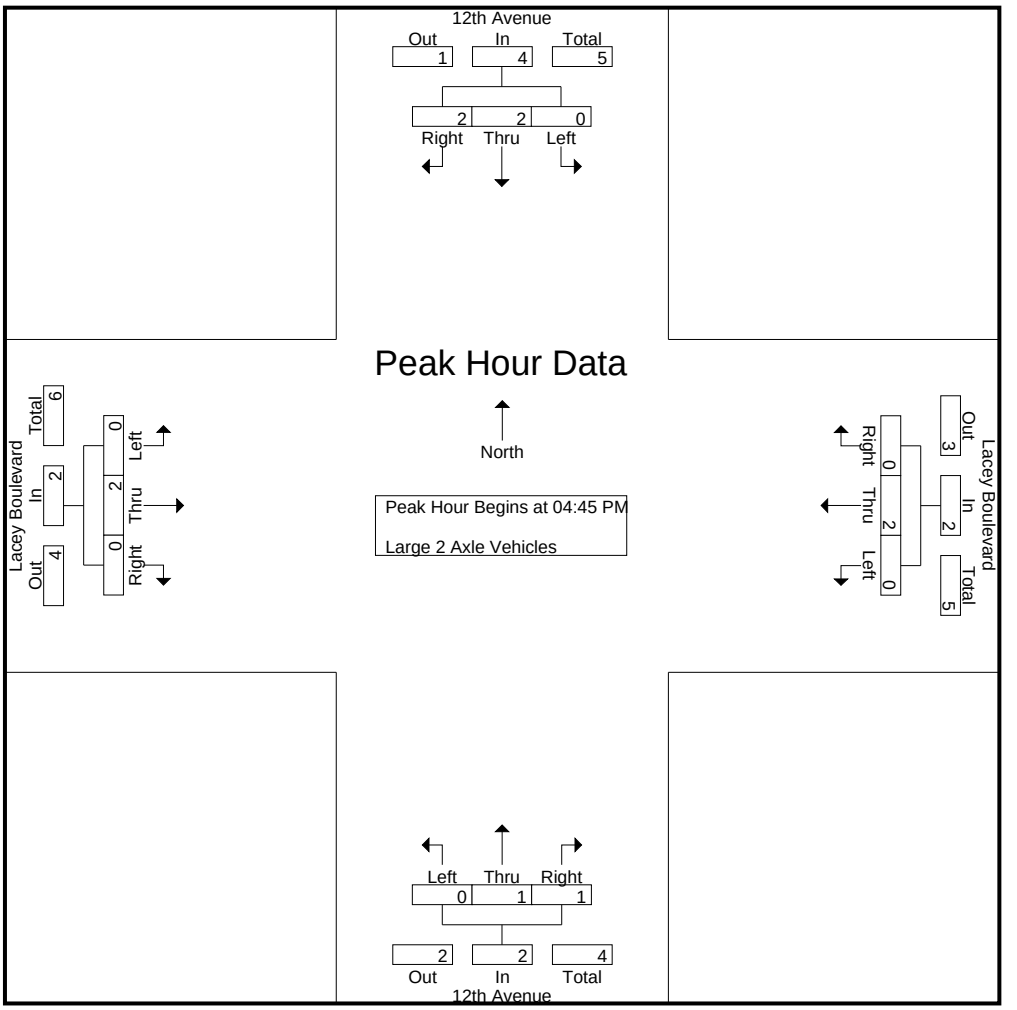
	12th Avenue Southbound				Lacey Boulevard Westbound				12th Avenue Northbound				Lacey Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	1	1	2	0	0	0	0	0	0	0	0	0	1	0	1	3
04:15 PM	1	1	0	2	1	1	0	2	0	0	0	0	0	4	0	4	8
04:30 PM	0	0	1	1	0	1	0	1	0	0	0	0	0	0	0	0	2
04:45 PM	0	1	0	1	0	1	0	1	0	0	0	0	0	1	0	1	3
Total	1	3	2	6	1	3	0	4	0	0	0	0	0	6	0	6	16
05:00 PM	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1
05:15 PM	0	1	0	1	0	1	0	1	0	0	1	1	0	1	0	1	4
05:30 PM	0	0	1	1	0	0	0	0	0	1	0	1	0	0	0	0	2
05:45 PM	0	0	0	0	0	1	1	2	0	0	1	1	0	2	0	2	5
Total	0	1	2	3	0	2	1	3	0	1	2	3	0	3	0	3	12
Grand Total	1	4	4	9	1	5	1	7	0	1	2	3	0	9	0	9	28
Apprch %	11.1	44.4	44.4		14.3	71.4	14.3		0	33.3	66.7		0	100	0		
Total %	3.6	14.3	14.3	32.1	3.6	17.9	3.6	25	0	3.6	7.1	10.7	0	32.1	0	32.1	

	12th Avenue Southbound				Lacey Boulevard Westbound				12th Avenue Northbound				Lacey Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	**1**	0	**1**	0	**1**	0	**1**	0	0	0	0	0	**1**	0	**1**	3
05:00 PM	0	0	**1**	1	0	0	0	0	0	0	0	0	0	0	0	0	1
05:15 PM	0	1	0	1	0	1	0	1	0	0	**1**	**1**	0	1	0	1	**4**
05:30 PM	0	0	1	1	0	0	0	0	0	**1**	0	1	0	0	0	0	2
Total Volume	0	2	2	4	0	2	0	2	0	1	1	2	0	2	0	2	10
% App. Total	0	50	50		0	100	0		0	50	50		0	100	0		
PHF	.000	.500	.500	1.00	.000	.500	.000	.500	.000	.250	.250	.500	.000	.500	.000	.500	.625

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 12th Avenue
E/W: Lacey Boulevard
Weather: Clear

File Name : 06_HFD_12th_Lacey PM
Site Code : 00322472
Start Date : 5/17/2022
Page No : 2



Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	0	**1**	0	**1**	0	**1**	0	**1**	0	0	0	0	0	**1**	0	**1**
+15 mins.	0	0	**1**	1	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	1	0	1	0	1	0	1	0	0	**1**	**1**	0	1	0	1
+45 mins.	0	0	1	1	0	0	0	0	0	**1**	0	1	0	0	0	0
Total Volume	0	2	2	4	0	2	0	2	0	1	1	2	0	2	0	2
% App. Total	0	50	50		0	100	0		0	50	50		0	100	0	
PHF	.000	.500	.500	1.000	.000	.500	.000	.500	.000	.250	.250	.500	.000	.500	.000	.500

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 12th Avenue
E/W: Lacey Boulevard
Weather: Clear

File Name : 06_HFD_12th_Lacey PM
Site Code : 00322472
Start Date : 5/17/2022
Page No : 1

Groups Printed- 3 Axle Vehicles

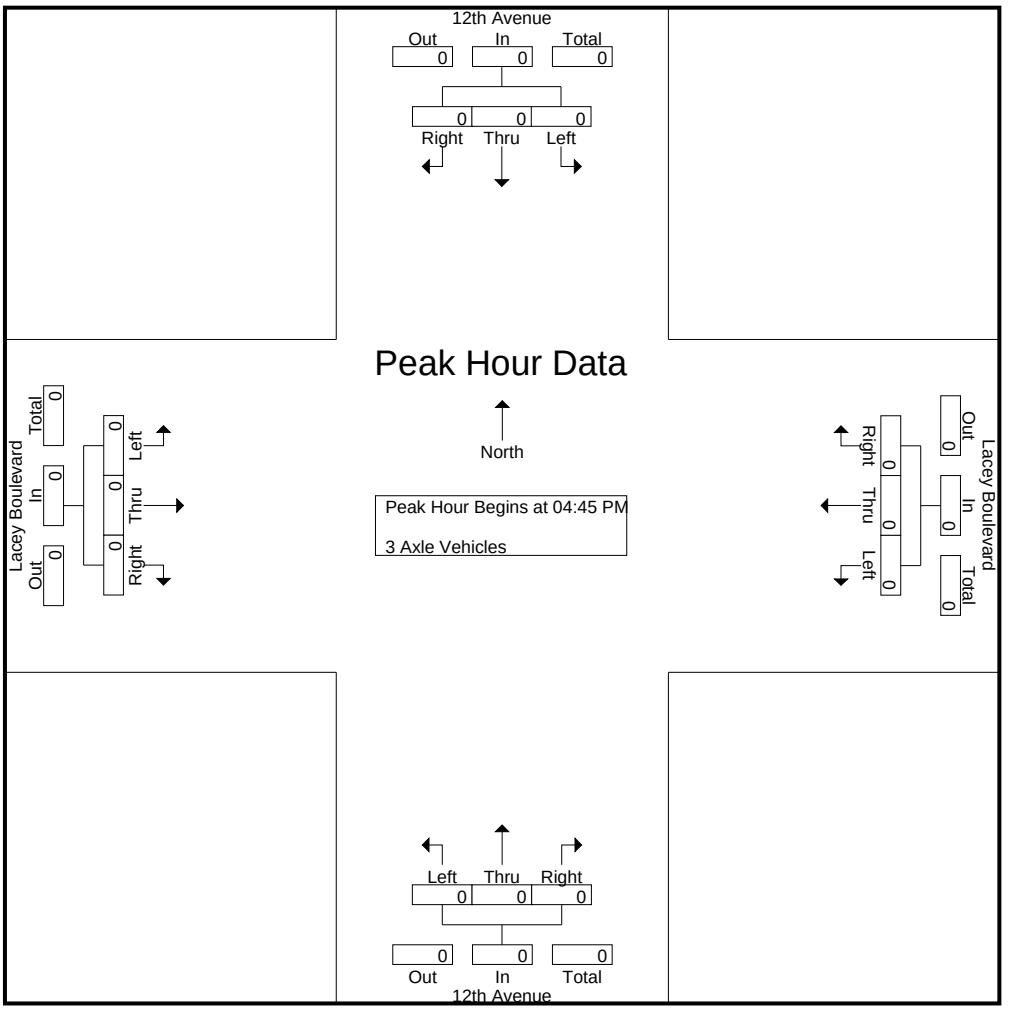
	12th Avenue Southbound				Lacey Boulevard Westbound				12th Avenue Northbound				Lacey Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Apprch %	0	100	0		0	0	0		0	0	0		0	0	0		
Total %	0	100	0	100	0	0	0	0	0	0	0	0	0	0	0	0	

	12th Avenue Southbound				Lacey Boulevard Westbound				12th Avenue Northbound				Lacey Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0		0	0	0		0	0	0		0	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 12th Avenue
E/W: Lacey Boulevard
Weather: Clear

File Name : 06_HFD_12th_Lacey PM
Site Code : 00322472
Start Date : 5/17/2022



Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0		0	0	0		0	0	0		0	0	0	
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 12th Avenue
E/W: Lacey Boulevard
Weather: Clear

File Name : 06_HFD_12th_Lacey PM
Site Code : 00322472
Start Date : 5/17/2022
Page No : 1

Groups Printed- 4+ Axle Trucks

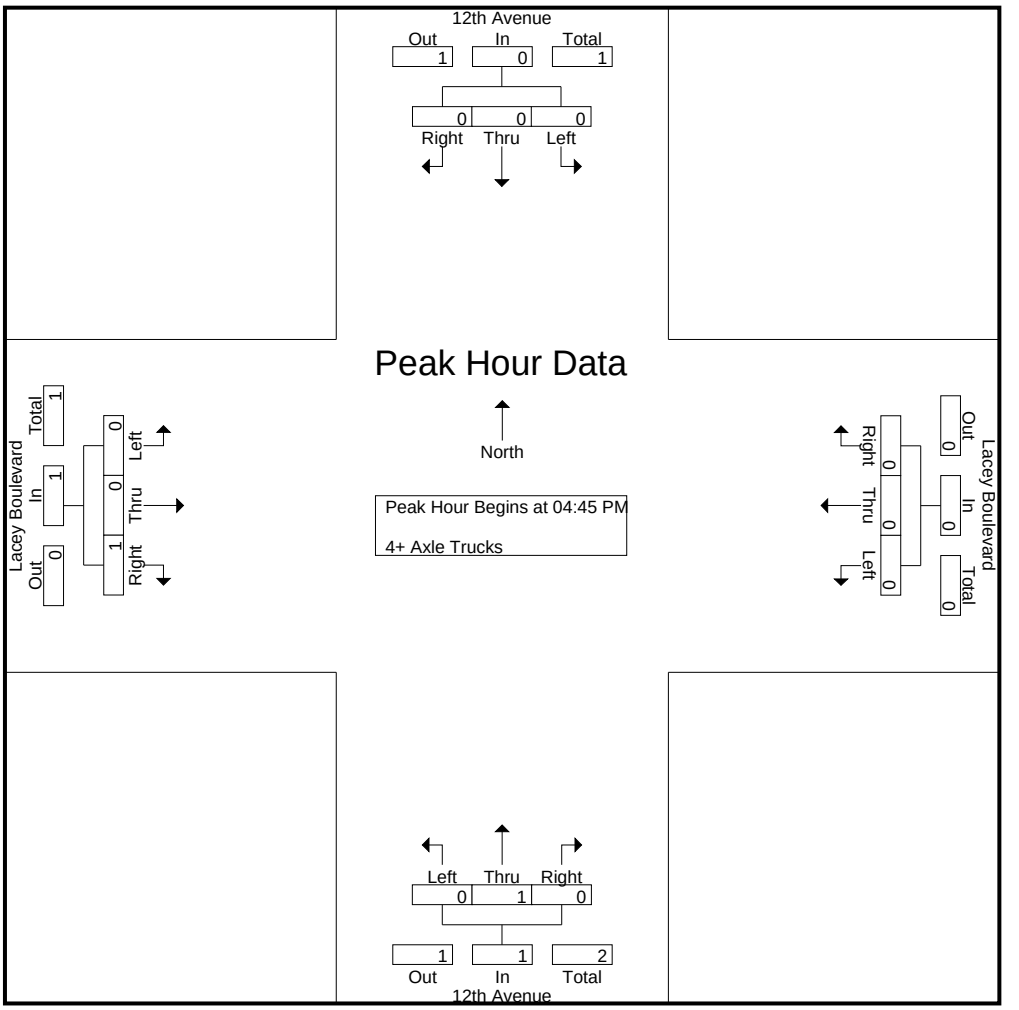
	12th Avenue Southbound				Lacey Boulevard Westbound				12th Avenue Northbound				Lacey Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1
04:15 PM	0	1	0	1	0	0	0	0	1	0	0	1	0	0	0	0	2
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	1	1	0	0	1	1	0	0	1	0	0	0	0	3
05:00 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	1	0	1	0	0	1	1	2
Grand Total	0	1	0	1	1	0	0	1	1	1	0	2	0	0	1	1	5
Apprch %	0	100	0		100	0	0		50	50	0		0	0	100		
Total %	0	20	0	20	20	0	0	20	20	20	0	40	0	0	20	20	

	12th Avenue Southbound				Lacey Boulevard Westbound				12th Avenue Northbound				Lacey Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	**1**	0	**1**	0	0	0	0	**1**
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**	**1**	1
Total Volume	0	0	0	0	0	0	0	0	0	1	0	1	0	0	1	1	2
% App. Total	0	0	0		0	0	0		0	100	0		0	0	100		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250	.000	.250	.000	.000	.250	.250	.500

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 12th Avenue
E/W: Lacey Boulevard
Weather: Clear

File Name : 06_HFD_12th_Lacey PM
Site Code : 00322472
Start Date : 5/17/2022
Page No : 2



Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	**1**	0	**1**	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**	**1**
Total Volume	0	0	0	0	0	0	0	0	0	1	0	1	0	0	1	1
% App. Total	0	0	0		0	0	0		0	100	0		0	0	100	
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250	.000	.250	.000	.000	.250	.250

Location: Hanford
N/S: 12th Avenue
E/W: Lacey Boulevard



Date: 5/17/2022
Day: Tuesday

PEDESTRIANS

	North Leg 12th Avenue Pedestrians	East Leg Lacey Boulevard Pedestrians	South Leg 12th Avenue Pedestrians	West Leg Lacey Boulevard Pedestrians	
7:00 AM	0	0	2	0	2
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	1	0	1	1	3
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
TOTAL VOLUMES:	1	0	3	1	5

	North Leg 12th Avenue Pedestrians	East Leg Lacey Boulevard Pedestrians	South Leg 12th Avenue Pedestrians	West Leg Lacey Boulevard Pedestrians	
4:00 PM	0	0	0	0	0
4:15 PM	2	0	0	0	2
4:30 PM	0	0	0	0	0
4:45 PM	0	0	2	1	3
5:00 PM	0	0	1	0	1
5:15 PM	0	0	0	0	0
5:30 PM	0	0	2	0	2
5:45 PM	0	0	0	0	0
TOTAL VOLUMES:	2	0	5	1	8

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
951-268-6268

Location: Hanford
N/S: 12th Avenue
E/W: Lacey Boulevard

Date: 5/17/2022
Day: Tuesday

BICYCLES

	Southbound 12th Avenue			Westbound Lacey Boulevard			Northbound 12th Avenue			Eastbound Lacey Boulevard			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	1	0	0	0	0	0	0	0	1
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	1	0	0	0	0	0	1	0	0	0	2
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	1	0	0	1	0	0	0	0	0	0	0	2
TOTAL VOLUMES:	0	1	1	0	2	0	0	0	1	0	0	0	5

	Southbound 12th Avenue			Westbound Lacey Boulevard			Northbound 12th Avenue			Eastbound Lacey Boulevard			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	2	0	0	0	0	0	2
4:30 PM	0	1	0	0	0	0	0	0	0	0	0	0	1
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
5:30 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	1	0	0	0	0	2	2	0	0	0	0	5

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
951-268-6268

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 12th Avenue
E/W: Centennial Drive/Mall Drive
Weather: Clear

File Name : 07_HFD_12th_Mall AM
Site Code : 00322472
Start Date : 5/17/2022
Page No : 1

Groups Printed- Total Volume

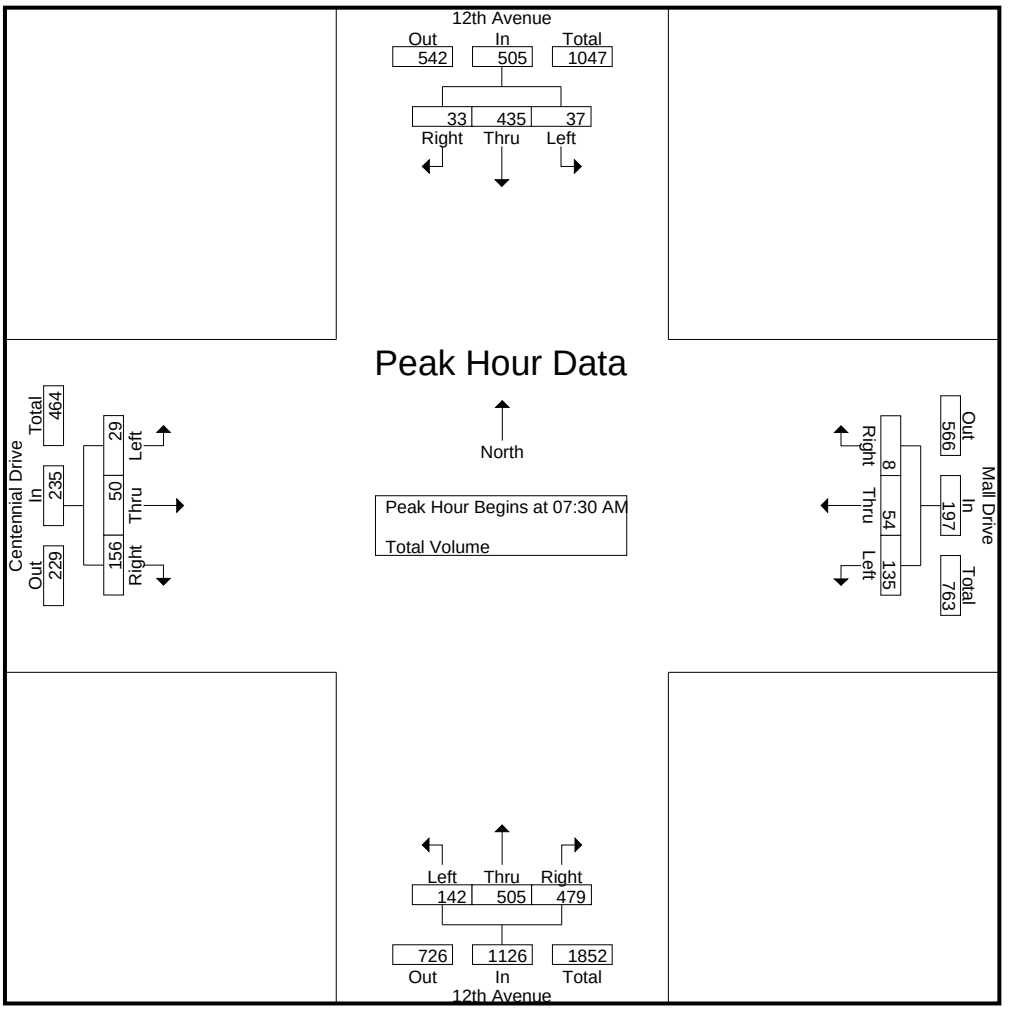
	12th Avenue Southbound				Mall Drive Westbound				12th Avenue Northbound				Centennial Drive Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	4	116	1	121	18	5	2	25	22	65	42	129	7	12	34	53	328
07:15 AM	4	98	5	107	20	8	6	34	36	77	46	159	7	13	38	58	358
07:30 AM	4	116	8	128	29	8	2	39	24	107	91	222	3	11	54	68	457
07:45 AM	12	110	8	130	32	11	2	45	49	151	136	336	10	15	48	73	584
Total	24	440	22	486	99	32	12	143	131	400	315	846	27	51	174	252	1727
08:00 AM	10	101	12	123	29	14	3	46	36	139	129	304	7	15	33	55	528
08:15 AM	11	108	5	124	45	21	1	67	33	108	123	264	9	9	21	39	494
08:30 AM	10	104	13	127	48	14	4	66	29	95	64	188	8	16	22	46	427
08:45 AM	24	103	10	137	29	19	0	48	36	94	95	225	13	14	24	51	461
Total	55	416	40	511	151	68	8	227	134	436	411	981	37	54	100	191	1910
Grand Total	79	856	62	997	250	100	20	370	265	836	726	1827	64	105	274	443	3637
Apprch %	7.9	85.9	6.2		67.6	27	5.4		14.5	45.8	39.7		14.4	23.7	61.9		
Total %	2.2	23.5	1.7	27.4	6.9	2.7	0.5	10.2	7.3	23	20	50.2	1.8	2.9	7.5	12.2	

	12th Avenue Southbound				Mall Drive Westbound				12th Avenue Northbound				Centennial Drive Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	4	**116**	8	128	29	8	2	39	24	107	91	222	3	11	**54**	68	457
07:45 AM	**12**	110	8	**130**	32	11	2	45	**49**	**151**	**136**	**336**	**10**	**15**	48	**73**	**584**
08:00 AM	10	101	**12**	123	29	14	**3**	46	36	139	129	304	7	15	33	55	528
08:15 AM	11	108	5	124	**45**	**21**	1	**67**	33	108	123	264	9	9	21	39	494
Total Volume	37	435	33	505	135	54	8	197	142	505	479	1126	29	50	156	235	2063
% App. Total	7.3	86.1	6.5		68.5	27.4	4.1		12.6	44.8	42.5		12.3	21.3	66.4		
PHF	.771	.938	.688	.971	.750	.643	.667	.735	.724	.836	.881	.838	.725	.833	.722	.805	.883

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 12th Avenue
E/W: Centennial Drive/Mall Drive
Weather: Clear

File Name : 07_HFD_12th_Mall AM
Site Code : 00322472
Start Date : 5/17/2022
Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	08:00 AM				08:00 AM				07:30 AM				07:15 AM			
+0 mins.	10	101	12	123	29	14	3	46	24	107	91	222	7	13	38	58
+15 mins.	11	**108**	5	124	45	**21**	1	**67**	**49**	**151**	**136**	**336**	3	11	**54**	68
+30 mins.	10	104	**13**	127	**48**	14	**4**	66	36	139	129	304	**10**	**15**	48	**73**
+45 mins.	**24**	103	10	**137**	29	19	0	48	33	108	123	264	7	15	33	55
Total Volume	55	416	40	511	151	68	8	227	142	505	479	1126	27	54	173	254
% App. Total	10.8	81.4	7.8		66.5	30	3.5		12.6	44.8	42.5		10.6	21.3	68.1	
PHF	.573	.963	.769	.932	.786	.810	.500	.847	.724	.836	.881	.838	.675	.900	.801	.870

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 12th Avenue
E/W: Centennial Drive/Mall Drive
Weather: Clear

File Name : 07_HFD_12th_Mall PM
Site Code : 00322472
Start Date : 5/17/2022
Page No : 1

Groups Printed- Total Volume

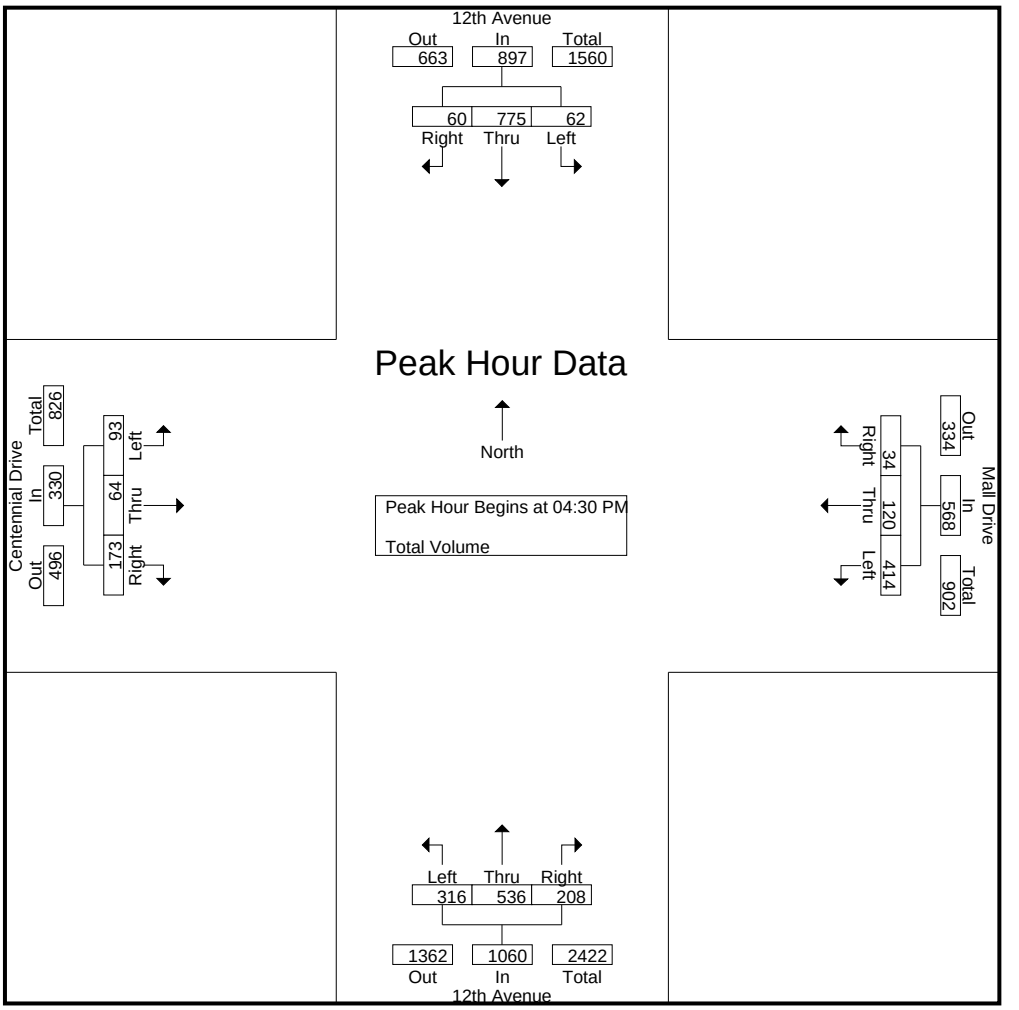
	12th Avenue Southbound				Mall Drive Westbound				12th Avenue Northbound				Centennial Drive Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	15	200	18	233	98	27	6	131	64	133	65	262	30	23	49	102	728
04:15 PM	16	176	16	208	63	18	7	88	77	124	66	267	32	19	47	98	661
04:30 PM	14	202	17	233	112	31	3	146	79	128	58	265	20	12	51	83	727
04:45 PM	16	162	17	195	90	36	12	138	70	126	45	241	22	17	52	91	665
Total	61	740	68	869	363	112	28	503	290	511	234	1035	104	71	199	374	2781
05:00 PM	10	204	10	224	138	25	8	171	79	156	54	289	24	20	34	78	762
05:15 PM	22	207	16	245	74	28	11	113	88	126	51	265	27	15	36	78	701
05:30 PM	17	236	17	270	68	19	10	97	78	120	28	226	20	20	51	91	684
05:45 PM	14	194	20	228	65	18	6	89	64	126	55	245	25	20	40	85	647
Total	63	841	63	967	345	90	35	470	309	528	188	1025	96	75	161	332	2794
Grand Total	124	1581	131	1836	708	202	63	973	599	1039	422	2060	200	146	360	706	5575
Apprch %	6.8	86.1	7.1		72.8	20.8	6.5		29.1	50.4	20.5		28.3	20.7	51		
Total %	2.2	28.4	2.3	32.9	12.7	3.6	1.1	17.5	10.7	18.6	7.6	37	3.6	2.6	6.5	12.7	

	12th Avenue Southbound				Mall Drive Westbound				12th Avenue Northbound				Centennial Drive Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	14	202	**17**	233	112	31	3	146	79	128	**58**	265	20	12	51	83	727
04:45 PM	16	162	17	195	90	**36**	**12**	138	70	126	45	241	22	17	**52**	**91**	665
05:00 PM	10	204	10	224	**138**	25	8	**171**	79	**156**	54	**289**	24	**20**	34	78	**762**
05:15 PM	**22**	**207**	16	**245**	74	28	11	113	**88**	126	51	265	**27**	15	36	78	701
Total Volume	62	775	60	897	414	120	34	568	316	536	208	1060	93	64	173	330	2855
% App. Total	6.9	86.4	6.7		72.9	21.1	6		29.8	50.6	19.6		28.2	19.4	52.4		
PHF	.705	.936	.882	.915	.750	.833	.708	.830	.898	.859	.897	.917	.861	.800	.832	.907	.937

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 12th Avenue
E/W: Centennial Drive/Mall Drive
Weather: Clear

File Name : 07_HFD_12th_Mall PM
Site Code : 00322472
Start Date : 5/17/2022
Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	05:00 PM				04:30 PM				04:15 PM				04:00 PM			
+0 mins.	10	204	10	224	112	31	3	146	77	124	**66**	267	30	**23**	49	**102**
+15 mins.	**22**	207	16	245	90	**36**	**12**	138	**79**	128	58	265	**32**	19	47	98
+30 mins.	17	**236**	17	**270**	**138**	25	8	**171**	70	126	45	241	20	12	51	83
+45 mins.	14	194	**20**	228	74	28	11	113	79	**156**	54	**289**	22	17	**52**	91
Total Volume	63	841	63	967	414	120	34	568	305	534	223	1062	104	71	199	374
% App. Total	6.5	87	6.5		72.9	21.1	6		28.7	50.3	21		27.8	19	53.2	
PHF	.716	.891	.788	.895	.750	.833	.708	.830	.965	.856	.845	.919	.813	.772	.957	.917

Location: Hanford
N/S: 12th Avenue
E/W: Centennial Drive/Mall Drive

Date: 5/17/2022
Day: Tuesday

PEDESTRIANS

	North Leg 12th Avenue	East Leg Mall Drive	South Leg 12th Avenue	West Leg Centennial Drive	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	1	1	0	0	2
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	1	0	0	0	1
8:45 AM	1	0	0	3	4
TOTAL VOLUMES:	3	1	0	3	7

	North Leg 12th Avenue	East Leg Mall Drive	South Leg 12th Avenue	West Leg Centennial Drive	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
4:00 PM	2	1	0	2	5
4:15 PM	0	0	0	1	1
4:30 PM	0	1	0	1	2
4:45 PM	1	0	0	1	2
5:00 PM	1	2	0	0	3
5:15 PM	2	2	0	0	4
5:30 PM	0	0	0	1	1
5:45 PM	1	0	0	1	2
TOTAL VOLUMES:	7	6	0	7	20

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
951-268-6268

Location: Hanford
N/S: 12th Avenue
E/W: Centennial Drive/Mall Drive

Date: 5/17/2022
Day: Tuesday

BICYCLES

	Southbound 12th Avenue			Westbound Mall Drive			Northbound 12th Avenue			Eastbound Centennial Drive			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	1	0	0	0	0	0	0	0	1
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	2	1	1	0	0	4
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	1	0	0	0	0	0	0	0	1
8:45 AM	0	0	0	0	1	0	0	0	0	0	0	0	1
TOTAL VOLUMES:	0	0	0	0	3	0	0	2	1	1	0	0	7

	Southbound 12th Avenue			Westbound Mall Drive			Northbound 12th Avenue			Eastbound Centennial Drive			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
4:15 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
4:30 PM	1	0	0	0	0	0	0	0	0	0	0	0	1
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	1	1
TOTAL VOLUMES:	1	0	0	0	1	0	0	2	0	0	0	1	5

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
951-268-6268

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 12th Avenue
E/W: SR-198 Westbound Ramps
Weather: Clear

File Name : 08_HFD_12th_198W AM
Site Code : 00322472
Start Date : 5/17/2022
Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

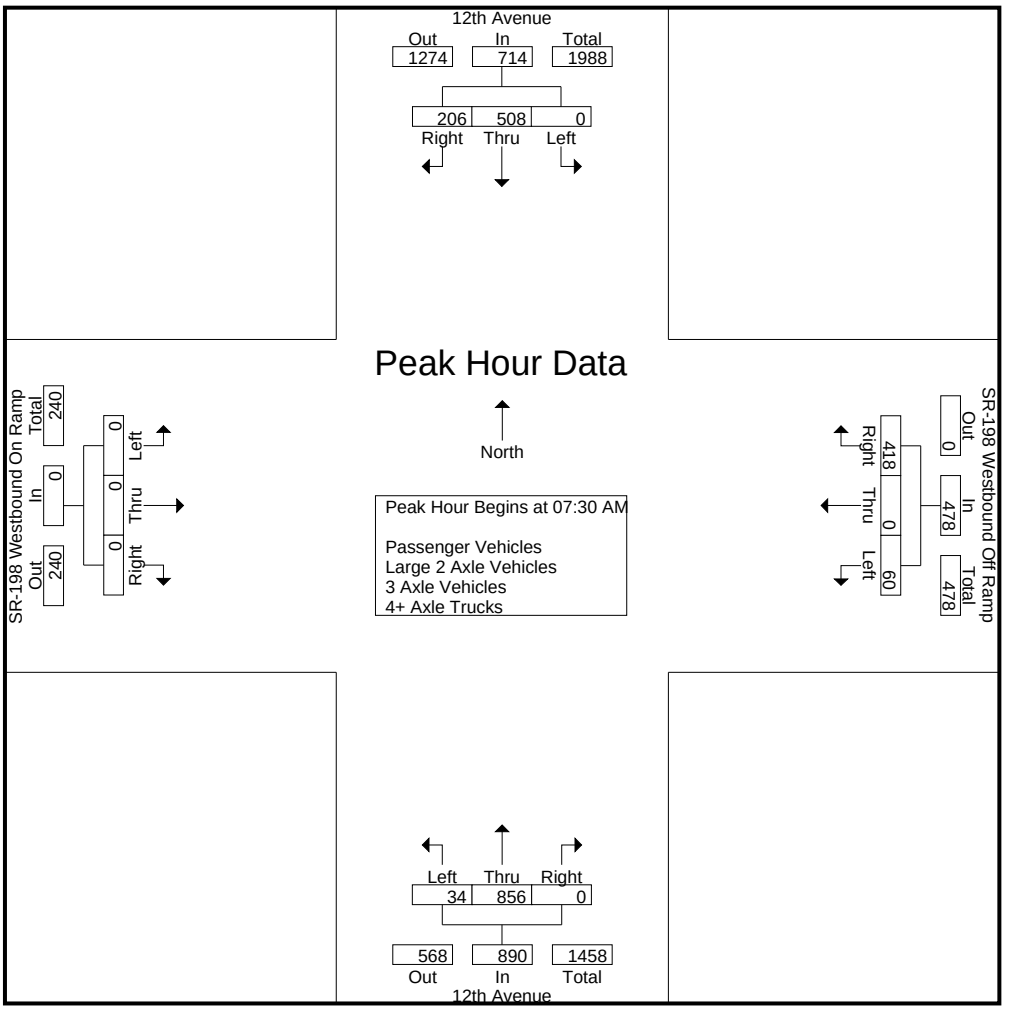
	12th Avenue Southbound				SR-198 Westbound Off Ramp Westbound				12th Avenue Northbound				SR-198 Westbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	132	60	192	13	0	54	67	1	109	0	110	0	0	0	0	369
07:15 AM	0	129	48	177	6	0	77	83	6	117	0	123	0	0	0	0	383
07:30 AM	0	145	60	205	10	0	102	112	13	175	0	188	0	0	0	0	505
07:45 AM	0	118	53	171	18	0	115	133	5	267	0	272	0	0	0	0	576
Total	0	524	221	745	47	0	348	395	25	668	0	693	0	0	0	0	1833
08:00 AM	0	118	52	170	20	0	107	127	9	205	0	214	0	0	0	0	511
08:15 AM	0	127	41	168	12	0	94	106	7	209	0	216	0	0	0	0	490
08:30 AM	0	111	65	176	17	1	64	82	4	177	0	181	0	0	0	0	439
08:45 AM	0	120	40	160	15	0	87	102	7	168	0	175	0	0	0	0	437
Total	0	476	198	674	64	1	352	417	27	759	0	786	0	0	0	0	1877
Grand Total	0	1000	419	1419	111	1	700	812	52	1427	0	1479	0	0	0	0	3710
Apprch %	0	70.5	29.5		13.7	0.1	86.2		3.5	96.5	0		0	0	0		
Total %	0	27	11.3	38.2	3	0	18.9	21.9	1.4	38.5	0	39.9	0	0	0	0	
Passenger Vehicles	0	967	407	1374	105	1	676	782	52	1397	0	1449	0	0	0	0	3605
% Passenger Vehicles	0	96.7	97.1	96.8	94.6	100	96.6	96.3	100	97.9	0	98	0	0	0	0	97.2
Large 2 Axle Vehicles	0	29	5	34	3	0	16	19	0	29	0	29	0	0	0	0	82
% Large 2 Axle Vehicles	0	2.9	1.2	2.4	2.7	0	2.3	2.3	0	2	0	2	0	0	0	0	2.2
3 Axle Vehicles	0	1	0	1	1	0	1	2	0	0	0	0	0	0	0	0	3
% 3 Axle Vehicles	0	0.1	0	0.1	0.9	0	0.1	0.2	0	0	0	0	0	0	0	0	0.1
4+ Axle Trucks	0	3	7	10	2	0	7	9	0	1	0	1	0	0	0	0	20
% 4+ Axle Trucks	0	0.3	1.7	0.7	1.8	0	1	1.1	0	0.1	0	0.1	0	0	0	0	0.5

	12th Avenue Southbound				SR-198 Westbound Off Ramp Westbound				12th Avenue Northbound				SR-198 Westbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	**145**	**60**	**205**	10	0	102	112	**13**	175	0	188	0	0	0	0	505
07:45 AM	0	118	53	171	18	0	**115**	**133**	5	**267**	0	**272**	0	0	0	0	**576**
08:00 AM	0	118	52	170	**20**	0	107	127	9	205	0	214	0	0	0	0	511
08:15 AM	0	127	41	168	12	0	94	106	7	209	0	216	0	0	0	0	490
Total Volume	0	508	206	714	60	0	418	478	34	856	0	890	0	0	0	0	2082
% App. Total	0	71.1	28.9		12.6	0	87.4		3.8	96.2	0		0	0	0		
PHF	.000	.876	.858	.871	.750	.000	.909	.898	.654	.801	.000	.818	.000	.000	.000	.000	.904

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 12th Avenue
E/W: SR-198 Westbound Ramps
Weather: Clear

File Name : 08_HFD_12th_198W AM
Site Code : 00322472
Start Date : 5/17/2022



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM				07:30 AM				07:30 AM				07:00 AM			
+0 mins.	0	132	**60**	192	10	0	102	112	**13**	175	0	188	0	0	0	0
+15 mins.	0	129	48	177	18	0	**115**	**133**	5	**267**	0	**272**	0	0	0	0
+30 mins.	0	**145**	60	**205**	**20**	0	107	127	9	205	0	214	0	0	0	0
+45 mins.	0	118	53	171	12	0	94	106	7	209	0	216	0	0	0	0
Total Volume	0	524	221	745	60	0	418	478	34	856	0	890	0	0	0	0
% App. Total	0	70.3	29.7		12.6	0	87.4		3.8	96.2	0		0	0	0	
PHF	.000	.903	.921	.909	.750	.000	.909	.898	.654	.801	.000	.818	.000	.000	.000	.000

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 12th Avenue
E/W: SR-198 Westbound Ramps
Weather: Clear

File Name : 08_HFD_12th_198W AM
Site Code : 00322472
Start Date : 5/17/2022
Page No : 1

Groups Printed- Passenger Vehicles

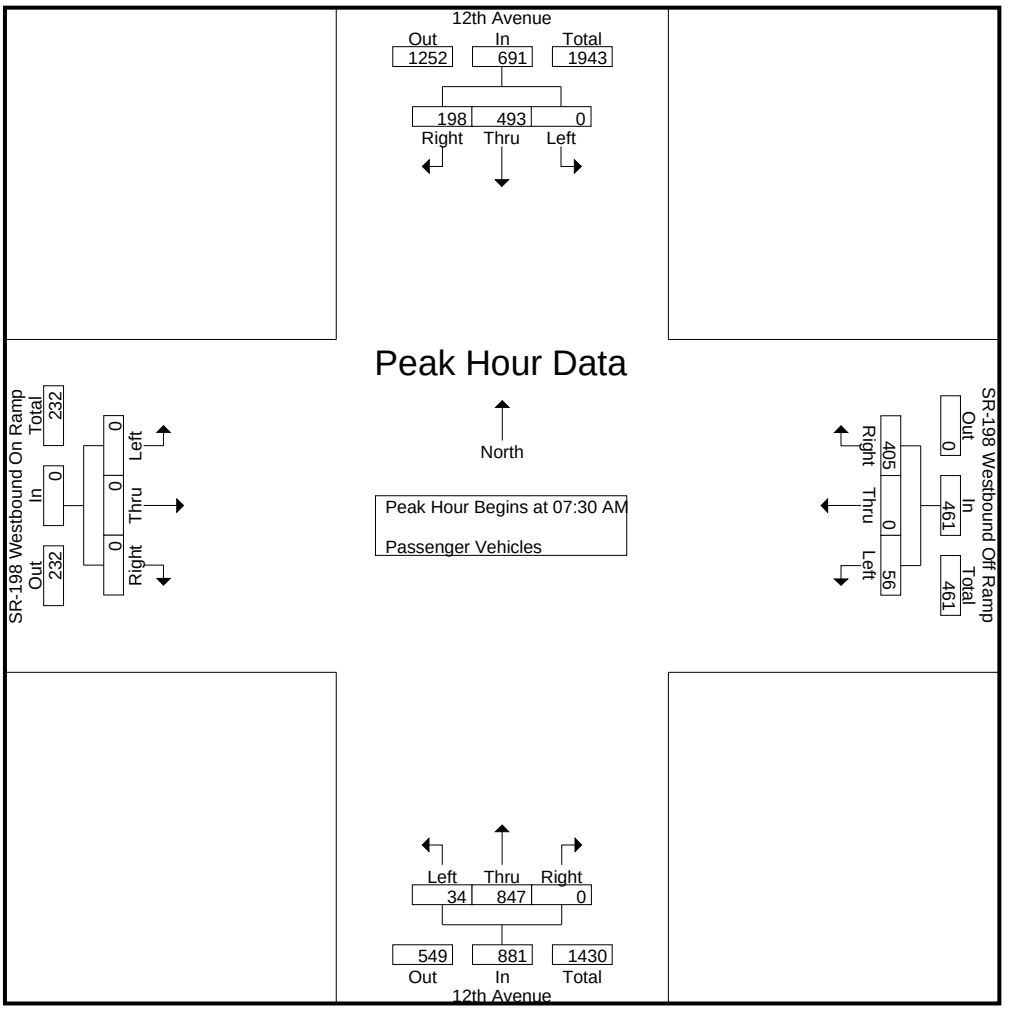
	12th Avenue Southbound				SR-198 Westbound Off Ramp Westbound				12th Avenue Northbound				SR-198 Westbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	127	59	186	13	0	51	64	1	105	0	106	0	0	0	0	356
07:15 AM	0	123	48	171	5	0	75	80	6	113	0	119	0	0	0	0	370
07:30 AM	0	142	59	201	10	0	101	111	13	173	0	186	0	0	0	0	498
07:45 AM	0	110	51	161	18	0	110	128	5	266	0	271	0	0	0	0	560
Total	0	502	217	719	46	0	337	383	25	657	0	682	0	0	0	0	1784
08:00 AM	0	116	49	165	19	0	104	123	9	202	0	211	0	0	0	0	499
08:15 AM	0	125	39	164	9	0	90	99	7	206	0	213	0	0	0	0	476
08:30 AM	0	106	63	169	16	1	62	79	4	172	0	176	0	0	0	0	424
08:45 AM	0	118	39	157	15	0	83	98	7	160	0	167	0	0	0	0	422
Total	0	465	190	655	59	1	339	399	27	740	0	767	0	0	0	0	1821
Grand Total	0	967	407	1374	105	1	676	782	52	1397	0	1449	0	0	0	0	3605
Apprch %	0	70.4	29.6		13.4	0.1	86.4		3.6	96.4	0		0	0	0		
Total %	0	26.8	11.3	38.1	2.9	0	18.8	21.7	1.4	38.8	0	40.2	0	0	0	0	

	12th Avenue Southbound				SR-198 Westbound Off Ramp Westbound				12th Avenue Northbound				SR-198 Westbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	**142**	**59**	**201**	10	0	101	111	**13**	173	0	186	0	0	0	0	498
07:45 AM	0	110	51	161	18	0	**110**	**128**	5	**266**	0	**271**	0	0	0	0	**560**
08:00 AM	0	116	49	165	**19**	0	104	123	9	202	0	211	0	0	0	0	499
08:15 AM	0	125	39	164	9	0	90	99	7	206	0	213	0	0	0	0	476
Total Volume	0	493	198	691	56	0	405	461	34	847	0	881	0	0	0	0	2033
% App. Total	0	71.3	28.7		12.1	0	87.9		3.9	96.1	0		0	0	0		
PHF	.000	.868	.839	.859	.737	.000	.920	.900	.654	.796	.000	.813	.000	.000	.000	.000	.908

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 12th Avenue
E/W: SR-198 Westbound Ramps
Weather: Clear

File Name : 08_HFD_12th_198W AM
Site Code : 00322472
Start Date : 5/17/2022



Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	0	**142**	**59**	**201**	10	0	101	111	**13**	173	0	186	0	0	0	0
+15 mins.	0	110	51	161	18	0	**110**	**128**	5	**266**	0	**271**	0	0	0	0
+30 mins.	0	116	49	165	**19**	0	104	123	9	202	0	211	0	0	0	0
+45 mins.	0	125	39	164	9	0	90	99	7	206	0	213	0	0	0	0
Total Volume	0	493	198	691	56	0	405	461	34	847	0	881	0	0	0	0
% App. Total	0	71.3	28.7		12.1	0	87.9		3.9	96.1	0		0	0	0	
PHF	.000	.868	.839	.859	.737	.000	.920	.900	.654	.796	.000	.813	.000	.000	.000	.000

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 12th Avenue
E/W: SR-198 Westbound Ramps
Weather: Clear

File Name : 08_HFD_12th_198W AM
Site Code : 00322472
Start Date : 5/17/2022
Page No : 1

Groups Printed- Large 2 Axle Vehicles

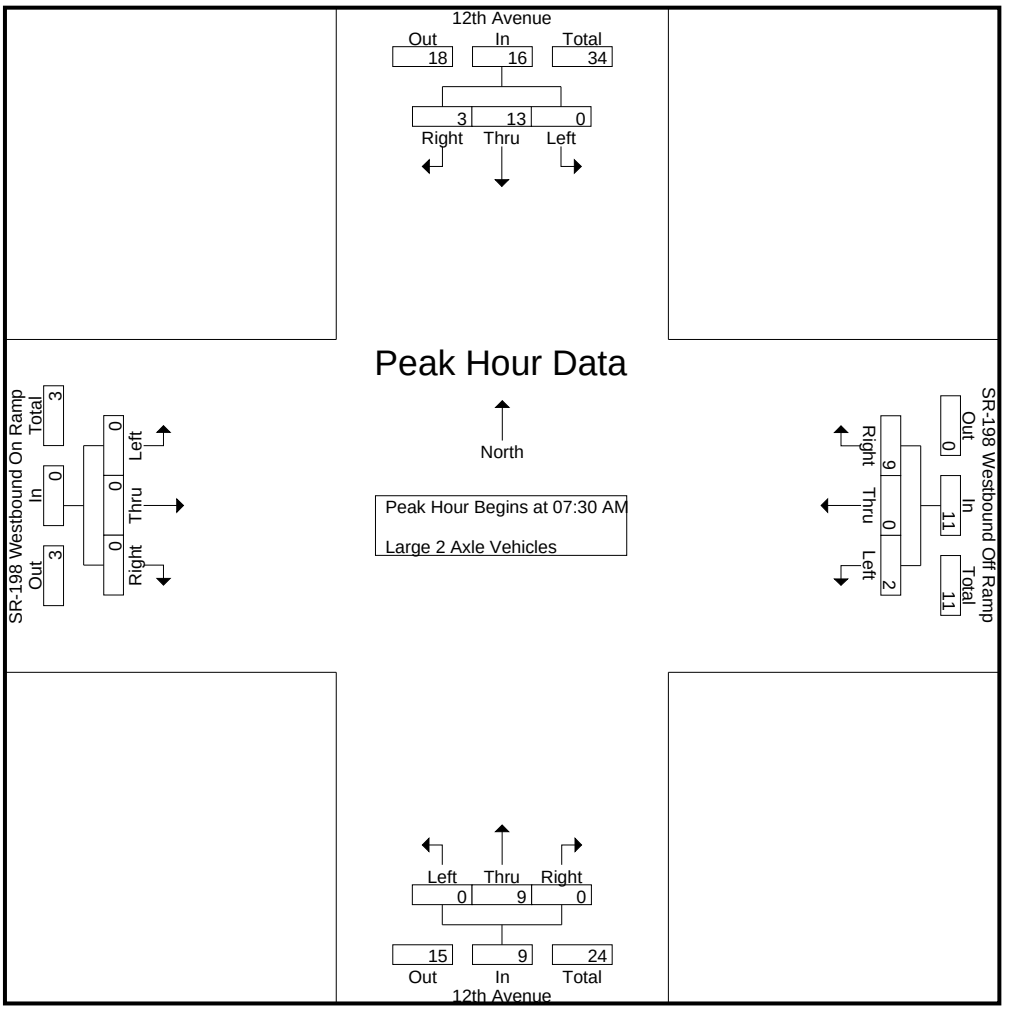
	12th Avenue Southbound				SR-198 Westbound Off Ramp Westbound				12th Avenue Northbound				SR-198 Westbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	5	0	5	0	0	1	1	0	3	0	3	0	0	0	0	9
07:15 AM	0	6	0	6	1	0	2	3	0	4	0	4	0	0	0	0	13
07:30 AM	0	2	1	3	0	0	0	0	0	2	0	2	0	0	0	0	5
07:45 AM	0	8	0	8	0	0	4	4	0	1	0	1	0	0	0	0	13
Total	0	21	1	22	1	0	7	8	0	10	0	10	0	0	0	0	40
08:00 AM	0	1	1	2	1	0	2	3	0	3	0	3	0	0	0	0	8
08:15 AM	0	2	1	3	1	0	3	4	0	3	0	3	0	0	0	0	10
08:30 AM	0	4	1	5	0	0	1	1	0	5	0	5	0	0	0	0	11
08:45 AM	0	1	1	2	0	0	3	3	0	8	0	8	0	0	0	0	13
Total	0	8	4	12	2	0	9	11	0	19	0	19	0	0	0	0	42
Grand Total	0	29	5	34	3	0	16	19	0	29	0	29	0	0	0	0	82
Apprch %	0	85.3	14.7		15.8	0	84.2		0	100	0		0	0	0		
Total %	0	35.4	6.1	41.5	3.7	0	19.5	23.2	0	35.4	0	35.4	0	0	0	0	

	12th Avenue Southbound				SR-198 Westbound Off Ramp Westbound				12th Avenue Northbound				SR-198 Westbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	2	**1**	3	0	0	0	0	0	2	0	2	0	0	0	0	5
07:45 AM	0	**8**	0	**8**	0	0	**4**	**4**	0	1	0	1	0	0	0	0	**13**
08:00 AM	0	1	1	2	**1**	0	2	3	0	**3**	0	**3**	0	0	0	0	8
08:15 AM	0	2	1	3	1	0	3	4	0	3	0	3	0	0	0	0	10
Total Volume	0	13	3	16	2	0	9	11	0	9	0	9	0	0	0	0	36
% App. Total	0	81.2	18.8		18.2	0	81.8		0	100	0		0	0	0		
PHF	.000	.406	.750	.500	.500	.000	.563	.688	.000	.750	.000	.750	.000	.000	.000	.000	.692

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 12th Avenue
E/W: SR-198 Westbound Ramps
Weather: Clear

File Name : 08_HFD_12th_198W AM
Site Code : 00322472
Start Date : 5/17/2022



Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	0	2	**1**	3	0	0	0	0	0	2	0	2	0	0	0	0
+15 mins.	0	**8**	0	**8**	0	0	**4**	**4**	0	1	0	1	0	0	0	0
+30 mins.	0	1	1	2	**1**	0	2	3	0	**3**	0	**3**	0	0	0	0
+45 mins.	0	2	1	3	1	0	3	4	0	3	0	3	0	0	0	0
Total Volume	0	13	3	16	2	0	9	11	0	9	0	9	0	0	0	0
% App. Total	0	81.2	18.8		18.2	0	81.8		0	100	0		0	0	0	
PHF	.000	.406	.750	.500	.500	.000	.563	.688	.000	.750	.000	.750	.000	.000	.000	.000

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 12th Avenue
E/W: SR-198 Westbound Ramps
Weather: Clear

File Name : 08_HFD_12th_198W AM
Site Code : 00322472
Start Date : 5/17/2022
Page No : 1

Groups Printed- 3 Axle Vehicles

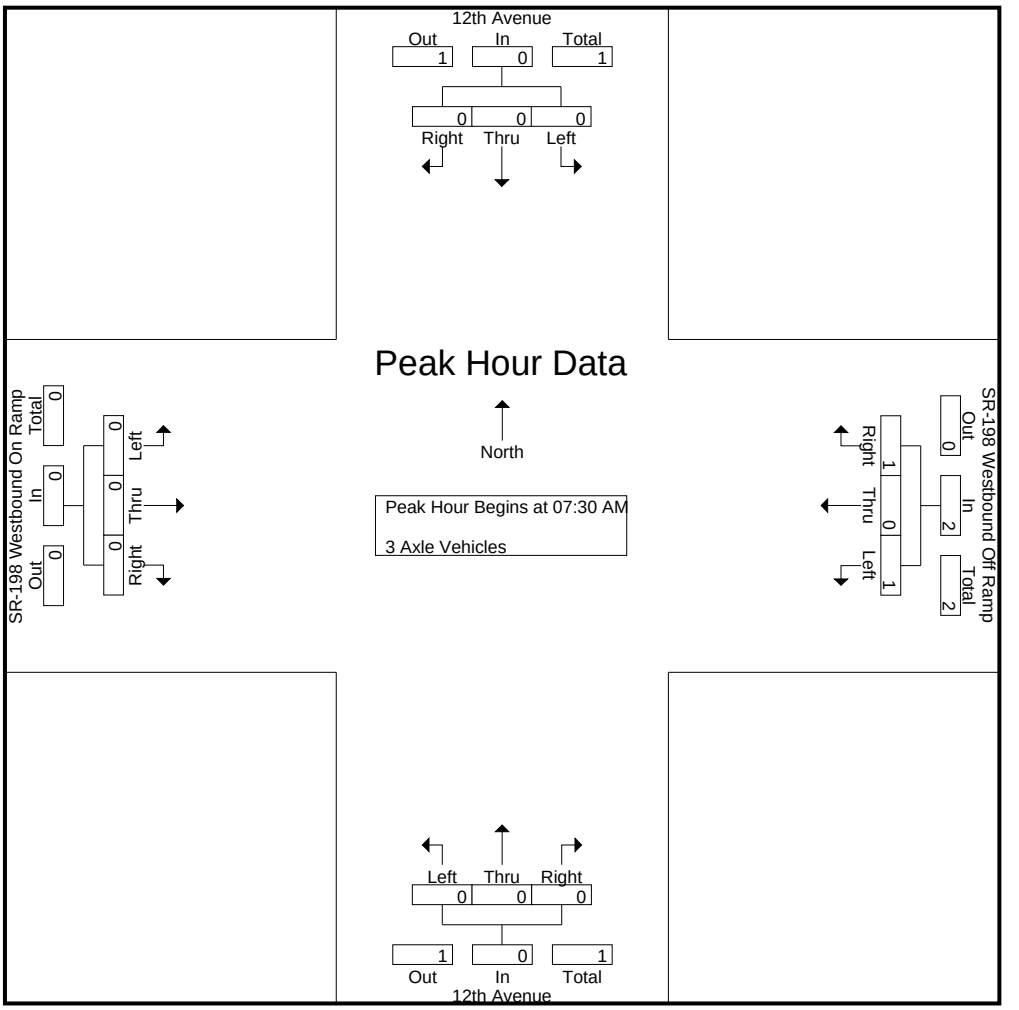
	12th Avenue Southbound				SR-198 Westbound Off Ramp Westbound				12th Avenue Northbound				SR-198 Westbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1
08:15 AM	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	1	0	1	1	0	1	2	0	0	0	0	0	0	0	0	3
Grand Total	0	1	0	1	1	0	1	2	0	0	0	0	0	0	0	0	3
Apprch %	0	100	0		50	0	50		0	0	0		0	0	0		
Total %	0	33.3	0	33.3	33.3	0	33.3	66.7	0	0	0	0	0	0	0	0	

	12th Avenue Southbound				SR-198 Westbound Off Ramp Westbound				12th Avenue Northbound				SR-198 Westbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	0	0	**1**	**1**	0	0	0	0	0	0	0	0	**1**
08:15 AM	0	0	0	0	**1**	0	0	1	0	0	0	0	0	0	0	0	1
Total Volume	0	0	0	0	1	0	1	2	0	0	0	0	0	0	0	0	2
% App. Total	0	0	0		50	0	50		0	0	0		0	0	0		
PHF	.000	.000	.000	.000	.250	.000	.250	.500	.000	.000	.000	.000	.000	.000	.000	.000	.500

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 12th Avenue
E/W: SR-198 Westbound Ramps
Weather: Clear

File Name : 08_HFD_12th_198W AM
Site Code : 00322472
Start Date : 5/17/2022
Page No : 2



Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	**1**	**1**	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	**1**	0	0	1	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	1	0	1	2	0	0	0	0	0	0	0	0
% App. Total	0	0	0		50	0	50		0	0	0		0	0	0	
PHF	.000	.000	.000	.000	.250	.000	.250	.500	.000	.000	.000	.000	.000	.000	.000	.000

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 12th Avenue
E/W: SR-198 Westbound Ramps
Weather: Clear

File Name : 08_HFD_12th_198W AM
Site Code : 00322472
Start Date : 5/17/2022
Page No : 1

Groups Printed- 4+ Axle Trucks

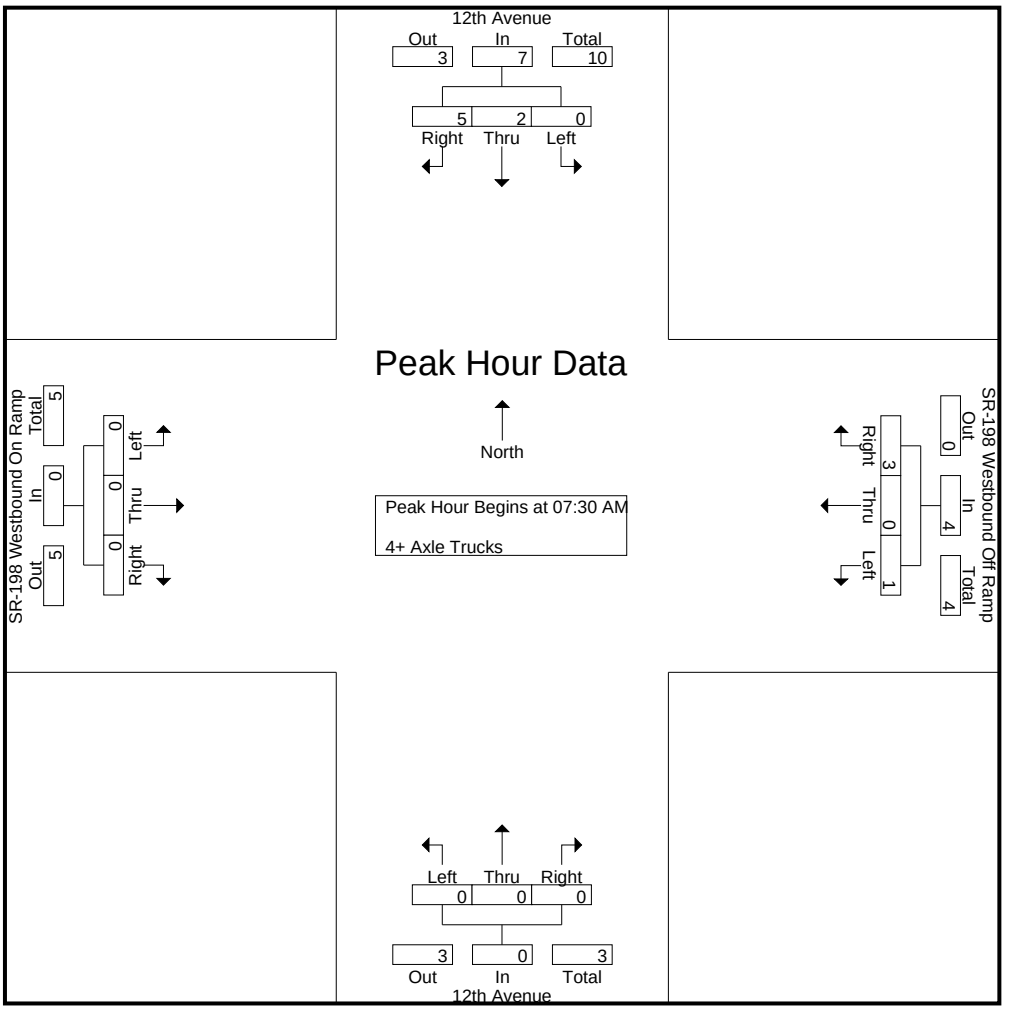
	12th Avenue Southbound				SR-198 Westbound Off Ramp Westbound				12th Avenue Northbound				SR-198 Westbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	1	1	0	0	2	2	0	1	0	1	0	0	0	0	4
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	1	0	1	0	0	1	1	0	0	0	0	0	0	0	0	2
07:45 AM	0	0	2	2	0	0	1	1	0	0	0	0	0	0	0	0	3
Total	0	1	3	4	0	0	4	4	0	1	0	1	0	0	0	0	9
08:00 AM	0	1	2	3	0	0	0	0	0	0	0	0	0	0	0	0	3
08:15 AM	0	0	1	1	1	0	1	2	0	0	0	0	0	0	0	0	3
08:30 AM	0	1	1	2	1	0	1	2	0	0	0	0	0	0	0	0	4
08:45 AM	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1
Total	0	2	4	6	2	0	3	5	0	0	0	0	0	0	0	0	11
Grand Total	0	3	7	10	2	0	7	9	0	1	0	1	0	0	0	0	20
Apprch %	0	30	70		22.2	0	77.8		0	100	0		0	0	0		
Total %	0	15	35	50	10	0	35	45	0	5	0	5	0	0	0	0	

	12th Avenue Southbound				SR-198 Westbound Off Ramp Westbound				12th Avenue Northbound				SR-198 Westbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	**1**	0	1	0	0	**1**	1	0	0	0	0	0	0	0	0	2
07:45 AM	0	0	**2**	2	0	0	1	1	0	0	0	0	0	0	0	0	**3**
08:00 AM	0	1	2	**3**	0	0	0	0	0	0	0	0	0	0	0	0	3
08:15 AM	0	0	1	1	**1**	0	1	**2**	0	0	0	0	0	0	0	0	3
Total Volume	0	2	5	7	1	0	3	4	0	0	0	0	0	0	0	0	11
% App. Total	0	28.6	71.4		25	0	75		0	0	0		0	0	0		
PHF	.000	.500	.625	.583	.250	.000	.750	.500	.000	.000	.000	.000	.000	.000	.000	.000	.917

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 12th Avenue
E/W: SR-198 Westbound Ramps
Weather: Clear

File Name : 08_HFD_12th_198W AM
Site Code : 00322472
Start Date : 5/17/2022
Page No : 2



Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	0	**1**	0	1	0	0	**1**	1	0	0	0	0	0	0	0	0
+15 mins.	0	0	**2**	2	0	0	1	1	0	0	0	0	0	0	0	0
+30 mins.	0	1	2	**3**	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	1	1	**1**	0	1	**2**	0	0	0	0	0	0	0	0
Total Volume	0	2	5	7	1	0	3	4	0	0	0	0	0	0	0	0
% App. Total	0	28.6	71.4		25	0	75		0	0	0		0	0	0	
PHF	.000	.500	.625	.583	.250	.000	.750	.500	.000	.000	.000	.000	.000	.000	.000	.000

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 12th Avenue
E/W: SR-198 Westbound Ramps
Weather: Clear

File Name : 08_HFD_12th_198W PM
Site Code : 00322472
Start Date : 5/17/2022
Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

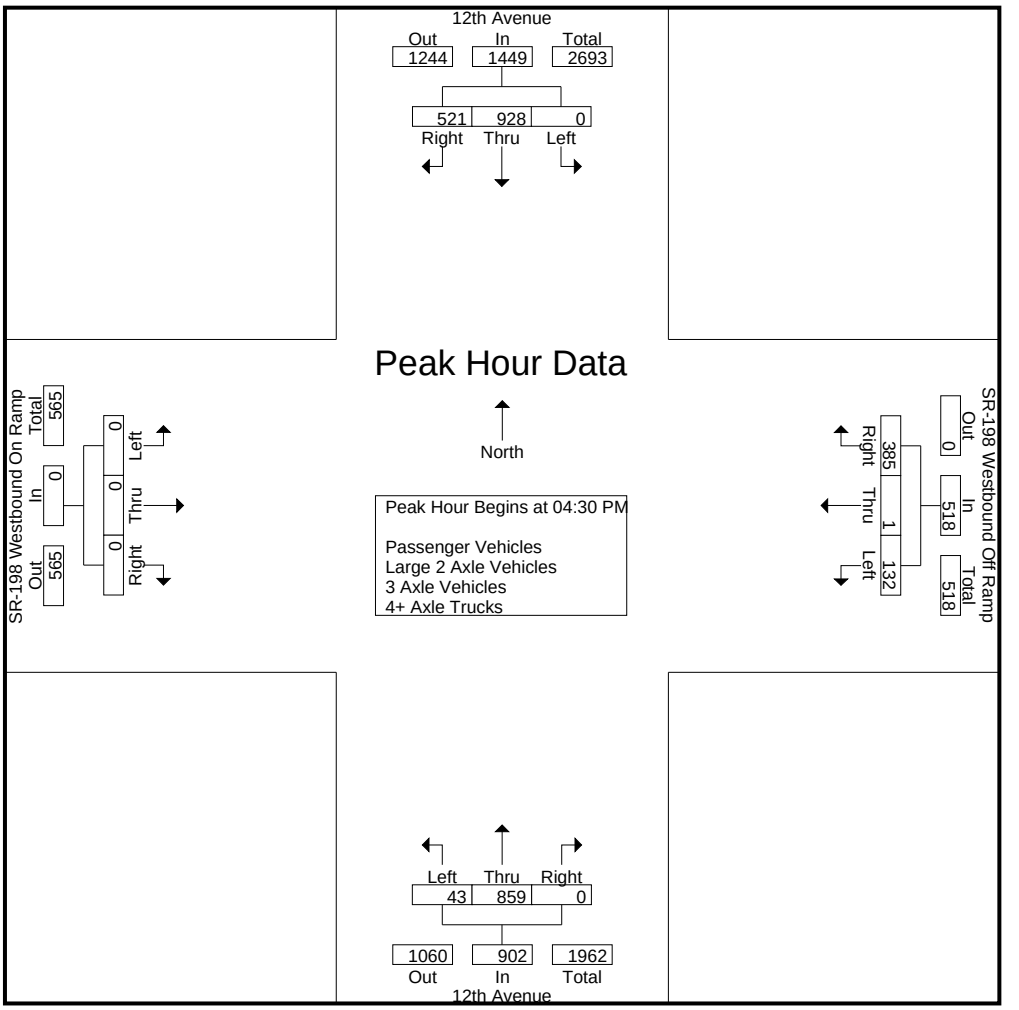
	12th Avenue Southbound				SR-198 Westbound Off Ramp Westbound				12th Avenue Northbound				SR-198 Westbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	232	123	355	20	0	104	124	3	211	0	214	0	0	0	0	693
04:15 PM	0	220	108	328	33	0	94	127	8	213	0	221	0	0	0	0	676
04:30 PM	0	235	144	379	34	1	82	117	12	200	0	212	0	0	0	0	708
04:45 PM	0	221	123	344	23	0	103	126	10	209	0	219	0	0	0	0	689
Total	0	908	498	1406	110	1	383	494	33	833	0	866	0	0	0	0	2766
05:00 PM	0	244	144	388	33	0	103	136	13	240	0	253	0	0	0	0	777
05:15 PM	0	228	110	338	42	0	97	139	8	210	0	218	0	0	0	0	695
05:30 PM	0	233	118	351	36	0	73	109	2	193	0	195	0	0	0	0	655
05:45 PM	0	201	127	328	39	0	87	126	8	200	0	208	0	0	0	0	662
Total	0	906	499	1405	150	0	360	510	31	843	0	874	0	0	0	0	2789
Grand Total	0	1814	997	2811	260	1	743	1004	64	1676	0	1740	0	0	0	0	5555
Apprch %	0	64.5	35.5		25.9	0.1	74		3.7	96.3	0		0	0	0		
Total %	0	32.7	17.9	50.6	4.7	0	13.4	18.1	1.2	30.2	0	31.3	0	0	0	0	
Passenger Vehicles	0	1796	992	2788	252	1	736	989	63	1662	0	1725	0	0	0	0	5502
% Passenger Vehicles	0	99	99.5	99.2	96.9	100	99.1	98.5	98.4	99.2	0	99.1	0	0	0	0	99
Large 2 Axle Vehicles	0	15	3	18	2	0	4	6	1	11	0	12	0	0	0	0	36
% Large 2 Axle Vehicles	0	0.8	0.3	0.6	0.8	0	0.5	0.6	1.6	0.7	0	0.7	0	0	0	0	0.6
3 Axle Vehicles	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
% 3 Axle Vehicles	0	0.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4+ Axle Trucks	0	2	2	4	6	0	3	9	0	3	0	3	0	0	0	0	16
% 4+ Axle Trucks	0	0.1	0.2	0.1	2.3	0	0.4	0.9	0	0.2	0	0.2	0	0	0	0	0.3

	12th Avenue Southbound				SR-198 Westbound Off Ramp Westbound				12th Avenue Northbound				SR-198 Westbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	0	235	**144**	379	34	**1**	82	117	12	200	0	212	0	0	0	0	708
04:45 PM	0	221	123	344	23	0	**103**	126	10	209	0	219	0	0	0	0	689
05:00 PM	0	**244**	144	**388**	33	0	103	136	**13**	**240**	0	**253**	0	0	0	0	**777**
05:15 PM	0	228	110	338	**42**	0	97	**139**	8	210	0	218	0	0	0	0	695
Total Volume	0	928	521	1449	132	1	385	518	43	859	0	902	0	0	0	0	2869
% App. Total	0	64	36		25.5	0.2	74.3		4.8	95.2	0		0	0	0		
PHF	.000	.951	.905	.934	.786	.250	.934	.932	.827	.895	.000	.891	.000	.000	.000	.000	.923

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 12th Avenue
E/W: SR-198 Westbound Ramps
Weather: Clear

File Name : 08_HFD_12th_198W PM
Site Code : 00322472
Start Date : 5/17/2022
Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM				04:30 PM				04:15 PM				04:00 PM			
+0 mins.	0	235	**144**	379	34	**1**	82	117	8	213	0	221	0	0	0	0
+15 mins.	0	221	123	344	23	0	**103**	126	12	200	0	212	0	0	0	0
+30 mins.	0	**244**	144	**388**	33	0	103	136	10	209	0	219	0	0	0	0
+45 mins.	0	228	110	338	**42**	0	97	**139**	**13**	**240**	0	**253**	0	0	0	0
Total Volume	0	928	521	1449	132	1	385	518	43	862	0	905	0	0	0	0
% App. Total	0	64	36		25.5	0.2	74.3		4.8	95.2	0		0	0	0	
PHF	.000	.951	.905	.934	.786	.250	.934	.932	.827	.898	.000	.894	.000	.000	.000	.000

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 12th Avenue
E/W: SR-198 Westbound Ramps
Weather: Clear

File Name : 08_HFD_12th_198W PM
Site Code : 00322472
Start Date : 5/17/2022
Page No : 1

Groups Printed- Passenger Vehicles

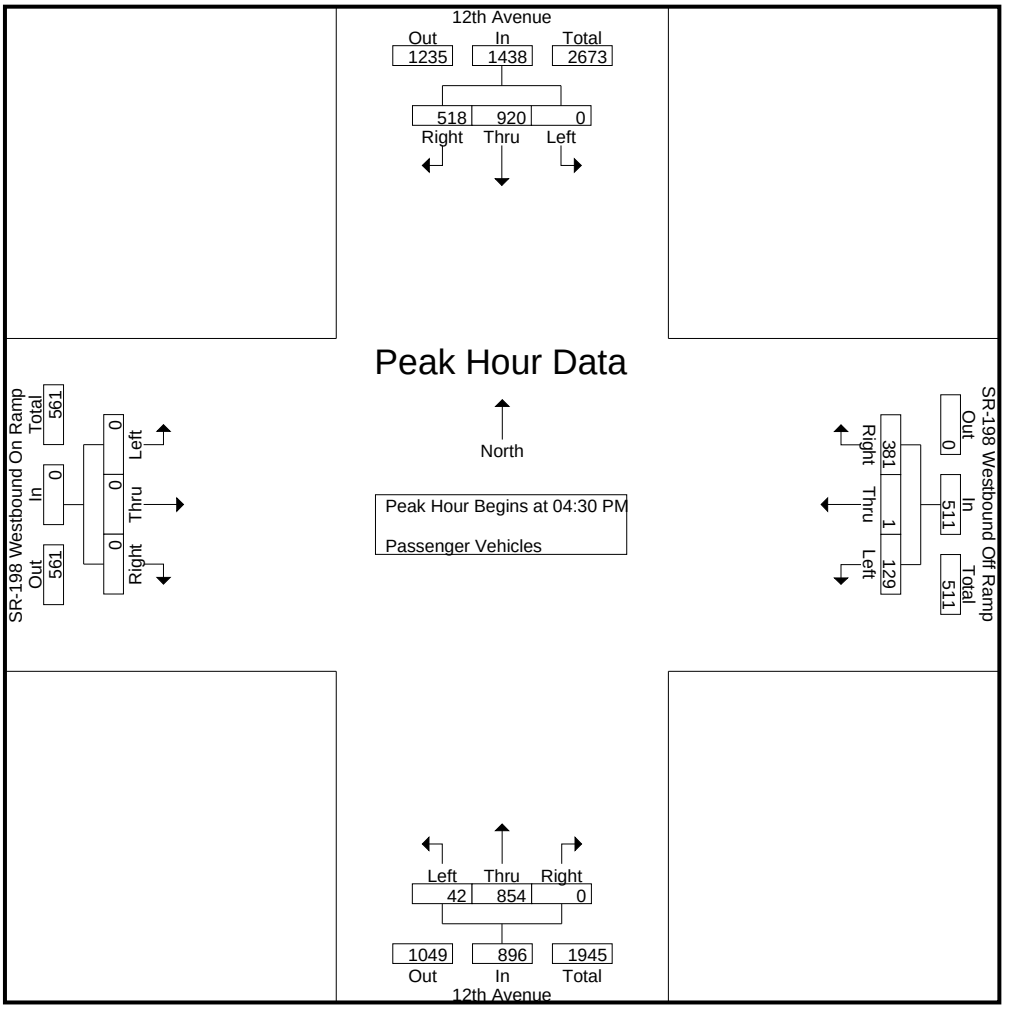
	12th Avenue Southbound				SR-198 Westbound Off Ramp Westbound				12th Avenue Northbound				SR-198 Westbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	229	122	351	18	0	103	121	3	208	0	211	0	0	0	0	683
04:15 PM	0	217	108	325	32	0	92	124	8	210	0	218	0	0	0	0	667
04:30 PM	0	232	142	374	34	1	81	116	12	199	0	211	0	0	0	0	701
04:45 PM	0	218	122	340	22	0	101	123	10	209	0	219	0	0	0	0	682
Total	0	896	494	1390	106	1	377	484	33	826	0	859	0	0	0	0	2733
05:00 PM	0	242	144	386	32	0	102	134	12	238	0	250	0	0	0	0	770
05:15 PM	0	228	110	338	41	0	97	138	8	208	0	216	0	0	0	0	692
05:30 PM	0	230	117	347	35	0	73	108	2	193	0	195	0	0	0	0	650
05:45 PM	0	200	127	327	38	0	87	125	8	197	0	205	0	0	0	0	657
Total	0	900	498	1398	146	0	359	505	30	836	0	866	0	0	0	0	2769
Grand Total	0	1796	992	2788	252	1	736	989	63	1662	0	1725	0	0	0	0	5502
Apprch %	0	64.4	35.6		25.5	0.1	74.4		3.7	96.3	0		0	0	0		
Total %	0	32.6	18	50.7	4.6	0	13.4	18	1.1	30.2	0	31.4	0	0	0	0	

	12th Avenue Southbound				SR-198 Westbound Off Ramp Westbound				12th Avenue Northbound				SR-198 Westbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	0	232	142	374	34	**1**	81	116	**12**	199	0	211	0	0	0	0	701
04:45 PM	0	218	122	340	22	0	101	123	10	209	0	219	0	0	0	0	682
05:00 PM	0	**242**	**144**	**386**	32	0	**102**	134	12	**238**	0	**250**	0	0	0	0	**770**
05:15 PM	0	228	110	338	**41**	0	97	**138**	8	208	0	216	0	0	0	0	692
Total Volume	0	920	518	1438	129	1	381	511	42	854	0	896	0	0	0	0	2845
% App. Total	0	64	36		25.2	0.2	74.6		4.7	95.3	0		0	0	0		
PHF	.000	.950	.899	.931	.787	.250	.934	.926	.875	.897	.000	.896	.000	.000	.000	.000	.924

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 12th Avenue
E/W: SR-198 Westbound Ramps
Weather: Clear

File Name : 08_HFD_12th_198W PM
Site Code : 00322472
Start Date : 5/17/2022
Page No : 2



Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM				04:30 PM				04:30 PM				04:30 PM			
+0 mins.	0	232	142	374	34	**1**	81	116	**12**	199	0	211	0	0	0	0
+15 mins.	0	218	122	340	22	0	101	123	10	209	0	219	0	0	0	0
+30 mins.	0	**242**	**144**	**386**	32	0	**102**	134	12	**238**	0	**250**	0	0	0	0
+45 mins.	0	228	110	338	**41**	0	97	**138**	8	208	0	216	0	0	0	0
Total Volume	0	920	518	1438	129	1	381	511	42	854	0	896	0	0	0	0
% App. Total	0	64	36		25.2	0.2	74.6		4.7	95.3	0		0	0	0	
PHF	.000	.950	.899	.931	.787	.250	.934	.926	.875	.897	.000	.896	.000	.000	.000	.000

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 12th Avenue
E/W: SR-198 Westbound Ramps
Weather: Clear

File Name : 08_HFD_12th_198W PM
Site Code : 00322472
Start Date : 5/17/2022
Page No : 1

Groups Printed- Large 2 Axle Vehicles

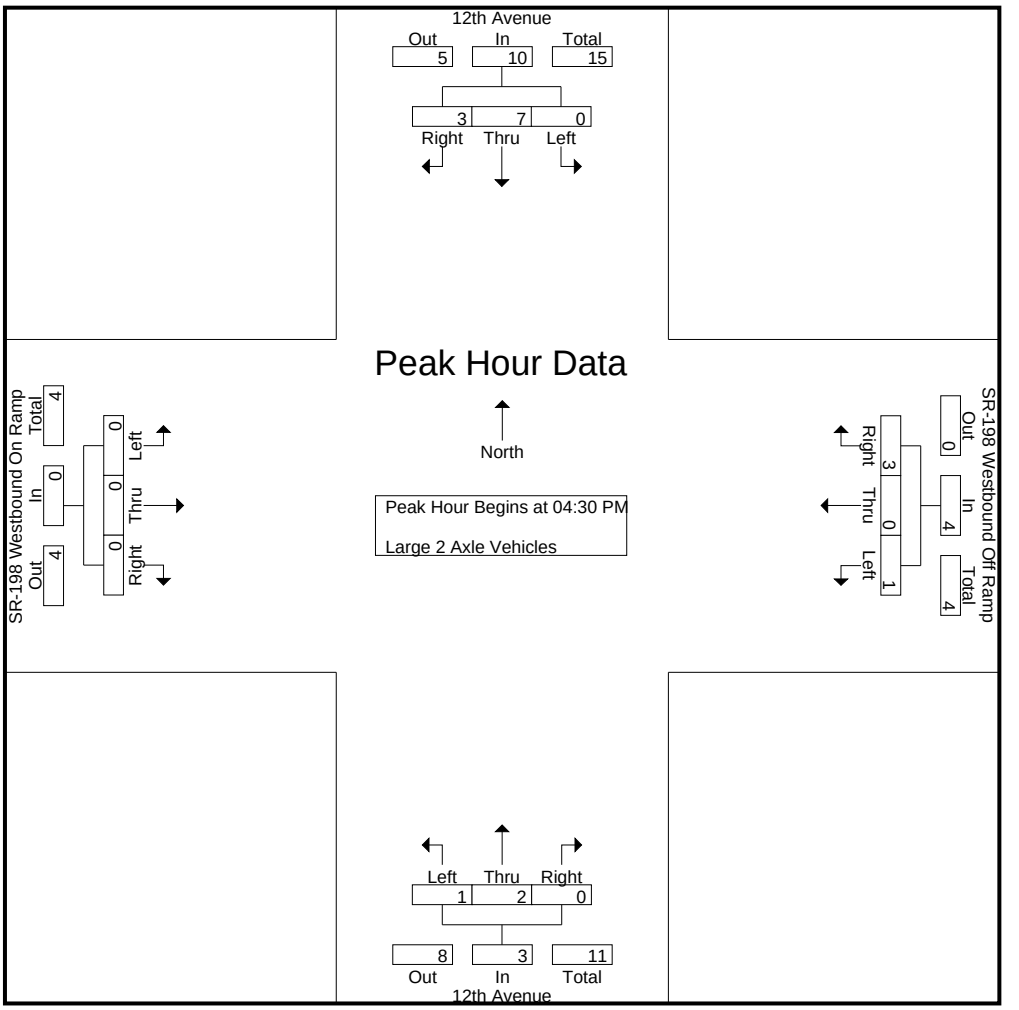
	12th Avenue Southbound				SR-198 Westbound Off Ramp Westbound				12th Avenue Northbound				SR-198 Westbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	3	0	3	1	0	0	1	0	3	0	3	0	0	0	0	7
04:15 PM	0	2	0	2	0	0	1	1	0	3	0	3	0	0	0	0	6
04:30 PM	0	2	2	4	0	0	1	1	0	0	0	0	0	0	0	0	5
04:45 PM	0	3	1	4	0	0	2	2	0	0	0	0	0	0	0	0	6
Total	0	10	3	13	1	0	4	5	0	6	0	6	0	0	0	0	24
05:00 PM	0	2	0	2	1	0	0	1	1	1	0	2	0	0	0	0	5
05:15 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
05:30 PM	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
05:45 PM	0	1	0	1	0	0	0	0	0	3	0	3	0	0	0	0	4
Total	0	5	0	5	1	0	0	1	1	5	0	6	0	0	0	0	12
Grand Total	0	15	3	18	2	0	4	6	1	11	0	12	0	0	0	0	36
Apprch %	0	83.3	16.7		33.3	0	66.7		8.3	91.7	0		0	0	0		
Total %	0	41.7	8.3	50	5.6	0	11.1	16.7	2.8	30.6	0	33.3	0	0	0	0	

	12th Avenue Southbound				SR-198 Westbound Off Ramp Westbound				12th Avenue Northbound				SR-198 Westbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	0	2	**2**	**4**	0	0	1	1	0	0	0	0	0	0	0	0	5
04:45 PM	0	**3**	1	4	0	0	**2**	**2**	0	0	0	0	0	0	0	0	**6**
05:00 PM	0	2	0	2	**1**	0	0	1	**1**	**1**	0	**2**	0	0	0	0	5
05:15 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
Total Volume	0	7	3	10	1	0	3	4	1	2	0	3	0	0	0	0	17
% App. Total	0	70	30		25	0	75		33.3	66.7	0		0	0	0		
PHF	.000	.583	.375	.625	.250	.000	.375	.500	.250	.500	.000	.375	.000	.000	.000	.000	.708

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 12th Avenue
E/W: SR-198 Westbound Ramps
Weather: Clear

File Name : 08_HFD_12th_198W PM
Site Code : 00322472
Start Date : 5/17/2022
Page No : 2



Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM				04:30 PM				04:30 PM				04:30 PM			
+0 mins.	0	2	**2**	**4**	0	0	1	1	0	0	0	0	0	0	0	0
+15 mins.	0	**3**	1	4	0	0	**2**	**2**	0	0	0	0	0	0	0	0
+30 mins.	0	2	0	2	**1**	0	0	1	**1**	**1**	0	**2**	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0
Total Volume	0	7	3	10	1	0	3	4	1	2	0	3	0	0	0	0
% App. Total	0	70	30		25	0	75		33.3	66.7	0		0	0	0	
PHF	.000	.583	.375	.625	.250	.000	.375	.500	.250	.500	.000	.375	.000	.000	.000	.000

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 12th Avenue
E/W: SR-198 Westbound Ramps
Weather: Clear

File Name : 08_HFD_12th_198W PM
Site Code : 00322472
Start Date : 5/17/2022
Page No : 1

Groups Printed- 3 Axle Vehicles

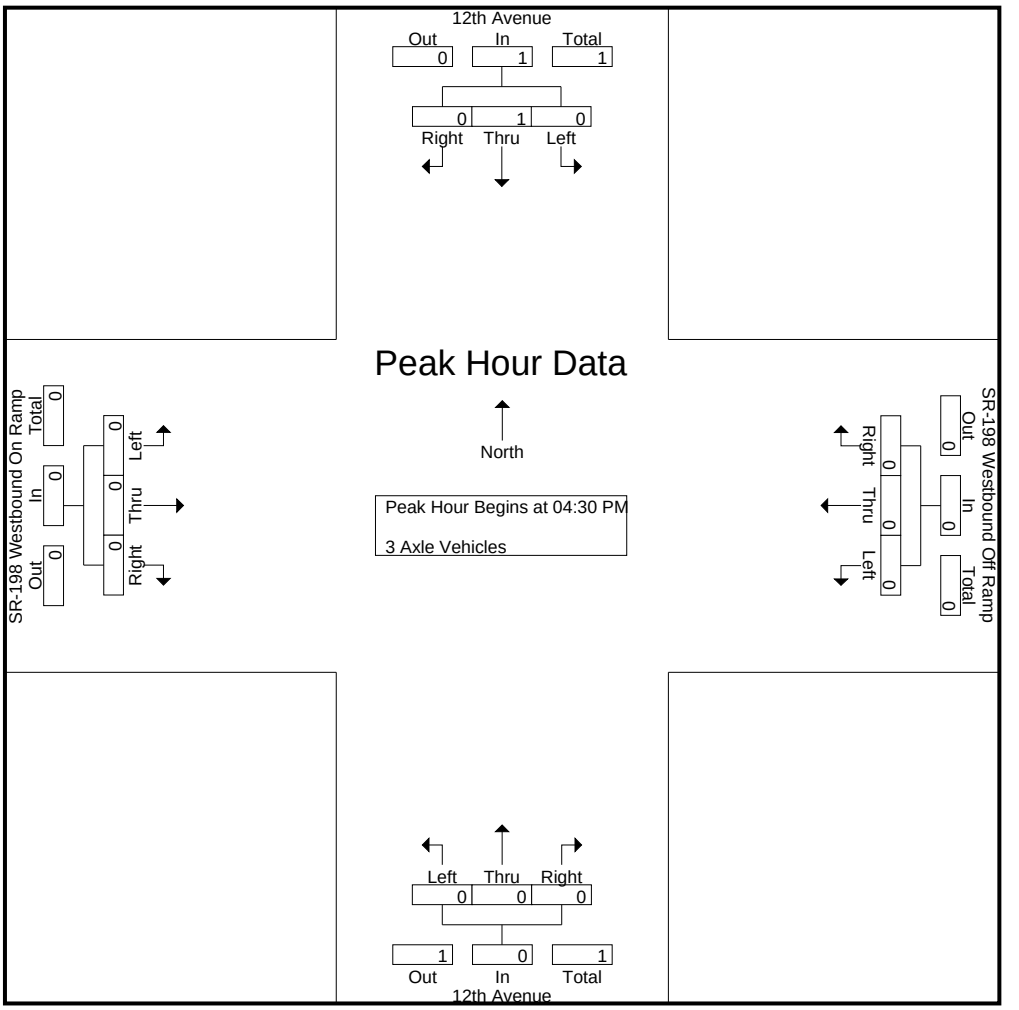
	12th Avenue Southbound				SR-198 Westbound Off Ramp Westbound				12th Avenue Northbound				SR-198 Westbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Apprch %	0	100	0		0	0	0		0	0	0		0	0	0		
Total %	0	100	0	100	0	0	0	0	0	0	0	0	0	0	0	0	

	12th Avenue Southbound				SR-198 Westbound Off Ramp Westbound				12th Avenue Northbound				SR-198 Westbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	0	**1**	0	**1**	0	0	0	0	0	0	0	0	0	0	0	0	**1**
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
% App. Total	0	100	0		0	0	0		0	0	0		0	0	0		
PHF	.000	.250	.000	.250	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 12th Avenue
E/W: SR-198 Westbound Ramps
Weather: Clear

File Name : 08_HFD_12th_198W PM
Site Code : 00322472
Start Date : 5/17/2022
Page No : 2



Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM				04:30 PM				04:30 PM				04:30 PM			
+0 mins.	0	**1**	0	**1**	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	100	0		0	0	0		0	0	0		0	0	0	
PHF	.000	.250	.000	.250	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 12th Avenue
E/W: SR-198 Westbound Ramps
Weather: Clear

File Name : 08_HFD_12th_198W PM
Site Code : 00322472
Start Date : 5/17/2022
Page No : 1

Groups Printed- 4+ Axle Trucks

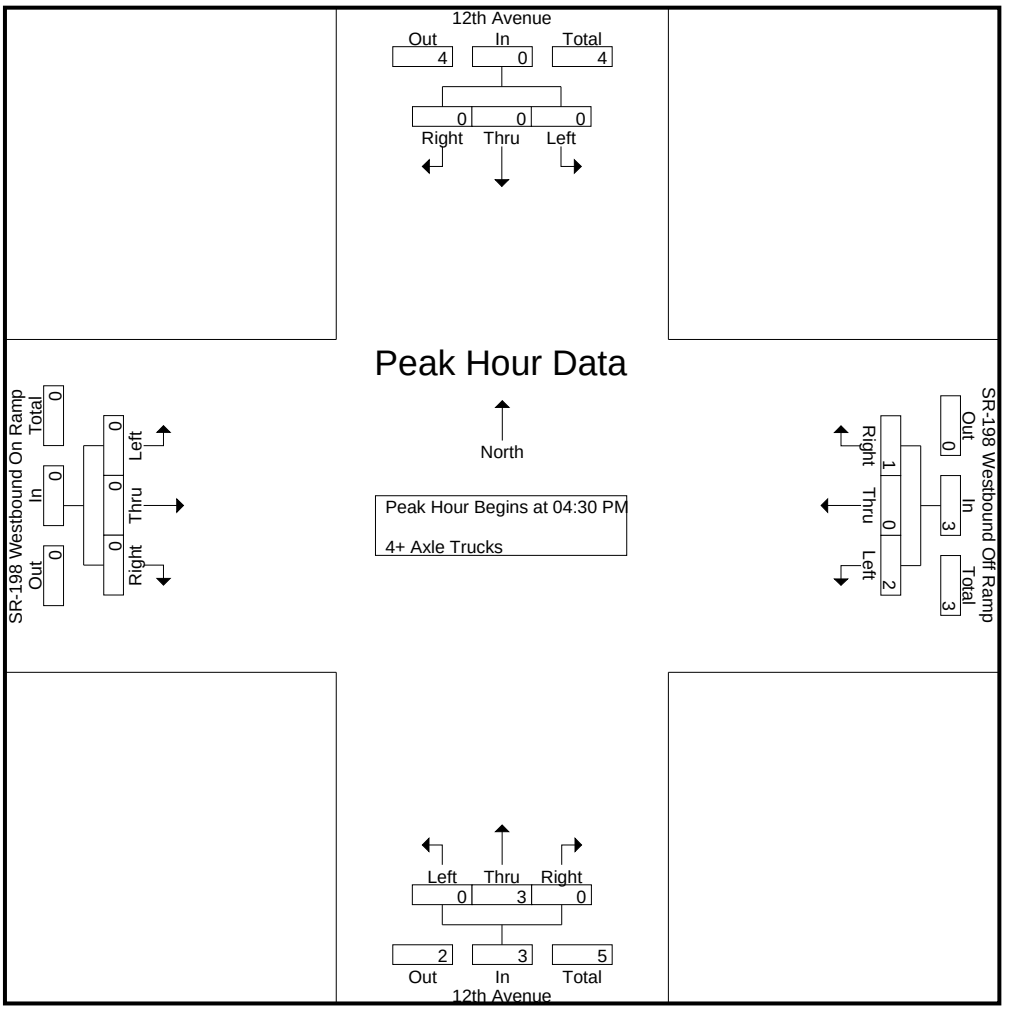
	12th Avenue Southbound				SR-198 Westbound Off Ramp Westbound				12th Avenue Northbound				SR-198 Westbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	1	1	1	0	1	2	0	0	0	0	0	0	0	0	3
04:15 PM	0	1	0	1	1	0	1	2	0	0	0	0	0	0	0	0	3
04:30 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
04:45 PM	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1
Total	0	1	1	2	3	0	2	5	0	1	0	1	0	0	0	0	8
05:00 PM	0	0	0	0	0	0	1	1	0	1	0	1	0	0	0	0	2
05:15 PM	0	0	0	0	1	0	0	1	0	1	0	1	0	0	0	0	2
05:30 PM	0	1	1	2	1	0	0	1	0	0	0	0	0	0	0	0	3
05:45 PM	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1
Total	0	1	1	2	3	0	1	4	0	2	0	2	0	0	0	0	8
Grand Total	0	2	2	4	6	0	3	9	0	3	0	3	0	0	0	0	16
Apprch %	0	50	50		66.7	0	33.3		0	100	0		0	0	0		
Total %	0	12.5	12.5	25	37.5	0	18.8	56.2	0	18.8	0	18.8	0	0	0	0	

	12th Avenue Southbound				SR-198 Westbound Off Ramp Westbound				12th Avenue Northbound				SR-198 Westbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	0	0	0	0	0	0	0	0	0	**1**	0	**1**	0	0	0	0	1
04:45 PM	0	0	0	0	**1**	0	0	**1**	0	0	0	0	0	0	0	0	1
05:00 PM	0	0	0	0	0	0	**1**	1	0	1	0	1	0	0	0	0	**2**
05:15 PM	0	0	0	0	1	0	0	1	0	1	0	1	0	0	0	0	2
Total Volume	0	0	0	0	2	0	1	3	0	3	0	3	0	0	0	0	6
% App. Total	0	0	0		66.7	0	33.3		0	100	0		0	0	0		
PHF	.000	.000	.000	.000	.500	.000	.250	.750	.000	.750	.000	.750	.000	.000	.000	.000	.750

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 12th Avenue
E/W: SR-198 Westbound Ramps
Weather: Clear

File Name : 08_HFD_12th_198W PM
Site Code : 00322472
Start Date : 5/17/2022
Page No : 2



Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM				04:30 PM				04:30 PM				04:30 PM			
+0 mins.	0	0	0	0	0	0	0	0	0	**1**	0	**1**	0	0	0	0
+15 mins.	0	0	0	0	**1**	0	0	**1**	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	**1**	1	0	1	0	1	0	0	0	0
+45 mins.	0	0	0	0	1	0	0	1	0	1	0	1	0	0	0	0
Total Volume	0	0	0	0	2	0	1	3	0	3	0	3	0	0	0	0
% App. Total	0	0	0		66.7	0	33.3		0	100	0		0	0	0	
PHF	.000	.000	.000	.000	.500	.000	.250	.750	.000	.750	.000	.750	.000	.000	.000	.000

Location: Hanford
N/S: 12th Avenue
E/W: SR-198 WB Ramps

Date: 5/17/2022
Day: Tuesday

PEDESTRIANS

	North Leg 12th Avenue	East Leg SR-198 WB Ramps	South Leg 12th Avenue	West Leg SR-198 WB Ramps	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
7:00 AM	0	0	0	1	1
7:15 AM	0	1	0	0	1
7:30 AM	0	1	0	0	1
7:45 AM	0	1	0	0	1
8:00 AM	0	0	0	0	0
8:15 AM	0	1	0	0	1
8:30 AM	0	6	0	1	7
8:45 AM	0	0	0	3	3
TOTAL VOLUMES:	0	10	0	5	15

	North Leg 12th Avenue	East Leg SR-198 WB Ramps	South Leg 12th Avenue	West Leg SR-198 WB Ramps	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
4:00 PM	0	1	0	1	2
4:15 PM	0	0	0	3	3
4:30 PM	0	1	0	1	2
4:45 PM	0	0	0	0	0
5:00 PM	0	1	0	0	1
5:15 PM	0	1	0	0	1
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
TOTAL VOLUMES:	0	4	0	5	9

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
951-268-6268

Location: Hanford
N/S: 12th Avenue
E/W: SR-198 WB Ramps

Date: 5/17/2022
Day: Tuesday

BICYCLES

	Southbound 12th Avenue			Westbound SR-198 WB Ramps			Northbound 12th Avenue			Eastbound SR-198 WB Ramps			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	1	0	0	0	0	1
8:00 AM	0	0	0	0	0	0	0	1	0	0	0	0	1
8:15 AM	0	0	0	0	0	0	0	1	0	0	0	0	1
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	0	0	3	0	0	0	0	3

	Southbound 12th Avenue			Westbound SR-198 WB Ramps			Northbound 12th Avenue			Eastbound SR-198 WB Ramps			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
4:15 PM	0	0	0	0	0	0	0	2	0	0	0	0	2
4:30 PM	1	0	0	0	0	0	0	0	0	0	0	0	1
4:45 PM	0	1	0	1	0	0	0	0	0	0	0	0	2
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	1	0	0	0	0	0	1	0	0	0	0	2
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	1	2	0	1	0	0	0	4	0	0	0	0	8

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
951-268-6268

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 12th Avenue
E/W: SR-198 Eastbound Ramps
Weather: Clear

File Name : 09_HFD_12th_198E AM
Site Code : 00322472
Start Date : 5/17/2022
Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

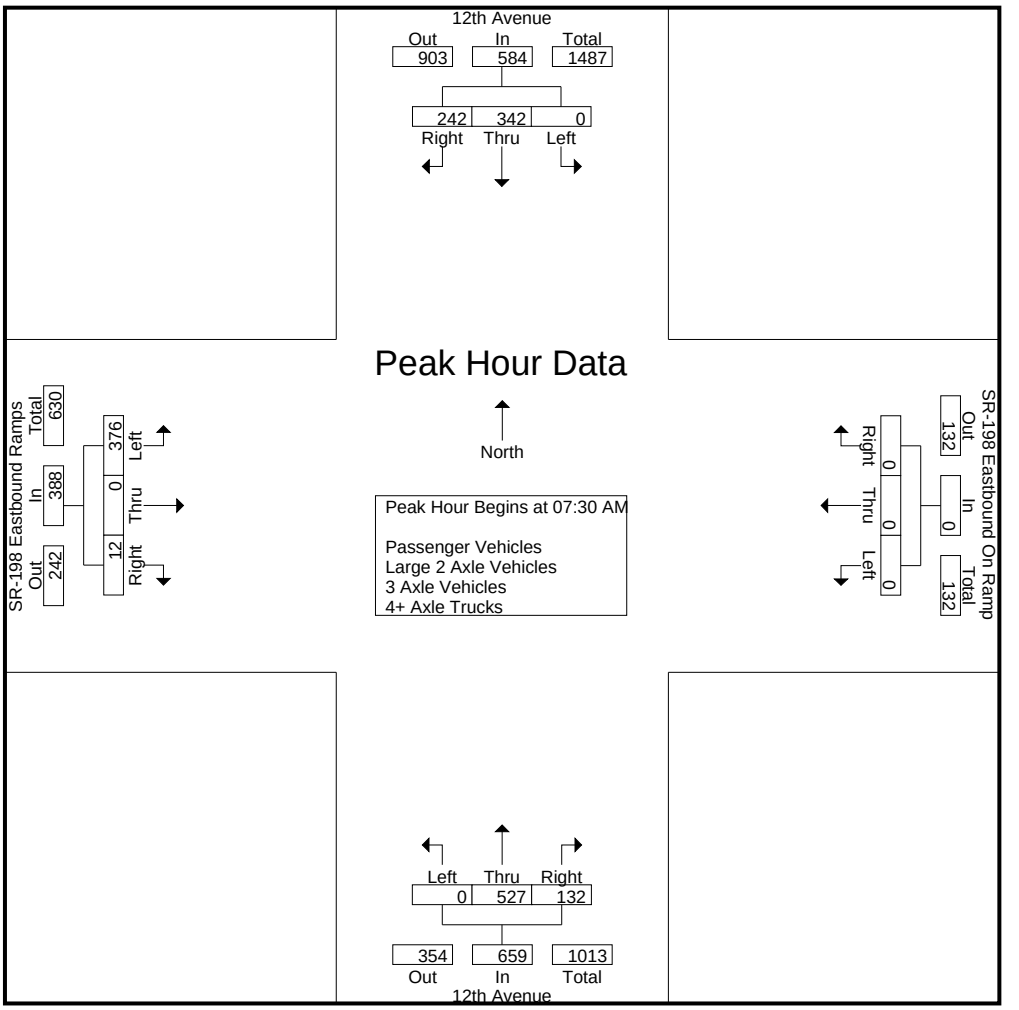
	12th Avenue Southbound				SR-198 Eastbound On Ramp Westbound				12th Avenue Northbound				SR-198 Eastbound Ramps Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	73	74	147	0	0	0	0	0	63	22	85	47	0	0	47	279
07:15 AM	0	71	67	138	0	0	0	0	0	80	31	111	39	0	3	42	291
07:30 AM	0	75	80	155	0	0	0	0	0	128	47	175	62	0	4	66	396
07:45 AM	0	87	58	145	0	0	0	0	0	139	35	174	130	0	7	137	456
Total	0	306	279	585	0	0	0	0	0	410	135	545	278	0	14	292	1422
08:00 AM	0	91	48	139	0	0	0	0	0	129	27	156	100	0	0	100	395
08:15 AM	0	89	56	145	0	0	0	0	0	131	23	154	84	0	1	85	384
08:30 AM	0	90	39	129	0	0	0	0	0	94	19	113	80	0	5	85	327
08:45 AM	0	89	48	137	0	0	0	0	0	105	23	128	78	0	8	86	351
Total	0	359	191	550	0	0	0	0	0	459	92	551	342	0	14	356	1457
Grand Total	0	665	470	1135	0	0	0	0	0	869	227	1096	620	0	28	648	2879
Apprch %	0	58.6	41.4		0	0	0		0	79.3	20.7		95.7	0	4.3		
Total %	0	23.1	16.3	39.4	0	0	0	0	0	30.2	7.9	38.1	21.5	0	1	22.5	
Passenger Vehicles	0	645	453	1098	0	0	0	0	0	857	222	1079	606	0	28	634	2811
% Passenger Vehicles	0	97	96.4	96.7	0	0	0	0	0	98.6	97.8	98.4	97.7	0	100	97.8	97.6
Large 2 Axle Vehicles	0	15	13	28	0	0	0	0	0	12	2	14	13	0	0	13	55
% Large 2 Axle Vehicles	0	2.3	2.8	2.5	0	0	0	0	0	1.4	0.9	1.3	2.1	0	0	2	1.9
3 Axle Vehicles	0	2	1	3	0	0	0	0	0	0	1	1	0	0	0	0	4
% 3 Axle Vehicles	0	0.3	0.2	0.3	0	0	0	0	0	0	0.4	0.1	0	0	0	0	0.1
4+ Axle Trucks	0	3	3	6	0	0	0	0	0	0	2	2	1	0	0	1	9
% 4+ Axle Trucks	0	0.5	0.6	0.5	0	0	0	0	0	0	0.9	0.2	0.2	0	0	0.2	0.3

	12th Avenue Southbound				SR-198 Eastbound On Ramp Westbound				12th Avenue Northbound				SR-198 Eastbound Ramps Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	75	**80**	**155**	0	0	0	0	0	128	**47**	**175**	62	0	4	66	396
07:45 AM	0	87	58	145	0	0	0	0	0	**139**	35	174	**130**	0	**7**	**137**	**456**
08:00 AM	0	**91**	48	139	0	0	0	0	0	129	27	156	100	0	0	100	395
08:15 AM	0	89	56	145	0	0	0	0	0	131	23	154	84	0	1	85	384
Total Volume	0	342	242	584	0	0	0	0	0	527	132	659	376	0	12	388	1631
% App. Total	0	58.6	41.4		0	0	0		0	80	20		96.9	0	3.1		
PHF	.000	.940	.756	.942	.000	.000	.000	.000	.000	.948	.702	.941	.723	.000	.429	.708	.894

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 12th Avenue
E/W: SR-198 Eastbound Ramps
Weather: Clear

File Name : 09_HFD_12th_198E AM
Site Code : 00322472
Start Date : 5/17/2022
Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM				07:00 AM				07:30 AM				07:45 AM			
+0 mins.	0	73	74	147	0	0	0	0	0	128	**47**	**175**	**130**	0	**7**	**137**
+15 mins.	0	71	67	138	0	0	0	0	0	**139**	35	174	100	0	0	100
+30 mins.	0	75	**80**	**155**	0	0	0	0	0	129	27	156	84	0	1	85
+45 mins.	0	**87**	58	145	0	0	0	0	0	131	23	154	80	0	5	85
Total Volume	0	306	279	585	0	0	0	0	0	527	132	659	394	0	13	407
% App. Total	0	52.3	47.7		0	0	0		0	80	20		96.8	0	3.2	
PHF	.000	.879	.872	.944	.000	.000	.000	.000	.000	.948	.702	.941	.758	.000	.464	.743

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 12th Avenue
E/W: SR-198 Eastbound Ramps
Weather: Clear

File Name : 09_HFD_12th_198E AM
Site Code : 00322472
Start Date : 5/17/2022
Page No : 1

Groups Printed- Passenger Vehicles

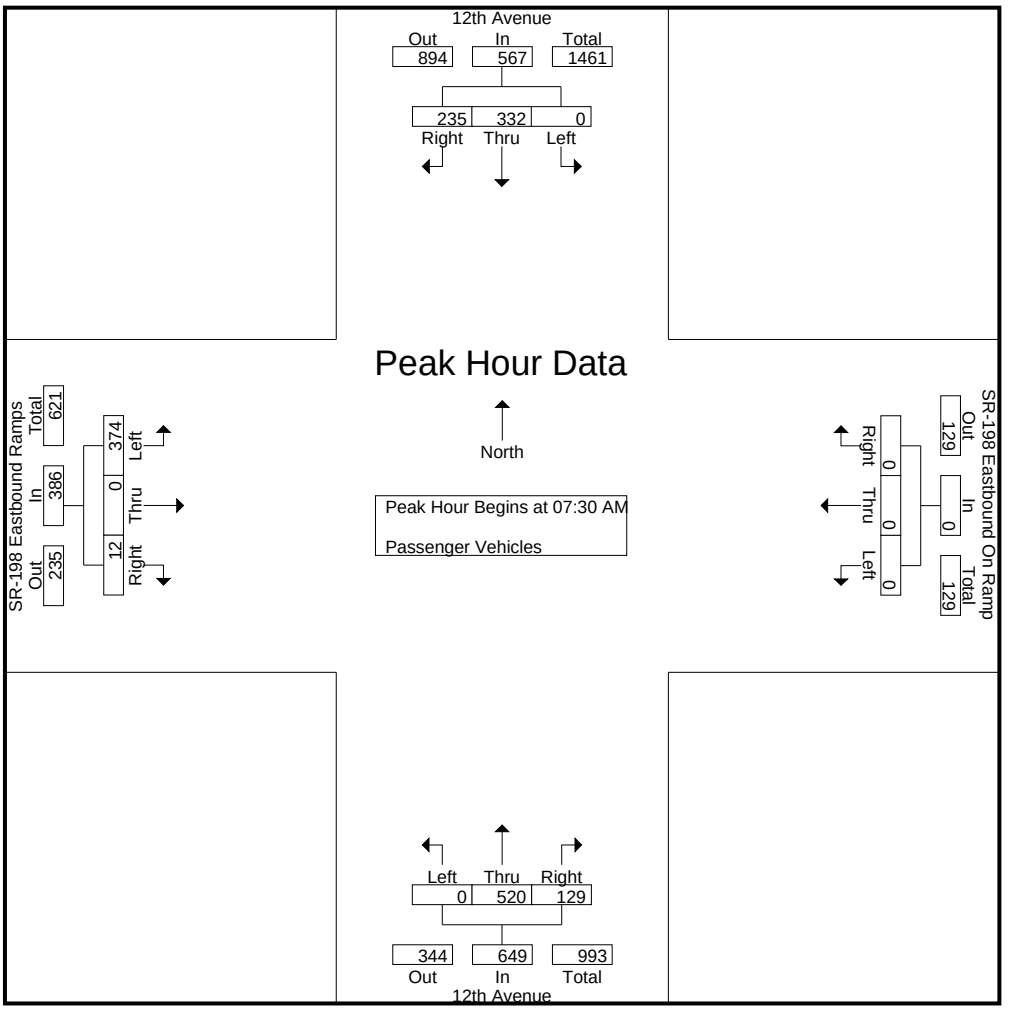
	12th Avenue Southbound				SR-198 Eastbound On Ramp Westbound				12th Avenue Northbound				SR-198 Eastbound Ramps Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	71	70	141	0	0	0	0	0	61	22	83	46	0	0	46	270
07:15 AM	0	67	65	132	0	0	0	0	0	79	30	109	38	0	3	41	282
07:30 AM	0	74	78	152	0	0	0	0	0	126	47	173	62	0	4	66	391
07:45 AM	0	84	55	139	0	0	0	0	0	138	35	173	130	0	7	137	449
Total	0	296	268	564	0	0	0	0	0	404	134	538	276	0	14	290	1392
08:00 AM	0	89	47	136	0	0	0	0	0	126	24	150	100	0	0	100	386
08:15 AM	0	85	55	140	0	0	0	0	0	130	23	153	82	0	1	83	376
08:30 AM	0	87	38	125	0	0	0	0	0	92	18	110	78	0	5	83	318
08:45 AM	0	88	45	133	0	0	0	0	0	105	23	128	70	0	8	78	339
Total	0	349	185	534	0	0	0	0	0	453	88	541	330	0	14	344	1419
Grand Total	0	645	453	1098	0	0	0	0	0	857	222	1079	606	0	28	634	2811
Apprch %	0	58.7	41.3		0	0	0		0	79.4	20.6		95.6	0	4.4		
Total %	0	22.9	16.1	39.1	0	0	0	0	0	30.5	7.9	38.4	21.6	0	1	22.6	

	12th Avenue Southbound				SR-198 Eastbound On Ramp Westbound				12th Avenue Northbound				SR-198 Eastbound Ramps Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	74	**78**	**152**	0	0	0	0	0	126	**47**	**173**	62	0	4	66	391
07:45 AM	0	84	55	139	0	0	0	0	0	**138**	35	173	**130**	0	**7**	**137**	**449**
08:00 AM	0	**89**	47	136	0	0	0	0	0	126	24	150	100	0	0	100	386
08:15 AM	0	85	55	140	0	0	0	0	0	130	23	153	82	0	1	83	376
Total Volume	0	332	235	567	0	0	0	0	0	520	129	649	374	0	12	386	1602
% App. Total	0	58.6	41.4		0	0	0		0	80.1	19.9		96.9	0	3.1		
PHF	.000	.933	.753	.933	.000	.000	.000	.000	.000	.942	.686	.938	.719	.000	.429	.704	.892

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 12th Avenue
E/W: SR-198 Eastbound Ramps
Weather: Clear

File Name : 09_HFD_12th_198E AM
Site Code : 00322472
Start Date : 5/17/2022
Page No : 2



Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	0	74	**78**	**152**	0	0	0	0	0	126	**47**	**173**	62	0	4	66
+15 mins.	0	84	55	139	0	0	0	0	0	**138**	35	173	**130**	0	**7**	**137**
+30 mins.	0	**89**	47	136	0	0	0	0	0	126	24	150	100	0	0	100
+45 mins.	0	85	55	140	0	0	0	0	0	130	23	153	82	0	1	83
Total Volume	0	332	235	567	0	0	0	0	0	520	129	649	374	0	12	386
% App. Total	0	58.6	41.4		0	0	0		0	80.1	19.9		96.9	0	3.1	
PHF	.000	.933	.753	.933	.000	.000	.000	.000	.000	.942	.686	.938	.719	.000	.429	.704

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 12th Avenue
E/W: SR-198 Eastbound Ramps
Weather: Clear

File Name : 09_HFD_12th_198E AM
Site Code : 00322472
Start Date : 5/17/2022
Page No : 1

Groups Printed- Large 2 Axle Vehicles

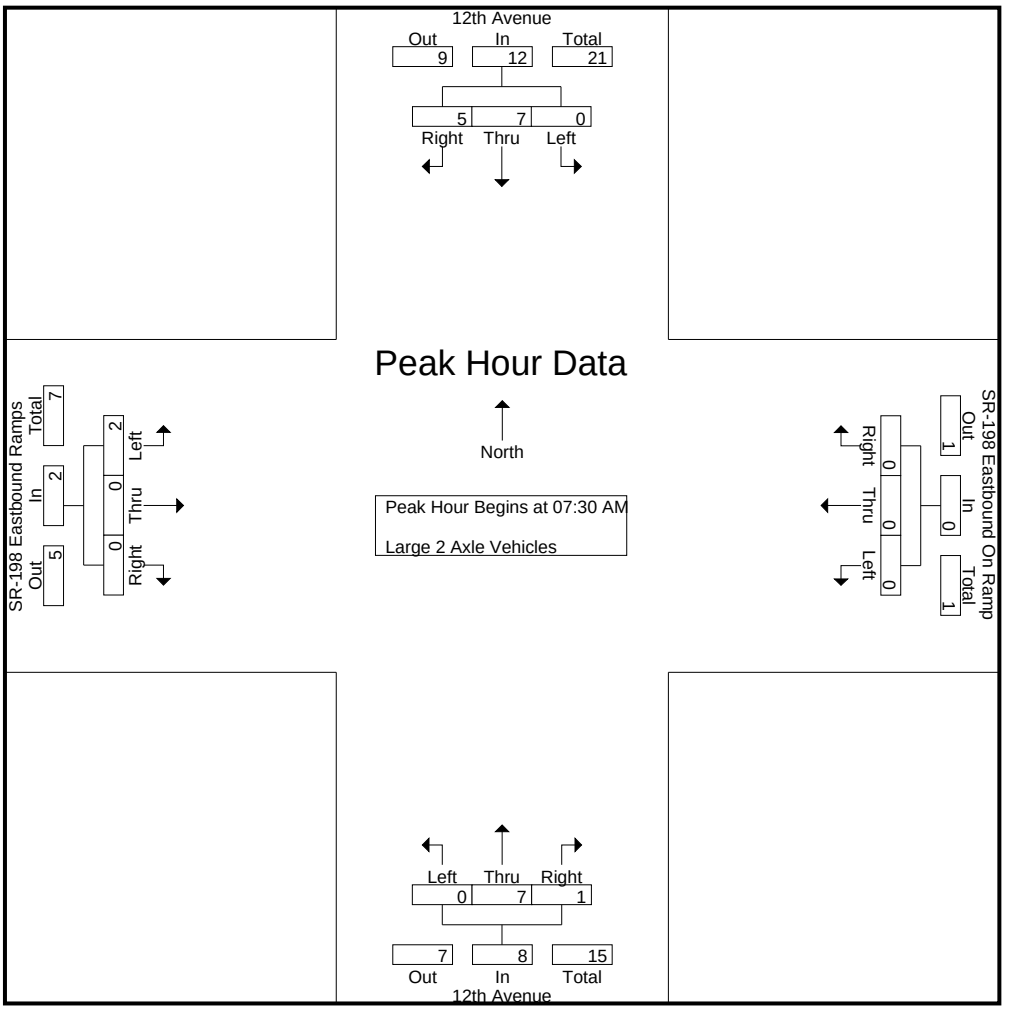
	12th Avenue Southbound				SR-198 Eastbound On Ramp Westbound				12th Avenue Northbound				SR-198 Eastbound Ramps Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	2	4	6	0	0	0	0	0	2	0	2	0	0	0	0	8
07:15 AM	0	4	2	6	0	0	0	0	0	1	0	1	1	0	0	1	8
07:30 AM	0	1	2	3	0	0	0	0	0	2	0	2	0	0	0	0	5
07:45 AM	0	2	2	4	0	0	0	0	0	1	0	1	0	0	0	0	5
Total	0	9	10	19	0	0	0	0	0	6	0	6	1	0	0	1	26
08:00 AM	0	2	0	2	0	0	0	0	0	3	1	4	0	0	0	0	6
08:15 AM	0	2	1	3	0	0	0	0	0	1	0	1	2	0	0	2	6
08:30 AM	0	2	1	3	0	0	0	0	0	2	1	3	2	0	0	2	8
08:45 AM	0	0	1	1	0	0	0	0	0	0	0	0	8	0	0	8	9
Total	0	6	3	9	0	0	0	0	0	6	2	8	12	0	0	12	29
Grand Total	0	15	13	28	0	0	0	0	0	12	2	14	13	0	0	13	55
Apprch %	0	53.6	46.4		0	0	0		0	85.7	14.3		100	0	0		
Total %	0	27.3	23.6	50.9	0	0	0	0	0	21.8	3.6	25.5	23.6	0	0	23.6	

	12th Avenue Southbound				SR-198 Eastbound On Ramp Westbound				12th Avenue Northbound				SR-198 Eastbound Ramps Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	1	**2**	3	0	0	0	0	0	2	0	2	0	0	0	0	5
07:45 AM	0	**2**	2	**4**	0	0	0	0	0	1	0	1	0	0	0	0	5
08:00 AM	0	2	0	2	0	0	0	0	0	**3**	**1**	**4**	0	0	0	0	**6**
08:15 AM	0	2	1	3	0	0	0	0	0	1	0	1	**2**	0	0	**2**	6
Total Volume	0	7	5	12	0	0	0	0	0	7	1	8	2	0	0	2	22
% App. Total	0	58.3	41.7		0	0	0		0	87.5	12.5		100	0	0		
PHF	.000	.875	.625	.750	.000	.000	.000	.000	.000	.583	.250	.500	.250	.000	.000	.250	.917

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 12th Avenue
E/W: SR-198 Eastbound Ramps
Weather: Clear

File Name : 09_HFD_12th_198E AM
Site Code : 00322472
Start Date : 5/17/2022
Page No : 2



Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	0	1	**2**	3	0	0	0	0	0	2	0	2	0	0	0	0
+15 mins.	0	**2**	2	**4**	0	0	0	0	0	1	0	1	0	0	0	0
+30 mins.	0	2	0	2	0	0	0	0	0	**3**	**1**	**4**	0	0	0	0
+45 mins.	0	2	1	3	0	0	0	0	0	1	0	1	**2**	0	0	**2**
Total Volume	0	7	5	12	0	0	0	0	0	7	1	8	2	0	0	2
% App. Total	0	58.3	41.7		0	0	0		0	87.5	12.5		100	0	0	
PHF	.000	.875	.625	.750	.000	.000	.000	.000	.000	.583	.250	.500	.250	.000	.000	.250

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 12th Avenue
E/W: SR-198 Eastbound Ramps
Weather: Clear

File Name : 09_HFD_12th_198E AM
Site Code : 00322472
Start Date : 5/17/2022
Page No : 1

Groups Printed- 3 Axle Vehicles

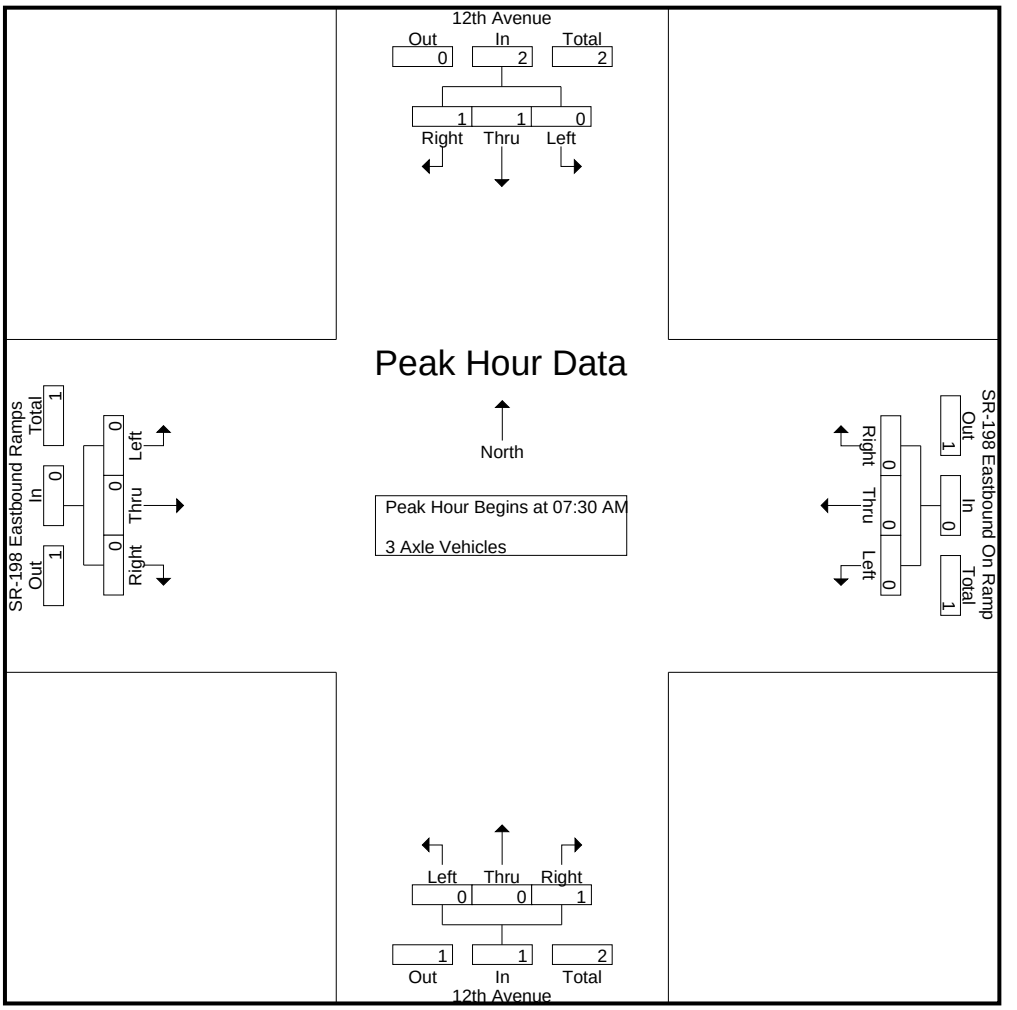
	12th Avenue Southbound				SR-198 Eastbound On Ramp Westbound				12th Avenue Northbound				SR-198 Eastbound Ramps Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1
08:00 AM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1
08:15 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	2	0	2	0	0	0	0	0	0	1	1	0	0	0	0	3
Grand Total	0	2	1	3	0	0	0	0	0	0	1	1	0	0	0	0	4
Apprch %	0	66.7	33.3		0	0	0		0	0	100		0	0	0		
Total %	0	50	25	75	0	0	0	0	0	0	25	25	0	0	0	0	

	12th Avenue Southbound				SR-198 Eastbound On Ramp Westbound				12th Avenue Northbound				SR-198 Eastbound Ramps Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	**1**	**1**	0	0	0	0	0	0	0	0	0	0	0	0	**1**
08:00 AM	0	0	0	0	0	0	0	0	0	0	**1**	**1**	0	0	0	0	1
08:15 AM	0	**1**	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Total Volume	0	1	1	2	0	0	0	0	0	0	1	1	0	0	0	0	3
% App. Total	0	50	50		0	0	0		0	0	100		0	0	0		
PHF	.000	.250	.250	.500	.000	.000	.000	.000	.000	.000	.250	.250	.000	.000	.000	.000	.750

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 12th Avenue
E/W: SR-198 Eastbound Ramps
Weather: Clear

File Name : 09_HFD_12th_198E AM
Site Code : 00322472
Start Date : 5/17/2022
Page No : 2



Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	**1**	**1**	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	**1**	**1**	0	0	0	0
+45 mins.	0	**1**	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	1	1	2	0	0	0	0	0	0	1	1	0	0	0	0
% App. Total	0	50	50		0	0	0		0	0	100		0	0	0	
PHF	.000	.250	.250	.500	.000	.000	.000	.000	.000	.000	.250	.250	.000	.000	.000	.000

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 12th Avenue
E/W: SR-198 Eastbound Ramps
Weather: Clear

File Name : 09_HFD_12th_198E AM
Site Code : 00322472
Start Date : 5/17/2022
Page No : 1

Groups Printed- 4+ Axle Trucks

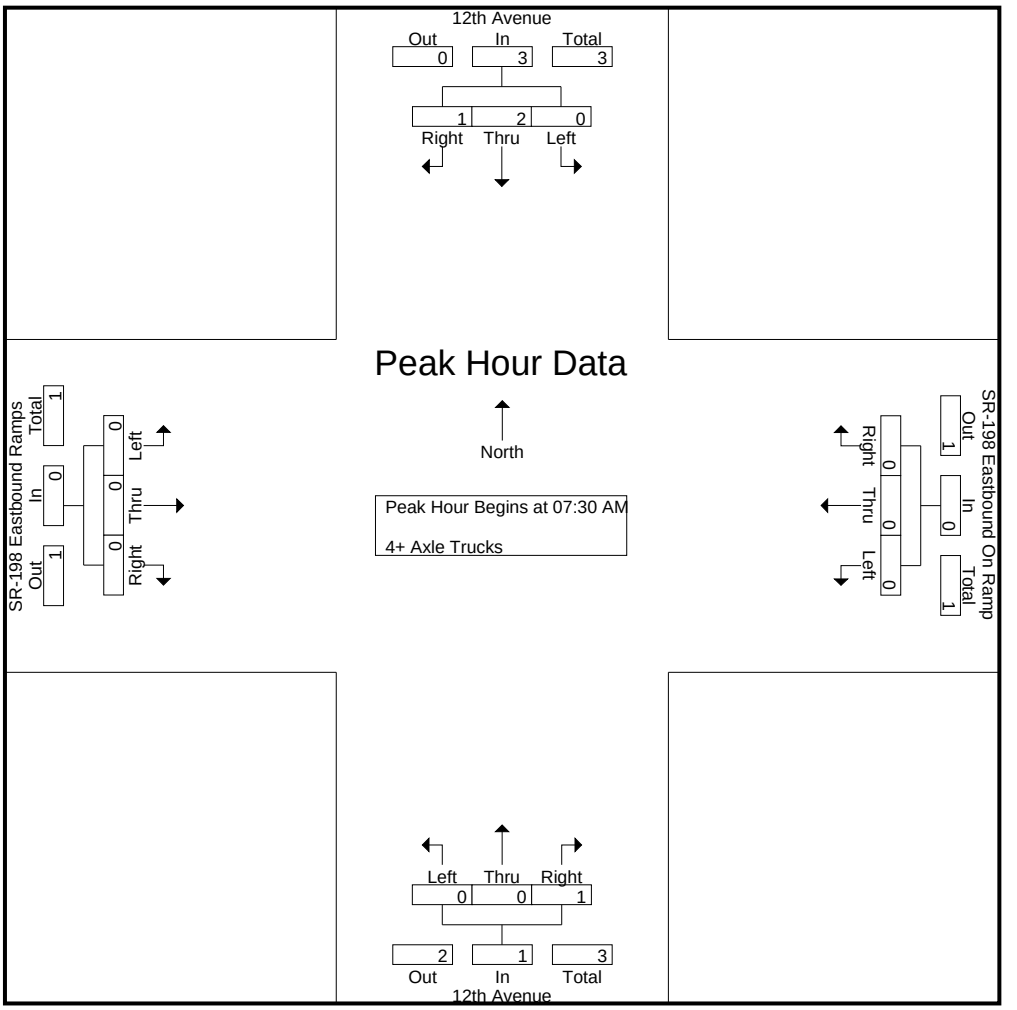
	12th Avenue Southbound				SR-198 Eastbound On Ramp Westbound				12th Avenue Northbound				SR-198 Eastbound Ramps Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
07:15 AM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	1	0	1	0	0	0	0	0	0	1	1	1	0	0	1	3
08:00 AM	0	0	1	1	0	0	0	0	0	0	1	1	0	0	0	0	2
08:15 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
08:30 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
08:45 AM	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	2
Total	0	2	3	5	0	0	0	0	0	0	1	1	0	0	0	0	6
Grand Total	0	3	3	6	0	0	0	0	0	0	2	2	1	0	0	1	9
Apprch %	0	50	50		0	0	0		0	0	100		100	0	0		
Total %	0	33.3	33.3	66.7	0	0	0	0	0	0	22.2	22.2	11.1	0	0	11.1	

	12th Avenue Southbound				SR-198 Eastbound On Ramp Westbound				12th Avenue Northbound				SR-198 Eastbound Ramps Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	**1**	0	**1**	0	0	0	0	0	0	0	0	0	0	0	0	1
08:00 AM	0	0	**1**	1	0	0	0	0	0	0	**1**	**1**	0	0	0	0	**2**
08:15 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Total Volume	0	2	1	3	0	0	0	0	0	0	1	1	0	0	0	0	4
% App. Total	0	66.7	33.3		0	0	0		0	0	100		0	0	0		
PHF	.000	.500	.250	.750	.000	.000	.000	.000	.000	.000	.250	.250	.000	.000	.000	.000	.500

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 12th Avenue
E/W: SR-198 Eastbound Ramps
Weather: Clear

File Name : 09_HFD_12th_198E AM
Site Code : 00322472
Start Date : 5/17/2022
Page No : 2



Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	**1**	0	**1**	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	**1**	1	0	0	0	0	0	0	**1**	**1**	0	0	0	0
+45 mins.	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	2	1	3	0	0	0	0	0	0	1	1	0	0	0	0
% App. Total	0	66.7	33.3		0	0	0		0	0	100		0	0	0	
PHF	.000	.500	.250	.750	.000	.000	.000	.000	.000	.000	.250	.250	.000	.000	.000	.000

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 12th Avenue
E/W: SR-198 Eastbound Ramps
Weather: Clear

File Name : 09_HFD_12th_198E PM
Site Code : 00322472
Start Date : 5/17/2022
Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

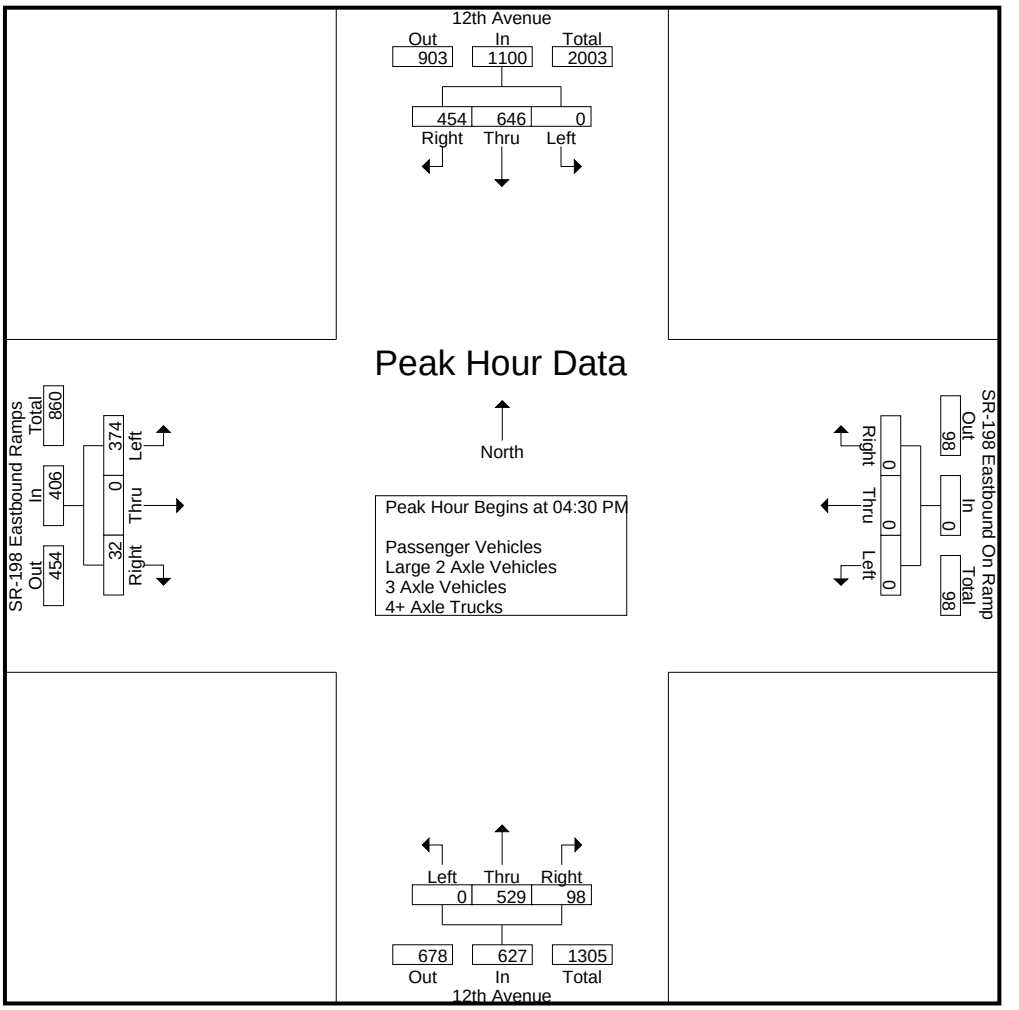
	12th Avenue Southbound				SR-198 Eastbound On Ramp Westbound				12th Avenue Northbound				SR-198 Eastbound Ramps Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	170	98	268	0	0	0	0	0	121	28	149	99	0	8	107	524
04:15 PM	0	169	91	260	0	0	0	0	0	120	34	154	101	0	10	111	525
04:30 PM	0	158	130	288	0	0	0	0	0	128	31	159	88	0	8	96	543
04:45 PM	0	162	96	258	0	0	0	0	0	125	14	139	92	0	6	98	495
Total	0	659	415	1074	0	0	0	0	0	494	107	601	380	0	32	412	2087
05:00 PM	0	164	126	290	0	0	0	0	0	144	24	168	100	0	11	111	569
05:15 PM	0	162	102	264	0	0	0	0	0	132	29	161	94	0	7	101	526
05:30 PM	0	191	102	293	0	0	0	0	0	127	22	149	71	0	5	76	518
05:45 PM	0	173	88	261	0	0	0	0	0	112	32	144	92	0	6	98	503
Total	0	690	418	1108	0	0	0	0	0	515	107	622	357	0	29	386	2116
Grand Total	0	1349	833	2182	0	0	0	0	0	1009	214	1223	737	0	61	798	4203
Apprch %	0	61.8	38.2		0	0	0		0	82.5	17.5		92.4	0	7.6		
Total %	0	32.1	19.8	51.9	0	0	0	0	0	24	5.1	29.1	17.5	0	1.5	19	
Passenger Vehicles	0	1334	824	2158	0	0	0	0	0	997	211	1208	732	0	59	791	4157
% Passenger Vehicles	0	98.9	98.9	98.9	0	0	0	0	0	98.8	98.6	98.8	99.3	0	96.7	99.1	98.9
Large 2 Axle Vehicles	0	7	8	15	0	0	0	0	0	10	1	11	4	0	1	5	31
% Large 2 Axle Vehicles	0	0.5	1	0.7	0	0	0	0	0	1	0.5	0.9	0.5	0	1.6	0.6	0.7
3 Axle Vehicles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% 3 Axle Vehicles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4+ Axle Trucks	0	8	1	9	0	0	0	0	0	2	2	4	1	0	1	2	15
% 4+ Axle Trucks	0	0.6	0.1	0.4	0	0	0	0	0	0.2	0.9	0.3	0.1	0	1.6	0.3	0.4

	12th Avenue Southbound				SR-198 Eastbound On Ramp Westbound				12th Avenue Northbound				SR-198 Eastbound Ramps Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	0	158	**130**	288	0	0	0	0	0	128	**31**	159	88	0	8	96	543
04:45 PM	0	162	96	258	0	0	0	0	0	125	14	139	92	0	6	98	495
05:00 PM	0	**164**	126	**290**	0	0	0	0	0	**144**	24	**168**	**100**	0	**11**	**111**	**569**
05:15 PM	0	162	102	264	0	0	0	0	0	132	29	161	94	0	7	101	526
Total Volume	0	646	454	1100	0	0	0	0	0	529	98	627	374	0	32	406	2133
% App. Total	0	58.7	41.3		0	0	0		0	84.4	15.6		92.1	0	7.9		
PHF	.000	.985	.873	.948	.000	.000	.000	.000	.000	.918	.790	.933	.935	.000	.727	.914	.937

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 12th Avenue
E/W: SR-198 Eastbound Ramps
Weather: Clear

File Name : 09_HFD_12th_198E PM
Site Code : 00322472
Start Date : 5/17/2022
Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	05:00 PM				04:00 PM				04:30 PM				04:15 PM			
+0 mins.	0	164	**126**	290	0	0	0	0	0	128	**31**	159	**101**	0	10	**111**
+15 mins.	0	162	102	264	0	0	0	0	0	125	14	139	88	0	8	96
+30 mins.	0	**191**	102	**293**	0	0	0	0	0	**144**	24	**168**	92	0	6	98
+45 mins.	0	173	88	261	0	0	0	0	0	132	29	161	100	0	**11**	111
Total Volume	0	690	418	1108	0	0	0	0	0	529	98	627	381	0	35	416
% App. Total	0	62.3	37.7		0	0	0		0	84.4	15.6		91.6	0	8.4	
PHF	.000	.903	.829	.945	.000	.000	.000	.000	.000	.918	.790	.933	.943	.000	.795	.937

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 12th Avenue
E/W: SR-198 Eastbound Ramps
Weather: Clear

File Name : 09_HFD_12th_198E PM
Site Code : 00322472
Start Date : 5/17/2022
Page No : 1

Groups Printed- Passenger Vehicles

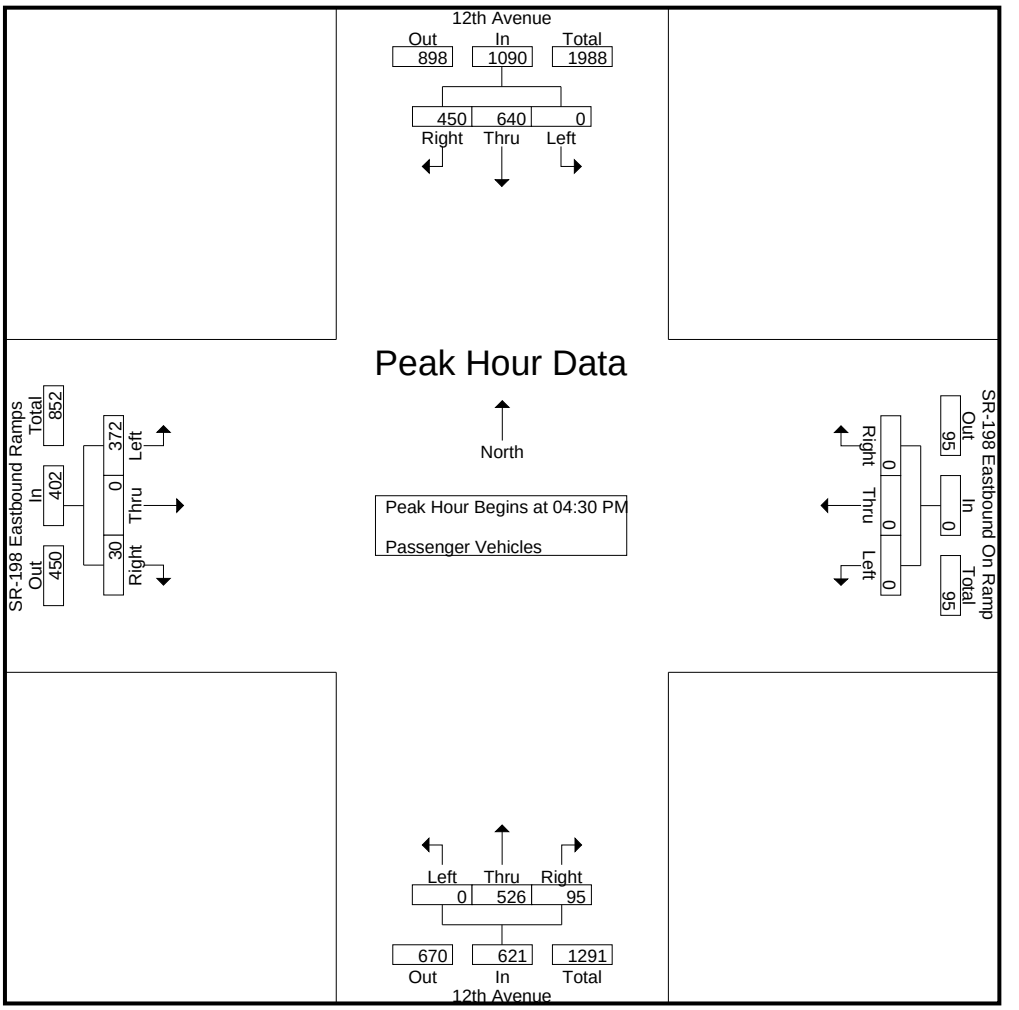
	12th Avenue Southbound				SR-198 Eastbound On Ramp Westbound				12th Avenue Northbound				SR-198 Eastbound Ramps Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	165	98	263	0	0	0	0	0	118	28	146	98	0	8	106	515
04:15 PM	0	167	90	257	0	0	0	0	0	116	34	150	101	0	10	111	518
04:30 PM	0	156	129	285	0	0	0	0	0	127	30	157	88	0	8	96	538
04:45 PM	0	159	95	254	0	0	0	0	0	125	12	137	92	0	6	98	489
Total	0	647	412	1059	0	0	0	0	0	486	104	590	379	0	32	411	2060
05:00 PM	0	164	124	288	0	0	0	0	0	142	24	166	100	0	10	110	564
05:15 PM	0	161	102	263	0	0	0	0	0	132	29	161	92	0	6	98	522
05:30 PM	0	190	99	289	0	0	0	0	0	126	22	148	71	0	5	76	513
05:45 PM	0	172	87	259	0	0	0	0	0	111	32	143	90	0	6	96	498
Total	0	687	412	1099	0	0	0	0	0	511	107	618	353	0	27	380	2097
Grand Total	0	1334	824	2158	0	0	0	0	0	997	211	1208	732	0	59	791	4157
Apprch %	0	61.8	38.2		0	0	0		0	82.5	17.5		92.5	0	7.5		
Total %	0	32.1	19.8	51.9	0	0	0	0	0	24	5.1	29.1	17.6	0	1.4	19	

	12th Avenue Southbound				SR-198 Eastbound On Ramp Westbound				12th Avenue Northbound				SR-198 Eastbound Ramps Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	0	156	**129**	285	0	0	0	0	0	127	**30**	157	88	0	8	96	538
04:45 PM	0	159	95	254	0	0	0	0	0	125	12	137	92	0	6	98	489
05:00 PM	0	**164**	124	**288**	0	0	0	0	0	**142**	24	**166**	**100**	0	**10**	**110**	**564**
05:15 PM	0	161	102	263	0	0	0	0	0	132	29	161	92	0	6	98	522
Total Volume	0	640	450	1090	0	0	0	0	0	526	95	621	372	0	30	402	2113
% App. Total	0	58.7	41.3		0	0	0		0	84.7	15.3		92.5	0	7.5		
PHF	.000	.976	.872	.946	.000	.000	.000	.000	.000	.926	.792	.935	.930	.000	.750	.914	.937

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 12th Avenue
E/W: SR-198 Eastbound Ramps
Weather: Clear

File Name : 09_HFD_12th_198E PM
Site Code : 00322472
Start Date : 5/17/2022
Page No : 2



Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM				04:30 PM				04:30 PM				04:30 PM			
+0 mins.	0	156	**129**	285	0	0	0	0	0	127	**30**	157	88	0	8	96
+15 mins.	0	159	95	254	0	0	0	0	0	125	12	137	92	0	6	98
+30 mins.	0	**164**	124	**288**	0	0	0	0	0	**142**	24	**166**	**100**	0	**10**	**110**
+45 mins.	0	161	102	263	0	0	0	0	0	132	29	161	92	0	6	98
Total Volume	0	640	450	1090	0	0	0	0	0	526	95	621	372	0	30	402
% App. Total	0	58.7	41.3		0	0	0		0	84.7	15.3		92.5	0	7.5	
PHF	.000	.976	.872	.946	.000	.000	.000	.000	.000	.926	.792	.935	.930	.000	.750	.914

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 12th Avenue
E/W: SR-198 Eastbound Ramps
Weather: Clear

File Name : 09_HFD_12th_198E PM
Site Code : 00322472
Start Date : 5/17/2022
Page No : 1

Groups Printed- Large 2 Axle Vehicles

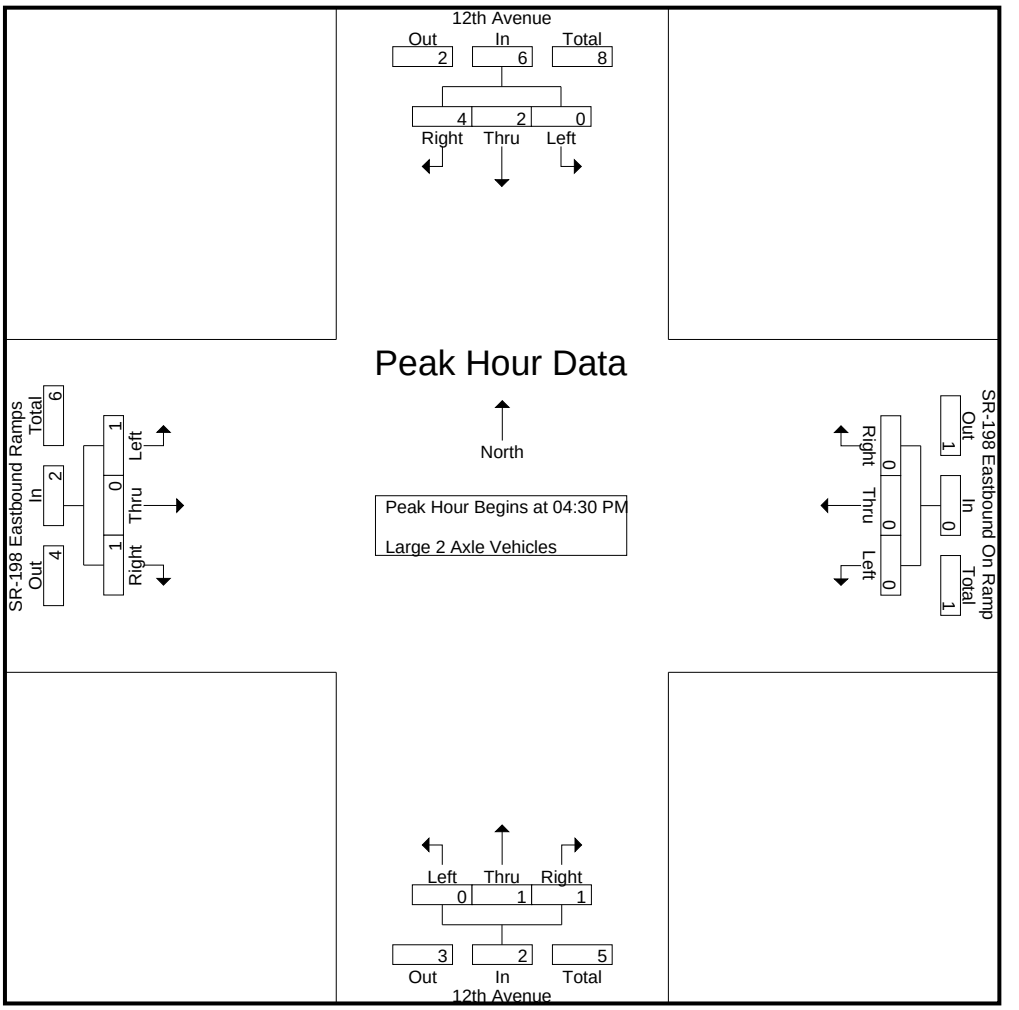
	12th Avenue Southbound				SR-198 Eastbound On Ramp Westbound				12th Avenue Northbound				SR-198 Eastbound Ramps Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	4	0	4	0	0	0	0	0	3	0	3	1	0	0	1	8
04:15 PM	0	1	1	2	0	0	0	0	0	4	0	4	0	0	0	0	6
04:30 PM	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1
04:45 PM	0	2	1	3	0	0	0	0	0	0	1	1	0	0	0	0	4
Total	0	7	3	10	0	0	0	0	0	7	1	8	1	0	0	1	19
05:00 PM	0	0	2	2	0	0	0	0	0	1	0	1	0	0	1	1	4
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
05:30 PM	0	0	2	2	0	0	0	0	0	1	0	1	0	0	0	0	3
05:45 PM	0	0	1	1	0	0	0	0	0	1	0	1	2	0	0	2	4
Total	0	0	5	5	0	0	0	0	0	3	0	3	3	0	1	4	12
Grand Total	0	7	8	15	0	0	0	0	0	10	1	11	4	0	1	5	31
Apprch %	0	46.7	53.3		0	0	0		0	90.9	9.1		80	0	20		
Total %	0	22.6	25.8	48.4	0	0	0	0	0	32.3	3.2	35.5	12.9	0	3.2	16.1	

	12th Avenue Southbound				SR-198 Eastbound On Ramp Westbound				12th Avenue Northbound				SR-198 Eastbound Ramps Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1
04:45 PM	0	**2**	1	**3**	0	0	0	0	0	0	**1**	**1**	0	0	0	0	**4**
05:00 PM	0	0	**2**	2	0	0	0	0	0	**1**	0	1	0	0	**1**	**1**	4
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	**1**	0	0	1	1
Total Volume	0	2	4	6	0	0	0	0	0	1	1	2	1	0	1	2	10
% App. Total	0	33.3	66.7		0	0	0		0	50	50		50	0	50		
PHF	.000	.250	.500	.500	.000	.000	.000	.000	.000	.250	.250	.500	.250	.000	.250	.500	.625

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 12th Avenue
E/W: SR-198 Eastbound Ramps
Weather: Clear

File Name : 09_HFD_12th_198E PM
Site Code : 00322472
Start Date : 5/17/2022
Page No : 2



Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM				04:30 PM				04:30 PM				04:30 PM			
+0 mins.	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	**2**	1	**3**	0	0	0	0	0	0	**1**	**1**	0	0	0	0
+30 mins.	0	0	**2**	2	0	0	0	0	0	**1**	0	1	0	0	**1**	**1**
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	**1**	0	0	1
Total Volume	0	2	4	6	0	0	0	0	0	1	1	2	1	0	1	2
% App. Total	0	33.3	66.7		0	0	0		0	50	50		50	0	50	
PHF	.000	.250	.500	.500	.000	.000	.000	.000	.000	.250	.250	.500	.250	.000	.250	.500

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 12th Avenue
E/W: SR-198 Eastbound Ramps
Weather: Clear

File Name : 09_HFD_12th_198E PM
Site Code : 00322472
Start Date : 5/17/2022
Page No : 1

Groups Printed- 3 Axle Vehicles

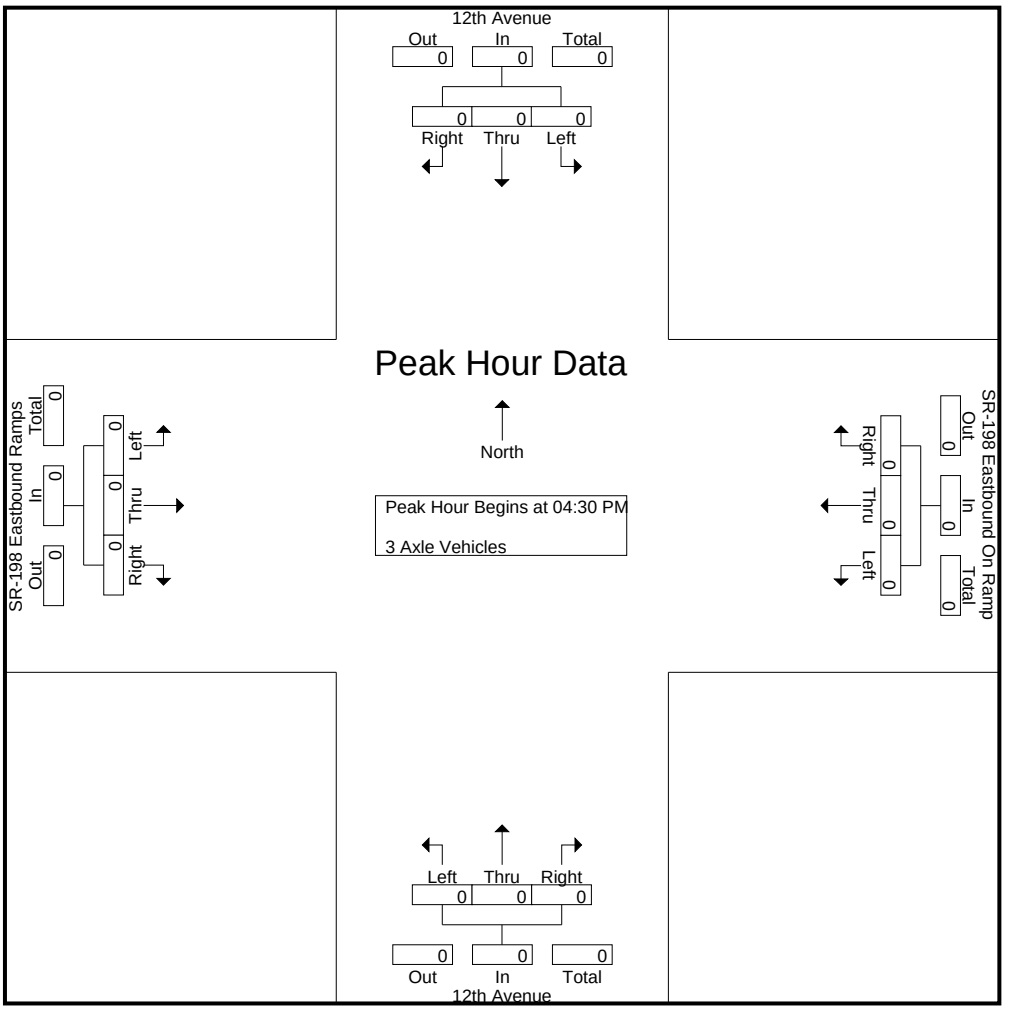
	12th Avenue Southbound				SR-198 Eastbound On Ramp Westbound				12th Avenue Northbound				SR-198 Eastbound Ramps Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Apprch %	0	0	0		0	0	0		0	0	0		0	0	0		
Total %																	

	12th Avenue Southbound				SR-198 Eastbound On Ramp Westbound				12th Avenue Northbound				SR-198 Eastbound Ramps Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0		0	0	0		0	0	0		0	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 12th Avenue
E/W: SR-198 Eastbound Ramps
Weather: Clear

File Name : 09_HFD_12th_198E PM
Site Code : 00322472
Start Date : 5/17/2022
Page No : 2



Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM				04:30 PM				04:30 PM				04:30 PM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0		0	0	0		0	0	0		0	0	0	
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 12th Avenue
E/W: SR-198 Eastbound Ramps
Weather: Clear

File Name : 09_HFD_12th_198E PM
Site Code : 00322472
Start Date : 5/17/2022
Page No : 1

Groups Printed- 4+ Axle Trucks

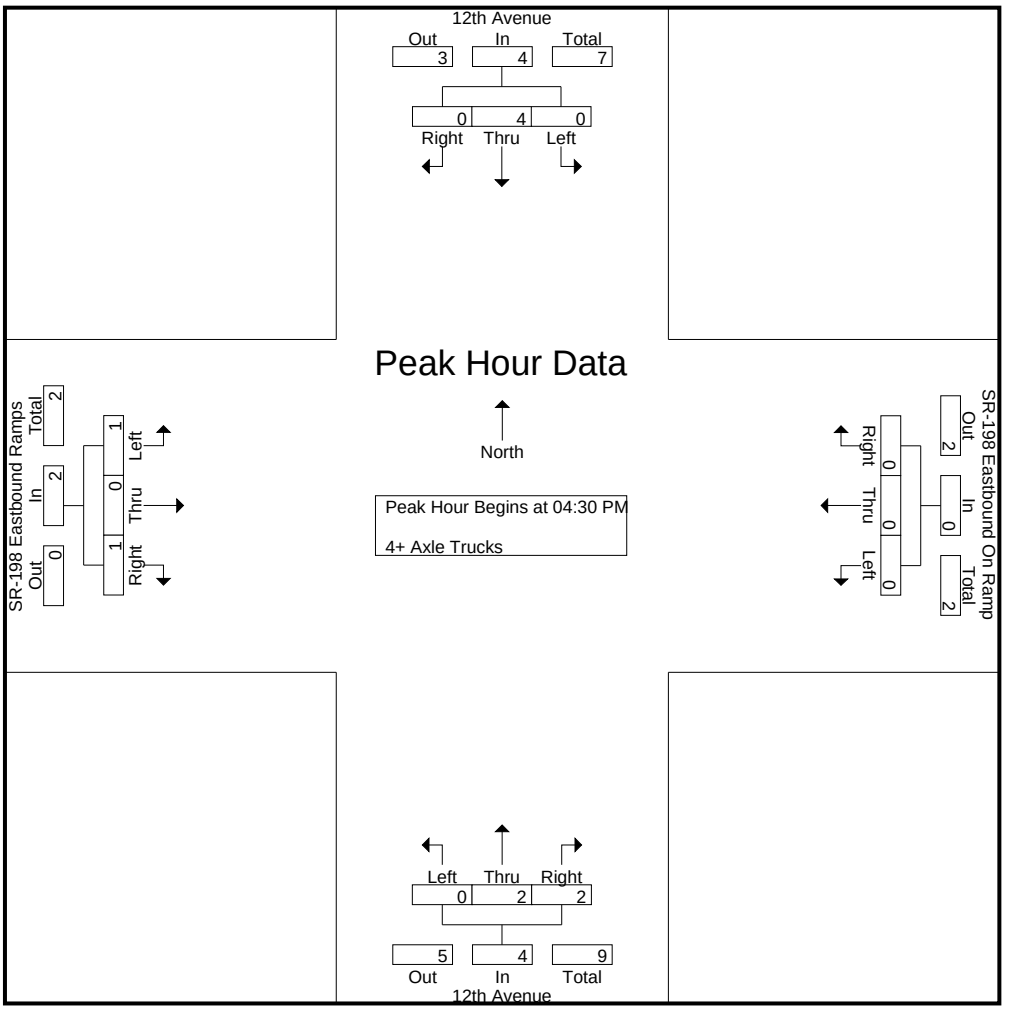
	12th Avenue Southbound				SR-198 Eastbound On Ramp Westbound				12th Avenue Northbound				SR-198 Eastbound Ramps Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
04:15 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
04:30 PM	0	2	0	2	0	0	0	0	0	1	1	2	0	0	0	0	4
04:45 PM	0	1	0	1	0	0	0	0	0	0	1	1	0	0	0	0	2
Total	0	5	0	5	0	0	0	0	0	1	2	3	0	0	0	0	8
05:00 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
05:15 PM	0	1	0	1	0	0	0	0	0	0	0	0	1	0	1	2	3
05:30 PM	0	1	1	2	0	0	0	0	0	0	0	0	0	0	0	0	2
05:45 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	3	1	4	0	0	0	0	0	1	0	1	1	0	1	2	7
Grand Total	0	8	1	9	0	0	0	0	0	2	2	4	1	0	1	2	15
Apprch %	0	88.9	11.1		0	0	0		0	50	50		50	0	50		
Total %	0	53.3	6.7	60	0	0	0	0	0	13.3	13.3	26.7	6.7	0	6.7	13.3	

	12th Avenue Southbound				SR-198 Eastbound On Ramp Westbound				12th Avenue Northbound				SR-198 Eastbound Ramps Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	0	**2**	0	**2**	0	0	0	0	0	**1**	**1**	**2**	0	0	0	0	**4**
04:45 PM	0	1	0	1	0	0	0	0	0	0	1	1	0	0	0	0	2
05:00 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
05:15 PM	0	1	0	1	0	0	0	0	0	0	0	0	**1**	0	**1**	**2**	3
Total Volume	0	4	0	4	0	0	0	0	0	2	2	4	1	0	1	2	10
% App. Total	0	100	0		0	0	0		0	50	50		50	0	50		
PHF	.000	.500	.000	.500	.000	.000	.000	.000	.000	.500	.500	.500	.250	.000	.250	.250	.625

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 12th Avenue
E/W: SR-198 Eastbound Ramps
Weather: Clear

File Name : 09_HFD_12th_198E PM
Site Code : 00322472
Start Date : 5/17/2022
Page No : 2



Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM				04:30 PM				04:30 PM				04:30 PM			
+0 mins.	0	**2**	0	**2**	0	0	0	0	0	**1**	**1**	**2**	0	0	0	0
+15 mins.	0	1	0	1	0	0	0	0	0	0	1	1	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0
+45 mins.	0	1	0	1	0	0	0	0	0	0	0	0	**1**	0	**1**	**2**
Total Volume	0	4	0	4	0	0	0	0	0	2	2	4	1	0	1	2
% App. Total	0	100	0		0	0	0		0	50	50		50	0	50	
PHF	.000	.500	.000	.500	.000	.000	.000	.000	.000	.500	.500	.500	.250	.000	.250	.250

Location: Hanford
N/S: 12th Avenue
E/W: SR-198 EB Ramps

Date: 5/17/2022
Day: Tuesday

PEDESTRIANS

	North Leg 12th Avenue Pedestrians	East Leg SR-198 EB Ramps Pedestrians	South Leg 12th Avenue Pedestrians	West Leg SR-198 EB Ramps Pedestrians	
7:00 AM	0	0	0	0	0
7:15 AM	0	1	0	0	1
7:30 AM	0	1	0	0	1
7:45 AM	0	1	0	0	1
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	1	1
8:45 AM	0	0	0	1	1
TOTAL VOLUMES:	0	3	0	2	5

	North Leg 12th Avenue Pedestrians	East Leg SR-198 EB Ramps Pedestrians	South Leg 12th Avenue Pedestrians	West Leg SR-198 EB Ramps Pedestrians	
4:00 PM	0	2	0	0	2
4:15 PM	0	0	0	0	0
4:30 PM	1	2	0	0	3
4:45 PM	0	0	0	1	1
5:00 PM	0	1	0	0	1
5:15 PM	0	0	0	0	0
5:30 PM	0	1	0	0	1
5:45 PM	0	0	0	0	0
TOTAL VOLUMES:	1	6	0	1	8

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
951-268-6268

Location: Hanford
N/S: 12th Avenue
E/W: SR-198 EB Ramps

Date: 5/17/2022
Day: Tuesday

BICYCLES

	Southbound 12th Avenue			Westbound SR-198 EB Ramps			Northbound 12th Avenue			Eastbound SR-198 EB Ramps			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	1
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	2	0	0	0	0	2
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	1	0	0	0	0	0	2	0	0	0	0	3

	Southbound 12th Avenue			Westbound SR-198 EB Ramps			Northbound 12th Avenue			Eastbound SR-198 EB Ramps			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
4:15 PM	0	0	0	0	0	0	0	2	0	0	0	0	2
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	1	0	0	0	0	0	0	0	0	0	0	1
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	1	0	0	0	0	0	1	0	0	0	0	2
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	2	0	0	0	0	0	4	0	0	0	0	6

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
951-268-6268

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: Fitzgerald Lane
E/W: Fargo Avenue
Weather: Clear

File Name : 10_HFD_Fitz_Fargo AM
Site Code : 00322472
Start Date : 5/17/2022
Page No : 1

Groups Printed- Total Volume

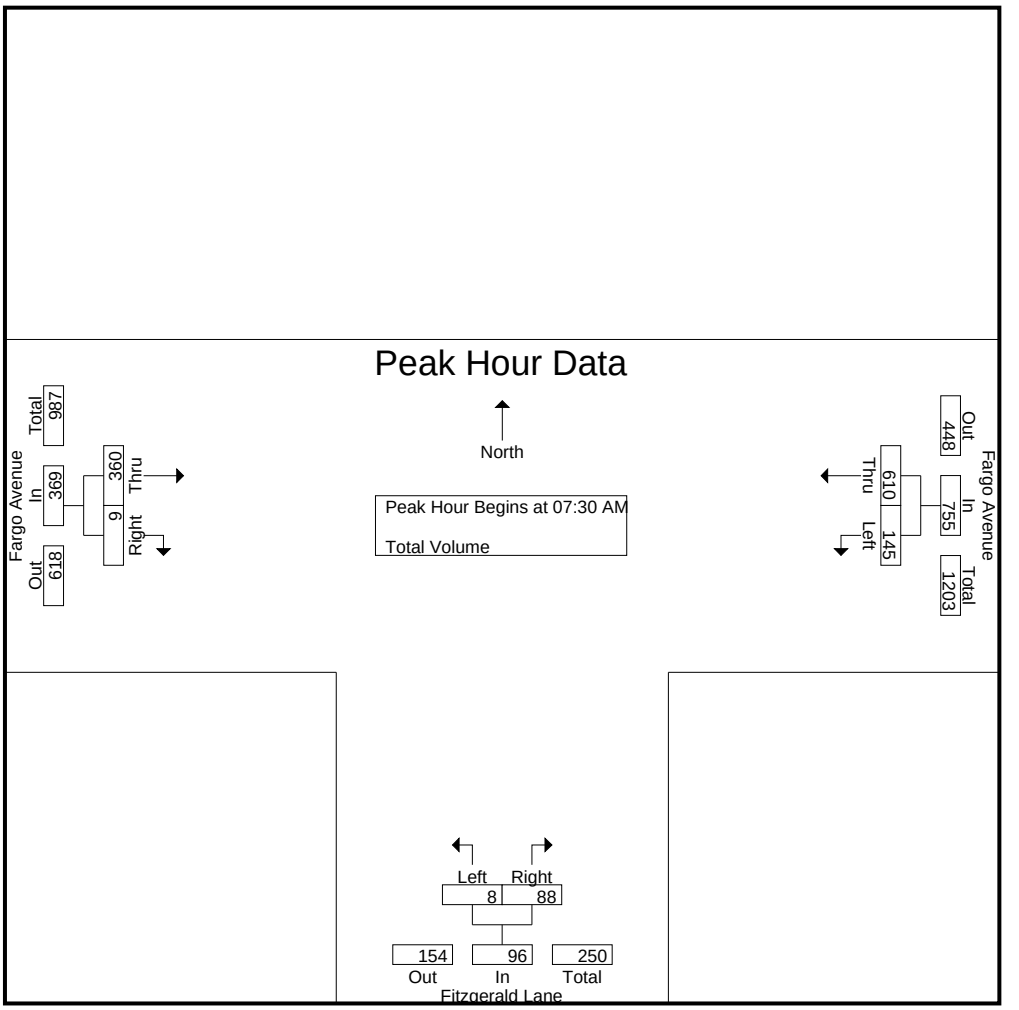
	Fargo Avenue Westbound			Fitzgerald Lane Northbound			Fargo Avenue Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
07:00 AM	8	78	86	3	12	15	33	1	34	135
07:15 AM	8	103	111	4	20	24	42	2	44	179
07:30 AM	21	152	173	2	27	29	66	1	67	269
07:45 AM	59	192	251	2	29	31	94	3	97	379
Total	96	525	621	11	88	99	235	7	242	962
08:00 AM	33	162	195	2	12	14	104	3	107	316
08:15 AM	32	104	136	2	20	22	96	2	98	256
08:30 AM	12	71	83	1	18	19	66	3	69	171
08:45 AM	6	67	73	0	5	5	51	1	52	130
Total	83	404	487	5	55	60	317	9	326	873
Grand Total	179	929	1108	16	143	159	552	16	568	1835
Apprch %	16.2	83.8		10.1	89.9		97.2	2.8		
Total %	9.8	50.6	60.4	0.9	7.8	8.7	30.1	0.9	31	

	Fargo Avenue Westbound			Fitzgerald Lane Northbound			Fargo Avenue Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:30 AM										
07:30 AM	21	152	173	**2**	27	29	66	1	67	269
07:45 AM	**59**	**192**	**251**	2	**29**	**31**	94	**3**	97	**379**
08:00 AM	33	162	195	2	12	14	**104**	3	**107**	316
08:15 AM	32	104	136	2	20	22	96	2	98	256
Total Volume	145	610	755	8	88	96	360	9	369	1220
% App. Total	19.2	80.8		8.3	91.7		97.6	2.4		
PHF	.614	.794	.752	1.00	.759	.774	.865	.750	.862	.805

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: Fitzgerald Lane
E/W: Fargo Avenue
Weather: Clear

File Name : 10_HFD_Fitz_Fargo AM
Site Code : 00322472
Start Date : 5/17/2022
Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM			07:00 AM			07:45 AM		
+0 mins.	21	152	173	3	12	15	94	**3**	97
+15 mins.	**59**	**192**	**251**	**4**	20	24	**104**	3	**107**
+30 mins.	33	162	195	2	27	29	96	2	98
+45 mins.	32	104	136	2	**29**	**31**	66	3	69
Total Volume	145	610	755	11	88	99	360	11	371
% App. Total	19.2	80.8		11.1	88.9		97	3	
PHF	.614	.794	.752	.688	.759	.798	.865	.917	.867

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: Fitzgerald Lane
E/W: Fargo Avenue
Weather: Clear

File Name : 10_HFD_Fitz_Fargo PM
Site Code : 00322472
Start Date : 5/17/2022
Page No : 1

Groups Printed- Total Volume

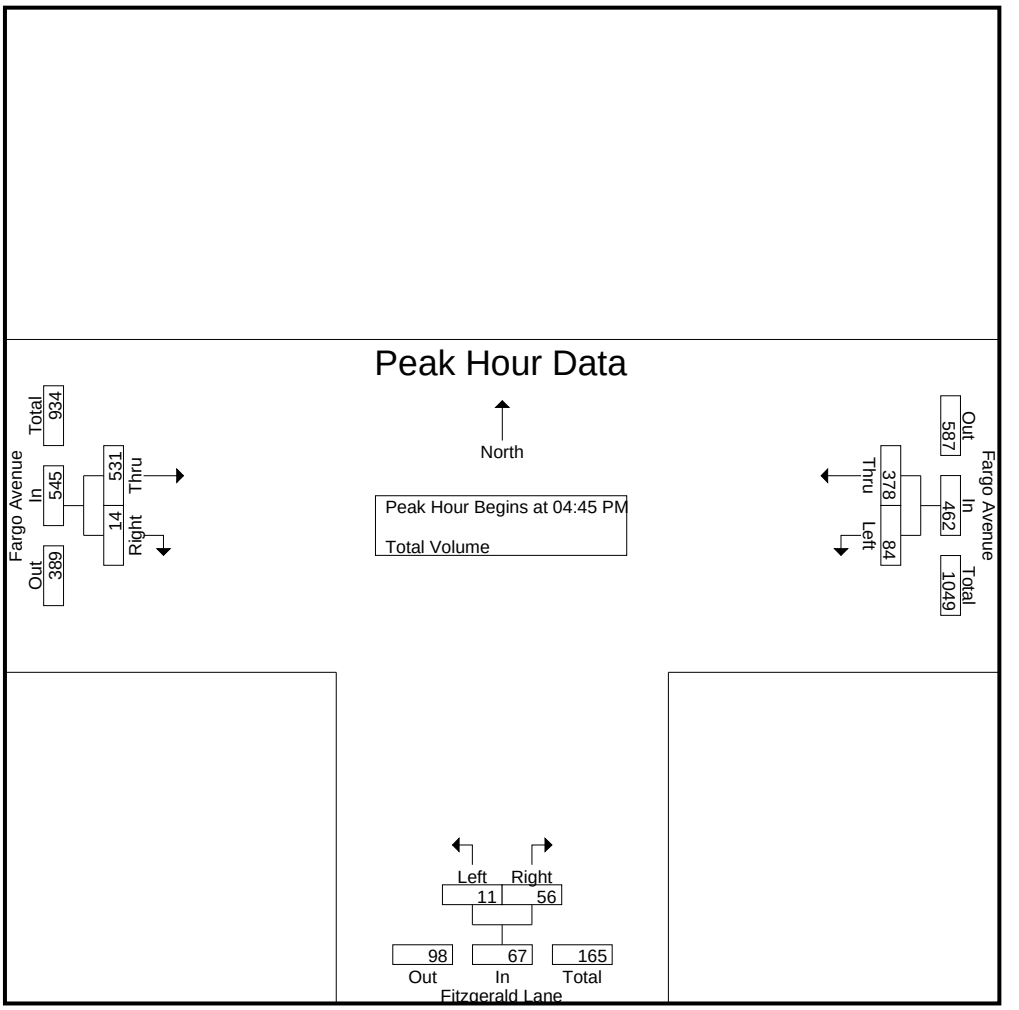
	Fargo Avenue Westbound			Fitzgerald Lane Northbound			Fargo Avenue Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
04:00 PM	13	79	92	2	29	31	135	5	140	263
04:15 PM	9	89	98	4	14	18	124	3	127	243
04:30 PM	16	93	109	4	9	13	106	1	107	229
04:45 PM	30	90	120	2	7	9	132	6	138	267
Total	68	351	419	12	59	71	497	15	512	1002
05:00 PM	12	81	93	3	11	14	149	1	150	257
05:15 PM	20	90	110	1	16	17	146	3	149	276
05:30 PM	22	117	139	5	22	27	104	4	108	274
05:45 PM	24	83	107	0	19	19	123	2	125	251
Total	78	371	449	9	68	77	522	10	532	1058
Grand Total	146	722	868	21	127	148	1019	25	1044	2060
Apprch %	16.8	83.2		14.2	85.8		97.6	2.4		
Total %	7.1	35	42.1	1	6.2	7.2	49.5	1.2	50.7	

	Fargo Avenue Westbound			Fitzgerald Lane Northbound			Fargo Avenue Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:45 PM										
04:45 PM	**30**	90	120	2	7	9	132	**6**	138	267
05:00 PM	12	81	93	3	11	14	**149**	1	**150**	257
05:15 PM	20	90	110	1	16	17	146	3	149	**276**
05:30 PM	22	**117**	**139**	**5**	**22**	**27**	104	4	108	274
Total Volume	84	378	462	11	56	67	531	14	545	1074
% App. Total	18.2	81.8		16.4	83.6		97.4	2.6		
PHF	.700	.808	.831	.550	.636	.620	.891	.583	.908	.973

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: Fitzgerald Lane
E/W: Fargo Avenue
Weather: Clear

File Name : 10_HFD_Fitz_Fargo PM
Site Code : 00322472
Start Date : 5/17/2022
Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM			05:00 PM			04:45 PM		
+0 mins.	**30**	90	120	3	11	14	132	**6**	138
+15 mins.	12	81	93	1	16	17	**149**	1	**150**
+30 mins.	20	90	110	**5**	**22**	**27**	146	3	149
+45 mins.	22	**117**	**139**	0	19	19	104	4	108
Total Volume	84	378	462	9	68	77	531	14	545
% App. Total	18.2	81.8		11.7	88.3		97.4	2.6	
PHF	.700	.808	.831	.450	.773	.713	.891	.583	.908

Location: Hanford
N/S: Fitzgerald Lane
E/W: Fargo Avenue

Date: 5/17/2022
Day: Tuesday

PEDESTRIANS

	North Leg Dead End Pedestrians	East Leg Fargo Avenue Pedestrians	South Leg Fitzgerald Lane Pedestrians	West Leg Fargo Avenue Pedestrians	
7:00 AM	0	0	2	0	2
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
TOTAL VOLUMES:	0	0	2	0	2

	North Leg Dead End Pedestrians	East Leg Fargo Avenue Pedestrians	South Leg Fitzgerald Lane Pedestrians	West Leg Fargo Avenue Pedestrians	
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	1	0	0	0	1
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
TOTAL VOLUMES:	1	0	0	0	1

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
951-268-6268

Location: Hanford
N/S: Fitzgerald Lane
E/W: Fargo Avenue

Date: 5/17/2022
Day: Tuesday

BICYCLES

	Southbound Dead End			Westbound Fargo Avenue			Northbound Fitzgerald Lane			Eastbound Fargo Avenue			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	1	0	1
7:45 AM	0	0	0	0	0	0	0	0	0	0	1	0	1
8:00 AM	0	0	0	0	6	0	0	0	0	0	0	0	6
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	6	0	0	0	0	0	2	0	8

	Southbound Dead End			Westbound Fargo Avenue			Northbound Fitzgerald Lane			Eastbound Fargo Avenue			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	0	0	0	0	0	0	0	0

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
951-268-6268

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: Glacier Way
E/W: Fargo Avenue
Weather: Clear

File Name : 11_HFD_Glac_Fargo AM
Site Code : 00322472
Start Date : 5/17/2022
Page No : 1

Groups Printed- Total Volume

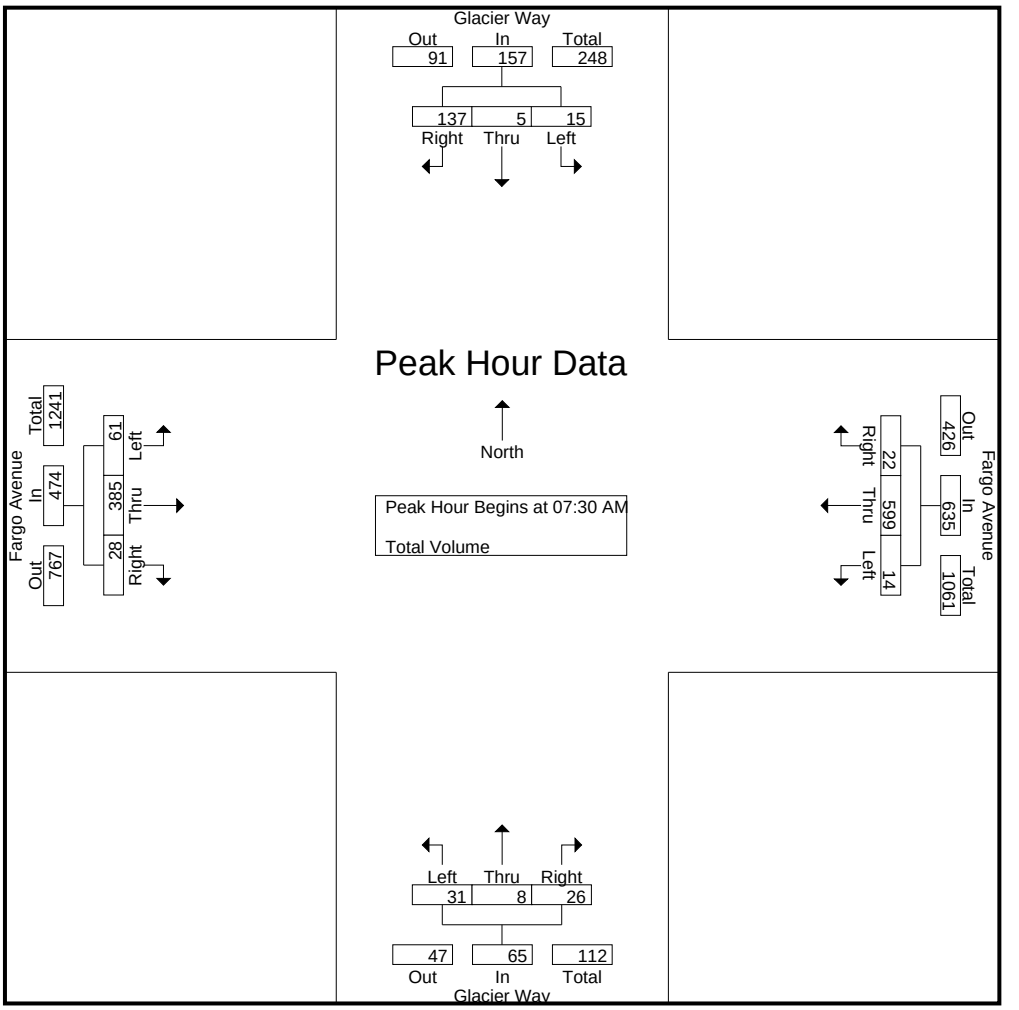
	Glacier Way Southbound				Fargo Avenue Westbound				Glacier Way Northbound				Fargo Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	6	0	10	16	1	73	2	76	8	1	3	12	6	38	4	48	152
07:15 AM	2	0	18	20	1	80	4	85	8	1	7	16	5	61	3	69	190
07:30 AM	4	1	31	36	1	145	2	148	7	1	11	19	9	79	8	96	299
07:45 AM	2	1	41	44	7	212	5	224	5	4	6	15	17	113	5	135	418
Total	14	2	100	116	10	510	13	533	28	7	27	62	37	291	20	348	1059
08:00 AM	4	1	33	38	3	148	9	160	9	1	5	15	21	91	4	116	329
08:15 AM	5	2	32	39	3	94	6	103	10	2	4	16	14	102	11	127	285
08:30 AM	4	2	13	19	2	63	4	69	5	2	5	12	15	63	5	83	183
08:45 AM	6	0	4	10	2	65	4	71	4	1	5	10	6	50	0	56	147
Total	19	5	82	106	10	370	23	403	28	6	19	53	56	306	20	382	944
Grand Total	33	7	182	222	20	880	36	936	56	13	46	115	93	597	40	730	2003
Apprch %	14.9	3.2	82		2.1	94	3.8		48.7	11.3	40		12.7	81.8	5.5		
Total %	1.6	0.3	9.1	11.1	1	43.9	1.8	46.7	2.8	0.6	2.3	5.7	4.6	29.8	2	36.4	

	Glacier Way Southbound				Fargo Avenue Westbound				Glacier Way Northbound				Fargo Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	4	1	31	36	1	145	2	148	7	1	**11**	**19**	9	79	8	96	299
07:45 AM	2	1	**41**	**44**	**7**	**212**	5	**224**	5	**4**	6	15	17	**113**	5	**135**	**418**
08:00 AM	4	1	33	38	3	148	**9**	160	9	1	5	15	**21**	91	4	116	329
08:15 AM	**5**	**2**	32	39	3	94	6	103	**10**	2	4	16	14	102	**11**	127	285
Total Volume	15	5	137	157	14	599	22	635	31	8	26	65	61	385	28	474	1331
% App. Total	9.6	3.2	87.3		2.2	94.3	3.5		47.7	12.3	40		12.9	81.2	5.9		
PHF	.750	.625	.835	.892	.500	.706	.611	.709	.775	.500	.591	.855	.726	.852	.636	.878	.796

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: Glacier Way
E/W: Fargo Avenue
Weather: Clear

File Name : 11_HFD_Glac_Fargo AM
Site Code : 00322472
Start Date : 5/17/2022
Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:15 AM				07:30 AM			
+0 mins.	4	1	31	36	1	145	2	148	8	1	7	16	9	79	8	96
+15 mins.	2	1	**41**	**44**	**7**	**212**	5	**224**	7	1	**11**	**19**	17	**113**	5	**135**
+30 mins.	4	1	33	38	3	148	**9**	160	5	**4**	6	15	**21**	91	4	116
+45 mins.	**5**	**2**	32	39	3	94	6	103	**9**	1	5	15	14	102	**11**	127
Total Volume	15	5	137	157	14	599	22	635	29	7	29	65	61	385	28	474
% App. Total	9.6	3.2	87.3		2.2	94.3	3.5		44.6	10.8	44.6		12.9	81.2	5.9	
PHF	.750	.625	.835	.892	.500	.706	.611	.709	.806	.438	.659	.855	.726	.852	.636	.878

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: Glacier Way
E/W: Fargo Avenue
Weather: Clear

File Name : 11_HFD_Glac_Fargo PM
Site Code : 00322472
Start Date : 5/17/2022
Page No : 1

Groups Printed- Total Volume

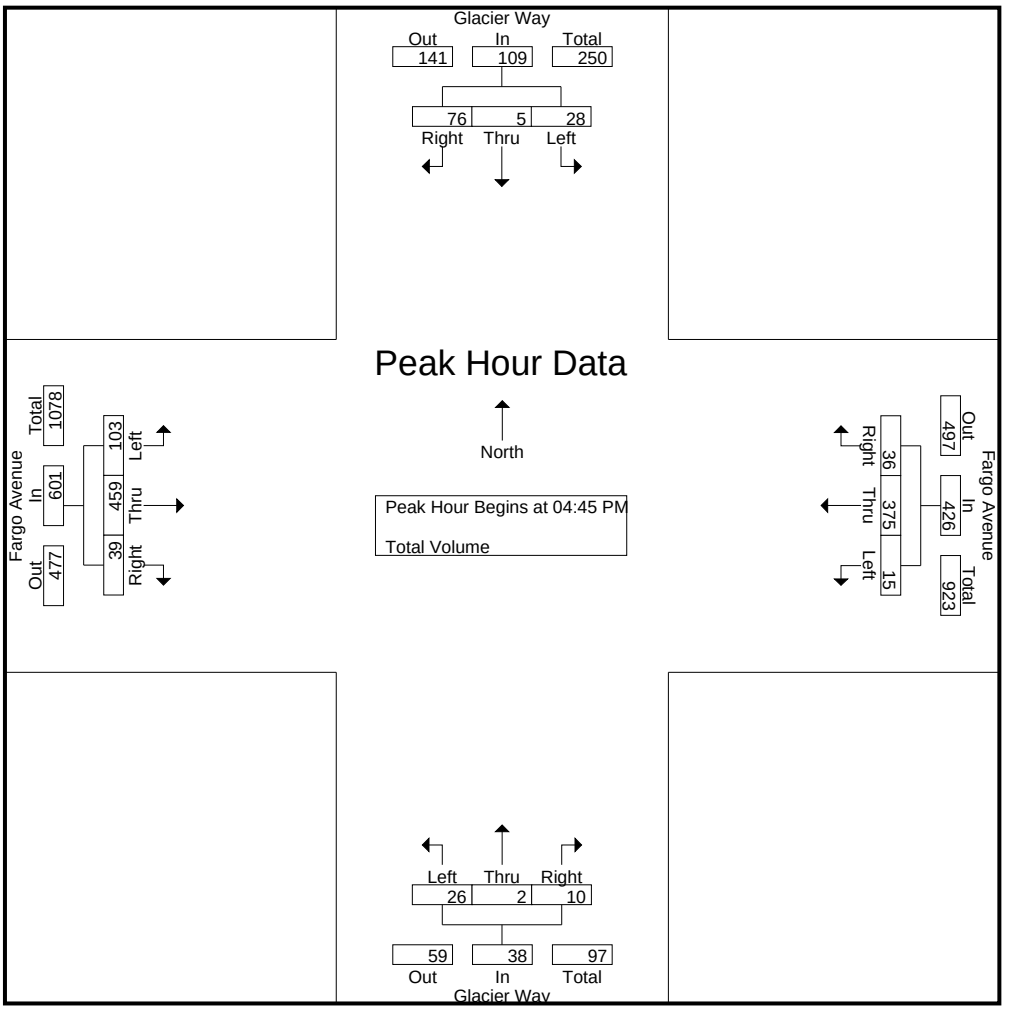
	Glacier Way Southbound				Fargo Avenue Westbound				Glacier Way Northbound				Fargo Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	8	1	11	20	2	84	8	94	6	0	3	9	35	125	13	173	296
04:15 PM	3	0	18	21	9	76	14	99	4	0	6	10	25	113	9	147	277
04:30 PM	4	3	18	25	6	90	11	107	7	2	4	13	19	94	6	119	264
04:45 PM	5	2	17	24	4	99	13	116	9	0	2	11	26	106	10	142	293
Total	20	6	64	90	21	349	46	416	26	2	15	43	105	438	38	581	1130
05:00 PM	6	1	13	20	3	83	10	96	6	1	3	10	28	120	12	160	286
05:15 PM	11	1	18	30	6	85	8	99	6	0	3	9	29	132	7	168	306
05:30 PM	6	1	28	35	2	108	5	115	5	1	2	8	20	101	10	131	289
05:45 PM	12	0	21	33	5	87	9	101	2	1	6	9	23	95	16	134	277
Total	35	3	80	118	16	363	32	411	19	3	14	36	100	448	45	593	1158
Grand Total	55	9	144	208	37	712	78	827	45	5	29	79	205	886	83	1174	2288
Apprch %	26.4	4.3	69.2		4.5	86.1	9.4		57	6.3	36.7		17.5	75.5	7.1		
Total %	2.4	0.4	6.3	9.1	1.6	31.1	3.4	36.1	2	0.2	1.3	3.5	9	38.7	3.6	51.3	

	Glacier Way Southbound				Fargo Avenue Westbound				Glacier Way Northbound				Fargo Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	5	**2**	17	24	4	99	**13**	**116**	**9**	0	2	**11**	26	106	10	142	293
05:00 PM	6	1	13	20	3	83	10	96	6	**1**	**3**	10	28	120	**12**	160	286
05:15 PM	**11**	1	18	30	**6**	85	8	99	6	0	3	9	**29**	**132**	7	**168**	**306**
05:30 PM	6	1	**28**	**35**	2	**108**	5	115	5	1	2	8	20	101	10	131	289
Total Volume	28	5	76	109	15	375	36	426	26	2	10	38	103	459	39	601	1174
% App. Total	25.7	4.6	69.7		3.5	88	8.5		68.4	5.3	26.3		17.1	76.4	6.5		
PHF	.636	.625	.679	.779	.625	.868	.692	.918	.722	.500	.833	.864	.888	.869	.813	.894	.959

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: Glacier Way
E/W: Fargo Avenue
Weather: Clear

File Name : 11_HFD_Glac_Fargo PM
Site Code : 00322472
Start Date : 5/17/2022
Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	05:00 PM				04:45 PM				04:15 PM				04:45 PM			
+0 mins.	6	**1**	13	20	4	99	**13**	**116**	4	0	**6**	10	26	106	10	142
+15 mins.	11	1	18	30	3	83	10	96	7	**2**	4	**13**	28	120	**12**	160
+30 mins.	6	1	**28**	**35**	**6**	85	8	99	**9**	0	2	11	**29**	**132**	7	**168**
+45 mins.	**12**	0	21	33	2	**108**	5	115	6	1	3	10	20	101	10	131
Total Volume	35	3	80	118	15	375	36	426	26	3	15	44	103	459	39	601
% App. Total	29.7	2.5	67.8		3.5	88	8.5		59.1	6.8	34.1		17.1	76.4	6.5	
PHF	.729	.750	.714	.843	.625	.868	.692	.918	.722	.375	.625	.846	.888	.869	.813	.894

Location: Hanford
N/S: Glacier Way
E/W: Fargo Avenue

Date: 5/17/2022
Day: Tuesday

PEDESTRIANS

	North Leg Glacier Way Pedestrians	East Leg Fargo Avenue Pedestrians	South Leg Glacier Way Pedestrians	West Leg Fargo Avenue Pedestrians	
7:00 AM	1	3	0	0	4
7:15 AM	1	0	0	0	1
7:30 AM	1	0	0	0	1
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	1	0	0	1
8:30 AM	0	0	0	0	0
8:45 AM	0	0	1	1	2
TOTAL VOLUMES:	3	4	1	1	9

	North Leg Glacier Way Pedestrians	East Leg Fargo Avenue Pedestrians	South Leg Glacier Way Pedestrians	West Leg Fargo Avenue Pedestrians	
4:00 PM	0	5	0	0	5
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	1	0	0	0	1
5:45 PM	0	0	0	0	0
TOTAL VOLUMES:	1	5	0	0	6

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
951-268-6268

Location: Hanford
N/S: Glacier Way
E/W: Fargo Avenue

Date: 5/17/2022
Day: Tuesday

BICYCLES

	Southbound Glacier Way			Westbound Fargo Avenue			Northbound Glacier Way			Eastbound Fargo Avenue			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	1	0	1
7:45 AM	0	0	0	0	0	0	0	0	0	0	3	0	3
8:00 AM	0	0	6	0	0	0	0	0	0	0	0	0	6
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	6	0	0	0	0	0	0	0	4	0	10

	Southbound Glacier Way			Westbound Fargo Avenue			Northbound Glacier Way			Eastbound Fargo Avenue			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	2	0	2
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	0	0	1	0	0	2	0	3

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
951-268-6268

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 11th Avenue
E/W: Flint Avenue
Weather: Clear

File Name : 03_HFD_11th_Flint AM
Site Code : 00323251
Start Date : 3/23/2023
Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

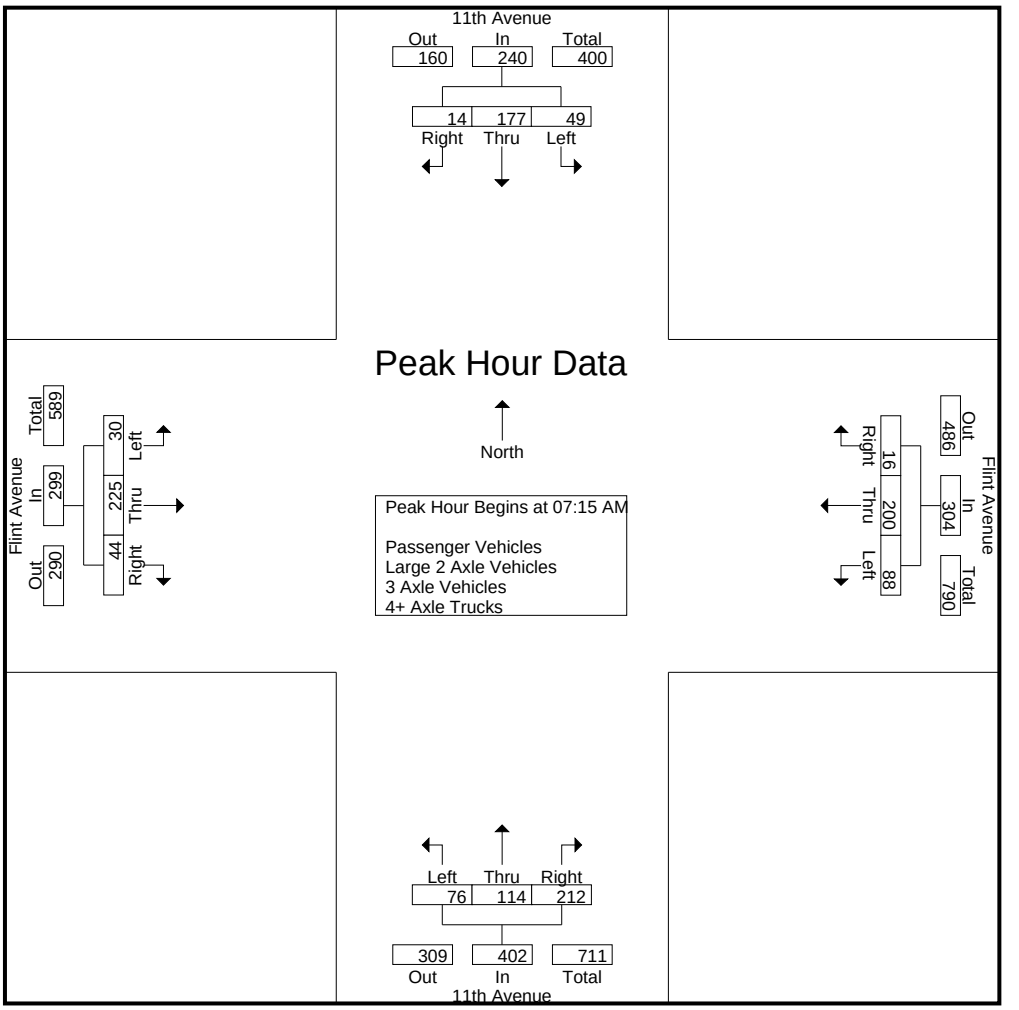
	11th Avenue Southbound				Flint Avenue Westbound				11th Avenue Northbound				Flint Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	3	11	4	18	15	15	1	31	7	31	45	83	3	20	6	29	161
07:15 AM	4	19	1	24	18	29	1	48	13	29	50	92	10	24	5	39	203
07:30 AM	16	60	4	80	19	55	5	79	28	44	43	115	15	48	14	77	351
07:45 AM	21	67	8	96	20	60	3	83	28	23	65	116	5	65	11	81	376
Total	44	157	17	218	72	159	10	241	76	127	203	406	33	157	36	226	1091
08:00 AM	8	31	1	40	31	56	7	94	7	18	54	79	0	88	14	102	315
08:15 AM	4	14	3	21	15	26	3	44	4	14	30	48	0	15	6	21	134
08:30 AM	3	11	0	14	14	14	4	32	1	11	32	44	1	16	2	19	109
08:45 AM	1	11	0	12	14	16	1	31	6	13	13	32	1	16	6	23	98
Total	16	67	4	87	74	112	15	201	18	56	129	203	2	135	28	165	656
Grand Total	60	224	21	305	146	271	25	442	94	183	332	609	35	292	64	391	1747
Apprch %	19.7	73.4	6.9		33	61.3	5.7		15.4	30	54.5		9	74.7	16.4		
Total %	3.4	12.8	1.2	17.5	8.4	15.5	1.4	25.3	5.4	10.5	19	34.9	2	16.7	3.7	22.4	
Passenger Vehicles	60	223	21	304	141	260	25	426	94	183	324	601	35	286	60	381	1712
% Passenger Vehicles	100	99.6	100	99.7	96.6	95.9	100	96.4	100	100	97.6	98.7	100	97.9	93.8	97.4	98
Large 2 Axle Vehicles	0	0	0	0	3	9	0	12	0	0	7	7	0	2	4	6	25
% Large 2 Axle Vehicles	0	0	0	0	2.1	3.3	0	2.7	0	0	2.1	1.1	0	0.7	6.2	1.5	1.4
3 Axle Vehicles	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
% 3 Axle Vehicles	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0	0.3	0.1
4+ Axle Trucks	0	1	0	1	2	2	0	4	0	0	1	1	0	3	0	3	9
% 4+ Axle Trucks	0	0.4	0	0.3	1.4	0.7	0	0.9	0	0	0.3	0.2	0	1	0	0.8	0.5

	11th Avenue Southbound				Flint Avenue Westbound				11th Avenue Northbound				Flint Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	4	19	1	24	18	29	1	48	13	29	50	92	10	24	5	39	203
07:30 AM	16	60	4	80	19	55	5	79	**28**	**44**	43	115	**15**	48	**14**	77	351
07:45 AM	**21**	**67**	**8**	**96**	20	**60**	3	83	28	23	**65**	**116**	5	65	11	81	**376**
08:00 AM	8	31	1	40	**31**	56	**7**	**94**	7	18	54	79	0	**88**	14	**102**	315
Total Volume	49	177	14	240	88	200	16	304	76	114	212	402	30	225	44	299	1245
% App. Total	20.4	73.8	5.8		28.9	65.8	5.3		18.9	28.4	52.7		10	75.3	14.7		
PHF	.583	.660	.438	.625	.710	.833	.571	.809	.679	.648	.815	.866	.500	.639	.786	.733	.828

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 11th Avenue
E/W: Flint Avenue
Weather: Clear

File Name : 03_HFD_11th_Flint AM
Site Code : 00323251
Start Date : 3/23/2023
Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:00 AM				07:15 AM			
+0 mins.	4	19	1	24	18	29	1	48	7	31	45	83	10	24	5	39
+15 mins.	16	60	4	80	19	55	5	79	13	29	50	92	**15**	48	**14**	77
+30 mins.	**21**	**67**	**8**	**96**	20	**60**	3	83	**28**	**44**	43	115	5	65	11	81
+45 mins.	8	31	1	40	**31**	56	**7**	**94**	28	23	**65**	**116**	0	**88**	14	**102**
Total Volume	49	177	14	240	88	200	16	304	76	127	203	406	30	225	44	299
% App. Total	20.4	73.8	5.8		28.9	65.8	5.3		18.7	31.3	50		10	75.3	14.7	
PHF	.583	.660	.438	.625	.710	.833	.571	.809	.679	.722	.781	.875	.500	.639	.786	.733

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 11th Avenue
E/W: Flint Avenue
Weather: Clear

File Name : 03_HFD_11th_Flint AM
Site Code : 00323251
Start Date : 3/23/2023
Page No : 1

Groups Printed- Passenger Vehicles

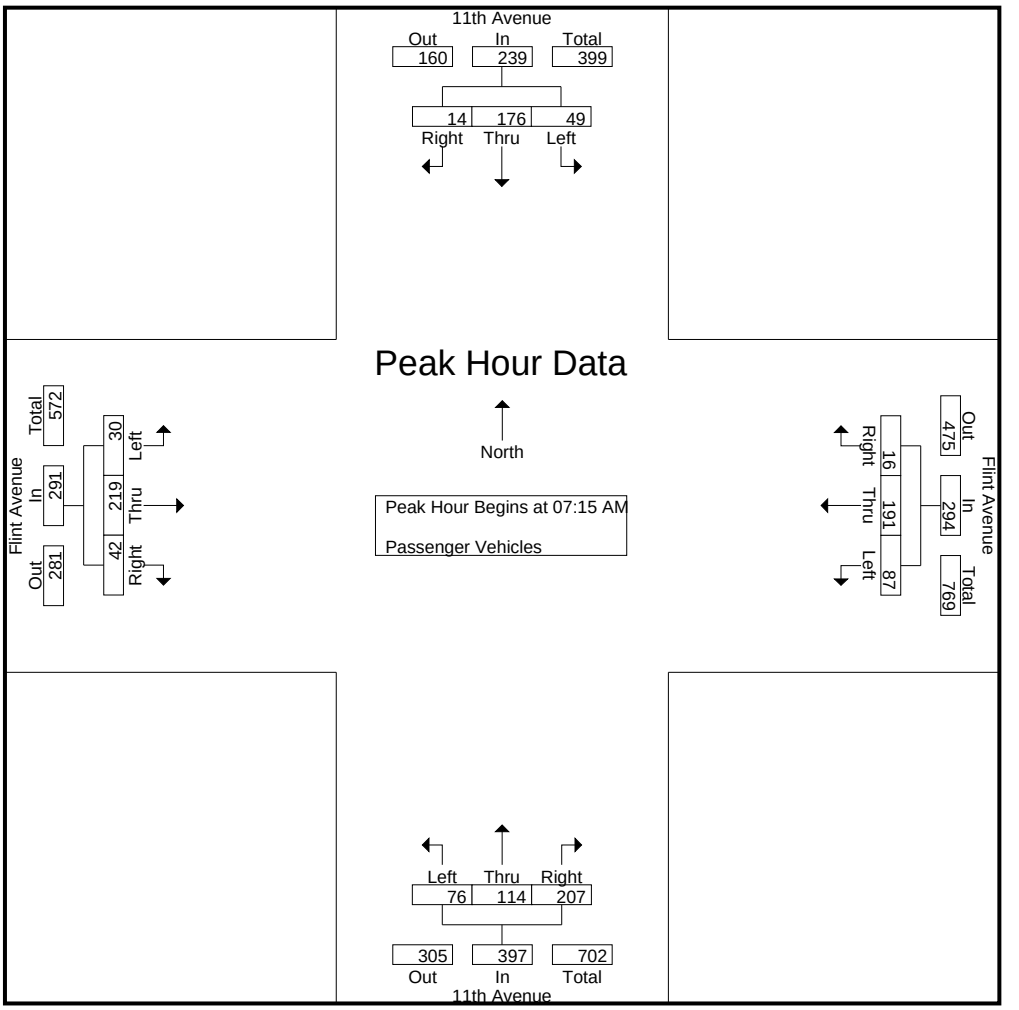
	11th Avenue Southbound				Flint Avenue Westbound				11th Avenue Northbound				Flint Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	3	11	4	18	14	14	1	29	7	31	44	82	3	20	4	27	156
07:15 AM	4	19	1	24	18	27	1	46	13	29	49	91	10	24	4	38	199
07:30 AM	16	60	4	80	18	54	5	77	28	44	43	115	15	48	13	76	348
07:45 AM	21	66	8	95	20	60	3	83	28	23	62	113	5	60	11	76	367
Total	44	156	17	217	70	155	10	235	76	127	198	401	33	152	32	217	1070
08:00 AM	8	31	1	40	31	50	7	88	7	18	53	78	0	87	14	101	307
08:15 AM	4	14	3	21	14	25	3	42	4	14	29	47	0	15	6	21	131
08:30 AM	3	11	0	14	14	14	4	32	1	11	31	43	1	16	2	19	108
08:45 AM	1	11	0	12	12	16	1	29	6	13	13	32	1	16	6	23	96
Total	16	67	4	87	71	105	15	191	18	56	126	200	2	134	28	164	642
Grand Total	60	223	21	304	141	260	25	426	94	183	324	601	35	286	60	381	1712
Apprch %	19.7	73.4	6.9		33.1	61	5.9		15.6	30.4	53.9		9.2	75.1	15.7		
Total %	3.5	13	1.2	17.8	8.2	15.2	1.5	24.9	5.5	10.7	18.9	35.1	2	16.7	3.5	22.3	

	11th Avenue Southbound				Flint Avenue Westbound				11th Avenue Northbound				Flint Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	4	19	1	24	18	27	1	46	13	29	49	91	10	24	4	38	199
07:30 AM	16	60	4	80	18	54	5	77	**28**	**44**	43	**115**	**15**	48	13	76	348
07:45 AM	**21**	**66**	**8**	**95**	20	**60**	3	83	28	23	**62**	113	5	60	11	76	**367**
08:00 AM	8	31	1	40	**31**	50	**7**	**88**	7	18	53	78	0	**87**	**14**	**101**	307
Total Volume	49	176	14	239	87	191	16	294	76	114	207	397	30	219	42	291	1221
% App. Total	20.5	73.6	5.9		29.6	65	5.4		19.1	28.7	52.1		10.3	75.3	14.4		
PHF	.583	.667	.438	.629	.702	.796	.571	.835	.679	.648	.835	.863	.500	.629	.750	.720	.832

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 11th Avenue
E/W: Flint Avenue
Weather: Clear

File Name : 03_HFD_11th_Flint AM
Site Code : 00323251
Start Date : 3/23/2023
Page No : 2



Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	4	19	1	24	18	27	1	46	13	29	49	91	10	24	4	38
+15 mins.	16	60	4	80	18	54	5	77	**28**	**44**	43	**115**	**15**	48	13	76
+30 mins.	**21**	**66**	**8**	**95**	20	**60**	3	83	28	23	**62**	113	5	60	11	76
+45 mins.	8	31	1	40	**31**	50	**7**	**88**	7	18	53	78	0	**87**	**14**	**101**
Total Volume	49	176	14	239	87	191	16	294	76	114	207	397	30	219	42	291
% App. Total	20.5	73.6	5.9		29.6	65	5.4		19.1	28.7	52.1		10.3	75.3	14.4	
PHF	.583	.667	.438	.629	.702	.796	.571	.835	.679	.648	.835	.863	.500	.629	.750	.720

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 11th Avenue
E/W: Flint Avenue
Weather: Clear

File Name : 03_HFD_11th_Flint AM
Site Code : 00323251
Start Date : 3/23/2023
Page No : 1

Groups Printed- Large 2 Axle Vehicles

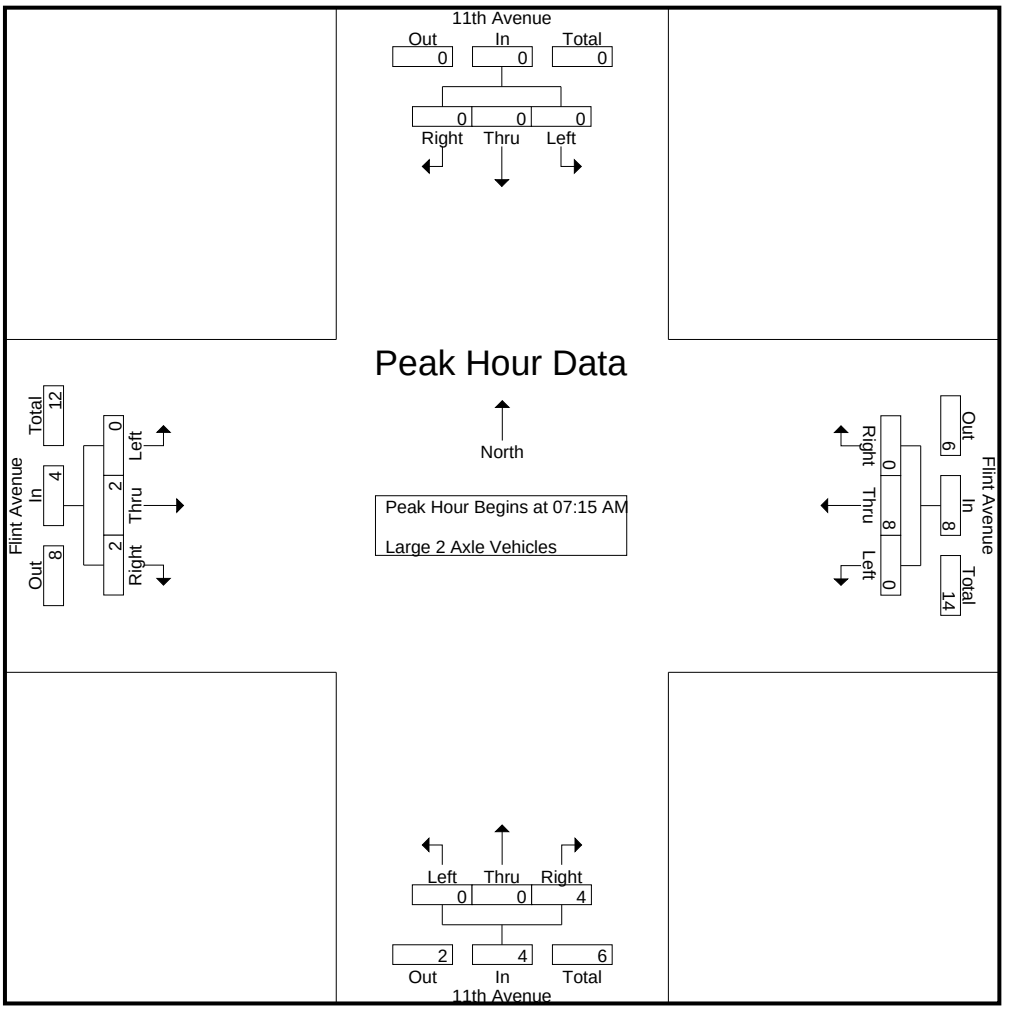
	11th Avenue Southbound				Flint Avenue Westbound				11th Avenue Northbound				Flint Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	1	0	0	1	0	0	1	1	0	0	2	2	4
07:15 AM	0	0	0	0	0	1	0	1	0	0	1	1	0	0	1	1	3
07:30 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1	1	2
07:45 AM	0	0	0	0	0	0	0	0	0	0	2	2	0	2	0	2	4
Total	0	0	0	0	1	2	0	3	0	0	4	4	0	2	4	6	13
08:00 AM	0	0	0	0	0	6	0	6	0	0	1	1	0	0	0	0	7
08:15 AM	0	0	0	0	0	1	0	1	0	0	1	1	0	0	0	0	2
08:30 AM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1
08:45 AM	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	2
Total	0	0	0	0	2	7	0	9	0	0	3	3	0	0	0	0	12
Grand Total	0	0	0	0	3	9	0	12	0	0	7	7	0	2	4	6	25
Apprch %	0	0	0		25	75	0		0	0	100		0	33.3	66.7		
Total %	0	0	0	0	12	36	0	48	0	0	28	28	0	8	16	24	

	11th Avenue Southbound				Flint Avenue Westbound				11th Avenue Northbound				Flint Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	0	0	0	0	1	0	1	0	0	1	1	0	0	**1**	1	3
07:30 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1	1	2
07:45 AM	0	0	0	0	0	0	0	0	0	0	**2**	**2**	0	**2**	0	**2**	4
08:00 AM	0	0	0	0	0	**6**	0	**6**	0	0	1	1	0	0	0	0	**7**
Total Volume	0	0	0	0	0	8	0	8	0	0	4	4	0	2	2	4	16
% App. Total	0	0	0		0	100	0		0	0	100		0	50	50		
PHF	.000	.000	.000	.000	.000	.333	.000	.333	.000	.000	.500	.500	.000	.250	.500	.500	.571

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 11th Avenue
E/W: Flint Avenue
Weather: Clear

File Name : 03_HFD_11th_Flint AM
Site Code : 00323251
Start Date : 3/23/2023
Page No : 2



Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	0	0	0	0	0	1	0	1	0	0	1	1	0	0	**1**	1
+15 mins.	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1	1
+30 mins.	0	0	0	0	0	0	0	0	0	0	**2**	**2**	0	**2**	0	**2**
+45 mins.	0	0	0	0	0	**6**	0	**6**	0	0	1	1	0	0	0	0
Total Volume	0	0	0	0	0	8	0	8	0	0	4	4	0	2	2	4
% App. Total	0	0	0		0	100	0		0	0	100		0	50	50	
PHF	.000	.000	.000	.000	.000	.333	.000	.333	.000	.000	.500	.500	.000	.250	.500	.500

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 11th Avenue
E/W: Flint Avenue
Weather: Clear

File Name : 03_HFD_11th_Flint AM
Site Code : 00323251
Start Date : 3/23/2023
Page No : 1

Groups Printed- 3 Axle Vehicles

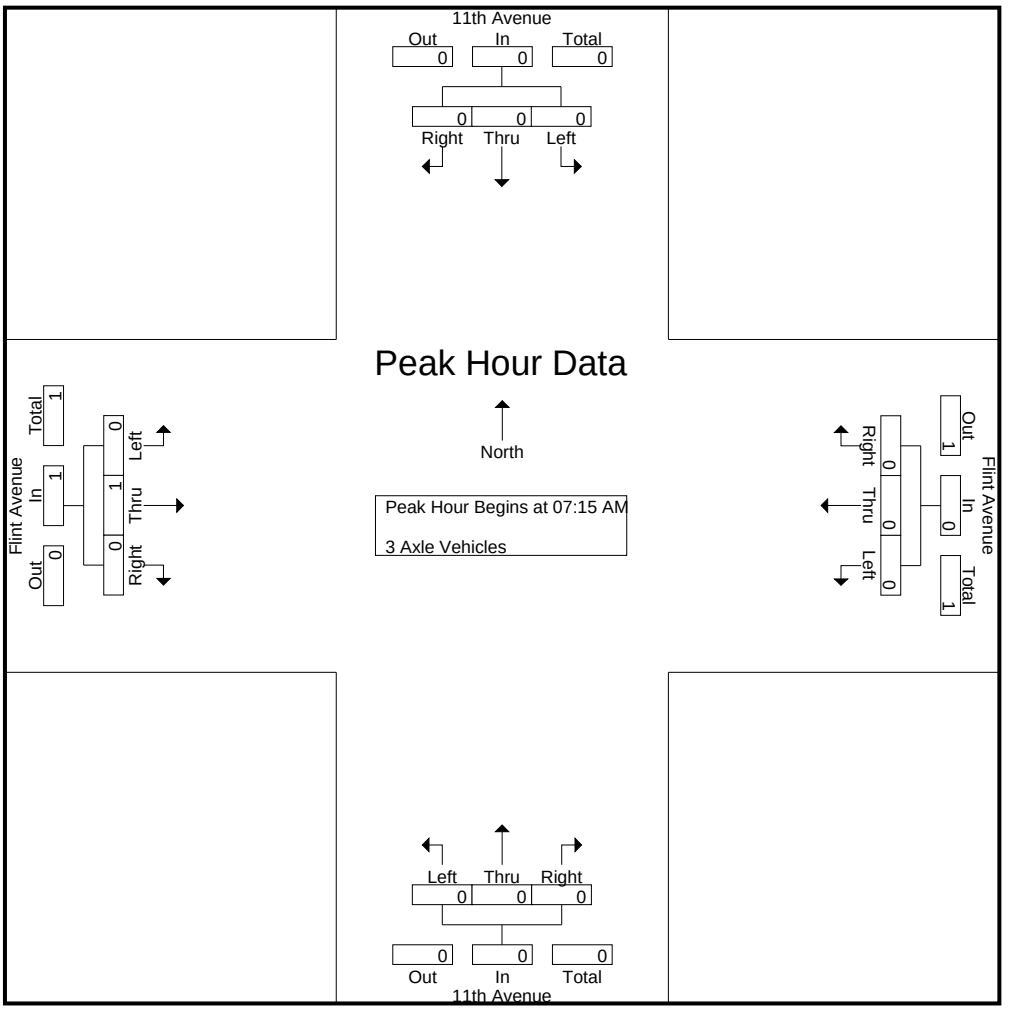
	11th Avenue Southbound				Flint Avenue Westbound				11th Avenue Northbound				Flint Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
Apprch %	0	0	0		0	0	0		0	0	0		0	100	0		
Total %	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0	100	

	11th Avenue Southbound				Flint Avenue Westbound				11th Avenue Northbound				Flint Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**	0	**1**	**1**
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
% App. Total	0	0	0		0	0	0		0	0	0		0	100	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250	.000	.250	.250

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 11th Avenue
E/W: Flint Avenue
Weather: Clear

File Name : 03_HFD_11th_Flint AM
Site Code : 00323251
Start Date : 3/23/2023
Page No : 2



Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**	0	**1**
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
% App. Total	0	0	0		0	0	0		0	0	0		0	100	0	
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250	.000	.250

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 11th Avenue
E/W: Flint Avenue
Weather: Clear

File Name : 03_HFD_11th_Flint AM
Site Code : 00323251
Start Date : 3/23/2023
Page No : 1

Groups Printed- 4+ Axle Trucks

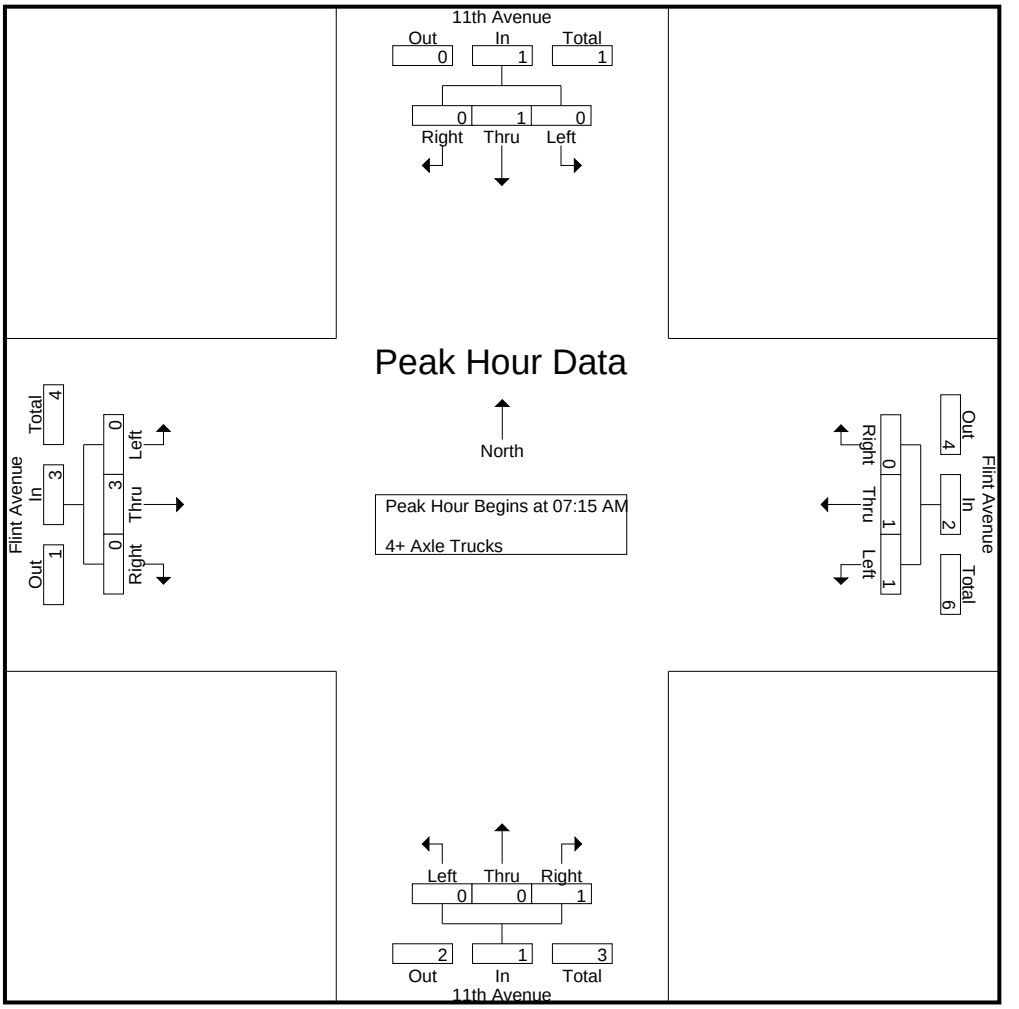
	11th Avenue Southbound				Flint Avenue Westbound				11th Avenue Northbound				Flint Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
07:15 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
07:30 AM	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1
07:45 AM	0	1	0	1	0	0	0	0	0	0	1	1	0	3	0	3	5
Total	0	1	0	1	1	2	0	3	0	0	1	1	0	3	0	3	8
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1
Grand Total	0	1	0	1	2	2	0	4	0	0	1	1	0	3	0	3	9
Apprch %	0	100	0		50	50	0		0	0	100		0	100	0		
Total %	0	11.1	0	11.1	22.2	22.2	0	44.4	0	0	11.1	11.1	0	33.3	0	33.3	

	11th Avenue Southbound				Flint Avenue Westbound				11th Avenue Northbound				Flint Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	0	0	0	0	**1**	0	**1**	0	0	0	0	0	0	0	0	1
07:30 AM	0	0	0	0	**1**	0	0	1	0	0	0	0	0	0	0	0	1
07:45 AM	0	**1**	0	**1**	0	0	0	0	0	0	**1**	**1**	0	**3**	0	**3**	**5**
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	1	0	1	1	1	0	2	0	0	1	1	0	3	0	3	7
% App. Total	0	100	0		50	50	0		0	0	100		0	100	0		
PHF	.000	.250	.000	.250	.250	.250	.000	.500	.000	.000	.250	.250	.000	.250	.000	.250	.350

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 11th Avenue
E/W: Flint Avenue
Weather: Clear

File Name : 03_HFD_11th_Flint AM
Site Code : 00323251
Start Date : 3/23/2023
Page No : 2



Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	0	0	0	0	0	**1**	0	**1**	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	**1**	0	0	1	0	0	0	0	0	0	0	0
+30 mins.	0	**1**	0	**1**	0	0	0	0	0	0	**1**	**1**	0	**3**	0	**3**
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	1	0	1	1	1	0	2	0	0	1	1	0	3	0	3
% App. Total	0	100	0		50	50	0		0	0	100		0	100	0	
PHF	.000	.250	.000	.250	.250	.250	.000	.500	.000	.000	.250	.250	.000	.250	.000	.250

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 11th Avenue
E/W: Flint Avenue
Weather: Clear

File Name : 03_HFD_11th_Flint PM
Site Code : 00323251
Start Date : 3/23/2023
Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

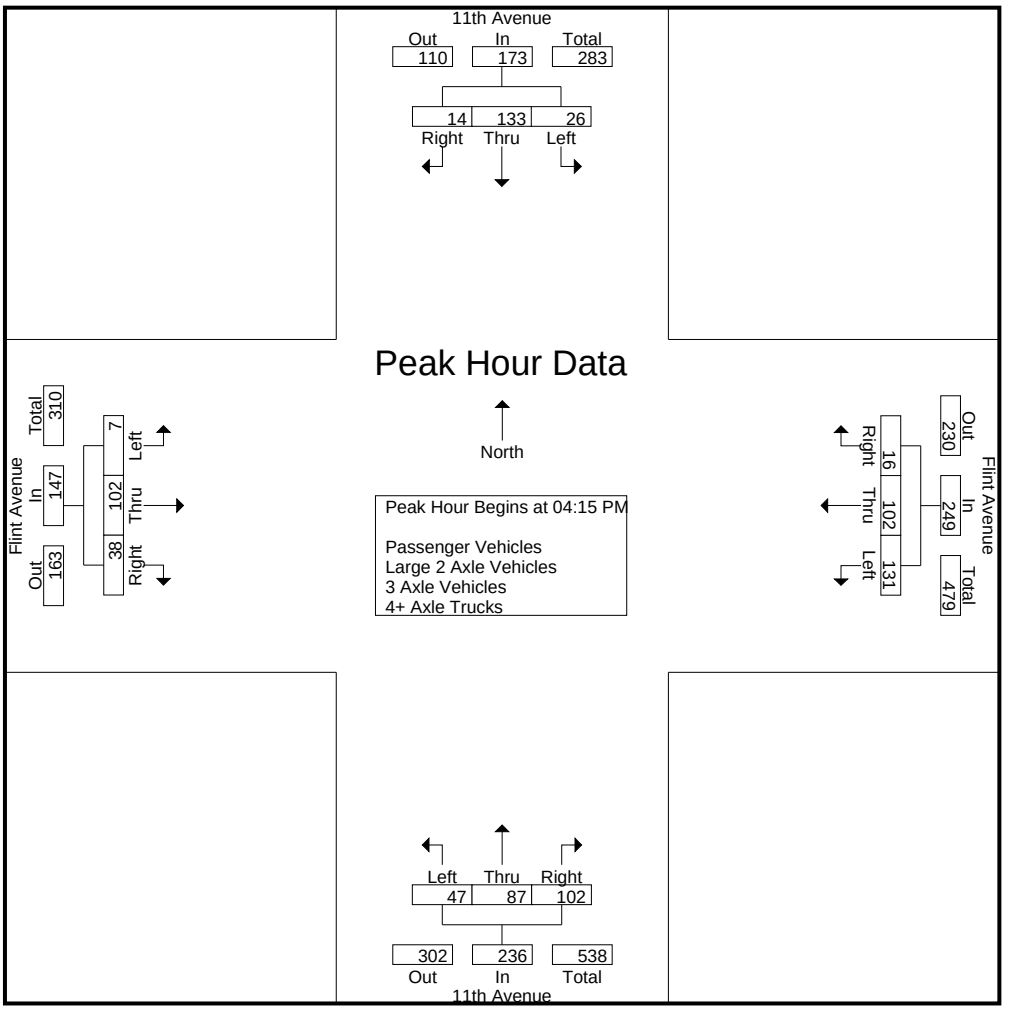
	11th Avenue Southbound				Flint Avenue Westbound				11th Avenue Northbound				Flint Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	6	31	6	43	22	20	9	51	5	26	24	55	6	25	9	40	189
04:15 PM	11	43	6	60	38	22	3	63	9	21	24	54	3	21	10	34	211
04:30 PM	6	40	3	49	31	23	3	57	14	24	21	59	0	31	9	40	205
04:45 PM	7	24	1	32	26	19	5	50	13	29	24	66	1	20	10	31	179
Total	30	138	16	184	117	84	20	221	41	100	93	234	10	97	38	145	784
05:00 PM	2	26	4	32	36	38	5	79	11	13	33	57	3	30	9	42	210
05:15 PM	3	36	3	42	19	26	3	48	9	25	20	54	1	19	6	26	170
05:30 PM	4	23	2	29	21	14	1	36	9	14	22	45	1	26	6	33	143
05:45 PM	1	22	1	24	34	25	4	63	1	22	14	37	0	20	10	30	154
Total	10	107	10	127	110	103	13	226	30	74	89	193	5	95	31	131	677
Grand Total	40	245	26	311	227	187	33	447	71	174	182	427	15	192	69	276	1461
Apprch %	12.9	78.8	8.4		50.8	41.8	7.4		16.6	40.7	42.6		5.4	69.6	25		
Total %	2.7	16.8	1.8	21.3	15.5	12.8	2.3	30.6	4.9	11.9	12.5	29.2	1	13.1	4.7	18.9	
Passenger Vehicles	40	242	26	308	226	184	33	443	71	174	179	424	15	191	68	274	1449
% Passenger Vehicles	100	98.8	100	99	99.6	98.4	100	99.1	100	100	98.4	99.3	100	99.5	98.6	99.3	99.2
Large 2 Axle Vehicles	0	2	0	2	0	3	0	3	0	0	2	2	0	1	1	2	9
% Large 2 Axle Vehicles	0	0.8	0	0.6	0	1.6	0	0.7	0	0	1.1	0.5	0	0.5	1.4	0.7	0.6
3 Axle Vehicles	0	1	0	1	1	0	0	1	0	0	1	1	0	0	0	0	3
% 3 Axle Vehicles	0	0.4	0	0.3	0.4	0	0	0.2	0	0	0.5	0.2	0	0	0	0	0.2
4+ Axle Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% 4+ Axle Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

	11th Avenue Southbound				Flint Avenue Westbound				11th Avenue Northbound				Flint Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:15 PM																	
04:15 PM	**11**	**43**	**6**	**60**	**38**	22	3	63	9	21	24	54	**3**	21	**10**	34	**211**
04:30 PM	6	40	3	49	31	23	3	57	**14**	24	21	59	0	**31**	9	40	205
04:45 PM	7	24	1	32	26	19	**5**	50	13	**29**	24	**66**	1	20	10	31	179
05:00 PM	2	26	4	32	36	**38**	5	**79**	11	13	**33**	57	3	30	9	**42**	210
Total Volume	26	133	14	173	131	102	16	249	47	87	102	236	7	102	38	147	805
% App. Total	15	76.9	8.1		52.6	41	6.4		19.9	36.9	43.2		4.8	69.4	25.9		
PHF	.591	.773	.583	.721	.862	.671	.800	.788	.839	.750	.773	.894	.583	.823	.950	.875	.954

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 11th Avenue
E/W: Flint Avenue
Weather: Clear

File Name : 03_HFD_11th_Flint PM
Site Code : 00323251
Start Date : 3/23/2023
Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:00 PM				04:15 PM				04:15 PM				04:15 PM			
+0 mins.	6	31	**6**	43	**38**	22	3	63	9	21	24	54	**3**	21	**10**	34
+15 mins.	**11**	**43**	6	**60**	31	23	3	57	**14**	24	21	59	0	**31**	9	40
+30 mins.	6	40	3	49	26	19	**5**	50	13	**29**	24	**66**	1	20	10	31
+45 mins.	7	24	1	32	36	**38**	5	**79**	11	13	**33**	57	3	30	9	**42**
Total Volume	30	138	16	184	131	102	16	249	47	87	102	236	7	102	38	147
% App. Total	16.3	75	8.7		52.6	41	6.4		19.9	36.9	43.2		4.8	69.4	25.9	
PHF	.682	.802	.667	.767	.862	.671	.800	.788	.839	.750	.773	.894	.583	.823	.950	.875

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 11th Avenue
E/W: Flint Avenue
Weather: Clear

File Name : 03_HFD_11th_Flint PM
Site Code : 00323251
Start Date : 3/23/2023
Page No : 1

Groups Printed- Passenger Vehicles

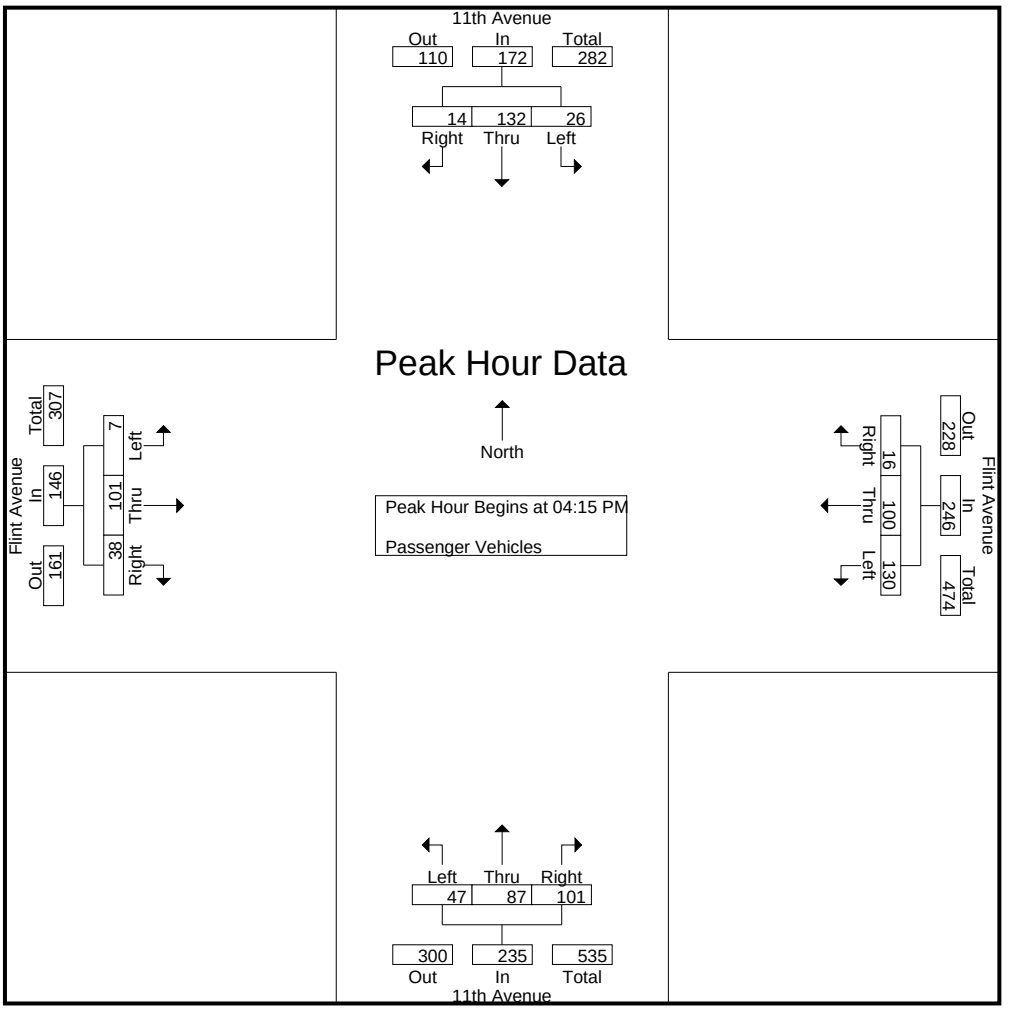
	11th Avenue Southbound				Flint Avenue Westbound				11th Avenue Northbound				Flint Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	6	31	6	43	22	19	9	50	5	26	23	54	6	25	8	39	186
04:15 PM	11	43	6	60	38	22	3	63	9	21	24	54	3	21	10	34	211
04:30 PM	6	39	3	48	31	23	3	57	14	24	21	59	0	31	9	40	204
04:45 PM	7	24	1	32	25	18	5	48	13	29	23	65	1	20	10	31	176
Total	30	137	16	183	116	82	20	218	41	100	91	232	10	97	37	144	777
05:00 PM	2	26	4	32	36	37	5	78	11	13	33	57	3	29	9	41	208
05:15 PM	3	35	3	41	19	26	3	48	9	25	20	54	1	19	6	26	169
05:30 PM	4	23	2	29	21	14	1	36	9	14	21	44	1	26	6	33	142
05:45 PM	1	21	1	23	34	25	4	63	1	22	14	37	0	20	10	30	153
Total	10	105	10	125	110	102	13	225	30	74	88	192	5	94	31	130	672
Grand Total	40	242	26	308	226	184	33	443	71	174	179	424	15	191	68	274	1449
Apprch %	13	78.6	8.4		51	41.5	7.4		16.7	41	42.2		5.5	69.7	24.8		
Total %	2.8	16.7	1.8	21.3	15.6	12.7	2.3	30.6	4.9	12	12.4	29.3	1	13.2	4.7	18.9	

	11th Avenue Southbound				Flint Avenue Westbound				11th Avenue Northbound				Flint Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:15 PM																	
04:15 PM	**11**	**43**	**6**	**60**	**38**	22	3	63	9	21	24	54	**3**	21	**10**	34	**211**
04:30 PM	6	39	3	48	31	23	3	57	**14**	24	21	59	0	**31**	9	40	204
04:45 PM	7	24	1	32	25	18	**5**	48	13	**29**	23	**65**	1	20	10	31	176
05:00 PM	2	26	4	32	36	**37**	5	**78**	11	13	**33**	57	3	29	9	**41**	208
Total Volume	26	132	14	172	130	100	16	246	47	87	101	235	7	101	38	146	799
% App. Total	15.1	76.7	8.1		52.8	40.7	6.5		20	37	43		4.8	69.2	26		
PHF	.591	.767	.583	.717	.855	.676	.800	.788	.839	.750	.765	.904	.583	.815	.950	.890	.947

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 11th Avenue
E/W: Flint Avenue
Weather: Clear

File Name : 03_HFD_11th_Flint PM
Site Code : 00323251
Start Date : 3/23/2023
Page No : 2



Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:15 PM				04:15 PM				04:15 PM				04:15 PM			
+0 mins.	**11**	**43**	**6**	**60**	**38**	22	3	63	9	21	24	54	**3**	21	**10**	34
+15 mins.	6	39	3	48	31	23	3	57	**14**	24	21	59	0	**31**	9	40
+30 mins.	7	24	1	32	25	18	**5**	48	13	**29**	23	**65**	1	20	10	31
+45 mins.	2	26	4	32	36	**37**	5	**78**	11	13	**33**	57	3	29	9	**41**
Total Volume	26	132	14	172	130	100	16	246	47	87	101	235	7	101	38	146
% App. Total	15.1	76.7	8.1		52.8	40.7	6.5		20	37	43		4.8	69.2	26	
PHF	.591	.767	.583	.717	.855	.676	.800	.788	.839	.750	.765	.904	.583	.815	.950	.890

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 11th Avenue
E/W: Flint Avenue
Weather: Clear

File Name : 03_HFD_11th_Flint PM
Site Code : 00323251
Start Date : 3/23/2023
Page No : 1

Groups Printed- Large 2 Axle Vehicles

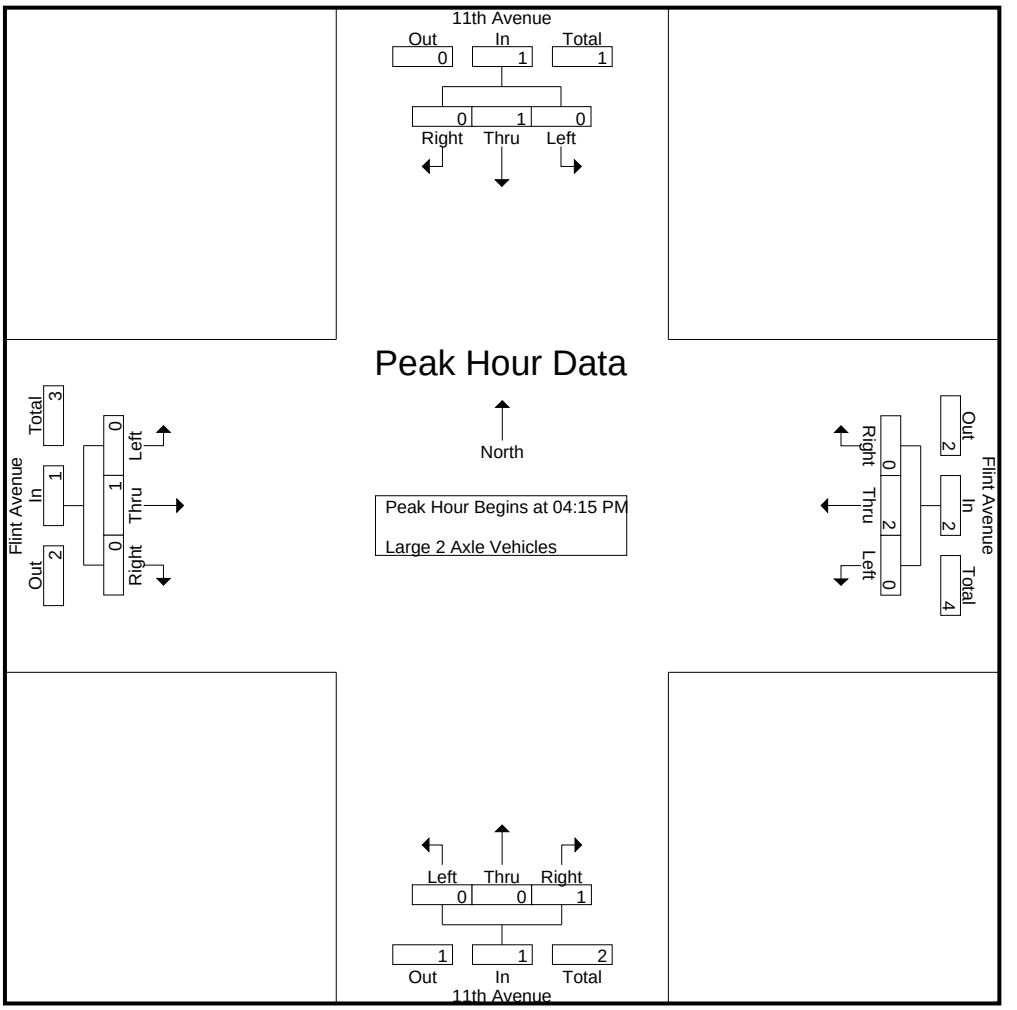
	11th Avenue Southbound				Flint Avenue Westbound				11th Avenue Northbound				Flint Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	0	0	1	0	1	0	0	1	1	0	0	1	1	3
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
04:45 PM	0	0	0	0	0	1	0	1	0	0	1	1	0	0	0	0	2
Total	0	1	0	1	0	2	0	2	0	0	2	2	0	0	1	1	6
05:00 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
05:15 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	1	0	1	0	1	0	0	0	0	0	1	0	1	3
Grand Total	0	2	0	2	0	3	0	3	0	0	2	2	0	1	1	2	9
Apprch %	0	100	0		0	100	0		0	0	100		0	50	50		
Total %	0	22.2	0	22.2	0	33.3	0	33.3	0	0	22.2	22.2	0	11.1	11.1	22.2	

	11th Avenue Southbound				Flint Avenue Westbound				11th Avenue Northbound				Flint Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:15 PM																	
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	**1**	0	**1**	0	0	0	0	0	0	0	0	0	0	0	0	1
04:45 PM	0	0	0	0	0	**1**	0	**1**	0	0	**1**	**1**	0	0	0	0	**2**
05:00 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	**1**	0	**1**	2
Total Volume	0	1	0	1	0	2	0	2	0	0	1	1	0	1	0	1	5
% App. Total	0	100	0		0	100	0		0	0	100		0	100	0		
PHF	.000	.250	.000	.250	.000	.500	.000	.500	.000	.000	.250	.250	.000	.250	.000	.250	.625

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 11th Avenue
E/W: Flint Avenue
Weather: Clear

File Name : 03_HFD_11th_Flint PM
Site Code : 00323251
Start Date : 3/23/2023
Page No : 2



Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:15 PM				04:15 PM				04:15 PM				04:15 PM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	**1**	0	**1**	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	**1**	0	**1**	0	0	**1**	**1**	0	0	0	0
+45 mins.	0	0	0	0	0	1	0	1	0	0	0	0	0	**1**	0	**1**
Total Volume	0	1	0	1	0	2	0	2	0	0	1	1	0	1	0	1
% App. Total	0	100	0		0	100	0		0	0	100		0	100	0	
PHF	.000	.250	.000	.250	.000	.500	.000	.500	.000	.000	.250	.250	.000	.250	.000	.250

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 11th Avenue
E/W: Flint Avenue
Weather: Clear

File Name : 03_HFD_11th_Flint PM
Site Code : 00323251
Start Date : 3/23/2023
Page No : 1

Groups Printed- 3 Axle Vehicles

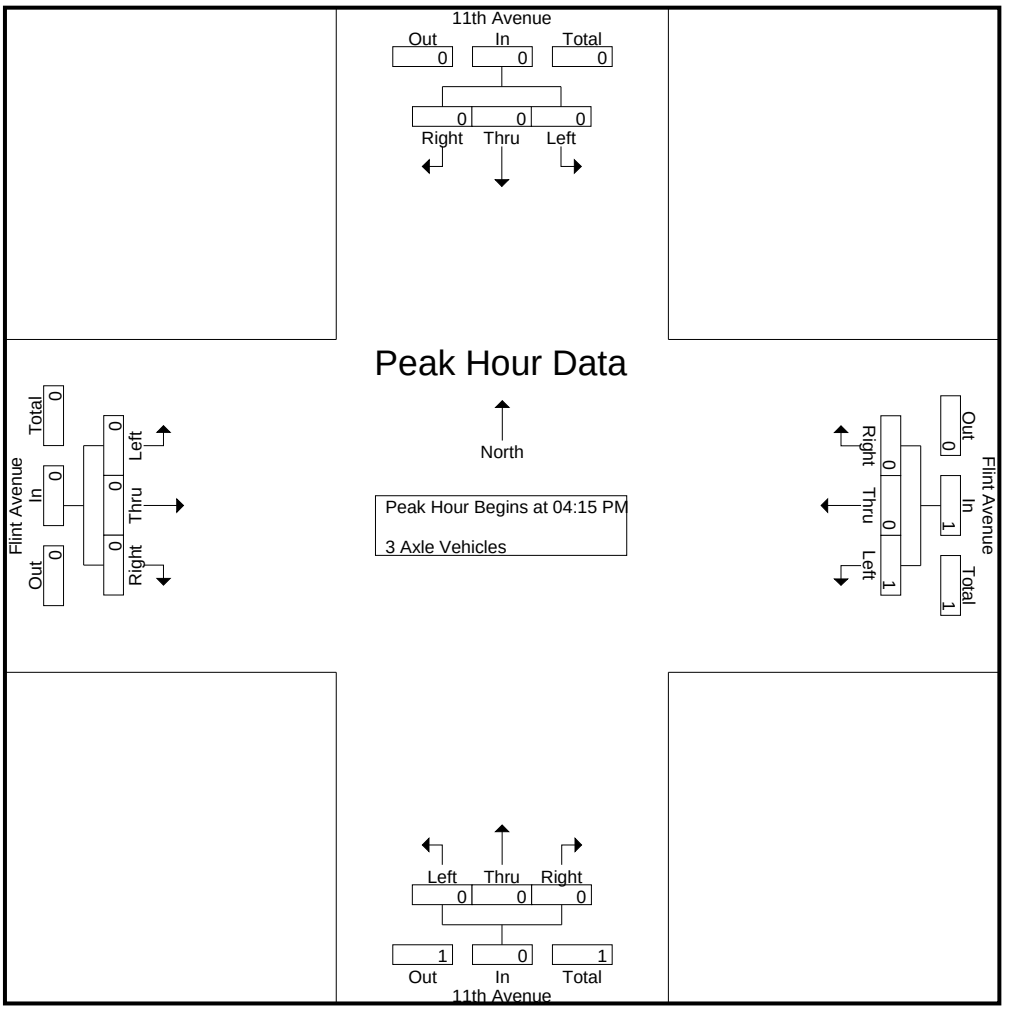
	11th Avenue Southbound				Flint Avenue Westbound				11th Avenue Northbound				Flint Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1
Total	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1
05:45 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	1	0	1	0	0	0	0	0	0	1	1	0	0	0	0	2
Grand Total	0	1	0	1	1	0	0	1	0	0	1	1	0	0	0	0	3
Apprch %	0	100	0		100	0	0		0	0	100		0	0	0		
Total %	0	33.3	0	33.3	33.3	0	0	33.3	0	0	33.3	33.3	0	0	0	0	

	11th Avenue Southbound				Flint Avenue Westbound				11th Avenue Northbound				Flint Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:15 PM																	
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	**1**	0	0	**1**	0	0	0	0	0	0	0	0	**1**
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1
% App. Total	0	0	0		100	0	0		0	0	0		0	0	0		
PHF	.000	.000	.000	.000	.250	.000	.000	.250	.000	.000	.000	.000	.000	.000	.000	.000	.250

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 11th Avenue
E/W: Flint Avenue
Weather: Clear

File Name : 03_HFD_11th_Flint PM
Site Code : 00323251
Start Date : 3/23/2023
Page No : 2



Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:15 PM				04:15 PM				04:15 PM				04:15 PM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	**1**	0	0	**1**	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0
% App. Total	0	0	0		100	0	0		0	0	0		0	0	0	
PHF	.000	.000	.000	.000	.250	.000	.000	.250	.000	.000	.000	.000	.000	.000	.000	.000

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 11th Avenue
E/W: Flint Avenue
Weather: Clear

File Name : 03_HFD_11th_Flint PM
Site Code : 00323251
Start Date : 3/23/2023
Page No : 1

Groups Printed- 4+ Axle Trucks

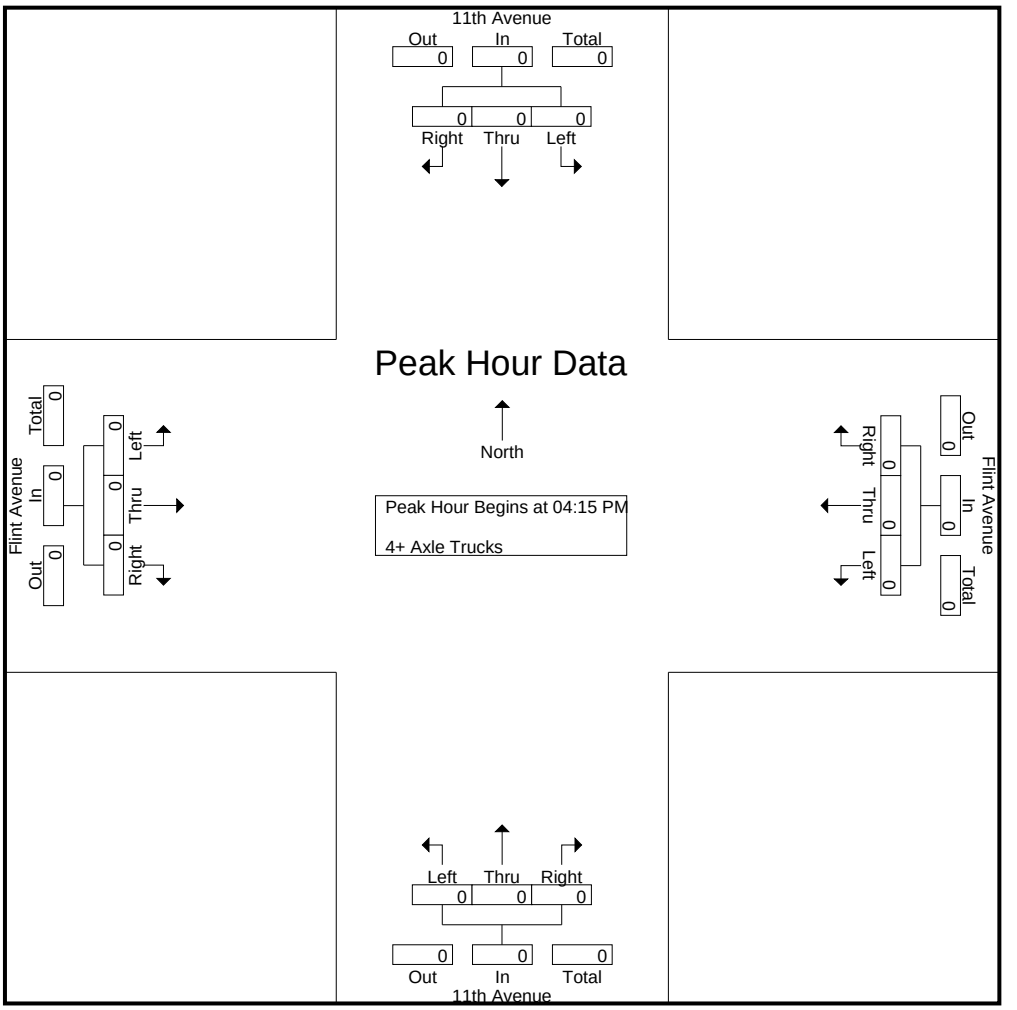
	11th Avenue Southbound				Flint Avenue Westbound				11th Avenue Northbound				Flint Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Apprch %	0	0	0		0	0	0		0	0	0		0	0	0		
Total %																	

	11th Avenue Southbound				Flint Avenue Westbound				11th Avenue Northbound				Flint Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:15 PM																	
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0		0	0	0		0	0	0		0	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 11th Avenue
E/W: Flint Avenue
Weather: Clear

File Name : 03_HFD_11th_Flint PM
Site Code : 00323251
Start Date : 3/23/2023
Page No : 2



Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:15 PM				04:15 PM				04:15 PM				04:15 PM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0		0	0	0		0	0	0		0	0	0	
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 11th Avenue
E/W: Fargo Avenue
Weather: Clear

File Name : 12_HFD_11th_Fargo AM
Site Code : 00322472
Start Date : 5/17/2022
Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

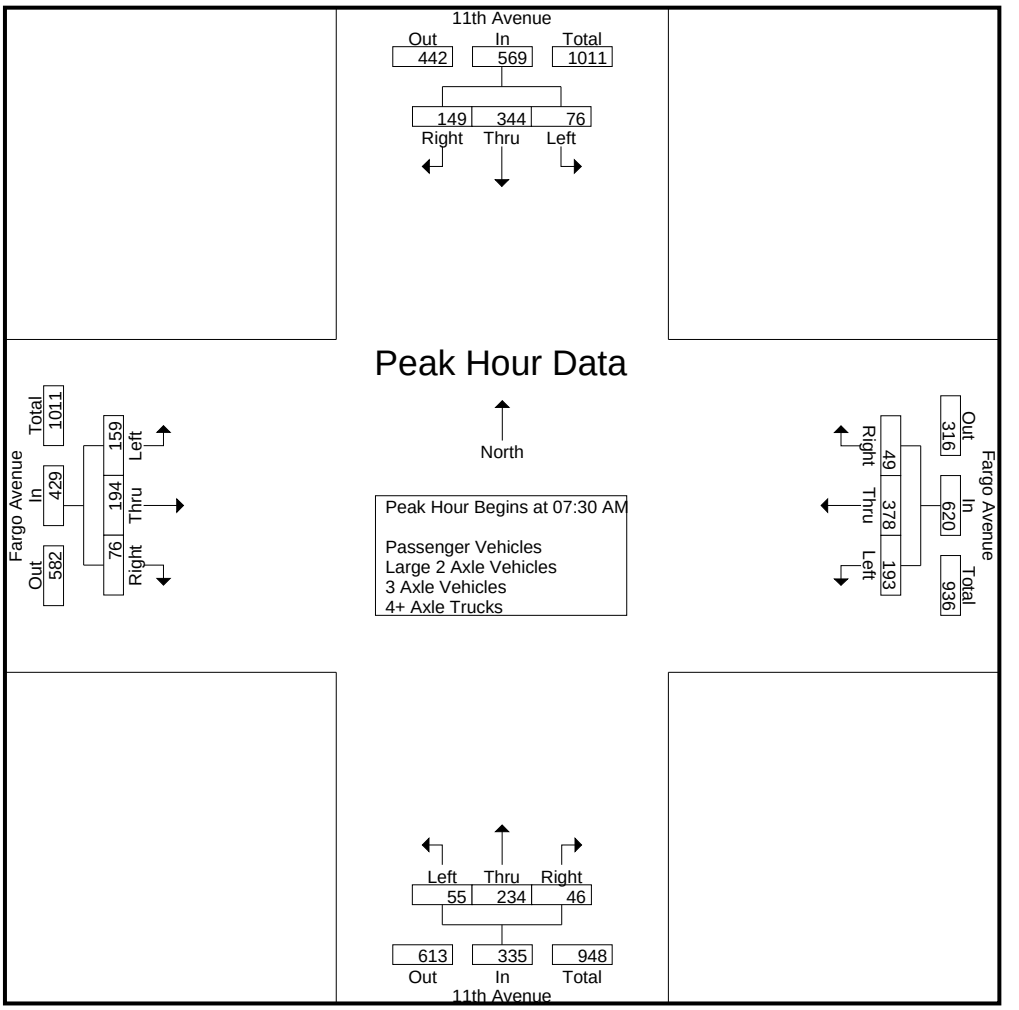
	11th Avenue Southbound				Fargo Avenue Westbound				11th Avenue Northbound				Fargo Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	12	40	15	67	30	46	5	81	5	46	6	57	12	24	10	46	251
07:15 AM	16	59	17	92	31	56	8	95	6	53	14	73	28	33	16	77	337
07:30 AM	13	76	39	128	50	89	11	150	10	65	12	87	38	44	22	104	469
07:45 AM	22	114	62	198	48	124	14	186	23	60	4	87	35	47	25	107	578
Total	63	289	133	485	159	315	38	512	44	224	36	304	113	148	73	334	1635
08:00 AM	26	88	33	147	49	94	11	154	12	49	15	76	52	44	18	114	491
08:15 AM	15	66	15	96	46	71	13	130	10	60	15	85	34	59	11	104	415
08:30 AM	10	43	7	60	28	56	6	90	4	56	16	76	19	42	7	68	294
08:45 AM	10	47	11	68	30	47	7	84	8	53	5	66	17	27	15	59	277
Total	61	244	66	371	153	268	37	458	34	218	51	303	122	172	51	345	1477
Grand Total	124	533	199	856	312	583	75	970	78	442	87	607	235	320	124	679	3112
Apprch %	14.5	62.3	23.2		32.2	60.1	7.7		12.9	72.8	14.3		34.6	47.1	18.3		
Total %	4	17.1	6.4	27.5	10	18.7	2.4	31.2	2.5	14.2	2.8	19.5	7.6	10.3	4	21.8	
Passenger Vehicles	120	519	196	835	304	574	73	951	77	430	86	593	230	315	122	667	3046
% Passenger Vehicles	96.8	97.4	98.5	97.5	97.4	98.5	97.3	98	98.7	97.3	98.9	97.7	97.9	98.4	98.4	98.2	97.9
Large 2 Axle Vehicles	4	10	3	17	8	7	1	16	1	7	1	9	5	4	1	10	52
% Large 2 Axle Vehicles	3.2	1.9	1.5	2	2.6	1.2	1.3	1.6	1.3	1.6	1.1	1.5	2.1	1.2	0.8	1.5	1.7
3 Axle Vehicles	0	0	0	0	0	0	0	0	0	3	0	3	0	1	0	1	4
% 3 Axle Vehicles	0	0	0	0	0	0	0	0	0	0.7	0	0.5	0	0.3	0	0.1	0.1
4+ Axle Trucks	0	4	0	4	0	2	1	3	0	2	0	2	0	0	1	1	10
% 4+ Axle Trucks	0	0.8	0	0.5	0	0.3	1.3	0.3	0	0.5	0	0.3	0	0	0.8	0.1	0.3

	11th Avenue Southbound				Fargo Avenue Westbound				11th Avenue Northbound				Fargo Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	13	76	39	128	**50**	89	11	150	10	**65**	12	**87**	38	44	22	104	469
07:45 AM	22	**114**	**62**	**198**	48	**124**	**14**	**186**	**23**	60	4	87	35	47	**25**	107	**578**
08:00 AM	**26**	88	33	147	49	94	11	154	12	49	**15**	76	**52**	44	18	**114**	491
08:15 AM	15	66	15	96	46	71	13	130	10	60	15	85	34	**59**	11	104	415
Total Volume	76	344	149	569	193	378	49	620	55	234	46	335	159	194	76	429	1953
% App. Total	13.4	60.5	26.2		31.1	61	7.9		16.4	69.9	13.7		37.1	45.2	17.7		
PHF	.731	.754	.601	.718	.965	.762	.875	.833	.598	.900	.767	.963	.764	.822	.760	.941	.845

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 11th Avenue
E/W: Fargo Avenue
Weather: Clear

File Name : 12_HFD_11th_Fargo AM
Site Code : 00322472
Start Date : 5/17/2022
Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	13	76	39	128	**50**	89	11	150	10	**65**	12	**87**	38	44	22	104
+15 mins.	22	**114**	**62**	**198**	48	**124**	**14**	**186**	**23**	60	4	87	35	47	**25**	107
+30 mins.	**26**	88	33	147	49	94	11	154	12	49	**15**	76	**52**	44	18	**114**
+45 mins.	15	66	15	96	46	71	13	130	10	60	15	85	34	**59**	11	104
Total Volume	76	344	149	569	193	378	49	620	55	234	46	335	159	194	76	429
% App. Total	13.4	60.5	26.2		31.1	61	7.9		16.4	69.9	13.7		37.1	45.2	17.7	
PHF	.731	.754	.601	.718	.965	.762	.875	.833	.598	.900	.767	.963	.764	.822	.760	.941

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 11th Avenue
E/W: Fargo Avenue
Weather: Clear

File Name : 12_HFD_11th_Fargo AM
Site Code : 00322472
Start Date : 5/17/2022
Page No : 1

Groups Printed- Passenger Vehicles

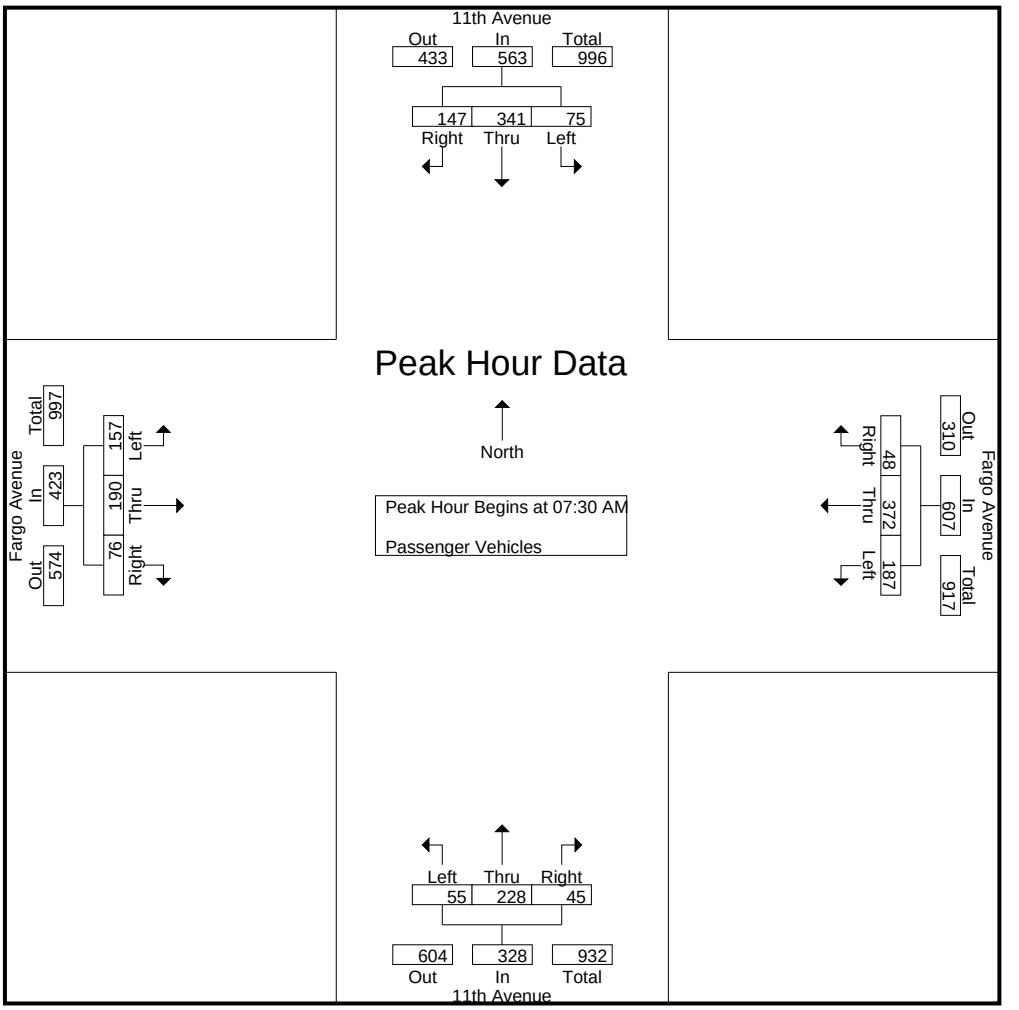
	11th Avenue Southbound				Fargo Avenue Westbound				11th Avenue Northbound				Fargo Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	11	36	15	62	29	45	5	79	4	44	6	54	12	24	8	44	239
07:15 AM	15	56	16	87	31	55	8	94	6	52	14	72	25	33	16	74	327
07:30 AM	13	76	37	126	50	87	11	148	10	62	12	84	38	42	22	102	460
07:45 AM	22	112	62	196	43	120	13	176	23	60	4	87	33	47	25	105	564
Total	61	280	130	471	153	307	37	497	43	218	36	297	108	146	71	325	1590
08:00 AM	26	88	33	147	49	94	11	154	12	47	14	73	52	43	18	113	487
08:15 AM	14	65	15	94	45	71	13	129	10	59	15	84	34	58	11	103	410
08:30 AM	10	40	7	57	27	56	5	88	4	55	16	75	19	41	7	67	287
08:45 AM	9	46	11	66	30	46	7	83	8	51	5	64	17	27	15	59	272
Total	59	239	66	364	151	267	36	454	34	212	50	296	122	169	51	342	1456
Grand Total	120	519	196	835	304	574	73	951	77	430	86	593	230	315	122	667	3046
Apprch %	14.4	62.2	23.5		32	60.4	7.7		13	72.5	14.5		34.5	47.2	18.3		
Total %	3.9	17	6.4	27.4	10	18.8	2.4	31.2	2.5	14.1	2.8	19.5	7.6	10.3	4	21.9	

	11th Avenue Southbound				Fargo Avenue Westbound				11th Avenue Northbound				Fargo Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	13	76	37	126	**50**	87	11	148	10	**62**	12	84	38	42	22	102	460
07:45 AM	22	**112**	**62**	**196**	43	**120**	**13**	**176**	**23**	60	4	**87**	33	47	**25**	105	**564**
08:00 AM	**26**	88	33	147	49	94	11	154	12	47	14	73	**52**	43	18	**113**	487
08:15 AM	14	65	15	94	45	71	13	129	10	59	**15**	84	34	**58**	11	103	410
Total Volume	75	341	147	563	187	372	48	607	55	228	45	328	157	190	76	423	1921
% App. Total	13.3	60.6	26.1		30.8	61.3	7.9		16.8	69.5	13.7		37.1	44.9	18		
PHF	.721	.761	.593	.718	.935	.775	.923	.862	.598	.919	.750	.943	.755	.819	.760	.936	.852

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 11th Avenue
E/W: Fargo Avenue
Weather: Clear

File Name : 12_HFD_11th_Fargo AM
Site Code : 00322472
Start Date : 5/17/2022
Page No : 2



Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	13	76	37	126	**50**	87	11	148	10	**62**	12	84	38	42	22	102
+15 mins.	22	**112**	**62**	**196**	43	**120**	**13**	**176**	**23**	60	4	**87**	33	47	**25**	105
+30 mins.	**26**	88	33	147	49	94	11	154	12	47	14	73	**52**	43	18	**113**
+45 mins.	14	65	15	94	45	71	13	129	10	59	**15**	84	34	**58**	11	103
Total Volume	75	341	147	563	187	372	48	607	55	228	45	328	157	190	76	423
% App. Total	13.3	60.6	26.1		30.8	61.3	7.9		16.8	69.5	13.7		37.1	44.9	18	
PHF	.721	.761	.593	.718	.935	.775	.923	.862	.598	.919	.750	.943	.755	.819	.760	.936

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 11th Avenue
E/W: Fargo Avenue
Weather: Clear

File Name : 12_HFD_11th_Fargo AM
Site Code : 00322472
Start Date : 5/17/2022
Page No : 1

Groups Printed- Large 2 Axle Vehicles

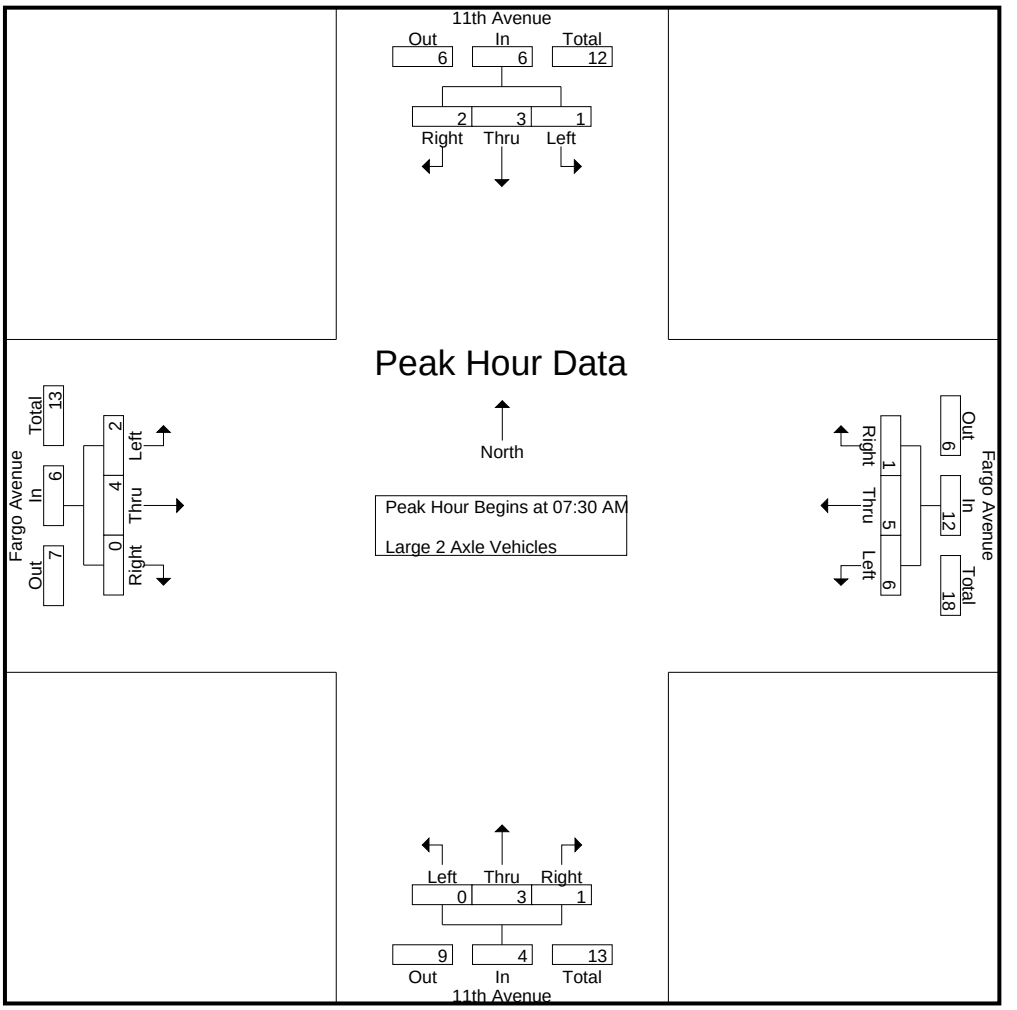
	11th Avenue Southbound				Fargo Avenue Westbound				11th Avenue Northbound				Fargo Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	1	2	0	3	1	1	0	2	1	1	0	2	0	0	1	1	8
07:15 AM	1	2	1	4	0	1	0	1	0	0	0	0	3	0	0	3	8
07:30 AM	0	0	2	2	0	2	0	2	0	2	0	2	0	2	0	2	8
07:45 AM	0	2	0	2	5	3	1	9	0	0	0	0	2	0	0	2	13
Total	2	6	3	11	6	7	1	14	1	3	0	4	5	2	1	8	37
08:00 AM	0	0	0	0	0	0	0	0	0	0	1	1	0	1	0	1	2
08:15 AM	1	1	0	2	1	0	0	1	0	1	0	1	0	1	0	1	5
08:30 AM	0	2	0	2	1	0	0	1	0	1	0	1	0	0	0	0	4
08:45 AM	1	1	0	2	0	0	0	0	0	2	0	2	0	0	0	0	4
Total	2	4	0	6	2	0	0	2	0	4	1	5	0	2	0	2	15
Grand Total	4	10	3	17	8	7	1	16	1	7	1	9	5	4	1	10	52
Apprch %	23.5	58.8	17.6		50	43.8	6.2		11.1	77.8	11.1		50	40	10		
Total %	7.7	19.2	5.8	32.7	15.4	13.5	1.9	30.8	1.9	13.5	1.9	17.3	9.6	7.7	1.9	19.2	

	11th Avenue Southbound				Fargo Avenue Westbound				11th Avenue Northbound				Fargo Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	0	**2**	**2**	0	2	0	2	0	**2**	0	**2**	0	**2**	0	**2**	8
07:45 AM	0	**2**	0	2	**5**	**3**	**1**	**9**	0	0	0	0	**2**	0	0	2	**13**
08:00 AM	0	0	0	0	0	0	0	0	0	0	**1**	1	0	1	0	1	2
08:15 AM	**1**	1	0	2	1	0	0	1	0	1	0	1	0	1	0	1	5
Total Volume	1	3	2	6	6	5	1	12	0	3	1	4	2	4	0	6	28
% App. Total	16.7	50	33.3		50	41.7	8.3		0	75	25		33.3	66.7	0		
PHF	.250	.375	.250	.750	.300	.417	.250	.333	.000	.375	.250	.500	.250	.500	.000	.750	.538

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 11th Avenue
E/W: Fargo Avenue
Weather: Clear

File Name : 12_HFD_11th_Fargo AM
Site Code : 00322472
Start Date : 5/17/2022



Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	0	0	**2**	**2**	0	2	0	2	0	**2**	0	**2**	0	**2**	0	**2**
+15 mins.	0	**2**	0	2	**5**	**3**	**1**	**9**	0	0	0	0	**2**	0	0	2
+30 mins.	0	0	0	0	0	0	0	0	0	0	**1**	1	0	1	0	1
+45 mins.	**1**	1	0	2	1	0	0	1	0	1	0	1	0	1	0	1
Total Volume	1	3	2	6	6	5	1	12	0	3	1	4	2	4	0	6
% App. Total	16.7	50	33.3		50	41.7	8.3		0	75	25		33.3	66.7	0	
PHF	.250	.375	.250	.750	.300	.417	.250	.333	.000	.375	.250	.500	.250	.500	.000	.750

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 11th Avenue
E/W: Fargo Avenue
Weather: Clear

File Name : 12_HFD_11th_Fargo AM
Site Code : 00322472
Start Date : 5/17/2022
Page No : 1

Groups Printed- 3 Axle Vehicles

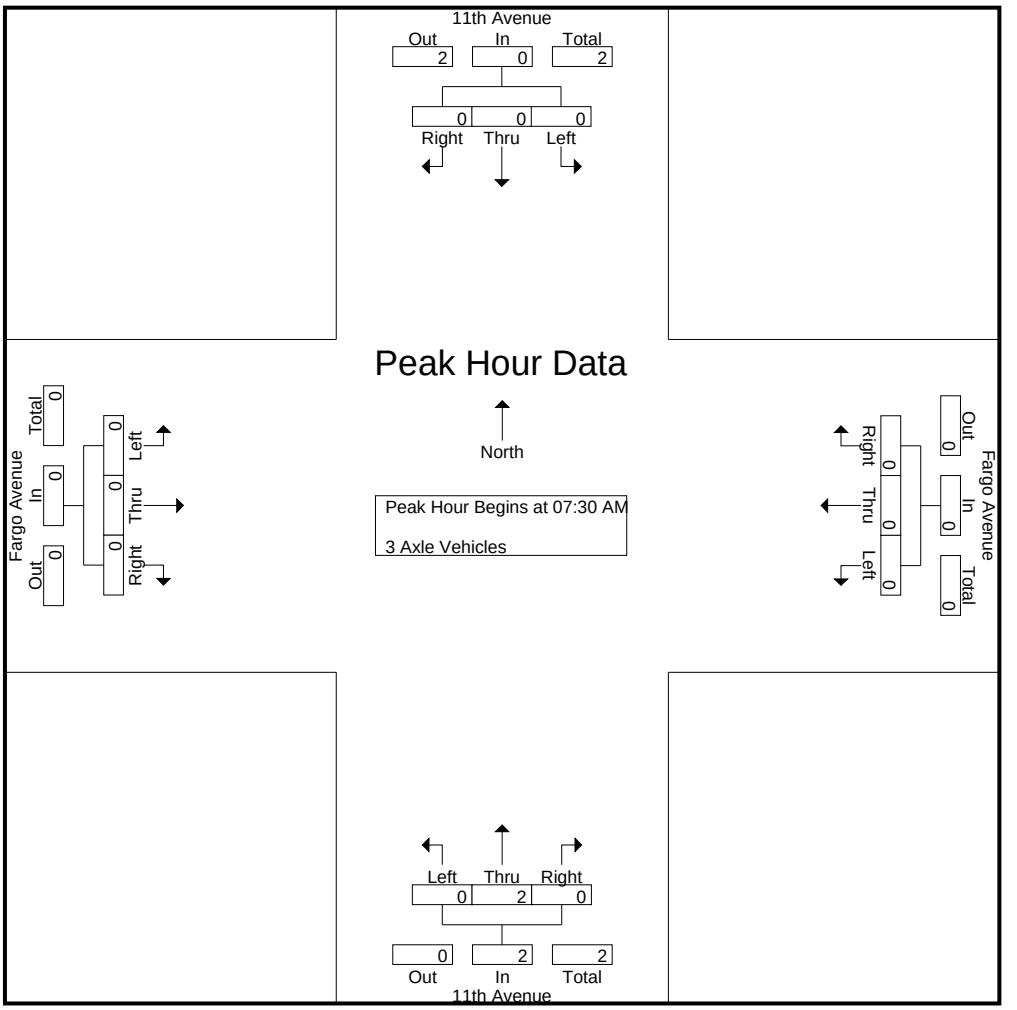
	11th Avenue Southbound				Fargo Avenue Westbound				11th Avenue Northbound				Fargo Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	2
08:00 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	1	0	1	0	1	0	1	2
Grand Total	0	0	0	0	0	0	0	0	0	3	0	3	0	1	0	1	4
Apprch %	0	0	0		0	0	0		0	100	0		0	100	0		
Total %	0	0	0	0	0	0	0	0	0	75	0	75	0	25	0	25	

	11th Avenue Southbound				Fargo Avenue Westbound				11th Avenue Northbound				Fargo Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	0	0	0	0	0	0	0	0	**1**	0	**1**	0	0	0	0	**1**
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	2
% App. Total	0	0	0		0	0	0		0	100	0		0	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.500	.000	.500	.000	.000	.000	.000	.500

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 11th Avenue
E/W: Fargo Avenue
Weather: Clear

File Name : 12_HFD_11th_Fargo AM
Site Code : 00322472
Start Date : 5/17/2022
Page No : 2



Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	0	0	0	0	0	0	0	0	0	**1**	0	**1**	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0
% App. Total	0	0	0		0	0	0		0	100	0		0	0	0	
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.500	.000	.500	.000	.000	.000	.000

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 11th Avenue
E/W: Fargo Avenue
Weather: Clear

File Name : 12_HFD_11th_Fargo AM
Site Code : 00322472
Start Date : 5/17/2022
Page No : 1

Groups Printed- 4+ Axle Trucks

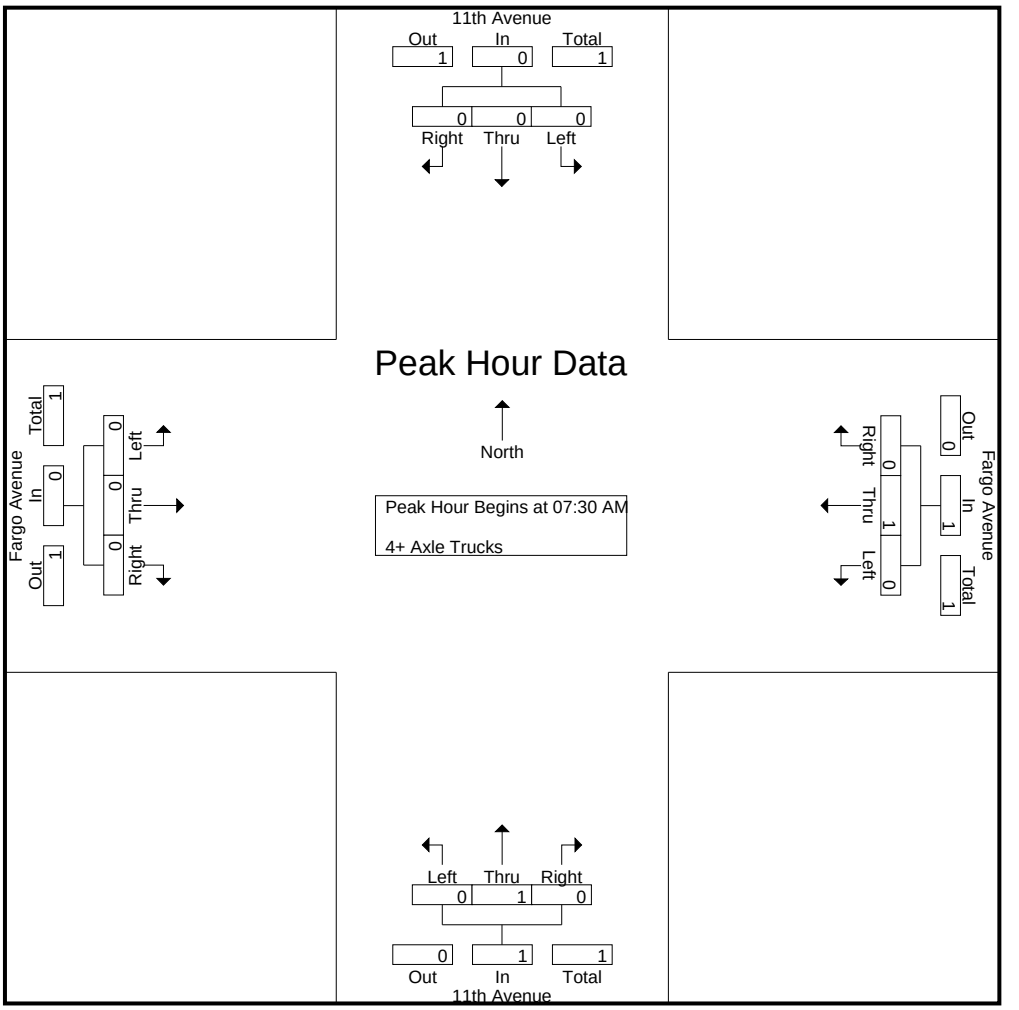
	11th Avenue Southbound				Fargo Avenue Westbound				11th Avenue Northbound				Fargo Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	2	0	2	0	0	0	0	0	0	0	0	0	0	1	1	3
07:15 AM	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	2
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
Total	0	3	0	3	0	1	0	1	0	1	0	1	0	0	1	1	6
08:00 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	1	0	1	0	0	1	1	0	0	0	0	0	0	0	0	2
08:45 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
Total	0	1	0	1	0	1	1	2	0	1	0	1	0	0	0	0	4
Grand Total	0	4	0	4	0	2	1	3	0	2	0	2	0	0	1	1	10
Apprch %	0	100	0		0	66.7	33.3		0	100	0		0	0	100		
Total %	0	40	0	40	0	20	10	30	0	20	0	20	0	0	10	10	

	11th Avenue Southbound				Fargo Avenue Westbound				11th Avenue Northbound				Fargo Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	**1**	0	**1**	0	0	0	0	0	0	0	0	**1**
08:00 AM	0	0	0	0	0	0	0	0	0	**1**	0	**1**	0	0	0	0	1
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	1	0	1	0	1	0	1	0	0	0	0	2
% App. Total	0	0	0		0	100	0		0	100	0		0	0	0		
PHF	.000	.000	.000	.000	.000	.250	.000	.250	.000	.250	.000	.250	.000	.000	.000	.000	.500

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 11th Avenue
E/W: Fargo Avenue
Weather: Clear

File Name : 12_HFD_11th_Fargo AM
Site Code : 00322472
Start Date : 5/17/2022
Page No : 2



Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	**1**	0	**1**	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	**1**	0	**1**	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	1	0	1	0	1	0	1	0	0	0	0
% App. Total	0	0	0		0	100	0		0	100	0		0	0	0	
PHF	.000	.000	.000	.000	.000	.250	.000	.250	.000	.250	.000	.250	.000	.000	.000	.000

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 11th Avenue
E/W: Fargo Avenue
Weather: Clear

File Name : 12_HFD_11th_Fargo PM
Site Code : 00322472
Start Date : 5/17/2022
Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

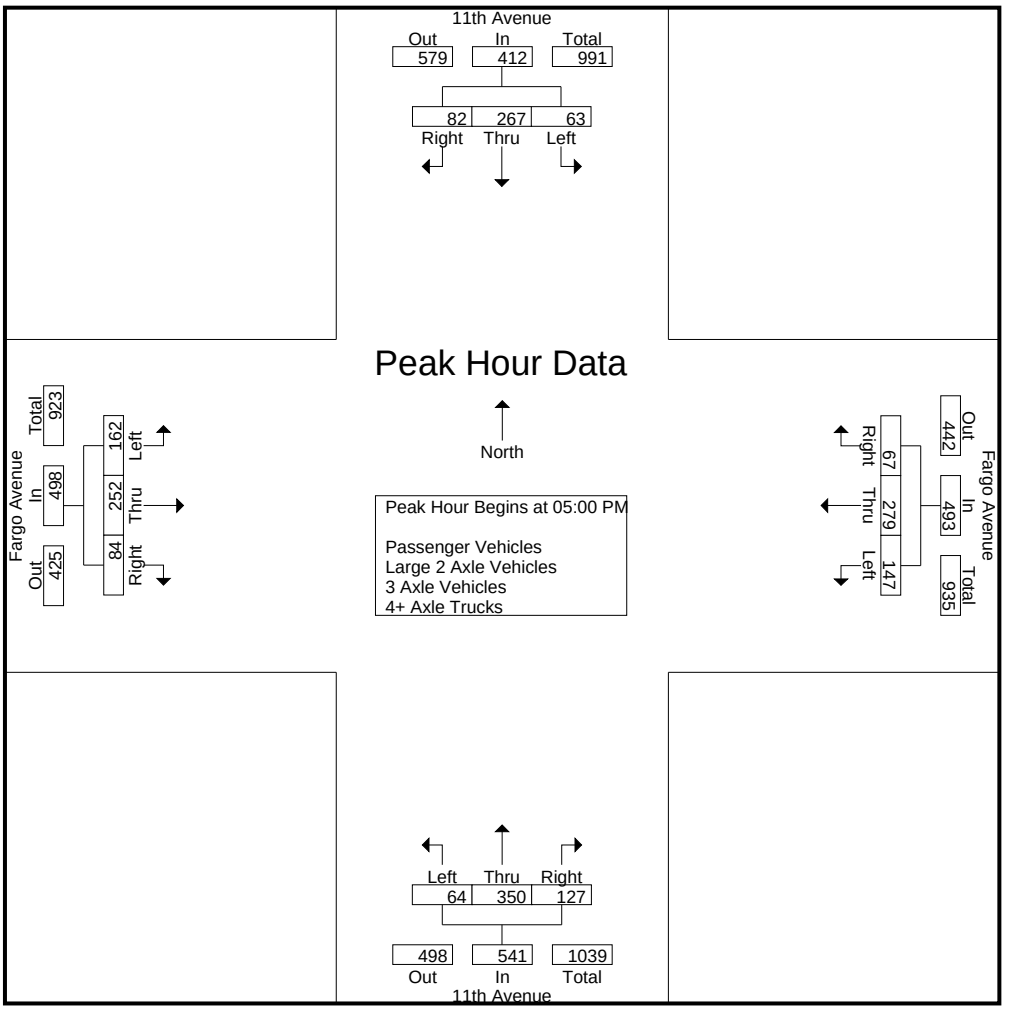
	11th Avenue Southbound				Fargo Avenue Westbound				11th Avenue Northbound				Fargo Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	8	67	16	91	36	66	7	109	15	89	38	142	46	69	18	133	475
04:15 PM	9	50	19	78	36	65	20	121	20	82	26	128	39	66	15	120	447
04:30 PM	16	43	20	79	34	70	18	122	22	69	31	122	27	64	22	113	436
04:45 PM	18	69	13	100	43	81	17	141	16	97	29	142	31	61	11	103	486
Total	51	229	68	348	149	282	62	493	73	337	124	534	143	260	66	469	1844
05:00 PM	12	69	19	100	28	64	15	107	17	101	42	160	34	65	17	116	483
05:15 PM	8	59	17	84	37	69	20	126	13	88	25	126	48	77	24	149	485
05:30 PM	21	77	25	123	38	73	19	130	17	80	31	128	33	44	22	99	480
05:45 PM	22	62	21	105	44	73	13	130	17	81	29	127	47	66	21	134	496
Total	63	267	82	412	147	279	67	493	64	350	127	541	162	252	84	498	1944
Grand Total	114	496	150	760	296	561	129	986	137	687	251	1075	305	512	150	967	3788
Apprch %	15	65.3	19.7		30	56.9	13.1		12.7	63.9	23.3		31.5	52.9	15.5		
Total %	3	13.1	4	20.1	7.8	14.8	3.4	26	3.6	18.1	6.6	28.4	8.1	13.5	4	25.5	
Passenger Vehicles	112	487	149	748	294	560	129	983	137	682	249	1068	305	510	150	965	3764
% Passenger Vehicles	98.2	98.2	99.3	98.4	99.3	99.8	100	99.7	100	99.3	99.2	99.3	100	99.6	100	99.8	99.4
Large 2 Axle Vehicles	2	7	1	10	2	1	0	3	0	3	2	5	0	2	0	2	20
% Large 2 Axle Vehicles	1.8	1.4	0.7	1.3	0.7	0.2	0	0.3	0	0.4	0.8	0.5	0	0.4	0	0.2	0.5
3 Axle Vehicles	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
% 3 Axle Vehicles	0	0	0	0	0	0	0	0	0	0.1	0	0.1	0	0	0	0	0
4+ Axle Trucks	0	2	0	2	0	0	0	0	0	1	0	1	0	0	0	0	3
% 4+ Axle Trucks	0	0.4	0	0.3	0	0	0	0	0	0.1	0	0.1	0	0	0	0	0.1

	11th Avenue Southbound				Fargo Avenue Westbound				11th Avenue Northbound				Fargo Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	12	69	19	100	28	64	15	107	**17**	**101**	**42**	**160**	34	65	17	116	483
05:15 PM	8	59	17	84	37	69	**20**	126	13	88	25	126	**48**	**77**	**24**	**149**	485
05:30 PM	21	**77**	**25**	**123**	38	**73**	19	**130**	17	80	31	128	33	44	22	99	480
05:45 PM	**22**	62	21	105	**44**	73	13	130	17	81	29	127	47	66	21	134	**496**
Total Volume	63	267	82	412	147	279	67	493	64	350	127	541	162	252	84	498	1944
% App. Total	15.3	64.8	19.9		29.8	56.6	13.6		11.8	64.7	23.5		32.5	50.6	16.9		
PHF	.716	.867	.820	.837	.835	.955	.838	.948	.941	.866	.756	.845	.844	.818	.875	.836	.980

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 11th Avenue
E/W: Fargo Avenue
Weather: Clear

File Name : 12_HFD_11th_Fargo PM
Site Code : 00322472
Start Date : 5/17/2022
Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	05:00 PM				04:45 PM				04:45 PM				05:00 PM			
+0 mins.	12	69	19	100	**43**	**81**	17	**141**	16	97	29	142	34	65	17	116
+15 mins.	8	59	17	84	28	64	15	107	**17**	**101**	**42**	**160**	**48**	**77**	**24**	**149**
+30 mins.	21	**77**	**25**	**123**	37	69	**20**	126	13	88	25	126	33	44	22	99
+45 mins.	**22**	62	21	105	38	73	19	130	17	80	31	128	47	66	21	134
Total Volume	63	267	82	412	146	287	71	504	63	366	127	556	162	252	84	498
% App. Total	15.3	64.8	19.9		29	56.9	14.1		11.3	65.8	22.8		32.5	50.6	16.9	
PHF	.716	.867	.820	.837	.849	.886	.888	.894	.926	.906	.756	.869	.844	.818	.875	.836

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 11th Avenue
E/W: Fargo Avenue
Weather: Clear

File Name : 12_HFD_11th_Fargo PM
Site Code : 00322472
Start Date : 5/17/2022
Page No : 1

Groups Printed- Passenger Vehicles

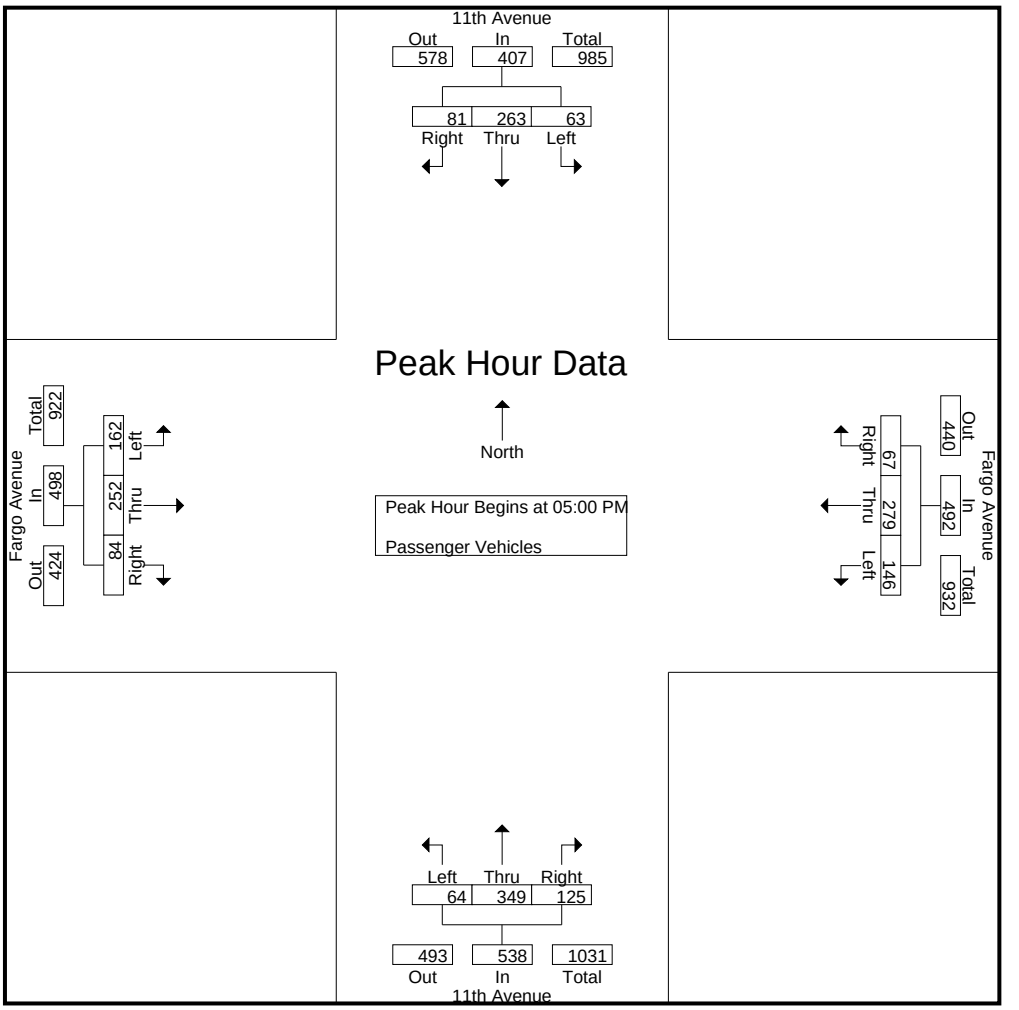
	11th Avenue Southbound				Fargo Avenue Westbound				11th Avenue Northbound				Fargo Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	8	67	16	91	35	65	7	107	15	87	38	140	46	68	18	132	470
04:15 PM	8	49	19	76	36	65	20	121	20	80	26	126	39	65	15	119	442
04:30 PM	15	41	20	76	34	70	18	122	22	69	31	122	27	64	22	113	433
04:45 PM	18	67	13	98	43	81	17	141	16	97	29	142	31	61	11	103	484
Total	49	224	68	341	148	281	62	491	73	333	124	530	143	258	66	467	1829
05:00 PM	12	69	18	99	28	64	15	107	17	101	41	159	34	65	17	116	481
05:15 PM	8	58	17	83	37	69	20	126	13	88	25	126	48	77	24	149	484
05:30 PM	21	75	25	121	37	73	19	129	17	80	31	128	33	44	22	99	477
05:45 PM	22	61	21	104	44	73	13	130	17	80	28	125	47	66	21	134	493
Total	63	263	81	407	146	279	67	492	64	349	125	538	162	252	84	498	1935
Grand Total	112	487	149	748	294	560	129	983	137	682	249	1068	305	510	150	965	3764
Apprch %	15	65.1	19.9		29.9	57	13.1		12.8	63.9	23.3		31.6	52.8	15.5		
Total %	3	12.9	4	19.9	7.8	14.9	3.4	26.1	3.6	18.1	6.6	28.4	8.1	13.5	4	25.6	

	11th Avenue Southbound				Fargo Avenue Westbound				11th Avenue Northbound				Fargo Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	12	69	18	99	28	64	15	107	**17**	**101**	**41**	**159**	34	65	17	116	481
05:15 PM	8	58	17	83	37	69	**20**	126	13	88	25	126	**48**	**77**	**24**	**149**	484
05:30 PM	21	**75**	**25**	**121**	37	**73**	19	129	17	80	31	128	33	44	22	99	477
05:45 PM	**22**	61	21	104	**44**	73	13	**130**	17	80	28	125	47	66	21	134	**493**
Total Volume	63	263	81	407	146	279	67	492	64	349	125	538	162	252	84	498	1935
% App. Total	15.5	64.6	19.9		29.7	56.7	13.6		11.9	64.9	23.2		32.5	50.6	16.9		
PHF	.716	.877	.810	.841	.830	.955	.838	.946	.941	.864	.762	.846	.844	.818	.875	.836	.981

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 11th Avenue
E/W: Fargo Avenue
Weather: Clear

File Name : 12_HFD_11th_Fargo PM
Site Code : 00322472
Start Date : 5/17/2022
Page No : 2



Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	05:00 PM				05:00 PM				05:00 PM				05:00 PM			
+0 mins.	12	69	18	99	28	64	15	107	**17**	**101**	**41**	**159**	34	65	17	116
+15 mins.	8	58	17	83	37	69	**20**	126	13	88	25	126	**48**	**77**	**24**	**149**
+30 mins.	21	**75**	**25**	**121**	37	**73**	19	129	17	80	31	128	33	44	22	99
+45 mins.	**22**	61	21	104	**44**	73	13	**130**	17	80	28	125	47	66	21	134
Total Volume	63	263	81	407	146	279	67	492	64	349	125	538	162	252	84	498
% App. Total	15.5	64.6	19.9		29.7	56.7	13.6		11.9	64.9	23.2		32.5	50.6	16.9	
PHF	.716	.877	.810	.841	.830	.955	.838	.946	.941	.864	.762	.846	.844	.818	.875	.836

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 11th Avenue
E/W: Fargo Avenue
Weather: Clear

File Name : 12_HFD_11th_Fargo PM
Site Code : 00322472
Start Date : 5/17/2022
Page No : 1

Groups Printed- Large 2 Axle Vehicles

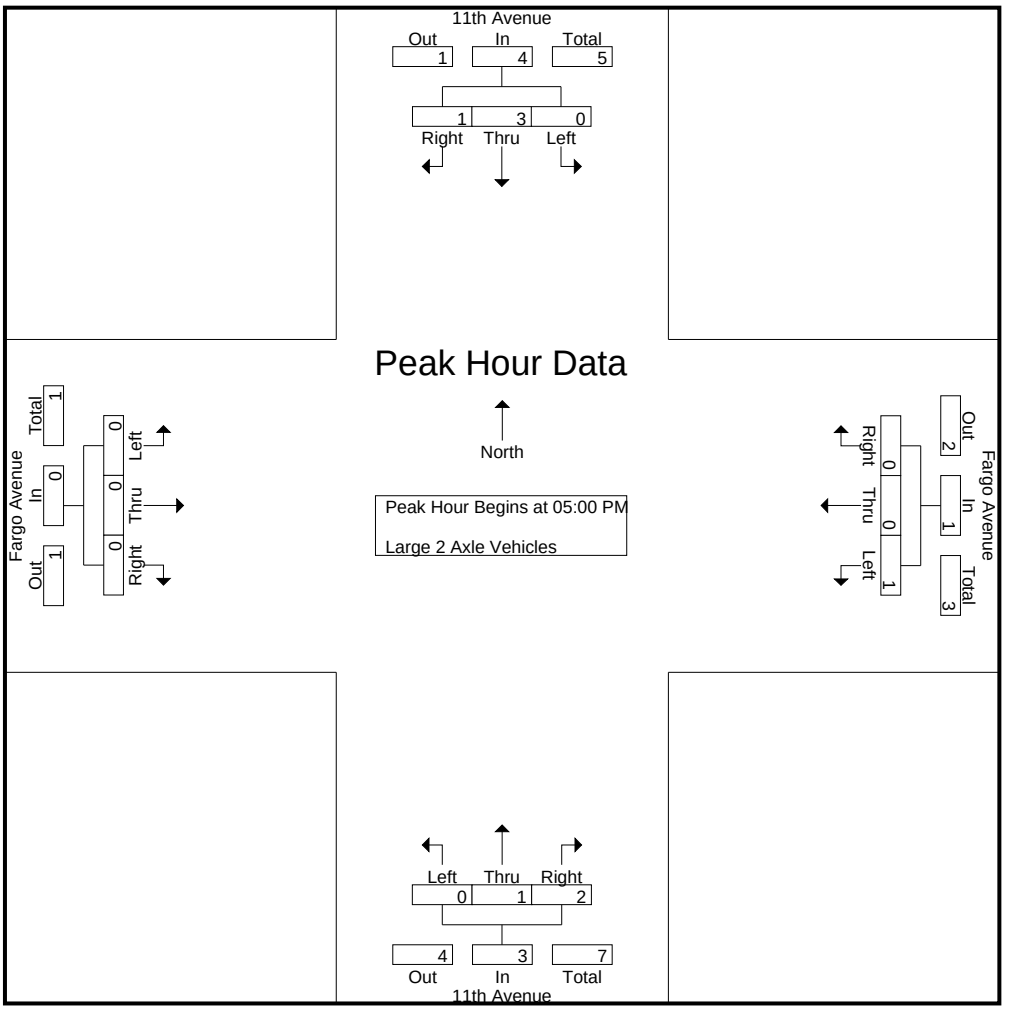
	11th Avenue Southbound				Fargo Avenue Westbound				11th Avenue Northbound				Fargo Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	0	1	1	0	2	0	1	0	1	0	1	0	1	4
04:15 PM	1	1	0	2	0	0	0	0	0	1	0	1	0	1	0	1	4
04:30 PM	1	2	0	3	0	0	0	0	0	0	0	0	0	0	0	0	3
04:45 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	2	4	0	6	1	1	0	2	0	2	0	2	0	2	0	2	12
05:00 PM	0	0	1	1	0	0	0	0	0	0	1	1	0	0	0	0	2
05:15 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
05:30 PM	0	1	0	1	1	0	0	1	0	0	0	0	0	0	0	0	2
05:45 PM	0	1	0	1	0	0	0	0	0	1	1	2	0	0	0	0	3
Total	0	3	1	4	1	0	0	1	0	1	2	3	0	0	0	0	8
Grand Total	2	7	1	10	2	1	0	3	0	3	2	5	0	2	0	2	20
Apprch %	20	70	10		66.7	33.3	0		0	60	40		0	100	0		
Total %	10	35	5	50	10	5	0	15	0	15	10	25	0	10	0	10	

	11th Avenue Southbound				Fargo Avenue Westbound				11th Avenue Northbound				Fargo Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	0	0	**1**	**1**	0	0	0	0	0	0	**1**	1	0	0	0	0	2
05:15 PM	0	**1**	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
05:30 PM	0	1	0	1	**1**	0	0	**1**	0	0	0	0	0	0	0	0	2
05:45 PM	0	1	0	1	0	0	0	0	0	**1**	1	**2**	0	0	0	0	**3**
Total Volume	0	3	1	4	1	0	0	1	0	1	2	3	0	0	0	0	8
% App. Total	0	75	25		100	0	0		0	33.3	66.7		0	0	0		
PHF	.000	.750	.250	1.00	.250	.000	.000	.250	.000	.250	.500	.375	.000	.000	.000	.000	.667

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 11th Avenue
E/W: Fargo Avenue
Weather: Clear

File Name : 12_HFD_11th_Fargo PM
Site Code : 00322472
Start Date : 5/17/2022



Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	05:00 PM				05:00 PM				05:00 PM				05:00 PM			
+0 mins.	0	0	**1**	**1**	0	0	0	0	0	0	**1**	1	0	0	0	0
+15 mins.	0	**1**	0	1	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	1	0	1	**1**	0	0	**1**	0	0	0	0	0	0	0	0
+45 mins.	0	1	0	1	0	0	0	0	0	**1**	1	**2**	0	0	0	0
Total Volume	0	3	1	4	1	0	0	1	0	1	2	3	0	0	0	0
% App. Total	0	75	25		100	0	0		0	33.3	66.7		0	0	0	
PHF	.000	.750	.250	1.000	.250	.000	.000	.250	.000	.250	.500	.375	.000	.000	.000	.000

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 11th Avenue
E/W: Fargo Avenue
Weather: Clear

File Name : 12_HFD_11th_Fargo PM
Site Code : 00322472
Start Date : 5/17/2022
Page No : 1

Groups Printed- 3 Axle Vehicles

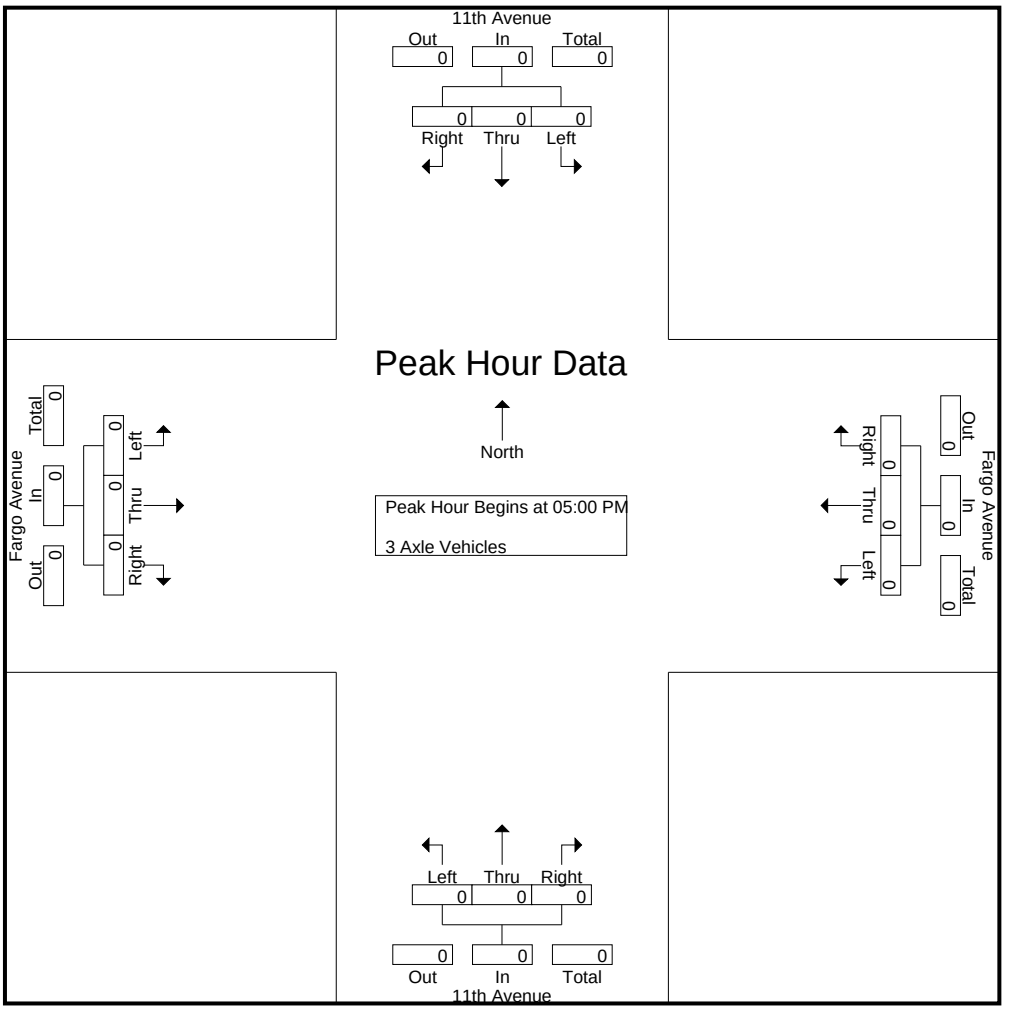
	11th Avenue Southbound				Fargo Avenue Westbound				11th Avenue Northbound				Fargo Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
Apprch %	0	0	0		0	0	0		0	100	0		0	0	0		
Total %	0	0	0	0	0	0	0	0	0	100	0	100	0	0	0	0	

	11th Avenue Southbound				Fargo Avenue Westbound				11th Avenue Northbound				Fargo Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0		0	0	0		0	0	0		0	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 11th Avenue
E/W: Fargo Avenue
Weather: Clear

File Name : 12_HFD_11th_Fargo PM
Site Code : 00322472
Start Date : 5/17/2022
Page No : 2



Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	05:00 PM				05:00 PM				05:00 PM				05:00 PM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0		0	0	0		0	0	0		0	0	0	
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 11th Avenue
E/W: Fargo Avenue
Weather: Clear

File Name : 12_HFD_11th_Fargo PM
Site Code : 00322472
Start Date : 5/17/2022
Page No : 1

Groups Printed- 4+ Axle Trucks

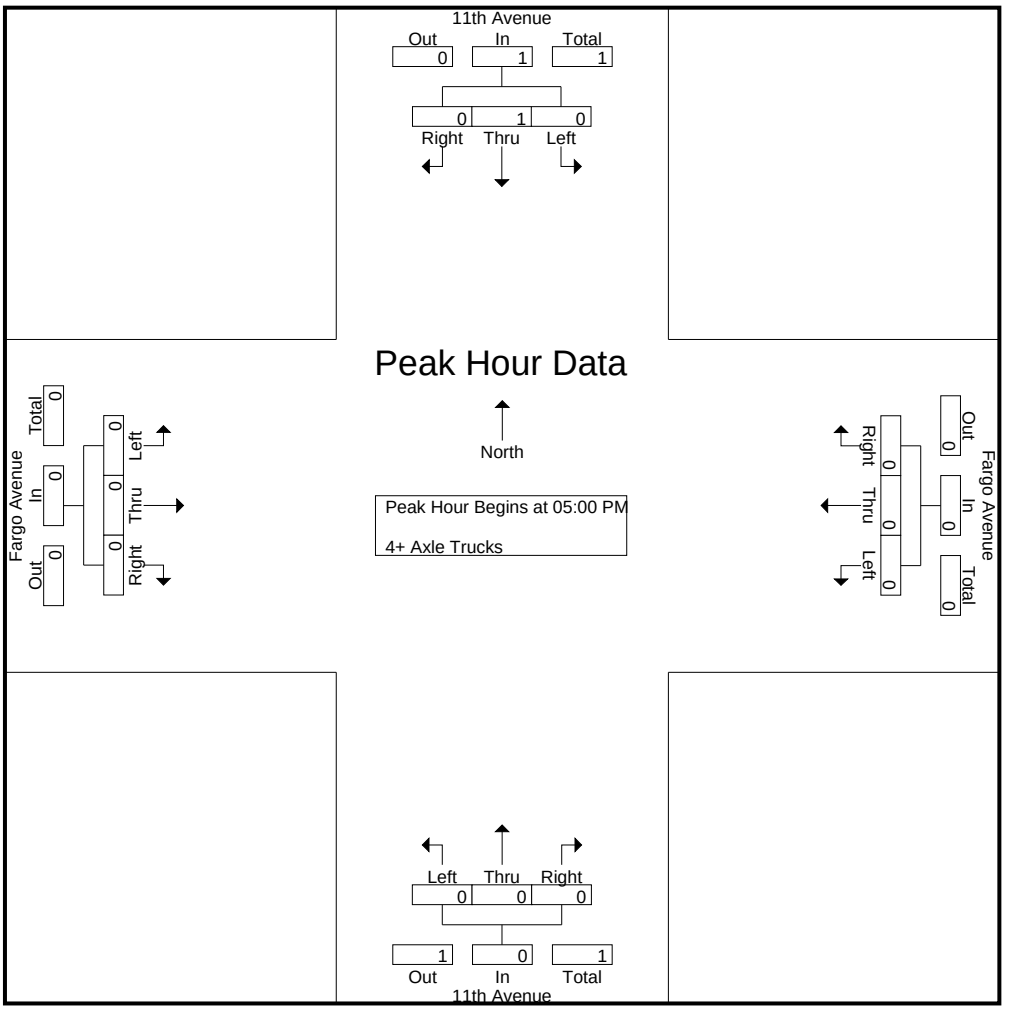
	11th Avenue Southbound				Fargo Avenue Westbound				11th Avenue Northbound				Fargo Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	2
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Grand Total	0	2	0	2	0	0	0	0	0	1	0	1	0	0	0	0	3
Apprch %	0	100	0		0	0	0		0	100	0		0	0	0		
Total %	0	66.7	0	66.7	0	0	0	0	0	33.3	0	33.3	0	0	0	0	

	11th Avenue Southbound				Fargo Avenue Westbound				11th Avenue Northbound				Fargo Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	**1**	0	**1**	0	0	0	0	0	0	0	0	0	0	0	0	**1**
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
% App. Total	0	100	0		0	0	0		0	0	0		0	0	0		
PHF	.000	.250	.000	.250	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 11th Avenue
E/W: Fargo Avenue
Weather: Clear

File Name : 12_HFD_11th_Fargo PM
Site Code : 00322472
Start Date : 5/17/2022
Page No : 2



Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	05:00 PM				05:00 PM				05:00 PM				05:00 PM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	**1**	0	**1**	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	100	0		0	0	0		0	0	0		0	0	0	
PHF	.000	.250	.000	.250	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

Location: Hanford
N/S: 11th Avenue
E/W: Fargo Avenue

Date: 5/17/2022
Day: Tuesday

PEDESTRIANS

	North Leg 11th Avenue Pedestrians	East Leg Fargo Avenue Pedestrians	South Leg 11th Avenue Pedestrians	West Leg Fargo Avenue Pedestrians	
7:00 AM	1	0	0	1	2
7:15 AM	2	1	0	3	6
7:30 AM	0	2	0	0	2
7:45 AM	0	1	1	0	2
8:00 AM	0	1	0	1	2
8:15 AM	1	0	0	2	3
8:30 AM	1	0	0	1	2
8:45 AM	0	0	0	1	1
TOTAL VOLUMES:	5	5	1	9	20

	North Leg 11th Avenue Pedestrians	East Leg Fargo Avenue Pedestrians	South Leg 11th Avenue Pedestrians	West Leg Fargo Avenue Pedestrians	
4:00 PM	1	0	0	0	1
4:15 PM	0	1	0	0	1
4:30 PM	1	1	0	0	2
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	2	2
5:15 PM	0	0	0	0	0
5:30 PM	1	0	0	0	1
5:45 PM	0	0	0	0	0
TOTAL VOLUMES:	3	2	0	2	7

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
951-268-6268

Location: Hanford
N/S: 11th Avenue
E/W: Fargo Avenue

Date: 5/17/2022
Day: Tuesday

BICYCLES

	Southbound 11th Avenue			Westbound Fargo Avenue			Northbound 11th Avenue			Eastbound Fargo Avenue			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	1
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	2	2
7:30 AM	0	0	0	0	0	0	0	0	0	1	0	0	1
7:45 AM	0	0	0	0	0	0	0	0	0	3	0	0	3
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	1	0	0	0	0	0	0	0	4	0	2	7

	Southbound 11th Avenue			Westbound Fargo Avenue			Northbound 11th Avenue			Eastbound Fargo Avenue			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	2	0	0	2
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	0	0	0	0	2	0	0	2

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
951-268-6268

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 10th Avenue (SR-43)
E/W: Flint Avenue
Weather: Clear

File Name : 13_HFD_SR43_Flint AM
Site Code : 00322472
Start Date : 5/17/2022
Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

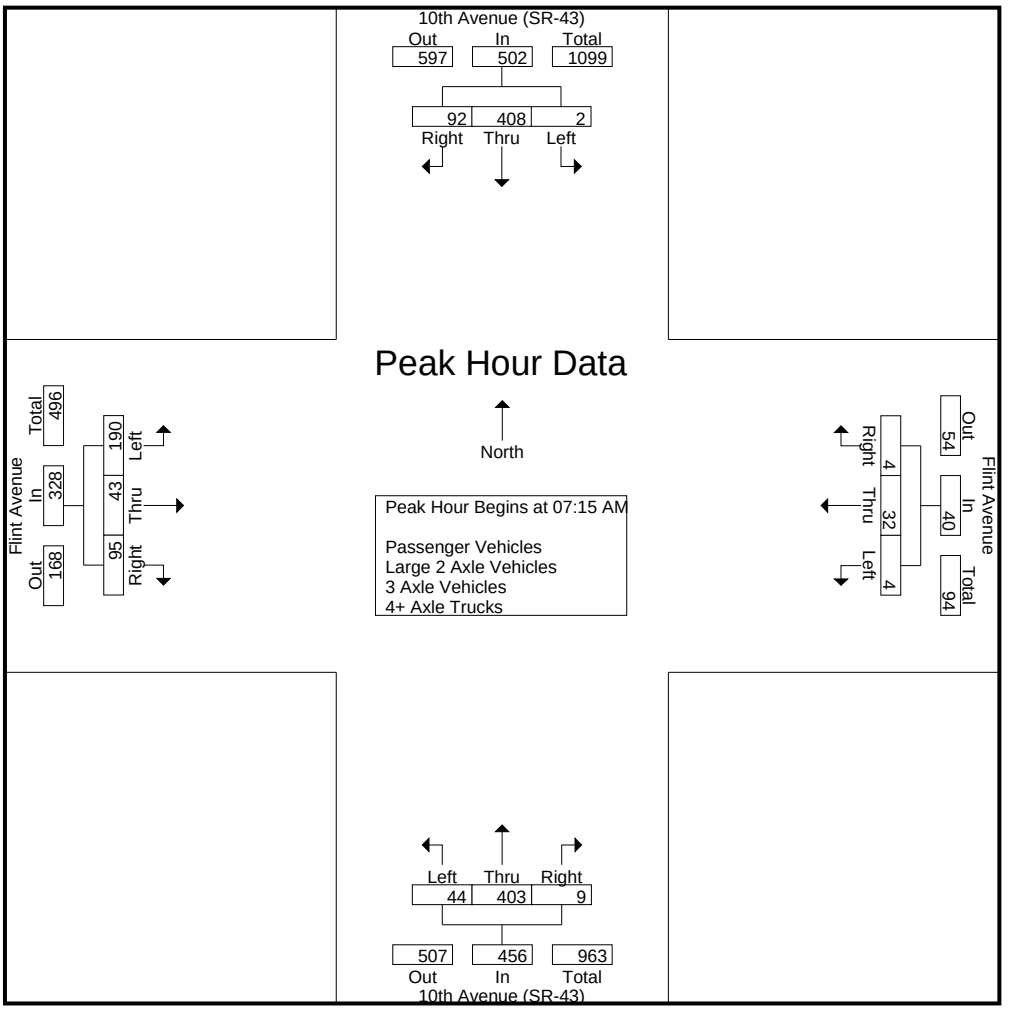
	10th Avenue (SR-43) Southbound				Flint Avenue Westbound				10th Avenue (SR-43) Northbound				Flint Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	103	8	111	0	4	0	4	6	87	2	95	27	6	20	53	263
07:15 AM	0	102	23	125	1	6	1	8	9	88	2	99	31	12	17	60	292
07:30 AM	1	98	23	122	2	7	2	11	11	137	3	151	84	9	22	115	399
07:45 AM	0	110	26	136	1	14	1	16	14	103	2	119	45	13	25	83	354
Total	1	413	80	494	4	31	4	39	40	415	9	464	187	40	84	311	1308
08:00 AM	1	98	20	119	0	5	0	5	10	75	2	87	30	9	31	70	281
08:15 AM	0	64	12	76	1	8	0	9	7	79	2	88	29	5	16	50	223
08:30 AM	1	83	22	106	1	2	0	3	6	68	1	75	28	13	18	59	243
08:45 AM	1	69	25	95	2	6	2	10	4	74	1	79	23	4	8	35	219
Total	3	314	79	396	4	21	2	27	27	296	6	329	110	31	73	214	966
Grand Total	4	727	159	890	8	52	6	66	67	711	15	793	297	71	157	525	2274
Apprch %	0.4	81.7	17.9		12.1	78.8	9.1		8.4	89.7	1.9		56.6	13.5	29.9		
Total %	0.2	32	7	39.1	0.4	2.3	0.3	2.9	2.9	31.3	0.7	34.9	13.1	3.1	6.9	23.1	
Passenger Vehicles	4	595	149	748	7	51	5	63	65	622	15	702	293	69	155	517	2030
% Passenger Vehicles	100	81.8	93.7	84	87.5	98.1	83.3	95.5	97	87.5	100	88.5	98.7	97.2	98.7	98.5	89.3
Large 2 Axle Vehicles	0	33	6	39	1	0	0	1	1	17	0	18	1	0	1	2	60
% Large 2 Axle Vehicles	0	4.5	3.8	4.4	12.5	0	0	1.5	1.5	2.4	0	2.3	0.3	0	0.6	0.4	2.6
3 Axle Vehicles	0	20	3	23	0	0	0	0	0	13	0	13	1	1	1	3	39
% 3 Axle Vehicles	0	2.8	1.9	2.6	0	0	0	0	0	1.8	0	1.6	0.3	1.4	0.6	0.6	1.7
4+ Axle Trucks	0	79	1	80	0	1	1	2	1	59	0	60	2	1	0	3	145
% 4+ Axle Trucks	0	10.9	0.6	9	0	1.9	16.7	3	1.5	8.3	0	7.6	0.7	1.4	0	0.6	6.4

	10th Avenue (SR-43) Southbound				Flint Avenue Westbound				10th Avenue (SR-43) Northbound				Flint Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	102	23	125	1	6	1	8	9	88	2	99	31	12	17	60	292
07:30 AM	**1**	98	23	122	**2**	7	**2**	11	11	**137**	**3**	**151**	**84**	9	22	**115**	**399**
07:45 AM	0	**110**	**26**	**136**	1	**14**	1	**16**	**14**	103	2	119	45	**13**	25	83	354
08:00 AM	1	98	20	119	0	5	0	5	10	75	2	87	30	9	**31**	70	281
Total Volume	2	408	92	502	4	32	4	40	44	403	9	456	190	43	95	328	1326
% App. Total	0.4	81.3	18.3		10	80	10		9.6	88.4	2		57.9	13.1	29		
PHF	.500	.927	.885	.923	.500	.571	.500	.625	.786	.735	.750	.755	.565	.827	.766	.713	.831

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 10th Avenue (SR-43)
E/W: Flint Avenue
Weather: Clear

File Name : 13_HFD_SR43_Flint AM
Site Code : 00322472
Start Date : 5/17/2022
Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:30 AM				07:00 AM				07:15 AM			
+0 mins.	0	102	23	125	**2**	7	**2**	11	6	87	2	95	31	12	17	60
+15 mins.	**1**	98	23	122	1	**14**	1	**16**	9	88	2	99	**84**	9	22	**115**
+30 mins.	0	**110**	**26**	**136**	0	5	0	5	11	**137**	**3**	**151**	45	**13**	25	83
+45 mins.	1	98	20	119	1	8	0	9	**14**	103	2	119	30	9	**31**	70
Total Volume	2	408	92	502	4	34	3	41	40	415	9	464	190	43	95	328
% App. Total	0.4	81.3	18.3		9.8	82.9	7.3		8.6	89.4	1.9		57.9	13.1	29	
PHF	.500	.927	.885	.923	.500	.607	.375	.641	.714	.757	.750	.768	.565	.827	.766	.713

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 10th Avenue (SR-43)
E/W: Flint Avenue
Weather: Clear

File Name : 13_HFD_SR43_Flint AM
Site Code : 00322472
Start Date : 5/17/2022
Page No : 1

Groups Printed- Passenger Vehicles

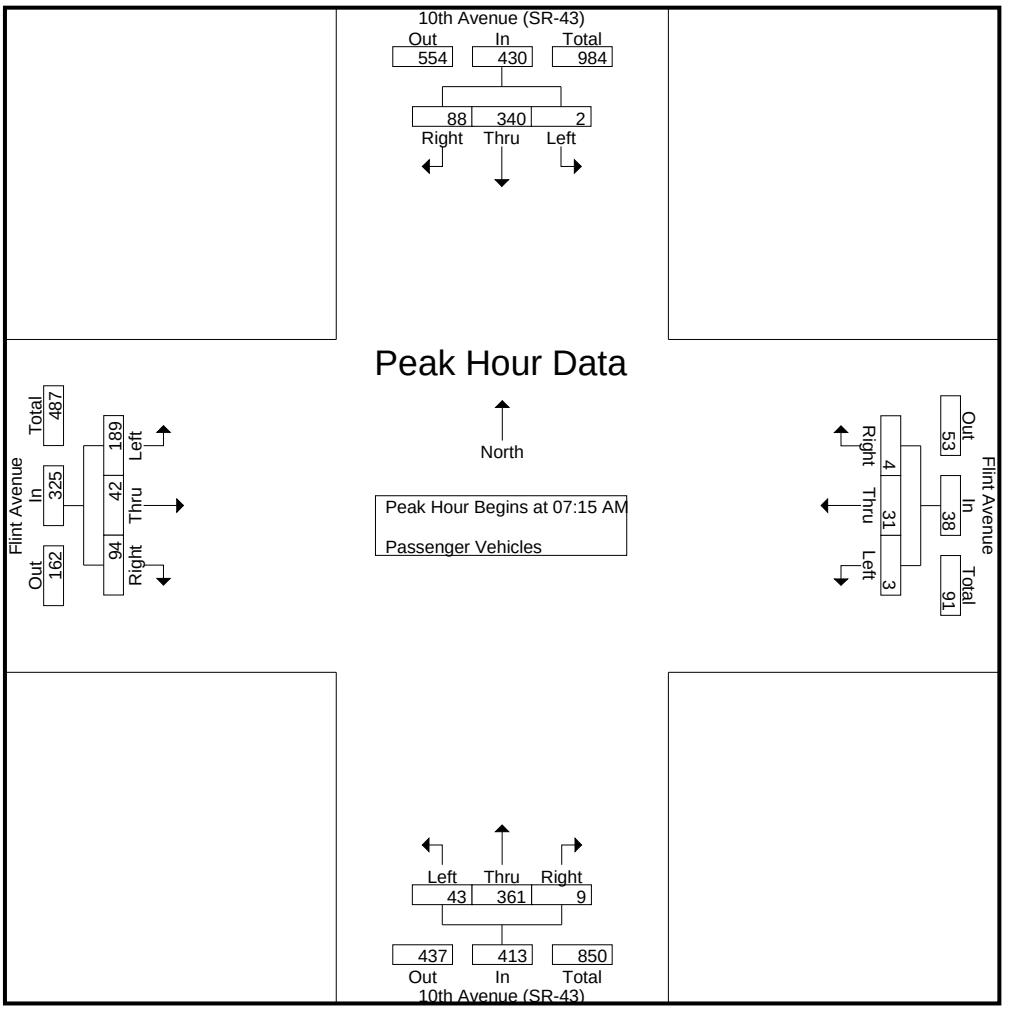
	10th Avenue (SR-43) Southbound				Flint Avenue Westbound				10th Avenue (SR-43) Northbound				Flint Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	84	6	90	0	4	0	4	6	80	2	88	25	5	20	50	232
07:15 AM	0	84	20	104	0	6	1	7	9	79	2	90	30	12	17	59	260
07:30 AM	1	83	22	106	2	7	2	11	11	128	3	142	84	8	22	114	373
07:45 AM	0	94	26	120	1	14	1	16	14	93	2	109	45	13	25	83	328
Total	1	345	74	420	3	31	4	38	40	380	9	429	184	38	84	306	1193
08:00 AM	1	79	20	100	0	4	0	4	9	61	2	72	30	9	30	69	245
08:15 AM	0	50	12	62	1	8	0	9	6	61	2	69	28	5	16	49	189
08:30 AM	1	62	20	83	1	2	0	3	6	58	1	65	28	13	17	58	209
08:45 AM	1	59	23	83	2	6	1	9	4	62	1	67	23	4	8	35	194
Total	3	250	75	328	4	20	1	25	25	242	6	273	109	31	71	211	837
Grand Total	4	595	149	748	7	51	5	63	65	622	15	702	293	69	155	517	2030
Apprch %	0.5	79.5	19.9		11.1	81	7.9		9.3	88.6	2.1		56.7	13.3	30		
Total %	0.2	29.3	7.3	36.8	0.3	2.5	0.2	3.1	3.2	30.6	0.7	34.6	14.4	3.4	7.6	25.5	

	10th Avenue (SR-43) Southbound				Flint Avenue Westbound				10th Avenue (SR-43) Northbound				Flint Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	84	20	104	0	6	1	7	9	79	2	90	30	12	17	59	260
07:30 AM	**1**	83	22	106	**2**	7	**2**	11	11	**128**	**3**	**142**	**84**	8	22	**114**	**373**
07:45 AM	0	**94**	**26**	**120**	1	**14**	1	**16**	**14**	93	2	109	45	**13**	25	83	328
08:00 AM	1	79	20	100	0	4	0	4	9	61	2	72	30	9	**30**	69	245
Total Volume	2	340	88	430	3	31	4	38	43	361	9	413	189	42	94	325	1206
% App. Total	0.5	79.1	20.5		7.9	81.6	10.5		10.4	87.4	2.2		58.2	12.9	28.9		
PHF	.500	.904	.846	.896	.375	.554	.500	.594	.768	.705	.750	.727	.563	.808	.783	.713	.808

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 10th Avenue (SR-43)
E/W: Flint Avenue
Weather: Clear

File Name : 13_HFD_SR43_Flint AM
Site Code : 00322472
Start Date : 5/17/2022
Page No : 2



Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	0	84	20	104	0	6	1	7	9	79	2	90	30	12	17	59
+15 mins.	**1**	83	22	106	**2**	7	**2**	11	11	**128**	**3**	**142**	**84**	8	22	**114**
+30 mins.	0	**94**	**26**	**120**	1	**14**	1	**16**	**14**	93	2	109	45	**13**	25	83
+45 mins.	1	79	20	100	0	4	0	4	9	61	2	72	30	9	**30**	69
Total Volume	2	340	88	430	3	31	4	38	43	361	9	413	189	42	94	325
% App. Total	0.5	79.1	20.5		7.9	81.6	10.5		10.4	87.4	2.2		58.2	12.9	28.9	
PHF	.500	.904	.846	.896	.375	.554	.500	.594	.768	.705	.750	.727	.563	.808	.783	.713

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 10th Avenue (SR-43)
E/W: Flint Avenue
Weather: Clear

File Name : 13_HFD_SR43_Flint AM
Site Code : 00322472
Start Date : 5/17/2022
Page No : 1

Groups Printed- Large 2 Axle Vehicles

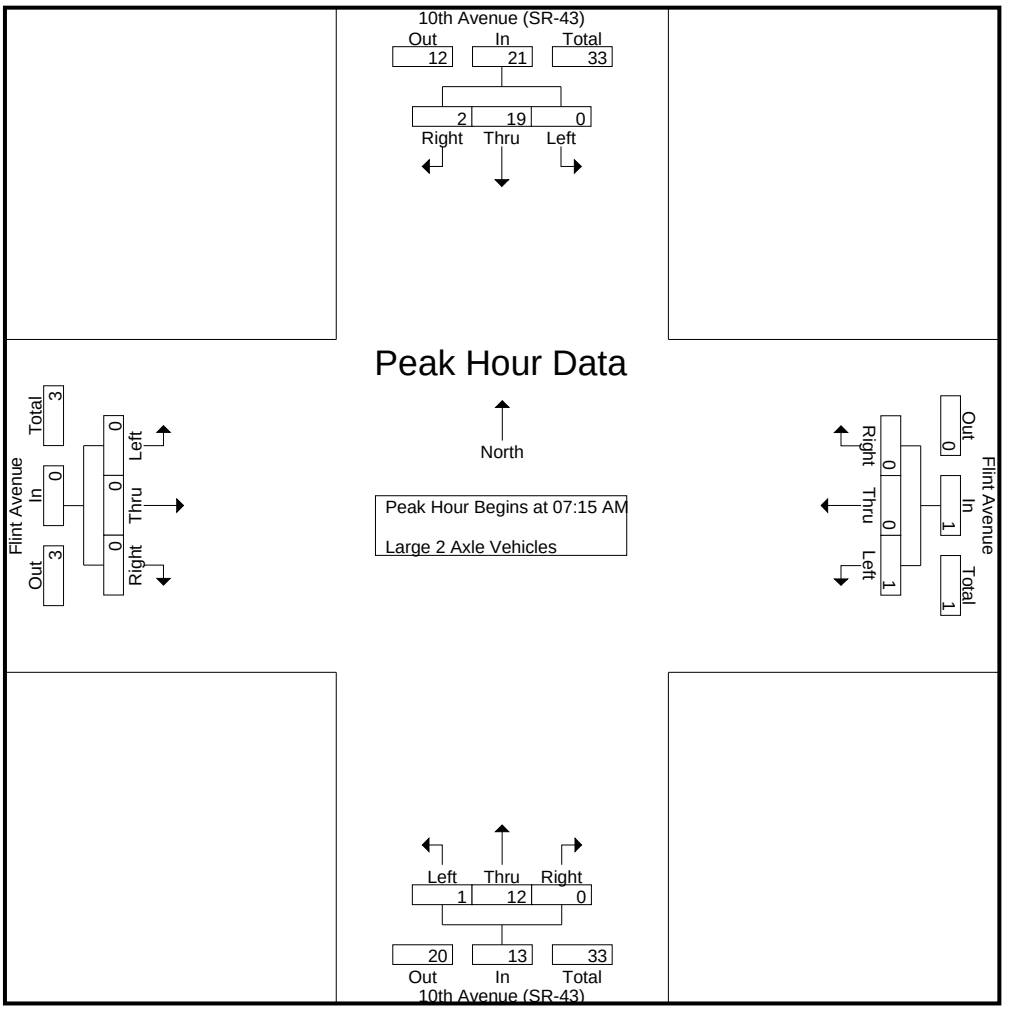
	10th Avenue (SR-43) Southbound				Flint Avenue Westbound				10th Avenue (SR-43) Northbound				Flint Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	6	2	8	0	0	0	0	0	1	0	1	1	0	0	1	10
07:15 AM	0	3	2	5	1	0	0	1	0	4	0	4	0	0	0	0	10
07:30 AM	0	3	0	3	0	0	0	0	0	3	0	3	0	0	0	0	6
07:45 AM	0	8	0	8	0	0	0	0	0	2	0	2	0	0	0	0	10
Total	0	20	4	24	1	0	0	1	0	10	0	10	1	0	0	1	36
08:00 AM	0	5	0	5	0	0	0	0	1	3	0	4	0	0	0	0	9
08:15 AM	0	1	0	1	0	0	0	0	0	2	0	2	0	0	0	0	3
08:30 AM	0	5	2	7	0	0	0	0	0	2	0	2	0	0	1	1	10
08:45 AM	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
Total	0	13	2	15	0	0	0	0	1	7	0	8	0	0	1	1	24
Grand Total	0	33	6	39	1	0	0	1	1	17	0	18	1	0	1	2	60
Apprch %	0	84.6	15.4		100	0	0		5.6	94.4	0		50	0	50		
Total %	0	55	10	65	1.7	0	0	1.7	1.7	28.3	0	30	1.7	0	1.7	3.3	

	10th Avenue (SR-43) Southbound				Flint Avenue Westbound				10th Avenue (SR-43) Northbound				Flint Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	3	**2**	5	**1**	0	0	**1**	0	**4**	0	**4**	0	0	0	0	**10**
07:30 AM	0	3	0	3	0	0	0	0	0	3	0	3	0	0	0	0	6
07:45 AM	0	**8**	0	**8**	0	0	0	0	0	2	0	2	0	0	0	0	10
08:00 AM	0	5	0	5	0	0	0	0	**1**	3	0	4	0	0	0	0	9
Total Volume	0	19	2	21	1	0	0	1	1	12	0	13	0	0	0	0	35
% App. Total	0	90.5	9.5		100	0	0		7.7	92.3	0		0	0	0		
PHF	.000	.594	.250	.656	.250	.000	.000	.250	.250	.750	.000	.813	.000	.000	.000	.000	.875

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 10th Avenue (SR-43)
E/W: Flint Avenue
Weather: Clear

File Name : 13_HFD_SR43_Flint AM
Site Code : 00322472
Start Date : 5/17/2022
Page No : 2



Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	0	3	**2**	5	**1**	0	0	**1**	0	**4**	0	**4**	0	0	0	0
+15 mins.	0	3	0	3	0	0	0	0	0	3	0	3	0	0	0	0
+30 mins.	0	**8**	0	**8**	0	0	0	0	0	2	0	2	0	0	0	0
+45 mins.	0	5	0	5	0	0	0	0	**1**	3	0	4	0	0	0	0
Total Volume	0	19	2	21	1	0	0	1	1	12	0	13	0	0	0	0
% App. Total	0	90.5	9.5		100	0	0		7.7	92.3	0		0	0	0	
PHF	.000	.594	.250	.656	.250	.000	.000	.250	.250	.750	.000	.813	.000	.000	.000	.000

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 10th Avenue (SR-43)
E/W: Flint Avenue
Weather: Clear

File Name : 13_HFD_SR43_Flint AM
Site Code : 00322472
Start Date : 5/17/2022
Page No : 1

Groups Printed- 3 Axle Vehicles

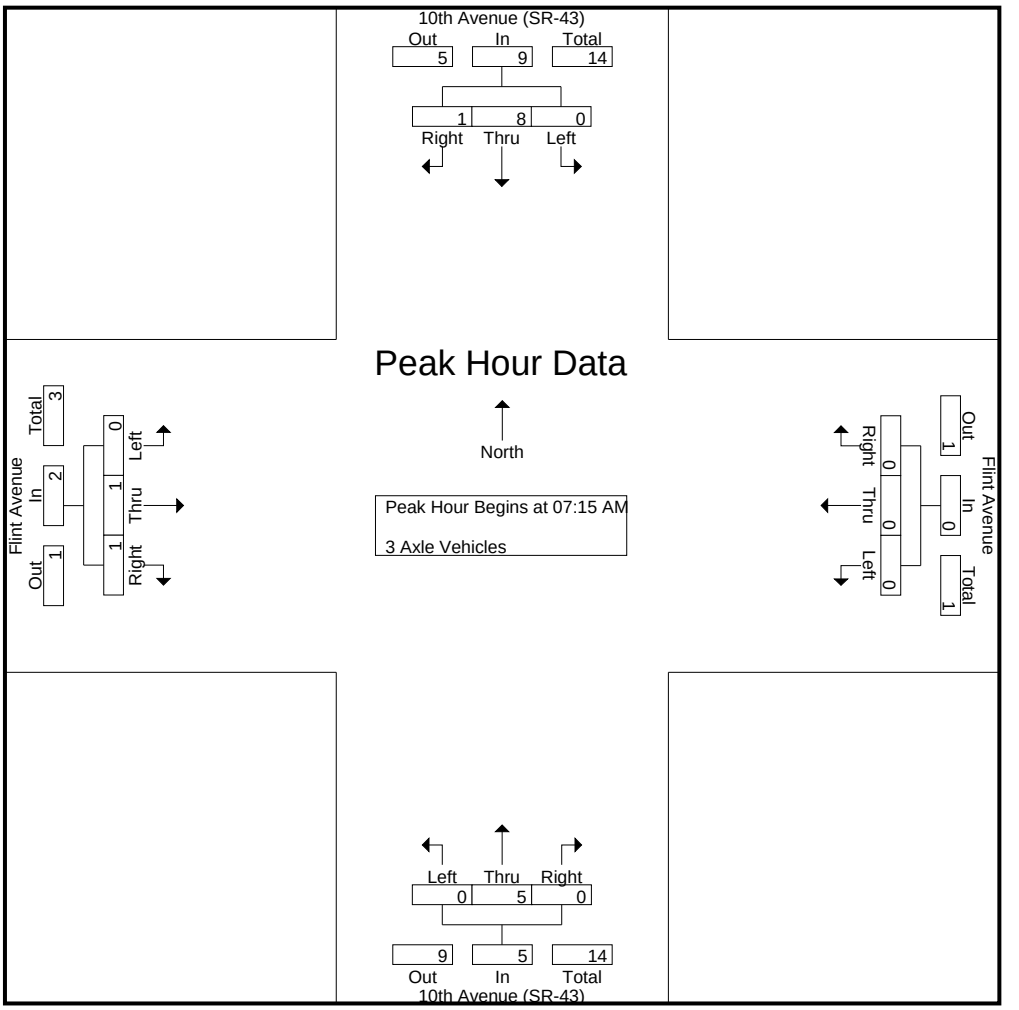
	10th Avenue (SR-43) Southbound				Flint Avenue Westbound				10th Avenue (SR-43) Northbound				Flint Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	4	0	4	0	0	0	0	0	4	0	4	0	0	0	0	8
07:15 AM	0	2	1	3	0	0	0	0	0	0	0	0	0	0	0	0	3
07:30 AM	0	3	0	3	0	0	0	0	0	0	0	0	0	1	0	1	4
07:45 AM	0	2	0	2	0	0	0	0	0	3	0	3	0	0	0	0	5
Total	0	11	1	12	0	0	0	0	0	7	0	7	0	1	0	1	20
08:00 AM	0	1	0	1	0	0	0	0	0	2	0	2	0	0	1	1	4
08:15 AM	0	1	0	1	0	0	0	0	0	1	0	1	1	0	0	1	3
08:30 AM	0	5	0	5	0	0	0	0	0	1	0	1	0	0	0	0	6
08:45 AM	0	2	2	4	0	0	0	0	0	2	0	2	0	0	0	0	6
Total	0	9	2	11	0	0	0	0	0	6	0	6	1	0	1	2	19
Grand Total	0	20	3	23	0	0	0	0	0	13	0	13	1	1	1	3	39
Apprch %	0	87	13		0	0	0		0	100	0		33.3	33.3	33.3		
Total %	0	51.3	7.7	59	0	0	0	0	0	33.3	0	33.3	2.6	2.6	2.6	7.7	

	10th Avenue (SR-43) Southbound				Flint Avenue Westbound				10th Avenue (SR-43) Northbound				Flint Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	2	**1**	**3**	0	0	0	0	0	0	0	0	0	0	0	0	3
07:30 AM	0	**3**	0	3	0	0	0	0	0	0	0	0	0	**1**	0	**1**	4
07:45 AM	0	2	0	2	0	0	0	0	0	**3**	0	**3**	0	0	0	0	**5**
08:00 AM	0	1	0	1	0	0	0	0	0	2	0	2	0	0	**1**	1	4
Total Volume	0	8	1	9	0	0	0	0	0	5	0	5	0	1	1	2	16
% App. Total	0	88.9	11.1		0	0	0		0	100	0		0	50	50		
PHF	.000	.667	.250	.750	.000	.000	.000	.000	.000	.417	.000	.417	.000	.250	.250	.500	.800

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 10th Avenue (SR-43)
E/W: Flint Avenue
Weather: Clear

File Name : 13_HFD_SR43_Flint AM
Site Code : 00322472
Start Date : 5/17/2022
Page No : 2



Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	0	2	**1**	**3**	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	**3**	0	3	0	0	0	0	0	0	0	0	0	**1**	0	**1**
+30 mins.	0	2	0	2	0	0	0	0	0	**3**	0	**3**	0	0	0	0
+45 mins.	0	1	0	1	0	0	0	0	0	2	0	2	0	0	**1**	1
Total Volume	0	8	1	9	0	0	0	0	0	5	0	5	0	1	1	2
% App. Total	0	88.9	11.1		0	0	0		0	100	0		0	50	50	
PHF	.000	.667	.250	.750	.000	.000	.000	.000	.000	.417	.000	.417	.000	.250	.250	.500

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 10th Avenue (SR-43)
E/W: Flint Avenue
Weather: Clear

File Name : 13_HFD_SR43_Flint AM
Site Code : 00322472
Start Date : 5/17/2022
Page No : 1

Groups Printed- 4+ Axle Trucks

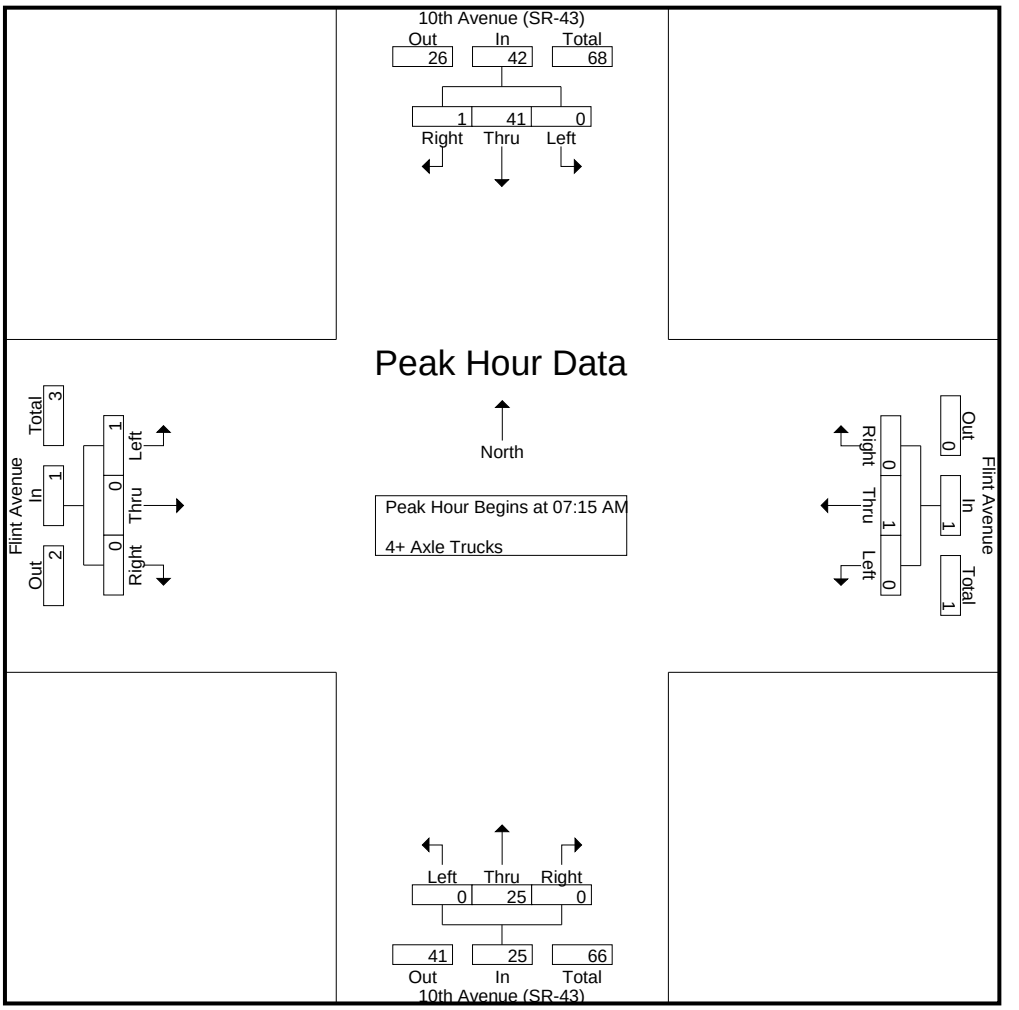
	10th Avenue (SR-43) Southbound				Flint Avenue Westbound				10th Avenue (SR-43) Northbound				Flint Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	9	0	9	0	0	0	0	0	2	0	2	1	1	0	2	13
07:15 AM	0	13	0	13	0	0	0	0	0	5	0	5	1	0	0	1	19
07:30 AM	0	9	1	10	0	0	0	0	0	6	0	6	0	0	0	0	16
07:45 AM	0	6	0	6	0	0	0	0	0	5	0	5	0	0	0	0	11
Total	0	37	1	38	0	0	0	0	0	18	0	18	2	1	0	3	59
08:00 AM	0	13	0	13	0	1	0	1	0	9	0	9	0	0	0	0	23
08:15 AM	0	12	0	12	0	0	0	0	1	15	0	16	0	0	0	0	28
08:30 AM	0	11	0	11	0	0	0	0	0	7	0	7	0	0	0	0	18
08:45 AM	0	6	0	6	0	0	1	1	0	10	0	10	0	0	0	0	17
Total	0	42	0	42	0	1	1	2	1	41	0	42	0	0	0	0	86
Grand Total	0	79	1	80	0	1	1	2	1	59	0	60	2	1	0	3	145
Apprch %	0	98.8	1.2		0	50	50		1.7	98.3	0		66.7	33.3	0		
Total %	0	54.5	0.7	55.2	0	0.7	0.7	1.4	0.7	40.7	0	41.4	1.4	0.7	0	2.1	

	10th Avenue (SR-43) Southbound				Flint Avenue Westbound				10th Avenue (SR-43) Northbound				Flint Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	**13**	0	**13**	0	0	0	0	0	5	0	5	**1**	0	0	**1**	19
07:30 AM	0	9	**1**	10	0	0	0	0	0	6	0	6	0	0	0	0	16
07:45 AM	0	6	0	6	0	0	0	0	0	5	0	5	0	0	0	0	11
08:00 AM	0	13	0	13	0	**1**	0	**1**	0	**9**	0	**9**	0	0	0	0	**23**
Total Volume	0	41	1	42	0	1	0	1	0	25	0	25	1	0	0	1	69
% App. Total	0	97.6	2.4		0	100	0		0	100	0		100	0	0		
PHF	.000	.788	.250	.808	.000	.250	.000	.250	.000	.694	.000	.694	.250	.000	.000	.250	.750

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 10th Avenue (SR-43)
E/W: Flint Avenue
Weather: Clear

File Name : 13_HFD_SR43_Flint AM
Site Code : 00322472
Start Date : 5/17/2022



Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	0	**13**	0	**13**	0	0	0	0	0	5	0	5	**1**	0	0	**1**
+15 mins.	0	9	**1**	10	0	0	0	0	0	6	0	6	0	0	0	0
+30 mins.	0	6	0	6	0	0	0	0	0	5	0	5	0	0	0	0
+45 mins.	0	13	0	13	0	**1**	0	**1**	0	**9**	0	**9**	0	0	0	0
Total Volume	0	41	1	42	0	1	0	1	0	25	0	25	1	0	0	1
% App. Total	0	97.6	2.4		0	100	0		0	100	0		100	0	0	
PHF	.000	.788	.250	.808	.000	.250	.000	.250	.000	.694	.000	.694	.250	.000	.000	.250

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 10th Avenue (SR-43)
E/W: Flint Avenue
Weather: Clear

File Name : 13_HFD_SR43_Flint PM
Site Code : 00322472
Start Date : 5/17/2022
Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

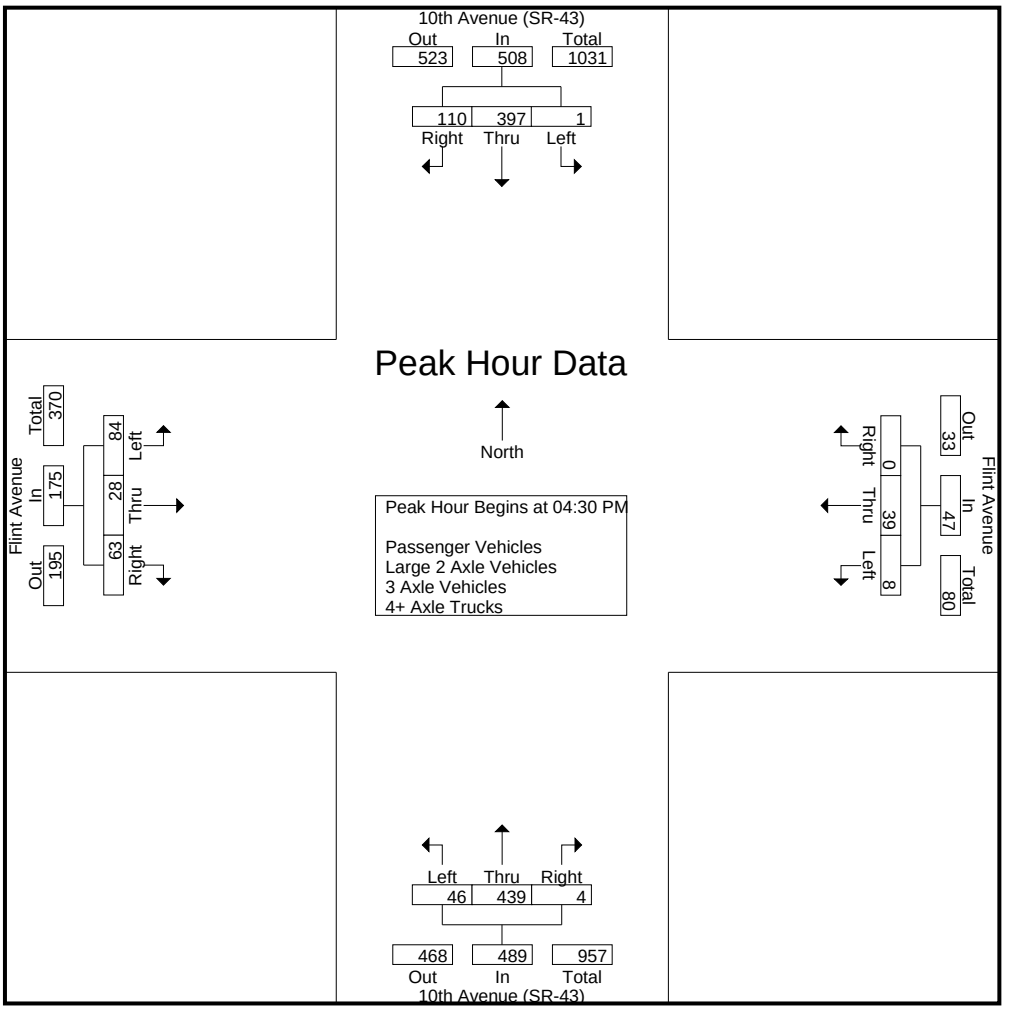
	10th Avenue (SR-43) Southbound				Flint Avenue Westbound				10th Avenue (SR-43) Northbound				Flint Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	101	24	125	2	18	0	20	8	76	2	86	26	6	13	45	276
04:15 PM	0	87	23	110	4	6	2	12	15	100	5	120	23	7	6	36	278
04:30 PM	0	111	27	138	2	6	0	8	7	127	0	134	24	8	14	46	326
04:45 PM	1	94	25	120	2	13	0	15	11	92	0	103	19	5	16	40	278
Total	1	393	99	493	10	43	2	55	41	395	7	443	92	26	49	167	1158
05:00 PM	0	86	27	113	0	7	0	7	12	111	1	124	21	8	21	50	294
05:15 PM	0	106	31	137	4	13	0	17	16	109	3	128	20	7	12	39	321
05:30 PM	0	96	33	129	2	6	0	8	11	97	3	111	31	9	15	55	303
05:45 PM	0	120	42	162	0	9	0	9	14	71	1	86	23	3	7	33	290
Total	0	408	133	541	6	35	0	41	53	388	8	449	95	27	55	177	1208
Grand Total	1	801	232	1034	16	78	2	96	94	783	15	892	187	53	104	344	2366
Apprch %	0.1	77.5	22.4		16.7	81.2	2.1		10.5	87.8	1.7		54.4	15.4	30.2		
Total %	0	33.9	9.8	43.7	0.7	3.3	0.1	4.1	4	33.1	0.6	37.7	7.9	2.2	4.4	14.5	
Passenger Vehicles	1	749	228	978	16	76	1	93	90	728	14	832	183	50	101	334	2237
% Passenger Vehicles	100	93.5	98.3	94.6	100	97.4	50	96.9	95.7	93	93.3	93.3	97.9	94.3	97.1	97.1	94.5
Large 2 Axle Vehicles	0	11	2	13	0	0	0	0	1	13	0	14	2	1	2	5	32
% Large 2 Axle Vehicles	0	1.4	0.9	1.3	0	0	0	0	1.1	1.7	0	1.6	1.1	1.9	1.9	1.5	1.4
3 Axle Vehicles	0	4	1	5	0	1	1	2	1	3	0	4	1	1	0	2	13
% 3 Axle Vehicles	0	0.5	0.4	0.5	0	1.3	50	2.1	1.1	0.4	0	0.4	0.5	1.9	0	0.6	0.5
4+ Axle Trucks	0	37	1	38	0	1	0	1	2	39	1	42	1	1	1	3	84
% 4+ Axle Trucks	0	4.6	0.4	3.7	0	1.3	0	1	2.1	5	6.7	4.7	0.5	1.9	1	0.9	3.6

	10th Avenue (SR-43) Southbound				Flint Avenue Westbound				10th Avenue (SR-43) Northbound				Flint Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	0	**111**	27	**138**	2	6	0	8	7	**127**	0	**134**	**24**	**8**	14	46	**326**
04:45 PM	**1**	94	25	120	2	**13**	0	15	11	92	0	103	19	5	16	40	278
05:00 PM	0	86	27	113	0	7	0	7	12	111	1	124	21	8	**21**	**50**	294
05:15 PM	0	106	**31**	137	**4**	13	0	**17**	**16**	109	**3**	128	20	7	12	39	321
Total Volume	1	397	110	508	8	39	0	47	46	439	4	489	84	28	63	175	1219
% App. Total	0.2	78.1	21.7		17	83	0		9.4	89.8	0.8		48	16	36		
PHF	.250	.894	.887	.920	.500	.750	.000	.691	.719	.864	.333	.912	.875	.875	.750	.875	.935

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 10th Avenue (SR-43)
E/W: Flint Avenue
Weather: Clear

File Name : 13_HFD_SR43_Flint PM
Site Code : 00322472
Start Date : 5/17/2022
Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	05:00 PM				04:00 PM				04:30 PM				04:45 PM			
+0 mins.	0	86	27	113	2	**18**	0	**20**	7	**127**	0	**134**	19	5	16	40
+15 mins.	0	106	31	137	**4**	6	**2**	12	11	92	0	103	21	8	**21**	50
+30 mins.	0	96	33	129	2	6	0	8	12	111	1	124	20	7	12	39
+45 mins.	0	**120**	**42**	**162**	2	13	0	15	**16**	109	**3**	128	**31**	**9**	15	**55**
Total Volume	0	408	133	541	10	43	2	55	46	439	4	489	91	29	64	184
% App. Total	0	75.4	24.6		18.2	78.2	3.6		9.4	89.8	0.8		49.5	15.8	34.8	
PHF	.000	.850	.792	.835	.625	.597	.250	.688	.719	.864	.333	.912	.734	.806	.762	.836

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 10th Avenue (SR-43)
E/W: Flint Avenue
Weather: Clear

File Name : 13_HFD_SR43_Flint PM
Site Code : 00322472
Start Date : 5/17/2022
Page No : 1

Groups Printed- Passenger Vehicles

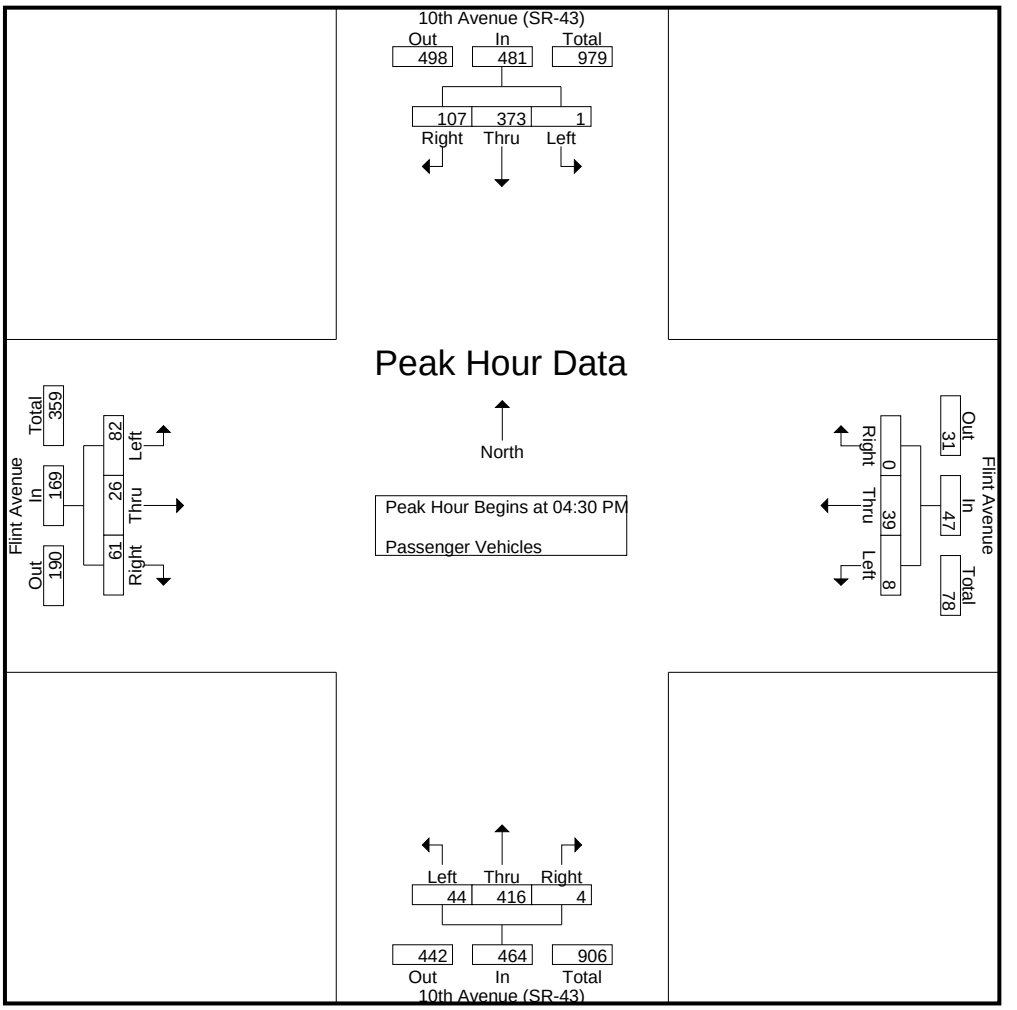
	10th Avenue (SR-43) Southbound				Flint Avenue Westbound				10th Avenue (SR-43) Northbound				Flint Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	89	23	112	2	18	0	20	7	68	2	77	25	6	13	44	253
04:15 PM	0	77	23	100	4	6	1	11	14	87	5	106	22	6	5	33	250
04:30 PM	0	101	26	127	2	6	0	8	6	120	0	126	23	7	14	44	305
04:45 PM	1	89	25	115	2	13	0	15	11	91	0	102	19	5	16	40	272
Total	1	356	97	454	10	43	1	54	38	366	7	411	89	24	48	161	1080
05:00 PM	0	81	27	108	0	7	0	7	12	105	1	118	21	7	21	49	282
05:15 PM	0	102	29	131	4	13	0	17	15	100	3	118	19	7	10	36	302
05:30 PM	0	94	33	127	2	6	0	8	11	92	2	105	31	9	15	55	295
05:45 PM	0	116	42	158	0	7	0	7	14	65	1	80	23	3	7	33	278
Total	0	393	131	524	6	33	0	39	52	362	7	421	94	26	53	173	1157
Grand Total	1	749	228	978	16	76	1	93	90	728	14	832	183	50	101	334	2237
Apprch %	0.1	76.6	23.3		17.2	81.7	1.1		10.8	87.5	1.7		54.8	15	30.2		
Total %	0	33.5	10.2	43.7	0.7	3.4	0	4.2	4	32.5	0.6	37.2	8.2	2.2	4.5	14.9	

	10th Avenue (SR-43) Southbound				Flint Avenue Westbound				10th Avenue (SR-43) Northbound				Flint Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	0	101	26	127	2	6	0	8	6	**120**	0	**126**	**23**	**7**	14	44	**305**
04:45 PM	**1**	89	25	115	2	**13**	0	15	11	91	0	102	19	5	16	40	272
05:00 PM	0	81	27	108	0	7	0	7	12	105	1	118	21	7	**21**	**49**	282
05:15 PM	0	**102**	**29**	**131**	**4**	13	0	**17**	**15**	100	**3**	118	19	7	10	36	302
Total Volume	1	373	107	481	8	39	0	47	44	416	4	464	82	26	61	169	1161
% App. Total	0.2	77.5	22.2		17	83	0		9.5	89.7	0.9		48.5	15.4	36.1		
PHF	.250	.914	.922	.918	.500	.750	.000	.691	.733	.867	.333	.921	.891	.929	.726	.862	.952

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 10th Avenue (SR-43)
E/W: Flint Avenue
Weather: Clear

File Name : 13_HFD_SR43_Flint PM
Site Code : 00322472
Start Date : 5/17/2022
Page No : 2



Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM				04:30 PM				04:30 PM				04:30 PM			
+0 mins.	0	101	26	127	2	6	0	8	6	**120**	0	**126**	**23**	**7**	14	44
+15 mins.	**1**	89	25	115	2	**13**	0	15	11	91	0	102	19	5	16	40
+30 mins.	0	81	27	108	0	7	0	7	12	105	1	118	21	7	**21**	**49**
+45 mins.	0	**102**	**29**	**131**	**4**	13	0	**17**	**15**	100	**3**	118	19	7	10	36
Total Volume	1	373	107	481	8	39	0	47	44	416	4	464	82	26	61	169
% App. Total	0.2	77.5	22.2		17	83	0		9.5	89.7	0.9		48.5	15.4	36.1	
PHF	.250	.914	.922	.918	.500	.750	.000	.691	.733	.867	.333	.921	.891	.929	.726	.862

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 10th Avenue (SR-43)
E/W: Flint Avenue
Weather: Clear

File Name : 13_HFD_SR43_Flint PM
Site Code : 00322472
Start Date : 5/17/2022
Page No : 1

Groups Printed- Large 2 Axle Vehicles

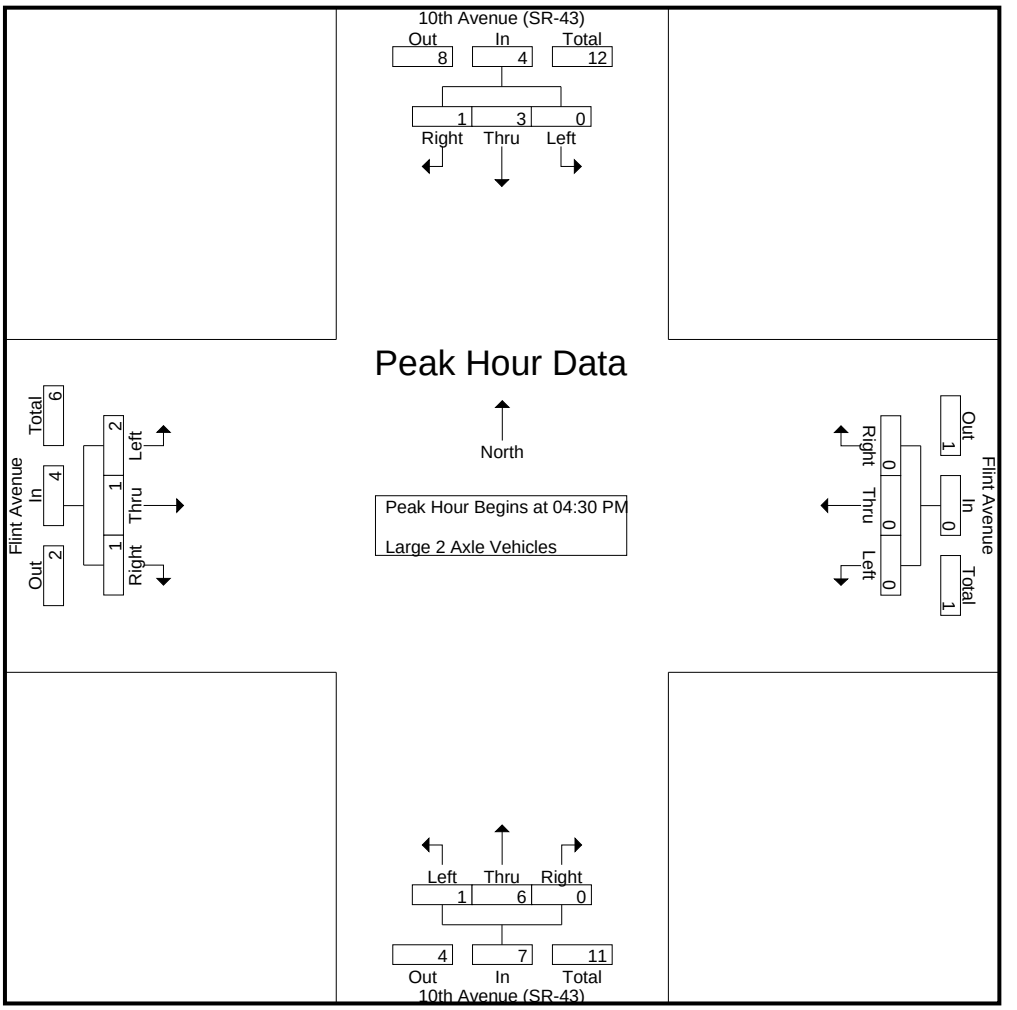
	10th Avenue (SR-43) Southbound				Flint Avenue Westbound				10th Avenue (SR-43) Northbound				Flint Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	3	1	4	0	0	0	0	0	3	0	3	0	0	0	0	7
04:15 PM	0	2	0	2	0	0	0	0	0	4	0	4	0	0	1	1	7
04:30 PM	0	2	1	3	0	0	0	0	1	2	0	3	1	0	0	1	7
04:45 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	8	2	10	0	0	0	0	1	9	0	10	1	0	1	2	22
05:00 PM	0	0	0	0	0	0	0	0	0	2	0	2	0	1	0	1	3
05:15 PM	0	0	0	0	0	0	0	0	0	2	0	2	1	0	1	2	4
05:30 PM	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
05:45 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	3	0	3	0	0	0	0	0	4	0	4	1	1	1	3	10
Grand Total	0	11	2	13	0	0	0	0	1	13	0	14	2	1	2	5	32
Apprch %	0	84.6	15.4		0	0	0		7.1	92.9	0		40	20	40		
Total %	0	34.4	6.2	40.6	0	0	0	0	3.1	40.6	0	43.8	6.2	3.1	6.2	15.6	

	10th Avenue (SR-43) Southbound				Flint Avenue Westbound				10th Avenue (SR-43) Northbound				Flint Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	0	**2**	**1**	**3**	0	0	0	0	**1**	**2**	0	**3**	**1**	0	0	1	**7**
04:45 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
05:00 PM	0	0	0	0	0	0	0	0	0	2	0	2	0	**1**	0	1	3
05:15 PM	0	0	0	0	0	0	0	0	0	2	0	2	1	0	**1**	**2**	4
Total Volume	0	3	1	4	0	0	0	0	1	6	0	7	2	1	1	4	15
% App. Total	0	75	25		0	0	0		14.3	85.7	0		50	25	25		
PHF	.000	.375	.250	.333	.000	.000	.000	.000	.250	.750	.000	.583	.500	.250	.250	.500	.536

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 10th Avenue (SR-43)
E/W: Flint Avenue
Weather: Clear

File Name : 13_HFD_SR43_Flint PM
Site Code : 00322472
Start Date : 5/17/2022
Page No : 2



Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM				04:30 PM				04:30 PM				04:30 PM			
+0 mins.	0	**2**	**1**	**3**	0	0	0	0	**1**	**2**	0	**3**	**1**	0	0	1
+15 mins.	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	2	0	2	0	**1**	0	1
+45 mins.	0	0	0	0	0	0	0	0	0	2	0	2	1	0	**1**	**2**
Total Volume	0	3	1	4	0	0	0	0	1	6	0	7	2	1	1	4
% App. Total	0	75	25		0	0	0		14.3	85.7	0		50	25	25	
PHF	.000	.375	.250	.333	.000	.000	.000	.000	.250	.750	.000	.583	.500	.250	.250	.500

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 10th Avenue (SR-43)
E/W: Flint Avenue
Weather: Clear

File Name : 13_HFD_SR43_Flint PM
Site Code : 00322472
Start Date : 5/17/2022
Page No : 1

Groups Printed- 3 Axle Vehicles

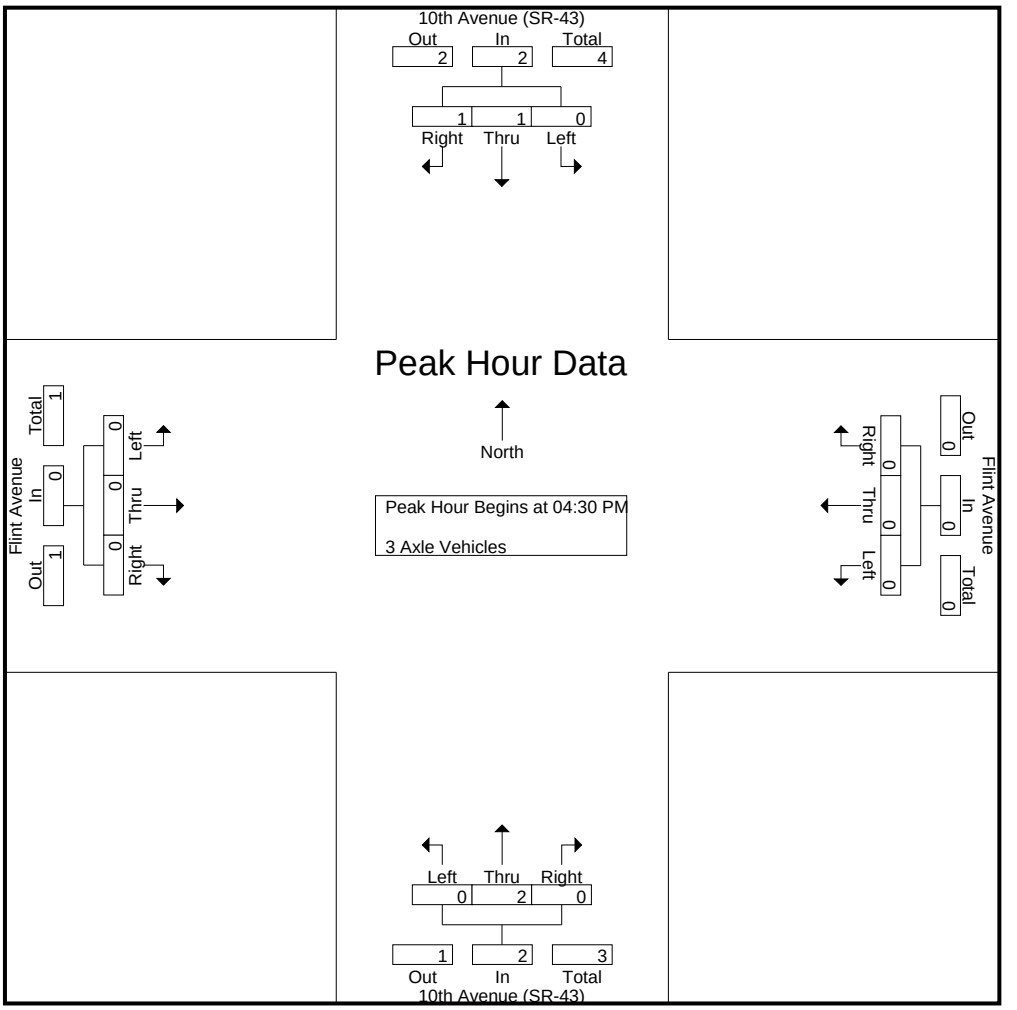
	10th Avenue (SR-43) Southbound				Flint Avenue Westbound				10th Avenue (SR-43) Northbound				Flint Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	2	0	2	0	0	0	0	1	0	0	1	0	0	0	0	3
04:15 PM	0	1	0	1	0	0	1	1	0	0	0	0	1	1	0	2	4
04:30 PM	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	2
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	4	0	4	0	0	1	1	1	1	0	2	1	1	0	2	9
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	1	1	0	0	0	0	0	1	0	1	0	0	0	0	2
05:30 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
05:45 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
Total	0	0	1	1	0	1	0	1	0	2	0	2	0	0	0	0	4
Grand Total	0	4	1	5	0	1	1	2	1	3	0	4	1	1	0	2	13
Apprch %	0	80	20		0	50	50		25	75	0		50	50	0		
Total %	0	30.8	7.7	38.5	0	7.7	7.7	15.4	7.7	23.1	0	30.8	7.7	7.7	0	15.4	

	10th Avenue (SR-43) Southbound				Flint Avenue Westbound				10th Avenue (SR-43) Northbound				Flint Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	0	**1**	0	**1**	0	0	0	0	0	**1**	0	**1**	0	0	0	0	**2**
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	**1**	1	0	0	0	0	0	1	0	1	0	0	0	0	2
Total Volume	0	1	1	2	0	0	0	0	0	2	0	2	0	0	0	0	4
% App. Total	0	50	50		0	0	0		0	100	0		0	0	0		
PHF	.000	.250	.250	.500	.000	.000	.000	.000	.000	.500	.000	.500	.000	.000	.000	.000	.500

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 10th Avenue (SR-43)
E/W: Flint Avenue
Weather: Clear

File Name : 13_HFD_SR43_Flint PM
Site Code : 00322472
Start Date : 5/17/2022
Page No : 2



Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM				04:30 PM				04:30 PM				04:30 PM			
+0 mins.	0	**1**	0	**1**	0	0	0	0	0	**1**	0	**1**	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	**1**	1	0	0	0	0	0	1	0	1	0	0	0	0
Total Volume	0	1	1	2	0	0	0	0	0	2	0	2	0	0	0	0
% App. Total	0	50	50		0	0	0		0	100	0		0	0	0	
PHF	.000	.250	.250	.500	.000	.000	.000	.000	.000	.500	.000	.500	.000	.000	.000	.000

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 10th Avenue (SR-43)
E/W: Flint Avenue
Weather: Clear

File Name : 13_HFD_SR43_Flint PM
Site Code : 00322472
Start Date : 5/17/2022
Page No : 1

Groups Printed- 4+ Axle Trucks

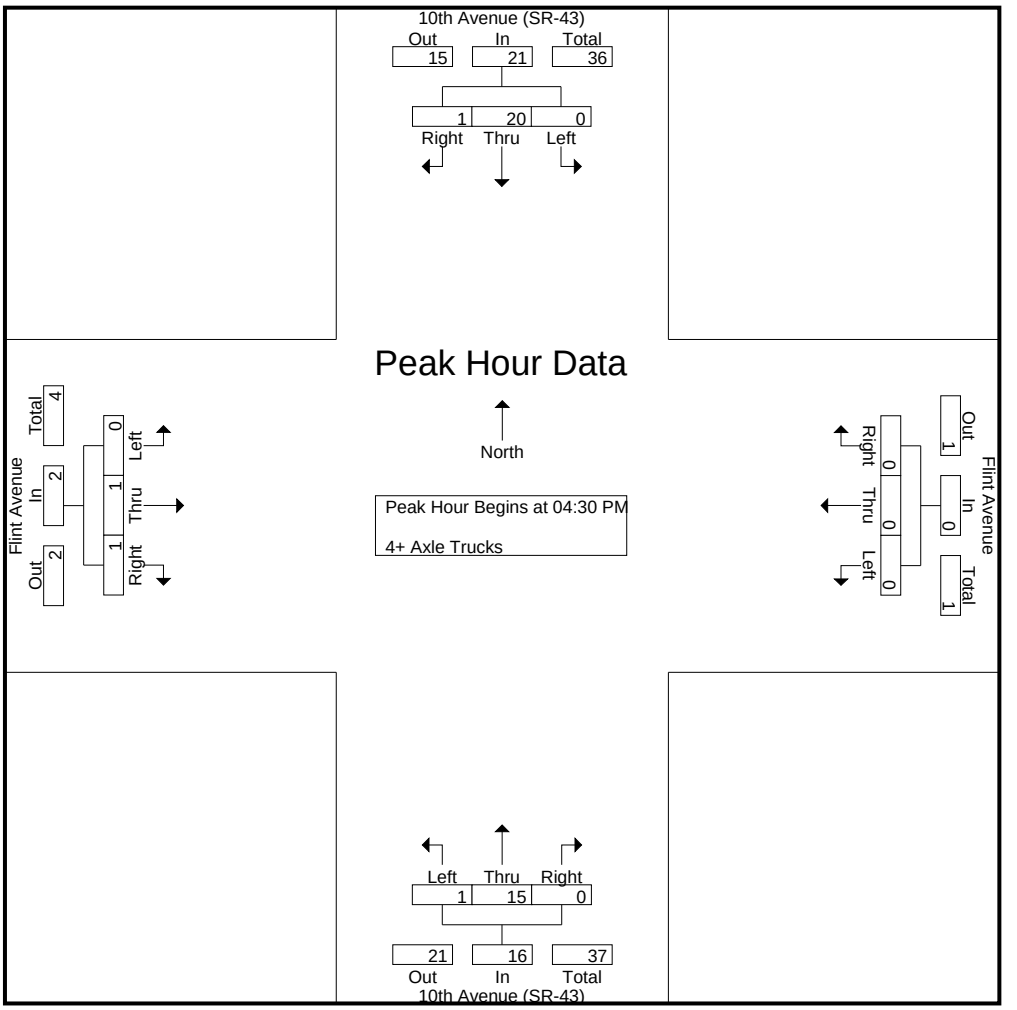
	10th Avenue (SR-43) Southbound				Flint Avenue Westbound				10th Avenue (SR-43) Northbound				Flint Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	7	0	7	0	0	0	0	0	5	0	5	1	0	0	1	13
04:15 PM	0	7	0	7	0	0	0	0	1	9	0	10	0	0	0	0	17
04:30 PM	0	7	0	7	0	0	0	0	0	4	0	4	0	1	0	1	12
04:45 PM	0	4	0	4	0	0	0	0	0	1	0	1	0	0	0	0	5
Total	0	25	0	25	0	0	0	0	1	19	0	20	1	1	0	2	47
05:00 PM	0	5	0	5	0	0	0	0	0	4	0	4	0	0	0	0	9
05:15 PM	0	4	1	5	0	0	0	0	1	6	0	7	0	0	1	1	13
05:30 PM	0	0	0	0	0	0	0	0	0	4	1	5	0	0	0	0	5
05:45 PM	0	3	0	3	0	1	0	1	0	6	0	6	0	0	0	0	10
Total	0	12	1	13	0	1	0	1	1	20	1	22	0	0	1	1	37
Grand Total	0	37	1	38	0	1	0	1	2	39	1	42	1	1	1	3	84
Apprch %	0	97.4	2.6		0	100	0		4.8	92.9	2.4		33.3	33.3	33.3		
Total %	0	44	1.2	45.2	0	1.2	0	1.2	2.4	46.4	1.2	50	1.2	1.2	1.2	3.6	

	10th Avenue (SR-43) Southbound				Flint Avenue Westbound				10th Avenue (SR-43) Northbound				Flint Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	0	**7**	0	**7**	0	0	0	0	0	4	0	4	0	**1**	0	**1**	12
04:45 PM	0	4	0	4	0	0	0	0	0	1	0	1	0	0	0	0	5
05:00 PM	0	5	0	5	0	0	0	0	0	4	0	4	0	0	0	0	9
05:15 PM	0	4	**1**	5	0	0	0	0	**1**	**6**	0	**7**	0	0	**1**	1	**13**
Total Volume	0	20	1	21	0	0	0	0	1	15	0	16	0	1	1	2	39
% App. Total	0	95.2	4.8		0	0	0		6.2	93.8	0		0	50	50		
PHF	.000	.714	.250	.750	.000	.000	.000	.000	.250	.625	.000	.571	.000	.250	.250	.500	.750

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Hanford
N/S: 10th Avenue (SR-43)
E/W: Flint Avenue
Weather: Clear

File Name : 13_HFD_SR43_Flint PM
Site Code : 00322472
Start Date : 5/17/2022
Page No : 2



Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM				04:30 PM				04:30 PM				04:30 PM			
+0 mins.	0	**7**	0	**7**	0	0	0	0	0	4	0	4	0	**1**	0	**1**
+15 mins.	0	4	0	4	0	0	0	0	0	1	0	1	0	0	0	0
+30 mins.	0	5	0	5	0	0	0	0	0	4	0	4	0	0	0	0
+45 mins.	0	4	**1**	5	0	0	0	0	**1**	**6**	0	**7**	0	0	**1**	1
Total Volume	0	20	1	21	0	0	0	0	1	15	0	16	0	1	1	2
% App. Total	0	95.2	4.8		0	0	0		6.2	93.8	0		0	50	50	
PHF	.000	.714	.250	.750	.000	.000	.000	.000	.250	.625	.000	.571	.000	.250	.250	.500

Location: Hanford
N/S: 10th Avenue (SR-43)
E/W: Flint Avenue

Date: 5/17/2022
Day: Tuesday

PEDESTRIANS

	North Leg 10th Avenue (SR-43) Pedestrians	East Leg Flint Avenue Pedestrians	South Leg 10th Avenue (SR-43) Pedestrians	West Leg Flint Avenue Pedestrians	
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0

	North Leg 10th Avenue (SR-43) Pedestrians	East Leg Flint Avenue Pedestrians	South Leg 10th Avenue (SR-43) Pedestrians	West Leg Flint Avenue Pedestrians	
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
951-268-6268

Location: Hanford
N/S: 10th Avenue (SR-43)
E/W: Flint Avenue

Date: 5/17/2022
Day: Tuesday

BICYCLES

	Southbound 10th Avenue (SR-43)			Westbound Flint Avenue			Northbound 10th Avenue (SR-43)			Eastbound Flint Avenue			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	1	0	0	0	1
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	0	0	0	1	0	0	0	1

	Southbound 10th Avenue (SR-43)			Westbound Flint Avenue			Northbound 10th Avenue (SR-43)			Eastbound Flint Avenue			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	0	0	0	0	0	0	0	0

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
951-268-6268

12 AVE & FARGO TIMING

2. CONTROLLER SUBMENU

1. CONTROLLER TIMING DATA

PHASE	1	2	3	4	5	6	7	8	9	10	11	12
MIN GRN	5	5	5	5	5	5	5	5				
BIKE GRN												
CS MGRN	7		7		7		7					
WALK		11		11		11		11				
PED CLR	7	7	7	7	7	7	7	7				
VEH EXT	1.5	2.0	2.0	2.0	1.5	2.0	1.5	2.0				
VEH EXT2												
MAX EXT												
MAX1	15	25	15	25	15	25	15	25				
MAX2	20	30	20	30	20	30	20	30				
MAX3	25	35	25	35	25	35	25	35				
DET MAX												
YELLOW	4.0	4.5	4.0	4.5	4.0	4.5	4.0	4.5				
RED CLR	1	1	1	1	1	1	1	1				
RED RVT	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0				
ACT B4												
SEC/ACT												
MAX INI	30	30	30	30	30	30	30	30				
TIME B4												
CARS WT												
TTREDUC												
MIN GAP												

2. PHASE OVERLAP ASSIGNMENTS

	OVERLAP CONISISTS OF PHASES:											
OVLP PHASE	1	2	3	4	5	6	7	8	9	10	11	12
1	X											
2		X										
3			X									
4				X								
5					X							
6						X						
7							X					
8								X				
9									X			
10										X		
11											X	
12												X

3. PED TIMING CARRYOVER

PHASE	CARRYOVER PHASE	PHASE	CARRYOVER PHASE
1		7	
2		8	
3		9	
4		10	
5		11	
6		12	

4. CONTROLLER RECALL DATA

PHASE	1	2	3	4	5	6	7	8	9	10	11	12
LOCKING MEMORY												
VEHICLE RECALL												
PED RECALL												
RECALL TO MAX												
SOFT RECALL		X				X						
DON'T REST HERE												
PED DARK N/CALL												

5. CONTROLLER OVERLAP DATA

OVERLAP A	1	2	3	4	5	6	7	8	9	10	11	12
STANDARD												
PROTECTED												
PERMITTED												
ENABLE LAG												
ENABLE LEAD												
SPARE												
ADVANCE GREEN TIMER												
LAG/LEAD GREEN TIMER												
LAG/LEAD YELLOW TIMER												
LAG/LEAD RED TIMER												

OVERLAP B	1	2	3	4	5	6	7	8	9	10	11	12
STANDARD												
PROTECTED												
PERMITTED												
ENABLE LAG												
ENABLE LEAD												
SPARE												
ADVANCE GREEN TIMER												
LAG/LEAD GREEN TIMER												
LAG/LEAD YELLOW TIMER												
LAG/LEAD RED TIMER												

OVERLAP C	1	2	3	4	5	6	7	8	9	10	11	12
STANDARD												
PROTECTED												
PERMITTED												
ENABLE LAG												
ENABLE LEAD												
SPARE												
ADVANCE GREEN TIMER												
LAG/LEAD GREEN TIMER												
LAG/LEAD YELLOW TIMER												
LAG/LEAD RED TIMER												

OVERLAP D	1	2	3	4	5	6	7	8	9	10	11	12
STANDARD												
PROTECTED												
PERMITTED												
ENABLE LAG												
ENABLE LEAD												
SPARE												
ADVANCE GREEN TIMER												
LAG/LEAD GREEN TIMER												
LAG/LEAD YELLOW TIMER												
LAG/LEAD RED TIMER												

ϕ 1,6 SB

ϕ 2,5 NB

ϕ 3,8 WB

ϕ 4,7 EB

ϕ 3 15 sec. min Green - temp time

ϕ 4 10 " " " "

*TIMING CHANGES FOR: WALK, PED CLR, + Red Clr

10-28-19

12th | Grangeville

2-1. CONTROLLER TIMING DATA

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
MINIMUM GREEN	5	5	5	5	5	5	5	5								
BICYCLE MINIMUM GREEN																
CONDITIONAL SERVICE MINIMUM GREEN	7		7		7		7									
DELAYED GREEN																
WALK		11		11		11		11								
WALK 2																
WALK MAX																
PEDESTRIAN CLEARANCE		19		19		19		19								
PEDESTRIAN CLEARANCE 2																
PEDESTRIAN CLEARANCE MAX																
PEDESTRIAN CARRY OVER																
VEHICLE EXTENSION	1.5	2.0	R40	2.0	1.5	2.0	1.5	2.0								
VEHICLE EXTENSION 2																
MAX1	25	35	30	35	25	35	25	35								
MAX2	15	20	15	20	15	20	15	20								
MAX3	30	40	30	40	30	40	30	40								
DYNAMIC MAX																
DYNAMIC MAX STEP																
YELLOW CHANGE	3.5	4	3.5	4	3.5	4	3.5	4								
RED CLRANCE	1	1	1	1	1	1	1	1								
RED MAX																
RED REVERT	2	2	2	2	2	2	2	2								
ACTUATIONS BEFORE GAP REDUCTION																
SECONDS PER ACTIONS ADDED TO INITIAL																
MAXIMUM ADDED INITIAL GREEN	30	30	30	30	30	30	30	30								
TIME BEFORE GAP REDUCTION		10		10		10		10								
CARS WAITING BEFORE GAP REDUCTION																
STEP TO REDUCE																
TIME TO REDUCE TO MINIMUM		25		25		25		25								
MININIMUM GAP	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5								

12th | Greenfield

2. CONTROLLER SUBMENU

1. CONTROLLER TIMING DATA

PHASE	1	2	3	4	5	6	7	8	9	10	11	12
MIN GRN	5	5	5	5	5	5	5	5				
BIKE GRN												
CS MGRN	7		7		7		7					
WALK		8		8		8		8				
PED CLR		23		23		23		23				
VEH EXT	1.0	1.5	1.0	1.5	1.0	1.5	1.0	1.5				
VEH EXT 2												
MAX EXT												
MAX1	10	20	15	25	15	15	20	25				
MAX2	15	15	15	15	15	15	15	15				
MAX3	10	20	15	25	15	15	20	25				
DET MAX												
YELLOW	3	4	3	4	3	4	3	4				
RED CLR	1	1	1	1	1	1	1	1				
RED RVT	2	2	2	2	2	2	2	2				
ACT B4												
SEC/ACT												
MAX INI				3				3				
TIME B4												
CARS WT												
TTREDUC												
MIN GAP				2.0				2.0				

2. PHASE OVERLAP ASSIGNMENTS

	OVERLAP CONSISTS OF PHASES:											
OVLP PHASE	1	2	3	4	5	6	7	8	9	10	11	12
1												
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												

3. PED TIMING CARRYOVER

PHASE	CARRYOVER PHASE	PHASE	CARRYOVER PHASE
1		7	
2		8	
3		9	
4		10	
5		11	
6		12	

4. CONTROLLER RECALL DATA

PHASE	1	2	3	4	5	6	7	8	9	10	11	12
LOCKING MEMORY												
VEHICLE RECALL												
PED RECALL												
RECALL TO MAX												
SOFT RECALL		X				X						
DON'T REST HERE												
PED DARK N/CALL												

5. CONTROLLER OVERLAP DATA

OVERLAP A	1	2	3	4	5	6	7	8	9	10	11	12
STANDARD												
PROTECTED												
PERMITTED												
ENABLE LAG												
ENABLE LEAD												
SPARE												
ADVANCE GREEN TIMER												
LAG/LEAD GREEN TIMER												
LAG/LEAD YELLOW TIMER												
LAG/LEAD RED TIMER												

OVERLAP B	1	2	3	4	5	6	7	8	9	10	11	12
STANDARD												
PROTECTED												
PERMITTED												
ENABLE LAG												
ENABLE LEAD												
SPARE												
ADVANCE GREEN TIMER												
LAG/LEAD GREEN TIMER												
LAG/LEAD YELLOW TIMER												
LAG/LEAD RED TIMER												

OVERLAP C	1	2	3	4	5	6	7	8	9	10	11	12
STANDARD												
PROTECTED												
PERMITTED												
ENABLE LAG												
ENABLE LEAD												
SPARE												
ADVANCE GREEN TIMER												
LAG/LEAD GREEN TIMER												
LAG/LEAD YELLOW TIMER												
LAG/LEAD RED TIMER												

OVERLAP D	1	2	3	4	5	6	7	8	9	10	11	12
STANDARD												
PROTECTED												
PERMITTED												
ENABLE LAG												
ENABLE LEAD												
SPARE												
ADVANCE GREEN TIMER												
LAG/LEAD GREEN TIMER												
LAG/LEAD YELLOW TIMER												
LAG/LEAD RED TIMER												

PED OVERLAP ASSIGNMENTS
OVERLAP CONSISTS OF PHASES:

OVLP PHASE	1	2	3	4	5	6	7	8	9	10	11	12
1												
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												

2-1. CONTROLLER TIMING DATA 12th / Liberty

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
MINIMUM GREEN	5	5	5	5	5	5	5	5								
BICYCLE MINIMUM GREEN																
CONDITIONAL SERVICE MINIMUM GREEN	7		7		7		7									
DELAYED GREEN																
WALK		8		8		8		8								
WALK 2																
WALK MAX																
PEDESTRIAN CLEARANCE		23		23		23		23								
PEDESTRIAN CLEARANCE 2																
PEDESTRIAN CLEARANCE MAX																
PEDESTRIAN CARRY OVER																
VEHICLE EXTENSION	1.0	1.5	1.0	1.5	1.0	1.5	1.0	1.5								
VEHICLE EXTENSION 2																
MAX1	10	20	15	25	15	15	20	25								
MAX2	15	15	15	15	15	15	15	15								
MAX3	10	20	15	25	15	15	20	25								
DYNAMIC MAX																
DYNAMIC MAX STEP																
YELLOW CHANGE	3	4	3	4	3	4	3	4								
RED CLRANCE	1	1	1	1	1	1	1	1								
RED MAX																
RED REVERT	2	2	2	2	2	2	2	2								
ACTUATIONS BEFORE GAP REDUCTION																
SECONDS PER ACTIONS ADDED TO INITIAL																
MAXIMUM ADDED INITIAL GREEN				3				3								
TIME BEFORE GAP REDUCTION																
CARS WAITING BEFORE GAP REDUCTION																
STEP TO REDUCE																
TIME TO REDUCE TO MINIMUM																
MININIMUM GAP				2.0				2.0								

12th / Lacey

2. CONTROLLER SUBMENU

1. CONTROLLER TIMING DATA

PHASE	1	2	3	4	5	6	7	8	9	10	11	12
MIN GRN	4	4	4	4	4	4	4	4				
BIKE GRN												
CS MGRN	7		7		7		7					
WALK		8		8		8		8				
PED CLR		23		23		23		23				
VEH EXT	1	1.5	1	1.5	1	1.5	1	1.5				
VEH EXT 2												
MAX EXT												
MAX1	25	30	25	30	25	30	25	30				
MAX2	10	15	10	15	10	15	10	15				
MAX3	10	15	10	15	10	15	10	15				
DET MAX												
YELLOW	3	4	3	4	3	4	3	4				
RED CLR	1	1	1	1	1	1	1	1				
RED RVT	2	2	2	2	2	2	2	2				
ACT B4												
SEC/ACT												
MAX INI	3	3	3	3	3	3	3	3				
TIME B4												
CARS WT												
TTREDUC												
MIN GAP	1.5	2	1.5	2	1.5	2	1.5	2				

2. PHASE OVERLAP ASSIGNMENTS

	OVERLAP CONSISTS OF PHASES:											
OVLP PHASE	1	2	3	4	5	6	7	8	9	10	11	12
1	X											
2		X										
3			X									
4				X								
5					X							
6						X						
7							X					
8								X				
9									X			
10										X		
11											X	
12												X

3. PED TIMING CARRYOVER

PHASE	CARRYOVER PHASE	PHASE	CARRYOVER PHASE
1		7	
2		8	
3		9	
4		10	
5		11	
6		12	

4. CONTROLLER RECALL DATA

PHASE	1	2	3	4	5	6	7	8	9	10	11	12
LOCKING MEMORY												
VEHICLE RECALL												
PED RECALL												
RECALL TO MAX												
SOFT RECALL				X				X				
DON'T REST HERE												
PED DARK N/CALL												

5. CONTROLLER OVERLAP DATA

OVERLAP A	1	2	3	4	5	6	7	8	9	10	11	12
STANDARD												
PROTECTED												
PERMITTED												
ENABLE LAG												
ENABLE LEAD												
SPARE												
ADVANCE GREEN TIMER												
LAG/LEAD GREEN TIMER												
LAG/LEAD YELLOW TIMER												
LAG/LEAD RED TIMER												

OVERLAP B	1	2	3	4	5	6	7	8	9	10	11	12
STANDARD												
PROTECTED												
PERMITTED												
ENABLE LAG												
ENABLE LEAD												
SPARE												
ADVANCE GREEN TIMER												
LAG/LEAD GREEN TIMER												
LAG/LEAD YELLOW TIMER												
LAG/LEAD RED TIMER												

OVERLAP C	1	2	3	4	5	6	7	8	9	10	11	12
STANDARD												
PROTECTED												
PERMITTED												
ENABLE LAG												
ENABLE LEAD												
SPARE												
ADVANCE GREEN TIMER												
LAG/LEAD GREEN TIMER												
LAG/LEAD YELLOW TIMER												
LAG/LEAD RED TIMER												

OVERLAP D	1	2	3	4	5	6	7	8	9	10	11	12
STANDARD												
PROTECTED												
PERMITTED												
ENABLE LAG												
ENABLE LEAD												
SPARE												
ADVANCE GREEN TIMER												
LAG/LEAD GREEN TIMER												
LAG/LEAD YELLOW TIMER												
LAG/LEAD RED TIMER												

PED OVERLAP ASSIGNMENTS
OVERLAP CONSISTS OF PHASES:

OVLP PHASE	1	2	3	4	5	6	7	8	9	10	11	12
1												
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												

Rth + Mall

2. CONTROLLER SUBMENU

1. CONTROLLER TIMING DATA

PHASE	1	2	3	4	5	6	7	8	9	10	11	12
MIN GRN	5	5		5	5	5		5				
BIKE GRN												
CS MGRN												
WALK		10				10		10				
PED CLR		17				17		17				
VEH EXT	2.0	2.0		2.0	2.0	2.0		2.0				
VEH EXT 2												
MAX EXT												
MAX1	30	35		30	30	35		30				
MAX2	10	15		15	10	15		15				
MAX3	30	40		40	30	40		40				
DET MAX												
YELLOW	4	4		4	4	4		4				
RED CLR	1	1		1	1	1		1				
RED RVT	2	2		2	2	2		2				
ACT B4												
SEC/ACT												
MAX INI												
TIME B4												
CARS WT												
TTREDUC												
MIN GAP												

2. PHASE OVERLAP ASSIGNMENTS

	OVERLAP CONSISTS OF PHASES:											
OVLP PHASE	1	2	3	4	5	6	7	8	9	10	11	12
1	X											
2		X										
3			X									
4				X								
5					X							
6						X						
7							X					
8								X				
9									X			
10										X		
11											X	
12												X

3. PED TIMING CARRYOVER

PHASE	CARRYOVER PHASE	PHASE	CARRYOVER PHASE
1		7	
2		8	
3		9	
4		10	
5		11	
6		12	

4. CONTROLLER RECALL DATA

PHASE	1	2	3	4	5	6	7	8	9	10	11	12
LOCKING MEMORY												
VEHICLE RECALL												
PED RECALL												
RECALL TO MAX												
SOFT RECALL				X				X				
DON'T REST HERE												
PED DARK N/CALL												

ϕ 1,6 S.B. ϕ 8 WB

ϕ 2,5 NB ϕ 4 EB

5. CONTROLLER OVERLAP DATA

OVERLAP A	1	2	3	4	5	6	7	8	9	10	11	12
STANDARD												
PROTECTED												
PERMITTED												
ENABLE LAG												
ENABLE LEAD												
SPARE												
ADVANCE GREEN TIMER												
LAG/LEAD GREEN TIMER												
LAG/LEAD YELLOW TIMER												
LAG/LEAD RED TIMER												

OVERLAP B	1	2	3	4	5	6	7	8	9	10	11	12
STANDARD												
PROTECTED												
PERMITTED												
ENABLE LAG												
ENABLE LEAD												
SPARE												
ADVANCE GREEN TIMER												
LAG/LEAD GREEN TIMER												
LAG/LEAD YELLOW TIMER												
LAG/LEAD RED TIMER												

OVERLAP C	1	2	3	4	5	6	7	8	9	10	11	12
STANDARD												
PROTECTED												
PERMITTED												
ENABLE LAG												
ENABLE LEAD												
SPARE												
ADVANCE GREEN TIMER												
LAG/LEAD GREEN TIMER												
LAG/LEAD YELLOW TIMER												
LAG/LEAD RED TIMER												

OVERLAP D	1	2	3	4	5	6	7	8	9	10	11	12
STANDARD												
PROTECTED												
PERMITTED												
ENABLE LAG												
ENABLE LEAD												
SPARE												
ADVANCE GREEN TIMER												
LAG/LEAD GREEN TIMER												
LAG/LEAD YELLOW TIMER												
LAG/LEAD RED TIMER												

PED OVERLAP ASSIGNMENTS
OVERLAP CONSISTS OF PHASES:

OVLP PHASE	1	2	3	4	5	6	7	8	9	10	11	12
1												
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												

2070 Controller Timing Chart

© 2017 California Department of Transportation, All Rights Reserved

Caltrans TSCP Ver 3.10

Location:			Designed By:
System:	District:		Intalled By:
Master At:	I/C:		Service Info:

Timing Change:	By:	Date Start:	Date End:	Designed:	Installed:

		FLASH
PHASE	1)	[ ]
	2)	[ ]
	3)	[ ]
	4)	[ ]
	5)	[ ]
	6)	[ ]
	7)	[ ]
	8)	[ ]
OVERLAP	A)	[ ]
	B)	[ ]
	C)	[ ]
	D)	[ ]
	E)	[ ]
	F)	[ ]

Intersection Layout

Comments and Notes:

RAM Checksum

Page 2:	4079	Page 8:	FE95
Page 3:	FED8	Page 9:	E454
Page 4:	8BD4	Page 10:	1981
Page 5:	191A	Page 11:	91CE
Page 6:	191A	Page 12:	23DF
Page 7:	F528	Page 13:	86F7

© 2017 California Department of Transportation, All Rights Reserved

CONFIGURATION PHASE FLAGS

Cabinet (9-3)	
Type	332
Configuration	CALTRANS

Phases (2-1-1-1)	
Permitted	- 2 - - 5 6 - 8
Restricted	- - - - - - - -

Phase Features (2-1-1-4)	
Double Entry	- - - - - - - -
Rest In Walk	- - - - - - - -
Rest In Red	- - - - - - - -
Walk2	- - - - - - - -
Max Green 2	- 2 - - 5 6 - 8
Max Green 3	- - - - - - - -

Startup (2-1-1-5)	
First Green Phases	- 2 - - - 6 - -
Yellow Start Phases	- - - - - - - -
Vehicle Calls	- 2 - - 5 6 - 8
Pedestrian Calls	- 2 - - - 6 - -
Yellow Start Overlaps	- - - - - -
Startup All-Red	7.0

Phase Recalls (2-1-1-2)	
Vehicle Min	- 2 - - - 6 - -
vehicle Max	- - - - - - - -
Pedestrian	- - - - - - - -
Bicyle	- - - - - - - -

Phase Locks (2-1-1-3)	
Red	- - - - - - - -
Yellow	- - - - - - - -
Force/Max	- - - - - - - -

Call To Phase (2-1-2-1)		Omit On Green	
1	- - - - - - - -	1	- - - - - - - -
2	- - - - - - - -	2	- - - - - - - -
3	- - - - - - - -	3	- - - - - - - -
4	- - - - - - - -	4	- - - - - - - -
5	- - - - - - - -	5	- - - - - - - -
6	- - - - - - - -	6	- - - - - - - -
7	- - - - - - - -	7	- - - - - - - -
8	- - - - - - - -	8	- - - - - - - -

Flashing Colors (2-1-2-2)	
Yellow Flash Phases	- - - - - - - -
Yellow Flash Overlap	- - - - - - - -
Flash In Red Phases	- - - - - - - -
Flash In Red Overlap	- - - - - - - -

Special Operation (2-1-2-3)	
Single Exit Phase	- - - - - - - -
Driveway Signal Phases	- - - - - - - -
Driveway Signal Overlaps	- - - - - - - -
Leading Ped Phases	- - - - - - - -

Protected Permissive (2-1-2-4)	
Protected Permissive	- - - - - - - -

Pedestrian (2-1-3)	
P1	- - - - - - - -
P2	- 2 - - - - - -
P3	- - - - - - - -
P4	- - - 4 - - - -
P5	- - - - - - - -
P6	- - - - - 6 - -
P7	- - - - - - - -
P8	- - - - - - - 8

Overlap (2-1-4)				
Overlap	Parent	Omit	No Start	Not
A [Arrow A]	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
B [Arrow B]	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
C [OL A]	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
D [OL B]	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
E [OL C]	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
F [OL D]	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -

[-] 332 Cabinet Overlap Assignment - For Reference Only

 CHECKSUM: 4079

© 2017 California Department of Transportation, All Rights Reserved Location: 198 WB @ 12th Ave TSCP 3.10

PHASE TIMING

PHASE (2-2)	-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-
--- Walk 1 ---	0	7	0	0	0	7	0	0
Flash Don't Walk	0	25	0	0	0	25	0	0
Minimum Green	0	10	0	0	6	10	0	10
Det Limit	0	20	0	0	0	20	0	20
Max Initial	0	0	0	0	0	0	0	0
Max Green 1	0	25	0	0	15	25	0	25
Max Green 2	0	35	0	0	25	35	0	40
Max Green 3	0	0	0	0	0	0	0	0
Extension	0.0	6.7	0.0	0.0	2.0	4.8	0.0	5.3
Maximum Gap	0.0	9.1	0.0	0.0	2.0	6.6	0.0	7.0
Minimum Gap	0.0	2.0	0.0	0.0	2.0	2.0	0.0	2.0
Add Per Vehicle	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0
Reduce Gap By	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.1
Reduce Every	0.0	0.4	0.0	0.0	0.0	0.6	0.0	0.5
Yellow	3.0	4.8	3.0	3.0	3.7	4.8	3.0	4.4
All-Red	0.0	2.0	0.0	0.0	2.0	2.0	0.0	2.0
Ped/Bike (2-3)	-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-
--- Walk 2 ---	0	0	0	0	0	0	0	0
Delay/Early Walk	0	0	0	0	0	0	0	0
Solid Don't Walk	0	0	0	0	0	0	0	0
Bike Green	0	0	0	0	0	0	0	0
Bike All-Red	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

OVERLAP TIMING

Overlap (2-4)	A [Arrow A]	B [Arrow B]	C [OL A]	D [OL B]	E [OL C]	F [OL D]
Green	0.0	0.0	0.0	0.0	0.0	0.0
Yellow	5.0	5.0	5.0	5.0	5.0	5.0
Red	0.0	0.0	0.0	0.0	0.0	0.0

Red Revert (2-5)	
Time	5.0

Red To Se (2-6)	
Red To Sec	OFF

Max/Gap Out (2-7)	
Max Cnt	2
Gap Cnt	3

PAGE 3 CHECKSUM: FED8

© 2017 California Department of Transportation, All Rights Reserved

Local Plan 1...9 (7-1) TIMING DATA

COORDINATION

[Offsets] Green Factors or Press [F] to Select

		Cycle	Multi	Lag Gap	A	B	C	-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-
Plan 1	Green Factor	100	0.0	- - - - - - - -					66			15	44		20
Plan 2	Green Factor	100	0.0	- - - - - - - -		15			66			14	46		20
Plan 3	Green Factor	110	0.0	- - - - - - - -	100				74			16	51		22
Plan 4	Green Factor	110	0.0	- - - - - - - -	90				57			14	37		39
Plan 5	Green Factor	100	0.0	- - - - - - - -	3				63			16	41		23
Plan 6	Green Factor	100	0.0	- - - - - - - -	1				63			16	41		23
Plan 7	Green Factor		0.0	- - - - - - - -											
Plan 8	Green Factor		0.0	- - - - - - - -											
Plan 9	Green Factor	120	0.0	- - - - - - - -					83			12	64		23

Local Plan 1...9 (7-1) PHASE FLAGS

	Lag	Sync	Hold	Omit	Veh Min	Veh Max	Ped	Bike
Plan 1	- - - - 5 - - -	- 2 - - - 6 - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
Plan 2	- - - - - 6 - -	- 2 - - - 6 - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
Plan 3	- - - - 5 - - -	- 2 - - - 6 - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
Plan 4	- 2 - - - 6 - -	- 2 - - - 6 - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
Plan 5	- 2 - - - 6 - -	- 2 - - - 6 - -	- 2 - - - 6 - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
Plan 6	- 2 - - - 6 - -	- 2 - - - 6 - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
Plan 7	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
Plan 8	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
Plan 9	- - - 4 5 - - 8	- 2 - - - 6 - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -

Master Timer Sync (7-A)	
Enable in Plans	
1-9	- - - - - - - - -
11-19	- - - - - - - - -
21-29	- - - - - - - - -

Master Sub Master	
Input	0.0
Output	0

(7-E) Free	
Lag	Omit
- 2 - 4 - 6 - 8	- - - - - - - -
Veh Min	Veh Max
- 2 - - - 6 - -	- - - - - - - -
Ped	Bike
- - - - - - - -	- - - - - - - -
Cond	Cond Grn
- - - - - - - -	10

MANUAL COMMANDS

Manual Plan (4-1)	
Plan	Offset
0	A

Plan: 1-29
15 or 254 = Flash
14 or 255 = Free
Offset A, B, or C

Special Function Override (4-2)			
#	Control	#	Control
1	NORMAL	3	NORMAL
2	NORMAL	4	NORMAL

Detector Reset	(4-3)
Local Manual (4-4)	OFF

PAGE 4 CHECKSUM: 8BD4

© 2017 California Department of Transportation, All Rights Reserved

Local Plan 11...19 (7-2) TIMING DATA

COORDINATION

					[Offsets]			Green Factors or Press [F] to Select Force-Off							
		Cycle	Multi	Lag Gap	A	B	C	1	2	3	4	5	6	7	8
Plan 11	Green Factor		0.0	- - - - - - - -											
Plan 12	Green Factor		0.0	- - - - - - - -											
Plan 13	Green Factor		0.0	- - - - - - - -											
Plan 14	Green Factor		0.0	- - - - - - - -											
Plan 15	Green Factor		0.0	- - - - - - - -											
Plan 16	Green Factor		0.0	- - - - - - - -											
Plan 17	Green Factor		0.0	- - - - - - - -											
Plan 18	Green Factor		0.0	- - - - - - - -											
Plan 19	Green Factor		0.0	- - - - - - - -											

Local Plan 11...19 (7-2) PHASE FLAGS

	Lag	Sync	Hold	Omit	Veh Min	Veh Max	Ped	Bike
Plan 11	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
Plan 12	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
Plan 13	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
Plan 14	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
Plan15	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
Plan 16	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
Plan 17	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
Plan 18	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
Plan 19	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -

© 2017 California Department of Transportation, All Rights Reserved

Local Plan 21...29 (7-3) TIMING DATA

COORDINATION

					[Offsets]			Green Factors or Press [F] to Select Force-Off							
		Cycle	Multi	Lag Gap	A	B	C	1	2	3	4	5	6	7	8
Plan 21	Green Factor		0.0	- - - - - - - -											
Plan 22	Green Factor		0.0	- - - - - - - -											
Plan 23	Green Factor		0.0	- - - - - - - -											
Plan 24	Green Factor		0.0	- - - - - - - -											
Plan 25	Green Factor		0.0	- - - - - - - -											
Plan 26	Green Factor		0.0	- - - - - - - -											
Plan 27	Green Factor		0.0	- - - - - - - -											
Plan 28	Green Factor		0.0	- - - - - - - -											
Plan 29	Green Factor		0.0	- - - - - - - -											

Local Plan 21...29 (7-3) PHASE FLAGS

	Lag	Sync	Hold	Omit	Veh Min	Veh Max	Ped	Bike
Plan 21	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
Plan 22	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
Plan 23	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
Plan 24	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
Plan 25	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
Plan 26	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
Plan 27	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
Plan 28	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
Plan 29	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -

PAGE 6 **CHECKSUM:** 191A

© 2017 California Department of Transportation, All Rights Reserved

DETECTORS

Detector Attributes (5-1)

Det	Type	Phases	Lock	Slot
1	Count+Call+Extend	1 - - - - - - -	NO	I1U
2	Count+Call+Extend	1 - - - - - - -	NO	I1L
3	Count+Call+Extend	- 2 - - - - - -	NO	I2U
4	Count+Call+Extend	- 2 - - - - - -	NO	I2L
5	Count+Call+Extend	- 2 - - - - - -	NO	I3U
6	Call+Extend	- 2 - - - - - -	NO	I3L
7	Limited	- 2 - - - - - -	NO	I4U
8	Limited	- 2 - - - - - -	NO	I4L
9	Count+Call+Extend	- 2 - - - - - -	NO	I5U
10	Count+Call+Extend	- 2 - - - - - -	NO	I5L
11	Count+Call+Extend	- - - 4 - - - -	NO	I6U
12	Count+Call+Extend	- - - 4 - - - -	NO	I6L
13	Count+Call+Extend	- - - 4 - - - -	NO	I7U
14	Call+Extend	- - - 4 - - - -	NO	I7L
15	Limited	- - - 4 - - - -	NO	I8U
16	Count+Call+Extend	- - - 4 - - - -	NO	I8L
17	Count+Call+Extend	1 - - - - - - -	NO	I9U
18	Count+Call+Extend	- - 3 - - - - -	NO	I9L
19	Count+Call+Extend	- 2 - - - - - -	NO	I10U
20	Count+Call+Extend	- - - 4 - - - -	NO	I10L
21	Count+Call+Extend	- - - - 5 - - -	NO	J1U
22	Count+Call+Extend	- - - - 5 - - -	NO	J1L
23	Count+Call+Extend	- - - - - 6 - -	NO	J2U
24	Count+Call+Extend	- - - - - 6 - -	NO	J2L
25	Count+Call+Extend	- - - - - 6 - -	NO	J3U
26	Call+Extend	- - - - - 6 - -	NO	J3L
27	Limited	- - - - - 6 - -	NO	J4U
28	Limited	- - - - - 6 - -	NO	J4L
29	Count+Call+Extend	- - - - - 6 - -	NO	J5U
30	Count+Call+Extend	- - - - - 6 - -	NO	J5L
31	Count+Call+Extend	- - - - - - - 8	NO	J6U
32	Count+Call+Extend	- - - - - - - 8	NO	J6L
33	Limited	- - - - - - - 8	NO	J7U
34	Limited	- - - - - - - 8	NO	J7L
35	Call+Extend	- - - - - - - 8	NO	J8U
36	Call+Extend	- - - - - - - 8	NO	J8L
37	Count+Call+Extend	- - - - 5 - - -	NO	J9U
38	Count+Call+Extend	- - - - - - - 8	NO	J9L
39	Count+Call+Extend	- - - - - 6 - -	NO	J10U
40	Count+Call+Extend	- - - - - - - 8	NO	J10L
41	Pedestrian	- 2 - - - - - -	NO	I12U
42	Pedestrian	- - - 4 - - - -	NO	I12L
43	Pedestrian	- - - - - 6 - -	NO	I13U
44	Pedestrian	- - - - - - - 8	NO	I13L

Detector Configuration (5-2)

Det	Delay	Extend	Recall	Port
1	0	0.0	10	3.2
2	0	0.0	10	7.2
3	0	2.0	10	1.1
4	0	2.6	10	1.5
5	0	0.0	10	4.5
6	0	0.0	10	6.2
7	0	2.0	10	2.1
8	0	2.0	10	7.4
9	0	0.0	10	3.4
10	0	0.0	10	7.6
11	0	0.0	10	1.3
12	0	0.0	10	1.7
13	0	0.0	10	4.7
14	0	0.0	10	6.4
15	0	0.0	10	2.3
16	0	0.0	10	7.8
17	0	0.0	10	3.6
18	0	0.0	10	3.8
19	0	0.0	10	4.1
20	0	0.0	10	4.2
21	2	1.0	10	3.1
22	0	0.0	10	7.1
23	0	0.0	10	1.2
24	0	0.6	10	1.6
25	0	2.0	10	4.6
26	0	2.0	10	6.3
27	0	2.0	10	2.2
28	0	2.0	10	7.3
29	0	0.0	10	3.3
30	0	0.0	10	7.5
31	2	0.0	10	1.4
32	2	0.0	10	1.8
33	0	2.0	10	4.8
34	15	2.0	10	6.5
35	0	2.0	10	2.4
36	0	2.0	10	7.7
37	0	0.0	10	3.5
38	0	0.0	10	3.7
39	0	0.0	10	4.3
40	0	0.0	10	4.4
41	0	0.0	10	5.1
42	0	0.0	10	5.3
43	0	0.0	10	5.2
44	0	0.0	10	5.4

Failure Times (5-3)

Failure Times (5-3)	Minutes
Maximum On Time	0
Fail Reset Time	0

Failure Override (5-4)

Detectors 1-8	- - - - - - - -
Detectors 9-16	- - - - - - - -
Detectors 17-24	- - - - - - - -
Detectors 25-32	- - - - - - - -
Detectors 33-40	- - - - - - - -
Detectors 41-44	- - - - - - - -

System Detector Assignment (5-5)

Sys Det	1	2	3	4	5	6	7	8
Det Num	0	0	0	0	0	0	0	0
Sys Det	9	10	11	12	13	14	15	16
Det Num	0	0	0	0	0	0	0	0

CIC Operation (5-6-1)

Enable in Plans	- - - - - - - -

CIC Values (5-6-2)

CIC Values (5-6-2)	Volume	Occupancy	Demand
Smoothing	0.66	0.66	0.66
Multiplier	4.0	0.33	
Exponent	0.50	1.0	

Detector-to-Phase Assignment (5-6-3)

Sys Det	1	2	3	4	5	6	7	8
Phase	0	0	0	0	0	0	0	0
Sys Det	9	10	11	12	13	14	15	16
Phase	0	0	0	0	0	0	0	0

Input File Port-Bit Assignments

332 Cabinet - For Reference Only

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
I-	3.2	1.1	4.5	2.1	3.4	1.3	4.7	2.3	3.6	4.1	6.6	5.1	5.2	6.7
	7.2	1.5	6.2	7.4	7.6	1.7	6.4	7.8	3.8	4.2	2.7	5.3	5.4	6.8
J-	3.1	1.2	4.6	2.2	3.3	1.4	4.8	2.4	3.5	4.3	2.8	5.5	5.6	2.5
	7.1	1.6	6.3	7.3	7.5	1.8	6.5	7.7	3.7	4.4	6.1	5.7	5.8	2.6

CHECKSUM: F528

© 2017 California Department of Transportation, All Rights Reserved

TOD SCHEDULE

Table 1 (8-2-1)		
Time	Plan	OS
0700	1	A
0830	2	A
1530	3	A
1830	255	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A

Table 2 (8-2-2)		
Hour	Plan	OS
0630	4	A
0830	5	A
1500	6	A
1830	255	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A

Table 3 (8-2-3)		
Hour	Plan	OS
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A

Table 4 (8-2-4)		
Hour	Plan	OS
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A

Table 5 (8-2-5)		
Hour	Plan	OS
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A

Table 6 (8-2-6)		
Hour	Plan	OS
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A

WEEKDAY ASSIGNMENT

Weekday Table Assignments (8-2-7)						
Mon	Tue	Wed	Thu	Fri	Sat	Sun
1	1	1	1	1	2	2

PAGE 8 **CHECKSUM:** FE95

© 2017 California Department of Transportation, All Rights Reserved

HOLIDAY TABLES

Floating Holiday Table (8-2-8)

#	Mnth	Week	DOW	Table
1	0	0	- - - - - - - -	0
2	0	0	- - - - - - - -	0
3	0	0	- - - - - - - -	0
4	0	0	- - - - - - - -	0
5	0	0	- - - - - - - -	0
6	0	0	- - - - - - - -	0
7	0	0	- - - - - - - -	0
8	0	0	- - - - - - - -	0
9	0	0	- - - - - - - -	0
10	0	0	- - - - - - - -	0
11	0	0	- - - - - - - -	0
12	0	0	- - - - - - - -	0
13	0	0	- - - - - - - -	0
14	0	0	- - - - - - - -	0
15	0	0	- - - - - - - -	0
16	0	0	- - - - - - - -	0

Fixed Holiday Table (8-2-9)

#	Mnth	Day	DOW	Table
1	0	0	- - - - - - - -	0
2	0	0	- - - - - - - -	0
3	0	0	- - - - - - - -	0
4	0	0	- - - - - - - -	0
5	0	0	- - - - - - - -	0
6	0	0	- - - - - - - -	0
7	0	0	- - - - - - - -	0
8	0	0	- - - - - - - -	0
9	0	0	- - - - - - - -	0
10	0	0	- - - - - - - -	0
11	0	0	- - - - - - - -	0
12	0	0	- - - - - - - -	0
13	0	0	- - - - - - - -	0
14	0	0	- - - - - - - -	0
15	0	0	- - - - - - - -	0
16	0	0	- - - - - - - -	0

Daylight Saving (8-6)

Enable	YES		
		Month	Sunday
	Start	None	None
	End	None	None

Solar Clock Data (8-4)

North Latitude	34
West Longitude	118
Local Time Zone	8

Sabbatical Clock (8-5)

Hebrew	Ped Recall
Sabbath	- - - - - - - -
Holiday	- - - - - - - -

TOD Functions (8-3)

#	Start	End	DOW	Action	Phases
1	0530	2230	1 2 3 4 5 6 7	27	- 2 - - 5 6 - 8
2	0000	0000	- - - - - - - -	0	- - - - - - - -
3	0000	0000	- - - - - - - -	0	- - - - - - - -
4	0000	0000	- - - - - - - -	0	- - - - - - - -
5	0000	0000	- - - - - - - -	0	- - - - - - - -
6	0000	0000	- - - - - - - -	0	- - - - - - - -
7	0000	0000	- - - - - - - -	0	- - - - - - - -
8	0000	0000	- - - - - - - -	0	- - - - - - - -
9	0000	0000	- - - - - - - -	0	- - - - - - - -
10	0000	0000	- - - - - - - -	0	- - - - - - - -
11	0000	0000	- - - - - - - -	0	- - - - - - - -
12	0000	0000	- - - - - - - -	0	- - - - - - - -
13	0000	0000	- - - - - - - -	0	- - - - - - - -
14	0000	0000	- - - - - - - -	0	- - - - - - - -
15	0000	0000	- - - - - - - -	0	- - - - - - - -
16	0000	0000	- - - - - - - -	0	- - - - - - - -

Action Codes:
0. None
1. Permitted
2. Restricted
4. Veh Min Recall
5. Veh Max Recall
6. Ped Recall
7. Bike Recall
8. Red Lock
9. Yellow Lock
10. Force/Max Lock
11.Double Entry
12. Y-Coord C
13. Y-Coord D
14. Free
15. Flashing
16. Walk 2
17. Max Green 2
18. Max Green 3
19. Rest in Walk
20. Rest in Red
21. Free Lag Phases
22. Special Functions
23. Truck Preempt
24. Conditional Service
25. Conditional Service
26. Leading Ped
41. Protected Permissive
42. Protected Permissive

Action Code = Phases added to normal setting

100+Action Code = Phases removed
200+Action Code = Phases replaced

© 2017 California Department of Transportation, All Rights Reserved

COMMUNICATIONS

	C2 (6-1-1)	C20 (6-1-2)	C21 (6-1-3)
Address	0	0	0
Protocol	AB3418	AB3418	AB3418
Baud	1200	1200	1200
Parity	None	None	None
Data Bits	8 data bits	8 data bits	8 data bits
Stop Bits	1 stop bit	1 stop bit	1 stop bit
RTS On Time	20	20	20
RTS Off Time	20	20	20
Handshaking	Normal	Normal	Normal
Access Level	None	None	None

CALLBACK NUMBERS

Callback Numbers (6-3...3)			
Line Out	0	0	0
Local Toll	0	0	0
Long Distance	0	0	0
Delay	10	10	10
Area Code	0	0	0
Phone Number	0 - 0	0 - 0	0 - 0

SOFT LOGIC

Soft Logic (6-2)							
#	Data	OP	Data	OP	Data	OP	Data
1	00.0	00	00.0	00	00.0	00	00.0
2	00.0	00	00.0	00	00.0	00	00.0
3	00.0	00	00.0	00	00.0	00	00.0
4	00.0	00	00.0	00	00.0	00	00.0
5	00.0	00	00.0	00	00.0	00	00.0
6	00.0	00	00.0	00	00.0	00	00.0
7	00.0	00	00.0	00	00.0	00	00.0
8	00.0	00	00.0	00	00.0	00	00.0
9	00.0	00	00.0	00	00.0	00	00.0
10	00.0	00	00.0	00	00.0	00	00.0
11	00.0	00	00.0	00	00.0	00	00.0
12	00.0	00	00.0	00	00.0	00	00.0
13	00.0	00	00.0	00	00.0	00	00.0
14	00.0	00	00.0	00	00.0	00	00.0
15	00.0	00	00.0	00	00.0	00	00.0
16	00.0	00	00.0	00	00.0	00	00.0

***Refer to User's Manual for Data and OP Codes**

NETWORK

Network (6-4)	
Address	1
Protocol	AB3418
Port	27000
IP Mode	Static IP
Central Access	0
Field Access	0
ATSPM	Enabled

IP Address	192	168	13	4
Netmask	255	255	255	0
Broadcast	192	168	13	255
Gateway	192	168	13	254

SPAT Network (6-5)				
SPAT	1		2	
Protocol	None		None	
Port	0		0	
Address	0	0	0	0

Access Levels

0-Full Access
1-Status Only
2-Status, Set Pattern, Time
3-Status, Set Pattern, Time, Manual Plan
4-Reserved
5-Full Access with No Set Pattern
6-Full Access with No Set Time
7-Full Access with No Set Pattern, Manual Plan
8-Full Access with No Set Time, Pattern, Manual Plan

© 2017 California Department of Transportation, All Rights Reserved

RAILROAD PREEMPTION

RR 1

Timing (3-1-1)	
Clear 1	10
Clear 2	0
Clear 3	0
Hold	0
Min Grn	0
Delay	0
Exit	5
Ped Clr	0

Phase Flags (3-1-2)		
Grn Hold	Yel Flash	Red Flash
- 2 - - 5 - - -	- - - - - - - -	- - - - - - - -
- - - - - - - -	- - - - - - - -	- - - - - - - -
- - - - - - - -	- - - - - - - -	- - - - - - - -
- - - - - - - -	- - - - - - - -	1 2 3 4 5 6 7 8

Pedestrian Flags (3-1-3)		
Walk	Flash DW	Solid DW
- - - - - - - -	- - - - - - - -	- 2 - 4 - 6 - 8
- - - - - - - -	- - - - - - - -	- - - - - - - -
- - - - - - - -	- - - - - - - -	- - - - - - - -
- - - - - - - -	- - - - - - - -	- - - - - - - -

Overlap Flags (3-1-4)		
Grn Hold	Yel Flash	Red Flash
- - - - - -	- - - - - -	- - - - - -
- - - - - -	- - - - - -	- - - - - -
- - - - - -	- - - - - -	- - - - - -
- - - - - -	- - - - - -	A B C D E F

Exit Parameters (3-1-5)			
Phase Green	Overlap Green	Veh Permit/Call	Ped Permit/Call
- - - - - - - -	- - - - - - -	1 2 3 4 5 6 7	- 2 - 4 - 6 -

Configuration (3-1-6)									
	PR	XR	Gate	Isld	APP	Sign 1	Sign 2	Max On	Latching
1	0.0	0.0	0.0	0.0	0.0	00.0	00.0	0	No
2	0.0	0.0							

Valid Inputs: 1.x, 2.x, 3.x, 4.x, 5.x, 6.x, 7.x, 8.x x=1 to 8
Valid Outputs: 11.x,12.x,13.x,14.x,15.x,16.x,17.x,18.x x=1 to 8

RR 2

Timing (3-2-1)	
Clear 1	10
Clear 2	0
Clear 3	0
Hold	0
Min Grn	0
Delay	0
Exit	0
Ped Clr	0

Phase Flags (3-2-2)		
Grn Hold	Yel Flash	Red Flash
- - - 4 - - 7 -	- - - - - - - -	- - - - - - - -
- - - - - - - -	- - - - - - - -	- - - - - - - -
- - - - - - - -	- - - - - - - -	- - - - - - - -
1 2 3 - - 6 - -	- - - - - - - -	- - - - - - - -

Pedestrian Flags (3-2-3)		
Walk	Flash DW	Solid DW
- - - - - - - -	- - - - - - - -	- 2 - 4 - 6 - 8
- - - - - - - -	- - - - - - - -	- - - - - - - -
- - - - - - - -	- - - - - - - -	- - - - - - - -
- 2 - - - 6 - -	- - - - - - - -	- - - 4 - - - 8

Overlap Flags (3-2-4)		
Grn Hold	Yel Flash	Red Flash
- - - - - -	- - - - - -	- - - - - -
- - - - - -	- - - - - -	- - - - - -
- - - - - -	- - - - - -	- - - - - -
- - - - - -	- - - - - -	- - - - - -

Exit Parameters (3-2-5)			
Phase Green	Overlap Green	Veh Permit/Call	Ped Permit/Call
- - - - - - - -	- - - - - - -	- - - 4 - - 7	- - - - - - - -

Configuration (3-2-6)									
	PR	XR	Gate	Isld	APP	Sign 1	Sign 2	Max On	Latching
1	0.0	0.0	0.0	0.0	0.0	00.0	00.0	0	No
2	0.0	0.0							

Valid Inputs: 1.x, 2.x, 3.x, 4.x, 5.x, 6.x, 7.x, 8.x x=1 to 8
Valid Outputs: 11.x,12.x,13.x,14.x,15.x,16.x,17.x,18.x x=1 to 8

EMERGENCY VEHICLE PREEMPTION

EVA (3-A)

Preempt Timers			Phase Green	Overlap Grn
Delay	Clear	Max		
0	30	30	- 2 - - 5 - - -	- - - - - - - -

Port	Latching	Phase Termination
5.5	No	Advance

EVB (3-B)

Preempt Timers			Phase Green	Overlap Grn
Delay	Clear	Max		
0	30	30	- - - 4 - - 7 -	- - - - - - - -

Port	Latching	Phase Termination
5.6	No	Advance

EVC (3-C)

Preempt Timers			Phase Green	Overlap Grn
Delay	Clear	Max		
0	30	30	1 - - - - 6 - -	- - - - - - - -

Port	Latching	Phase Termination
5.7	No	Advance

EVD (3-D)

Preempt Timers			Phase Green	Overlap Grn
Delay	Clear	Max		
0	30	30	- - 3 - - - - 8	- - - - - - - -

Port	Latching	Phase Termination
5.8	No	Advance

© 2017 California Department of Transportation, All Rights Reserved

INPUTS

Enable	No
Max ON	0
Max OFF	0

7 Wire I/C(2-1-5-1)

Input	Port	Input	Port
R1	3.8	Free	3.6
R2	3.5	D2	2.8
R3	3.7	D3	6.1

Manual Control(2-1-5-2)

Input	Port
Manual Adv	6.6
Adv Enable	6.6

Cabinet Staus (2-1-5-3)

Input	Port
Flash Bus	0.0
Door Ajar	0.0
Flash Sense	6.7
Stop Time	6.8

Special Function (2-1-5-4)

Input	Port
1	0.0
2	0.0
3	0.0
4	0.0

Battery Backup (2-1-5-5)

Port	Operation
2.7	Flashing

Y-Coordination (2-1-5-6)

Port C	Port D
6.1	2.8

OUTPUTS

Loadswitch Assignments (2-1-6)

A	1	2	22	3	4	24	9
B	5	6	26	7	8	28	10
X	13	14	0	11	12	0	0

Loadswitch Codes:
0 Unused (no output)
1- 8 Vehicle 1-8
9-14 Overlap A-F
21-28 Ped 1-8
41-47 Special Functions
41 Protected Permissive Flashing Phase 1
43 Protected Permissive Flashing Phase 3
45 Protected Permissive Flashing Phase 5
47 Protected Permissive Flashing Phase 7
51-57 Special Functions
71-72 Seven Wire I/C + middle output of loadswitches 3 and 6 Channel 9 and 10

INTERVAL CONTROL

Interval Control (3-3-1)	Time
Step 1	0
Step 2	0
Step 3	0
Step 4	0
Step 5	0
Step 6	0
Step 7	0
Step 8	0

Phase Control (3-3-2)

Hold	Force	Advance
- - - - - - - -	- - - - - - - -	- - - - - - - -
- - - - - - - -	- - - - - - - -	- - - - - - - -
- - - - - - - -	- - - - - - - -	- - - - - - - -
- - - - - - - -	- - - - - - - -	- - - - - - - -
- - - - - - - -	- - - - - - - -	- - - - - - - -
- - - - - - - -	- - - - - - - -	- - - - - - - -
- - - - - - - -	- - - - - - - -	- - - - - - - -
- - - - - - - -	- - - - - - - -	- - - - - - - -

Phase Recalls (3-3-3)

Veh Call	Ped Call	Int Call
- - - - - - - -	- - - - - - - -	- - - - - - - -
- - - - - - - -	- - - - - - - -	- - - - - - - -
- - - - - - - -	- - - - - - - -	- - - - - - - -
- - - - - - - -	- - - - - - - -	- - - - - - - -
- - - - - - - -	- - - - - - - -	- - - - - - - -
- - - - - - - -	- - - - - - - -	- - - - - - - -
- - - - - - - -	- - - - - - - -	- - - - - - - -
- - - - - - - -	- - - - - - - -	- - - - - - - -

Phase Permissions (3-3-4)

Phs Permit	Ped Permit	Overlap
- - - - - - - -	- - - - - - - -	- - - - - -
- - - - - - - -	- - - - - - - -	- - - - - -
- - - - - - - -	- - - - - - - -	- - - - - -
- - - - - - - -	- - - - - - - -	- - - - - -
- - - - - - - -	- - - - - - - -	- - - - - -
- - - - - - - -	- - - - - - - -	- - - - - -
- - - - - - - -	- - - - - - - -	- - - - - -
- - - - - - - -	- - - - - - - -	- - - - - -

Configuration (3-3-5)

Input	Port	Delay
1	0.0	0
2	0.0	0

© 2017 California Department of Transportation, All Rights Reserved

TRANSIT PRIORITY

Local Plans (3-E) 1...9 11...19		Early Green	Green Extend	Inhibit Cycles	Phase 1 Minimum	Phase 2 Minimum	Phase 3 Minimum	Phase 4 Minimum	Phase 5 Minimum	Phase 6 Minimum	Phase 7 Minimum	Phase 8 Minimum
Plan 1	Green Factor	0	0	0	0	0	0	0	0	0	0	0
Plan 2	Green Factor	0	0	0	0	0	0	0	0	0	0	0
Plan 3	Green Factor	0	0	0	0	0	0	0	0	0	0	0
Plan 4	Green Factor	0	0	0	0	0	0	0	0	0	0	0
Plan 5	Green Factor	0	0	0	0	0	0	0	0	0	0	0
Plan 6	Green Factor	0	0	0	0	0	0	0	0	0	0	0
Plan 7	Green Factor	0	0	0	0	0	0	0	0	0	0	0
Plan 8	Green Factor	0	0	0	0	0	0	0	0	0	0	0
Plan 9	Green Factor	0	0	0	0	0	0	0	0	0	0	0
Plan 11	Green Factor	0	0	0	0	0	0	0	0	0	0	0
Plan 12	Green Factor	0	0	0	0	0	0	0	0	0	0	0
Plan 13	Green Factor	0	0	0	0	0	0	0	0	0	0	0
Plan 14	Green Factor	0	0	0	0	0	0	0	0	0	0	0
Plan 15	Green Factor	0	0	0	0	0	0	0	0	0	0	0
Plan 16	Green Factor	0	0	0	0	0	0	0	0	0	0	0
Plan 17	Green Factor	0	0	0	0	0	0	0	0	0	0	0
Plan 18	Green Factor	0	0	0	0	0	0	0	0	0	0	0
Plan 19	Green Factor	0	0	0	0	0	0	0	0	0	0	0

Enable in Local Plans (3-E-3)	
Plan 1-9	- - - - - - - -
Plan 11-19	- - - - - - - -

Queue Jump (3-E-4)	
Grn Hold	Hold Phase
0	- - - - - - - -
0	- - - - - - - -

Input	
Type	Port
OPT	0.0
OPT	0.0

Output	
Stop	Go
0	0
0	0

Free Plans (3-E-E)	
Max Green	Hold Phase
0	- - - - - - - -

Access Utilities (9-5)	
Password	***
Timeout	30

YELLOW YIELD COORDINATION

					Force-Offs											
Y-Coord Plans (7-C,D)	Long Grn	No Grn	Offset	Perm	1	2	3	4	5	6	7	8	Coord	Lag	Min Recall	Restricted
Plan C	0	0	0	0	0	0	0	0	0	0	0	0	- 2 - - - 6 - -	- 2 - 4 - 6 - 8	- - - - - - - -	- - - - - - - -
Plan D	0	0	0	0	0	0	0	0	0	0	0	0	- 2 - - - 6 - -	- 2 - 4 - 6 - 8	- - - - - - - -	- - - - - - - -

TRUCK PRIORITY

Truck Priority (3-F)	Passage	CarryOver	Clearance	Next Priority	Phase Green	Det 2 Port	Det 3 Port	Det 4 Port	Sign Output	Slave Input	Slave Output
	0.0	0.0	0	0	- - - - - - - -	0.0	0.0	0.0	0	0.0	0

CONTROLLER ID

Manufacturer ID	Caltrans TSCP Ver 3.10
Model ID	Model 2070
Protocol Revision ID	AB3418

2070 Controller Timing Chart

© 2017 California Department of Transportation, All Rights Reserved

Caltrans TSCP Ver 3.10

Location:			Designed By:
System:	District:		Intalled By:
Master At:	I/C:		Service Info:

Timing Change:	By:	Date Start:	Date End:	Designed:	Installed:

		FLASH
PHASE	1)	[ ]
	2)	[ ]
	3)	[ ]
	4)	[ ]
	5)	[ ]
	6)	[ ]
	7)	[ ]
	8)	[ ]
OVERLAP	A)	[ ]
	B)	[ ]
	C)	[ ]
	D)	[ ]
	E)	[ ]
	F)	[ ]

Intersection Layout

Comments and Notes:

RAM Checksum

Page 2:	57D5	Page 8:	B8E5
Page 3:	4017	Page 9:	4019
Page 4:	2246	Page 10:	45DB
Page 5:	191A	Page 11:	F686
Page 6:	191A	Page 12:	23DF
Page 7:	4EFF	Page 13:	86F7

© 2017 California Department of Transportation, All Rights Reserved

CONFIGURATION PHASE FLAGS

Cabinet (9-3)	
Type	332
Configuration	CALTRANS

Phases (2-1-1-1)	
Permitted	- 2 - 4 - 6 - -
Restricted	- - - - - - - -

Phase Features (2-1-1-4)	
Double Entry	- - - - - - - -
Rest In Walk	- - - - - - - -
Rest In Red	- - - - - - - -
Walk2	- - - - - - - -
Max Green 2	- 2 - 4 - 6 - -
Max Green 3	- - - - - - - -

Startup (2-1-1-5)	
First Green Phases	- 2 - - - 6 - -
Yellow Start Phases	- - - - - - - -
Vehicle Calls	- 2 - 4 - 6 - -
Pedestrian Calls	- - - - - 6 - -
Yellow Start Overlaps	- - - - - -
Startup All-Red	7.0

Phase Recalls (2-1-1-2)	
Vehicle Min	- 2 - - - 6 - -
vehicle Max	- - - - - - - -
Pedestrian	- - - - - - - -
Bicyle	- - - - - - - -

Phase Locks (2-1-1-3)	
Red	- - - - - - - -
Yellow	- - - - - - - -
Force/Max	- - - - - - - -

Call To Phase (2-1-2-1)		Omit On Green	
1	- - - - - - - -	1	- - - - - - - -
2	- - - - - - - -	2	- - - - - - - -
3	- - - - - - - -	3	- - - - - - - -
4	- - - - - - - -	4	- - - - - - - -
5	- - - - - - - -	5	- - - - - - - -
6	- - - - - - - -	6	- - - - - - - -
7	- - - - - - - -	7	- - - - - - - -
8	- - - - - - - -	8	- - - - - - - -

Flashing Colors (2-1-2-2)	
Yellow Flash Phases	- - - - - - - -
Yellow Flash Overlap	- - - - - - - -
Flash In Red Phases	- - - - - - - -
Flash In Red Overlap	- - - - - - - -

Special Operation (2-1-2-3)	
Single Exit Phase	- - - - - - - -
Driveway Signal Phases	- - - - - - - -
Driveway Signal Overlaps	- - - - - - - -
Leading Ped Phases	- - - - - - - -

Protected Permissive (2-1-2-4)	
Protected Permissive	- - - - - - - -

Pedestrian (2-1-3)	
P1	- - - - - - - -
P2	- 2 - - - - - -
P3	- - - - - - - -
P4	- - - 4 - - - -
P5	- - - - - - - -
P6	- - - - - 6 - -
P7	- - - - - - - -
P8	- - - - - - - 8

Overlap (2-1-4)				
Overlap	Parent	Omit	No Start	Not
A [Arrow A]	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
B [Arrow B]	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
C [OL A]	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
D [OL B]	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
E [OL C]	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
F [OL D]	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -

[-] 332 Cabinet Overlap Assignment - For Reference Only

PAGE 2 **CHECKSUM:** 57D5

© 2017 California Department of Transportation, All Rights Reserved Location: 198 EB @ 12th Ave TSCP 3.10

PHASE TIMING

PHASE (2-2)	-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-
--- Walk 1 ---	0	0	0	0	0	7	0	0
Flash Don't Walk	0	0	0	0	0	19	0	0
Minimum Green	0	10	0	8	0	10	0	0
Det Limit	0	20	0	20	0	20	0	0
Max Initial	0	0	0	0	0	0	0	0
Max Green 1	0	25	0	30	0	25	0	0
Max Green 2	0	35	0	40	0	35	0	0
Max Green 3	0	0	0	0	0	0	0	0
Extension	0.0	5.6	0.0	5.2	0.0	5.6	0.0	0.0
Maximum Gap	0.0	7.7	0.0	6.9	0.0	9.0	0.0	0.0
Minimum Gap	0.0	2.0	0.0	2.0	0.0	2.0	0.0	0.0
Add Per Vehicle	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Reduce Gap By	0.0	0.1	0.0	0.1	0.0	0.1	0.0	0.0
Reduce Every	0.0	0.5	0.0	0.5	0.0	0.5	0.0	0.0
Yellow	3.0	4.8	3.0	4.4	3.0	4.8	3.0	3.0
All-Red	0.0	2.0	0.0	2.0	0.0	2.0	0.0	0.0
Ped/Bike (2-3)	-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-
--- Walk 2 ---	0	0	0	0	0	0	0	0
Delay/Early Walk	0	0	0	0	0	0	0	0
Solid Don't Walk	0	0	0	0	0	0	0	0
Bike Green	0	0	0	0	0	0	0	0
Bike All-Red	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

OVERLAP TIMING

Overlap (2-4)	A [Arrow A]	B [Arrow B]	C [OL A]	D [OL B]	E [OL C]	F [OL D]
Green	0.0	0.0	0.0	0.0	0.0	0.0
Yellow	5.0	5.0	5.0	5.0	5.0	5.0
Red	0.0	0.0	0.0	0.0	0.0	0.0

Red Revert (2-5)	
Time	5.0

Red To Se (2-6)	
Red To Sec	OFF

Max/Gap Out (2-7)	
Max Cnt	2
Gap Cnt	3

PAGE 3 CHECKSUM: 4017

© 2017 California Department of Transportation, All Rights Reserved

Local Plan 1...9 (7-1) TIMING DATA

COORDINATION

					[Offsets]			Green Factors or Press [F] to Select							
		Cycle	Multi	Lag Gap	A	B	C	-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-
Plan 1	Green Factor	100	0.0	- - - - - - - -					66		20		65		
Plan 2	Green Factor	100	0.0	- - - - - - - -					66		20		65		
Plan 3	Green Factor	110	0.0	- - - - - - - -	12				74		22		73		
Plan 4	Green Factor	100	0.0	- - - - - - - -	55			21	57		30		57		
Plan 5	Green Factor	100	0.0	- - - - - - - -	57			21	57		30		57		
Plan 6	Green Factor	100	0.0	- - - - - - - -	51			21	57		30		57		
Plan 7	Green Factor		0.0	- - - - - - - -											
Plan 8	Green Factor		0.0	- - - - - - - -											
Plan 9	Green Factor	120	0.0	- - - - - - - -	80				47		60		47		

Master Timer Sync (7-A)	
Enable in Plans	
1-9	- - - - - - - - -
11-19	- - - - - - - - -
21-29	- - - - - - - - -

Master Sub Master	
Input	0.0
Output	0

(7-E) Free	
Lag	Omit
- 2 - 4 - 6 - 8	- - - - - - - -
Veh Min	Veh Max
- 2 - - - 6 - -	- - - - - - - -
Ped	Bike
- - - - - - - -	- - - - - - - -
Cond	Cond Grn
- - - - - - - -	10

Local Plan 1...9 (7-1) PHASE FLAGS

	Lag	Sync	Hold	Omit	Veh Min	Veh Max	Ped	Bike
Plan 1	1 - - - - 6 - -	- 2 - - - 6 - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
Plan 2	1 - - - - 6 - -	- 2 - - - 6 - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
Plan 3	1 - - - - 6 - -	- 2 - - - 6 - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
Plan 4	- 2 - - - 6 - -	- 2 - - - 6 - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
Plan 5	- 2 - - - 6 - -	- 2 - - - 6 - -	- - - - - 6 - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
Plan 6	- 2 - - - 6 - -	- 2 - - - 6 - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
Plan 7	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
Plan 8	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
Plan 9	- - - 4 - - - -	- 2 - - - 6 - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -

MANUAL COMMANDS

Manual Plan (4-1)	
Plan	Offset
0	A

Plan: 1-29
15 or 254 = Flash
14 or 255 = Free
Offset A, B, or C

Special Function Override (4-2)			
#	Control	#	Control
1	NORMAL	3	NORMAL
2	NORMAL	4	NORMAL

Detector Reset	(4-3)
Local Manual (4-4)	OFF

 CHECKSUM: 2246

© 2017 California Department of Transportation, All Rights Reserved

Local Plan 11...19 (7-2) TIMING DATA

COORDINATION

					[Offsets]			Green Factors or Press [F] to Select Force-Off							
		Cycle	Multi	Lag Gap	A	B	C	1	2	3	4	5	6	7	8
Plan 11	Green Factor		0.0	- - - - - - - -											
Plan 12	Green Factor		0.0	- - - - - - - -											
Plan 13	Green Factor		0.0	- - - - - - - -											
Plan 14	Green Factor		0.0	- - - - - - - -											
Plan 15	Green Factor		0.0	- - - - - - - -											
Plan 16	Green Factor		0.0	- - - - - - - -											
Plan 17	Green Factor		0.0	- - - - - - - -											
Plan 18	Green Factor		0.0	- - - - - - - -											
Plan 19	Green Factor		0.0	- - - - - - - -											

Local Plan 11...19 (7-2) PHASE FLAGS

	Lag	Sync	Hold	Omit	Veh Min	Veh Max	Ped	Bike
Plan 11	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
Plan 12	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
Plan 13	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
Plan 14	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
Plan15	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
Plan 16	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
Plan 17	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
Plan 18	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
Plan 19	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -

© 2017 California Department of Transportation, All Rights Reserved

Local Plan 21...29 (7-3) TIMING DATA

COORDINATION

					[Offsets]			Green Factors or Press [F] to Select Force-Off							
		Cycle	Multi	Lag Gap	A	B	C	1	2	3	4	5	6	7	8
Plan 21	Green Factor		0.0	- - - - - - - -											
Plan 22	Green Factor		0.0	- - - - - - - -											
Plan 23	Green Factor		0.0	- - - - - - - -											
Plan 24	Green Factor		0.0	- - - - - - - -											
Plan 25	Green Factor		0.0	- - - - - - - -											
Plan 26	Green Factor		0.0	- - - - - - - -											
Plan 27	Green Factor		0.0	- - - - - - - -											
Plan 28	Green Factor		0.0	- - - - - - - -											
Plan 29	Green Factor		0.0	- - - - - - - -											

Local Plan 21...29 (7-3) PHASE FLAGS

	Lag	Sync	Hold	Omit	Veh Min	Veh Max	Ped	Bike
Plan 21	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
Plan 22	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
Plan 23	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
Plan 24	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
Plan 25	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
Plan 26	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
Plan 27	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
Plan 28	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
Plan 29	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -

PAGE 6 **CHECKSUM:** 191A

© 2017 California Department of Transportation, All Rights Reserved

DETECTORS

Detector Attributes (5-1)

Det	Type	Phases	Lock	Slot
1	Count+Call+Extend	1 - - - - - - -	NO	I1U
2	Count+Call+Extend	1 - - - - - - -	NO	I1L
3	Count+Call+Extend	- 2 - - - - - -	NO	I2U
4	Count+Call+Extend	- 2 - - - - - -	NO	I2L
5	Limited	- 2 - - - - - -	NO	I3U
6	Limited	- 2 - - - - - -	NO	I3L
7	Limited	- 2 - - - - - -	NO	I4U
8	Limited	- 2 - - - - - -	NO	I4L
9	Count+Call+Extend	- - 3 - - - - -	NO	I5U
10	Count+Call+Extend	- - 3 - - - - -	NO	I5L
11	Count+Call+Extend	- - - 4 - - - -	NO	I6U
12	Count+Call+Extend	- - - 4 - - - -	NO	I6L
13	Limited	- - - 4 - - - -	NO	I7U
14	Limited	- - - 4 - - - -	NO	I7L
15	Limited	- - - 4 - - - -	NO	I8U
16	Limited	- - - 4 - - - -	NO	I8L
17	Count+Call+Extend	1 - - - - - - -	NO	I9U
18	Limited	- - - 4 - - - -	NO	I9L
19	Count+Call+Extend	- 2 - - - - - -	NO	I10U
20	Count+Call+Extend	- - - 4 - - - -	NO	I10L
21	Count+Call+Extend	- 2 - - - - - -	NO	J1U
22	Count+Call+Extend	- - - - 5 - - -	NO	J1L
23	Count+Call+Extend	- - - - - 6 - -	NO	J2U
24	Count+Call+Extend	- - - - - 6 - -	NO	J2L
25	Limited	- - - - - 6 - -	NO	J3U
26	Limited	- - - - - 6 - -	NO	J3L
27	Limited	- - - - - 6 - -	NO	J4U
28	Limited	- - - - - 6 - -	NO	J4L
29	Count+Call+Extend	- - - - - - 7 -	NO	J5U
30	Count+Call+Extend	- - - - - - 7 -	NO	J5L
31	Count+Call+Extend	- - - - - - - 8	NO	J6U
32	Count+Call+Extend	- - - - - - - 8	NO	J6L
33	Count+Call+Extend	- - - - - - - 8	NO	J7U
34	Call+Extend	- - - - - - - 8	NO	J7L
35	Limited	- - - - - - - 8	NO	J8U
36	Limited	- - - - - - - 8	NO	J8L
37	Count+Call+Extend	- - - - 5 - - -	NO	J9U
38	Count+Call+Extend	- - - - - - 7 -	NO	J9L
39	Count+Call+Extend	- - - - - 6 - -	NO	J10U
40	Count+Call+Extend	- - - - - - - 8	NO	J10L
41	Pedestrian	- 2 - - - - - -	NO	I12U
42	Pedestrian	- - - 4 - - - -	NO	I12L
43	Pedestrian	- - - - - 6 - -	NO	I13U
44	Pedestrian	- - - - - - - 8	NO	I13L

Detector Configuration (5-2)

Det	Delay	Extend	Recall	Port
1	0	0.0	10	3.2
2	0	0.0	10	7.2
3	0	0.0	10	1.1
4	0	0.0	10	1.5
5	0	2.0	10	4.5
6	0	0.0	10	6.2
7	0	2.0	10	2.1
8	0	2.0	10	7.4
9	0	0.0	10	3.4
10	0	0.0	10	7.6
11	0	0.0	10	1.3
12	0	0.0	10	1.7
13	20	3.0	10	4.7
14	20	3.0	10	6.4
15	0	3.0	10	2.3
16	0	3.0	10	7.8
17	0	0.0	10	3.6
18	0	3.0	10	3.8
19	0	0.0	10	4.1
20	0	0.0	10	4.2
21	0	0.0	10	3.1
22	0	0.0	10	7.1
23	0	0.0	10	1.2
24	0	0.0	10	1.6
25	0	2.0	10	4.6
26	0	2.0	10	6.3
27	0	2.0	10	2.2
28	0	2.0	10	7.3
29	0	0.0	10	3.3
30	0	0.0	10	7.5
31	0	0.0	10	1.4
32	0	0.0	10	1.8
33	0	0.0	10	4.8
34	0	0.0	10	6.5
35	0	0.0	10	2.4
36	0	0.0	10	7.7
37	0	0.0	10	3.5
38	0	0.0	10	3.7
39	0	0.0	10	4.3
40	0	0.0	10	4.4
41	0	0.0	10	5.1
42	0	0.0	10	5.3
43	0	0.0	10	5.2
44	0	0.0	10	5.4

Failure Times (5-3)	Minutes
Maximum On Time	0
Fail Reset Time	0

Failure Override (5-4)	
Detectors 1-8	- - - - - - - -
Detectors 9-16	- - - - - - - -
Detectors 17-24	- - - - - - - -
Detectors 25-32	- - - - - - - -
Detectors 33-40	- - - - - - - -
Detectors 41-44	- - - - - - - -

System Detector Assignment (5-5)

Sys Det	1	2	3	4	5	6	7	8
Det Num	0	0	0	0	0	0	0	0
Sys Det	9	10	11	12	13	14	15	16
Det Num	0	0	0	0	0	0	0	0

CIC Operation (5-6-1)	
Enable in Plans	- - - - - - - -

CIC Values (5-6-2)	Volume	Occupancy	Demand
Smoothing	0.66	0.66	0.66
Multiplier	4.0	0.33	
Exponent	0.50	1.0	

Detector-to-Phase Assignment (5-6-3)

Sys Det	1	2	3	4	5	6	7	8
Phase	0	0	0	0	0	0	0	0
Sys Det	9	10	11	12	13	14	15	16
Phase	0	0	0	0	0	0	0	0

Input File Port-Bit Assignments

332 Cabinet - For Reference Only

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
I-	3.2	1.1	4.5	2.1	3.4	1.3	4.7	2.3	3.6	4.1	6.6	5.1	5.2	6.7
	7.2	1.5	6.2	7.4	7.6	1.7	6.4	7.8	3.8	4.2	2.7	5.3	5.4	6.8
J-	3.1	1.2	4.6	2.2	3.3	1.4	4.8	2.4	3.5	4.3	2.8	5.5	5.6	2.5
	7.1	1.6	6.3	7.3	7.5	1.8	6.5	7.7	3.7	4.4	6.1	5.7	5.8	2.6

CHECKSUM: 4EFF

© 2017 California Department of Transportation, All Rights Reserved

TOD SCHEDULE

Table 1 (8-2-1)		
Time	Plan	OS
0700	1	A
0830	2	A
1530	3	A
1830	255	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A

Table 2 (8-2-2)		
Hour	Plan	OS
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A

Table 3 (8-2-3)		
Hour	Plan	OS
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A

Table 4 (8-2-4)		
Hour	Plan	OS
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A

Table 5 (8-2-5)		
Hour	Plan	OS
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A

Table 6 (8-2-6)		
Hour	Plan	OS
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A

WEEKDAY ASSIGNMENT

Weekday Table Assignments (8-2-7)						
Mon	Tue	Wed	Thu	Fri	Sat	Sun
1	1	1	1	1	2	2

 CHECKSUM: B8E5

© 2017 California Department of Transportation, All Rights Reserved

HOLIDAY TABLES

Floating Holiday Table (8-2-8)

#	Mnth	Week	DOW	Table
1	0	0	- - - - - - - -	0
2	0	0	- - - - - - - -	0
3	0	0	- - - - - - - -	0
4	0	0	- - - - - - - -	0
5	0	0	- - - - - - - -	0
6	0	0	- - - - - - - -	0
7	0	0	- - - - - - - -	0
8	0	0	- - - - - - - -	0
9	0	0	- - - - - - - -	0
10	0	0	- - - - - - - -	0
11	0	0	- - - - - - - -	0
12	0	0	- - - - - - - -	0
13	0	0	- - - - - - - -	0
14	0	0	- - - - - - - -	0
15	0	0	- - - - - - - -	0
16	0	0	- - - - - - - -	0

Fixed Holiday Table (8-2-9)

#	Mnth	Day	DOW	Table
1	0	0	- - - - - - - -	0
2	0	0	- - - - - - - -	0
3	0	0	- - - - - - - -	0
4	0	0	- - - - - - - -	0
5	0	0	- - - - - - - -	0
6	0	0	- - - - - - - -	0
7	0	0	- - - - - - - -	0
8	0	0	- - - - - - - -	0
9	0	0	- - - - - - - -	0
10	0	0	- - - - - - - -	0
11	0	0	- - - - - - - -	0
12	0	0	- - - - - - - -	0
13	0	0	- - - - - - - -	0
14	0	0	- - - - - - - -	0
15	0	0	- - - - - - - -	0
16	0	0	- - - - - - - -	0

Daylight Saving (8-6)

Enable	YES		
		Month	Sunday
	Start	None	None
	End	January	3rd

Solar Clock Data (8-4)

North Latitude	34
West Longitude	118
Local Time Zone	8

Sabbatical Clock (8-5)

Hebrew	Ped Recall
Sabbath	- - - - - - - -
Holiday	- - - - - - - -

TOD Functions (8-3)

#	Start	End	DOW	Action	Phases
1	0530	2230	1 2 3 4 5 6 7	27	1 2 - 4 - 6 - -
2	0000	0000	- - - - - - - -	0	- - - - - - - -
3	0000	0000	- - - - - - - -	0	- - - - - - - -
4	0000	0000	- - - - - - - -	0	- - - - - - - -
5	0000	0000	- - - - - - - -	0	- - - - - - - -
6	0000	0000	- - - - - - - -	0	- - - - - - - -
7	0000	0000	- - - - - - - -	0	- - - - - - - -
8	0000	0000	- - - - - - - -	0	- - - - - - - -
9	0000	0000	- - - - - - - -	0	- - - - - - - -
10	0000	0000	- - - - - - - -	0	- - - - - - - -
11	0000	0000	- - - - - - - -	0	- - - - - - - -
12	0000	0000	- - - - - - - -	0	- - - - - - - -
13	0000	0000	- - - - - - - -	0	- - - - - - - -
14	0000	0000	- - - - - - - -	0	- - - - - - - -
15	0000	0000	- - - - - - - -	0	- - - - - - - -
16	0000	0000	- - - - - - - -	0	- - - - - - - -

Action Codes:
0. None
1. Permitted
2. Restricted
4. Veh Min Recall
5. Veh Max Recall
6. Ped Recall
7. Bike Recall
8. Red Lock
9. Yellow Lock
10. Force/Max Lock
11.Double Entry
12. Y-Coord C
13. Y-Coord D
14. Free
15. Flashing
16. Walk 2
17. Max Green 2
18. Max Green 3
19. Rest in Walk
20. Rest in Red
21. Free Lag Phases
22. Special Functions
23. Truck Preempt
24. Conditional Service
25. Conditional Service
26. Leading Ped
41. Protected Permissive
42. Protected Permissive

Action Code = Phases added to normal setting

100+Action Code = Phases removed
200+Action Code = Phases replaced

© 2017 California Department of Transportation, All Rights Reserved

COMMUNICATIONS

	C2 (6-1-1)	C20 (6-1-2)	C21 (6-1-3)
Address	0	0	0
Protocol	AB3418	AB3418	AB3418
Baud	1200	1200	1200
Parity	None	None	None
Data Bits	8 data bits	8 data bits	8 data bits
Stop Bits	1 stop bit	1 stop bit	1 stop bit
RTS On Time	20	20	20
RTS Off Time	20	20	20
Handshaking	Normal	Normal	Normal
Access Level	None	None	None

CALLBACK NUMBERS

Callback Numbers (6-3...3)			
Line Out	0	0	0
Local Toll	0	0	0
Long Distance	0	0	0
Delay	10	10	10
Area Code	0	0	0
Phone Number	0 - 0	0 - 0	0 - 0

SOFT LOGIC

Soft Logic (6-2)							
#	Data	OP	Data	OP	Data	OP	Data
1	00.0	00	00.0	00	00.0	00	00.0
2	00.0	00	00.0	00	00.0	00	00.0
3	00.0	00	00.0	00	00.0	00	00.0
4	00.0	00	00.0	00	00.0	00	00.0
5	00.0	00	00.0	00	00.0	00	00.0
6	00.0	00	00.0	00	00.0	00	00.0
7	00.0	00	00.0	00	00.0	00	00.0
8	00.0	00	00.0	00	00.0	00	00.0
9	00.0	00	00.0	00	00.0	00	00.0
10	00.0	00	00.0	00	00.0	00	00.0
11	00.0	00	00.0	00	00.0	00	00.0
12	00.0	00	00.0	00	00.0	00	00.0
13	00.0	00	00.0	00	00.0	00	00.0
14	00.0	00	00.0	00	00.0	00	00.0
15	00.0	00	00.0	00	00.0	00	00.0
16	00.0	00	00.0	00	00.0	0A	00.0

***Refer to User's Manual for Data and OP Codes**

NETWORK

Network (6-4)	
Address	1
Protocol	AB3418
Port	27000
IP Mode	Static IP
Central Access	0
Field Access	0
ATSPM	Enabled

IP Address	192	168	13	1
Netmask	255	255	255	0
Broadcast	192	168	13	255
Gateway	192	168	13	254

SPAT Network (6-5)				
SPAT	1		2	
Protocol	None		None	
Port	0		0	
Address	0	0	0	0

Access Levels

0-Full Access
1-Status Only
2-Status, Set Pattern, Time
3-Status, Set Pattern, Time, Manual Plan
4-Reserved
5-Full Access with No Set Pattern
6-Full Access with No Set Time
7-Full Access with No Set Pattern, Manual Plan
8-Full Access with No Set Time, Pattern, Manual Plan

© 2017 California Department of Transportation, All Rights Reserved

RAILROAD PREEMPTION

RR 1

Timing (3-1-1)	
Clear 1	10
Clear 2	0
Clear 3	0
Hold	0
Min Grn	0
Delay	0
Exit	0
Ped Clr	0

Phase Flags (3-1-2)			Pedestrian Flags (3-1-3)			Overlap Flags (3-1-4)		
Grn Hold	Yel Flash	Red Flash	Walk	Flash DW	Solid DW	Grn Hold	Yel Flash	Red Flash
- 2 - - 5 - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- 2 - 4 - 6 - 8	- - - - - -	- - - - - -	- - - - - -
- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - -	- - - - - -	- - - - - -
- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - -	- - - - - -	- - - - - -
- - - - - - - -	- - - - - - - -	1 2 3 4 5 6 7 8	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - -	- - - - - -	- - - - - -

Exit Parameters (3-1-5)			
Phase Green	Overlap Green	Veh Permit/Call	Ped Permit/Call
- - - - - - - -	- - - - - - -	1 2 3 4 5 6 7	- 2 - 4 - 6 -

Configuration (3-1-6)									
	PR	XR	Gate	Isld	APP	Sign 1	Sign 2	Max On	Latching
1	2.5	0.0	0.0	0.0	0.0	00.0	FF.0	0	Yes
2	0.0	0.0							

Valid Inputs: 1.x, 2.x, 3.x, 4.x, 5.x, 6.x, 7.x, 8.x x=1 to 8
Valid Outputs: 11.x,12.x,13.x,14.x,15.x,16.x,17.x,18.x x=1 to 8

RR 2

Timing (3-2-1)	
Clear 1	10
Clear 2	0
Clear 3	0
Hold	0
Min Grn	0
Delay	0
Exit	0
Ped Clr	0

Phase Flags (3-2-2)			Pedestrian Flags (3-2-3)			Overlap Flags (3-2-4)		
Grn Hold	Yel Flash	Red Flash	Walk	Flash DW	Solid DW	Grn Hold	Yel Flash	Red Flash
- - - 4 - - 7 -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- 2 - 4 - 6 - 8	- - - - - -	- - - - - -	- - - - - -
- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - -	- - - - - -	- - - - - -
- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - -	- - - - - -	- - - - - -
- - - - - - - -	- - - - - - - -	- - - - - - - -	- 2 - - - 6 - -	- - - - - - - -	- - - 4 - - - 8	- - - - - -	- - - - - -	- - - - - -

Exit Parameters (3-2-5)			
Phase Green	Overlap Green	Veh Permit/Call	Ped Permit/Call
- - - - - - - -	- - - - - - -	- - - 4 - - 7	- - - - - - - -

Configuration (3-2-6)									
	PR	XR	Gate	Isld	APP	Sign 1	Sign 2	Max On	Latching
1	2.6	0.0	0.0	0.0	0.0	00.0	00.0	0	Yes
2	0.0	0.0							

Valid Inputs: 1.x, 2.x, 3.x, 4.x, 5.x, 6.x, 7.x, 8.x x=1 to 8
Valid Outputs: 11.x,12.x,13.x,14.x,15.x,16.x,17.x,18.x x=1 to 8

EMERGENCY VEHICLE PREEMPTION

EVA (3-A)

Preempt Timers			Phase Green	Overlap Grn
Delay	Clear	Max		
0	30	30	- 2 - - 5 - - -	- - - - - -

Port	Latching	Phase Termination
5.5	No	Advance

EVB (3-B)

Preempt Timers			Phase Green	Overlap Grn
Delay	Clear	Max		
0	30	30	- - - 4 - - 7 -	- - - - - -

Port	Latching	Phase Termination
5.6	No	Advance

EVC (3-C)

Preempt Timers			Phase Green	Overlap Grn
Delay	Clear	Max		
0	30	30	1 - - - - 6 - -	- - - - - -

Port	Latching	Phase Termination
5.7	No	Advance

EVD (3-D)

Preempt Timers			Phase Green	Overlap Grn
Delay	Clear	Max		
0	30	30	- - 3 - - - - 8	- - - - - -

Port	Latching	Phase Termination
5.8	No	Advance

© 2017 California Department of Transportation, All Rights Reserved

INPUTS

Enable	No
Max ON	0
Max OFF	0

7 Wire I/C(2-1-5-1)			
Input	Port	Input	Port
R1	3.8	Free	3.6
R2	3.5	D2	2.8
R3	3.7	D3	6.1

Manual Control(2-1-5-2)	
Input	Port
Manual Adv	6.6
Adv Enable	6.6

Cabinet Staus (2-1-5-3)	
Input	Port
Flash Bus	0.0
Door Ajar	0.0
Flash Sense	6.7
Stop Time	6.8

Special Function (2-1-5-4)	
Input	Port
1	0.0
2	0.0
3	0.0
4	0.0

Battery Backup (2-1-5-5)	
Port	Operation
2.7	Flashing

Y-Coordination (2-1-5-6)	
Port C	Port D
6.1	2.8

OUTPUTS

Loadswitch Assignments (2-1-6)							
A	1	2	22	3	4	24	9
B	5	6	26	7	8	28	10
X	13	14	0	11	12	0	0

Loadswitch Codes:
0 Unused (no output)
1- 8 Vehicle 1-8
9-14 Overlap A-F
21-28 Ped 1-8
41-47 Special Functions
41 Protected Permissive Flashing Phase 1
43 Protected Permissive Flashing Phase 3
45 Protected Permissive Flashing Phase 5
47 Protected Permissive Flashing Phase 7
51-57 Special Functions
71-72 Seven Wire I/C + middle output of loadswitches 3 and 6 Channel 9 and 10

INTERVAL CONTROL

Interval Control	
(3-3-1)	Time
Step 1	0
Step 2	0
Step 3	0
Step 4	0
Step 5	0
Step 6	0
Step 7	0
Step 8	0

Phase Control (3-3-2)		
Hold	Force	Advance
- - - - - - - -	- - - - - - - -	- - - - - - - -
- - - - - - - -	- - - - - - - -	- - - - - - - -
- - - - - - - -	- - - - - - - -	- - - - - - - -
- - - - - - - -	- - - - - - - -	- - - - - - - -
- - - - - - - -	- - - - - - - -	- - - - - - - -
- - - - - - - -	- - - - - - - -	- - - - - - - -
- - - - - - - -	- - - - - - - -	- - - - - - - -
- - - - - - - -	- - - - - - - -	- - - - - - - -

Phase Recalls (3-3-3)		
Veh Call	Ped Call	Int Call
- - - - - - - -	- - - - - - - -	- - - - - - - -
- - - - - - - -	- - - - - - - -	- - - - - - - -
- - - - - - - -	- - - - - - - -	- - - - - - - -
- - - - - - - -	- - - - - - - -	- - - - - - - -
- - - - - - - -	- - - - - - - -	- - - - - - - -
- - - - - - - -	- - - - - - - -	- - - - - - - -
- - - - - - - -	- - - - - - - -	- - - - - - - -
- - - - - - - -	- - - - - - - -	- - - - - - - -

Phase Permissions (3-3-4)		
Phs Permit	Ped Permit	Overlap
- - - - - - - -	- - - - - - - -	- - - - - -
- - - - - - - -	- - - - - - - -	- - - - - -
- - - - - - - -	- - - - - - - -	- - - - - -
- - - - - - - -	- - - - - - - -	- - - - - -
- - - - - - - -	- - - - - - - -	- - - - - -
- - - - - - - -	- - - - - - - -	- - - - - -
- - - - - - - -	- - - - - - - -	- - - - - -
- - - - - - - -	- - - - - - - -	- - - - - -

Configuration (3-3-5)		
Input	Port	Delay
1	0.0	0
2	0.0	0

© 2017 California Department of Transportation, All Rights Reserved

TRANSIT PRIORITY

Local Plans (3-E) 1...9 11...19		Early Green	Green Extend	Inhibit Cycles	Phase 1 Minimum	Phase 2 Minimum	Phase 3 Minimum	Phase 4 Minimum	Phase 5 Minimum	Phase 6 Minimum	Phase 7 Minimum	Phase 8 Minimum
Plan 1	Green Factor	0	0	0	0	0	0	0	0	0	0	0
Plan 2	Green Factor	0	0	0	0	0	0	0	0	0	0	0
Plan 3	Green Factor	0	0	0	0	0	0	0	0	0	0	0
Plan 4	Green Factor	0	0	0	0	0	0	0	0	0	0	0
Plan 5	Green Factor	0	0	0	0	0	0	0	0	0	0	0
Plan 6	Green Factor	0	0	0	0	0	0	0	0	0	0	0
Plan 7	Green Factor	0	0	0	0	0	0	0	0	0	0	0
Plan 8	Green Factor	0	0	0	0	0	0	0	0	0	0	0
Plan 9	Green Factor	0	0	0	0	0	0	0	0	0	0	0
Plan 11	Green Factor	0	0	0	0	0	0	0	0	0	0	0
Plan 12	Green Factor	0	0	0	0	0	0	0	0	0	0	0
Plan 13	Green Factor	0	0	0	0	0	0	0	0	0	0	0
Plan 14	Green Factor	0	0	0	0	0	0	0	0	0	0	0
Plan 15	Green Factor	0	0	0	0	0	0	0	0	0	0	0
Plan 16	Green Factor	0	0	0	0	0	0	0	0	0	0	0
Plan 17	Green Factor	0	0	0	0	0	0	0	0	0	0	0
Plan 18	Green Factor	0	0	0	0	0	0	0	0	0	0	0
Plan 19	Green Factor	0	0	0	0	0	0	0	0	0	0	0

Enable in Local Plans (3-E-3)	
Plan 1-9	- - - - - - - -
Plan 11-19	- - - - - - - -

Queue Jump (3-E-4)	
Grn Hold	Hold Phase
0	- - - - - - - -
0	- - - - - - - -

Input	
Type	Port
OPT	0.0
OPT	0.0

Output	
Stop	Go
0	0
0	0

Free Plans (3-E-E)	
Max Green	Hold Phase
0	- - - - - - - -

Access Utilities (9-5)	
Password	***
Timeout	30

YELLOW YIELD COORDINATION

					Force-Offs											
Y-Coord Plans (7-C,D)	Long Grn	No Grn	Offset	Perm	1	2	3	4	5	6	7	8	Coord	Lag	Min Recall	Restricted
Plan C	0	0	0	0	0	0	0	0	0	0	0	0	- 2 - - - 6 - -	- 2 - 4 - 6 - 8	- - - - - - - -	- - - - - - - -
Plan D	0	0	0	0	0	0	0	0	0	0	0	0	- 2 - - - 6 - -	- 2 - 4 - 6 - 8	- - - - - - - -	- - - - - - - -

TRUCK PRIORITY

Truck Priority (3-F)	Passage	CarryOver	Clearance	Next Priority	Phase Green	Det 2 Port	Det 3 Port	Det 4 Port	Sign Output	Slave Input	Slave Output
	0.0	0.0	0	0	- - - - - - - -	0.0	0.0	0.0	0	0.0	0

CONTROLLER ID

Manufacturer ID	Caltrans TSCP Ver 3.10
Model ID	Model 2070
Protocol Revision ID	AB3418

State of California
DEPARTMENT OF TRANSPORTATION

2070 Controller Timing Chart

Caltrans TSCP Ver 2.21

Location:			Designed By:
System:	District:		Intalled By:
Master At:	I/C:		Service Info:

Timing Change:	By:	Date Start:	Date End:	Designed:	Installed:

		FLASH
PHASE	1)	[ ]
	2)	[ ]
	3)	[ ]
	4)	[ ]
	5)	[ ]
	6)	[ ]
	7)	[ ]
	8)	[ ]
OVERLAP	A)	[ ]
	B)	[ ]
	C)	[ ]
	D)	[ ]
	E)	[ ]
	F)	[ ]

Intersection Layout

Comments and Notes:

RAM Checksum

Page 2:	8EBE	Page 8:	85AF
Page 3:	3D7F	Page 9:	2FCE
Page 4:	2D9A	Page 10:	BAC2
Page 5:	191A	Page 11:	C3CB
Page 6:	191A	Page 12:	9553
Page 7:	4050	Page 13:	86F7

CONFIGURATION PHASE FLAGS

Phases (2-1-1-1)	
Permitted	1 2 3 4 5 6 7 8
Restricted	- - - - - - - -

Phase Recalls (2-1-1-2)	
Vehicle Min	- 2 - - - 6 - -
vehicle Max	- - - - - - - -
Pedestrian	- - - - - - - -
Bicyle	- - - - - - - -

Phase Locks (2-1-1-3)	
Red	- - - - - - - -
Yellow	- - - - - - - -
Force/Max	- - - - - - - -

Phase Features (2-1-1-4)	
Double Entry	- - - 4 - - - 8
Rest In Walk	- - - - - - - -
Rest In Red	- - - - - - - -
Walk2	- - - - - - - -
Max Green 2	1 2 3 4 5 6 7 8
Max Green 3	- - - - - - - -

Startup (2-1-1-5)	
First Green Phases	- 2 - - - 6 - -
Yellow Start Phases	- - - - - - - -
Vehicle Calls	1 2 3 4 5 6 7 8
Pedestrian Calls	- 2 - 4 - 6 - 8
Yellow Start Overlaps	- - - - - -
Startup All-Red	7.0

Call To Phase (2-1-2-1)		Omit On Green	
1	- - - - - - - -	1	- - - - - - - -
2	- - - - - - - -	2	- - - - - - - -
3	- - - - - - - -	3	- - - - - - - -
4	- - - - - - - -	4	- - - - - - - -
5	- - - - - - - -	5	- - - - - - - -
6	- - - - - - - -	6	- - - - - - - -
7	- - - - - - - -	7	- - - - - - - -
8	- - - - - - - -	8	- - - - - - - -

Flashing Colors (2-1-2-2)	
Yellow Flash Phases	- - - - - - - -
Yellow Flash Overlap	- - - - - - - -
Flash In Red Phases	- - - - - - - -
Flash In Red Overlap	- - - - - - - -

Special Operation (2-1-2-3)	
Single Exit Phase	- - - - - - - -
Driveway Signal Phases	- - - - - - - -
Driveway Signal Overlaps	- - - - - - - -
Leading Ped Phases	- - - - - - - -

Protected Permissive (2-1-2-4)	
Protected Permissive	- - - - - - - -

Pedestrian (2-1-3)	
P1	- - - - - - - -
P2	- 2 - - - - - -
P3	- - - - - - - -
P4	- - - 4 - - - -
P5	- - - - - - - -
P6	- - - - - 6 - -
P7	- - - - - - - -
P8	- - - - - - - 8

Overlap (2-1-4)				
Overlap	Parent	Omit	No Start	Not
A [Arrow A]	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
B [Arrow B]	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
C [OL A]	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
D [OL B]	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
E [OL C]	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
F [OL D]	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -

[-] 332 Cabinet Overlap Assignment - For Reference Only

PAGE 2 **CHECKSUM:** 8EBE

PHASE TIMING

PHASE (2-2)	-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-
--- Walk 1 ---	0	7	0	7	0	7	0	7
Flash Don't Walk	0	23	0	21	0	17	0	25
Minimum Green	9	10	9	8	9	10	9	8
Det Limit	0	30	0	20	0	30	0	20
Max Initial	0	0	0	0	0	0	0	0
Max Green 1	15	35	15	20	15	35	15	20
Max Green 2	25	45	25	30	25	45	25	30
Max Green 3	0	0	0	0	0	0	0	0
Extension	2.0	6.7	2.0	5.7	2.0	6.7	2.0	5.7
Maximum Gap	2.0	9.2	2.0	7.8	2.0	9.2	2.0	7.8
Minimum Gap	2.0	3.0	2.0	3.0	2.0	3.0	2.0	3.0
Add Per Vehicle	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Reduce Gap By	0.0	0.1	0.0	0.1	0.0	0.1	0.0	0.1
Reduce Every	0.0	0.4	0.0	0.4	0.0	0.4	0.0	0.4
Yellow	3.7	5.9	3.7	5.5	3.7	5.9	3.7	5.5
All-Red	2.2	2.0	2.2	2.0	2.2	2.0	2.0	2.0
Ped/Bike (2-3)	-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-
--- Walk 2 ---	0	0	0	0	0	0	0	0
Delay/Early Walk	0	0	0	0	0	0	0	0
Solid Don't Walk	0	0	0	0	0	0	0	0
Bike Green	0	0	0	0	0	0	0	0
Bike All-Red	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

OVERLAP TIMING

Overlap (2-4)	A [Arrow A]	B [Arrow B]	C [OL A]	D [OL B]	E [OL C]	F [OL D]
Green	0.0	0.0	0.0	0.0	0.0	0.0
Yellow	5.0	5.0	5.0	5.0	5.0	5.0
Red	0.0	0.0	0.0	0.0	0.0	0.0

Red Revert (2-5)	
Time	5.0

Red To Se (2-6)	
Red To Sec	OFF

Max/Gap Out (2-7)	
Max Cnt	0
Gap Cnt	0

PAGE 3 CHECKSUM: 3D7F

Local Plan 1...9 (7-1) TIMING DATA

COORDINATION

					[Offsets]			Green Factors or Press [F] to Select							
		Cycle	Multi	Lag Gap	A	B	C	-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-
Plan 1	Green Factor		0.0	- - - - - - - -											
Plan 2	Green Factor		0.0	- - - - - - - -											
Plan 3	Green Factor		0.0	- - - - - - - -											
Plan 4	Green Factor		0.0	- - - - - - - -											
Plan 5	Green Factor		0.0	- - - - - - - -											
Plan 6	Green Factor		0.0	- - - - - - - -											
Plan 7	Green Factor		0.0	- - - - - - - -											
Plan 8	Green Factor		0.0	- - - - - - - -											
Plan 9	Green Factor		0.0	- - - - - - - -											

Master Timer Sync (7-A)	
Enable in Plans	
1-9	- 2 - - - 6 - - -
11-19	- - - - - - - - - -
21-29	- - - - - - - - - -

Master Sub Master	
Input	0.0
Output	0

(7-E) Free	
Lag	Omit
- 2 - 4 - 6 - 8	- - - - - - - -
Veh Min	Veh Max
- 2 - - - 6 - -	- - - - - - - -
Ped	Bike
- - - - - - - -	- - - - - - - -
Cond	Cond Grn
- - - - - - - -	10

Local Plan 1...9 (7-1) PHASE FLAGS

	Lag	Sync	Hold	Omit	Veh Min	Veh Max	Ped	Bike
Plan 1	- 2 - 4 - 6 - 8	- 2 - - - 6 - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
Plan 2	- 2 - 4 - 6 - 8	- 2 - - - 6 - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
Plan 3	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
Plan 4	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
Plan 5	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
Plan 6	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
Plan 7	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
Plan 8	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
Plan 9	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -

MANUAL COMMANDS

Manual Plan (4-1)	
Plan	Offset
0	A

Plan: 1-9
15 or 254 = Flash
14 or 255 = Free
Offset A, B, or C

Special Function Override (4-2)			
#	Control	#	Control
1	NORMAL	3	NORMAL
2	NORMAL	4	NORMAL

Detector Reset	(4-3)
Local Manual (4-4)	OFF

PAGE 4 CHECKSUM: 2D9A

Local Plan 11...19 (7-2) TIMING DATA COORDINATION

					[Offsets]			Green Factors or Press [F] to Select Force-Off							
		Cycle	Multi	Lag Gap	A	B	C	1	2	3	4	5	6	7	8
Plan 11	Green Factor		0.0	- - - - - - - -											
Plan 12	Green Factor		0.0	- - - - - - - -											
Plan 13	Green Factor		0.0	- - - - - - - -											
Plan 14	Green Factor		0.0	- - - - - - - -											
Plan 15	Green Factor		0.0	- - - - - - - -											
Plan 16	Green Factor		0.0	- - - - - - - -											
Plan 17	Green Factor		0.0	- - - - - - - -											
Plan 18	Green Factor		0.0	- - - - - - - -											
Plan 19	Green Factor		0.0	- - - - - - - -											

Local Plan 11...19 (7-2) PHASE FLAGS

	Lag	Sync	Hold	Omit	Veh Min	Veh Max	Ped	Bike
Plan 11	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
Plan 12	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
Plan 13	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
Plan 14	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
Plan15	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
Plan 16	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
Plan 17	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
Plan 18	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
Plan 19	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -

PAGE 5 CHECKSUM: 191A

Local Plan 21...29 (7-3) TIMING DATA COORDINATION

[Offsets] Green Factors or Press [F] to Select Force-Off

		Cycle	Multi	Lag Gap	A	B	C	1	2	3	4	5	6	7	8
Plan 21	Green Factor		0.0	- - - - - - - -											
Plan 22	Green Factor		0.0	- - - - - - - -											
Plan 23	Green Factor		0.0	- - - - - - - -											
Plan 24	Green Factor		0.0	- - - - - - - -											
Plan 25	Green Factor		0.0	- - - - - - - -											
Plan 26	Green Factor		0.0	- - - - - - - -											
Plan 27	Green Factor		0.0	- - - - - - - -											
Plan 28	Green Factor		0.0	- - - - - - - -											
Plan 29	Green Factor		0.0	- - - - - - - -											

Local Plan 21...29 (7-3) PHASE FLAGS

	Lag	Sync	Hold	Omit	Veh Min	Veh Max	Ped	Bike
Plan 21	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
Plan 22	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
Plan 23	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
Plan 24	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
Plan 25	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
Plan 26	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
Plan 27	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
Plan 28	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
Plan 29	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -

DETECTORS

Detector Attributes (5-1)				Slot
Det	Type	Phases	Lock	
1	Count+Call+Extend	1 - - - - - - -	NO	I1U
2	Count+Call+Extend	1 - - - - - - -	NO	I1L
3	Count+Call+Extend	- 2 - - - - - -	NO	I2U
4	Count+Call+Extend	- 2 - - - - - -	NO	I2L
5	Count+Call+Extend	- 2 - - - - - -	NO	I3U
6	Count+Call+Extend	- 2 - - - - - -	NO	I3L
7	Count+Call+Extend	- 2 - - - - - -	NO	I4U
8	Count+Call+Extend	- 2 - - - - - -	NO	I4L
9	Count+Call+Extend	- - 3 - - - - -	NO	I5U
10	Count+Call+Extend	- - 3 - - - - -	NO	I5L
11	Count+Call+Extend	- - - 4 - - - -	NO	I6U
12	Count+Call+Extend	- - - 4 - - - -	NO	I6L
13	Count+Call+Extend	- - - 4 - - - -	NO	I7U
14	Count+Call+Extend	- - - 4 - - - -	NO	I7L
15	Count+Call+Extend	- - - 4 - - - -	NO	I8U
16	Count+Call+Extend	- - - 4 - - - -	NO	I8L
17	Count+Call+Extend	1 - - - - - - -	NO	I9U
18	Count+Call+Extend	- - 3 - - - - -	NO	I9L
19	None	- - - - - - - -	NO	I10U
20	None	- - - - - - - -	NO	I10L
21	Count+Call+Extend	- - - - 5 - - -	NO	J1U
22	Count+Call+Extend	- - - - 5 - - -	NO	J1L
23	Count+Call+Extend	- - - - - 6 - -	NO	J2U
24	Count+Call+Extend	- - - - - 6 - -	NO	J2L
25	Count+Call+Extend	- - - - - 6 - -	NO	J3U
26	Count+Call+Extend	- - - - - 6 - -	NO	J3L
27	Count+Call+Extend	- - - - - 6 - -	NO	J4U
28	Count+Call+Extend	- - - - - 6 - -	NO	J4L
29	Count+Call+Extend	- - - - - - 7 -	NO	J5U
30	Count+Call+Extend	- - - - - - 7 -	NO	J5L
31	Count+Call+Extend	- - - - - - - 8	NO	J6U
32	Count+Call+Extend	- - - - - - - 8	NO	J6L
33	Count+Call+Extend	- - - - - - - 8	NO	J7U
34	Count+Call+Extend	- - - - - - - 8	NO	J7L
35	Count+Call+Extend	- - - - - - - 8	NO	J8U
36	Count+Call+Extend	- - - - - - - 8	NO	J8L
37	Count+Call+Extend	- - - - 5 - - -	NO	J9U
38	Count+Call+Extend	- - - - - - 7 -	NO	J9L
39	None	- - - - - - - -	NO	J10U
40	None	- - - - - - - -	NO	J10L
41	Pedestrian	- 2 - - - - - -	NO	I12U
42	Pedestrian	- - - 4 - - - -	NO	I12L
43	Pedestrian	- - - - - 6 - -	NO	I13U
44	Pedestrian	- - - - - - - 8	NO	I13L

Detector Configuration (5-2)				
Det	Delay	Extend	Recall	Port
1	2	1.0	10	3.2
2	2	1.0	10	7.2
3	0	0.0	10	1.1
4	0	1.8	10	1.5
5	0	0.0	10	4.5
6	15	0.0	10	6.2
7	0	4.0	10	2.1
8	0	4.0	10	7.4
9	2	1.0	10	3.4
10	2	1.0	10	7.6
11	2	0.0	10	1.3
12	2	0.0	10	1.7
13	0	0.0	10	4.7
14	0	0.0	10	6.4
15	0	3.0	10	2.3
16	0	3.0	10	7.8
17	0	0.0	10	3.6
18	0	0.0	10	3.8
19	0	0.0	10	4.1
20	0	0.0	10	4.2
21	2	1.0	10	3.1
22	2	1.0	10	7.1
23	0	0.0	10	1.2
24	0	1.8	10	1.6
25	0	0.0	10	4.6
26	15	0.0	10	6.3
27	0	4.0	10	2.2
28	0	4.0	10	7.3
29	2	1.0	10	3.3
30	2	1.0	10	7.5
31	2	0.0	10	1.4
32	2	0.0	10	1.8
33	0	0.0	10	4.8
34	0	0.0	10	6.5
35	0	3.0	10	2.4
36	0	3.0	10	7.7
37	0	0.0	10	3.5
38	0	0.0	10	3.7
39	0	0.0	10	4.3
40	0	0.0	10	4.4
41	0	0.0	10	5.1
42	0	0.0	10	5.3
43	0	0.0	10	5.2
44	0	0.0	10	5.4

Failure Times (5-3)	Minutes
Maximum On Time	0
Fail Reset Time	0

Failure Override (5-4)	
Detectors 1-8	- - - - - - - -
Detectors 9-16	- - - - - - - -
Detectors 17-24	- - - - - - - -
Detectors 25-32	- - - - - - - -
Detectors 33-40	- - - - - - - -
Detectors 41-44	- - - - - - - -

System Detector Assignment (5-5)								
Sys Det	1	2	3	4	5	6	7	8
Det Num	0	0	0	0	0	0	0	0
Sys Det	9	10	11	12	13	14	15	16
Det Num	0	0	0	0	0	0	0	0

CIC Operation (5-6-1)	
Enable in Plans	- - - - - - - -

CIC Values (5-6-2)	Volume	Occupancy	Demand
Smoothing	0.66	0.66	0.66
Multiplier	4.0	0.33	
Exponent	0.50	1.0	

Detector-to-Phase Assignment (5-6-3)								
Sys Det	1	2	3	4	5	6	7	8
Phase	0	0	0	0	0	0	0	0
Sys Det	9	10	11	12	13	14	15	16
Phase	0	0	0	0	0	0	0	0

Input File Port-Bit Assignments

332 Cabinet - For Reference Only

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
I-	3.2	1.1	4.5	2.1	3.4	1.3	4.7	2.3	3.6	4.1	6.6	5.1	5.2	6.7
	7.2	1.5	6.2	7.4	7.6	1.7	6.4	7.8	3.8	4.2	2.7	5.3	5.4	6.8
J-	3.1	1.2	4.6	2.2	3.3	1.4	4.8	2.4	3.5	4.3	2.8	5.5	5.6	2.5
	7.1	1.6	6.3	7.3	7.5	1.8	6.5	7.7	3.7	4.4	6.1	5.7	5.8	2.6

PAGE 7 CHECKSUM: 4050

TOD SCHEDULE

Table 1 (8-2-1)		
Time	Plan	OS
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A

Table 2 (8-2-2)		
Hour	Plan	OS
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A

Table 3 (8-2-3)		
Hour	Plan	OS
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A

Table 4 (8-2-4)		
Hour	Plan	OS
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A

Table 5 (8-2-5)		
Hour	Plan	OS
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A

Table 6 (8-2-6)		
Hour	Plan	OS
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A

WEEKDAY ASSIGNMENT

Weekday Table Assignments (8-2-7)						
Mon	Tue	Wed	Thu	Fri	Sat	Sun
1	1	1	1	1	2	2

PAGE 8 **CHECKSUM:** 85AF

HOLIDAY TABLES

Floating Holiday Table (8-2-8)

#	Mnth	Week	DOW	Table
1	0	0	- - - - - - - -	0
2	0	0	- - - - - - - -	0
3	0	0	- - - - - - - -	0
4	0	0	- - - - - - - -	0
5	0	0	- - - - - - - -	0
6	0	0	- - - - - - - -	0
7	0	0	- - - - - - - -	0
8	0	0	- - - - - - - -	0
9	0	0	- - - - - - - -	0
10	0	0	- - - - - - - -	0
11	0	0	- - - - - - - -	0
12	0	0	- - - - - - - -	0
13	0	0	- - - - - - - -	0
14	0	0	- - - - - - - -	0
15	0	0	- - - - - - - -	0
16	0	0	- - - - - - - -	0

Fixed Holiday Table (8-2-9)

#	Mnth	Day	DOW	Table
1	0	0	- - - - - - - -	0
2	0	0	- - - - - - - -	0
3	0	0	- - - - - - - -	0
4	0	0	- - - - - - - -	0
5	0	0	- - - - - - - -	0
6	0	0	- - - - - - - -	0
7	0	0	- - - - - - - -	0
8	0	0	- - - - - - - -	0
9	0	0	- - - - - - - -	0
10	0	0	- - - - - - - -	0
11	0	0	- - - - - - - -	0
12	0	0	- - - - - - - -	0
13	0	0	- - - - - - - -	0
14	0	0	- - - - - - - -	0
15	0	0	- - - - - - - -	0
16	0	0	- - - - - - - -	0

Solar Clock Data (8-4)

North Latidude	36
West Longitude	119
Local Time Zone	8

Sabbatical Clock (8-5)

Hebrew	Ped Recall
Sabbath	- - - - - - - -
Holiday	- - - - - - - -

Daylight Saving (8-6)

Daylight Saving	YES

TOD Functions (8-3)

#	Start	End	DOW	Action	Phases
1	0530	2230	1 2 3 4 5 6 7	17	1 2 3 4 5 6 7 8
2	0000	0000	- - - - - - -	0	- - - - - - - -
3	0000	0000	- - - - - - -	0	- - - - - - - -
4	0000	0000	- - - - - - -	0	- - - - - - - -
5	0000	0000	- - - - - - -	0	- - - - - - - -
6	0000	0000	- - - - - - -	0	- - - - - - - -
7	0000	0000	- - - - - - -	0	- - - - - - - -
8	0000	0000	- - - - - - -	0	- - - - - - - -
9	0000	0000	- - - - - - -	0	- - - - - - - -
10	0000	0000	- - - - - - -	0	- - - - - - - -
11	0000	0000	- - - - - - -	0	- - - - - - - -
12	0000	0000	- - - - - - -	0	- - - - - - - -
13	0000	0000	- - - - - - -	0	- - - - - - - -
14	0000	0000	- - - - - - -	0	- - - - - - - -
15	0000	0000	- - - - - - -	0	- - - - - - - -
16	0000	0000	- - - - - - -	0	- - - - - - - -

Action Codes:
0. None
1. Permitted
2. Restricted
4. Veh Min Recall
5. Veh Max Recall
6. Ped Recall
7. Bike Recall
8. Red Lock
9. Yellow Lock
10. Force/Max Lock
11.Double Entry
12. Y-Coord C
13. Y-Coord D
14. Free
15. Flashing
16. Walk 2
17. Max Green 2
18. Max Green 3
19. Rest in Walk
20. Rest in Red
21. Free Lag Phases
22. Special Functions
23. Truck Preempt
24. Conditional Service
25. Conditional Service
26. Leading Ped
41. Protected Permissive
42. Protected Permissive

Action Code = Phases added to normal setting

100+Action Code = Phases removed
200+Action Code = Phases replaced

COMMUNICATIONS

C2 (6-1-1)	
Address	0
Protocol	AB3418
Limit Access	None
Baud	1200
Parity	None
Data Bits	8 data bits
Stop Bits	1 stop bit
RTS On Time	20
RTS Off Time	20
Handshaking	Normal

C20 (6-1-2)	
Address	0
Protocol	AB3418
Limit Access	None
Baud	1200
Parity	None
Data Bits	8 data bits
Stop Bits	1 stop bit
RTS On Time	20
RTS Off Time	20
Handshaking	Normal

C21 (6-1-3)	
Address	0
Protocol	AB3418
Limit Access	None
Baud	1200
Parity	None
Data Bits	8 data bits
Stop Bits	1 stop bit
RTS On Time	20
RTS Off Time	20
Handshaking	Normal

SOFT LOGIC

Soft Logic (6-2)							
#	Data	OP	Data	OP	Data	OP	Data
1	00.0	00	00.0	00	00.0	00	00.0
2	00.0	00	00.0	00	00.0	00	00.0
3	00.0	00	00.0	00	00.0	00	00.0
4	00.0	00	00.0	00	00.0	00	00.0
5	00.0	00	00.0	00	00.0	00	00.0
6	00.0	00	00.0	00	00.0	00	00.0
7	00.0	00	00.0	00	00.0	00	00.0
8	00.0	00	00.0	00	00.0	00	00.0
9	00.0	00	00.0	00	00.0	00	00.0
10	00.0	00	00.0	00	00.0	00	00.0
11	00.0	00	00.0	00	00.0	00	00.0
12	00.0	00	00.0	00	00.0	00	00.0
13	00.0	00	00.0	00	00.0	00	00.0
14	00.0	00	00.0	00	00.0	00	00.0
15	00.0	00	00.0	00	00.0	00	00.0
16	00.0	00	00.0	00	00.0	00	00.0

CALLBACK NUMBERS

Callback Numbers (6-3...3)	
Line Out	0
Local Toll	0
Long Distance	0
Delay	10
Area Code	0
Phone Number	0 - 0

Line Out	0
Local Toll	0
Long Distance	0
Delay	10
Area Code	0
Phone Number	0 - 0

Line Out	0
Local Toll	0
Long Distance	0
Delay	10
Area Code	0
Phone Number	0 - 0

NETWORK

Network (6-4)				
Address	1			
Protocol	AB3418			
Port	27000			
IP Mode	Static IP			
IP Address	192	168	13	1
Netmask	255	255	255	0
Broadcast	192	168	13	255
Gateway	192	168	13	254

PAGE 10 **CHECKSUM:** BAC2

RAILROAD PREEMPTION

RR 1	(3-1-1)	Timing	Phase Flags (3-1-2)			Pedestrian Flags (3-1-3)			Overlap Flags (3-1-4)		
	Delay	0	Grn Hold	Yel Flash	Red Flash	Walk	Flash DW	Solid DW	Grn Hold	Yel Flash	Red Flash
	Clear 1	10	- 2 - - 5 - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- 2 - 4 - 6 - 8	- - - - - -	- - - - - -	- - - - - -
	Clear 2	0	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - -	- - - - - -	- - - - - -
	Clear 3	0	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - -	- - - - - -	- - - - - -
	Hold	0	- - - - - - - -	- - - - - - - -	1 2 3 4 5 6 7 8	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - -	- - - - - -	A B C D E F
	Exit	5									
	Min Grn	0									
	Ped Clr	0									

Exit Parameters (3-1-5)			
Phase Green	Overlap Green	Vehicle Recall	Ped Call
- - - - - - - -	- - - - - - -	1 2 3 4 5 6 7 8	- 2 - 4 - 6 - 8

Configuration (3-1-6)			
Port	Gate Port	Latching	Power-Up
2.5	0.0	Yes	Flashing

RR 2	(3-2-1)	Timing	Phase Flags (3-2-2)			Pedestrian Flags (3-2-3)			Overlap Flags (3-2-4)		
	Delay	0	Grn Hold	Yel Flash	Red Flash	Walk	Flash DW	Solid DW	Grn Hold	Yel Flash	Red Flash
	Clear 1	10	- - - 4 - - 7 -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- 2 - 4 - 6 - 8	- - - - - -	- - - - - -	- - - - - -
	Clear 2	0	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - -	- - - - - -	- - - - - -
	Clear 3	0	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - -	- - - - - -	- - - - - -
	Hold	0	1 2 3 - - 6 - -	- - - - - - - -	- - - - - - - -	- 2 - - - 6 - -	- - - - - - - -	- - - 4 - - - 8	- - - - - -	- - - - - -	- - - - - -
	Exit	0									
	Min Grn	0									
	Ped Clr	0									

Exit Parameters (3-2-5)			
Exit Ph Grn	Exit Ovl Grn	Exit Veh Recall	Exit Ped Call
- - - - - - - -	- - - - - - -	- - - 4 - - 7 -	- - - - - - - -

Configuration (3-2-6)			
Port	Gate Port	Latching	Power-Up
2.6	0.0	Yes	Dark

EMERGENCY VEHICLE PREEMPTION

EVA (3-A)	Preempt Timers			Phase Green	Overlap Grn
	Delay	Clear	Max		
	0	30	30	- 2 - - 5 - - -	- - - - - - -

Port	Latching	Phase Termination
5.5	No	Advance

EVB (3-B)	Preempt Timers			Phase Green	Overlap Grn
	Delay	Clear	Max		
	0	30	30	- - - 4 - - 7 -	- - - - - - -

Port	Latching	Phase	Phase Termination
5.6	No		Advance

EVC (3-C)	Preempt Timers			Phase Green	Overlap Grn
	Delay	Clear	Max		
	0	30	30	1 - - - - 6 - -	- - - - - - -

Port	Latching	Phase Termination
5.7	No	Advance

EVD (3-D)	Preempt Timers			Phase Green	Overlap Grn
	Delay	Clear	Max		
	0	30	30	- - 3 - - - - 8	- - - - - - -

Port	Latching	Phase	Phase Termination
5.8	No		Advance

INPUTS

		7 Wire I/C(2-1-5-1)			
		Input	Port	Input	Port
Enable	No	R1	3.8	Free	3.6
Max ON	0	R2	3.5	D2	2.8
Max OFF	0	R3	3.7	D3	6.1

Manual Control(2-1-5-2)	
Input	Port
Manual Adv	6.6
Adv Enable	6.6

Battery Backup (2-1-5-5)	
Port	Operation
2.7	Flashing

Cabinet Staus (2-1-5-3)	
Input	Port
Flash Bus	0.0
Door Ajar	0.0
Flash Sense	6.7
Stop Time	6.8

Special Function (2-1-5-4)	
Input	Port
1	0.0
2	0.0
3	0.0
4	0.0

Y-Coordination (2-1-5-6)	
Port C	Port D
6.1	2.8

OUTPUTS

Loadswitch Assignments (2-1-6)							
A	1	2	22	3	4	24	9
B	5	6	26	7	8	28	10
X	13	14	0	11	12	41	42

Loadswitch Codes:
0 Unused (no output)
1-8 Vehicle 1-8
9-14 Overlap A-F
21-28 Ped 1-8
41-47 Special Functions
41 Protected Permissive Flashing Phase 1
43 Protected Permissive Flashing Phase 3
45 Protected Permissive Flashing Phase 5
47 Protected Permissive Flashing Phase 7
51-57 Special Functions
71-72 Seven Wire I/C
+ middle output of loadswitches 3 and 6

YELLOW YIELD COORDINATION

					Force-Offs											
Y-Coord Plans (7-C,D)	Long Grn	No Grn	Offset	Perm	1	2	3	4	5	6	7	8	Coord	Lag	Min Recall	Restricted
Plan C	0	0	0	0	0	0	0	0	0	0	0	0	- 2 - - - 6 - -	- 2 - 4 - 6 - 8	- - - - - - - -	- - - - - - - -
Plan D	0	0	0	0	0	0	0	0	0	0	0	0	- 2 - - - 6 - -	- 2 - 4 - 6 - 8	- - - - - - - -	- - - - - - - -

TRANSIT PRIORITY

Local Plans (3-E) 1...9 1...19		Early Green	Green Extend	Inhibit Cycles	Phase 1 Minimum	Phase 2 Minimum	Phase 3 Minimum	Phase 4 Minimum	Phase 5 Minimum	Phase 6 Minimum	Phase 7 Minimum	Phase 8 Minimum
Plan 1	Green Factor	0	0	0	0	0	0	0	0	0	0	0
Plan 2	Green Factor	0	0	0	0	0	0	0	0	0	0	0
Plan 3	Green Factor	0	0	0	0	0	0	0	0	0	0	0
Plan 4	Green Factor	0	0	0	0	0	0	0	0	0	0	0
Plan 5	Green Factor	0	0	0	0	0	0	0	0	0	0	0
Plan 6	Green Factor	0	0	0	0	0	0	0	0	0	0	0
Plan 7	Green Factor	0	0	0	0	0	0	0	0	0	0	0
Plan 8	Green Factor	0	0	0	0	0	0	0	0	0	0	0
Plan 9	Green Factor	0	0	0	0	0	0	0	0	0	0	0
Plan 11	Green Factor	0	0	0	0	0	0	0	0	0	0	0
Plan 12	Green Factor	0	0	0	0	0	0	0	0	0	0	0
Plan 13	Green Factor	0	0	0	0	0	0	0	0	0	0	0
Plan 14	Green Factor	0	0	0	0	0	0	0	0	0	0	0
Plan 15	Green Factor	0	0	0	0	0	0	0	0	0	0	0
Plan 16	Green Factor	0	0	0	0	0	0	0	0	0	0	0
Plan 17	Green Factor	0	0	0	0	0	0	0	0	0	0	0
Plan 18	Green Factor	0	0	0	0	0	0	0	0	0	0	0
Plan 19	Green Factor	0	0	0	0	0	0	0	0	0	0	0

Enable Priority in Plan (3-E-A)					
Enable in Plans		Input	Type	Stop	Go
Plan 1-9	- - - - - - - -	0.0	OPT	0	0
Plan 11-19	- - - - - - - -	0.0	OPT	0	0

Queue Jump (3-E-B)	
Grn Hold	Hold Phase
0	- - - - - - - -
0	- - - - - - - -

Free Plans (3-E-E)	
Max Green	Hold Phase
0	- - - - - - - -

Access Utilities (9-5)	
Password	***
Timeout	30

TRUCK PRIORITY

Truck Priority (3-F)	Passage	CarryOver	Clearance	Next Priority	Phase Green	Det 2 Port	Det 3 Port	Det 4 Port	Sign Output	Slave Input	Slave Output
	0.0	0.0	0	0	- - - - - - - -	0.0	0.0	0.0	0	0.0	0

PAGE 13 **CHECKSUM:** 86F7

CONTROLLER ID

Manufacturer ID	Caltrans TSCP Ver 2.21
Model ID	Model 2070
Protocol Revision ID	AB3418

APPENDIX C

VOLUME DEVELOPMENT WORKSHEETS

LSA

Table C-1 - Existing Peak Hour Volume Summary

	AM Peak Hour			PM Peak Hour		
	Existing (2023) W/O Project	Project Trips	Existing (2023) Plus Project	Existing (2023) W/O Project	Project Trips	Existing (2023) Plus Project
1 13th Avenue/Flint Avenue						
NBL	0	0	0	3	0	3
NBT	64	0	64	59	0	59
NBR	36	0	36	9	0	9
SBL	9	0	9	2	0	2
SBT	81	0	81	66	0	66
SBR	2	0	2	2	0	2
EBL	4	0	4	2	0	2
EBT	114	9	123	46	8	54
EBR	11	0	11	8	0	8
WBL	43	0	43	5	0	5
WBT	103	10	113	38	6	44
WBR	4	0	4	8	0	8
North Leg						
Approach	92	0	92	70	0	70
Departure	72	0	72	69	0	69
Total	164	0	164	139	0	139
South Leg						
Approach	100	0	100	71	0	71
Departure	135	0	135	79	0	79
Total	235	0	235	150	0	150
East Leg						
Approach	150	10	160	51	6	57
Departure	159	9	168	57	8	65
Total	309	19	328	108	14	122
West Leg						
Approach	129	9	138	56	8	64
Departure	105	10	115	43	6	49
Total	234	19	253	99	14	113
Total Approaches						
Approach	471	19	490	248	14	262
Departure	471	19	490	248	14	262
Total	942	38	980	496	28	524

LSA

Table C-1 - Existing Peak Hour Volume Summary

	AM Peak Hour			PM Peak Hour		
	Existing (2023) W/O Project	Project Trips	Existing (2023) Plus Project	Existing (2023) W/O Project	Project Trips	Existing (2023) Plus Project
2 13th Avenue/Fargo Avenue						
NBL	7	0	7	6	0	6
NBT	62	0	62	50	0	50
NBR	30	5	35	77	15	92
SBL	26	0	26	24	0	24
SBT	99	0	99	51	0	51
SBR	3	0	3	3	0	3
EBL	5	0	5	3	0	3
EBT	93	18	111	126	11	137
EBR	3	0	3	4	0	4
WBL	104	13	117	34	9	43
WBT	201	16	217	56	10	66
WBR	15	0	15	18	0	18
North Leg						
Approach	128	0	128	78	0	78
Departure	82	0	82	71	0	71
Total	210	0	210	149	0	149
South Leg						
Approach	99	5	104	133	15	148
Departure	206	13	219	89	9	98
Total	305	18	323	222	24	246
East Leg						
Approach	320	29	349	108	19	127
Departure	149	23	172	227	26	253
Total	469	52	521	335	45	380
West Leg						
Approach	101	18	119	133	11	144
Departure	211	16	227	65	10	75
Total	312	34	346	198	21	219
Total Approaches						
Approach	648	52	700	452	45	497
Departure	648	52	700	452	45	497
Total	1,296	104	1,400	904	90	994

LSA

Table C-1 - Existing Peak Hour Volume Summary

	AM Peak Hour			PM Peak Hour		
	Existing (2023) W/O Project	Project Trips	Existing (2023) Plus Project	Existing (2023) W/O Project	Project Trips	Existing (2023) Plus Project
3 12th Avenue/Flint Avenue						
NBL	2	11	13	11	4	15
NBT	203	11	214	179	4	183
NBR	63	3	66	26	10	36
SBL	62	0	62	50	0	50
SBT	289	14	303	172	4	176
SBR	13	0	13	4	0	4
EBL	17	0	17	2	0	2
EBT	91	2	93	49	5	54
EBR	10	14	24	4	4	8
WBL	55	0	55	27	0	27
WBT	135	4	139	48	3	51
WBR	106	0	106	21	0	21
North Leg						
Approach	364	14	378	226	4	230
Departure	326	11	337	202	4	206
Total	690	25	715	428	8	436
South Leg						
Approach	268	25	293	216	18	234
Departure	354	28	382	203	8	211
Total	622	53	675	419	26	445
East Leg						
Approach	296	4	300	96	3	99
Departure	216	5	221	125	15	140
Total	512	9	521	221	18	239
West Leg						
Approach	118	16	134	55	9	64
Departure	150	15	165	63	7	70
Total	268	31	299	118	16	134
Total Approaches						
Approach	1,046	59	1,105	593	34	627
Departure	1,046	59	1,105	593	34	627
Total	2,092	118	2,210	1,186	68	1,254

LSA

Table C-1 - Existing Peak Hour Volume Summary

	AM Peak Hour			PM Peak Hour		
	Existing (2023) W/O Project	Project Trips	Existing (2023) Plus Project	Existing (2023) W/O Project	Project Trips	Existing (2023) Plus Project
4 12th Avenue/Fargo Avenue						
NBL	17	0	17	18	0	18
NBT	171	154	325	229	264	493
NBR	121	111	232	278	214	492
SBL	17	0	17	26	0	26
SBT	257	256	513	164	151	315
SBR	52	22	74	25	11	36
EBL	72	27	99	20	25	45
EBT	237	11	248	250	8	258
EBR	23	0	23	20	0	20
WBL	194	227	421	180	159	339
WBT	408	19	427	207	15	222
WBR	27	28	55	8	20	28
North Leg						
Approach	326	278	604	215	162	377
Departure	270	209	479	257	309	566
Total	596	487	1,083	472	471	943
South Leg						
Approach	309	265	574	525	478	1,003
Departure	474	483	957	364	310	674
Total	783	748	1,531	889	788	1,677
East Leg						
Approach	629	274	903	395	194	589
Departure	375	122	497	554	222	776
Total	1,004	396	1,400	949	416	1,365
West Leg						
Approach	332	38	370	290	33	323
Departure	477	41	518	250	26	276
Total	809	79	888	540	59	599
Total Approaches						
Approach	1,596	855	2,451	1,425	867	2,292
Departure	1,596	855	2,451	1,425	867	2,292
Total	3,192	1,710	4,902	2,850	1,734	4,584

LSA

Table C-1 - Existing Peak Hour Volume Summary

	AM Peak Hour			PM Peak Hour		
	Existing (2023) W/O Project	Project Trips	Existing (2023) Plus Project	Existing (2023) W/O Project	Project Trips	Existing (2023) Plus Project
5 12th Avenue/Grangeville Boulevard						
NBL	69	0	69	98	0	98
NBT	229	174	403	623	407	1,030
NBR	154	0	154	241	0	241
SBL	73	16	89	46	10	56
SBT	459	385	844	326	253	579
SBR	82	52	134	40	32	72
EBL	66	36	102	68	47	115
EBT	387	0	387	272	0	272
EBR	74	0	74	54	0	54
WBL	207	0	207	201	0	201
WBT	308	0	308	290	0	290
WBR	34	18	52	37	11	48
North Leg						
Approach	614	453	1,067	412	295	707
Departure	329	228	557	728	465	1,193
Total	943	681	1,624	1,140	760	1,900
South Leg						
Approach	452	174	626	962	407	1,369
Departure	740	385	1,125	581	253	834
Total	1,192	559	1,751	1,543	660	2,203
East Leg						
Approach	549	18	567	528	11	539
Departure	614	16	630	559	10	569
Total	1,163	34	1,197	1,087	21	1,108
West Leg						
Approach	527	36	563	394	47	441
Departure	459	52	511	428	32	460
Total	986	88	1,074	822	79	901
Total Approaches						
Approach	2,142	681	2,823	2,296	760	3,056
Departure	2,142	681	2,823	2,296	760	3,056
Total	4,284	1,362	5,646	4,592	1,520	6,112

LSA

Table C-1 - Existing Peak Hour Volume Summary

	AM Peak Hour			PM Peak Hour		
	Existing (2023) W/O Project	Project Trips	Existing (2023) Plus Project	Existing (2023) W/O Project	Project Trips	Existing (2023) Plus Project
6 12th Avenue/Greenfield Avenue						
NBL	24	0	24	51	0	51
NBT	340	130	470	750	347	1,097
NBR	30	0	30	93	0	93
SBL	93	54	147	35	35	70
SBT	699	316	1,015	543	212	755
SBR	57	9	66	36	5	41
EBL	75	10	85	41	5	46
EBT	124	0	124	61	0	61
EBR	25	0	25	18	0	18
WBL	69	0	69	52	0	52
WBT	67	0	67	91	0	91
WBR	50	25	75	61	55	116
North Leg						
Approach	849	379	1,228	614	252	866
Departure	465	165	630	852	407	1,259
Total	1,314	544	1,858	1,466	659	2,125
South Leg						
Approach	394	130	524	894	347	1,241
Departure	793	316	1,109	613	212	825
Total	1,187	446	1,633	1,507	559	2,066
East Leg						
Approach	186	25	211	204	55	259
Departure	247	54	301	189	35	224
Total	433	79	512	393	90	483
West Leg						
Approach	224	10	234	120	5	125
Departure	148	9	157	178	5	183
Total	372	19	391	298	10	308
Total Approaches						
Approach	1,653	544	2,197	1,832	659	2,491
Departure	1,653	544	2,197	1,832	659	2,491
Total	3,306	1,088	4,394	3,664	1,318	4,982

LSA

Table C-1 - Existing Peak Hour Volume Summary

	AM Peak Hour			PM Peak Hour		
	Existing (2023) W/O Project	Project Trips	Existing (2023) Plus Project	Existing (2023) W/O Project	Project Trips	Existing (2023) Plus Project
7 12th Avenue/Liberty Street - Kings County Drive						
NBL	12	0	12	17	0	17
NBT	360	108	468	673	272	945
NBR	28	0	28	6	0	6
SBL	270	67	337	41	44	85
SBT	502	249	751	573	168	741
SBR	15	0	15	9	0	9
EBL	21	0	21	13	0	13
EBT	102	0	102	16	0	16
EBR	18	0	18	27	0	27
WBL	10	0	10	18	0	18
WBT	21	0	21	67	0	67
WBR	81	23	104	164	75	239
North Leg						
Approach	787	316	1,103	623	212	835
Departure	462	131	593	850	347	1,197
Total	1,249	447	1,696	1,473	559	2,032
South Leg						
Approach	400	108	508	696	272	968
Departure	530	249	779	618	168	786
Total	930	357	1,287	1,314	440	1,754
East Leg						
Approach	112	23	135	249	75	324
Departure	400	67	467	63	44	107
Total	512	90	602	312	119	431
West Leg						
Approach	141	0	141	56	0	56
Departure	48	0	48	93	0	93
Total	189	0	189	149	0	149
Total Approaches						
Approach	1,440	447	1,887	1,624	559	2,183
Departure	1,440	447	1,887	1,624	559	2,183
Total	2,880	894	3,774	3,248	1,118	4,366

LSA

Table C-1 - Existing Peak Hour Volume Summary

	AM Peak Hour			PM Peak Hour		
	Existing (2023) W/O Project	Project Trips	Existing (2023) Plus Project	Existing (2023) W/O Project	Project Trips	Existing (2023) Plus Project
8 12th Avenue/Lacey Boulevard						
NBL	66	0	66	153	0	153
NBT	254	55	309	404	137	541
NBR	81	0	81	89	0	89
SBL	93	74	167	112	49	161
SBT	366	126	492	542	85	627
SBR	73	27	100	81	19	100
EBL	139	14	153	281	29	310
EBT	338	0	338	285	0	285
EBR	66	0	66	134	0	134
WBL	135	0	135	320	0	320
WBT	175	0	175	387	0	387
WBR	27	31	58	62	81	143
North Leg						
Approach	532	227	759	735	153	888
Departure	420	100	520	747	247	994
Total	952	327	1,279	1,482	400	1,882
South Leg						
Approach	401	55	456	646	137	783
Departure	567	126	693	996	85	1,081
Total	968	181	1,149	1,642	222	1,864
East Leg						
Approach	337	31	368	769	81	850
Departure	512	74	586	486	49	535
Total	849	105	954	1,255	130	1,385
West Leg						
Approach	543	14	557	700	29	729
Departure	314	27	341	621	19	640
Total	857	41	898	1,321	48	1,369
Total Approaches						
Approach	1,813	327	2,140	2,850	400	3,250
Departure	1,813	327	2,140	2,850	400	3,250
Total	3,626	654	4,280	5,700	800	6,500

LSA

Table C-1 - Existing Peak Hour Volume Summary

	AM Peak Hour			PM Peak Hour		
	Existing (2023) W/O Project	Project Trips	Existing (2023) Plus Project	Existing (2023) W/O Project	Project Trips	Existing (2023) Plus Project
9 12th Avenue/Centennial Drive - Mall Drive						
NBL	144	0	144	321	0	321
NBT	512	40	552	544	87	631
NBR	486	0	486	211	0	211
SBL	38	13	51	63	9	72
SBT	441	81	522	786	55	841
SBR	33	9	42	61	6	67
EBL	29	3	32	94	10	104
EBT	51	0	51	65	0	65
EBR	158	0	158	175	0	175
WBL	137	0	137	420	0	420
WBT	55	0	55	122	0	122
WBR	8	5	13	34	15	49
North Leg						
Approach	512	103	615	910	70	980
Departure	549	48	597	672	112	784
Total	1,061	151	1,212	1,582	182	1,764
South Leg						
Approach	1,142	40	1,182	1,076	87	1,163
Departure	736	81	817	1,381	55	1,436
Total	1,878	121	1,999	2,457	142	2,599
East Leg						
Approach	200	5	205	576	15	591
Departure	575	13	588	339	9	348
Total	775	18	793	915	24	939
West Leg						
Approach	238	3	241	334	10	344
Departure	232	9	241	504	6	510
Total	470	12	482	838	16	854
Total Approaches						
Approach	2,092	151	2,243	2,896	182	3,078
Departure	2,092	151	2,243	2,896	182	3,078
Total	4,184	302	4,486	5,792	364	6,156

LSA

Table C-1 - Existing Peak Hour Volume Summary

	AM Peak Hour			PM Peak Hour		
	Existing (2023) W/O Project	Project Trips	Existing (2023) Plus Project	Existing (2023) W/O Project	Project Trips	Existing (2023) Plus Project
10 12th Avenue/SR-198 WB Ramps						
NBL	36	0	36	44	0	44
NBT	887	32	919	878	62	940
NBR	0	0	0	0	0	0
SBL	0	0	0	0	0	0
SBT	534	25	559	983	17	1,000
SBR	210	34	244	530	23	553
EBL	0	0	0	0	0	0
EBT	0	0	0	0	0	0
EBR	0	0	0	0	0	0
WBL	63	0	63	139	0	139
WBT	0	0	0	0	0	0
WBR	426	0	426	393	0	393
North Leg						
Approach	744	59	803	1,513	40	1,553
Departure	1,313	32	1,345	1,271	62	1,333
Total	2,057	91	2,148	2,784	102	2,886
South Leg						
Approach	923	32	955	922	62	984
Departure	597	25	622	1,122	17	1,139
Total	1,520	57	1,577	2,044	79	2,123
East Leg						
Approach	489	0	489	532	0	532
Departure	0	0	0	0	0	0
Total	489	0	489	532	0	532
West Leg						
Approach	0	0	0	0	0	0
Departure	246	34	280	574	23	597
Total	246	34	280	574	23	597
Total Approaches						
Approach	2,156	91	2,247	2,967	102	3,069
Departure	2,156	91	2,247	2,967	102	3,069
Total	4,312	182	4,494	5,934	204	6,138

LSA

Table C-1 - Existing Peak Hour Volume Summary

	AM Peak Hour			PM Peak Hour		
	Existing (2023) W/O Project	Project Trips	Existing (2023) Plus Project	Existing (2023) W/O Project	Project Trips	Existing (2023) Plus Project
11 12th Avenue/SR-198 EB Ramps						
NBL	0	0	0	0	0	0
NBT	539	14	553	540	26	566
NBR	135	0	135	100	0	100
SBL	0	0	0	0	0	0
SBT	350	25	375	659	17	676
SBR	247	0	247	463	0	463
EBL	384	17	401	382	36	418
EBT	0	0	0	0	0	0
EBR	12	0	12	33	0	33
WBL	0	0	0	0	0	0
WBT	0	0	0	0	0	0
WBR	0	0	0	0	0	0
North Leg						
Approach	597	25	622	1,122	17	1,139
Departure	923	31	954	922	62	984
Total	1,520	56	1,576	2,044	79	2,123
South Leg						
Approach	674	14	688	640	26	666
Departure	362	25	387	692	17	709
Total	1,036	39	1,075	1,332	43	1,375
East Leg						
Approach	0	0	0	0	0	0
Departure	135	0	135	100	0	100
Total	135	0	135	100	0	100
West Leg						
Approach	396	17	413	415	36	451
Departure	247	0	247	463	0	463
Total	643	17	660	878	36	914
Total Approaches						
Approach	1,667	56	1,723	2,177	79	2,256
Departure	1,667	56	1,723	2,177	79	2,256
Total	3,334	112	3,446	4,354	158	4,512

LSA

Table C-1 - Existing Peak Hour Volume Summary

	AM Peak Hour			PM Peak Hour		
	Existing (2023) W/O Project	Project Trips	Existing (2023) Plus Project	Existing (2023) W/O Project	Project Trips	Existing (2023) Plus Project
12 Fitzgerald Lane/Fargo Avenue						
NBL	8	45	53	11	23	34
NBT	0	0	0	0	0	0
NBR	90	0	90	57	0	57
SBL	0	0	0	0	0	0
SBT	0	0	0	0	0	0
SBR	0	0	0	0	0	0
EBL	0	0	0	0	0	0
EBT	366	220	586	540	137	677
EBR	9	38	47	14	22	36
WBL	148	0	148	85	0	85
WBT	621	278	899	384	154	538
WBR	0	0	0	0	0	0
North Leg						
Approach	0	0	0	0	0	0
Departure	0	0	0	0	0	0
Total	0	0	0	0	0	0
South Leg						
Approach	98	45	143	68	23	91
Departure	157	38	195	99	22	121
Total	255	83	338	167	45	212
East Leg						
Approach	769	278	1,047	469	154	623
Departure	456	220	676	597	137	734
Total	1,225	498	1,723	1,066	291	1,357
West Leg						
Approach	375	258	633	554	159	713
Departure	629	323	952	395	177	572
Total	1,004	581	1,585	949	336	1,285
Total Approaches						
Approach	1,242	581	1,823	1,091	336	1,427
Departure	1,242	581	1,823	1,091	336	1,427
Total	2,484	1,162	3,646		672	2,854

LSA

Table C-1 - Existing Peak Hour Volume Summary

	AM Peak Hour			PM Peak Hour		
	Existing (2023) W/O Project	Project Trips	Existing (2023) Plus Project	Existing (2023) W/O Project	Project Trips	Existing (2023) Plus Project
13 Glacier Way/Fargo Avenue						
NBL	31	25	56	26	12	38
NBT	8	0	8	2	0	2
NBR	26	0	26	10	0	10
SBL	15	0	15	28	0	28
SBT	5	0	5	5	0	5
SBR	139	36	175	77	14	91
EBL	62	30	92	104	14	118
EBT	390	169	559	465	111	576
EBR	28	21	49	40	11	51
WBL	14	0	14	15	0	15
WBT	607	165	772	380	135	515
WBR	22	0	22	36	0	36
North Leg						
Approach	159	36	195	110	14	124
Departure	92	30	122	142	14	156
Total	251	66	317	252	28	280
South Leg						
Approach	65	25	90	38	12	50
Departure	47	21	68	60	11	71
Total	112	46	158	98	23	121
East Leg						
Approach	643	165	808	431	135	566
Departure	431	169	600	503	111	614
Total	1,074	334	1,408	934	246	1,180
West Leg						
Approach	480	220	700	609	136	745
Departure	777	226	1,003	483	161	644
Total	1,257	446	1,703	1,092	297	1,389
Total Approaches						
Approach	1,347	446	1,793	1,188	297	1,485
Departure	1,347	446	1,793	1,188	297	1,485
Total	2,694	892	3,586	2,376	594	2,970

LSA

Table C-1 - Existing Peak Hour Volume Summary

	AM Peak Hour			PM Peak Hour		
	Existing (2023) W/O Project	Project Trips	Existing (2023) Plus Project	Existing (2023) W/O Project	Project Trips	Existing (2023) Plus Project
14 11th Avenue/Flint Avenue						
NBL	76	0	76	47	0	47
NBT	114	5	119	87	4	91
NBR	212	0	212	102	0	102
SBL	49	0	49	26	0	26
SBT	177	6	183	133	4	137
SBR	14	0	14	14	0	14
EBL	30	0	30	7	0	7
EBT	225	36	261	102	17	119
EBR	44	0	44	38	0	38
WBL	88	0	88	131	0	131
WBT	200	28	228	102	24	126
WBR	16	0	16	16	0	16
North Leg						
Approach	240	6	246	173	4	177
Departure	160	5	165	110	4	114
Total	400	11	411	283	8	291
South Leg						
Approach	402	5	407	236	4	240
Departure	309	6	315	302	4	306
Total	711	11	722	538	8	546
East Leg						
Approach	304	28	332	249	24	273
Departure	486	36	522	230	17	247
Total	790	64	854	479	41	520
West Leg						
Approach	299	36	335	147	17	164
Departure	290	28	318	163	24	187
Total	589	64	653	310	41	351
Total Approaches						
Approach	1,245	75	1,320	805	49	854
Departure	1,245	75	1,320	805	49	854
Total	2,490	150	2,640	1,610	98	1,708

LSA

Table C-1 - Existing Peak Hour Volume Summary

	AM Peak Hour			PM Peak Hour		
	Existing (2023) W/O Project	Project Trips	Existing (2023) Plus Project	Existing (2023) W/O Project	Project Trips	Existing (2023) Plus Project
15 11th Avenue/Fargo Avenue						
NBL	56	33	89	65	37	102
NBT	237	0	237	354	0	354
NBR	47	0	47	128	0	128
SBL	77	0	77	64	0	64
SBT	348	0	348	270	0	270
SBR	151	25	176	83	12	95
EBL	161	21	182	164	11	175
EBT	196	101	297	255	72	327
EBR	77	43	120	85	26	111
WBL	195	0	195	149	0	149
WBT	382	104	486	282	86	368
WBR	50	0	50	68	0	68
North Leg						
Approach	576	25	601	417	12	429
Departure	448	21	469	586	11	597
Total	1,024	46	1,070	1,003	23	1,026
South Leg						
Approach	340	33	373	547	37	584
Departure	620	43	663	504	26	530
Total	960	76	1,036	1,051	63	1,114
East Leg						
Approach	627	104	731	499	86	585
Departure	320	101	421	447	72	519
Total	947	205	1,152	946	158	1,104
West Leg						
Approach	434	165	599	504	109	613
Departure	589	162	751	430	135	565
Total	1,023	327	1,350	934	244	1,178
Total Approaches						
Approach	1,977	327	2,304	1,967	244	2,211
Departure	1,977	327	2,304	1,967	244	2,211
Total	3,954	654	4,608	3,934	488	4,422

LSA

Table C-1 - Existing Peak Hour Volume Summary

	AM Peak Hour			PM Peak Hour		
	Existing (2023) W/O Project	Project Trips	Existing (2023) Plus Project	Existing (2023) W/O Project	Project Trips	Existing (2023) Plus Project
16 SR-43/Flint Avenue						
NBL	45	6	51	47	20	67
NBT	410	0	410	448	0	448
NBR	9	0	9	4	0	4
SBL	2	0	2	1	0	1
SBT	415	0	415	405	0	405
SBR	94	4	98	112	1	113
EBL	193	4	197	86	1	87
EBT	44	4	48	29	1	30
EBR	97	18	115	64	12	76
WBL	4	0	4	8	0	8
WBT	33	4	37	40	1	41
WBR	4	0	4	0	0	0
North Leg						
Approach	511	4	515	518	1	519
Departure	607	4	611	534	1	535
Total	1,118	8	1,126	1,052	2	1,054
South Leg						
Approach	464	6	470	499	20	519
Departure	516	18	534	477	12	489
Total	980	24	1,004	976	32	1,008
East Leg						
Approach	41	4	45	48	1	49
Departure	55	4	59	34	1	35
Total	96	8	104	82	2	84
West Leg						
Approach	334	26	360	179	14	193
Departure	172	14	186	199	22	221
Total	506	40	546	378	36	414
Total Approaches						
Approach	1,350	40	1,390	1,244	36	1,280
Departure	1,350	40	1,390	1,244	36	1,280
Total	2,700	80	2,780	2,488	72	2,560

LSA

Table C-1 - Existing Peak Hour Volume Summary

	AM Peak Hour			PM Peak Hour		
	Existing (2023) W/O Project	Project Trips	Existing (2023) Plus Project	Existing (2023) W/O Project	Project Trips	Existing (2023) Plus Project
17 12th Avenue/Project Driveway 1						
NBL	0	0	0	0	0	0
NBT	270	8	278	257	14	271
NBR	0	138	138	0	251	251
SBL	0	28	28	0	8	8
SBT	326	0	326	215	0	215
SBR	0	0	0	0	0	0
EBL	0	0	0	0	0	0
EBT	0	0	0	0	0	0
EBR	0	0	0	0	0	0
WBL	0	279	279	0	163	163
WBT	0	0	0	0	0	0
WBR	0	18	18	0	5	5
North Leg						
Approach	326	28	354	215	8	223
Departure	270	26	296	257	19	276
Total	596	54	650	472	27	499
South Leg						
Approach	270	146	416	257	265	522
Departure	326	279	605	215	163	378
Total	596	425	1,021	472	428	900
East Leg						
Approach	0	297	297	0	168	168
Departure	0	166	166	0	259	259
Total	0	463	463	0	427	427
West Leg						
Approach	0	0	0	0	0	0
Departure	0	0	0	0	0	0
Total	0	0	0	0	0	0
Total Approaches						
Approach	596	471	1,067	472	441	913
Departure	596	471	1,067	472	441	913
Total	1,192	942	2,134	944	882	1,826

LSA

Table C-1 - Existing Peak Hour Volume Summary

	AM Peak Hour			PM Peak Hour		
	Existing (2023) W/O Project	Project Trips	Existing (2023) Plus Project	Existing (2023) W/O Project	Project Trips	Existing (2023) Plus Project
18 12th Avenue/Project Driveway 2						
NBL	0	0	0	0	0	0
NBT	270	131	401	257	259	516
NBR	0	68	68	0	47	47
SBL	0	0	0	0	0	0
SBT	326	270	596	215	160	375
SBR	0	0	0	0	0	0
EBL	0	0	0	0	0	0
EBT	0	0	0	0	0	0
EBR	0	0	0	0	0	0
WBL	0	0	0	0	0	0
WBT	0	0	0	0	0	0
WBR	0	5	5	0	4	4
North Leg						
Approach	326	270	596	215	160	375
Departure	270	136	406	257	263	520
Total	596	406	1,002	472	423	895
South Leg						
Approach	270	199	469	257	306	563
Departure	326	270	596	215	160	375
Total	596	469	1,065	472	466	938
East Leg						
Approach	0	5	5	0	4	4
Departure	0	68	68	0	47	47
Total	0	73	73	0	51	51
West Leg						
Approach	0	0	0	0	0	0
Departure	0	0	0	0	0	0
Total	0	0	0	0	0	0
Total Approaches						
Approach	596	474	1,070	472	470	942
Departure	596	474	1,070	472	470	942
Total	1,192	948	2,140	944	940	1,884

LSA

Table C-1 - Existing Peak Hour Volume Summary

	AM Peak Hour			PM Peak Hour		
	Existing (2023) W/O Project	Project Trips	Existing (2023) Plus Project	Existing (2023) W/O Project	Project Trips	Existing (2023) Plus Project
19 Project Driveway 3/Fargo Avenue						
NBL	0	0	0	0	0	0
NBT	0	0	0	0	0	0
NBR	0	0	0	0	0	0
SBL	0	0	0	0	0	0
SBT	0	0	0	0	0	0
SBR	0	70	70	0	55	55
EBL	0	0	0	0	0	0
EBT	375	122	497	554	222	776
EBR	0	0	0	0	0	0
WBL	0	0	0	0	0	0
WBT	629	204	833	395	139	534
WBR	0	99	99	0	69	69
North Leg						
Approach	0	70	70	0	55	55
Departure	0	99	99	0	69	69
Total	0	169	169	0	124	124
South Leg						
Approach	0	0	0	0	0	0
Departure	0	0	0	0	0	0
Total	0	0	0	0	0	0
East Leg						
Approach	629	303	932	395	208	603
Departure	375	122	497	554	222	776
Total	1,004	425	1,429	949	430	1,379
West Leg						
Approach	375	122	497	554	222	776
Departure	629	274	903	395	194	589
Total	1,004	396	1,400	949	416	1,365
Total Approaches						
Approach	1,004	495	1,499	949	485	1,434
Departure	1,004	495	1,499	949	485	1,434
Total	2,008	990	2,998	1,898	970	2,868

LSA

Table C-1 - Existing Peak Hour Volume Summary

	AM Peak Hour			PM Peak Hour		
	Existing (2023) W/O Project	Project Trips	Existing (2023) Plus Project	Existing (2023) W/O Project	Project Trips	Existing (2023) Plus Project
20 Project Driveway 4/Fargo Avenue						
NBL	0	0	0	0	0	0
NBT	0	0	0	0	0	0
NBR	0	0	0	0	0	0
SBL	0	257	257	0	158	158
SBT	0	0	0	0	0	0
SBR	0	108	108	0	74	74
EBL	0	122	122	0	222	222
EBT	375	0	375	554	0	554
EBR	0	0	0	0	0	0
WBL	0	0	0	0	0	0
WBT	629	194	823	395	132	527
WBR	0	128	128	0	44	44
North Leg						
Approach	0	365	365	0	232	232
Departure	0	250	250	0	266	266
Total	0	615	615	0	498	498
South Leg						
Approach	0	0	0	0	0	0
Departure	0	0	0	0	0	0
Total	0	0	0	0	0	0
East Leg						
Approach	629	322	951	395	176	571
Departure	375	257	632	554	158	712
Total	1,004	579	1,583	949	334	1,283
West Leg						
Approach	375	122	497	554	222	776
Departure	629	302	931	395	206	601
Total	1,004	424	1,428	949	428	1,377
Total Approaches						
Approach	1,004	809	1,813	949	630	1,579
Departure	1,004	809	1,813	949	630	1,579
Total	2,008	1,618	3,626	1,898	1,260	3,158

LSA

Table C-1 - Existing Peak Hour Volume Summary

	AM Peak Hour			PM Peak Hour		
	Existing (2023) W/O Project	Project Trips	Existing (2023) Plus Project	Existing (2023) W/O Project	Project Trips	Existing (2023) Plus Project
21 Project Driveway 5/Flint Avenue						
NBL	0	0	0	0	0	0
NBT	0	0	0	0	0	0
NBR	0	4	4	0	3	3
SBL	0	0	0	0	0	0
SBT	0	0	0	0	0	0
SBR	0	0	0	0	0	0
EBL	0	0	0	0	0	0
EBT	216	2	218	125	5	130
EBR	0	3	3	0	10	10
WBL	0	0	0	0	0	0
WBT	296	4	300	96	3	99
WBR	0	0	0	0	0	0
North Leg						
Approach	0	0	0	0	0	0
Departure	0	0	0	0	0	0
Total	0	0	0	0	0	0
South Leg						
Approach	0	4	4	0	3	3
Departure	0	3	3	0	10	10
Total	0	7	7	0	13	13
East Leg						
Approach	296	4	300	96	3	99
Departure	216	6	222	125	8	133
Total	512	10	522	221	11	232
West Leg						
Approach	216	5	221	125	15	140
Departure	296	4	300	96	3	99
Total	512	9	521	221	18	239
Total Approaches						
Approach	512	13	525	221	21	242
Departure	512	13	525	221	21	242
Total	1,024	26	1,050	442	42	484

LSA

Table C-1 - Existing Peak Hour Volume Summary

	AM Peak Hour			PM Peak Hour		
	Existing (2023) W/O Project	Project Trips	Existing (2023) Plus Project	Existing (2023) W/O Project	Project Trips	Existing (2023) Plus Project
22 Project Driveway 6/Flint Avenue						
NBL	0	4	4	0	3	3
NBT	0	0	0	0	0	0
NBR	0	50	50	0	19	19
SBL	0	0	0	0	0	0
SBT	0	0	0	0	0	0
SBR	0	0	0	0	0	0
EBL	0	0	0	0	0	0
EBT	216	4	220	125	3	128
EBR	0	2	2	0	5	5
WBL	0	51	51	0	33	33
WBT	296	0	296	96	0	96
WBR	0	0	0	0	0	0
North Leg						
Approach	0	0	0	0	0	0
Departure	0	0	0	0	0	0
Total	0	0	0	0	0	0
South Leg						
Approach	0	54	54	0	22	22
Departure	0	53	53	0	38	38
Total	0	107	107	0	60	60
East Leg						
Approach	296	51	347	96	33	129
Departure	216	54	270	125	22	147
Total	512	105	617	221	55	276
West Leg						
Approach	216	6	222	125	8	133
Departure	296	4	300	96	3	99
Total	512	10	522	221	11	232
Total Approaches						
Approach	512	111	623	221	63	284
Departure	512	111	623	221	63	284
Total	1,024	222	1,246	442	126	568

LSA

Table C-1 - Existing Peak Hour Volume Summary

	AM Peak Hour			PM Peak Hour		
	Existing (2023) W/O Project	Project Trips	Existing (2023) Plus Project	Existing (2023) W/O Project	Project Trips	Existing (2023) Plus Project
23 Project Driveway 7/Fargo Avenue						
NBL	0	0	0	0	0	0
NBT	0	0	0	0	0	0
NBR	0	0	0	0	0	0
SBL	0	0	0	0	0	0
SBT	0	0	0	0	0	0
SBR	0	67	67	0	44	44
EBL	0	0	0	0	0	0
EBT	456	220	676	597	137	734
EBR	0	0	0	0	0	0
WBL	0	0	0	0	0	0
WBT	769	211	980	469	110	579
WBR	0	15	15	0	50	50
North Leg						
Approach	0	67	67	0	44	44
Departure	0	15	15	0	50	50
Total	0	82	82	0	94	94
South Leg						
Approach	0	0	0	0	0	0
Departure	0	0	0	0	0	0
Total	0	0	0	0	0	0
East Leg						
Approach	769	226	995	469	160	629
Departure	456	220	676	597	137	734
Total	1,225	446	1,671	1,066	297	1,363
West Leg						
Approach	456	220	676	597	137	734
Departure	769	278	1,047	469	154	623
Total	1,225	498	1,723	1,066	291	1,357
Total Approaches						
Approach	1,225	513	1,738	1,066	341	1,407
Departure	1,225	513	1,738	1,066	341	1,407
Total	2,450	1,026	3,476	2,132	682	2,814

LSA

Table C-2 - Near-Term Peak Hour Volume Summary

	AM Peak Hour					PM Peak Hour				
	Existing (2023) W/O Project	Cumulative Project Trips	Near-Term W/O Project	Project Trips	Near-Term Plus Project	Existing (2023) W/O Project	Cumulative Project Trips	Near-Term W/O Project	Project Trips	Near-Term Plus Project
1 13th Avenue/Flint Avenue										
NBL	0	0	0	0	0	3	0	3	0	3
NBT	64	13	77	0	77	59	8	67	0	67
NBR	36	0	36	0	36	9	0	9	0	9
SBL	9	0	9	0	9	2	0	2	0	2
SBT	81	4	85	0	85	66	15	81	0	81
SBR	2	0	2	0	2	2	0	2	0	2
EBL	4	0	4	0	4	2	0	2	0	2
EBT	114	0	114	9	123	46	1	47	8	55
EBR	11	0	11	0	11	8	0	8	0	8
WBL	43	0	43	0	43	5	0	5	0	5
WBT	103	1	104	10	114	38	1	39	6	45
WBR	4	0	4	0	4	8	0	8	0	8
North Leg										
Approach	92	4	96	0	96	70	15	85	0	85
Departure	72	13	85	0	85	69	8	77	0	77
Total	164	17	181	0	181	139	23	162	0	162
South Leg										
Approach	100	13	113	0	113	71	8	79	0	79
Departure	135	4	139	0	139	79	15	94	0	94
Total	235	17	252	0	252	150	23	173	0	173
East Leg										
Approach	150	1	151	10	161	51	1	52	6	58
Departure	159	0	159	9	168	57	1	58	8	66
Total	309	1	310	19	329	108	2	110	14	124
West Leg										
Approach	129	0	129	9	138	56	1	57	8	65
Departure	105	1	106	10	116	43	1	44	6	50
Total	234	1	235	19	254	99	2	101	14	115
Total Approaches										
Approach	471	18	489	19	508	248	25	273	14	287
Departure	471	18	489	19	508	248	25	273	14	287
Total	942	36	978	38	1,016	496	50	546	28	574

LSA

Table C-2 - Near-Term Peak Hour Volume Summary

	AM Peak Hour					PM Peak Hour				
	Existing (2023) W/O Project	Cumulative Project Trips	Near-Term W/O Project	Project Trips	Near-Term Plus Project	Existing (2023) W/O Project	Cumulative Project Trips	Near-Term W/O Project	Project Trips	Near-Term Plus Project
2 13th Avenue/Fargo Avenue										
NBL	7	0	7	0	7	6	0	6	0	6
NBT	62	17	79	0	79	50	12	62	0	62
NBR	30	0	30	5	35	77	0	77	15	92
SBL	26	0	26	0	26	24	0	24	0	24
SBT	99	7	106	0	106	51	20	71	0	71
SBR	3	0	3	0	3	3	0	3	0	3
EBL	5	0	5	0	5	3	0	3	0	3
EBT	93	0	93	18	111	126	1	127	11	138
EBR	3	0	3	0	3	4	0	4	0	4
WBL	104	0	104	13	117	34	0	34	9	43
WBT	201	1	202	16	218	56	1	57	10	67
WBR	15	0	15	0	15	18	0	18	0	18
North Leg										
Approach	128	7	135	0	135	78	20	98	0	98
Departure	82	17	99	0	99	71	12	83	0	83
Total	210	24	234	0	234	149	32	181	0	181
South Leg										
Approach	99	17	116	5	121	133	12	145	15	160
Departure	206	7	213	13	226	89	20	109	9	118
Total	305	24	329	18	347	222	32	254	24	278
East Leg										
Approach	320	1	321	29	350	108	1	109	19	128
Departure	149	0	149	23	172	227	1	228	26	254
Total	469	1	470	52	522	335	2	337	45	382
West Leg										
Approach	101	0	101	18	119	133	1	134	11	145
Departure	211	1	212	16	228	65	1	66	10	76
Total	312	1	313	34	347	198	2	200	21	221
Total Approaches										
Approach	648	25	673	52	725	452	34	486	45	531
Departure	648	25	673	52	725	452	34	486	45	531
Total	1,296	50	1,346	104	1,450	904	68	972	90	1,062

LSA

Table C-2 - Near-Term Peak Hour Volume Summary

	AM Peak Hour					PM Peak Hour				
	Existing (2023) W/O Project	Cumulative Project Trips	Near-Term W/O Project	Project Trips	Near-Term Plus Project	Existing (2023) W/O Project	Cumulative Project Trips	Near-Term W/O Project	Project Trips	Near-Term Plus Project
3 12th Avenue/Flint Avenue										
NBL	2	1	3	11	14	11	1	12	4	16
NBT	203	8	211	11	222	179	5	184	4	188
NBR	63	25	88	3	91	26	17	43	10	53
SBL	62	0	62	0	62	50	0	50	0	50
SBT	289	4	293	14	307	172	9	181	4	185
SBR	13	0	13	0	13	4	0	4	0	4
EBL	17	0	17	0	17	2	0	2	0	2
EBT	91	0	91	2	93	49	0	49	5	54
EBR	10	0	10	14	24	4	2	6	4	10
WBL	55	8	63	0	63	27	29	56	0	56
WBT	135	0	135	4	139	48	0	48	3	51
WBR	106	0	106	0	106	21	0	21	0	21
North Leg										
Approach	364	4	368	14	382	226	9	235	4	239
Departure	326	8	334	11	345	202	5	207	4	211
Total	690	12	702	25	727	428	14	442	8	450
South Leg										
Approach	268	34	302	25	327	216	23	239	18	257
Departure	354	12	366	28	394	203	40	243	8	251
Total	622	46	668	53	721	419	63	482	26	508
East Leg										
Approach	296	8	304	4	308	96	29	125	3	128
Departure	216	25	241	5	246	125	17	142	15	157
Total	512	33	545	9	554	221	46	267	18	285
West Leg										
Approach	118	0	118	16	134	55	2	57	9	66
Departure	150	1	151	15	166	63	1	64	7	71
Total	268	1	269	31	300	118	3	121	16	137
Total Approaches										
Approach	1,046	46	1,092	59	1,151	593	63	656	34	690
Departure	1,046	46	1,092	59	1,151	593	63	656	34	690
Total	2,092	92	2,184	118	2,302	1,186	126	1,312	68	1,380

LSA

Table C-2 - Near-Term Peak Hour Volume Summary

	AM Peak Hour					PM Peak Hour				
	Existing (2023) W/O Project	Cumulative Project Trips	Near-Term W/O Project	Project Trips	Near-Term Plus Project	Existing (2023) W/O Project	Cumulative Project Trips	Near-Term W/O Project	Project Trips	Near-Term Plus Project
4 12th Avenue/Fargo Avenue										
NBL	17	19	36	0	36	18	56	74	0	74
NBT	171	19	190	154	344	229	12	241	264	505
NBR	121	9	130	111	241	278	6	284	214	498
SBL	17	0	17	0	17	26	0	26	0	26
SBT	257	7	264	256	520	164	21	185	151	336
SBR	52	6	58	22	80	25	18	43	11	54
EBL	72	16	88	27	115	20	11	31	25	56
EBT	237	33	270	11	281	250	22	272	8	280
EBR	23	48	71	0	71	20	35	55	0	55
WBL	194	3	197	227	424	180	11	191	159	350
WBT	408	11	419	19	438	207	37	244	15	259
WBR	27	0	27	28	55	8	0	8	20	28
North Leg										
Approach	326	13	339	278	617	215	39	254	162	416
Departure	270	35	305	209	514	257	23	280	309	589
Total	596	48	644	487	1,131	472	62	534	471	1,005
South Leg										
Approach	309	47	356	265	621	525	74	599	478	1,077
Departure	474	58	532	483	1,015	364	67	431	310	741
Total	783	105	888	748	1,636	889	141	1,030	788	1,818
East Leg										
Approach	629	14	643	274	917	395	48	443	194	637
Departure	375	42	417	122	539	554	28	582	222	804
Total	1,004	56	1,060	396	1,456	949	76	1,025	416	1,441
West Leg										
Approach	332	97	429	38	467	290	68	358	33	391
Departure	477	36	513	41	554	250	111	361	26	387
Total	809	133	942	79	1,021	540	179	719	59	778
Total Approaches										
Approach	1,596	171	1,767	855	2,622	1,425	229	1,654	867	2,521
Departure	1,596	171	1,767	855	2,622	1,425	229	1,654	867	2,521
Total	3,192	342	3,534	1,710	5,244	2,850	458	3,308	1,734	5,042

LSA

Table C-2 - Near-Term Peak Hour Volume Summary

	AM Peak Hour					PM Peak Hour				
	Existing (2023) W/O Project	Cumulative Project Trips	Near-Term W/O Project	Project Trips	Near-Term Plus Project	Existing (2023) W/O Project	Cumulative Project Trips	Near-Term W/O Project	Project Trips	Near-Term Plus Project
5 12th Avenue/Grangeville Boulevard										
NBL	69	9	78	0	78	98	26	124	0	124
NBT	229	27	256	174	430	623	62	685	407	1,092
NBR	154	7	161	0	161	241	18	259	0	259
SBL	73	2	75	16	91	46	8	54	10	64
SBT	459	52	511	385	896	326	44	370	253	623
SBR	82	5	87	52	139	40	16	56	32	88
EBL	66	14	80	36	116	68	9	77	47	124
EBT	387	18	405	0	405	272	15	287	0	287
EBR	74	23	97	0	97	54	16	70	0	70
WBL	207	16	223	0	223	201	12	213	0	213
WBT	308	10	318	0	318	290	21	311	0	311
WBR	34	7	41	18	59	37	5	42	11	53
North Leg										
Approach	614	59	673	453	1,126	412	68	480	295	775
Departure	329	48	377	228	605	728	76	804	465	1,269
Total	943	107	1,050	681	1,731	1,140	144	1,284	760	2,044
South Leg										
Approach	452	43	495	174	669	962	106	1,068	407	1,475
Departure	740	91	831	385	1,216	581	72	653	253	906
Total	1,192	134	1,326	559	1,885	1,543	178	1,721	660	2,381
East Leg										
Approach	549	33	582	18	600	528	38	566	11	577
Departure	614	27	641	16	657	559	41	600	10	610
Total	1,163	60	1,223	34	1,257	1,087	79	1,166	21	1,187
West Leg										
Approach	527	55	582	36	618	394	40	434	47	481
Departure	459	24	483	52	535	428	63	491	32	523
Total	986	79	1,065	88	1,153	822	103	925	79	1,004
Total Approaches										
Approach	2,142	190	2,332	681	3,013	2,296	252	2,548	760	3,308
Departure	2,142	190	2,332	681	3,013	2,296	252	2,548	760	3,308
Total	4,284	380	4,664	1,362	6,026	4,592	504	5,096	1,520	6,616

LSA

Table C-2 - Near-Term Peak Hour Volume Summary

	AM Peak Hour					PM Peak Hour				
	Existing (2023) W/O Project	Cumulative Project Trips	Near-Term W/O Project	Project Trips	Near-Term Plus Project	Existing (2023) W/O Project	Cumulative Project Trips	Near-Term W/O Project	Project Trips	Near-Term Plus Project
6 12th Avenue/Greenfield Avenue										
NBL	24	2	26	0	26	51	1	52	0	52
NBT	340	43	383	130	513	750	107	857	347	1,204
NBR	30	1	31	0	31	93	0	93	0	93
SBL	93	0	93	54	147	35	0	35	35	70
SBT	699	91	790	316	1,106	543	72	615	212	827
SBR	57	0	57	9	66	36	0	36	5	41
EBL	75	0	75	10	85	41	0	41	5	46
EBT	124	0	124	0	124	61	0	61	0	61
EBR	25	1	26	0	26	18	2	20	0	20
WBL	69	0	69	0	69	52	1	53	0	53
WBT	67	0	67	0	67	91	0	91	0	91
WBR	50	0	50	25	75	61	0	61	55	116
North Leg										
Approach	849	91	940	379	1,319	614	72	686	252	938
Departure	465	43	508	165	673	852	107	959	407	1,366
Total	1,314	134	1,448	544	1,992	1,466	179	1,645	659	2,304
South Leg										
Approach	394	46	440	130	570	894	108	1,002	347	1,349
Departure	793	92	885	316	1,201	613	75	688	212	900
Total	1,187	138	1,325	446	1,771	1,507	183	1,690	559	2,249
East Leg										
Approach	186	0	186	25	211	204	1	205	55	260
Departure	247	1	248	54	302	189	0	189	35	224
Total	433	1	434	79	513	393	1	394	90	484
West Leg										
Approach	224	1	225	10	235	120	2	122	5	127
Departure	148	2	150	9	159	178	1	179	5	184
Total	372	3	375	19	394	298	3	301	10	311
Total Approaches										
Approach	1,653	138	1,791	544	2,335	1,832	183	2,015	659	2,674
Departure	1,653	138	1,791	544	2,335	1,832	183	2,015	659	2,674
Total	3,306	276	3,582	1,088	4,670	3,664	366	4,030	1,318	5,348

LSA

Table C-2 - Near-Term Peak Hour Volume Summary

	AM Peak Hour					PM Peak Hour				
	Existing (2023) W/O Project	Cumulative Project Trips	Near-Term W/O Project	Project Trips	Near-Term Plus Project	Existing (2023) W/O Project	Cumulative Project Trips	Near-Term W/O Project	Project Trips	Near-Term Plus Project
7 12th Avenue/Liberty Street - Kings County Drive										
NBL	12	1	13	0	13	17	0	17	0	17
NBT	360	44	404	108	512	673	106	779	272	1,051
NBR	28	1	29	0	29	6	0	6	0	6
SBL	270	0	270	67	337	41	0	41	44	85
SBT	502	90	592	249	841	573	73	646	168	814
SBR	15	2	17	0	17	9	2	11	0	11
EBL	21	1	22	0	22	13	3	16	0	16
EBT	102	0	102	0	102	16	0	16	0	16
EBR	18	0	18	0	18	27	1	28	0	28
WBL	10	0	10	0	10	18	1	19	0	19
WBT	21	0	21	0	21	67	0	67	0	67
WBR	81	0	81	23	104	164	0	164	75	239
North Leg										
Approach	787	92	879	316	1,195	623	75	698	212	910
Departure	462	45	507	131	638	850	109	959	347	1,306
Total	1,249	137	1,386	447	1,833	1,473	184	1,657	559	2,216
South Leg										
Approach	400	46	446	108	554	696	106	802	272	1,074
Departure	530	90	620	249	869	618	75	693	168	861
Total	930	136	1,066	357	1,423	1,314	181	1,495	440	1,935
East Leg										
Approach	112	0	112	23	135	249	1	250	75	325
Departure	400	1	401	67	468	63	0	63	44	107
Total	512	1	513	90	603	312	1	313	119	432
West Leg										
Approach	141	1	142	0	142	56	4	60	0	60
Departure	48	3	51	0	51	93	2	95	0	95
Total	189	4	193	0	193	149	6	155	0	155
Total Approaches										
Approach	1,440	139	1,579	447	2,026	1,624	186	1,810	559	2,369
Departure	1,440	139	1,579	447	2,026	1,624	186	1,810	559	2,369
Total	2,880	278	3,158	894	4,052	3,248	372	3,620	1,118	4,738

LSA

Table C-2 - Near-Term Peak Hour Volume Summary

	AM Peak Hour					PM Peak Hour				
	Existing (2023) W/O Project	Cumulative Project Trips	Near-Term W/O Project	Project Trips	Near-Term Plus Project	Existing (2023) W/O Project	Cumulative Project Trips	Near-Term W/O Project	Project Trips	Near-Term Plus Project
8 12th Avenue/Lacey Boulevard										
NBL	66	6	72	0	72	153	18	171	0	171
NBT	254	19	273	55	328	404	65	469	137	606
NBR	81	0	81	0	81	89	0	89	0	89
SBL	93	5	98	74	172	112	3	115	49	164
SBT	366	58	424	126	550	542	38	580	85	665
SBR	73	13	86	27	113	81	23	104	19	123
EBL	139	20	159	14	173	281	20	301	29	330
EBT	338	43	381	0	381	285	29	314	0	314
EBR	66	16	82	0	82	134	11	145	0	145
WBL	135	0	135	0	135	320	0	320	0	320
WBT	175	16	191	0	191	387	48	435	0	435
WBR	27	3	30	31	61	62	6	68	81	149
North Leg										
Approach	532	76	608	227	835	735	64	799	153	952
Departure	420	42	462	100	562	747	91	838	247	1,085
Total	952	118	1,070	327	1,397	1,482	155	1,637	400	2,037
South Leg										
Approach	401	25	426	55	481	646	83	729	137	866
Departure	567	74	641	126	767	996	49	1,045	85	1,130
Total	968	99	1,067	181	1,248	1,642	132	1,774	222	1,996
East Leg										
Approach	337	19	356	31	387	769	54	823	81	904
Departure	512	48	560	74	634	486	32	518	49	567
Total	849	67	916	105	1,021	1,255	86	1,341	130	1,471
West Leg										
Approach	543	79	622	14	636	700	60	760	29	789
Departure	314	35	349	27	376	621	89	710	19	729
Total	857	114	971	41	1,012	1,321	149	1,470	48	1,518
Total Approaches										
Approach	1,813	199	2,012	327	2,339	2,850	261	3,111	400	3,511
Departure	1,813	199	2,012	327	2,339	2,850	261	3,111	400	3,511
Total	3,626	398	4,024	654	4,678	5,700	522	6,222	800	7,022

LSA

Table C-2 - Near-Term Peak Hour Volume Summary

	AM Peak Hour					PM Peak Hour				
	Existing (2023) W/O Project	Cumulative Project Trips	Near-Term W/O Project	Project Trips	Near-Term Plus Project	Existing (2023) W/O Project	Cumulative Project Trips	Near-Term W/O Project	Project Trips	Near-Term Plus Project
9 12th Avenue/Centennial Drive - Mall Drive										
NBL	144	9	153	0	153	321	27	348	0	348
NBT	512	18	530	40	570	544	56	600	87	687
NBR	486	0	486	0	486	211	0	211	0	211
SBL	38	5	43	13	56	63	3	66	9	75
SBT	441	50	491	81	572	786	33	819	55	874
SBR	33	2	35	9	44	61	2	63	6	69
EBL	29	1	30	3	33	94	3	97	10	107
EBT	51	3	54	0	54	65	2	67	0	67
EBR	158	24	182	0	182	175	16	191	0	191
WBL	137	0	137	0	137	420	0	420	0	420
WBT	55	1	56	0	56	122	4	126	0	126
WBR	8	3	11	5	16	34	6	40	15	55
North Leg										
Approach	512	57	569	103	672	910	38	948	70	1,018
Departure	549	22	571	48	619	672	65	737	112	849
Total	1,061	79	1,140	151	1,291	1,582	103	1,685	182	1,867
South Leg										
Approach	1,142	27	1,169	40	1,209	1,076	83	1,159	87	1,246
Departure	736	74	810	81	891	1,381	49	1,430	55	1,485
Total	1,878	101	1,979	121	2,100	2,457	132	2,589	142	2,731
East Leg										
Approach	200	4	204	5	209	576	10	586	15	601
Departure	575	8	583	13	596	339	5	344	9	353
Total	775	12	787	18	805	915	15	930	24	954
West Leg										
Approach	238	28	266	3	269	334	21	355	10	365
Departure	232	12	244	9	253	504	33	537	6	543
Total	470	40	510	12	522	838	54	892	16	908
Total Approaches										
Approach	2,092	116	2,208	151	2,359	2,896	152	3,048	182	3,230
Departure	2,092	116	2,208	151	2,359	2,896	152	3,048	182	3,230
Total	4,184	232	4,416	302	4,718	5,792	304	6,096	364	6,460

LSA

Table C-2 - Near-Term Peak Hour Volume Summary

	AM Peak Hour					PM Peak Hour				
	Existing (2023) W/O Project	Cumulative Project Trips	Near-Term W/O Project	Project Trips	Near-Term Plus Project	Existing (2023) W/O Project	Cumulative Project Trips	Near-Term W/O Project	Project Trips	Near-Term Plus Project
10 12th Avenue/SR-198 WB Ramps										
NBL	36	0	36	0	36	44	0	44	0	44
NBT	887	15	902	32	934	878	50	928	62	990
NBR	0	0	0	0	0	0	0	0	0	0
SBL	0	0	0	0	0	0	0	0	0	0
SBT	534	44	578	25	603	983	29	1,012	17	1,029
SBR	210	29	239	34	273	530	20	550	23	573
EBL	0	0	0	0	0	0	0	0	0	0
EBT	0	0	0	0	0	0	0	0	0	0
EBR	0	0	0	0	0	0	0	0	0	0
WBL	63	0	63	0	63	139	0	139	0	139
WBT	0	0	0	0	0	0	0	0	0	0
WBR	426	11	437	0	437	393	34	427	0	427
North Leg										
Approach	744	73	817	59	876	1,513	49	1,562	40	1,602
Departure	1,313	26	1,339	32	1,371	1,271	84	1,355	62	1,417
Total	2,057	99	2,156	91	2,247	2,784	133	2,917	102	3,019
South Leg										
Approach	923	15	938	32	970	922	50	972	62	1,034
Departure	597	44	641	25	666	1,122	29	1,151	17	1,168
Total	1,520	59	1,579	57	1,636	2,044	79	2,123	79	2,202
East Leg										
Approach	489	11	500	0	500	532	34	566	0	566
Departure	0	0	0	0	0	0	0	0	0	0
Total	489	11	500	0	500	532	34	566	0	566
West Leg										
Approach	0	0	0	0	0	0	0	0	0	0
Departure	246	29	275	34	309	574	20	594	23	617
Total	246	29	275	34	309	574	20	594	23	617
Total Approaches										
Approach	2,156	99	2,255	91	2,346	2,967	133	3,100	102	3,202
Departure	2,156	99	2,255	91	2,346	2,967	133	3,100	102	3,202
Total	4,312	198	4,510	182	4,692	5,934	266	6,200	204	6,404

LSA

Table C-2 - Near-Term Peak Hour Volume Summary

	AM Peak Hour					PM Peak Hour				
	Existing (2023) W/O Project	Cumulative Project Trips	Near-Term W/O Project	Project Trips	Near-Term Plus Project	Existing (2023) W/O Project	Cumulative Project Trips	Near-Term W/O Project	Project Trips	Near-Term Plus Project
11 12th Avenue/SR-198 EB Ramps										
NBL	0	0	0	0	0	0	0	0	0	0
NBT	539	6	545	14	559	540	17	557	26	583
NBR	135	0	135	0	135	100	0	100	0	100
SBL	0	0	0	0	0	0	0	0	0	0
SBT	350	15	365	25	390	659	9	668	17	685
SBR	247	29	276	0	276	463	20	483	0	483
EBL	384	11	395	17	412	382	34	416	36	452
EBT	0	0	0	0	0	0	0	0	0	0
EBR	12	0	12	0	12	33	0	33	0	33
WBL	0	0	0	0	0	0	0	0	0	0
WBT	0	0	0	0	0	0	0	0	0	0
WBR	0	0	0	0	0	0	0	0	0	0
North Leg										
Approach	597	44	641	25	666	1,122	29	1,151	17	1,168
Departure	923	17	940	31	971	922	51	973	62	1,035
Total	1,520	61	1,581	56	1,637	2,044	80	2,124	79	2,203
South Leg										
Approach	674	6	680	14	694	640	17	657	26	683
Departure	362	15	377	25	402	692	9	701	17	718
Total	1,036	21	1,057	39	1,096	1,332	26	1,358	43	1,401
East Leg										
Approach	0	0	0	0	0	0	0	0	0	0
Departure	135	0	135	0	135	100	0	100	0	100
Total	135	0	135	0	135	100	0	100	0	100
West Leg										
Approach	396	11	407	17	424	415	34	449	36	485
Departure	247	29	276	0	276	463	20	483	0	483
Total	643	40	683	17	700	878	54	932	36	968
Total Approaches										
Approach	1,667	61	1,728	56	1,784	2,177	80	2,257	79	2,336
Departure	1,667	61	1,728	56	1,784	2,177	80	2,257	79	2,336
Total	3,334	122	3,456	112	3,568	4,354	160	4,514	158	4,672

LSA

Table C-2 - Near-Term Peak Hour Volume Summary

	AM Peak Hour					PM Peak Hour				
	Existing (2023) W/O Project	Cumulative Project Trips	Near-Term W/O Project	Project Trips	Near-Term Plus Project	Existing (2023) W/O Project	Cumulative Project Trips	Near-Term W/O Project	Project Trips	Near-Term Plus Project
12 Fitzgerald Lane/Fargo Avenue										
NBL	8	0	8	45	53	11	0	11	23	34
NBT	0	0	0	0	0	0	0	0	0	0
NBR	90	0	90	0	90	57	0	57	0	57
SBL	0	0	0	0	0	0	0	0	0	0
SBT	0	0	0	0	0	0	0	0	0	0
SBR	0	0	0	0	0	0	0	0	0	0
EBL	0	0	0	0	0	0	0	0	0	0
EBT	366	42	408	220	628	540	28	568	137	705
EBR	9	0	9	38	47	14	0	14	22	36
WBL	148	0	148	0	148	85	0	85	0	85
WBT	621	14	635	278	913	384	48	432	154	586
WBR	0	0	0	0	0	0	0	0	0	0
North Leg										
Approach	0	0	0	0	0	0	0	0	0	0
Departure	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0
South Leg										
Approach	98	0	98	45	143	68	0	68	23	91
Departure	157	0	157	38	195	99	0	99	22	121
Total	255	0	255	83	338	167	0	167	45	212
East Leg										
Approach	769	14	783	278	1,061	469	48	517	154	671
Departure	456	42	498	220	718	597	28	625	137	762
Total	1,225	56	1,281	498	1,779	1,066	76	1,142	291	1,433
West Leg										
Approach	375	42	417	258	675	554	28	582	159	741
Departure	629	14	643	323	966	395	48	443	177	620
Total	1,004	56	1,060	581	1,641	949	76	1,025	336	1,361
Total Approaches										
Approach	1,242	56	1,298	581	1,879	1,091	76	1,167	336	1,503
Departure	1,242	56	1,298	581	1,879	1,091	76	1,167	336	1,503
Total	2,484	112	2,596	1,162	3,758	2,182	152	2,334	672	3,006

LSA

Table C-2 - Near-Term Peak Hour Volume Summary

	AM Peak Hour					PM Peak Hour				
	Existing (2023) W/O Project	Cumulative Project Trips	Near-Term W/O Project	Project Trips	Near-Term Plus Project	Existing (2023) W/O Project	Cumulative Project Trips	Near-Term W/O Project	Project Trips	Near-Term Plus Project
13 Glacier Way/Fargo Avenue										
NBL	31	0	31	25	56	26	0	26	12	38
NBT	8	0	8	0	8	2	0	2	0	2
NBR	26	0	26	0	26	10	0	10	0	10
SBL	15	0	15	0	15	28	0	28	0	28
SBT	5	0	5	0	5	5	0	5	0	5
SBR	139	0	139	36	175	77	0	77	14	91
EBL	62	0	62	30	92	104	0	104	14	118
EBT	390	42	432	169	601	465	28	493	111	604
EBR	28	0	28	21	49	40	0	40	11	51
WBL	14	0	14	0	14	15	0	15	0	15
WBT	607	14	621	165	786	380	48	428	135	563
WBR	22	0	22	0	22	36	0	36	0	36
North Leg										
Approach	159	0	159	36	195	110	0	110	14	124
Departure	92	0	92	30	122	142	0	142	14	156
Total	251	0	251	66	317	252	0	252	28	280
South Leg										
Approach	65	0	65	25	90	38	0	38	12	50
Departure	47	0	47	21	68	60	0	60	11	71
Total	112	0	112	46	158	98	0	98	23	121
East Leg										
Approach	643	14	657	165	822	431	48	479	135	614
Departure	431	42	473	169	642	503	28	531	111	642
Total	1,074	56	1,130	334	1,464	934	76	1,010	246	1,256
West Leg										
Approach	480	42	522	220	742	609	28	637	136	773
Departure	777	14	791	226	1,017	483	48	531	161	692
Total	1,257	56	1,313	446	1,759	1,092	76	1,168	297	1,465
Total Approaches										
Approach	1,347	56	1,403	446	1,849	1,188	76	1,264	297	1,561
Departure	1,347	56	1,403	446	1,849	1,188	76	1,264	297	1,561
Total	2,694	112	2,806	892	3,698	2,376	152	2,528	594	3,122

LSA

Table C-2 - Near-Term Peak Hour Volume Summary

	AM Peak Hour					PM Peak Hour				
	Existing (2023) W/O Project	Cumulative Project Trips	Near-Term W/O Project	Project Trips	Near-Term Plus Project	Existing (2023) W/O Project	Cumulative Project Trips	Near-Term W/O Project	Project Trips	Near-Term Plus Project
14 11th Avenue/Flint Avenue										
NBL	76	0	76	0	76	47	0	47	0	47
NBT	114	0	114	5	119	87	0	87	4	91
NBR	212	0	212	0	212	102	0	102	0	102
SBL	49	0	49	0	49	26	0	26	0	26
SBT	177	0	177	6	183	133	0	133	4	137
SBR	14	0	14	0	14	14	0	14	0	14
EBL	30	0	30	0	30	7	0	7	0	7
EBT	225	25	250	36	286	102	17	119	17	136
EBR	44	0	44	0	44	38	0	38	0	38
WBL	88	0	88	0	88	131	0	131	0	131
WBT	200	8	208	28	236	102	29	131	24	155
WBR	16	0	16	0	16	16	0	16	0	16
North Leg										
Approach	240	0	240	6	246	173	0	173	4	177
Departure	160	0	160	5	165	110	0	110	4	114
Total	400	0	400	11	411	283	0	283	8	291
South Leg										
Approach	402	0	402	5	407	236	0	236	4	240
Departure	309	0	309	6	315	302	0	302	4	306
Total	711	0	711	11	722	538	0	538	8	546
East Leg										
Approach	304	8	312	28	340	249	29	278	24	302
Departure	486	25	511	36	547	230	17	247	17	264
Total	790	33	823	64	887	479	46	525	41	566
West Leg										
Approach	299	25	324	36	360	147	17	164	17	181
Departure	290	8	298	28	326	163	29	192	24	216
Total	589	33	622	64	686	310	46	356	41	397
Total Approaches										
Approach	1,245	33	1,278	75	1,353	805	46	851	49	900
Departure	1,245	33	1,278	75	1,353	805	46	851	49	900
Total	2,490	66	2,556	150	2,706	1,610	92	1,702	98	1,800

LSA

Table C-2 - Near-Term Peak Hour Volume Summary

	AM Peak Hour					PM Peak Hour				
	Existing (2023) W/O Project	Cumulative Project Trips	Near-Term W/O Project	Project Trips	Near-Term Plus Project	Existing (2023) W/O Project	Cumulative Project Trips	Near-Term W/O Project	Project Trips	Near-Term Plus Project
15 11th Avenue/Fargo Avenue										
NBL	56	0	56	33	89	65	0	65	37	102
NBT	237	3	240	0	240	354	3	357	0	357
NBR	47	0	47	0	47	128	0	128	0	128
SBL	77	0	77	0	77	64	0	64	0	64
SBT	348	1	349	0	349	270	4	274	0	274
SBR	151	3	154	25	179	83	12	95	12	107
EBL	161	11	172	21	193	164	6	170	11	181
EBT	196	32	228	101	329	255	21	276	72	348
EBR	77	0	77	43	120	85	0	85	26	111
WBL	195	0	195	0	195	149	0	149	0	149
WBT	382	11	393	104	497	282	36	318	86	404
WBR	50	0	50	0	50	68	0	68	0	68
North Leg										
Approach	576	4	580	25	605	417	16	433	12	445
Departure	448	14	462	21	483	586	9	595	11	606
Total	1,024	18	1,042	46	1,088	1,003	25	1,028	23	1,051
South Leg										
Approach	340	3	343	33	376	547	3	550	37	587
Departure	620	1	621	43	664	504	4	508	26	534
Total	960	4	964	76	1,040	1,051	7	1,058	63	1,121
East Leg										
Approach	627	11	638	104	742	499	36	535	86	621
Departure	320	32	352	101	453	447	21	468	72	540
Total	947	43	990	205	1,195	946	57	1,003	158	1,161
West Leg										
Approach	434	43	477	165	642	504	27	531	109	640
Departure	589	14	603	162	765	430	48	478	135	613
Total	1,023	57	1,080	327	1,407	934	75	1,009	244	1,253
Total Approaches										
Approach	1,977	61	2,038	327	2,365	1,967	82	2,049	244	2,293
Departure	1,977	61	2,038	327	2,365	1,967	82	2,049	244	2,293
Total	3,954	122	4,076	654	4,730	3,934	164	4,098	488	4,586

LSA

Table C-2 - Near-Term Peak Hour Volume Summary

	AM Peak Hour					PM Peak Hour				
	Existing (2023) W/O Project	Cumulative Project Trips	Near-Term W/O Project	Project Trips	Near-Term Plus Project	Existing (2023) W/O Project	Cumulative Project Trips	Near-Term W/O Project	Project Trips	Near-Term Plus Project
16 SR-43/Flint Avenue										
NBL	45	0	45	6	51	47	0	47	20	67
NBT	410	11	421	0	421	448	9	457	0	457
NBR	9	0	9	0	9	4	0	4	0	4
SBL	2	0	2	0	2	1	0	1	0	1
SBT	415	5	420	0	420	405	14	419	0	419
SBR	94	4	98	4	102	112	11	123	1	124
EBL	193	10	203	4	207	86	6	92	1	93
EBT	44	0	44	4	48	29	0	29	1	30
EBR	97	0	97	18	115	64	0	64	12	76
WBL	4	0	4	0	4	8	0	8	0	8
WBT	33	0	33	4	37	40	0	40	1	41
WBR	4	0	4	0	4	0	0	0	0	0
North Leg										
Approach	511	9	520	4	524	518	25	543	1	544
Departure	607	21	628	4	632	534	15	549	1	550
Total	1,118	30	1,148	8	1,156	1,052	40	1,092	2	1,094
South Leg										
Approach	464	11	475	6	481	499	9	508	20	528
Departure	516	5	521	18	539	477	14	491	12	503
Total	980	16	996	24	1,020	976	23	999	32	1,031
East Leg										
Approach	41	0	41	4	45	48	0	48	1	49
Departure	55	0	55	4	59	34	0	34	1	35
Total	96	0	96	8	104	82	0	82	2	84
West Leg										
Approach	334	10	344	26	370	179	6	185	14	199
Departure	172	4	176	14	190	199	11	210	22	232
Total	506	14	520	40	560	378	17	395	36	431
Total Approaches										
Approach	1,350	30	1,380	40	1,420	1,244	40	1,284	36	1,320
Departure	1,350	30	1,380	40	1,420	1,244	40	1,284	36	1,320
Total	2,700	60	2,760	80	2,840	2,488	80	2,568	72	2,640

LSA

Table C-2 - Near-Term Peak Hour Volume Summary

	AM Peak Hour					PM Peak Hour				
	Existing (2023) W/O Project	Cumulative Project Trips	Near-Term W/O Project	Project Trips	Near-Term Plus Project	Existing (2023) W/O Project	Cumulative Project Trips	Near-Term W/O Project	Project Trips	Near-Term Plus Project
17 12th Avenue/Project Driveway 1										
NBL	0	0	0	0	0	0	0	0	0	0
NBT	270	35	305	8	313	257	23	280	14	294
NBR	0	0	0	138	138	0	0	0	251	251
SBL	0	0	0	28	28	0	0	0	8	8
SBT	326	13	339	0	339	215	39	254	0	254
SBR	0	0	0	0	0	0	0	0	0	0
EBL	0	0	0	0	0	0	0	0	0	0
EBT	0	0	0	0	0	0	0	0	0	0
EBR	0	0	0	0	0	0	0	0	0	0
WBL	0	0	0	279	279	0	0	0	163	163
WBT	0	0	0	0	0	0	0	0	0	0
WBR	0	0	0	18	18	0	0	0	5	5
North Leg										
Approach	326	13	339	28	367	215	39	254	8	262
Departure	270	35	305	26	331	257	23	280	19	299
Total	596	48	644	54	698	472	62	534	27	561
South Leg										
Approach	270	35	305	146	451	257	23	280	265	545
Departure	326	13	339	279	618	215	39	254	163	417
Total	596	48	644	425	1,069	472	62	534	428	962
East Leg										
Approach	0	0	0	297	297	0	0	0	168	168
Departure	0	0	0	166	166	0	0	0	259	259
Total	0	0	0	463	463	0	0	0	427	427
West Leg										
Approach	0	0	0	0	0	0	0	0	0	0
Departure	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0
Total Approaches										
Approach	596	48	644	471	1,115	472	62	534	441	975
Departure	596	48	644	471	1,115	472	62	534	441	975
Total	1,192	96	1,288	942	2,230	944	124	1,068	882	1,950

LSA

Table C-2 - Near-Term Peak Hour Volume Summary

	AM Peak Hour					PM Peak Hour				
	Existing (2023) W/O Project	Cumulative Project Trips	Near-Term W/O Project	Project Trips	Near-Term Plus Project	Existing (2023) W/O Project	Cumulative Project Trips	Near-Term W/O Project	Project Trips	Near-Term Plus Project
18 12th Avenue/Project Driveway 2										
NBL	0	0	0	0	0	0	0	0	0	0
NBT	270	35	305	131	436	257	23	280	259	539
NBR	0	0	0	68	68	0	0	0	47	47
SBL	0	0	0	0	0	0	0	0	0	0
SBT	326	13	339	270	609	215	39	254	160	414
SBR	0	0	0	0	0	0	0	0	0	0
EBL	0	0	0	0	0	0	0	0	0	0
EBT	0	0	0	0	0	0	0	0	0	0
EBR	0	0	0	0	0	0	0	0	0	0
WBL	0	0	0	0	0	0	0	0	0	0
WBT	0	0	0	0	0	0	0	0	0	0
WBR	0	0	0	5	5	0	0	0	4	4
North Leg										
Approach	326	13	339	270	609	215	39	254	160	414
Departure	270	35	305	136	441	257	23	280	263	543
Total	596	48	644	406	1,050	472	62	534	423	957
South Leg										
Approach	270	35	305	199	504	257	23	280	306	586
Departure	326	13	339	270	609	215	39	254	160	414
Total	596	48	644	469	1,113	472	62	534	466	1,000
East Leg										
Approach	0	0	0	5	5	0	0	0	4	4
Departure	0	0	0	68	68	0	0	0	47	47
Total	0	0	0	73	73	0	0	0	51	51
West Leg										
Approach	0	0	0	0	0	0	0	0	0	0
Departure	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0
Total Approaches										
Approach	596	48	644	474	1,118	472	62	534	470	1,004
Departure	596	48	644	474	1,118	472	62	534	470	1,004
Total	1,192	96	1,288	948	2,236	944	124	1,068	940	2,008

LSA

Table C-2 - Near-Term Peak Hour Volume Summary

	AM Peak Hour					PM Peak Hour				
	Existing (2023) W/O Project	Cumulative Project Trips	Near-Term W/O Project	Project Trips	Near-Term Plus Project	Existing (2023) W/O Project	Cumulative Project Trips	Near-Term W/O Project	Project Trips	Near-Term Plus Project
19 Project Driveway 3/Fargo Avenue										
NBL	0	0	0	0	0	0	0	0	0	0
NBT	0	0	0	0	0	0	0	0	0	0
NBR	0	0	0	0	0	0	0	0	0	0
SBL	0	0	0	0	0	0	0	0	0	0
SBT	0	0	0	0	0	0	0	0	0	0
SBR	0	0	0	70	70	0	0	0	55	55
EBL	0	0	0	0	0	0	0	0	0	0
EBT	375	42	417	122	539	554	28	582	222	804
EBR	0	0	0	0	0	0	0	0	0	0
WBL	0	0	0	0	0	0	0	0	0	0
WBT	629	14	643	204	847	395	48	443	139	582
WBR	0	0	0	99	99	0	0	0	69	69
North Leg										
Approach	0	0	0	70	70	0	0	0	55	55
Departure	0	0	0	99	99	0	0	0	69	69
Total	0	0	0	169	169	0	0	0	124	124
South Leg										
Approach	0	0	0	0	0	0	0	0	0	0
Departure	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0
East Leg										
Approach	629	14	643	303	946	395	48	443	208	651
Departure	375	42	417	122	539	554	28	582	222	804
Total	1,004	56	1,060	425	1,485	949	76	1,025	430	1,455
West Leg										
Approach	375	42	417	122	539	554	28	582	222	804
Departure	629	14	643	274	917	395	48	443	194	637
Total	1,004	56	1,060	396	1,456	949	76	1,025	416	1,441
Total Approaches										
Approach	1,004	56	1,060	495	1,555	949	76	1,025	485	1,510
Departure	1,004	56	1,060	495	1,555	949	76	1,025	485	1,510
Total	2,008	112	2,120	990	3,110	1,898	152	2,050	970	3,020

LSA

Table C-2 - Near-Term Peak Hour Volume Summary

	AM Peak Hour					PM Peak Hour				
	Existing (2023) W/O Project	Cumulative Project Trips	Near-Term W/O Project	Project Trips	Near-Term Plus Project	Existing (2023) W/O Project	Cumulative Project Trips	Near-Term W/O Project	Project Trips	Near-Term Plus Project
20 Project Driveway 4/Fargo Avenue										
NBL	0	0	0	0	0	0	0	0	0	0
NBT	0	0	0	0	0	0	0	0	0	0
NBR	0	0	0	0	0	0	0	0	0	0
SBL	0	0	0	257	257	0	0	0	158	158
SBT	0	0	0	0	0	0	0	0	0	0
SBR	0	0	0	108	108	0	0	0	74	74
EBL	0	0	0	122	122	0	0	0	222	222
EBT	375	42	417	0	417	554	28	582	0	582
EBR	0	0	0	0	0	0	0	0	0	0
WBL	0	0	0	0	0	0	0	0	0	0
WBT	629	14	643	194	837	395	48	443	132	575
WBR	0	0	0	128	128	0	0	0	44	44
North Leg										
Approach	0	0	0	365	365	0	0	0	232	232
Departure	0	0	0	250	250	0	0	0	266	266
Total	0	0	0	615	615	0	0	0	498	498
South Leg										
Approach	0	0	0	0	0	0	0	0	0	0
Departure	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0
East Leg										
Approach	629	14	643	322	965	395	48	443	176	619
Departure	375	42	417	257	674	554	28	582	158	740
Total	1,004	56	1,060	579	1,639	949	76	1,025	334	1,359
West Leg										
Approach	375	42	417	122	539	554	28	582	222	804
Departure	629	14	643	302	945	395	48	443	206	649
Total	1,004	56	1,060	424	1,484	949	76	1,025	428	1,453
Total Approaches										
Approach	1,004	56	1,060	809	1,869	949	76	1,025	630	1,655
Departure	1,004	56	1,060	809	1,869	949	76	1,025	630	1,655
Total	2,008	112	2,120	1,618	3,738	1,898	152	2,050	1,260	3,310

LSA

Table C-2 - Near-Term Peak Hour Volume Summary

	AM Peak Hour					PM Peak Hour				
	Existing (2023) W/O Project	Cumulative Project Trips	Near-Term W/O Project	Project Trips	Near-Term Plus Project	Existing (2023) W/O Project	Cumulative Project Trips	Near-Term W/O Project	Project Trips	Near-Term Plus Project
21 Project Driveway 5/Flint Avenue										
NBL	0	0	0	0	0	0	0	0	0	0
NBT	0	0	0	0	0	0	0	0	0	0
NBR	0	0	0	4	4	0	0	0	3	3
SBL	0	0	0	0	0	0	0	0	0	0
SBT	0	0	0	0	0	0	0	0	0	0
SBR	0	0	0	0	0	0	0	0	0	0
EBL	0	0	0	0	0	0	0	0	0	0
EBT	216	25	241	2	243	125	17	142	5	147
EBR	0	0	0	3	3	0	0	0	10	10
WBL	0	0	0	0	0	0	0	0	0	0
WBT	296	8	304	4	308	96	29	125	3	128
WBR	0	0	0	0	0	0	0	0	0	0
North Leg										
Approach	0	0	0	0	0	0	0	0	0	0
Departure	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0
South Leg										
Approach	0	0	0	4	4	0	0	0	3	3
Departure	0	0	0	3	3	0	0	0	10	10
Total	0	0	0	7	7	0	0	0	13	13
East Leg										
Approach	296	8	304	4	308	96	29	125	3	128
Departure	216	25	241	6	247	125	17	142	8	150
Total	512	33	545	10	555	221	46	267	11	278
West Leg										
Approach	216	25	241	5	246	125	17	142	15	157
Departure	296	8	304	4	308	96	29	125	3	128
Total	512	33	545	9	554	221	46	267	18	285
Total Approaches										
Approach	512	33	545	13	558	221	46	267	21	288
Departure	512	33	545	13	558	221	46	267	21	288
Total	1,024	66	1,090	26	1,116	442	92	534	42	576

LSA

Table C-2 - Near-Term Peak Hour Volume Summary

	AM Peak Hour					PM Peak Hour				
	Existing (2023) W/O Project	Cumulative Project Trips	Near-Term W/O Project	Project Trips	Near-Term Plus Project	Existing (2023) W/O Project	Cumulative Project Trips	Near-Term W/O Project	Project Trips	Near-Term Plus Project
22 Project Driveway 6/Flint Avenue										
NBL	0	0	0	4	4	0	0	0	3	3
NBT	0	0	0	0	0	0	0	0	0	0
NBR	0	0	0	50	50	0	0	0	19	19
SBL	0	0	0	0	0	0	0	0	0	0
SBT	0	0	0	0	0	0	0	0	0	0
SBR	0	0	0	0	0	0	0	0	0	0
EBL	0	0	0	0	0	0	0	0	0	0
EBT	216	25	241	4	245	125	17	142	3	145
EBR	0	0	0	2	2	0	0	0	5	5
WBL	0	0	0	51	51	0	0	0	33	33
WBT	296	8	304	0	304	96	29	125	0	125
WBR	0	0	0	0	0	0	0	0	0	0
North Leg										
Approach	0	0	0	0	0	0	0	0	0	0
Departure	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0
South Leg										
Approach	0	0	0	54	54	0	0	0	22	22
Departure	0	0	0	53	53	0	0	0	38	38
Total	0	0	0	107	107	0	0	0	60	60
East Leg										
Approach	296	8	304	51	355	96	29	125	33	158
Departure	216	25	241	54	295	125	17	142	22	164
Total	512	33	545	105	650	221	46	267	55	322
West Leg										
Approach	216	25	241	6	247	125	17	142	8	150
Departure	296	8	304	4	308	96	29	125	3	128
Total	512	33	545	10	555	221	46	267	11	278
Total Approaches										
Approach	512	33	545	111	656	221	46	267	63	330
Departure	512	33	545	111	656	221	46	267	63	330
Total	1,024	66	1,090	222	1,312	442	92	534	126	660

LSA

Table C-2 - Near-Term Peak Hour Volume Summary

	AM Peak Hour					PM Peak Hour				
	Existing (2023) W/O Project	Cumulative Project Trips	Near-Term W/O Project	Project Trips	Near-Term Plus Project	Existing (2023) W/O Project	Cumulative Project Trips	Near-Term W/O Project	Project Trips	Near-Term Plus Project
23 Project Driveway 7/Fargo Avenue										
NBL	0	0	0	0	0	0	0	0	0	0
NBT	0	0	0	0	0	0	0	0	0	0
NBR	0	0	0	0	0	0	0	0	0	0
SBL	0	0	0	0	0	0	0	0	0	0
SBT	0	0	0	0	0	0	0	0	0	0
SBR	0	0	0	67	67	0	0	0	44	44
EBL	0	0	0	0	0	0	0	0	0	0
EBT	456	42	498	220	718	597	28	625	137	762
EBR	0	0	0	0	0	0	0	0	0	0
WBL	0	0	0	0	0	0	0	0	0	0
WBT	769	14	783	211	994	469	48	517	110	627
WBR	0	0	0	15	15	0	0	0	50	50
North Leg										
Approach	0	0	0	67	67	0	0	0	44	44
Departure	0	0	0	15	15	0	0	0	50	50
Total	0	0	0	82	82	0	0	0	94	94
South Leg										
Approach	0	0	0	0	0	0	0	0	0	0
Departure	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0
East Leg										
Approach	769	14	783	226	1,009	469	48	517	160	677
Departure	456	42	498	220	718	597	28	625	137	762
Total	1,225	56	1,281	446	1,727	1,066	76	1,142	297	1,439
West Leg										
Approach	456	42	498	220	718	597	28	625	137	762
Departure	769	14	783	278	1,061	469	48	517	154	671
Total	1,225	56	1,281	498	1,779	1,066	76	1,142	291	1,433
Total Approaches										
Approach	1,225	56	1,281	513	1,794	1,066	76	1,142	341	1,483
Departure	1,225	56	1,281	513	1,794	1,066	76	1,142	341	1,483
Total	2,450	112	2,562	1,026	3,588	2,132	152	2,284	682	2,966

LSA

Table C-3 - Cumulative Year (2042) Peak Hour Volume Summary

	AM Peak Hour			PM Peak Hour		
	Cumulative (2042) W/O Project	Project Trips	Cumulative (2042) Plus Project	Cumulative (2042) W/O Project	Project Trips	Cumulative (2042) Plus Project
1 13th Avenue/Flint Avenue						
NBL	1	0	1	4	0	4
NBT	81	0	81	70	0	70
NBR	38	0	38	9	0	9
SBL	9	0	9	2	0	2
SBT	89	0	89	85	0	85
SBR	3	0	3	2	0	2
EBL	4	0	4	3	0	3
EBT	120	9	129	71	8	79
EBR	13	0	13	17	0	17
WBL	45	0	45	7	0	7
WBT	126	10	136	48	6	54
WBR	4	0	4	9	0	9
North Leg						
Approach	101	0	101	89	0	89
Departure	89	0	89	82	0	82
Total	190	0	190	171	0	171
South Leg						
Approach	120	0	120	83	0	83
Departure	147	0	147	109	0	109
Total	267	0	267	192	0	192
East Leg						
Approach	175	10	185	64	6	70
Departure	167	9	176	82	8	90
Total	342	19	361	146	14	160
West Leg						
Approach	137	9	146	91	8	99
Departure	130	10	140	54	6	60
Total	267	19	286	145	14	159
Total Approaches						
Approach	533	19	552	327	14	341
Departure	533	19	552	327	14	341
Total	1,066	38	1,104	654	28	682

LSA

Table C-3 - Cumulative Year (2042) Peak Hour Volume Summary

	AM Peak Hour			PM Peak Hour		
	Cumulative (2042) W/O Project	Project Trips	Cumulative (2042) Plus Project	Cumulative (2042) W/O Project	Project Trips	Cumulative (2042) Plus Project
2 13th Avenue/Fargo Avenue						
NBL	8	0	8	11	0	11
NBT	83	0	83	93	0	93
NBR	32	5	37	80	15	95
SBL	28	0	28	28	0	28
SBT	115	0	115	76	0	76
SBR	4	0	4	6	0	6
EBL	6	0	6	7	0	7
EBT	96	18	114	155	11	166
EBR	3	0	3	6	0	6
WBL	109	13	122	36	9	45
WBT	206	16	222	67	10	77
WBR	16	0	16	22	0	22
North Leg						
Approach	147	0	147	110	0	110
Departure	105	0	105	122	0	122
Total	252	0	252	232	0	232
South Leg						
Approach	123	5	128	184	15	199
Departure	227	13	240	118	9	127
Total	350	18	368	302	24	326
East Leg						
Approach	331	29	360	125	19	144
Departure	156	23	179	263	26	289
Total	487	52	539	388	45	433
West Leg						
Approach	105	18	123	168	11	179
Departure	218	16	234	84	10	94
Total	323	34	357	252	21	273
Total Approaches						
Approach	706	52	758	587	45	632
Departure	706	52	758	587	45	632
Total	1,412	104	1,516	1,174	90	1,264

LSA

Table C-3 - Cumulative Year (2042) Peak Hour Volume Summary

	AM Peak Hour			PM Peak Hour		
	Cumulative (2042) W/O Project	Project Trips	Cumulative (2042) Plus Project	Cumulative (2042) W/O Project	Project Trips	Cumulative (2042) Plus Project
3 12th Avenue/Flint Avenue						
NBL	3	11	14	15	4	19
NBT	219	11	230	188	4	192
NBR	92	3	95	44	10	54
SBL	65	0	65	61	0	61
SBT	308	14	322	215	4	219
SBR	14	0	14	4	0	4
EBL	18	0	18	2	0	2
EBT	99	2	101	69	5	74
EBR	11	14	25	6	4	10
WBL	66	0	66	59	0	59
WBT	155	4	159	64	3	67
WBR	111	0	111	22	0	22
North Leg						
Approach	387	14	401	280	4	284
Departure	348	11	359	212	4	216
Total	735	25	760	492	8	500
South Leg						
Approach	314	25	339	247	18	265
Departure	385	28	413	280	8	288
Total	699	53	752	527	26	553
East Leg						
Approach	332	4	336	145	3	148
Departure	256	5	261	174	15	189
Total	588	9	597	319	18	337
West Leg						
Approach	128	16	144	77	9	86
Departure	172	15	187	83	7	90
Total	300	31	331	160	16	176
Total Approaches						
Approach	1,161	59	1,220	749	34	783
Departure	1,161	59	1,220	749	34	783
Total	2,322	118	2,440	1,498	68	1,566

LSA

Table C-3 - Cumulative Year (2042) Peak Hour Volume Summary

	AM Peak Hour			PM Peak Hour		
	Cumulative (2042) W/O Project	Project Trips	Cumulative (2042) Plus Project	Cumulative (2042) W/O Project	Project Trips	Cumulative (2042) Plus Project
4 12th Avenue/Fargo Avenue						
NBL	38	0	38	78	0	78
NBT	200	154	354	304	264	568
NBR	138	111	249	320	214	534
SBL	19	0	19	27	0	27
SBT	287	256	543	231	151	382
SBR	61	22	83	47	11	58
EBL	92	27	119	33	25	58
EBT	281	11	292	310	8	318
EBR	75	0	75	58	0	58
WBL	214	227	441	194	159	353
WBT	426	19	445	302	15	317
WBR	28	28	56	8	20	28
North Leg						
Approach	367	278	645	305	162	467
Departure	320	209	529	345	309	654
Total	687	487	1,174	650	471	1,121
South Leg						
Approach	376	265	641	702	478	1,180
Departure	576	483	1,059	483	310	793
Total	952	748	1,700	1,185	788	1,973
East Leg						
Approach	668	274	942	504	194	698
Departure	438	122	560	657	222	879
Total	1,106	396	1,502	1,161	416	1,577
West Leg						
Approach	448	38	486	401	33	434
Departure	525	41	566	427	26	453
Total	973	79	1,052	828	59	887
Total Approaches						
Approach	1,859	855	2,714	1,912	867	2,779
Departure	1,859	855	2,714	1,912	867	2,779
Total	3,718	1,710	5,428	3,824	1,734	5,558

LSA

Table C-3 - Cumulative Year (2042) Peak Hour Volume Summary

	AM Peak Hour			PM Peak Hour		
	Cumulative (2042) W/O Project	Project Trips	Cumulative (2042) Plus Project	Cumulative (2042) W/O Project	Project Trips	Cumulative (2042) Plus Project
5 12th Avenue/Grangeville Boulevard						
NBL	82	0	82	130	0	130
NBT	271	174	445	786	407	1,193
NBR	167	0	167	271	0	271
SBL	88	16	104	94	10	104
SBT	530	385	915	444	253	697
SBR	88	52	140	59	32	91
EBL	84	36	120	87	47	134
EBT	425	0	425	309	0	309
EBR	102	0	102	74	0	74
WBL	234	0	234	265	0	265
WBT	334	0	334	339	0	339
WBR	42	18	60	82	11	93
North Leg						
Approach	706	453	1,159	597	295	892
Departure	397	228	625	955	465	1,420
Total	1,103	681	1,784	1,552	760	2,312
South Leg						
Approach	520	174	694	1,187	407	1,594
Departure	866	385	1,251	783	253	1,036
Total	1,386	559	1,945	1,970	660	2,630
East Leg						
Approach	610	18	628	686	11	697
Departure	680	16	696	674	10	684
Total	1,290	34	1,324	1,360	21	1,381
West Leg						
Approach	611	36	647	470	47	517
Departure	504	52	556	528	32	560
Total	1,115	88	1,203	998	79	1,077
Total Approaches						
Approach	2,447	681	3,128	2,940	760	3,700
Departure	2,447	681	3,128	2,940	760	3,700
Total	4,894	1,362	6,256	5,880	1,520	7,400

LSA

Table C-3 - Cumulative Year (2042) Peak Hour Volume Summary

	AM Peak Hour			PM Peak Hour		
	Cumulative (2042) W/O Project	Project Trips	Cumulative (2042) Plus Project	Cumulative (2042) W/O Project	Project Trips	Cumulative (2042) Plus Project
6 12th Avenue/Greenfield Avenue						
NBL	31	0	31	80	0	80
NBT	393	130	523	905	347	1,252
NBR	34	0	34	98	0	98
SBL	98	54	152	37	35	72
SBT	830	316	1,146	723	212	935
SBR	61	9	70	44	5	49
EBL	80	10	90	52	5	57
EBT	129	0	129	68	0	68
EBR	31	0	31	33	0	33
WBL	74	0	74	61	0	61
WBT	68	0	68	99	0	99
WBR	53	25	78	64	55	119
North Leg						
Approach	989	379	1,368	804	252	1,056
Departure	526	165	691	1,021	407	1,428
Total	1,515	544	2,059	1,825	659	2,484
South Leg						
Approach	458	130	588	1,083	347	1,430
Departure	935	316	1,251	817	212	1,029
Total	1,393	446	1,839	1,900	559	2,459
East Leg						
Approach	195	25	220	224	55	279
Departure	261	54	315	203	35	238
Total	456	79	535	427	90	517
West Leg						
Approach	240	10	250	153	5	158
Departure	160	9	169	223	5	228
Total	400	19	419	376	10	386
Total Approaches						
Approach	1,882	544	2,426	2,264	659	2,923
Departure	1,882	544	2,426	2,264	659	2,923
Total	3,764	1,088	4,852	4,528	1,318	5,846

LSA

Table C-3 - Cumulative Year (2042) Peak Hour Volume Summary

	AM Peak Hour			PM Peak Hour		
	Cumulative (2042) W/O Project	Project Trips	Cumulative (2042) Plus Project	Cumulative (2042) W/O Project	Project Trips	Cumulative (2042) Plus Project
7 12th Avenue/Liberty Street - Kings County Drive						
NBL	14	0	14	18	0	18
NBT	424	108	532	805	272	1,077
NBR	33	0	33	14	0	14
SBL	308	67	375	93	44	137
SBT	622	249	871	730	168	898
SBR	18	0	18	12	0	12
EBL	23	0	23	17	0	17
EBT	108	0	108	34	0	34
EBR	19	0	19	32	0	32
WBL	13	0	13	27	0	27
WBT	26	0	26	84	0	84
WBR	103	23	126	228	75	303
North Leg						
Approach	948	316	1,264	835	212	1,047
Departure	550	131	681	1,050	347	1,397
Total	1,498	447	1,945	1,885	559	2,444
South Leg						
Approach	471	108	579	837	272	1,109
Departure	654	249	903	789	168	957
Total	1,125	357	1,482	1,626	440	2,066
East Leg						
Approach	142	23	165	339	75	414
Departure	449	67	516	141	44	185
Total	591	90	681	480	119	599
West Leg						
Approach	150	0	150	83	0	83
Departure	58	0	58	114	0	114
Total	208	0	208	197	0	197
Total Approaches						
Approach	1,711	447	2,158	2,094	559	2,653
Departure	1,711	447	2,158	2,094	559	2,653
Total	3,422	894	4,316	4,188	1,118	5,306

LSA

Table C-3 - Cumulative Year (2042) Peak Hour Volume Summary

	AM Peak Hour			PM Peak Hour		
	Cumulative (2042) W/O Project	Project Trips	Cumulative (2042) Plus Project	Cumulative (2042) W/O Project	Project Trips	Cumulative (2042) Plus Project
8 12th Avenue/Lacey Boulevard						
NBL	93	0	93	234	0	234
NBT	287	55	342	492	137	629
NBR	84	0	84	112	0	112
SBL	103	74	177	156	49	205
SBT	445	126	571	663	85	748
SBR	102	27	129	137	19	156
EBL	173	14	187	353	29	382
EBT	412	0	412	401	0	401
EBR	86	0	86	166	0	166
WBL	142	0	142	345	0	345
WBT	236	0	236	576	0	576
WBR	32	31	63	71	81	152
North Leg						
Approach	650	227	877	956	153	1,109
Departure	492	100	592	916	247	1,163
Total	1,142	327	1,469	1,872	400	2,272
South Leg						
Approach	464	55	519	838	137	975
Departure	673	126	799	1,174	85	1,259
Total	1,137	181	1,318	2,012	222	2,234
East Leg						
Approach	410	31	441	992	81	1,073
Departure	599	74	673	669	49	718
Total	1,009	105	1,114	1,661	130	1,791
West Leg						
Approach	671	14	685	920	29	949
Departure	431	27	458	947	19	966
Total	1,102	41	1,143	1,867	48	1,915
Total Approaches						
Approach	2,195	327	2,522	3,706	400	4,106
Departure	2,195	327	2,522	3,706	400	4,106
Total	4,390	654	5,044	7,412	800	8,212

LSA

Table C-3 - Cumulative Year (2042) Peak Hour Volume Summary

	AM Peak Hour			PM Peak Hour		
	Cumulative (2042) W/O Project	Project Trips	Cumulative (2042) Plus Project	Cumulative (2042) W/O Project	Project Trips	Cumulative (2042) Plus Project
9 12th Avenue/Centennial Drive - Mall Drive						
NBL	154	0	154	383	0	383
NBT	560	40	600	690	87	777
NBR	511	0	511	254	0	254
SBL	45	13	58	69	9	78
SBT	502	81	583	958	55	1,013
SBR	37	9	46	66	6	72
EBL	32	3	35	105	10	115
EBT	57	0	57	69	0	69
EBR	191	0	191	220	0	220
WBL	165	0	165	512	0	512
WBT	60	0	60	132	0	132
WBR	12	5	17	42	15	57
North Leg						
Approach	584	103	687	1,093	70	1,163
Departure	604	48	652	837	112	949
Total	1,188	151	1,339	1,930	182	2,112
South Leg						
Approach	1,225	40	1,265	1,327	87	1,414
Departure	858	81	939	1,690	55	1,745
Total	2,083	121	2,204	3,017	142	3,159
East Leg						
Approach	237	5	242	686	15	701
Departure	613	13	626	392	9	401
Total	850	18	868	1,078	24	1,102
West Leg						
Approach	280	3	283	394	10	404
Departure	251	9	260	581	6	587
Total	531	12	543	975	16	991
Total Approaches						
Approach	2,326	151	2,477	3,500	182	3,682
Departure	2,326	151	2,477	3,500	182	3,682
Total	4,652	302	4,954	7,000	364	7,364

LSA

Table C-3 - Cumulative Year (2042) Peak Hour Volume Summary

	AM Peak Hour			PM Peak Hour		
	Cumulative (2042) W/O Project	Project Trips	Cumulative (2042) Plus Project	Cumulative (2042) W/O Project	Project Trips	Cumulative (2042) Plus Project
10 12th Avenue/SR-198 WB Ramps						
NBL	41	0	41	54	0	54
NBT	966	32	998	1,113	62	1,175
NBR	0	0	0	0	0	0
SBL	0	0	0	0	0	0
SBT	643	25	668	1,232	17	1,249
SBR	241	34	275	600	23	623
EBL	0	0	0	0	0	0
EBT	0	0	0	0	0	0
EBR	0	0	0	0	0	0
WBL	75	0	75	180	0	180
WBT	0	0	0	0	0	0
WBR	460	0	460	478	0	478
North Leg						
Approach	884	59	943	1,832	40	1,872
Departure	1,426	32	1,458	1,591	62	1,653
Total	2,310	91	2,401	3,423	102	3,525
South Leg						
Approach	1,007	32	1,039	1,167	62	1,229
Departure	718	25	743	1,412	17	1,429
Total	1,725	57	1,782	2,579	79	2,658
East Leg						
Approach	535	0	535	658	0	658
Departure	0	0	0	0	0	0
Total	535	0	535	658	0	658
West Leg						
Approach	0	0	0	0	0	0
Departure	282	34	316	654	23	677
Total	282	34	316	654	23	677
Total Approaches						
Approach	2,426	91	2,517	3,657	102	3,759
Departure	2,426	91	2,517	3,657	102	3,759
Total	4,852	182	5,034	7,314	204	7,518

LSA

Table C-3 - Cumulative Year (2042) Peak Hour Volume Summary

	AM Peak Hour			PM Peak Hour		
	Cumulative (2042) W/O Project	Project Trips	Cumulative (2042) Plus Project	Cumulative (2042) W/O Project	Project Trips	Cumulative (2042) Plus Project
11 12th Avenue/SR-198 EB Ramps						
NBL	0	0	0	0	0	0
NBT	588	14	602	714	26	740
NBR	160	0	160	165	0	165
SBL	0	0	0	0	0	0
SBT	428	25	453	897	17	914
SBR	290	0	290	515	0	515
EBL	419	17	436	453	36	489
EBT	0	0	0	0	0	0
EBR	13	0	13	35	0	35
WBL	0	0	0	0	0	0
WBT	0	0	0	0	0	0
WBR	0	0	0	0	0	0
North Leg						
Approach	718	25	743	1,412	17	1,429
Departure	1,007	31	1,038	1,167	62	1,229
Total	1,725	56	1,781	2,579	79	2,658
South Leg						
Approach	748	14	762	879	26	905
Departure	441	25	466	932	17	949
Total	1,189	39	1,228	1,811	43	1,854
East Leg						
Approach	0	0	0	0	0	0
Departure	160	0	160	165	0	165
Total	160	0	160	165	0	165
West Leg						
Approach	432	17	449	488	36	524
Departure	290	0	290	515	0	515
Total	722	17	739	1,003	36	1,039
Total Approaches						
Approach	1,898	56	1,954	2,779	79	2,858
Departure	1,898	56	1,954	2,779	79	2,858
Total	3,796	112	3,908	5,558	158	5,716

LSA

Table C-3 - Cumulative Year (2042) Peak Hour Volume Summary

	AM Peak Hour			PM Peak Hour		
	Cumulative (2042) W/O Project	Project Trips	Cumulative (2042) Plus Project	Cumulative (2042) W/O Project	Project Trips	Cumulative (2042) Plus Project
12 Fitzgerald Lane/Fargo Avenue						
NBL	9	45	54	15	23	38
NBT	0	0	0	0	0	0
NBR	92	0	92	67	0	67
SBL	0	0	0	0	0	0
SBT	0	0	0	0	0	0
SBR	0	0	0	0	0	0
EBL	0	0	0	0	0	0
EBT	428	220	648	641	137	778
EBR	10	38	48	16	22	38
WBL	152	0	152	90	0	90
WBT	659	278	937	489	154	643
WBR	0	0	0	0	0	0
North Leg						
Approach	0	0	0	0	0	0
Departure	0	0	0	0	0	0
Total	0	0	0	0	0	0
South Leg						
Approach	101	45	146	82	23	105
Departure	162	38	200	106	22	128
Total	263	83	346	188	45	233
East Leg						
Approach	811	278	1,089	579	154	733
Departure	520	220	740	708	137	845
Total	1,331	498	1,829	1,287	291	1,578
West Leg						
Approach	438	258	696	657	159	816
Departure	668	323	991	504	177	681
Total	1,106	581	1,687	1,161	336	1,497
Total Approaches						
Approach	1,350	581	1,931	1,318	336	1,654
Departure	1,350	581	1,931	1,318	336	1,654
Total	2,700	1,162	3,862	2,636	672	3,308

LSA

Table C-3 - Cumulative Year (2042) Peak Hour Volume Summary

	AM Peak Hour			PM Peak Hour		
	Cumulative (2042) W/O Project	Project Trips	Cumulative (2042) Plus Project	Cumulative (2042) W/O Project	Project Trips	Cumulative (2042) Plus Project
13 Glacier Way/Fargo Avenue						
NBL	32	25	57	28	12	40
NBT	8	0	8	2	0	2
NBR	27	0	27	11	0	11
SBL	16	0	16	29	0	29
SBT	5	0	5	5	0	5
SBR	150	36	186	96	14	110
EBL	68	30	98	129	14	143
EBT	434	169	603	513	111	624
EBR	29	21	50	42	11	53
WBL	15	0	15	16	0	16
WBT	652	165	817	480	135	615
WBR	23	0	23	42	0	42
North Leg						
Approach	171	36	207	130	14	144
Departure	99	30	129	173	14	187
Total	270	66	336	303	28	331
South Leg						
Approach	67	25	92	41	12	53
Departure	49	21	70	63	11	74
Total	116	46	162	104	23	127
East Leg						
Approach	690	165	855	538	135	673
Departure	477	169	646	553	111	664
Total	1,167	334	1,501	1,091	246	1,337
West Leg						
Approach	531	220	751	684	136	820
Departure	834	226	1,060	604	161	765
Total	1,365	446	1,811	1,288	297	1,585
Total Approaches						
Approach	1,459	446	1,905	1,393	297	1,690
Departure	1,459	446	1,905	1,393	297	1,690
Total	2,918	892	3,810	2,786	594	3,380

LSA

Table C-3 - Cumulative Year (2042) Peak Hour Volume Summary

	AM Peak Hour			PM Peak Hour		
	Cumulative (2042) W/O Project	Project Trips	Cumulative (2042) Plus Project	Cumulative (2042) W/O Project	Project Trips	Cumulative (2042) Plus Project
14 11th Avenue/Flint Avenue						
NBL	79	0	79	59	0	59
NBT	120	5	125	92	4	96
NBR	223	0	223	105	0	105
SBL	50	0	50	28	0	28
SBT	186	6	192	143	4	147
SBR	15	0	15	18	0	18
EBL	32	0	32	9	0	9
EBT	263	36	299	123	17	140
EBR	46	0	46	45	0	45
WBL	91	0	91	139	0	139
WBT	220	28	248	132	24	156
WBR	17	0	17	17	0	17
North Leg						
Approach	251	6	257	189	4	193
Departure	169	5	174	118	4	122
Total	420	11	431	307	8	315
South Leg						
Approach	422	5	427	256	4	260
Departure	323	6	329	327	4	331
Total	745	11	756	583	8	591
East Leg						
Approach	328	28	356	288	24	312
Departure	536	36	572	256	17	273
Total	864	64	928	544	41	585
West Leg						
Approach	341	36	377	177	17	194
Departure	314	28	342	209	24	233
Total	655	64	719	386	41	427
Total Approaches						
Approach	1,342	75	1,417	910	49	959
Departure	1,342	75	1,417	910	49	959
Total	2,684	150	2,834	1,820	98	1,918

LSA

Table C-3 - Cumulative Year (2042) Peak Hour Volume Summary

	AM Peak Hour			PM Peak Hour		
	Cumulative (2042) W/O Project	Project Trips	Cumulative (2042) Plus Project	Cumulative (2042) W/O Project	Project Trips	Cumulative (2042) Plus Project
15 11th Avenue/Fargo Avenue						
NBL	59	33	92	87	37	124
NBT	252	0	252	392	0	392
NBR	50	0	50	141	0	141
SBL	79	0	79	66	0	66
SBT	356	0	356	285	0	285
SBR	162	25	187	104	12	116
EBL	173	21	194	180	11	191
EBT	239	101	340	279	72	351
EBR	86	43	129	95	26	121
WBL	199	0	199	152	0	152
WBT	413	104	517	342	86	428
WBR	53	0	53	71	0	71
North Leg						
Approach	597	25	622	455	12	467
Departure	478	21	499	643	11	654
Total	1,075	46	1,121	1,098	23	1,121
South Leg						
Approach	361	33	394	620	37	657
Departure	641	43	684	532	26	558
Total	1,002	76	1,078	1,152	63	1,215
East Leg						
Approach	665	104	769	565	86	651
Departure	368	101	469	486	72	558
Total	1,033	205	1,238	1,051	158	1,209
West Leg						
Approach	498	165	663	554	109	663
Departure	634	162	796	533	135	668
Total	1,132	327	1,459	1,087	244	1,331
Total Approaches						
Approach	2,121	327	2,448	2,194	244	2,438
Departure	2,121	327	2,448	2,194	244	2,438
Total	4,242	654	4,896	4,388	488	4,876

LSA

Table C-3 - Cumulative Year (2042) Peak Hour Volume Summary

	AM Peak Hour			PM Peak Hour		
	Cumulative (2042) W/O Project	Project Trips	Cumulative (2042) Plus Project	Cumulative (2042) W/O Project	Project Trips	Cumulative (2042) Plus Project
16 SR-43/Flint Avenue						
NBL	68	6	74	76	20	96
NBT	650	0	650	610	0	610
NBR	13	0	13	5	0	5
SBL	2	0	2	1	0	1
SBT	536	0	536	646	0	646
SBR	103	4	107	133	1	134
EBL	213	4	217	97	1	98
EBT	46	4	50	30	1	31
EBR	115	18	133	100	12	112
WBL	5	0	5	10	0	10
WBT	35	4	39	42	1	43
WBR	4	0	4	0	0	0
North Leg						
Approach	641	4	645	780	1	781
Departure	867	4	871	707	1	708
Total	1,508	8	1,516	1,487	2	1,489
South Leg						
Approach	731	6	737	691	20	711
Departure	656	18	674	756	12	768
Total	1,387	24	1,411	1,447	32	1,479
East Leg						
Approach	44	4	48	52	1	53
Departure	61	4	65	36	1	37
Total	105	8	113	88	2	90
West Leg						
Approach	374	26	400	227	14	241
Departure	206	14	220	251	22	273
Total	580	40	620	478	36	514
Total Approaches						
Approach	1,790	40	1,830	1,750	36	1,786
Departure	1,790	40	1,830	1,750	36	1,786
Total	3,580	80	3,660	3,500	72	3,572

LSA

Table C-3 - Cumulative Year (2042) Peak Hour Volume Summary

	AM Peak Hour			PM Peak Hour		
	Cumulative (2042) W/O Project	Project Trips	Cumulative (2042) Plus Project	Cumulative (2042) W/O Project	Project Trips	Cumulative (2042) Plus Project
17 12th Avenue/Project Driveway 1						
NBL	0	0	0	0	0	0
NBT	320	8	328	345	14	359
NBR	0	138	138	0	251	251
SBL	0	28	28	0	8	8
SBT	367	0	367	305	0	305
SBR	0	0	0	0	0	0
EBL	0	0	0	0	0	0
EBT	0	0	0	0	0	0
EBR	0	0	0	0	0	0
WBL	0	279	279	0	163	163
WBT	0	0	0	0	0	0
WBR	0	18	18	0	5	5
North Leg						
Approach	367	28	395	305	8	313
Departure	320	26	346	345	19	364
Total	687	54	741	650	27	677
South Leg						
Approach	320	146	466	345	265	610
Departure	367	279	646	305	163	468
Total	687	425	1,112	650	428	1,078
East Leg						
Approach	0	297	297	0	168	168
Departure	0	166	166	0	259	259
Total	0	463	463	0	427	427
West Leg						
Approach	0	0	0	0	0	0
Departure	0	0	0	0	0	0
Total	0	0	0	0	0	0
Total Approaches						
Approach	687	471	1,158	650	441	1,091
Departure	687	471	1,158	650	441	1,091
Total	1,374	942	2,316	1,300	882	2,182

LSA

Table C-3 - Cumulative Year (2042) Peak Hour Volume Summary

	AM Peak Hour			PM Peak Hour		
	Cumulative (2042) W/O Project	Project Trips	Cumulative (2042) Plus Project	Cumulative (2042) W/O Project	Project Trips	Cumulative (2042) Plus Project
18 12th Avenue/Project Driveway 2						
NBL	0	0	0	0	0	0
NBT	320	131	451	345	259	604
NBR	0	68	68	0	47	47
SBL	0	0	0	0	0	0
SBT	367	270	637	305	160	465
SBR	0	0	0	0	0	0
EBL	0	0	0	0	0	0
EBT	0	0	0	0	0	0
EBR	0	0	0	0	0	0
WBL	0	0	0	0	0	0
WBT	0	0	0	0	0	0
WBR	0	5	5	0	4	4
North Leg						
Approach	367	270	637	305	160	465
Departure	320	136	456	345	263	608
Total	687	406	1,093	650	423	1,073
South Leg						
Approach	320	199	519	345	306	651
Departure	367	270	637	305	160	465
Total	687	469	1,156	650	466	1,116
East Leg						
Approach	0	5	5	0	4	4
Departure	0	68	68	0	47	47
Total	0	73	73	0	51	51
West Leg						
Approach	0	0	0	0	0	0
Departure	0	0	0	0	0	0
Total	0	0	0	0	0	0
Total Approaches						
Approach	687	474	1,161	650	470	1,120
Departure	687	474	1,161	650	470	1,120
Total	1,374	948	2,322	1,300	940	2,240

LSA

Table C-3 - Cumulative Year (2042) Peak Hour Volume Summary

	AM Peak Hour			PM Peak Hour		
	Cumulative (2042) W/O Project	Project Trips	Cumulative (2042) Plus Project	Cumulative (2042) W/O Project	Project Trips	Cumulative (2042) Plus Project
19 Project Driveway 3/Fargo Avenue						
NBL	0	0	0	0	0	0
NBT	0	0	0	0	0	0
NBR	0	0	0	0	0	0
SBL	0	0	0	0	0	0
SBT	0	0	0	0	0	0
SBR	0	70	70	0	55	55
EBL	0	0	0	0	0	0
EBT	438	122	560	657	222	879
EBR	0	0	0	0	0	0
WBL	0	0	0	0	0	0
WBT	668	204	872	504	139	643
WBR	0	99	99	0	69	69
North Leg						
Approach	0	70	70	0	55	55
Departure	0	99	99	0	69	69
Total	0	169	169	0	124	124
South Leg						
Approach	0	0	0	0	0	0
Departure	0	0	0	0	0	0
Total	0	0	0	0	0	0
East Leg						
Approach	668	303	971	504	208	712
Departure	438	122	560	657	222	879
Total	1,106	425	1,531	1,161	430	1,591
West Leg						
Approach	438	122	560	657	222	879
Departure	668	274	942	504	194	698
Total	1,106	396	1,502	1,161	416	1,577
Total Approaches						
Approach	1,106	495	1,601	1,161	485	1,646
Departure	1,106	495	1,601	1,161	485	1,646
Total	2,212	990	3,202	2,322	970	3,292

LSA

Table C-3 - Cumulative Year (2042) Peak Hour Volume Summary

	AM Peak Hour			PM Peak Hour		
	Cumulative (2042) W/O Project	Project Trips	Cumulative (2042) Plus Project	Cumulative (2042) W/O Project	Project Trips	Cumulative (2042) Plus Project
20 Project Driveway 4/Fargo Avenue						
NBL	0	0	0	0	0	0
NBT	0	0	0	0	0	0
NBR	0	0	0	0	0	0
SBL	0	257	257	0	158	158
SBT	0	0	0	0	0	0
SBR	0	108	108	0	74	74
EBL	0	122	122	0	222	222
EBT	438	0	438	657	0	657
EBR	0	0	0	0	0	0
WBL	0	0	0	0	0	0
WBT	668	194	862	504	132	636
WBR	0	128	128	0	44	44
North Leg						
Approach	0	365	365	0	232	232
Departure	0	250	250	0	266	266
Total	0	615	615	0	498	498
South Leg						
Approach	0	0	0	0	0	0
Departure	0	0	0	0	0	0
Total	0	0	0	0	0	0
East Leg						
Approach	668	322	990	504	176	680
Departure	438	257	695	657	158	815
Total	1,106	579	1,685	1,161	334	1,495
West Leg						
Approach	438	122	560	657	222	879
Departure	668	302	970	504	206	710
Total	1,106	424	1,530	1,161	428	1,589
Total Approaches						
Approach	1,106	809	1,915	1,161	630	1,791
Departure	1,106	809	1,915	1,161	630	1,791
Total	2,212	1,618	3,830	2,322	1,260	3,582

LSA

Table C-3 - Cumulative Year (2042) Peak Hour Volume Summary

	AM Peak Hour			PM Peak Hour		
	Cumulative (2042) W/O Project	Project Trips	Cumulative (2042) Plus Project	Cumulative (2042) W/O Project	Project Trips	Cumulative (2042) Plus Project
21 Project Driveway 5/Flint Avenue						
NBL	0	0	0	0	0	0
NBT	0	0	0	0	0	0
NBR	0	4	4	0	3	3
SBL	0	0	0	0	0	0
SBT	0	0	0	0	0	0
SBR	0	0	0	0	0	0
EBL	0	0	0	0	0	0
EBT	256	2	258	174	5	179
EBR	0	3	3	0	10	10
WBL	0	0	0	0	0	0
WBT	332	4	336	145	3	148
WBR	0	0	0	0	0	0
North Leg						
Approach	0	0	0	0	0	0
Departure	0	0	0	0	0	0
Total	0	0	0	0	0	0
South Leg						
Approach	0	4	4	0	3	3
Departure	0	3	3	0	10	10
Total	0	7	7	0	13	13
East Leg						
Approach	332	4	336	145	3	148
Departure	256	6	262	174	8	182
Total	588	10	598	319	11	330
West Leg						
Approach	256	5	261	174	15	189
Departure	332	4	336	145	3	148
Total	588	9	597	319	18	337
Total Approaches						
Approach	588	13	601	319	21	340
Departure	588	13	601	319	21	340
Total	1,176	26	1,202	638	42	680

LSA

Table C-3 - Cumulative Year (2042) Peak Hour Volume Summary

	AM Peak Hour			PM Peak Hour		
	Cumulative (2042) W/O Project	Project Trips	Cumulative (2042) Plus Project	Cumulative (2042) W/O Project	Project Trips	Cumulative (2042) Plus Project
22 Project Driveway 6/Flint Avenue						
NBL	0	4	4	0	3	3
NBT	0	0	0	0	0	0
NBR	0	50	50	0	19	19
SBL	0	0	0	0	0	0
SBT	0	0	0	0	0	0
SBR	0	0	0	0	0	0
EBL	0	0	0	0	0	0
EBT	256	4	260	174	3	177
EBR	0	2	2	0	5	5
WBL	0	51	51	0	33	33
WBT	332	0	332	145	0	145
WBR	0	0	0	0	0	0
North Leg						
Approach	0	0	0	0	0	0
Departure	0	0	0	0	0	0
Total	0	0	0	0	0	0
South Leg						
Approach	0	54	54	0	22	22
Departure	0	53	53	0	38	38
Total	0	107	107	0	60	60
East Leg						
Approach	332	51	383	145	33	178
Departure	256	54	310	174	22	196
Total	588	105	693	319	55	374
West Leg						
Approach	256	6	262	174	8	182
Departure	332	4	336	145	3	148
Total	588	10	598	319	11	330
Total Approaches						
Approach	588	111	699	319	63	382
Departure	588	111	699	319	63	382
Total	1,176	222	1,398	638	126	764

LSA

Table C-3 - Cumulative Year (2042) Peak Hour Volume Summary

	AM Peak Hour			PM Peak Hour		
	Cumulative (2042) W/O Project	Project Trips	Cumulative (2042) Plus Project	Cumulative (2042) W/O Project	Project Trips	Cumulative (2042) Plus Project
23 Project Driveway 7/Fargo Avenue						
NBL	0	0	0	0	0	0
NBT	0	0	0	0	0	0
NBR	0	0	0	0	0	0
SBL	0	0	0	0	0	0
SBT	0	0	0	0	0	0
SBR	0	67	67	0	44	44
EBL	0	0	0	0	0	0
EBT	520	220	740	708	137	845
EBR	0	0	0	0	0	0
WBL	0	0	0	0	0	0
WBT	811	211	1,022	579	110	689
WBR	0	15	15	0	50	50
North Leg						
Approach	0	67	67	0	44	44
Departure	0	15	15	0	50	50
Total	0	82	82	0	94	94
South Leg						
Approach	0	0	0	0	0	0
Departure	0	0	0	0	0	0
Total	0	0	0	0	0	0
East Leg						
Approach	811	226	1,037	579	160	739
Departure	520	220	740	708	137	845
Total	1,331	446	1,777	1,287	297	1,584
West Leg						
Approach	520	220	740	708	137	845
Departure	811	278	1,089	579	154	733
Total	1,331	498	1,829	1,287	291	1,578
Total Approaches						
Approach	1,331	513	1,844	1,287	341	1,628
Departure	1,331	513	1,844	1,287	341	1,628
Total	2,662	1,026	3,688	2,574	682	3,256

APPENDIX D

LEVEL OF SERVICE WORKSHEETS

Intersection	
Intersection Delay, s/veh	10.5
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	4	114	11	43	103	4	0	64	36	9	81	2
Future Vol, veh/h	4	114	11	43	103	4	0	64	36	9	81	2
Peak Hour Factor	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60
Heavy Vehicles, %	4	6	2	2	6	4	6	4	6	6	2	6
Mvmt Flow	7	190	18	72	172	7	0	107	60	15	135	3
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	10.5	11.1	10	10.2
HCM LOS	B	B	A	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	0%	3%	29%	10%
Vol Thru, %	64%	88%	69%	88%
Vol Right, %	36%	9%	3%	2%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	100	129	150	92
LT Vol	0	4	43	9
Through Vol	64	114	103	81
RT Vol	36	11	4	2
Lane Flow Rate	167	215	250	153
Geometry Grp	1	1	1	1
Degree of Util (X)	0.243	0.31	0.36	0.235
Departure Headway (Hd)	5.243	5.185	5.184	5.511
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	685	694	695	652
Service Time	3.276	3.215	3.213	3.546
HCM Lane V/C Ratio	0.244	0.31	0.36	0.235
HCM Control Delay	10	10.5	11.1	10.2
HCM Lane LOS	A	B	B	B
HCM 95th-tile Q	0.9	1.3	1.6	0.9

Intersection	
Intersection Delay, s/veh	13.5
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	5	93	3	104	201	15	7	62	30	26	99	3
Future Vol, veh/h	5	93	3	104	201	15	7	62	30	26	99	3
Peak Hour Factor	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72
Heavy Vehicles, %	4	3	1	1	0	4	0	4	3	3	1	0
Mvmt Flow	7	129	4	144	279	21	10	86	42	36	138	4
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	10.1	16.5	10.2	11.1
HCM LOS	B	C	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	7%	5%	33%	20%
Vol Thru, %	63%	92%	63%	77%
Vol Right, %	30%	3%	5%	2%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	99	101	320	128
LT Vol	7	5	104	26
Through Vol	62	93	201	99
RT Vol	30	3	15	3
Lane Flow Rate	138	140	444	178
Geometry Grp	1	1	1	1
Degree of Util (X)	0.215	0.216	0.63	0.286
Departure Headway (Hd)	5.623	5.552	5.1	5.782
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	637	645	707	620
Service Time	3.675	3.6	3.134	3.83
HCM Lane V/C Ratio	0.217	0.217	0.628	0.287
HCM Control Delay	10.2	10.1	16.5	11.1
HCM Lane LOS	B	B	C	B
HCM 95th-tile Q	0.8	0.8	4.5	1.2

Intersection	
Intersection Delay, s/veh	56.4
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	17	91	10	55	135	106	2	203	63	62	289	13
Future Vol, veh/h	17	91	10	55	135	106	2	203	63	62	289	13
Peak Hour Factor	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70
Heavy Vehicles, %	1	6	2	2	3	1	3	1	6	6	2	3
Mvmt Flow	24	130	14	79	193	151	3	290	90	89	413	19
Number of Lanes	0	1	0	0	1	0	0	1	1	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	1	1
HCM Control Delay	17.9	43.2	23.2	104
HCM LOS	C	E	C	F

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	1%	0%	14%	19%	18%	0%
Vol Thru, %	99%	0%	77%	46%	82%	0%
Vol Right, %	0%	100%	8%	36%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	205	63	118	296	351	13
LT Vol	2	0	17	55	62	0
Through Vol	203	0	91	135	289	0
RT Vol	0	63	10	106	0	13
Lane Flow Rate	293	90	169	423	501	19
Geometry Grp	7	7	2	2	7	7
Degree of Util (X)	0.664	0.185	0.399	0.865	1.121	0.037
Departure Headway (Hd)	8.549	7.779	9.038	7.754	8.051	7.164
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	425	464	401	469	451	499
Service Time	6.249	5.479	7.038	5.754	5.806	4.918
HCM Lane V/C Ratio	0.689	0.194	0.421	0.902	1.111	0.038
HCM Control Delay	26.6	12.2	17.9	43.2	107.5	10.2
HCM Lane LOS	D	B	C	E	F	B
HCM 95th-tile Q	4.7	0.7	1.9	9	17.4	0.1



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	72	237	23	194	408	27	17	171	121	17	257	52
Future Volume (veh/h)	72	237	23	194	408	27	17	171	121	17	257	52
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1870	1870	1870	1885	1885	1885	1885	1870	1870	1870	1885
Adj Flow Rate, veh/h	90	296	29	242	510	34	21	214	151	21	321	65
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Percent Heavy Veh, %	1	2	2	2	1	1	1	1	2	2	2	1
Cap, veh/h	123	394	334	293	578	490	45	402	338	45	399	341
Arrive On Green	0.07	0.21	0.21	0.16	0.31	0.31	0.02	0.21	0.21	0.02	0.21	0.21
Sat Flow, veh/h	1795	1870	1585	1781	1885	1598	1795	1885	1585	1781	1870	1598
Grp Volume(v), veh/h	90	296	29	242	510	34	21	214	151	21	321	65
Grp Sat Flow(s),veh/h/ln	1795	1870	1585	1781	1885	1598	1795	1885	1585	1781	1870	1598
Q Serve(g_s), s	2.7	8.1	0.8	7.1	14.0	0.8	0.6	5.5	4.5	0.6	8.9	1.8
Cycle Q Clear(g_c), s	2.7	8.1	0.8	7.1	14.0	0.8	0.6	5.5	4.5	0.6	8.9	1.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	123	394	334	293	578	490	45	402	338	45	399	341
V/C Ratio(X)	0.73	0.75	0.09	0.83	0.88	0.07	0.47	0.53	0.45	0.47	0.81	0.19
Avail Cap(c_a), veh/h	331	672	569	328	677	574	331	677	569	328	672	574
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.8	20.1	17.2	21.9	17.9	13.3	26.1	19.0	18.6	26.1	20.3	17.5
Incr Delay (d2), s/veh	3.1	1.1	0.0	13.0	10.6	0.0	2.8	0.4	0.3	2.9	1.5	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	3.0	0.2	3.5	6.4	0.2	0.3	2.1	1.4	0.3	3.2	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	27.9	21.2	17.3	34.9	28.5	13.4	28.9	19.4	18.9	29.0	21.8	17.6
LnGrp LOS	C	C	B	C	C	B	C	B	B	C	C	B
Approach Vol, veh/h		415			786			386			407	
Approach Delay, s/veh		22.4			29.8			19.7			21.5	
Approach LOS		C			C			B			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.4	17.1	13.9	16.9	6.4	17.1	8.7	22.2
Change Period (Y+Rc), s	5.0	5.5	5.0	5.5	5.0	5.5	5.0	5.5
Max Green Setting (Gmax), s	10.0	19.5	10.0	19.5	10.0	19.5	10.0	19.5
Max Q Clear Time (g_c+I1), s	2.6	7.5	9.1	10.1	2.6	10.9	4.7	16.0
Green Ext Time (p_c), s	0.0	0.7	0.0	0.7	0.0	0.7	0.0	0.7

Intersection Summary	
HCM 6th Ctrl Delay	24.6
HCM 6th LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	66	387	74	207	308	34	69	229	154	73	459	82
Future Volume (veh/h)	66	387	74	207	308	34	69	229	154	73	459	82
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1885	1885	1885	1856	1856	1856	1856	1885	1885	1885	1856
Adj Flow Rate, veh/h	84	490	94	262	390	43	87	290	195	92	581	104
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79
Percent Heavy Veh, %	3	1	1	1	3	3	3	3	1	1	1	3
Cap, veh/h	235	728	325	407	887	396	239	821	372	250	841	369
Arrive On Green	0.07	0.20	0.20	0.12	0.25	0.25	0.07	0.23	0.23	0.07	0.23	0.23
Sat Flow, veh/h	3428	3582	1598	3483	3526	1572	3428	3526	1598	3483	3582	1572
Grp Volume(v), veh/h	84	490	94	262	390	43	87	290	195	92	581	104
Grp Sat Flow(s),veh/h/ln	1714	1791	1598	1742	1763	1572	1714	1763	1598	1742	1791	1572
Q Serve(g_s), s	1.2	6.4	2.5	3.6	4.7	1.1	1.2	3.5	5.4	1.3	7.5	2.7
Cycle Q Clear(g_c), s	1.2	6.4	2.5	3.6	4.7	1.1	1.2	3.5	5.4	1.3	7.5	2.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	235	728	325	407	887	396	239	821	372	250	841	369
V/C Ratio(X)	0.36	0.67	0.29	0.64	0.44	0.11	0.36	0.35	0.52	0.37	0.69	0.28
Avail Cap(c_a), veh/h	1389	2124	947	1755	2439	1088	1389	2090	947	1411	2124	932
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.5	18.6	17.1	21.3	15.9	14.6	22.5	16.2	17.0	22.4	17.7	15.9
Incr Delay (d2), s/veh	0.3	0.4	0.2	0.6	0.1	0.0	0.3	0.1	0.4	0.3	0.4	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	2.1	0.8	1.3	1.6	0.3	0.4	1.2	1.7	0.5	2.5	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	22.8	19.0	17.2	22.0	16.1	14.6	22.8	16.3	17.4	22.7	18.1	16.0
LnGrp LOS	C	B	B	C	B	B	C	B	B	C	B	B
Approach Vol, veh/h		668			695			572			777	
Approach Delay, s/veh		19.2			18.2			17.7			18.3	
Approach LOS		B			B			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.1	16.8	10.4	15.3	8.0	16.9	8.0	17.7
Change Period (Y+Rc), s	4.5	5.0	4.5	5.0	4.5	5.0	4.5	5.0
Max Green Setting (Gmax), s	20.5	30.0	25.5	30.0	20.5	30.0	20.5	35.0
Max Q Clear Time (g_c+I1), s	3.3	7.4	5.6	8.4	3.2	9.5	3.2	6.7
Green Ext Time (p_c), s	0.1	1.3	0.4	1.9	0.1	2.4	0.1	1.6

Intersection Summary	
HCM 6th Ctrl Delay	18.4
HCM 6th LOS	B



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	75	124	25	69	67	50	24	340	30	93	699	57
Future Volume (veh/h)	75	124	25	69	67	50	24	340	30	93	699	57
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1900	1885	1885	1900	1870	1900	1870	1900	1900	1885	1900
Adj Flow Rate, veh/h	89	148	30	82	80	60	29	405	36	111	832	68
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Percent Heavy Veh, %	2	0	1	1	0	2	0	2	0	0	1	0
Cap, veh/h	144	259	218	138	251	210	63	753	341	166	962	433
Arrive On Green	0.08	0.14	0.14	0.08	0.13	0.13	0.03	0.21	0.21	0.09	0.27	0.27
Sat Flow, veh/h	1781	1900	1598	1795	1900	1585	1810	3554	1610	1810	3582	1610
Grp Volume(v), veh/h	89	148	30	82	80	60	29	405	36	111	832	68
Grp Sat Flow(s),veh/h/ln	1781	1900	1598	1795	1900	1585	1810	1777	1610	1810	1791	1610
Q Serve(g_s), s	1.8	2.7	0.6	1.6	1.4	1.3	0.6	3.8	0.7	2.2	8.2	1.2
Cycle Q Clear(g_c), s	1.8	2.7	0.6	1.6	1.4	1.3	0.6	3.8	0.7	2.2	8.2	1.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	144	259	218	138	251	210	63	753	341	166	962	433
V/C Ratio(X)	0.62	0.57	0.14	0.59	0.32	0.29	0.46	0.54	0.11	0.67	0.86	0.16
Avail Cap(c_a), veh/h	766	1276	1073	531	1021	852	535	1432	649	292	962	433
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	16.6	15.1	14.2	16.6	14.6	14.6	17.6	13.1	11.8	16.4	13.0	10.4
Incr Delay (d2), s/veh	1.6	0.7	0.1	1.5	0.3	0.3	1.9	0.2	0.0	1.7	7.9	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	1.0	0.2	0.6	0.5	0.4	0.2	1.1	0.2	0.8	3.2	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	18.2	15.8	14.3	18.1	14.9	14.8	19.6	13.3	11.9	18.1	20.9	10.5
LnGrp LOS	B	B	B	B	B	B	B	B	B	B	C	B
Approach Vol, veh/h		267			222			470			1011	
Approach Delay, s/veh		16.4			16.1			13.6			19.9	
Approach LOS		B			B			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.4	12.9	6.9	10.1	5.3	15.0	7.0	9.9
Change Period (Y+Rc), s	4.0	5.0	4.0	5.0	4.0	5.0	4.0	5.0
Max Green Setting (Gmax), s	6.0	15.0	11.0	25.0	11.0	10.0	16.0	20.0
Max Q Clear Time (g_c+I1), s	4.2	5.8	3.6	4.7	2.6	10.2	3.8	3.4
Green Ext Time (p_c), s	0.0	0.9	0.0	0.4	0.0	0.0	0.0	0.2

Intersection Summary	
HCM 6th Ctrl Delay	17.5
HCM 6th LOS	B



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	21	102	18	10	21	81	12	360	28	270	502	15
Future Volume (veh/h)	21	102	18	10	21	81	12	360	28	270	502	15
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1900	1885	1885	1900	1870	1900	1870	1900	1900	1885	1900
Adj Flow Rate, veh/h	25	121	21	12	25	96	14	429	33	321	598	18
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Percent Heavy Veh, %	2	0	1	1	0	2	0	2	0	0	1	0
Cap, veh/h	55	271	228	28	242	202	33	677	307	295	1201	540
Arrive On Green	0.03	0.14	0.14	0.02	0.13	0.13	0.02	0.19	0.19	0.16	0.34	0.34
Sat Flow, veh/h	1781	1900	1598	1795	1900	1585	1810	3554	1610	1810	3582	1610
Grp Volume(v), veh/h	25	121	21	12	25	96	14	429	33	321	598	18
Grp Sat Flow(s),veh/h/ln	1781	1900	1598	1795	1900	1585	1810	1777	1610	1810	1791	1610
Q Serve(g_s), s	0.5	2.1	0.4	0.2	0.4	2.1	0.3	4.1	0.6	6.0	4.9	0.3
Cycle Q Clear(g_c), s	0.5	2.1	0.4	0.2	0.4	2.1	0.3	4.1	0.6	6.0	4.9	0.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	55	271	228	28	242	202	33	677	307	295	1201	540
V/C Ratio(X)	0.46	0.45	0.09	0.43	0.10	0.47	0.43	0.63	0.11	1.09	0.50	0.03
Avail Cap(c_a), veh/h	773	1289	1084	536	1031	860	540	1447	655	295	1201	540
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.6	14.5	13.7	18.0	14.2	14.9	17.9	13.7	12.3	15.4	9.8	8.2
Incr Delay (d2), s/veh	2.2	0.4	0.1	3.7	0.1	0.6	3.2	0.4	0.1	78.4	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.8	0.1	0.1	0.2	0.7	0.1	1.2	0.2	8.2	1.2	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	19.8	14.9	13.8	21.7	14.3	15.6	21.1	14.1	12.4	93.8	9.9	8.2
LnGrp LOS	B	B	B	C	B	B	C	B	B	F	A	A
Approach Vol, veh/h		167			133			476			937	
Approach Delay, s/veh		15.5			15.9			14.2			38.6	
Approach LOS		B			B			B			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.0	12.0	4.6	10.3	4.7	17.3	5.1	9.7
Change Period (Y+Rc), s	4.0	5.0	4.0	5.0	4.0	5.0	4.0	5.0
Max Green Setting (Gmax), s	6.0	15.0	11.0	25.0	11.0	10.0	16.0	20.0
Max Q Clear Time (g_c+I1), s	3.0	6.1	2.2	4.1	2.3	6.9	2.5	4.1
Green Ext Time (p_c), s	0.0	0.9	0.0	0.3	0.0	0.7	0.0	0.1

Intersection Summary	
HCM 6th Ctrl Delay	27.8
HCM 6th LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	139	338	66	135	175	27	66	254	81	93	366	73
Future Volume (veh/h)	139	338	66	135	175	27	66	254	81	93	366	73
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1885	1870	1870	1870	1870	1870	1870	1885	1885	1870	1870
Adj Flow Rate, veh/h	149	363	71	145	188	29	71	273	87	100	394	78
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	1	2	2	2	2	2	2	1	1	2	2
Cap, veh/h	295	636	282	292	628	280	100	616	277	126	666	297
Arrive On Green	0.09	0.18	0.18	0.08	0.18	0.18	0.06	0.17	0.17	0.07	0.19	0.19
Sat Flow, veh/h	3456	3582	1585	3456	3554	1585	1781	3554	1598	1795	3554	1585
Grp Volume(v), veh/h	149	363	71	145	188	29	71	273	87	100	394	78
Grp Sat Flow(s),veh/h/ln	1728	1791	1585	1728	1777	1585	1781	1777	1598	1795	1777	1585
Q Serve(g_s), s	1.5	3.4	1.4	1.5	1.7	0.6	1.4	2.5	1.7	2.0	3.7	1.5
Cycle Q Clear(g_c), s	1.5	3.4	1.4	1.5	1.7	0.6	1.4	2.5	1.7	2.0	3.7	1.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	295	636	282	292	628	280	100	616	277	126	666	297
V/C Ratio(X)	0.50	0.57	0.25	0.50	0.30	0.10	0.71	0.44	0.31	0.79	0.59	0.26
Avail Cap(c_a), veh/h	1993	2459	1088	1993	2439	1088	1027	2439	1097	1035	2439	1088
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	15.9	13.7	12.9	15.9	13.0	12.6	16.9	13.5	13.2	16.7	13.5	12.6
Incr Delay (d2), s/veh	0.5	0.3	0.2	0.5	0.1	0.1	3.4	0.2	0.2	4.2	0.3	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	1.0	0.4	0.5	0.5	0.2	0.6	0.8	0.5	0.8	1.1	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	16.4	14.0	13.1	16.4	13.1	12.6	20.3	13.7	13.4	20.8	13.8	12.8
LnGrp LOS	B	B	B	B	B	B	C	B	B	C	B	B
Approach Vol, veh/h		583			362			431			572	
Approach Delay, s/veh		14.5			14.4			14.7			14.9	
Approach LOS		B			B			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.6	11.3	7.1	11.5	6.0	11.8	7.1	11.4
Change Period (Y+Rc), s	4.0	5.0	4.0	5.0	4.0	5.0	4.0	5.0
Max Green Setting (Gmax), s	21.0	25.0	21.0	25.0	21.0	25.0	21.0	25.0
Max Q Clear Time (g_c+I1), s	4.0	4.5	3.5	5.4	3.4	5.7	3.5	3.7
Green Ext Time (p_c), s	0.0	0.8	0.1	1.1	0.0	1.1	0.1	0.6

Intersection Summary	
HCM 6th Ctrl Delay	14.7
HCM 6th LOS	B



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	29	51	158	137	55	8	144	512	486	38	441	33
Future Volume (veh/h)	29	51	158	137	55	8	144	512	486	38	441	33
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1900	1870	1870	1900	1870	1900	1870	1900	1900	1870	1900
Adj Flow Rate, veh/h	33	58	180	156	62	9	164	582	552	43	501	38
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	2	0	2	2	0	2	0	2	0	0	2	0
Cap, veh/h	263	281	234	287	131	19	270	1379	642	76	1892	597
Arrive On Green	0.15	0.15	0.15	0.08	0.08	0.08	0.08	0.41	0.41	0.04	0.37	0.37
Sat Flow, veh/h	1781	1900	1585	3563	1622	235	3510	3404	1585	1810	5106	1610
Grp Volume(v), veh/h	33	58	180	156	0	71	164	582	552	43	501	38
Grp Sat Flow(s),veh/h/ln	1781	1900	1585	1781	0	1858	1755	1702	1585	1810	1702	1610
Q Serve(g_s), s	1.0	1.7	6.7	2.6	0.0	2.3	2.8	7.6	19.6	1.4	4.2	0.9
Cycle Q Clear(g_c), s	1.0	1.7	6.7	2.6	0.0	2.3	2.8	7.6	19.6	1.4	4.2	0.9
Prop In Lane	1.00		1.00	1.00		0.13	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	263	281	234	287	0	149	270	1379	642	76	1892	597
V/C Ratio(X)	0.13	0.21	0.77	0.54	0.00	0.47	0.61	0.42	0.86	0.56	0.26	0.06
Avail Cap(c_a), veh/h	722	770	643	1445	0	753	1423	1656	771	734	2484	783
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.8	23.1	25.3	27.3	0.0	27.1	27.6	13.2	16.7	29.0	13.5	12.5
Incr Delay (d2), s/veh	0.1	0.1	2.0	0.6	0.0	0.9	0.8	0.1	7.3	2.4	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.7	2.5	1.1	0.0	1.0	1.1	2.4	7.1	0.6	1.4	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	22.9	23.2	27.3	27.9	0.0	28.0	28.4	13.2	24.1	31.4	13.6	12.5
LnGrp LOS	C	C	C	C	A	C	C	B	C	C	B	B
Approach Vol, veh/h		271			227			1298			582	
Approach Delay, s/veh		25.9			27.9			19.8			14.8	
Approach LOS		C			C			B			B	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	7.6	30.0		14.1	9.7	27.9		10.0
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0
Max Green Setting (Gmax), s	25.0	30.0		25.0	25.0	30.0		25.0
Max Q Clear Time (g_c+I1), s	3.4	21.6		8.7	4.8	6.2		4.6
Green Ext Time (p_c), s	0.0	3.4		0.5	0.2	2.2		0.5

Intersection Summary	
HCM 6th Ctrl Delay	20.0
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	63	0	426	36	887	0	0	534	210
Future Volume (veh/h)	0	0	0	63	0	426	36	887	0	0	534	210
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1856	1856	1870	1856	1870	0	0	1856	1856
Adj Flow Rate, veh/h				47	0	498	40	986	0	0	593	233
Peak Hour Factor				0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %				3	3	2	3	2	0	0	3	3
Cap, veh/h				325	0	583	653	2431	0	0	1248	387
Arrive On Green				0.18	0.00	0.18	0.74	1.00	0.00	0.00	0.25	0.25
Sat Flow, veh/h				1767	0	3170	1767	3647	0	0	5233	1572
Grp Volume(v), veh/h				47	0	498	40	986	0	0	593	233
Grp Sat Flow(s),veh/h/ln				1767	0	1585	1767	1777	0	0	1689	1572
Q Serve(g_s), s				2.2	0.0	15.2	0.6	0.0	0.0	0.0	10.0	13.1
Cycle Q Clear(g_c), s				2.2	0.0	15.2	0.6	0.0	0.0	0.0	10.0	13.1
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				325	0	583	653	2431	0	0	1248	387
V/C Ratio(X)				0.14	0.00	0.85	0.06	0.41	0.00	0.00	0.48	0.60
Avail Cap(c_a), veh/h				353	0	634	653	2431	0	0	2330	723
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.92	0.92	0.00	0.00	0.92	0.92
Uniform Delay (d), s/veh				34.2	0.0	39.5	8.3	0.0	0.0	0.0	32.2	33.3
Incr Delay (d2), s/veh				0.5	0.0	12.2	0.0	0.5	0.0	0.0	1.2	6.2
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				1.0	0.0	6.8	0.2	0.2	0.0	0.0	4.1	5.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				34.7	0.0	51.7	8.3	0.5	0.0	0.0	33.4	39.6
LnGrp LOS				C	A	D	A	A	A	A	C	D
Approach Vol, veh/h					545			1026			826	
Approach Delay, s/veh					50.2			0.8			35.1	
Approach LOS					D			A			D	

Timer - Assigned Phs	2		5	6		8
Phs Duration (G+Y+Rc), s	75.2		43.8	31.4		24.8
Change Period (Y+Rc), s	6.8		6.8	* 6.8		6.4
Max Green Setting (Gmax), s	66.8		15.1	* 46		20.0
Max Q Clear Time (g_c+I1), s	2.0		2.6	15.1		17.2
Green Ext Time (p_c), s	29.3		0.0	9.5		1.2

Intersection Summary	
HCM 6th Ctrl Delay	23.9
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	384	0	12	0	0	0	0	539	135	0	350	247
Future Volume (veh/h)	384	0	12	0	0	0	0	539	135	0	350	247
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1885	0	1856				0	1885	1870	0	1856	1856
Adj Flow Rate, veh/h	431	0	13				0	606	0	0	393	0
Peak Hour Factor	0.89	0.89	0.89				0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	1	0	3				0	1	2	0	3	3
Cap, veh/h	552	0	249				0	2592		0	2551	
Arrive On Green	0.16	0.00	0.16				0.00	0.72	0.00	0.00	1.00	0.00
Sat Flow, veh/h	3483	0	1572				0	3676	1585	0	3618	1572
Grp Volume(v), veh/h	431	0	13				0	606	0	0	393	0
Grp Sat Flow(s),veh/h/ln	1742	0	1572				0	1791	1585	0	1763	1572
Q Serve(g_s), s	11.9	0.0	0.7				0.0	5.6	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	11.9	0.0	0.7				0.0	5.6	0.0	0.0	0.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h	552	0	249				0	2592		0	2551	
V/C Ratio(X)	0.78	0.00	0.05				0.00	0.23		0.00	0.15	
Avail Cap(c_a), veh/h	731	0	330				0	2592		0	2551	
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	0.00	0.00	0.99	0.00
Uniform Delay (d), s/veh	40.4	0.0	35.7				0.0	4.6	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	6.5	0.0	0.2				0.0	0.2	0.0	0.0	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.5	0.0	0.3				0.0	1.7	0.0	0.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	46.9	0.0	35.9				0.0	4.8	0.0	0.0	0.1	0.0
LnGrp LOS	D	A	D				A	A		A	A	
Approach Vol, veh/h		444						606			393	
Approach Delay, s/veh		46.6						4.8			0.1	
Approach LOS		D						A			A	

Timer - Assigned Phs	2	4	6
Phs Duration (G+Y+Rc), s	79.2	20.8	79.2
Change Period (Y+Rc), s	6.8	5.0	6.8
Max Green Setting (Gmax), s	67.2	21.0	67.2
Max Q Clear Time (g_c+I1), s	7.6	13.9	2.0
Green Ext Time (p_c), s	10.9	2.0	6.5

Intersection Summary	
HCM 6th Ctrl Delay	16.4
HCM 6th LOS	B

Notes

Unsignalized Delay for [NBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Intersection	
Int Delay, s/veh	2.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	366	9	148	621	8	90
Future Vol, veh/h	366	9	148	621	8	90
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	120	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	81	81	81	81	81	81
Heavy Vehicles, %	2	0	0	1	1	2
Mvmt Flow	452	11	183	767	10	111

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	463	0	1591	458
Stage 1	-	-	-	-	458	-
Stage 2	-	-	-	-	1133	-
Critical Hdwy	-	-	4.1	-	6.41	6.22
Critical Hdwy Stg 1	-	-	-	-	5.41	-
Critical Hdwy Stg 2	-	-	-	-	5.41	-
Follow-up Hdwy	-	-	2.2	-	3.509	3.318
Pot Cap-1 Maneuver	-	-	1109	-	119	603
Stage 1	-	-	-	-	639	-
Stage 2	-	-	-	-	309	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1109	-	99	603
Mov Cap-2 Maneuver	-	-	-	-	99	-
Stage 1	-	-	-	-	639	-
Stage 2	-	-	-	-	258	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.7	16.8
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	426	-	-	1109	-
HCM Lane V/C Ratio	0.284	-	-	0.165	-
HCM Control Delay (s)	16.8	-	-	8.9	-
HCM Lane LOS	C	-	-	A	-
HCM 95th %tile Q(veh)	1.2	-	-	0.6	-

Intersection	
Int Delay, s/veh	14.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	62	390	28	14	607	22	31	8	26	15	5	139
Future Vol, veh/h	62	390	28	14	607	22	31	8	26	15	5	139
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	120	-	-	110	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	80	80	80	80	80	80	80	80	80	80	80	80
Heavy Vehicles, %	0	2	0	0	1	0	1	0	2	2	0	1
Mvmt Flow	78	488	35	18	759	28	39	10	33	19	6	174

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	787	0	0	523	0	0	1561	1485	262	1200	1474	759
Stage 1	-	-	-	-	-	-	662	662	-	795	795	-
Stage 2	-	-	-	-	-	-	899	823	-	405	679	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.315	6.5	6.93	7.33	6.5	6.215
Critical Hdwy Stg 1	-	-	-	-	-	-	6.515	5.5	-	6.13	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.115	5.5	-	6.53	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5095	4	3.319	3.519	4	3.3095
Pot Cap-1 Maneuver	841	-	-	1054	-	-	84	126	737	151	128	408
Stage 1	-	-	-	-	-	-	420	462	-	380	402	-
Stage 2	-	-	-	-	-	-	334	391	-	594	454	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	841	-	-	1054	-	-	42	112	737	124	114	408
Mov Cap-2 Maneuver	-	-	-	-	-	-	42	112	-	124	114	-
Stage 1	-	-	-	-	-	-	381	419	-	345	395	-
Stage 2	-	-	-	-	-	-	186	384	-	503	412	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.3	0.2	213.7	34.1
HCM LOS			F	D

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	77	841	-	-	1054	-	-	315
HCM Lane V/C Ratio	1.055	0.092	-	-	0.017	-	-	0.631
HCM Control Delay (s)	213.7	9.7	-	-	8.5	-	-	34.1
HCM Lane LOS	F	A	-	-	A	-	-	D
HCM 95th %tile Q(veh)	5.8	0.3	-	-	0.1	-	-	4

Intersection	
Intersection Delay, s/veh	29.3
Intersection LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	30	225	44	88	200	16	76	114	212	49	177	14
Future Vol, veh/h	30	225	44	88	200	16	76	114	212	49	177	14
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Heavy Vehicles, %	0	2	1	1	3	0	3	0	2	2	1	3
Mvmt Flow	36	271	53	106	241	19	92	137	255	59	213	17
Number of Lanes	0	1	0	0	1	0	0	1	1	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	2	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	1	1	1
HCM Control Delay	34.8	37.3	20.3	27.3
HCM LOS	D	E	C	D

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1
Vol Left, %	40%	0%	10%	29%	20%
Vol Thru, %	60%	0%	75%	66%	74%
Vol Right, %	0%	100%	15%	5%	6%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	190	212	299	304	240
LT Vol	76	0	30	88	49
Through Vol	114	0	225	200	177
RT Vol	0	212	44	16	14
Lane Flow Rate	229	255	360	366	289
Geometry Grp	7	7	2	2	5
Degree of Util (X)	0.549	0.543	0.79	0.811	0.675
Departure Headway (Hd)	8.64	7.654	7.894	7.968	8.404
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	417	470	458	454	431
Service Time	6.4	5.414	5.952	6.025	6.469
HCM Lane V/C Ratio	0.549	0.543	0.786	0.806	0.671
HCM Control Delay	21.5	19.2	34.8	37.3	27.3
HCM Lane LOS	C	C	D	E	D
HCM 95th-tile Q	3.2	3.2	7.1	7.5	4.9



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	161	196	77	195	382	50	56	237	47	77	348	151
Future Volume (veh/h)	161	196	77	195	382	50	56	237	47	77	348	151
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1885	1870	1885	1870	1870	1870	1870	1885
Adj Flow Rate, veh/h	192	233	92	232	455	60	67	282	56	92	414	180
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Percent Heavy Veh, %	2	2	2	2	1	2	1	2	2	2	2	1
Cap, veh/h	238	310	262	275	668	295	96	1016	199	118	861	370
Arrive On Green	0.13	0.17	0.17	0.15	0.19	0.19	0.05	0.34	0.34	0.07	0.36	0.36
Sat Flow, veh/h	1781	1870	1585	1781	3582	1585	1795	2963	580	1781	2420	1040
Grp Volume(v), veh/h	192	233	92	232	455	60	67	167	171	92	303	291
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1791	1585	1795	1777	1766	1781	1777	1683
Q Serve(g_s), s	7.0	7.9	3.4	8.4	7.9	2.1	2.4	4.5	4.7	3.4	8.8	9.0
Cycle Q Clear(g_c), s	7.0	7.9	3.4	8.4	7.9	2.1	2.4	4.5	4.7	3.4	8.8	9.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.33	1.00		0.62
Lane Grp Cap(c), veh/h	238	310	262	275	668	295	96	609	605	118	632	599
V/C Ratio(X)	0.81	0.75	0.35	0.84	0.68	0.20	0.70	0.27	0.28	0.78	0.48	0.49
Avail Cap(c_a), veh/h	362	605	512	281	996	441	256	609	605	193	632	599
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.0	26.5	24.6	27.3	25.2	22.9	31.0	15.9	15.9	30.6	16.6	16.7
Incr Delay (d2), s/veh	7.6	3.7	0.8	19.8	1.2	0.3	8.9	1.1	1.2	10.4	2.6	2.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.2	3.5	1.3	4.9	3.2	0.8	1.2	1.8	1.9	1.7	3.5	3.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	35.6	30.2	25.4	47.1	26.5	23.2	39.8	17.0	17.1	40.9	19.2	19.5
LnGrp LOS	D	C	C	D	C	C	D	B	B	D	B	B
Approach Vol, veh/h		517			747			405			686	
Approach Delay, s/veh		31.3			32.6			20.8			22.2	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.9	27.3	14.8	15.5	8.0	28.2	13.4	16.9
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	7.3	22.8	10.5	21.5	9.5	20.5	13.5	18.5
Max Q Clear Time (g_c+I1), s	5.4	6.7	10.4	9.9	4.4	11.0	9.0	9.9
Green Ext Time (p_c), s	0.0	1.6	0.0	1.1	0.0	2.3	0.2	2.0

Intersection Summary	
HCM 6th Ctrl Delay	27.3
HCM 6th LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	193	44	97	4	33	4	45	410	9	2	415	94
Future Volume (veh/h)	193	44	97	4	33	4	45	410	9	2	415	94
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1796	1870	1693	1693	1841	1796	1841	1796	1870	1870	1693	1841
Adj Flow Rate, veh/h	233	53	117	5	40	5	54	494	11	2	500	113
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Percent Heavy Veh, %	7	2	14	14	4	7	4	7	2	2	14	4
Cap, veh/h	267	122	269	19	148	19	133	779	687	9	614	566
Arrive On Green	0.16	0.23	0.23	0.01	0.09	0.09	0.08	0.43	0.43	0.00	0.36	0.36
Sat Flow, veh/h	1711	519	1145	1612	1604	201	1753	1796	1585	1781	1693	1560
Grp Volume(v), veh/h	233	0	170	5	0	45	54	494	11	2	500	113
Grp Sat Flow(s),veh/h/ln	1711	0	1664	1612	0	1805	1753	1796	1585	1781	1693	1560
Q Serve(g_s), s	11.5	0.0	7.5	0.3	0.0	2.0	2.5	18.5	0.3	0.1	23.0	4.3
Cycle Q Clear(g_c), s	11.5	0.0	7.5	0.3	0.0	2.0	2.5	18.5	0.3	0.1	23.0	4.3
Prop In Lane	1.00		0.69	1.00		0.11	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	267	0	390	19	0	167	133	779	687	9	614	566
V/C Ratio(X)	0.87	0.00	0.44	0.26	0.00	0.27	0.41	0.63	0.02	0.23	0.81	0.20
Avail Cap(c_a), veh/h	303	0	396	282	0	429	307	779	687	312	728	671
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.5	0.0	28.1	42.2	0.0	36.4	38.0	19.1	13.9	42.8	24.9	18.9
Incr Delay (d2), s/veh	19.5	0.0	2.3	2.7	0.0	2.6	0.7	3.9	0.0	4.9	11.4	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.8	0.0	3.0	0.1	0.0	0.9	1.1	7.7	0.1	0.1	10.2	1.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	55.0	0.0	30.5	44.9	0.0	39.1	38.8	23.0	14.0	47.6	36.2	19.7
LnGrp LOS	E	A	C	D	A	D	D	C	B	D	D	B
Approach Vol, veh/h		403			50			559			615	
Approach Delay, s/veh		44.7			39.7			24.4			33.2	
Approach LOS		D			D			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.3	45.3	6.9	27.7	12.4	39.2	19.2	15.5
Change Period (Y+Rc), s	5.9	7.9	5.9	7.5	5.9	7.9	* 5.7	7.5
Max Green Setting (Gmax), s	15.1	37.1	15.1	20.5	15.1	37.1	* 15	20.5
Max Q Clear Time (g_c+I1), s	2.1	20.5	2.3	9.5	4.5	25.0	13.5	4.0
Green Ext Time (p_c), s	0.0	6.8	0.0	1.2	0.0	6.2	0.1	0.2

Intersection Summary	
HCM 6th Ctrl Delay	33.2
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Intersection Delay, s/veh	7.7
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	2	46	8	5	38	8	3	59	9	2	66	2
Future Vol, veh/h	2	46	8	5	38	8	3	59	9	2	66	2
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles, %	0	0	0	2	2	2	3	3	3	0	0	0
Mvmt Flow	2	54	9	6	45	9	4	69	11	2	78	2
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	7.6	7.6	7.7	7.7
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	4%	4%	10%	3%
Vol Thru, %	83%	82%	75%	94%
Vol Right, %	13%	14%	16%	3%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	71	56	51	70
LT Vol	3	2	5	2
Through Vol	59	46	38	66
RT Vol	9	8	8	2
Lane Flow Rate	84	66	60	82
Geometry Grp	1	1	1	1
Degree of Util (X)	0.097	0.078	0.072	0.095
Departure Headway (Hd)	4.165	4.256	4.3	4.171
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	846	847	838	845
Service Time	2.259	2.258	2.301	2.266
HCM Lane V/C Ratio	0.099	0.078	0.072	0.097
HCM Control Delay	7.7	7.6	7.6	7.7
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.3	0.3	0.2	0.3

Intersection	
Intersection Delay, s/veh	8.5
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	3	126	4	34	56	18	6	50	77	24	51	3
Future Vol, veh/h	3	126	4	34	56	18	6	50	77	24	51	3
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	3	142	4	38	63	20	7	56	87	27	57	3
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8.7	8.4	8.3	8.4
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	5%	2%	31%	31%
Vol Thru, %	38%	95%	52%	65%
Vol Right, %	58%	3%	17%	4%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	133	133	108	78
LT Vol	6	3	34	24
Through Vol	50	126	56	51
RT Vol	77	4	18	3
Lane Flow Rate	149	149	121	88
Geometry Grp	1	1	1	1
Degree of Util (X)	0.178	0.19	0.154	0.115
Departure Headway (Hd)	4.298	4.566	4.576	4.737
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	834	786	783	755
Service Time	2.33	2.597	2.609	2.773
HCM Lane V/C Ratio	0.179	0.19	0.155	0.117
HCM Control Delay	8.3	8.7	8.4	8.4
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.6	0.7	0.5	0.4

Intersection	
Intersection Delay, s/veh	9.8
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	2	49	4	27	48	21	11	179	26	50	172	4
Future Vol, veh/h	2	49	4	27	48	21	11	179	26	50	172	4
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	0	0	0	1	1	1	1	1	1	1	1	1
Mvmt Flow	2	52	4	28	51	22	12	188	27	53	181	4
Number of Lanes	0	1	0	0	1	0	0	1	1	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	1	1
HCM Control Delay	8.7	9	9.7	10.6
HCM LOS	A	A	A	B

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	6%	0%	4%	28%	23%	0%
Vol Thru, %	94%	0%	89%	50%	77%	0%
Vol Right, %	0%	100%	7%	22%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	190	26	55	96	222	4
LT Vol	11	0	2	27	50	0
Through Vol	179	0	49	48	172	0
RT Vol	0	26	4	21	0	4
Lane Flow Rate	200	27	58	101	234	4
Geometry Grp	7	7	2	2	7	7
Degree of Util (X)	0.288	0.034	0.083	0.142	0.341	0.005
Departure Headway (Hd)	5.177	4.443	5.164	5.075	5.246	4.428
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	692	802	690	703	682	804
Service Time	2.926	2.191	3.228	3.133	2.996	2.177
HCM Lane V/C Ratio	0.289	0.034	0.084	0.144	0.343	0.005
HCM Control Delay	10	7.3	8.7	9	10.7	7.2
HCM Lane LOS	A	A	A	A	B	A
HCM 95th-tile Q	1.2	0.1	0.3	0.5	1.5	0



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	250	20	180	207	8	18	229	278	26	164	25
Future Volume (veh/h)	20	250	20	180	207	8	18	229	278	26	164	25
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	21	263	21	189	218	8	19	241	293	27	173	26
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	1	1	1	1	1	1
Cap, veh/h	46	348	295	239	552	468	42	436	370	56	452	383
Arrive On Green	0.03	0.18	0.18	0.13	0.29	0.29	0.02	0.23	0.23	0.03	0.24	0.24
Sat Flow, veh/h	1810	1900	1610	1810	1900	1610	1795	1885	1598	1795	1885	1598
Grp Volume(v), veh/h	21	263	21	189	218	8	19	241	293	27	173	26
Grp Sat Flow(s),veh/h/ln	1810	1900	1610	1810	1900	1610	1795	1885	1598	1795	1885	1598
Q Serve(g_s), s	0.6	6.5	0.5	5.0	4.6	0.2	0.5	5.6	8.6	0.7	3.8	0.6
Cycle Q Clear(g_c), s	0.6	6.5	0.5	5.0	4.6	0.2	0.5	5.6	8.6	0.7	3.8	0.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	46	348	295	239	552	468	42	436	370	56	452	383
V/C Ratio(X)	0.46	0.75	0.07	0.79	0.40	0.02	0.46	0.55	0.79	0.48	0.38	0.07
Avail Cap(c_a), veh/h	363	744	630	363	744	630	360	738	625	360	738	625
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.9	19.3	16.8	20.9	14.2	12.6	24.0	16.9	18.0	23.7	15.9	14.6
Incr Delay (d2), s/veh	2.6	1.3	0.0	3.2	0.2	0.0	2.9	0.4	1.5	2.3	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	2.4	0.2	1.9	1.5	0.0	0.2	2.0	2.6	0.3	1.3	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.6	20.5	16.9	24.2	14.3	12.6	26.9	17.3	19.5	26.1	16.1	14.7
LnGrp LOS	C	C	B	C	B	B	C	B	B	C	B	B
Approach Vol, veh/h		305			415			553			226	
Approach Delay, s/veh		20.7			18.8			18.8			17.1	
Approach LOS		C			B			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.6	17.0	11.6	14.6	6.2	17.4	6.3	20.0
Change Period (Y+Rc), s	5.0	5.5	5.0	5.5	5.0	5.5	5.0	5.5
Max Green Setting (Gmax), s	10.0	19.5	10.0	19.5	10.0	19.5	10.0	19.5
Max Q Clear Time (g_c+I1), s	2.6	10.6	7.0	8.5	2.5	5.8	2.6	6.6
Green Ext Time (p_c), s	0.0	0.9	0.1	0.6	0.0	0.4	0.0	0.5

Intersection Summary	
HCM 6th Ctrl Delay	18.9
HCM 6th LOS	B



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	68	272	54	201	290	37	98	623	241	46	326	40
Future Volume (veh/h)	68	272	54	201	290	37	98	623	241	46	326	40
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	75	299	59	221	319	41	108	685	265	51	358	44
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	1	1	1	1	1	1	1	1	1	1	1	1
Cap, veh/h	234	522	233	367	659	294	284	1009	450	182	904	403
Arrive On Green	0.07	0.15	0.15	0.11	0.18	0.18	0.08	0.28	0.28	0.05	0.25	0.25
Sat Flow, veh/h	3483	3582	1598	3483	3582	1598	3483	3582	1598	3483	3582	1598
Grp Volume(v), veh/h	75	299	59	221	319	41	108	685	265	51	358	44
Grp Sat Flow(s),veh/h/ln	1742	1791	1598	1742	1791	1598	1742	1791	1598	1742	1791	1598
Q Serve(g_s), s	0.9	3.6	1.5	2.8	3.7	1.0	1.3	7.8	6.5	0.6	3.8	1.0
Cycle Q Clear(g_c), s	0.9	3.6	1.5	2.8	3.7	1.0	1.3	7.8	6.5	0.6	3.8	1.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	234	522	233	367	659	294	284	1009	450	182	904	403
V/C Ratio(X)	0.32	0.57	0.25	0.60	0.48	0.14	0.38	0.68	0.59	0.28	0.40	0.11
Avail Cap(c_a), veh/h	1559	2347	1047	1940	2738	1221	1559	2347	1047	1559	2347	1047
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.4	18.2	17.3	19.6	16.7	15.6	19.9	14.6	14.2	20.9	14.2	13.2
Incr Delay (d2), s/veh	0.3	0.4	0.2	0.6	0.2	0.1	0.3	0.3	0.5	0.3	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	1.2	0.5	1.0	1.3	0.3	0.5	2.4	1.9	0.2	1.2	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	20.7	18.6	17.6	20.2	16.9	15.7	20.2	14.9	14.6	21.2	14.3	13.2
LnGrp LOS	C	B	B	C	B	B	C	B	B	C	B	B
Approach Vol, veh/h		433			581			1058			453	
Approach Delay, s/veh		18.8			18.1			15.4			15.0	
Approach LOS		B			B			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.9	17.9	9.3	11.7	8.2	16.6	7.6	13.4
Change Period (Y+Rc), s	4.5	5.0	4.5	5.0	4.5	5.0	4.5	5.0
Max Green Setting (Gmax), s	20.5	30.0	25.5	30.0	20.5	30.0	20.5	35.0
Max Q Clear Time (g_c+I1), s	2.6	9.8	4.8	5.6	3.3	5.8	2.9	5.7
Green Ext Time (p_c), s	0.0	3.1	0.4	1.1	0.1	1.4	0.1	1.3

Intersection Summary	
HCM 6th Ctrl Delay	16.5
HCM 6th LOS	B



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	41	61	18	52	91	61	51	750	93	35	543	36
Future Volume (veh/h)	41	61	18	52	91	61	51	750	93	35	543	36
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	47	70	21	60	105	70	59	862	107	40	624	41
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	0	0	0	0	0	0	1	1	1	1	1	1
Cap, veh/h	93	236	200	111	255	216	109	1100	491	81	1045	466
Arrive On Green	0.05	0.12	0.12	0.06	0.13	0.13	0.06	0.31	0.31	0.05	0.29	0.29
Sat Flow, veh/h	1810	1900	1610	1810	1900	1610	1795	3582	1598	1795	3582	1598
Grp Volume(v), veh/h	47	70	21	60	105	70	59	862	107	40	624	41
Grp Sat Flow(s),veh/h/ln	1810	1900	1610	1810	1900	1610	1795	1791	1598	1795	1791	1598
Q Serve(g_s), s	1.0	1.3	0.5	1.3	2.0	1.5	1.2	8.5	1.9	0.8	5.8	0.7
Cycle Q Clear(g_c), s	1.0	1.3	0.5	1.3	2.0	1.5	1.2	8.5	1.9	0.8	5.8	0.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	93	236	200	111	255	216	109	1100	491	81	1045	466
V/C Ratio(X)	0.51	0.30	0.11	0.54	0.41	0.32	0.54	0.78	0.22	0.49	0.60	0.09
Avail Cap(c_a), veh/h	744	1220	1034	511	976	827	507	1380	616	277	1045	466
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	18.0	15.5	15.1	17.7	15.4	15.3	17.8	12.3	10.0	18.2	11.8	10.0
Incr Delay (d2), s/veh	1.6	0.3	0.1	1.5	0.4	0.3	1.6	1.8	0.1	1.7	0.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.5	0.1	0.5	0.7	0.5	0.4	2.5	0.5	0.3	1.6	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	19.6	15.8	15.2	19.3	15.8	15.6	19.3	14.1	10.1	19.9	12.5	10.1
LnGrp LOS	B	B	B	B	B	B	B	B	B	B	B	B
Approach Vol, veh/h		138			235			1028			705	
Approach Delay, s/veh		17.0			16.6			14.0			12.8	
Approach LOS		B			B			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.8	17.0	6.4	9.8	6.4	16.4	6.0	10.2
Change Period (Y+Rc), s	4.0	5.0	4.0	5.0	4.0	5.0	4.0	5.0
Max Green Setting (Gmax), s	6.0	15.0	11.0	25.0	11.0	10.0	16.0	20.0
Max Q Clear Time (g_c+I1), s	2.8	10.5	3.3	3.3	3.2	7.8	3.0	4.0
Green Ext Time (p_c), s	0.0	1.4	0.0	0.2	0.0	0.5	0.0	0.3

Intersection Summary	
HCM 6th Ctrl Delay	14.1
HCM 6th LOS	B



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	13	16	27	18	67	164	17	673	6	41	573	9
Future Volume (veh/h)	13	16	27	18	67	164	17	673	6	41	573	9
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	14	17	29	20	73	178	18	732	7	45	623	10
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	1	1	1	1	1	1
Cap, veh/h	33	293	248	45	306	259	41	996	444	90	1094	488
Arrive On Green	0.02	0.15	0.15	0.03	0.16	0.16	0.02	0.28	0.28	0.05	0.31	0.31
Sat Flow, veh/h	1810	1900	1610	1810	1900	1610	1795	3582	1598	1795	3582	1598
Grp Volume(v), veh/h	14	17	29	20	73	178	18	732	7	45	623	10
Grp Sat Flow(s),veh/h/ln	1810	1900	1610	1810	1900	1610	1795	1791	1598	1795	1791	1598
Q Serve(g_s), s	0.3	0.3	0.6	0.4	1.2	3.8	0.4	6.8	0.1	0.9	5.3	0.2
Cycle Q Clear(g_c), s	0.3	0.3	0.6	0.4	1.2	3.8	0.4	6.8	0.1	0.9	5.3	0.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	33	293	248	45	306	259	41	996	444	90	1094	488
V/C Ratio(X)	0.43	0.06	0.12	0.44	0.24	0.69	0.44	0.73	0.02	0.50	0.57	0.02
Avail Cap(c_a), veh/h	792	1300	1102	545	1040	881	540	1470	656	295	1094	488
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.8	13.2	13.3	17.6	13.4	14.5	17.6	12.0	9.6	16.9	10.7	8.9
Incr Delay (d2), s/veh	3.2	0.0	0.1	2.5	0.1	1.2	2.7	0.4	0.0	1.6	0.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.1	0.2	0.2	0.4	1.2	0.1	1.8	0.0	0.3	1.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	21.0	13.2	13.4	20.0	13.5	15.7	20.3	12.4	9.6	18.5	11.1	8.9
LnGrp LOS	C	B	B	C	B	B	C	B	A	B	B	A
Approach Vol, veh/h		60			271			757			678	
Approach Delay, s/veh		15.1			15.4			12.5			11.6	
Approach LOS		B			B			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.8	15.2	4.9	10.6	4.8	16.2	4.7	10.9
Change Period (Y+Rc), s	4.0	5.0	4.0	5.0	4.0	5.0	4.0	5.0
Max Green Setting (Gmax), s	6.0	15.0	11.0	25.0	11.0	10.0	16.0	20.0
Max Q Clear Time (g_c+I1), s	2.3	8.8	2.4	2.6	2.4	7.3	2.3	5.8
Green Ext Time (p_c), s	0.0	1.4	0.0	0.0	0.0	0.6	0.0	0.3

Intersection Summary	
HCM 6th Ctrl Delay	12.7
HCM 6th LOS	B



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	281	285	134	320	387	62	153	404	89	112	542	81
Future Volume (veh/h)	281	285	134	320	387	62	153	404	89	112	542	81
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	284	288	135	323	391	63	155	408	90	113	547	82
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	1	1	1	1	1	1	1	1	1	1	1	1
Cap, veh/h	421	565	252	464	610	272	199	883	394	145	776	346
Arrive On Green	0.12	0.16	0.16	0.13	0.17	0.17	0.11	0.25	0.25	0.08	0.22	0.22
Sat Flow, veh/h	3483	3582	1598	3483	3582	1598	1795	3582	1598	1795	3582	1598
Grp Volume(v), veh/h	284	288	135	323	391	63	155	408	90	113	547	82
Grp Sat Flow(s),veh/h/ln	1742	1791	1598	1742	1791	1598	1795	1791	1598	1795	1791	1598
Q Serve(g_s), s	3.7	3.5	3.7	4.2	4.8	1.6	4.0	4.6	2.1	2.9	6.7	2.0
Cycle Q Clear(g_c), s	3.7	3.5	3.7	4.2	4.8	1.6	4.0	4.6	2.1	2.9	6.7	2.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	421	565	252	464	610	272	199	883	394	145	776	346
V/C Ratio(X)	0.67	0.51	0.54	0.70	0.64	0.23	0.78	0.46	0.23	0.78	0.70	0.24
Avail Cap(c_a), veh/h	1550	1898	846	1550	1898	846	799	1898	846	799	1898	846
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.9	18.2	18.3	19.5	18.2	16.9	20.4	15.1	14.2	21.3	17.1	15.3
Incr Delay (d2), s/veh	0.7	0.3	0.7	0.7	0.4	0.2	2.5	0.1	0.1	3.3	0.4	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	1.2	1.2	1.5	1.7	0.5	1.5	1.5	0.7	1.2	2.2	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	20.6	18.5	18.9	20.2	18.7	17.1	22.9	15.3	14.3	24.6	17.5	15.4
LnGrp LOS	C	B	B	C	B	B	C	B	B	C	B	B
Approach Vol, veh/h		707			777			653			742	
Approach Delay, s/veh		19.4			19.2			16.9			18.4	
Approach LOS		B			B			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.8	16.6	10.3	12.5	9.2	15.2	9.7	13.0
Change Period (Y+Rc), s	4.0	5.0	4.0	5.0	4.0	5.0	4.0	5.0
Max Green Setting (Gmax), s	21.0	25.0	21.0	25.0	21.0	25.0	21.0	25.0
Max Q Clear Time (g_c+I1), s	4.9	6.6	6.2	5.7	6.0	8.7	5.7	6.8
Green Ext Time (p_c), s	0.0	1.2	0.2	0.9	0.0	1.6	0.2	1.2

Intersection Summary	
HCM 6th Ctrl Delay	18.5
HCM 6th LOS	B



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	94	65	175	420	122	34	321	544	211	63	786	61
Future Volume (veh/h)	94	65	175	420	122	34	321	544	211	63	786	61
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	84	91	186	447	130	36	341	579	224	67	836	65
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	1	1	1	1	1	1
Cap, veh/h	274	288	244	610	242	67	465	1159	437	97	1213	377
Arrive On Green	0.15	0.15	0.15	0.17	0.17	0.17	0.13	0.32	0.32	0.05	0.24	0.24
Sat Flow, veh/h	1810	1900	1610	3619	1432	397	3483	3679	1388	1795	5147	1598
Grp Volume(v), veh/h	84	91	186	447	0	166	341	539	264	67	836	65
Grp Sat Flow(s),veh/h/ln	1810	1900	1610	1810	0	1829	1742	1716	1635	1795	1716	1598
Q Serve(g_s), s	2.7	2.7	7.1	7.5	0.0	5.3	6.1	8.2	8.5	2.4	9.5	2.1
Cycle Q Clear(g_c), s	2.7	2.7	7.1	7.5	0.0	5.3	6.1	8.2	8.5	2.4	9.5	2.1
Prop In Lane	1.00		1.00	1.00		0.22	1.00		0.85	1.00		1.00
Lane Grp Cap(c), veh/h	274	288	244	610	0	308	465	1081	515	97	1213	377
V/C Ratio(X)	0.31	0.32	0.76	0.73	0.00	0.54	0.73	0.50	0.51	0.69	0.69	0.17
Avail Cap(c_a), veh/h	702	737	625	1404	0	710	1352	1598	761	697	2396	744
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.3	24.4	26.2	25.4	0.0	24.5	26.8	17.9	18.0	29.9	22.5	19.6
Incr Delay (d2), s/veh	0.2	0.2	1.9	0.6	0.0	0.5	0.8	0.1	0.3	3.2	0.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	1.2	0.1	3.1	0.0	2.2	2.4	2.9	2.8	1.0	3.5	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	24.5	24.6	28.1	26.0	0.0	25.0	27.7	18.1	18.3	33.1	22.7	19.7
LnGrp LOS	C	C	C	C	A	C	C	B	B	C	C	B
Approach Vol, veh/h		361			613			1144			968	
Approach Delay, s/veh		26.4			25.8			21.0			23.2	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	8.5	25.3		14.8	13.6	20.2		15.9
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0
Max Green Setting (Gmax), s	25.0	30.0		25.0	25.0	30.0		25.0
Max Q Clear Time (g_c+I1), s	4.4	10.5		9.1	8.1	11.5		9.5
Green Ext Time (p_c), s	0.1	3.2		0.6	0.6	3.6		1.3

Intersection Summary		
HCM 6th Ctrl Delay		23.3
HCM 6th LOS		C

Notes

User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	139	0	393	44	878	0	0	983	530
Future Volume (veh/h)	0	0	0	139	0	393	44	878	0	0	983	530
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1885	1885	1885	1885	1885	0	0	1885	1885
Adj Flow Rate, veh/h				101	0	481	48	954	0	0	1068	576
Peak Hour Factor				0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %				1	1	1	1	1	0	0	1	1
Cap, veh/h				325	0	578	358	2504	0	0	2252	699
Arrive On Green				0.18	0.00	0.18	0.40	1.00	0.00	0.00	0.44	0.44
Sat Flow, veh/h				1795	0	3195	1795	3676	0	0	5316	1598
Grp Volume(v), veh/h				101	0	481	48	954	0	0	1068	576
Grp Sat Flow(s),veh/h/ln				1795	0	1598	1795	1791	0	0	1716	1598
Q Serve(g_s), s				5.4	0.0	16.0	1.9	0.0	0.0	0.0	16.2	34.9
Cycle Q Clear(g_c), s				5.4	0.0	16.0	1.9	0.0	0.0	0.0	16.2	34.9
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				325	0	578	358	2504	0	0	2252	699
V/C Ratio(X)				0.31	0.00	0.83	0.13	0.38	0.00	0.00	0.47	0.82
Avail Cap(c_a), veh/h				369	0	656	358	2504	0	0	2395	744
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.92	0.92	0.00	0.00	0.72	0.72
Uniform Delay (d), s/veh				39.1	0.0	43.4	27.0	0.0	0.0	0.0	22.0	27.2
Incr Delay (d2), s/veh				1.3	0.0	10.2	0.1	0.4	0.0	0.0	0.5	7.9
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				2.5	0.0	7.0	0.8	0.1	0.0	0.0	6.3	14.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				40.4	0.0	53.6	27.1	0.4	0.0	0.0	22.5	35.1
LnGrp LOS				D	A	D	C	A	A	A	C	D
Approach Vol, veh/h					582			1002			1644	
Approach Delay, s/veh					51.4			1.7			26.9	
Approach LOS					D			A			C	

Timer - Assigned Phs	2		5	6		8
Phs Duration (G+Y+Rc), s	83.7		28.8	54.9		26.3
Change Period (Y+Rc), s	6.8		6.8	* 6.8		6.4
Max Green Setting (Gmax), s	74.2		17.3	* 51		22.6
Max Q Clear Time (g_c+I1), s	2.0		3.9	36.9		18.0
Green Ext Time (p_c), s	29.1		0.0	11.2		1.9

Intersection Summary	
HCM 6th Ctrl Delay	23.5
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	382	0	33	0	0	0	0	540	100	0	659	463
Future Volume (veh/h)	382	0	33	0	0	0	0	540	100	0	659	463
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1885	0	1885				0	1885	1885	0	1885	1885
Adj Flow Rate, veh/h	406	0	35				0	574	0	0	701	0
Peak Hour Factor	0.94	0.94	0.94				0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	1	0	1				0	1	1	0	1	1
Cap, veh/h	529	0	243				0	2653		0	2653	
Arrive On Green	0.15	0.00	0.15				0.00	0.74	0.00	0.00	0.24	0.00
Sat Flow, veh/h	3483	0	1598				0	3676	1598	0	3676	1598
Grp Volume(v), veh/h	406	0	35				0	574	0	0	701	0
Grp Sat Flow(s),veh/h/ln	1742	0	1598				0	1791	1598	0	1791	1598
Q Serve(g_s), s	12.3	0.0	2.1				0.0	5.4	0.0	0.0	17.4	0.0
Cycle Q Clear(g_c), s	12.3	0.0	2.1				0.0	5.4	0.0	0.0	17.4	0.0
Prop In Lane	1.00		1.00				0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h	529	0	243				0	2653		0	2653	
V/C Ratio(X)	0.77	0.00	0.14				0.00	0.22		0.00	0.26	
Avail Cap(c_a), veh/h	760	0	349				0	2653		0	2653	
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	0.33	0.33
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	0.00	0.00	0.94	0.00
Uniform Delay (d), s/veh	44.8	0.0	40.4				0.0	4.4	0.0	0.0	17.3	0.0
Incr Delay (d2), s/veh	5.8	0.0	0.6				0.0	0.2	0.0	0.0	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.7	0.0	0.9				0.0	1.6	0.0	0.0	8.3	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	50.5	0.0	41.1				0.0	4.6	0.0	0.0	17.6	0.0
LnGrp LOS	D	A	D				A	A		A	B	
Approach Vol, veh/h		441						574			701	
Approach Delay, s/veh		49.8						4.6			17.6	
Approach LOS		D						A			B	

Timer - Assigned Phs	2	4	6
Phs Duration (G+Y+Rc), s	88.3	21.7	88.3
Change Period (Y+Rc), s	6.8	5.0	6.8
Max Green Setting (Gmax), s	74.2	24.0	74.2
Max Q Clear Time (g_c+I1), s	7.4	14.3	19.4
Green Ext Time (p_c), s	10.3	2.4	13.1

Intersection Summary	
HCM 6th Ctrl Delay	21.5
HCM 6th LOS	C

Notes

Unsignalized Delay for [NBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Intersection	
Int Delay, s/veh	1.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	540	14	85	384	11	57
Future Vol, veh/h	540	14	85	384	11	57
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	120	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	1	1	1	1	0	0
Mvmt Flow	557	14	88	396	11	59

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	571	0	1136	564
Stage 1	-	-	-	-	564	-
Stage 2	-	-	-	-	572	-
Critical Hdwy	-	-	4.11	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.209	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1007	-	225	529
Stage 1	-	-	-	-	573	-
Stage 2	-	-	-	-	569	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1007	-	205	529
Mov Cap-2 Maneuver	-	-	-	-	205	-
Stage 1	-	-	-	-	573	-
Stage 2	-	-	-	-	519	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.6	15.3
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	421	-	-	1007	-
HCM Lane V/C Ratio	0.167	-	-	0.087	-
HCM Control Delay (s)	15.3	-	-	8.9	-
HCM Lane LOS	C	-	-	A	-
HCM 95th %tile Q(veh)	0.6	-	-	0.3	-

Intersection	
Int Delay, s/veh	3.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	104	465	40	15	380	36	26	2	10	28	5	77
Future Vol, veh/h	104	465	40	15	380	36	26	2	10	28	5	77
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	120	-	-	110	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	1	1	1	1	1	1	0	0	0	0	0	0
Mvmt Flow	108	484	42	16	396	38	27	2	10	29	5	80

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	434	0	0	526	0	0	1211	1187	263	887	1170	396
Stage 1	-	-	-	-	-	-	721	721	-	428	428	-
Stage 2	-	-	-	-	-	-	490	466	-	459	742	-
Critical Hdwy	4.115	-	-	4.115	-	-	7.3	6.5	6.9	7.3	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.5	5.5	-
Follow-up Hdwy	2.2095	-	-	2.2095	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1130	-	-	1045	-	-	150	190	742	254	195	658
Stage 1	-	-	-	-	-	-	389	435	-	609	588	-
Stage 2	-	-	-	-	-	-	564	566	-	557	425	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1130	-	-	1045	-	-	118	169	742	227	174	658
Mov Cap-2 Maneuver	-	-	-	-	-	-	118	169	-	227	174	-
Stage 1	-	-	-	-	-	-	352	393	-	551	579	-
Stage 2	-	-	-	-	-	-	483	558	-	494	384	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.5	0.3	36	17.2
HCM LOS			E	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	155	1130	-	-	1045	-	-	409
HCM Lane V/C Ratio	0.255	0.096	-	-	0.015	-	-	0.28
HCM Control Delay (s)	36	8.5	-	-	8.5	-	-	17.2
HCM Lane LOS	E	A	-	-	A	-	-	C
HCM 95th %tile Q(veh)	1	0.3	-	-	0	-	-	1.1

Intersection	
Intersection Delay, s/veh	10.8
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	7	102	38	131	102	16	47	87	102	26	133	14
Future Vol, veh/h	7	102	38	131	102	16	47	87	102	26	133	14
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	1	1	1	1	1	1	1	1	1	1	1	1
Mvmt Flow	7	107	40	138	107	17	49	92	107	27	140	15
Number of Lanes	0	1	0	0	1	0	0	1	1	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	2	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	1	1	1
HCM Control Delay	10	11.9	10	10.8
HCM LOS	A	B	A	B

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1
Vol Left, %	35%	0%	5%	53%	15%
Vol Thru, %	65%	0%	69%	41%	77%
Vol Right, %	0%	100%	26%	6%	8%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	134	102	147	249	173
LT Vol	47	0	7	131	26
Through Vol	87	0	102	102	133
RT Vol	0	102	38	16	14
Lane Flow Rate	141	107	155	262	182
Geometry Grp	7	7	2	2	5
Degree of Util (X)	0.239	0.156	0.231	0.393	0.281
Departure Headway (Hd)	6.11	5.222	5.38	5.403	5.554
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	588	686	667	666	646
Service Time	3.846	2.959	3.42	3.438	3.593
HCM Lane V/C Ratio	0.24	0.156	0.232	0.393	0.282
HCM Control Delay	10.8	8.9	10	11.9	10.8
HCM Lane LOS	B	A	A	B	B
HCM 95th-tile Q	0.9	0.6	0.9	1.9	1.1



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	164	255	85	149	282	68	65	354	128	64	270	83
Future Volume (veh/h)	164	255	85	149	282	68	65	354	128	64	270	83
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	167	260	87	152	288	69	66	361	131	65	276	85
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	0	0	0	0	0	1	1	1	1	1	1
Cap, veh/h	214	345	292	194	617	275	98	949	339	97	994	300
Arrive On Green	0.12	0.18	0.18	0.11	0.17	0.17	0.05	0.37	0.37	0.05	0.37	0.37
Sat Flow, veh/h	1810	1900	1610	1810	3610	1610	1795	2586	924	1795	2711	818
Grp Volume(v), veh/h	167	260	87	152	288	69	66	248	244	65	180	181
Grp Sat Flow(s),veh/h/ln	1810	1900	1610	1810	1805	1610	1795	1791	1719	1795	1791	1738
Q Serve(g_s), s	5.6	8.1	2.9	5.1	4.5	2.3	2.2	6.3	6.5	2.2	4.4	4.6
Cycle Q Clear(g_c), s	5.6	8.1	2.9	5.1	4.5	2.3	2.2	6.3	6.5	2.2	4.4	4.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.54	1.00		0.47
Lane Grp Cap(c), veh/h	214	345	292	194	617	275	98	657	631	97	657	637
V/C Ratio(X)	0.78	0.75	0.30	0.78	0.47	0.25	0.67	0.38	0.39	0.67	0.27	0.28
Avail Cap(c_a), veh/h	393	658	557	306	1075	480	275	657	631	208	657	637
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.6	24.1	22.0	27.0	23.2	22.3	28.8	14.4	14.5	28.8	13.9	13.9
Incr Delay (d2), s/veh	6.1	3.4	0.6	6.7	0.6	0.5	7.7	1.7	1.8	7.6	1.0	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	3.5	1.1	2.4	1.8	0.8	1.1	2.5	2.5	1.1	1.7	1.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	32.8	27.5	22.6	33.7	23.8	22.8	36.5	16.1	16.3	36.4	14.9	15.0
LnGrp LOS	C	C	C	C	C	C	D	B	B	D	B	B
Approach Vol, veh/h		514			509			558			426	
Approach Delay, s/veh		28.4			26.6			18.6			18.2	
Approach LOS		C			C			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.9	27.3	11.2	15.8	7.9	27.3	11.8	15.1
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	7.3	22.8	10.5	21.5	9.5	20.5	13.5	18.5
Max Q Clear Time (g_c+I1), s	4.2	8.5	7.1	10.1	4.2	6.6	7.6	6.5
Green Ext Time (p_c), s	0.0	2.4	0.1	1.2	0.0	1.6	0.2	1.5

Intersection Summary	
HCM 6th Ctrl Delay	23.0
HCM 6th LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	86	29	64	8	40	0	47	448	4	1	405	112
Future Volume (veh/h)	86	29	64	8	40	0	47	448	4	1	405	112
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1900	1900	1900	1826	1826	1826	1826	1826	1826
Adj Flow Rate, veh/h	91	31	68	9	43	0	50	477	4	1	431	119
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	3	3	3	0	0	0	5	5	5	5	5	5
Cap, veh/h	184	96	211	37	200	0	137	759	643	4	619	525
Arrive On Green	0.10	0.19	0.19	0.02	0.11	0.00	0.08	0.42	0.42	0.00	0.34	0.34
Sat Flow, veh/h	1767	517	1134	1810	1900	0	1739	1826	1547	1739	1826	1547
Grp Volume(v), veh/h	91	0	99	9	43	0	50	477	4	1	431	119
Grp Sat Flow(s),veh/h/ln	1767	0	1651	1810	1900	0	1739	1826	1547	1739	1826	1547
Q Serve(g_s), s	3.5	0.0	3.8	0.4	1.5	0.0	2.0	15.0	0.1	0.0	14.8	4.0
Cycle Q Clear(g_c), s	3.5	0.0	3.8	0.4	1.5	0.0	2.0	15.0	0.1	0.0	14.8	4.0
Prop In Lane	1.00		0.69	1.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	184	0	307	37	200	0	137	759	643	4	619	525
V/C Ratio(X)	0.49	0.00	0.32	0.24	0.22	0.00	0.36	0.63	0.01	0.23	0.70	0.23
Avail Cap(c_a), veh/h	373	0	467	377	538	0	362	935	792	362	935	792
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.6	0.0	25.5	34.9	29.7	0.0	31.7	16.8	12.4	36.1	20.7	17.1
Incr Delay (d2), s/veh	0.8	0.0	1.8	1.2	1.6	0.0	0.6	3.9	0.0	9.9	6.4	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	0.0	1.5	0.2	0.7	0.0	0.8	6.1	0.0	0.0	6.6	1.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	31.4	0.0	27.4	36.2	31.3	0.0	32.3	20.7	12.4	45.9	27.1	18.1
LnGrp LOS	C	A	C	D	C	A	C	C	B	D	C	B
Approach Vol, veh/h		190			52			531			551	
Approach Delay, s/veh		29.3			32.2			21.7			25.2	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.1	38.0	7.4	21.0	11.6	32.5	13.3	15.1
Change Period (Y+Rc), s	5.9	7.9	5.9	7.5	5.9	7.9	* 5.7	7.5
Max Green Setting (Gmax), s	15.1	37.1	15.1	20.5	15.1	37.1	* 15	20.5
Max Q Clear Time (g_c+I1), s	2.0	17.0	2.4	5.8	4.0	16.8	5.5	3.5
Green Ext Time (p_c), s	0.0	7.3	0.0	0.7	0.0	7.8	0.1	0.2

Intersection Summary	
HCM 6th Ctrl Delay	24.7
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Intersection Delay, s/veh	10.8
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	4	123	11	43	113	4	0	64	36	9	81	2
Future Vol, veh/h	4	123	11	43	113	4	0	64	36	9	81	2
Peak Hour Factor	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60
Heavy Vehicles, %	4	6	2	2	6	4	6	4	6	6	2	6
Mvmt Flow	7	205	18	72	188	7	0	107	60	15	135	3
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	10.9	11.5	10.1	10.4
HCM LOS	B	B	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	0%	3%	27%	10%
Vol Thru, %	64%	89%	71%	88%
Vol Right, %	36%	8%	3%	2%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	100	138	160	92
LT Vol	0	4	43	9
Through Vol	64	123	113	81
RT Vol	36	11	4	2
Lane Flow Rate	167	230	267	153
Geometry Grp	1	1	1	1
Degree of Util (X)	0.247	0.334	0.387	0.239
Departure Headway (Hd)	5.34	5.23	5.221	5.61
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	672	688	688	639
Service Time	3.378	3.264	3.253	3.648
HCM Lane V/C Ratio	0.249	0.334	0.388	0.239
HCM Control Delay	10.1	10.9	11.5	10.4
HCM Lane LOS	B	B	B	B
HCM 95th-tile Q	1	1.5	1.8	0.9

Intersection	
Intersection Delay, s/veh	15.3
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	5	111	3	117	217	15	7	62	35	26	99	3
Future Vol, veh/h	5	111	3	117	217	15	7	62	35	26	99	3
Peak Hour Factor	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72
Heavy Vehicles, %	4	3	1	1	0	4	0	4	3	3	1	0
Mvmt Flow	7	154	4	163	301	21	10	86	49	36	138	4
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	10.8	19.5	10.7	11.6
HCM LOS	B	C	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	7%	4%	34%	20%
Vol Thru, %	60%	93%	62%	77%
Vol Right, %	34%	3%	4%	2%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	104	119	349	128
LT Vol	7	5	117	26
Through Vol	62	111	217	99
RT Vol	35	3	15	3
Lane Flow Rate	144	165	485	178
Geometry Grp	1	1	1	1
Degree of Util (X)	0.234	0.261	0.7	0.297
Departure Headway (Hd)	5.823	5.686	5.202	6.009
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	614	630	693	596
Service Time	3.889	3.747	3.247	4.071
HCM Lane V/C Ratio	0.235	0.262	0.7	0.299
HCM Control Delay	10.7	10.8	19.5	11.6
HCM Lane LOS	B	B	C	B
HCM 95th-tile Q	0.9	1	5.7	1.2

Intersection	
Intersection Delay, s/veh	73.2
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	17	93	24	55	139	106	13	214	66	62	303	13
Future Vol, veh/h	17	93	24	55	139	106	13	214	66	62	303	13
Peak Hour Factor	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70
Heavy Vehicles, %	1	6	2	2	3	1	3	1	6	6	2	3
Mvmt Flow	24	133	34	79	199	151	19	306	94	89	433	19
Number of Lanes	0	1	0	0	1	0	0	1	1	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	1	1
HCM Control Delay	20.5	52.2	29.8	142.1
HCM LOS	C	F	D	F

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	6%	0%	13%	18%	17%	0%
Vol Thru, %	94%	0%	69%	46%	83%	0%
Vol Right, %	0%	100%	18%	35%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	227	66	134	300	365	13
LT Vol	13	0	17	55	62	0
Through Vol	214	0	93	139	303	0
RT Vol	0	66	24	106	0	13
Lane Flow Rate	324	94	191	429	521	19
Geometry Grp	7	7	2	2	7	7
Degree of Util (X)	0.755	0.199	0.463	0.908	1.225	0.039
Departure Headway (Hd)	8.999	8.2	9.533	8.26	8.455	7.568
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	405	440	381	441	433	476
Service Time	6.699	5.9	7.533	6.26	6.155	5.268
HCM Lane V/C Ratio	0.8	0.214	0.501	0.973	1.203	0.04
HCM Control Delay	34.7	12.9	20.5	52.2	146.8	10.6
HCM Lane LOS	D	B	C	F	F	B
HCM 95th-tile Q	6.2	0.7	2.4	9.9	21.2	0.1



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	99	248	23	421	427	55	17	325	232	17	513	74
Future Volume (veh/h)	99	248	23	421	427	55	17	325	232	17	513	74
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1870	1870	1870	1885	1885	1885	1885	1870	1870	1870	1885
Adj Flow Rate, veh/h	124	310	29	526	534	69	21	406	290	21	641	92
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Percent Heavy Veh, %	1	2	2	2	1	1	1	1	2	2	2	1
Cap, veh/h	158	428	362	264	544	461	43	578	409	43	540	461
Arrive On Green	0.09	0.23	0.23	0.15	0.29	0.29	0.02	0.29	0.29	0.02	0.29	0.29
Sat Flow, veh/h	1795	1870	1585	1781	1885	1598	1795	2004	1417	1781	1870	1598
Grp Volume(v), veh/h	124	310	29	526	534	69	21	362	334	21	641	92
Grp Sat Flow(s),veh/h/ln	1795	1870	1585	1781	1885	1598	1795	1791	1630	1781	1870	1598
Q Serve(g_s), s	4.6	10.4	1.0	10.0	19.0	2.2	0.8	12.2	12.4	0.8	19.5	2.9
Cycle Q Clear(g_c), s	4.6	10.4	1.0	10.0	19.0	2.2	0.8	12.2	12.4	0.8	19.5	2.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.87	1.00		1.00
Lane Grp Cap(c), veh/h	158	428	362	264	544	461	43	517	470	43	540	461
V/C Ratio(X)	0.78	0.72	0.08	2.00	0.98	0.15	0.49	0.70	0.71	0.49	1.19	0.20
Avail Cap(c_a), veh/h	266	540	457	264	544	461	266	517	470	264	540	461
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.2	24.1	20.5	28.8	23.9	17.9	32.6	21.4	21.5	32.6	24.0	18.2
Incr Delay (d2), s/veh	3.2	2.4	0.0	461.3	33.7	0.1	3.1	3.6	4.2	3.2	102.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	4.3	0.3	37.6	12.2	0.7	0.4	5.0	4.7	0.3	22.4	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	33.4	26.5	20.5	490.1	57.6	17.9	35.7	25.0	25.7	35.7	126.0	18.2
LnGrp LOS	C	C	C	F	E	B	D	C	C	D	F	B
Approach Vol, veh/h		463			1129			717			754	
Approach Delay, s/veh		27.9			256.7			25.7			110.4	
Approach LOS		C			F			C			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.6	25.0	15.0	21.0	6.6	25.0	11.0	25.0
Change Period (Y+Rc), s	5.0	5.5	5.0	5.5	5.0	5.5	5.0	5.5
Max Green Setting (Gmax), s	10.0	19.5	10.0	19.5	10.0	19.5	10.0	19.5
Max Q Clear Time (g_c+I1), s	2.8	14.4	12.0	12.4	2.8	21.5	6.6	21.0
Green Ext Time (p_c), s	0.0	1.3	0.0	0.6	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	132.0
HCM 6th LOS	F



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	102	387	74	207	308	52	69	403	154	89	844	134
Future Volume (veh/h)	102	387	74	207	308	52	69	403	154	89	844	134
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1885	1885	1885	1856	1856	1856	1856	1885	1885	1885	1856
Adj Flow Rate, veh/h	129	490	94	262	390	66	87	510	195	113	1068	170
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79
Percent Heavy Veh, %	3	1	1	1	3	3	3	3	1	1	1	3
Cap, veh/h	232	667	298	375	824	368	205	698	316	735	1278	561
Arrive On Green	0.07	0.19	0.19	0.11	0.23	0.23	0.06	0.20	0.20	0.21	0.36	0.36
Sat Flow, veh/h	3428	3582	1598	3483	3526	1572	3428	3526	1598	3483	3582	1572
Grp Volume(v), veh/h	129	490	94	262	390	66	87	510	195	113	1068	170
Grp Sat Flow(s),veh/h/ln	1714	1791	1598	1742	1763	1572	1714	1763	1598	1742	1791	1572
Q Serve(g_s), s	2.5	8.7	2.6	4.9	6.4	1.2	1.6	9.1	7.5	1.8	18.4	5.3
Cycle Q Clear(g_c), s	2.5	8.7	2.6	4.9	6.4	1.2	1.6	9.1	7.5	1.8	18.4	5.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	232	667	298	375	824	368	205	698	316	735	1278	561
V/C Ratio(X)	0.56	0.73	0.32	0.70	0.47	0.18	0.43	0.73	0.62	0.15	0.84	0.30
Avail Cap(c_a), veh/h	1044	1596	712	1319	1833	817	1044	1571	712	1060	1596	701
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.4	25.8	13.4	29.0	22.2	5.8	30.5	25.3	24.7	21.7	19.9	15.6
Incr Delay (d2), s/veh	0.8	0.6	0.2	0.9	0.2	0.1	0.5	0.6	0.7	0.0	2.7	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	3.3	1.2	1.9	2.4	0.7	0.6	3.5	2.6	0.7	6.9	1.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	31.2	26.4	13.7	29.9	22.4	5.9	31.1	25.9	25.4	21.7	22.6	15.7
LnGrp LOS	C	C	B	C	C	A	C	C	C	C	C	B
Approach Vol, veh/h		713			718			792			1351	
Approach Delay, s/veh		25.6			23.6			26.3			21.6	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.2	18.3	12.3	17.5	8.5	29.0	9.1	20.7
Change Period (Y+Rc), s	5.0	* 5	5.0	* 5	4.5	5.0	4.5	5.0
Max Green Setting (Gmax), s	20.5	* 30	25.5	* 30	20.5	30.0	20.5	35.0
Max Q Clear Time (g_c+I1), s	3.8	11.1	6.9	10.7	3.6	20.4	4.5	8.4
Green Ext Time (p_c), s	0.1	2.2	0.4	1.9	0.1	3.6	0.1	1.7

Intersection Summary	
HCM 6th Ctrl Delay	23.9
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	85	124	25	69	67	75	24	470	30	147	1015	66
Future Volume (veh/h)	85	124	25	69	67	75	24	470	30	147	1015	66
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1900	1885	1885	1900	1870	1900	1870	1900	1900	1885	1900
Adj Flow Rate, veh/h	101	148	30	82	80	89	29	560	36	175	1208	79
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Percent Heavy Veh, %	2	0	1	1	0	2	0	2	0	0	1	0
Cap, veh/h	150	252	212	134	234	195	62	792	359	223	1117	502
Arrive On Green	0.08	0.13	0.13	0.07	0.12	0.12	0.03	0.22	0.22	0.12	0.31	0.31
Sat Flow, veh/h	1781	1900	1598	1795	1900	1585	1810	3554	1610	1810	3582	1610
Grp Volume(v), veh/h	101	148	30	82	80	89	29	560	36	175	1208	79
Grp Sat Flow(s),veh/h/ln	1781	1900	1598	1795	1900	1585	1810	1777	1610	1810	1791	1610
Q Serve(g_s), s	2.2	3.0	0.7	1.8	1.6	2.1	0.6	5.9	0.7	3.8	12.6	1.4
Cycle Q Clear(g_c), s	2.2	3.0	0.7	1.8	1.6	2.1	0.6	5.9	0.7	3.8	12.6	1.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	150	252	212	134	234	195	62	792	359	223	1117	502
V/C Ratio(X)	0.67	0.59	0.14	0.61	0.34	0.46	0.47	0.71	0.10	0.78	1.08	0.16
Avail Cap(c_a), veh/h	707	1179	991	490	943	787	494	1323	599	269	1117	502
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.9	16.4	15.4	18.1	16.2	16.4	19.1	14.4	12.4	17.1	13.9	10.0
Incr Delay (d2), s/veh	2.0	0.8	0.1	1.7	0.3	0.6	2.0	0.4	0.0	9.5	51.9	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	1.1	0.2	0.7	0.6	0.7	0.2	1.8	0.2	1.8	11.4	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	19.9	17.3	15.6	19.8	16.5	17.0	21.1	14.9	12.5	26.6	65.7	10.1
LnGrp LOS	B	B	B	B	B	B	C	B	B	C	F	B
Approach Vol, veh/h		279			251			625			1462	
Approach Delay, s/veh		18.0			17.8			15.0			58.1	
Approach LOS		B			B			B			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.0	14.0	7.0	10.3	5.4	17.6	7.4	10.0
Change Period (Y+Rc), s	4.0	5.0	4.0	5.0	4.0	5.0	4.0	5.0
Max Green Setting (Gmax), s	5.0	15.0	11.0	25.0	11.0	10.0	16.0	20.0
Max Q Clear Time (g_c+I1), s	5.8	7.9	3.8	5.0	2.6	14.6	4.2	4.1
Green Ext Time (p_c), s	0.0	1.1	0.0	0.4	0.0	0.0	0.0	0.2

Intersection Summary	
HCM 6th Ctrl Delay	39.6
HCM 6th LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	21	102	18	10	21	104	12	468	28	337	751	15
Future Volume (veh/h)	21	102	18	10	21	104	12	468	28	337	751	15
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1900	1885	1885	1900	1870	1900	1870	1900	1900	1885	1900
Adj Flow Rate, veh/h	25	121	21	12	25	124	14	557	33	401	894	18
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Percent Heavy Veh, %	2	0	1	1	0	2	0	2	0	0	1	0
Cap, veh/h	54	265	223	28	237	198	33	800	362	280	1296	583
Arrive On Green	0.03	0.14	0.14	0.02	0.12	0.12	0.02	0.23	0.23	0.15	0.36	0.36
Sat Flow, veh/h	1781	1900	1598	1795	1900	1585	1810	3554	1610	1810	3582	1610
Grp Volume(v), veh/h	25	121	21	12	25	124	14	557	33	401	894	18
Grp Sat Flow(s),veh/h/ln	1781	1900	1598	1795	1900	1585	1810	1777	1610	1810	1791	1610
Q Serve(g_s), s	0.5	2.3	0.4	0.3	0.5	2.9	0.3	5.6	0.6	6.0	8.2	0.3
Cycle Q Clear(g_c), s	0.5	2.3	0.4	0.3	0.5	2.9	0.3	5.6	0.6	6.0	8.2	0.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	54	265	223	28	237	198	33	800	362	280	1296	583
V/C Ratio(X)	0.46	0.46	0.09	0.43	0.11	0.63	0.43	0.70	0.09	1.43	0.69	0.03
Avail Cap(c_a), veh/h	736	1226	1031	510	981	818	514	1376	624	280	1296	583
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	18.5	15.3	14.5	18.9	15.0	16.1	18.8	13.8	11.9	16.4	10.5	8.0
Incr Delay (d2), s/veh	2.3	0.5	0.1	3.8	0.1	1.2	3.3	0.4	0.0	213.2	1.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.8	0.1	0.1	0.2	0.9	0.1	1.6	0.2	18.4	2.2	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	20.7	15.8	14.6	22.7	15.1	17.3	22.1	14.2	11.9	229.5	11.8	8.0
LnGrp LOS	C	B	B	C	B	B	C	B	B	F	B	A
Approach Vol, veh/h		167			161			604			1313	
Approach Delay, s/veh		16.4			17.4			14.3			78.3	
Approach LOS		B			B			B			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.0	13.7	4.6	10.4	4.7	19.0	5.2	9.8
Change Period (Y+Rc), s	4.0	5.0	4.0	5.0	4.0	5.0	4.0	5.0
Max Green Setting (Gmax), s	6.0	15.0	11.0	25.0	11.0	10.0	16.0	20.0
Max Q Clear Time (g_c+I1), s	10.0	7.6	2.3	4.3	2.3	10.2	2.5	4.9
Green Ext Time (p_c), s	0.0	1.1	0.0	0.3	0.0	0.0	0.0	0.2

Intersection Summary	
HCM 6th Ctrl Delay	52.1
HCM 6th LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	153	338	66	135	175	58	66	309	81	167	492	100
Future Volume (veh/h)	153	338	66	135	175	58	66	309	81	167	492	100
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1885	1870	1870	1870	1870	1870	1870	1885	1885	1870	1870
Adj Flow Rate, veh/h	165	363	71	145	188	62	71	332	87	180	529	108
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	1	2	2	2	2	2	2	1	1	2	2
Cap, veh/h	293	615	272	279	596	266	98	578	260	231	840	374
Arrive On Green	0.08	0.17	0.17	0.08	0.17	0.17	0.05	0.16	0.16	0.13	0.24	0.24
Sat Flow, veh/h	3456	3582	1585	3456	3554	1585	1781	3554	1598	1795	3554	1585
Grp Volume(v), veh/h	165	363	71	145	188	62	71	332	87	180	529	108
Grp Sat Flow(s),veh/h/ln	1728	1791	1585	1728	1777	1585	1781	1777	1598	1795	1777	1585
Q Serve(g_s), s	1.8	3.7	1.5	1.6	1.8	1.3	1.5	3.4	1.9	3.8	5.3	2.2
Cycle Q Clear(g_c), s	1.8	3.7	1.5	1.6	1.8	1.3	1.5	3.4	1.9	3.8	5.3	2.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	293	615	272	279	596	266	98	578	260	231	840	374
V/C Ratio(X)	0.56	0.59	0.26	0.52	0.32	0.23	0.73	0.57	0.33	0.78	0.63	0.29
Avail Cap(c_a), veh/h	1840	2271	1005	1840	2253	1005	949	2253	1013	956	2253	1005
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.3	15.1	14.2	17.4	14.4	14.2	18.3	15.3	14.6	16.6	13.5	12.3
Incr Delay (d2), s/veh	0.6	0.3	0.2	0.6	0.1	0.2	3.8	0.3	0.3	2.2	0.3	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	1.2	0.5	0.5	0.6	0.4	0.6	1.1	0.6	1.3	1.5	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	18.0	15.4	14.3	18.0	14.5	14.4	22.2	15.6	14.9	18.8	13.8	12.5
LnGrp LOS	B	B	B	B	B	B	C	B	B	B	B	B
Approach Vol, veh/h		599			395			490			817	
Approach Delay, s/veh		16.0			15.8			16.4			14.7	
Approach LOS		B			B			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.1	11.4	7.2	11.8	6.2	14.3	7.3	11.6
Change Period (Y+Rc), s	4.0	5.0	4.0	5.0	4.0	5.0	4.0	5.0
Max Green Setting (Gmax), s	21.0	25.0	21.0	25.0	21.0	25.0	21.0	25.0
Max Q Clear Time (g_c+I1), s	5.8	5.4	3.6	5.7	3.5	7.3	3.8	3.8
Green Ext Time (p_c), s	0.1	1.0	0.1	1.1	0.0	1.6	0.1	0.6

Intersection Summary	
HCM 6th Ctrl Delay	15.6
HCM 6th LOS	B



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	32	51	158	137	55	13	144	552	486	51	522	42
Future Volume (veh/h)	32	51	158	137	55	13	144	552	486	51	522	42
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1900	1870	1870	1900	1870	1900	1870	1900	1900	1870	1900
Adj Flow Rate, veh/h	36	58	180	156	62	15	164	627	552	58	593	48
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	2	0	2	2	0	2	0	2	0	0	2	0
Cap, veh/h	262	280	233	286	119	29	268	1375	640	92	1932	609
Arrive On Green	0.15	0.15	0.15	0.08	0.08	0.08	0.08	0.40	0.40	0.05	0.38	0.38
Sat Flow, veh/h	1781	1900	1585	3563	1478	358	3510	3404	1585	1810	5106	1610
Grp Volume(v), veh/h	36	58	180	156	0	77	164	627	552	58	593	48
Grp Sat Flow(s),veh/h/ln	1781	1900	1585	1781	0	1836	1755	1702	1585	1810	1702	1610
Q Serve(g_s), s	1.1	1.7	6.9	2.7	0.0	2.5	2.8	8.5	20.0	2.0	5.1	1.2
Cycle Q Clear(g_c), s	1.1	1.7	6.9	2.7	0.0	2.5	2.8	8.5	20.0	2.0	5.1	1.2
Prop In Lane	1.00		1.00	1.00		0.19	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	262	280	233	286	0	147	268	1375	640	92	1932	609
V/C Ratio(X)	0.14	0.21	0.77	0.55	0.00	0.52	0.61	0.46	0.86	0.63	0.31	0.08
Avail Cap(c_a), veh/h	707	755	630	1415	0	729	1394	1622	755	719	2434	767
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.4	23.6	25.8	27.8	0.0	27.8	28.2	13.7	17.1	29.3	13.8	12.5
Incr Delay (d2), s/veh	0.1	0.1	2.0	0.6	0.0	1.1	0.8	0.1	7.9	2.7	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.7	2.5	1.1	0.0	1.1	1.1	2.7	7.4	0.9	1.7	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.4	23.7	27.9	28.4	0.0	28.9	29.0	13.8	25.0	32.0	13.8	12.6
LnGrp LOS	C	C	C	C	A	C	C	B	C	C	B	B
Approach Vol, veh/h		274			233			1343			699	
Approach Delay, s/veh		26.4			28.6			20.3			15.2	
Approach LOS		C			C			C			B	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	8.2	30.4		14.3	9.8	28.8		10.1
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0
Max Green Setting (Gmax), s	25.0	30.0		25.0	25.0	30.0		25.0
Max Q Clear Time (g_c+I1), s	4.0	22.0		8.9	4.8	7.1		4.7
Green Ext Time (p_c), s	0.1	3.4		0.5	0.2	2.6		0.5

Intersection Summary	
HCM 6th Ctrl Delay	20.3
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	63	0	426	36	919	0	0	559	244
Future Volume (veh/h)	0	0	0	63	0	426	36	919	0	0	559	244
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1856	1856	1870	1856	1870	0	0	1856	1856
Adj Flow Rate, veh/h				47	0	498	40	1021	0	0	621	271
Peak Hour Factor				0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %				3	3	2	3	2	0	0	3	3
Cap, veh/h				325	0	583	635	2431	0	0	1299	403
Arrive On Green				0.18	0.00	0.18	0.72	1.00	0.00	0.00	0.26	0.26
Sat Flow, veh/h				1767	0	3170	1767	3647	0	0	5233	1572
Grp Volume(v), veh/h				47	0	498	40	1021	0	0	621	271
Grp Sat Flow(s),veh/h/ln				1767	0	1585	1767	1777	0	0	1689	1572
Q Serve(g_s), s				2.2	0.0	15.2	0.7	0.0	0.0	0.0	10.4	15.5
Cycle Q Clear(g_c), s				2.2	0.0	15.2	0.7	0.0	0.0	0.0	10.4	15.5
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				325	0	583	635	2431	0	0	1299	403
V/C Ratio(X)				0.14	0.00	0.85	0.06	0.42	0.00	0.00	0.48	0.67
Avail Cap(c_a), veh/h				353	0	634	635	2431	0	0	1834	569
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.91	0.91	0.00	0.00	0.90	0.90
Uniform Delay (d), s/veh				34.2	0.0	39.5	9.1	0.0	0.0	0.0	31.5	33.4
Incr Delay (d2), s/veh				0.5	0.0	12.2	0.0	0.5	0.0	0.0	1.1	7.8
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				1.0	0.0	6.8	0.3	0.2	0.0	0.0	4.2	6.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				34.7	0.0	51.7	9.1	0.5	0.0	0.0	32.6	41.2
LnGrp LOS				C	A	D	A	A	A	A	C	D
Approach Vol, veh/h					545			1061			892	
Approach Delay, s/veh					50.2			0.8			35.2	
Approach LOS					D			A			D	

Timer - Assigned Phs	2		5	6		8
Phs Duration (G+Y+Rc), s	75.2		42.8	32.5		24.8
Change Period (Y+Rc), s	6.8		6.8	* 6.8		6.4
Max Green Setting (Gmax), s	66.8		24.9	* 36		20.0
Max Q Clear Time (g_c+I1), s	2.0		2.7	17.5		17.2
Green Ext Time (p_c), s	30.8		0.0	8.2		1.2

Intersection Summary	
HCM 6th Ctrl Delay	23.9
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	401	0	12	0	0	0	0	553	135	0	375	247
Future Volume (veh/h)	401	0	12	0	0	0	0	553	135	0	375	247
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1885	0	1856				0	1885	1870	0	1856	1856
Adj Flow Rate, veh/h	451	0	13				0	621	0	0	421	0
Peak Hour Factor	0.89	0.89	0.89				0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	1	0	3				0	1	2	0	3	3
Cap, veh/h	563	0	254				0	2580		0	2539	
Arrive On Green	0.16	0.00	0.16				0.00	0.72	0.00	0.00	1.00	0.00
Sat Flow, veh/h	3483	0	1572				0	3676	1585	0	3618	1572
Grp Volume(v), veh/h	451	0	13				0	621	0	0	421	0
Grp Sat Flow(s),veh/h/ln	1742	0	1572				0	1791	1585	0	1763	1572
Q Serve(g_s), s	12.5	0.0	0.7				0.0	5.9	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	12.5	0.0	0.7				0.0	5.9	0.0	0.0	0.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h	563	0	254				0	2580		0	2539	
V/C Ratio(X)	0.80	0.00	0.05				0.00	0.24		0.00	0.17	
Avail Cap(c_a), veh/h	697	0	314				0	2580		0	2539	
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	0.00	0.00	0.99	0.00
Uniform Delay (d), s/veh	40.4	0.0	35.4				0.0	4.7	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	7.7	0.0	0.2				0.0	0.2	0.0	0.0	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.8	0.0	0.3				0.0	1.7	0.0	0.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	48.1	0.0	35.6				0.0	5.0	0.0	0.0	0.1	0.0
LnGrp LOS	D	A	D				A	A		A	A	
Approach Vol, veh/h		464						621			421	
Approach Delay, s/veh		47.8						5.0			0.1	
Approach LOS		D						A			A	

Timer - Assigned Phs	2	4	6
Phs Duration (G+Y+Rc), s	78.8	21.2	78.8
Change Period (Y+Rc), s	6.8	5.0	6.8
Max Green Setting (Gmax), s	68.2	20.0	68.2
Max Q Clear Time (g_c+I1), s	7.9	14.5	2.0
Green Ext Time (p_c), s	11.3	1.7	7.1

Intersection Summary	
HCM 6th Ctrl Delay	16.8
HCM 6th LOS	B

Notes

Unsignalized Delay for [NBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Intersection	
Int Delay, s/veh	14.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	586	47	148	899	53	90
Future Vol, veh/h	586	47	148	899	53	90
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	120	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	81	81	81	81	81	81
Heavy Vehicles, %	2	0	0	1	1	2
Mvmt Flow	723	58	183	1110	65	111

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	781	0	1673	752
Stage 1	-	-	-	-	752	-
Stage 2	-	-	-	-	921	-
Critical Hdwy	-	-	4.1	-	6.615	6.23
Critical Hdwy Stg 1	-	-	-	-	5.415	-
Critical Hdwy Stg 2	-	-	-	-	5.815	-
Follow-up Hdwy	-	-	2.2	-	3.5095	3.319
Pot Cap-1 Maneuver	-	-	845	-	96	409
Stage 1	-	-	-	-	467	-
Stage 2	-	-	-	-	351	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	845	-	75	409
Mov Cap-2 Maneuver	-	-	-	-	75	-
Stage 1	-	-	-	-	467	-
Stage 2	-	-	-	-	275	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.5	176
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	154	-	-	845	-
HCM Lane V/C Ratio	1.146	-	-	0.216	-
HCM Control Delay (s)	176	-	-	10.4	-
HCM Lane LOS	F	-	-	B	-
HCM 95th %tile Q(veh)	9.7	-	-	0.8	-

Intersection	
Int Delay, s/veh	219.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	92	559	49	14	772	22	56	8	26	15	5	175
Future Vol, veh/h	92	559	49	14	772	22	56	8	26	15	5	175
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	120	-	-	110	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	80	80	80	80	80	80	80	80	80	80	80	80
Heavy Vehicles, %	0	2	0	0	1	0	1	0	2	2	0	1
Mvmt Flow	115	699	61	18	965	28	70	10	33	19	6	219

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	993	0	0	760	0	0	2088	1989	380	1586	1991	965
Stage 1	-	-	-	-	-	-	960	960	-	1001	1001	-
Stage 2	-	-	-	-	-	-	1128	1029	-	585	990	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.315	6.5	6.93	7.33	6.5	6.215
Critical Hdwy Stg 1	-	-	-	-	-	-	6.515	5.5	-	6.13	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.115	5.5	-	6.53	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5095	4	3.319	3.519	4	3.3095
Pot Cap-1 Maneuver	704	-	-	861	-	-	~ 35	62	619	80	61	310
Stage 1	-	-	-	-	-	-	278	338	-	292	323	-
Stage 2	-	-	-	-	-	-	249	314	-	465	327	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	704	-	-	861	-	-	~ 8	51	619	56	50	310
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 8	51	-	56	50	-
Stage 1	-	-	-	-	-	-	233	283	-	244	316	-
Stage 2	-	-	-	-	-	-	70	307	-	356	274	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.5	0.2	$ 4015	161.8
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	13	704	-	-	861	-	-	209
HCM Lane V/C Ratio	8.654	0.163	-	-	0.02	-	-	1.166
HCM Control Delay (s)	$ 4015	11.1	-	-	9.3	-	-	161.8
HCM Lane LOS	F	B	-	-	A	-	-	F
HCM 95th %tile Q(veh)	15.2	0.6	-	-	0.1	-	-	12

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Intersection Delay, s/veh	47.5
Intersection LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	30	261	44	88	228	16	76	119	212	49	183	14
Future Vol, veh/h	30	261	44	88	228	16	76	119	212	49	183	14
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Heavy Vehicles, %	0	2	1	1	3	0	3	0	2	2	1	3
Mvmt Flow	36	314	53	106	275	19	92	143	255	59	220	17
Number of Lanes	0	1	0	0	1	0	0	1	1	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	2	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	1	1	1
HCM Control Delay	64.6	65.7	24.8	37.2
HCM LOS	F	F	C	E

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1
Vol Left, %	39%	0%	9%	27%	20%
Vol Thru, %	61%	0%	78%	69%	74%
Vol Right, %	0%	100%	13%	5%	6%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	195	212	335	332	246
LT Vol	76	0	30	88	49
Through Vol	119	0	261	228	183
RT Vol	0	212	44	16	14
Lane Flow Rate	235	255	404	400	296
Geometry Grp	7	7	2	2	5
Degree of Util (X)	0.617	0.601	0.961	0.964	0.766
Departure Headway (Hd)	9.453	8.467	8.573	8.672	9.306
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	381	427	424	420	388
Service Time	7.219	6.233	6.637	6.737	7.38
HCM Lane V/C Ratio	0.617	0.597	0.953	0.952	0.763
HCM Control Delay	26.4	23.3	64.6	65.7	37.2
HCM Lane LOS	D	C	F	F	E
HCM 95th-tile Q	4	3.8	11.3	11.3	6.3



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	182	297	120	195	486	50	89	237	47	77	348	176
Future Volume (veh/h)	182	297	120	195	486	50	89	237	47	77	348	176
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1885	1870	1885	1870	1870	1870	1870	1885
Adj Flow Rate, veh/h	217	354	143	232	579	60	106	282	56	92	414	210
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Percent Heavy Veh, %	2	2	2	2	1	2	1	2	2	2	2	1
Cap, veh/h	261	423	359	258	805	356	137	932	182	118	698	350
Arrive On Green	0.15	0.23	0.23	0.14	0.22	0.22	0.08	0.31	0.31	0.07	0.30	0.30
Sat Flow, veh/h	1781	1870	1585	1781	3582	1585	1795	2963	580	1781	2291	1149
Grp Volume(v), veh/h	217	354	143	232	579	60	106	167	171	92	320	304
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1791	1585	1795	1777	1766	1781	1777	1663
Q Serve(g_s), s	8.6	13.1	5.6	9.3	10.8	2.2	4.2	5.2	5.3	3.7	11.1	11.3
Cycle Q Clear(g_c), s	8.6	13.1	5.6	9.3	10.8	2.2	4.2	5.2	5.3	3.7	11.1	11.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.33	1.00		0.69
Lane Grp Cap(c), veh/h	261	423	359	258	805	356	137	559	555	118	541	507
V/C Ratio(X)	0.83	0.84	0.40	0.90	0.72	0.17	0.77	0.30	0.31	0.78	0.59	0.60
Avail Cap(c_a), veh/h	332	555	470	258	914	404	235	559	555	177	541	507
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.1	26.8	23.9	30.5	26.0	22.7	32.9	18.8	18.9	33.3	21.4	21.5
Incr Delay (d2), s/veh	13.3	8.5	0.7	31.2	2.4	0.2	9.0	1.4	1.4	11.8	4.7	5.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.3	6.2	2.0	6.0	4.6	0.8	2.1	2.1	2.2	1.9	4.8	4.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	43.4	35.2	24.6	61.7	28.4	22.9	41.9	20.2	20.3	45.1	26.1	26.6
LnGrp LOS	D	D	C	E	C	C	D	C	C	D	C	C
Approach Vol, veh/h		714			871			444			716	
Approach Delay, s/veh		35.6			36.9			25.4			28.8	
Approach LOS		D			D			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.3	27.3	15.0	20.9	10.0	26.6	15.1	20.8
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	7.3	22.8	10.5	21.5	9.5	20.5	13.5	18.5
Max Q Clear Time (g_c+I1), s	5.7	7.3	11.3	15.1	6.2	13.3	10.6	12.8
Green Ext Time (p_c), s	0.0	1.6	0.0	1.3	0.1	2.1	0.2	1.9

Intersection Summary	
HCM 6th Ctrl Delay	32.6
HCM 6th LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	197	48	115	4	37	4	51	410	9	2	415	98
Future Volume (veh/h)	197	48	115	4	37	4	51	410	9	2	415	98
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1796	1870	1693	1693	1841	1796	1841	1796	1870	1870	1693	1841
Adj Flow Rate, veh/h	237	58	139	5	45	5	61	494	11	2	500	118
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Percent Heavy Veh, %	7	2	14	14	4	7	4	7	2	2	14	4
Cap, veh/h	271	115	276	19	149	17	140	783	691	9	611	563
Arrive On Green	0.16	0.24	0.24	0.01	0.09	0.09	0.08	0.44	0.44	0.00	0.36	0.36
Sat Flow, veh/h	1711	489	1171	1612	1627	181	1753	1796	1585	1781	1693	1560
Grp Volume(v), veh/h	237	0	197	5	0	50	61	494	11	2	500	118
Grp Sat Flow(s),veh/h/ln	1711	0	1660	1612	0	1808	1753	1796	1585	1781	1693	1560
Q Serve(g_s), s	11.8	0.0	9.0	0.3	0.0	2.3	2.9	18.7	0.3	0.1	23.4	4.6
Cycle Q Clear(g_c), s	11.8	0.0	9.0	0.3	0.0	2.3	2.9	18.7	0.3	0.1	23.4	4.6
Prop In Lane	1.00		0.71	1.00		0.10	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	271	0	391	19	0	165	140	783	691	9	611	563
V/C Ratio(X)	0.87	0.00	0.50	0.26	0.00	0.30	0.44	0.63	0.02	0.23	0.82	0.21
Avail Cap(c_a), veh/h	300	0	391	279	0	425	303	783	691	308	720	663
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.9	0.0	28.9	42.7	0.0	37.0	38.3	19.2	14.0	43.2	25.3	19.3
Incr Delay (d2), s/veh	20.8	0.0	3.1	2.7	0.0	3.1	0.8	3.8	0.0	4.9	11.6	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.1	0.0	3.6	0.1	0.0	1.1	1.2	7.7	0.1	0.1	10.4	1.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	56.7	0.0	32.0	45.4	0.0	40.1	39.1	23.0	14.0	48.1	36.9	20.1
LnGrp LOS	E	A	C	D	A	D	D	C	B	D	D	C
Approach Vol, veh/h		434			55			566			620	
Approach Delay, s/veh		45.5			40.6			24.6			33.7	
Approach LOS		D			D			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.3	45.9	6.9	28.1	12.8	39.4	19.5	15.5
Change Period (Y+Rc), s	5.9	7.9	5.9	7.5	5.9	7.9	* 5.7	7.5
Max Green Setting (Gmax), s	15.1	37.1	15.1	20.5	15.1	37.1	* 15	20.5
Max Q Clear Time (g_c+I1), s	2.1	20.7	2.3	11.0	4.9	25.4	13.8	4.3
Green Ext Time (p_c), s	0.0	6.7	0.0	1.3	0.0	6.1	0.1	0.3

Intersection Summary	
HCM 6th Ctrl Delay	33.9
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	16.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	279	18	278	138	28	326
Future Vol, veh/h	279	18	278	138	28	326
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	150	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	1	0	0	2
Mvmt Flow	303	20	302	150	30	354

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	791	226	0	0	452	0
Stage 1	377	-	-	-	-	-
Stage 2	414	-	-	-	-	-
Critical Hdwy	6.6	6.9	-	-	4.1	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	346	783	-	-	1119	-
Stage 1	669	-	-	-	-	-
Stage 2	671	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	337	783	-	-	1119	-
Mov Cap-2 Maneuver	337	-	-	-	-	-
Stage 1	669	-	-	-	-	-
Stage 2	653	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	59.5	0	0.7
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	337	783	1119	-
HCM Lane V/C Ratio	-	-	0.9	0.025	0.027	-
HCM Control Delay (s)	-	-	62.7	9.7	8.3	-
HCM Lane LOS	-	-	F	A	A	-
HCM 95th %tile Q(veh)	-	-	8.8	0.1	0.1	-

Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	5	401	68	0	596
Future Vol, veh/h	0	5	401	68	0	596
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	1	0	0	2
Mvmt Flow	0	5	436	74	0	648

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	255	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.9	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	-	-
Pot Cap-1 Maneuver	0	750	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	750	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.8	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	750	-
HCM Lane V/C Ratio	-	-	0.007	-
HCM Control Delay (s)	-	-	9.8	-
HCM Lane LOS	-	-	A	-
HCM 95th %tile Q(veh)	-	-	0	-

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑↑↱			↱
Traffic Vol, veh/h	0	497	833	99	0	70
Future Vol, veh/h	0	497	833	99	0	70
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	2	1	0	0	0
Mvmt Flow	0	540	905	108	0	76

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	507
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.3
Pot Cap-1 Maneuver	0	-	-	-	0	516
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	516
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	13.2
HCM LOS			B

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	516
HCM Lane V/C Ratio	-	-	-	0.147
HCM Control Delay (s)	-	-	-	13.2
HCM Lane LOS	-	-	-	B
HCM 95th %tile Q(veh)	-	-	-	0.5

Intersection	
Int Delay, s/veh	170.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	122	375	823	128	257	108
Future Vol, veh/h	122	375	823	128	257	108
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	150	-	-	-	0	100
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	2	1	0	0	0
Mvmt Flow	133	408	895	139	279	117

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1034	0	-	0	1639	517
Stage 1	-	-	-	-	965	-
Stage 2	-	-	-	-	674	-
Critical Hdwy	4.1	-	-	-	6.6	6.9
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	680	-	-	-	~ 102	509
Stage 1	-	-	-	-	335	-
Stage 2	-	-	-	-	510	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	680	-	-	-	~ 82	509
Mov Cap-2 Maneuver	-	-	-	-	~ 82	-
Stage 1	-	-	-	-	~ 269	-
Stage 2	-	-	-	-	510	-

Approach	EB	WB	SB
HCM Control Delay, s	2.8	0	$ 842.7
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	680	-	-	-	82	509
HCM Lane V/C Ratio	0.195	-	-	-	3.407	0.231
HCM Control Delay (s)	11.6	-	-	-	$ 1190.8	14.2
HCM Lane LOS	B	-	-	-	F	B
HCM 95th %tile Q(veh)	0.7	-	-	-	28.4	0.9

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	0.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	218	3	0	300	0	4
Future Vol, veh/h	218	3	0	300	0	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	6	0	0	3	0	0
Mvmt Flow	237	3	0	326	0	4

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	120
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.3
Pot Cap-1 Maneuver	-	-	0	-	0	915
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	915
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	9
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	915	-	-	-
HCM Lane V/C Ratio	0.005	-	-	-
HCM Control Delay (s)	9	-	-	-
HCM Lane LOS	A	-	-	-
HCM 95th %tile Q(veh)	0	-	-	-

Intersection	
Int Delay, s/veh	1.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	220	2	51	296	4	50
Future Vol, veh/h	220	2	51	296	4	50
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	150	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	6	0	0	3	0	0
Mvmt Flow	239	2	55	322	4	54

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	241	0	672	121
Stage 1	-	-	-	-	240	-
Stage 2	-	-	-	-	432	-
Critical Hdwy	-	-	4.1	-	6.6	6.9
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1337	-	409	914
Stage 1	-	-	-	-	783	-
Stage 2	-	-	-	-	659	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1337	-	392	914
Mov Cap-2 Maneuver	-	-	-	-	392	-
Stage 1	-	-	-	-	783	-
Stage 2	-	-	-	-	632	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.1	9.7
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	832	-	-	1337	-
HCM Lane V/C Ratio	0.071	-	-	0.041	-
HCM Control Delay (s)	9.7	-	-	7.8	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0.2	-	-	0.1	-

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑↑↱			↱
Traffic Vol, veh/h	0	676	980	15	0	67
Future Vol, veh/h	0	676	980	15	0	67
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	2	1	0	0	0
Mvmt Flow	0	735	1065	16	0	73

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	541
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.3
Pot Cap-1 Maneuver	0	-	-	-	0	491
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	491
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	13.6
HCM LOS			B

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	491
HCM Lane V/C Ratio	-	-	-	0.148
HCM Control Delay (s)	-	-	-	13.6
HCM Lane LOS	-	-	-	B
HCM 95th %tile Q(veh)	-	-	-	0.5

Intersection	
Intersection Delay, s/veh	7.8
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	2	54	8	5	44	8	3	59	9	2	66	2
Future Vol, veh/h	2	54	8	5	44	8	3	59	9	2	66	2
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles, %	0	0	0	2	2	2	3	3	3	0	0	0
Mvmt Flow	2	64	9	6	52	9	4	69	11	2	78	2
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	7.7	7.7	7.8	7.8
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	4%	3%	9%	3%
Vol Thru, %	83%	84%	77%	94%
Vol Right, %	13%	12%	14%	3%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	71	64	57	70
LT Vol	3	2	5	2
Through Vol	59	54	44	66
RT Vol	9	8	8	2
Lane Flow Rate	84	75	67	82
Geometry Grp	1	1	1	1
Degree of Util (X)	0.1	0.089	0.08	0.098
Departure Headway (Hd)	4.297	4.275	4.32	4.303
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	839	841	832	838
Service Time	2.299	2.287	2.331	2.306
HCM Lane V/C Ratio	0.1	0.089	0.081	0.098
HCM Control Delay	7.8	7.7	7.7	7.8
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.3	0.3	0.3	0.3

Intersection	
Intersection Delay, s/veh	8.7
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	3	137	4	43	66	18	6	50	92	24	51	3
Future Vol, veh/h	3	137	4	43	66	18	6	50	92	24	51	3
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	3	154	4	48	74	20	7	56	103	27	57	3
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8.9	8.8	8.5	8.5
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	4%	2%	34%	31%
Vol Thru, %	34%	95%	52%	65%
Vol Right, %	62%	3%	14%	4%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	148	144	127	78
LT Vol	6	3	43	24
Through Vol	50	137	66	51
RT Vol	92	4	18	3
Lane Flow Rate	166	162	143	88
Geometry Grp	1	1	1	1
Degree of Util (X)	0.201	0.209	0.185	0.118
Departure Headway (Hd)	4.362	4.641	4.659	4.85
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	820	772	768	737
Service Time	2.401	2.68	2.699	2.894
HCM Lane V/C Ratio	0.202	0.21	0.186	0.119
HCM Control Delay	8.5	8.9	8.8	8.5
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.7	0.8	0.7	0.4

Intersection	
Intersection Delay, s/veh	10
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	2	54	8	27	51	21	15	183	36	50	176	4
Future Vol, veh/h	2	54	8	27	51	21	15	183	36	50	176	4
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	0	0	0	1	1	1	1	1	1	1	1	1
Mvmt Flow	2	57	8	28	54	22	16	193	38	53	185	4
Number of Lanes	0	1	0	0	1	0	0	1	1	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	1	1
HCM Control Delay	8.8	9.1	9.9	10.8
HCM LOS	A	A	A	B

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	8%	0%	3%	27%	22%	0%
Vol Thru, %	92%	0%	84%	52%	78%	0%
Vol Right, %	0%	100%	12%	21%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	198	36	64	99	226	4
LT Vol	15	0	2	27	50	0
Through Vol	183	0	54	51	176	0
RT Vol	0	36	8	21	0	4
Lane Flow Rate	208	38	67	104	238	4
Geometry Grp	7	7	2	2	7	7
Degree of Util (X)	0.303	0.047	0.097	0.149	0.35	0.005
Departure Headway (Hd)	5.228	4.485	5.193	5.147	5.301	4.484
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	684	793	685	692	676	793
Service Time	2.987	2.243	3.263	3.211	3.059	2.243
HCM Lane V/C Ratio	0.304	0.048	0.098	0.15	0.352	0.005
HCM Control Delay	10.3	7.5	8.8	9.1	10.9	7.3
HCM Lane LOS	B	A	A	A	B	A
HCM 95th-tile Q	1.3	0.1	0.3	0.5	1.6	0



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	45	258	20	339	222	28	18	493	492	26	315	36
Future Volume (veh/h)	45	258	20	339	222	28	18	493	492	26	315	36
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	47	272	21	357	234	29	19	519	518	27	332	38
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	1	1	1	1	1	1
Cap, veh/h	80	337	286	284	551	467	40	548	489	54	591	501
Arrive On Green	0.04	0.18	0.18	0.16	0.29	0.29	0.02	0.31	0.31	0.03	0.31	0.31
Sat Flow, veh/h	1810	1900	1610	1810	1900	1610	1795	1791	1598	1795	1885	1598
Grp Volume(v), veh/h	47	272	21	357	234	29	19	519	518	27	332	38
Grp Sat Flow(s),veh/h/ln	1810	1900	1610	1810	1900	1610	1795	1791	1598	1795	1885	1598
Q Serve(g_s), s	1.6	8.8	0.7	10.0	6.4	0.8	0.7	18.0	19.5	0.9	9.4	1.1
Cycle Q Clear(g_c), s	1.6	8.8	0.7	10.0	6.4	0.8	0.7	18.0	19.5	0.9	9.4	1.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	80	337	286	284	551	467	40	548	489	54	591	501
V/C Ratio(X)	0.59	0.81	0.07	1.26	0.42	0.06	0.47	0.95	1.06	0.50	0.56	0.08
Avail Cap(c_a), veh/h	284	582	493	284	582	493	282	548	489	282	591	501
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.9	25.1	21.8	26.9	18.3	16.3	30.8	21.6	22.1	30.4	18.2	15.4
Incr Delay (d2), s/veh	2.5	1.7	0.0	141.1	0.2	0.0	3.2	25.5	57.3	2.7	0.8	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	3.6	0.2	14.9	2.4	0.3	0.3	10.3	13.9	0.4	3.4	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	32.4	26.9	21.9	167.9	18.5	16.4	33.9	47.1	79.4	33.1	19.0	15.4
LnGrp LOS	C	C	C	F	B	B	C	D	F	C	B	B
Approach Vol, veh/h		340			620			1056			397	
Approach Delay, s/veh		27.3			104.4			62.7			19.6	
Approach LOS		C			F			E			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.9	25.0	15.0	16.8	6.4	25.5	7.8	24.0
Change Period (Y+Rc), s	5.0	5.5	5.0	5.5	5.0	5.5	5.0	5.5
Max Green Setting (Gmax), s	10.0	19.5	10.0	19.5	10.0	19.5	10.0	19.5
Max Q Clear Time (g_c+I1), s	2.9	21.5	12.0	10.8	2.7	11.4	3.6	8.4
Green Ext Time (p_c), s	0.0	0.0	0.0	0.6	0.0	0.7	0.0	0.5

Intersection Summary	
HCM 6th Ctrl Delay	61.4
HCM 6th LOS	E



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	115	272	54	201	290	48	98	1030	241	56	579	72
Future Volume (veh/h)	115	272	54	201	290	48	98	1030	241	56	579	72
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	126	299	59	221	319	53	108	1132	265	62	636	79
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	1	1	1	1	1	1	1	1	1	1	1	1
Cap, veh/h	259	473	211	343	559	250	246	1399	624	189	1341	598
Arrive On Green	0.07	0.13	0.13	0.10	0.16	0.16	0.07	0.39	0.39	0.05	0.37	0.37
Sat Flow, veh/h	3483	3582	1598	3483	3582	1598	3483	3582	1598	3483	3582	1598
Grp Volume(v), veh/h	126	299	59	221	319	53	108	1132	265	62	636	79
Grp Sat Flow(s),veh/h/ln	1742	1791	1598	1742	1791	1598	1742	1791	1598	1742	1791	1598
Q Serve(g_s), s	2.0	4.6	1.9	3.6	4.8	1.7	1.7	16.5	7.1	1.0	7.9	1.9
Cycle Q Clear(g_c), s	2.0	4.6	1.9	3.6	4.8	1.7	1.7	16.5	7.1	1.0	7.9	1.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	259	473	211	343	559	250	246	1399	624	189	1341	598
V/C Ratio(X)	0.49	0.63	0.28	0.64	0.57	0.21	0.44	0.81	0.42	0.33	0.47	0.13
Avail Cap(c_a), veh/h	1219	1835	819	1517	2141	955	1219	1835	819	1219	1835	819
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.0	24.1	22.9	25.4	22.9	21.6	26.1	15.9	13.0	26.7	13.9	12.1
Incr Delay (d2), s/veh	0.5	0.5	0.3	0.8	0.3	0.2	0.5	1.6	0.2	0.4	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	1.7	0.7	1.4	1.8	0.6	0.7	5.5	2.1	0.4	2.6	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.5	24.6	23.2	26.2	23.2	21.7	26.6	17.5	13.2	27.0	14.0	12.1
LnGrp LOS	C	C	C	C	C	C	C	B	B	C	B	B
Approach Vol, veh/h		484			593			1505			777	
Approach Delay, s/veh		24.9			24.2			17.4			14.9	
Approach LOS		C			C			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.7	27.9	10.3	12.7	8.6	26.9	8.9	14.1
Change Period (Y+Rc), s	4.5	5.0	4.5	5.0	4.5	5.0	4.5	5.0
Max Green Setting (Gmax), s	20.5	30.0	25.5	30.0	20.5	30.0	20.5	35.0
Max Q Clear Time (g_c+I1), s	3.0	18.5	5.6	6.6	3.7	9.9	4.0	6.8
Green Ext Time (p_c), s	0.0	4.4	0.4	1.1	0.1	2.6	0.1	1.3

Intersection Summary	
HCM 6th Ctrl Delay	19.1
HCM 6th LOS	B



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	46	61	18	52	91	116	51	1097	93	70	755	41
Future Volume (veh/h)	46	61	18	52	91	116	51	1097	93	70	755	41
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	53	70	21	60	105	133	59	1261	107	80	868	47
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	0	0	0	0	0	0	1	1	1	1	1	1
Cap, veh/h	98	237	201	107	247	209	105	1214	541	127	1258	561
Arrive On Green	0.05	0.12	0.12	0.06	0.13	0.13	0.06	0.34	0.34	0.07	0.35	0.35
Sat Flow, veh/h	1810	1900	1610	1810	1900	1610	1795	3582	1598	1795	3582	1598
Grp Volume(v), veh/h	53	70	21	60	105	133	59	1261	107	80	868	47
Grp Sat Flow(s),veh/h/ln	1810	1900	1610	1810	1900	1610	1795	1791	1598	1795	1791	1598
Q Serve(g_s), s	1.3	1.5	0.5	1.4	2.3	3.5	1.4	15.0	2.1	1.9	9.2	0.9
Cycle Q Clear(g_c), s	1.3	1.5	0.5	1.4	2.3	3.5	1.4	15.0	2.1	1.9	9.2	0.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	98	237	201	107	247	209	105	1214	541	127	1258	561
V/C Ratio(X)	0.54	0.29	0.10	0.56	0.43	0.64	0.56	1.04	0.20	0.63	0.69	0.08
Avail Cap(c_a), veh/h	654	1073	909	450	858	727	446	1214	541	243	1258	561
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.4	17.6	17.2	20.3	17.7	18.3	20.3	14.6	10.4	20.0	12.3	9.6
Incr Delay (d2), s/veh	1.7	0.3	0.1	1.7	0.4	1.2	1.8	36.6	0.1	1.9	1.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.6	0.2	0.6	0.9	1.2	0.5	10.4	0.6	0.7	2.8	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	22.1	17.9	17.3	22.0	18.2	19.5	22.1	51.2	10.4	21.9	13.7	9.6
LnGrp LOS	C	B	B	C	B	B	C	F	B	C	B	A
Approach Vol, veh/h		144			298			1427			995	
Approach Delay, s/veh		19.3			19.5			46.9			14.1	
Approach LOS		B			B			D			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.1	20.0	6.6	10.5	6.6	20.6	6.4	10.7
Change Period (Y+Rc), s	4.0	5.0	4.0	5.0	4.0	5.0	4.0	5.0
Max Green Setting (Gmax), s	6.0	15.0	11.0	25.0	11.0	10.0	16.0	20.0
Max Q Clear Time (g_c+I1), s	3.3	17.0	3.4	3.5	3.4	11.2	3.3	5.5
Green Ext Time (p_c), s	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.3

Intersection Summary	
HCM 6th Ctrl Delay	31.3
HCM 6th LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	13	16	27	18	67	239	17	945	6	85	741	9
Future Volume (veh/h)	13	16	27	18	67	239	17	945	6	85	741	9
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	14	17	29	20	73	260	18	1027	7	92	805	10
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	1	1	1	1	1	1
Cap, veh/h	32	374	317	44	386	327	40	1142	509	134	1329	593
Arrive On Green	0.02	0.20	0.20	0.02	0.20	0.20	0.02	0.32	0.32	0.07	0.37	0.37
Sat Flow, veh/h	1810	1900	1610	1810	1900	1610	1795	3582	1598	1795	3582	1598
Grp Volume(v), veh/h	14	17	29	20	73	260	18	1027	7	92	805	10
Grp Sat Flow(s),veh/h/ln	1810	1900	1610	1810	1900	1610	1795	1791	1598	1795	1791	1598
Q Serve(g_s), s	0.4	0.3	0.7	0.5	1.5	7.2	0.5	12.8	0.1	2.3	8.5	0.2
Cycle Q Clear(g_c), s	0.4	0.3	0.7	0.5	1.5	7.2	0.5	12.8	0.1	2.3	8.5	0.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	32	374	317	44	386	327	40	1142	509	134	1329	593
V/C Ratio(X)	0.44	0.05	0.09	0.45	0.19	0.79	0.45	0.90	0.01	0.69	0.61	0.02
Avail Cap(c_a), veh/h	620	1017	862	426	814	690	423	1151	513	231	1329	593
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.7	15.2	15.3	22.5	15.4	17.7	22.5	15.2	10.9	21.1	11.9	9.3
Incr Delay (d2), s/veh	3.4	0.0	0.0	2.7	0.1	1.7	2.9	9.4	0.0	2.3	0.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.1	0.2	0.2	0.6	2.5	0.2	5.3	0.0	0.9	2.5	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.1	15.2	15.4	25.1	15.5	19.3	25.4	24.5	10.9	23.4	12.5	9.3
LnGrp LOS	C	B	B	C	B	B	C	C	B	C	B	A
Approach Vol, veh/h		60			353			1052			907	
Approach Delay, s/veh		17.8			18.9			24.5			13.5	
Approach LOS		B			B			C			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.5	19.9	5.1	14.2	5.0	22.3	4.8	14.5
Change Period (Y+Rc), s	4.0	5.0	4.0	5.0	4.0	5.0	4.0	5.0
Max Green Setting (Gmax), s	6.0	15.0	11.0	25.0	11.0	10.0	16.0	20.0
Max Q Clear Time (g_c+I1), s	4.3	14.8	2.5	2.7	2.5	10.5	2.4	9.2
Green Ext Time (p_c), s	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.4

Intersection Summary	
HCM 6th Ctrl Delay	19.3
HCM 6th LOS	B



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	310	285	134	320	387	143	153	541	89	161	627	100
Future Volume (veh/h)	310	285	134	320	387	143	153	541	89	161	627	100
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	313	288	135	323	391	144	155	546	90	163	633	101
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	1	1	1	1	1	1	1	1	1	1	1	1
Cap, veh/h	445	588	262	456	599	267	198	836	373	208	855	381
Arrive On Green	0.13	0.16	0.16	0.13	0.17	0.17	0.11	0.23	0.23	0.12	0.24	0.24
Sat Flow, veh/h	3483	3582	1598	3483	3582	1598	1795	3582	1598	1795	3582	1598
Grp Volume(v), veh/h	313	288	135	323	391	144	155	546	90	163	633	101
Grp Sat Flow(s),veh/h/ln	1742	1791	1598	1742	1791	1598	1795	1791	1598	1795	1791	1598
Q Serve(g_s), s	4.4	3.7	3.9	4.5	5.2	4.2	4.3	7.0	2.3	4.5	8.3	2.6
Cycle Q Clear(g_c), s	4.4	3.7	3.9	4.5	5.2	4.2	4.3	7.0	2.3	4.5	8.3	2.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	445	588	262	456	599	267	198	836	373	208	855	381
V/C Ratio(X)	0.70	0.49	0.51	0.71	0.65	0.54	0.78	0.65	0.24	0.78	0.74	0.26
Avail Cap(c_a), veh/h	1446	1770	789	1446	1770	789	745	1770	789	745	1770	789
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.1	19.2	19.3	21.1	19.7	19.3	21.9	17.5	15.8	21.8	17.8	15.6
Incr Delay (d2), s/veh	0.8	0.2	0.6	0.8	0.4	0.6	2.5	0.3	0.1	2.5	0.5	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	1.3	1.3	1.7	1.9	1.4	1.7	2.4	0.7	1.7	2.8	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	21.9	19.5	19.9	21.8	20.1	19.9	24.4	17.9	15.9	24.2	18.3	15.8
LnGrp LOS	C	B	B	C	C	B	C	B	B	C	B	B
Approach Vol, veh/h		736			858			791			897	
Approach Delay, s/veh		20.6			20.7			18.9			19.1	
Approach LOS		C			C			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.9	16.8	10.6	13.3	9.6	17.1	10.5	13.5
Change Period (Y+Rc), s	4.0	5.0	4.0	5.0	4.0	5.0	4.0	5.0
Max Green Setting (Gmax), s	21.0	25.0	21.0	25.0	21.0	25.0	21.0	25.0
Max Q Clear Time (g_c+I1), s	6.5	9.0	6.5	5.9	6.3	10.3	6.4	7.2
Green Ext Time (p_c), s	0.0	1.7	0.2	0.9	0.0	1.8	0.2	1.3

Intersection Summary	
HCM 6th Ctrl Delay	19.8
HCM 6th LOS	B



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	104	65	175	420	122	49	321	631	211	72	841	67
Future Volume (veh/h)	104	65	175	420	122	49	321	631	211	72	841	67
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	90	98	186	447	130	52	341	671	224	77	895	71
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	1	1	1	1	1	1
Cap, veh/h	273	287	243	608	217	87	461	1235	406	103	1272	395
Arrive On Green	0.15	0.15	0.15	0.17	0.17	0.17	0.13	0.32	0.32	0.06	0.25	0.25
Sat Flow, veh/h	1810	1900	1610	3619	1291	516	3483	3831	1258	1795	5147	1598
Grp Volume(v), veh/h	90	98	186	447	0	182	341	600	295	77	895	71
Grp Sat Flow(s),veh/h/ln	1810	1900	1610	1810	0	1807	1742	1716	1659	1795	1716	1598
Q Serve(g_s), s	2.9	3.1	7.4	7.8	0.0	6.2	6.2	9.5	9.7	2.8	10.5	2.3
Cycle Q Clear(g_c), s	2.9	3.1	7.4	7.8	0.0	6.2	6.2	9.5	9.7	2.8	10.5	2.3
Prop In Lane	1.00		1.00	1.00		0.29	1.00		0.76	1.00		1.00
Lane Grp Cap(c), veh/h	273	287	243	608	0	304	461	1106	535	103	1272	395
V/C Ratio(X)	0.33	0.34	0.76	0.73	0.00	0.60	0.74	0.54	0.55	0.75	0.70	0.18
Avail Cap(c_a), veh/h	682	716	606	1363	0	681	1312	1551	750	676	2326	722
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.2	25.2	27.0	26.2	0.0	25.5	27.7	18.5	18.5	30.8	22.8	19.7
Incr Delay (d2), s/veh	0.3	0.3	1.9	0.7	0.0	0.7	0.9	0.2	0.3	4.1	0.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	1.3	2.8	3.2	0.0	2.5	2.4	3.3	3.3	1.2	3.8	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	25.4	25.5	28.9	26.9	0.0	26.2	28.6	18.6	18.9	34.9	23.0	19.8
LnGrp LOS	C	C	C	C	A	C	C	B	B	C	C	B
Approach Vol, veh/h		374			629			1236			1043	
Approach Delay, s/veh		27.2			26.7			21.4			23.7	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	8.8	26.4		15.0	13.8	21.4		16.2
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0
Max Green Setting (Gmax), s	25.0	30.0		25.0	25.0	30.0		25.0
Max Q Clear Time (g_c+I1), s	4.8	11.7		9.4	8.2	12.5		9.8
Green Ext Time (p_c), s	0.1	3.6		0.7	0.6	3.9		1.4

Intersection Summary	
HCM 6th Ctrl Delay	23.8
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	139	0	393	44	940	0	0	1000	553
Future Volume (veh/h)	0	0	0	139	0	393	44	940	0	0	1000	553
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1885	1885	1885	1885	1885	0	0	1885	1885
Adj Flow Rate, veh/h				101	0	481	48	1022	0	0	1087	601
Peak Hour Factor				0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %				1	1	1	1	1	0	0	1	1
Cap, veh/h				325	0	578	366	2504	0	0	2230	692
Arrive On Green				0.18	0.00	0.18	0.41	1.00	0.00	0.00	0.43	0.43
Sat Flow, veh/h				1795	0	3195	1795	3676	0	0	5316	1598
Grp Volume(v), veh/h				101	0	481	48	1022	0	0	1087	601
Grp Sat Flow(s),veh/h/ln				1795	0	1598	1795	1791	0	0	1716	1598
Q Serve(g_s), s				5.4	0.0	16.0	1.8	0.0	0.0	0.0	16.7	37.6
Cycle Q Clear(g_c), s				5.4	0.0	16.0	1.8	0.0	0.0	0.0	16.7	37.6
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				325	0	578	366	2504	0	0	2230	692
V/C Ratio(X)				0.31	0.00	0.83	0.13	0.41	0.00	0.00	0.49	0.87
Avail Cap(c_a), veh/h				369	0	656	366	2504	0	0	2302	715
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.91	0.91	0.00	0.00	0.71	0.71
Uniform Delay (d), s/veh				39.1	0.0	43.4	26.5	0.0	0.0	0.0	22.4	28.3
Incr Delay (d2), s/veh				1.3	0.0	10.2	0.1	0.5	0.0	0.0	0.5	10.4
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				2.5	0.0	7.0	0.8	0.2	0.0	0.0	6.5	15.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				40.4	0.0	53.6	26.5	0.5	0.0	0.0	22.9	38.7
LnGrp LOS				D	A	D	C	A	A	A	C	D
Approach Vol, veh/h					582			1070			1688	
Approach Delay, s/veh					51.4			1.6			28.5	
Approach LOS					D			A			C	

Timer - Assigned Phs	2		5	6		8
Phs Duration (G+Y+Rc), s	83.7		29.2	54.5		26.3
Change Period (Y+Rc), s	6.8		6.8	* 6.8		6.4
Max Green Setting (Gmax), s	74.2		19.3	* 49		22.6
Max Q Clear Time (g_c+I1), s	2.0		3.8	39.6		18.0
Green Ext Time (p_c), s	32.2		0.0	8.1		1.9

Intersection Summary		
HCM 6th Ctrl Delay		23.9
HCM 6th LOS		C

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	418	0	33	0	0	0	0	566	100	0	676	463
Future Volume (veh/h)	418	0	33	0	0	0	0	566	100	0	676	463
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1885	0	1885				0	1885	1885	0	1885	1885
Adj Flow Rate, veh/h	445	0	35				0	602	0	0	719	0
Peak Hour Factor	0.94	0.94	0.94				0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	1	0	1				0	1	1	0	1	1
Cap, veh/h	532	0	244				0	2650		0	2650	
Arrive On Green	0.15	0.00	0.15				0.00	0.74	0.00	0.00	0.24	0.00
Sat Flow, veh/h	3483	0	1598				0	3676	1598	0	3676	1598
Grp Volume(v), veh/h	445	0	35				0	602	0	0	719	0
Grp Sat Flow(s),veh/h/ln	1742	0	1598				0	1791	1598	0	1791	1598
Q Serve(g_s), s	13.7	0.0	2.1				0.0	5.8	0.0	0.0	17.9	0.0
Cycle Q Clear(g_c), s	13.7	0.0	2.1				0.0	5.8	0.0	0.0	17.9	0.0
Prop In Lane	1.00		1.00				0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h	532	0	244				0	2650		0	2650	
V/C Ratio(X)	0.84	0.00	0.14				0.00	0.23		0.00	0.27	
Avail Cap(c_a), veh/h	602	0	276				0	2650		0	2650	
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	0.33	0.33
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	0.00	0.00	0.94	0.00
Uniform Delay (d), s/veh	45.3	0.0	40.4				0.0	4.5	0.0	0.0	17.6	0.0
Incr Delay (d2), s/veh	11.2	0.0	0.6				0.0	0.2	0.0	0.0	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.6	0.0	0.9				0.0	1.7	0.0	0.0	8.6	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	56.4	0.0	41.0				0.0	4.7	0.0	0.0	17.8	0.0
LnGrp LOS	E	A	D				A	A		A	B	
Approach Vol, veh/h		480						602			719	
Approach Delay, s/veh		55.3						4.7			17.8	
Approach LOS		E						A			B	

Timer - Assigned Phs	2	4	6
Phs Duration (G+Y+Rc), s	88.2	21.8	88.2
Change Period (Y+Rc), s	6.8	5.0	6.8
Max Green Setting (Gmax), s	79.2	19.0	79.2
Max Q Clear Time (g_c+I1), s	7.8	15.7	19.9
Green Ext Time (p_c), s	11.1	1.2	13.7

Intersection Summary	
HCM 6th Ctrl Delay	23.4
HCM 6th LOS	C

Notes

Unsignalized Delay for [NBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Intersection	
Int Delay, s/veh	2.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	677	36	85	538	34	57
Future Vol, veh/h	677	36	85	538	34	57
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	120	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	1	1	1	1	0	0
Mvmt Flow	698	37	88	555	35	59

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	735	0	1171	717
Stage 1	-	-	-	-	717	-
Stage 2	-	-	-	-	454	-
Critical Hdwy	-	-	4.115	-	6.6	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	-	-	2.2095	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	874	-	201	433
Stage 1	-	-	-	-	487	-
Stage 2	-	-	-	-	612	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	874	-	181	433
Mov Cap-2 Maneuver	-	-	-	-	181	-
Stage 1	-	-	-	-	487	-
Stage 2	-	-	-	-	550	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.3	23.7
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	285	-	-	874	-
HCM Lane V/C Ratio	0.329	-	-	0.1	-
HCM Control Delay (s)	23.7	-	-	9.6	-
HCM Lane LOS	C	-	-	A	-
HCM 95th %tile Q(veh)	1.4	-	-	0.3	-

Intersection	
Int Delay, s/veh	6.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	118	576	51	15	515	36	38	2	10	28	5	91
Future Vol, veh/h	118	576	51	15	515	36	38	2	10	28	5	91
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	120	-	-	110	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	1	1	1	1	1	1	0	0	0	0	0	0
Mvmt Flow	123	600	53	16	536	38	40	2	10	29	5	95

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	574	0	0	653	0	0	1510	1479	327	1115	1467	536
Stage 1	-	-	-	-	-	-	873	873	-	568	568	-
Stage 2	-	-	-	-	-	-	637	606	-	547	899	-
Critical Hdwy	4.115	-	-	4.115	-	-	7.3	6.5	6.9	7.3	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.5	5.5	-
Follow-up Hdwy	2.2095	-	-	2.2095	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1003	-	-	937	-	-	92	127	675	176	129	549
Stage 1	-	-	-	-	-	-	316	370	-	511	510	-
Stage 2	-	-	-	-	-	-	469	490	-	494	360	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1003	-	-	937	-	-	66	109	675	153	111	549
Mov Cap-2 Maneuver	-	-	-	-	-	-	66	109	-	153	111	-
Stage 1	-	-	-	-	-	-	277	324	-	448	501	-
Stage 2	-	-	-	-	-	-	377	482	-	424	316	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.4	0.2	105.7	24.1
HCM LOS			F	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	82	1003	-	-	937	-	-	315
HCM Lane V/C Ratio	0.635	0.123	-	-	0.017	-	-	0.41
HCM Control Delay (s)	105.7	9.1	-	-	8.9	-	-	24.1
HCM Lane LOS	F	A	-	-	A	-	-	C
HCM 95th %tile Q(veh)	2.9	0.4	-	-	0.1	-	-	1.9

Intersection	
Intersection Delay, s/veh	11.3
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	7	119	38	131	126	16	47	91	102	26	137	14
Future Vol, veh/h	7	119	38	131	126	16	47	91	102	26	137	14
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	1	1	1	1	1	1	1	1	1	1	1	1
Mvmt Flow	7	125	40	138	133	17	49	96	107	27	144	15
Number of Lanes	0	1	0	0	1	0	0	1	1	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	2	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	1	1	1
HCM Control Delay	10.5	12.8	10.3	11.2
HCM LOS	B	B	B	B

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1
Vol Left, %	34%	0%	4%	48%	15%
Vol Thru, %	66%	0%	73%	46%	77%
Vol Right, %	0%	100%	23%	6%	8%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	138	102	164	273	177
LT Vol	47	0	7	131	26
Through Vol	91	0	119	126	137
RT Vol	0	102	38	16	14
Lane Flow Rate	145	107	173	287	186
Geometry Grp	7	7	2	2	5
Degree of Util (X)	0.253	0.16	0.264	0.438	0.296
Departure Headway (Hd)	6.264	5.381	5.501	5.485	5.72
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	572	665	651	655	626
Service Time	4.012	3.128	3.551	3.529	3.77
HCM Lane V/C Ratio	0.253	0.161	0.266	0.438	0.297
HCM Control Delay	11.1	9.2	10.5	12.8	11.2
HCM Lane LOS	B	A	B	B	B
HCM 95th-tile Q	1	0.6	1.1	2.2	1.2



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	175	327	111	149	368	68	102	354	128	64	270	95
Future Volume (veh/h)	175	327	111	149	368	68	102	354	128	64	270	95
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	179	334	113	152	376	69	104	361	131	65	276	97
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	0	0	0	0	0	1	1	1	1	1	1
Cap, veh/h	225	415	352	193	725	323	135	898	321	95	851	292
Arrive On Green	0.12	0.22	0.22	0.11	0.20	0.20	0.08	0.35	0.35	0.05	0.33	0.33
Sat Flow, veh/h	1810	1900	1610	1810	3610	1610	1795	2586	924	1795	2616	899
Grp Volume(v), veh/h	179	334	113	152	376	69	104	248	244	65	187	186
Grp Sat Flow(s),veh/h/ln	1810	1900	1610	1810	1805	1610	1795	1791	1719	1795	1791	1723
Q Serve(g_s), s	6.3	10.9	3.9	5.4	6.1	2.3	3.7	6.9	7.1	2.3	5.2	5.4
Cycle Q Clear(g_c), s	6.3	10.9	3.9	5.4	6.1	2.3	3.7	6.9	7.1	2.3	5.2	5.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.54	1.00		0.52
Lane Grp Cap(c), veh/h	225	415	352	193	725	323	135	622	597	95	582	561
V/C Ratio(X)	0.79	0.80	0.32	0.79	0.52	0.21	0.77	0.40	0.41	0.68	0.32	0.33
Avail Cap(c_a), veh/h	372	623	528	290	1018	454	260	622	597	197	582	561
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.9	24.3	21.6	28.6	23.4	21.9	29.8	16.2	16.3	30.5	16.7	16.7
Incr Delay (d2), s/veh	6.2	4.6	0.5	8.1	0.6	0.3	8.9	1.9	2.1	8.4	1.5	1.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.9	4.9	1.4	2.6	2.5	0.9	1.8	2.8	2.8	1.1	2.1	2.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	34.1	28.9	22.1	36.6	24.0	22.2	38.7	18.1	18.3	38.9	18.1	18.3
LnGrp LOS	C	C	C	D	C	C	D	B	B	D	B	B
Approach Vol, veh/h		626			597			596			438	
Approach Delay, s/veh		29.2			27.0			21.8			21.3	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.0	27.3	11.5	18.8	9.4	25.8	12.7	17.7
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	7.3	22.8	10.5	21.5	9.5	20.5	13.5	18.5
Max Q Clear Time (g_c+I1), s	4.3	9.1	7.4	12.9	5.7	7.4	8.3	8.1
Green Ext Time (p_c), s	0.0	2.3	0.1	1.4	0.1	1.6	0.2	1.9

Intersection Summary	
HCM 6th Ctrl Delay	25.1
HCM 6th LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	87	30	76	8	41	0	67	448	4	1	405	113
Future Volume (veh/h)	87	30	76	8	41	0	67	448	4	1	405	113
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1900	1900	1900	1826	1826	1826	1826	1826	1826
Adj Flow Rate, veh/h	93	32	81	9	44	0	71	477	4	1	431	120
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	3	3	3	0	0	0	5	5	5	5	5	5
Cap, veh/h	183	86	217	37	198	0	162	779	660	4	613	519
Arrive On Green	0.10	0.18	0.18	0.02	0.10	0.00	0.09	0.43	0.43	0.00	0.34	0.34
Sat Flow, veh/h	1767	465	1178	1810	1900	0	1739	1826	1547	1739	1826	1547
Grp Volume(v), veh/h	93	0	113	9	44	0	71	477	4	1	431	120
Grp Sat Flow(s),veh/h/ln	1767	0	1643	1810	1900	0	1739	1826	1547	1739	1826	1547
Q Serve(g_s), s	3.7	0.0	4.5	0.4	1.6	0.0	2.9	15.1	0.1	0.0	15.2	4.1
Cycle Q Clear(g_c), s	3.7	0.0	4.5	0.4	1.6	0.0	2.9	15.1	0.1	0.0	15.2	4.1
Prop In Lane	1.00		0.72	1.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	183	0	303	37	198	0	162	779	660	4	613	519
V/C Ratio(X)	0.51	0.00	0.37	0.24	0.22	0.00	0.44	0.61	0.01	0.23	0.70	0.23
Avail Cap(c_a), veh/h	364	0	454	368	524	0	354	912	773	354	912	773
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.5	0.0	26.5	35.8	30.5	0.0	31.8	16.5	12.2	37.0	21.5	17.8
Incr Delay (d2), s/veh	0.8	0.0	2.3	1.2	1.7	0.0	0.7	3.6	0.0	9.9	6.6	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	0.0	1.7	0.2	0.7	0.0	1.2	6.1	0.0	0.0	6.9	1.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	32.3	0.0	28.9	37.0	32.2	0.0	32.5	20.1	12.3	46.9	28.1	18.8
LnGrp LOS	C	A	C	D	C	A	C	C	B	D	C	B
Approach Vol, veh/h		206			53			552			552	
Approach Delay, s/veh		30.4			33.0			21.7			26.1	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.1	39.6	7.4	21.2	12.8	32.8	13.4	15.2
Change Period (Y+Rc), s	5.9	7.9	5.9	7.5	5.9	7.9	* 5.7	7.5
Max Green Setting (Gmax), s	15.1	37.1	15.1	20.5	15.1	37.1	* 15	20.5
Max Q Clear Time (g_c+I1), s	2.0	17.1	2.4	6.5	4.9	17.2	5.7	3.6
Green Ext Time (p_c), s	0.0	7.2	0.0	0.8	0.0	7.7	0.1	0.2

Intersection Summary	
HCM 6th Ctrl Delay	25.2
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	3.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	163	5	271	251	8	215
Future Vol, veh/h	163	5	271	251	8	215
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	150	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	1	0	0	1
Mvmt Flow	177	5	295	273	9	234

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	684	284	0	0	568	0
Stage 1	432	-	-	-	-	-
Stage 2	252	-	-	-	-	-
Critical Hdwy	6.6	6.9	-	-	4.1	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	402	719	-	-	1014	-
Stage 1	628	-	-	-	-	-
Stage 2	795	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	398	719	-	-	1014	-
Mov Cap-2 Maneuver	398	-	-	-	-	-
Stage 1	628	-	-	-	-	-
Stage 2	788	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	20.8	0	0.3
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	398	719	1014	-
HCM Lane V/C Ratio	-	-	0.445	0.008	0.009	-
HCM Control Delay (s)	-	-	21.1	10	8.6	-
HCM Lane LOS	-	-	C	B	A	-
HCM 95th %tile Q(veh)	-	-	2.2	0	0	-

Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	4	516	47	0	375
Future Vol, veh/h	0	4	516	47	0	375
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	1	0	0	1
Mvmt Flow	0	4	561	51	0	408

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	306	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.9	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	-	-
Pot Cap-1 Maneuver	0	696	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	696	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.2	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	696	-
HCM Lane V/C Ratio	-	-	0.006	-
HCM Control Delay (s)	-	-	10.2	-
HCM Lane LOS	-	-	B	-
HCM 95th %tile Q(veh)	-	-	0	-

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑↑↱			↱
Traffic Vol, veh/h	0	776	534	69	0	55
Future Vol, veh/h	0	776	534	69	0	55
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	1	1	0	0	0
Mvmt Flow	0	843	580	75	0	60

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	328
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.3
Pot Cap-1 Maneuver	0	-	-	-	0	674
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	674
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	10.9
HCM LOS			B

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	674
HCM Lane V/C Ratio	-	-	-	0.089
HCM Control Delay (s)	-	-	-	10.9
HCM Lane LOS	-	-	-	B
HCM 95th %tile Q(veh)	-	-	-	0.3

Intersection	
Int Delay, s/veh	77.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	222	554	527	44	158	74
Future Vol, veh/h	222	554	527	44	158	74
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	150	-	-	-	0	100
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	1	1	0	0	0
Mvmt Flow	241	602	573	48	172	80

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	621	0	-	0	1681	311
Stage 1	-	-	-	-	597	-
Stage 2	-	-	-	-	1084	-
Critical Hdwy	4.1	-	-	-	6.6	6.9
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	969	-	-	-	~ 96	691
Stage 1	-	-	-	-	518	-
Stage 2	-	-	-	-	327	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	969	-	-	-	~ 72	691
Mov Cap-2 Maneuver	-	-	-	-	~ 72	-
Stage 1	-	-	-	-	389	-
Stage 2	-	-	-	-	327	-

Approach	EB	WB	SB
HCM Control Delay, s	2.8	0	$ 517.7
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	969	-	-	-	72	691
HCM Lane V/C Ratio	0.249	-	-	-	2.385	0.116
HCM Control Delay (s)	9.9	-	-	-	$ 755	10.9
HCM Lane LOS	A	-	-	-	F	B
HCM 95th %tile Q(veh)	1	-	-	-	16.4	0.4

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	0.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	130	10	0	99	0	3
Future Vol, veh/h	130	10	0	99	0	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	1	0	0
Mvmt Flow	141	11	0	108	0	3

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	76
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.3
Pot Cap-1 Maneuver	-	-	0	-	0	976
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	976
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	8.7
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	976	-	-	-
HCM Lane V/C Ratio	0.003	-	-	-
HCM Control Delay (s)	8.7	-	-	-
HCM Lane LOS	A	-	-	-
HCM 95th %tile Q(veh)	0	-	-	-

Intersection	
Int Delay, s/veh	1.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	128	5	33	96	3	19
Future Vol, veh/h	128	5	33	96	3	19
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	150	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	1	0	0
Mvmt Flow	139	5	36	104	3	21

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	144	0	318	72
Stage 1	-	-	-	-	142	-
Stage 2	-	-	-	-	176	-
Critical Hdwy	-	-	4.1	-	6.6	6.9
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1451	-	667	982
Stage 1	-	-	-	-	876	-
Stage 2	-	-	-	-	859	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1451	-	650	982
Mov Cap-2 Maneuver	-	-	-	-	650	-
Stage 1	-	-	-	-	876	-
Stage 2	-	-	-	-	838	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.9	9
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	918	-	-	1451	-
HCM Lane V/C Ratio	0.026	-	-	0.025	-
HCM Control Delay (s)	9	-	-	7.5	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0.1	-

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑↱			↱
Traffic Vol, veh/h	0	734	579	50	0	44
Future Vol, veh/h	0	734	579	50	0	44
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	1	1	0	0	0
Mvmt Flow	0	798	629	54	0	48

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	342
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.3
Pot Cap-1 Maneuver	0	-	-	-	0	660
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	660
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	10.9
HCM LOS			B

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	660
HCM Lane V/C Ratio	-	-	-	0.072
HCM Control Delay (s)	-	-	-	10.9
HCM Lane LOS	-	-	-	B
HCM 95th %tile Q(veh)	-	-	-	0.2

Intersection	
Intersection Delay, s/veh	11.1
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	4	123	11	43	114	4	0	77	36	9	85	2
Future Vol, veh/h	4	123	11	43	114	4	0	77	36	9	85	2
Peak Hour Factor	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60
Heavy Vehicles, %	4	6	2	2	6	4	6	4	6	6	2	6
Mvmt Flow	7	205	18	72	190	7	0	128	60	15	142	3
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	11.1	11.8	10.6	10.6
HCM LOS	B	B	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	0%	3%	27%	9%
Vol Thru, %	68%	89%	71%	89%
Vol Right, %	32%	8%	2%	2%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	113	138	161	96
LT Vol	0	4	43	9
Through Vol	77	123	114	85
RT Vol	36	11	4	2
Lane Flow Rate	188	230	268	160
Geometry Grp	1	1	1	1
Degree of Util (X)	0.283	0.341	0.397	0.252
Departure Headway (Hd)	5.408	5.336	5.321	5.68
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	663	674	676	630
Service Time	3.452	3.376	3.36	3.727
HCM Lane V/C Ratio	0.284	0.341	0.396	0.254
HCM Control Delay	10.6	11.1	11.8	10.6
HCM Lane LOS	B	B	B	B
HCM 95th-tile Q	1.2	1.5	1.9	1

Intersection	
Intersection Delay, s/veh	16
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	5	111	3	117	218	15	7	79	35	26	106	3
Future Vol, veh/h	5	111	3	117	218	15	7	79	35	26	106	3
Peak Hour Factor	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72
Heavy Vehicles, %	4	3	1	1	0	4	0	4	3	3	1	0
Mvmt Flow	7	154	4	163	303	21	10	110	49	36	147	4
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	11.1	20.9	11.3	12
HCM LOS	B	C	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	6%	4%	33%	19%
Vol Thru, %	65%	93%	62%	79%
Vol Right, %	29%	3%	4%	2%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	121	119	350	135
LT Vol	7	5	117	26
Through Vol	79	111	218	106
RT Vol	35	3	15	3
Lane Flow Rate	168	165	486	188
Geometry Grp	1	1	1	1
Degree of Util (X)	0.276	0.268	0.719	0.318
Departure Headway (Hd)	5.919	5.838	5.325	6.104
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	603	612	676	585
Service Time	3.997	3.912	3.378	4.179
HCM Lane V/C Ratio	0.279	0.27	0.719	0.321
HCM Control Delay	11.3	11.1	20.9	12
HCM Lane LOS	B	B	C	B
HCM 95th-tile Q	1.1	1.1	6.1	1.4

Intersection	
Intersection Delay, s/veh	80.8
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	17	93	24	63	139	106	14	222	91	62	307	13
Future Vol, veh/h	17	93	24	63	139	106	14	222	91	62	307	13
Peak Hour Factor	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70
Heavy Vehicles, %	1	6	2	2	3	1	3	1	6	6	2	3
Mvmt Flow	24	133	34	90	199	151	20	317	130	89	439	19
Number of Lanes	0	1	0	0	1	0	0	1	1	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	1	1
HCM Control Delay	21.5	60.8	32.5	159.1
HCM LOS	C	F	D	F

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	6%	0%	13%	20%	17%	0%
Vol Thru, %	94%	0%	69%	45%	83%	0%
Vol Right, %	0%	100%	18%	34%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	236	91	134	308	369	13
LT Vol	14	0	17	63	62	0
Through Vol	222	0	93	139	307	0
RT Vol	0	91	24	106	0	13
Lane Flow Rate	337	130	191	440	527	19
Geometry Grp	7	7	2	2	7	7
Degree of Util (X)	0.796	0.279	0.475	0.947	1.268	0.04
Departure Headway (Hd)	9.201	8.4	9.875	8.478	8.658	7.77
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	398	430	368	431	422	464
Service Time	6.901	6.1	7.875	6.478	6.358	5.47
HCM Lane V/C Ratio	0.847	0.302	0.519	1.021	1.249	0.041
HCM Control Delay	39.5	14.3	21.5	60.8	164.3	10.8
HCM Lane LOS	E	B	C	F	F	B
HCM 95th-tile Q	6.9	1.1	2.5	11	22.7	0.1



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	115	281	71	424	438	55	36	344	241	17	520	80
Future Volume (veh/h)	115	281	71	424	438	55	36	344	241	17	520	80
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1870	1870	1870	1885	1885	1885	1885	1870	1870	1870	1885
Adj Flow Rate, veh/h	125	305	77	461	476	60	39	374	262	18	565	87
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	1	2	2	2	1	1	1	1	2	2	2	1
Cap, veh/h	159	408	346	262	522	442	69	616	426	38	537	459
Arrive On Green	0.09	0.22	0.22	0.15	0.28	0.28	0.04	0.30	0.30	0.02	0.29	0.29
Sat Flow, veh/h	1795	1870	1585	1781	1885	1598	1795	2025	1399	1781	1870	1598
Grp Volume(v), veh/h	125	305	77	461	476	60	39	330	306	18	565	87
Grp Sat Flow(s),veh/h/ln	1795	1870	1585	1781	1885	1598	1795	1791	1633	1781	1870	1598
Q Serve(g_s), s	4.6	10.3	2.7	10.0	16.6	1.9	1.5	10.7	10.9	0.7	19.5	2.8
Cycle Q Clear(g_c), s	4.6	10.3	2.7	10.0	16.6	1.9	1.5	10.7	10.9	0.7	19.5	2.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.86	1.00		1.00
Lane Grp Cap(c), veh/h	159	408	346	262	522	442	69	545	497	38	537	459
V/C Ratio(X)	0.78	0.75	0.22	1.76	0.91	0.14	0.57	0.61	0.62	0.48	1.05	0.19
Avail Cap(c_a), veh/h	264	537	455	262	541	459	264	545	497	262	537	459
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.3	24.8	21.8	29.0	23.8	18.5	32.1	20.2	20.2	32.9	24.2	18.3
Incr Delay (d2), s/veh	3.2	2.6	0.1	356.3	18.9	0.1	2.7	1.4	1.7	3.4	53.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	4.3	0.9	29.7	9.0	0.6	0.6	4.1	3.8	0.3	15.1	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	33.5	27.4	21.9	385.3	42.7	18.5	34.8	21.5	21.9	36.3	77.5	18.3
LnGrp LOS	C	C	C	F	D	B	C	C	C	D	F	B
Approach Vol, veh/h		507			997			675			670	
Approach Delay, s/veh		28.1			199.7			22.5			68.7	
Approach LOS		C			F			C			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.4	26.2	15.0	20.3	7.6	25.0	11.0	24.3
Change Period (Y+Rc), s	5.0	5.5	5.0	5.5	5.0	5.5	5.0	5.5
Max Green Setting (Gmax), s	10.0	19.5	10.0	19.5	10.0	19.5	10.0	19.5
Max Q Clear Time (g_c+I1), s	2.7	12.9	12.0	12.3	3.5	21.5	6.6	18.6
Green Ext Time (p_c), s	0.0	1.4	0.0	0.7	0.0	0.0	0.0	0.2

Intersection Summary	
HCM 6th Ctrl Delay	96.4
HCM 6th LOS	F



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	116	405	97	223	318	59	78	430	161	91	896	139
Future Volume (veh/h)	116	405	97	223	318	59	78	430	161	91	896	139
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1885	1885	1885	1856	1856	1856	1856	1885	1885	1885	1856
Adj Flow Rate, veh/h	147	513	123	282	403	75	99	544	204	115	1134	176
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79
Percent Heavy Veh, %	3	1	1	1	3	3	3	3	1	1	1	3
Cap, veh/h	232	685	306	392	832	371	208	1285	582	220	1315	577
Arrive On Green	0.07	0.19	0.19	0.11	0.24	0.24	0.06	0.36	0.36	0.06	0.37	0.37
Sat Flow, veh/h	3428	3582	1598	3483	3526	1572	3428	3526	1598	3483	3582	1572
Grp Volume(v), veh/h	147	513	123	282	403	75	99	544	204	115	1134	176
Grp Sat Flow(s),veh/h/ln	1714	1791	1598	1742	1763	1572	1714	1763	1598	1742	1791	1572
Q Serve(g_s), s	3.0	9.6	4.8	5.5	7.0	2.7	2.0	8.2	6.6	2.3	20.7	5.6
Cycle Q Clear(g_c), s	3.0	9.6	4.8	5.5	7.0	2.7	2.0	8.2	6.6	2.3	20.7	5.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	232	685	306	392	832	371	208	1285	582	220	1315	577
V/C Ratio(X)	0.63	0.75	0.40	0.72	0.48	0.20	0.48	0.42	0.35	0.52	0.86	0.30
Avail Cap(c_a), veh/h	993	1518	677	1255	1743	778	993	1494	677	1009	1518	666
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.1	27.0	25.1	30.3	23.3	21.7	32.2	16.9	16.4	32.1	20.7	16.0
Incr Delay (d2), s/veh	1.1	0.6	0.3	0.9	0.2	0.1	0.6	0.1	0.1	0.7	4.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	3.7	1.7	2.2	2.7	0.9	0.8	2.9	2.2	0.9	8.2	1.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	33.2	27.6	25.4	31.3	23.5	21.8	32.8	17.0	16.5	32.8	25.0	16.1
LnGrp LOS	C	C	C	C	C	C	C	B	B	C	C	B
Approach Vol, veh/h		783			760			847			1425	
Approach Delay, s/veh		28.3			26.2			18.7			24.5	
Approach LOS		C			C			B			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.0	30.8	12.5	18.5	8.8	31.0	9.3	21.7
Change Period (Y+Rc), s	4.5	5.0	4.5	5.0	4.5	5.0	4.5	5.0
Max Green Setting (Gmax), s	20.5	30.0	25.5	30.0	20.5	30.0	20.5	35.0
Max Q Clear Time (g_c+I1), s	4.3	10.2	7.5	11.6	4.0	22.7	5.0	9.0
Green Ext Time (p_c), s	0.1	2.4	0.5	2.0	0.1	3.2	0.1	1.7

Intersection Summary	
HCM 6th Ctrl Delay	24.4
HCM 6th LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	85	124	26	69	67	75	26	513	31	147	1106	66
Future Volume (veh/h)	85	124	26	69	67	75	26	513	31	147	1106	66
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1900	1885	1885	1900	1870	1900	1870	1900	1900	1885	1900
Adj Flow Rate, veh/h	101	148	31	82	80	89	31	611	37	175	1317	79
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Percent Heavy Veh, %	2	0	1	1	0	2	0	2	0	0	1	0
Cap, veh/h	148	247	208	133	229	191	66	838	380	223	1156	520
Arrive On Green	0.08	0.13	0.13	0.07	0.12	0.12	0.04	0.24	0.24	0.12	0.32	0.32
Sat Flow, veh/h	1781	1900	1598	1795	1900	1585	1810	3554	1610	1810	3582	1610
Grp Volume(v), veh/h	101	148	31	82	80	89	31	611	37	175	1317	79
Grp Sat Flow(s),veh/h/ln	1781	1900	1598	1795	1900	1585	1810	1777	1610	1810	1791	1610
Q Serve(g_s), s	2.3	3.0	0.7	1.8	1.6	2.2	0.7	6.5	0.7	3.9	13.3	1.4
Cycle Q Clear(g_c), s	2.3	3.0	0.7	1.8	1.6	2.2	0.7	6.5	0.7	3.9	13.3	1.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	148	247	208	133	229	191	66	838	380	223	1156	520
V/C Ratio(X)	0.68	0.60	0.15	0.62	0.35	0.47	0.47	0.73	0.10	0.78	1.14	0.15
Avail Cap(c_a), veh/h	692	1154	970	480	923	770	483	1295	587	264	1156	520
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	18.3	16.9	15.9	18.5	16.6	16.9	19.5	14.5	12.3	17.5	13.9	9.9
Incr Delay (d2), s/veh	2.1	0.9	0.1	1.7	0.3	0.7	2.0	0.5	0.0	10.2	73.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	1.2	0.2	0.7	0.6	0.7	0.3	2.0	0.2	1.9	15.4	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	20.4	17.8	16.0	20.2	17.0	17.5	21.4	15.0	12.3	27.7	87.5	10.0
LnGrp LOS	C	B	B	C	B	B	C	B	B	C	F	A
Approach Vol, veh/h		280			251			679			1571	
Approach Delay, s/veh		18.5			18.2			15.1			76.9	
Approach LOS		B			B			B			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.1	14.7	7.0	10.3	5.5	18.3	7.4	10.0
Change Period (Y+Rc), s	4.0	5.0	4.0	5.0	4.0	5.0	4.0	5.0
Max Green Setting (Gmax), s	6.0	15.0	11.0	25.0	11.0	10.0	16.0	20.0
Max Q Clear Time (g_c+I1), s	5.3	8.5	3.8	5.0	2.7	15.3	4.3	4.2
Green Ext Time (p_c), s	0.0	1.2	0.0	0.4	0.0	0.0	0.0	0.2

Intersection Summary	
HCM 6th Ctrl Delay	50.6
HCM 6th LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	22	102	18	10	21	104	13	512	29	337	841	17
Future Volume (veh/h)	22	102	18	10	21	104	13	512	29	337	841	17
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1900	1885	1885	1900	1870	1900	1870	1900	1900	1885	1900
Adj Flow Rate, veh/h	26	121	21	12	25	124	15	610	35	401	1001	20
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Percent Heavy Veh, %	2	0	1	1	0	2	0	2	0	0	1	0
Cap, veh/h	56	266	224	28	236	197	35	848	384	274	1328	597
Arrive On Green	0.03	0.14	0.14	0.02	0.12	0.12	0.02	0.24	0.24	0.15	0.37	0.37
Sat Flow, veh/h	1781	1900	1598	1795	1900	1585	1810	3554	1610	1810	3582	1610
Grp Volume(v), veh/h	26	121	21	12	25	124	15	610	35	401	1001	20
Grp Sat Flow(s),veh/h/ln	1781	1900	1598	1795	1900	1585	1810	1777	1610	1810	1791	1610
Q Serve(g_s), s	0.6	2.3	0.5	0.3	0.5	2.9	0.3	6.2	0.7	6.0	9.7	0.3
Cycle Q Clear(g_c), s	0.6	2.3	0.5	0.3	0.5	2.9	0.3	6.2	0.7	6.0	9.7	0.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	56	266	224	28	236	197	35	848	384	274	1328	597
V/C Ratio(X)	0.46	0.46	0.09	0.43	0.11	0.63	0.43	0.72	0.09	1.46	0.75	0.03
Avail Cap(c_a), veh/h	720	1199	1008	499	959	800	503	1346	610	274	1328	597
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	18.9	15.6	14.8	19.3	15.4	16.5	19.2	13.9	11.7	16.8	10.9	7.9
Incr Delay (d2), s/veh	2.2	0.5	0.1	3.8	0.1	1.2	3.1	0.4	0.0	227.4	2.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.9	0.1	0.1	0.2	1.0	0.1	1.8	0.2	19.2	2.7	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	21.1	16.1	14.9	23.1	15.5	17.7	22.3	14.3	11.8	244.2	13.1	7.9
LnGrp LOS	C	B	B	C	B	B	C	B	B	F	B	A
Approach Vol, veh/h		168			161			660			1422	
Approach Delay, s/veh		16.7			17.8			14.3			78.2	
Approach LOS		B			B			B			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.0	14.5	4.6	10.5	4.8	19.7	5.2	9.9
Change Period (Y+Rc), s	4.0	5.0	4.0	5.0	4.0	5.0	4.0	5.0
Max Green Setting (Gmax), s	6.0	15.0	11.0	25.0	11.0	10.0	16.0	20.0
Max Q Clear Time (g_c+I1), s	8.0	8.2	2.3	4.3	2.3	11.7	2.6	4.9
Green Ext Time (p_c), s	0.0	1.2	0.0	0.3	0.0	0.0	0.0	0.2

Intersection Summary	
HCM 6th Ctrl Delay	52.4
HCM 6th LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	173	381	82	135	191	61	72	328	81	172	550	113
Future Volume (veh/h)	173	381	82	135	191	61	72	328	81	172	550	113
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1885	1870	1870	1870	1870	1870	1870	1885	1885	1870	1870
Adj Flow Rate, veh/h	186	410	88	145	205	66	77	353	87	185	591	122
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	1	2	2	2	2	2	2	1	1	2	2
Cap, veh/h	313	661	292	272	613	273	101	596	268	236	861	384
Arrive On Green	0.09	0.18	0.18	0.08	0.17	0.17	0.06	0.17	0.17	0.13	0.24	0.24
Sat Flow, veh/h	3456	3582	1585	3456	3554	1585	1781	3554	1598	1795	3554	1585
Grp Volume(v), veh/h	186	410	88	145	205	66	77	353	87	185	591	122
Grp Sat Flow(s),veh/h/ln	1728	1791	1585	1728	1777	1585	1781	1777	1598	1795	1777	1585
Q Serve(g_s), s	2.1	4.3	2.0	1.7	2.1	1.5	1.8	3.8	2.0	4.1	6.2	2.6
Cycle Q Clear(g_c), s	2.1	4.3	2.0	1.7	2.1	1.5	1.8	3.8	2.0	4.1	6.2	2.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	313	661	292	272	613	273	101	596	268	236	861	384
V/C Ratio(X)	0.59	0.62	0.30	0.53	0.33	0.24	0.76	0.59	0.32	0.78	0.69	0.32
Avail Cap(c_a), veh/h	1764	2177	963	1764	2160	963	909	2160	971	917	2160	963
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	18.0	15.4	14.5	18.2	14.9	14.7	19.1	15.8	15.1	17.3	14.2	12.8
Incr Delay (d2), s/veh	0.7	0.4	0.2	0.6	0.1	0.2	4.3	0.4	0.3	2.1	0.4	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	1.4	0.6	0.6	0.7	0.4	0.7	1.2	0.6	1.5	1.8	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	18.6	15.8	14.7	18.8	15.1	14.9	23.4	16.2	15.3	19.4	14.5	13.0
LnGrp LOS	B	B	B	B	B	B	C	B	B	B	B	B
Approach Vol, veh/h		684			416			517			898	
Approach Delay, s/veh		16.4			16.3			17.1			15.3	
Approach LOS		B			B			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.4	11.9	7.2	12.6	6.3	15.0	7.7	12.1
Change Period (Y+Rc), s	4.0	5.0	4.0	5.0	4.0	5.0	4.0	5.0
Max Green Setting (Gmax), s	21.0	25.0	21.0	25.0	21.0	25.0	21.0	25.0
Max Q Clear Time (g_c+I1), s	6.1	5.8	3.7	6.3	3.8	8.2	4.1	4.1
Green Ext Time (p_c), s	0.1	1.1	0.1	1.3	0.0	1.8	0.1	0.6

Intersection Summary	
HCM 6th Ctrl Delay	16.2
HCM 6th LOS	B



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	33	54	182	137	56	16	153	570	486	56	572	44
Future Volume (veh/h)	33	54	182	137	56	16	153	570	486	56	572	44
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1900	1870	1870	1900	1870	1900	1870	1900	1900	1870	1900
Adj Flow Rate, veh/h	38	61	207	156	64	18	174	648	552	64	650	50
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	2	0	2	2	0	2	0	2	0	0	2	0
Cap, veh/h	291	310	259	286	115	32	278	1359	633	95	1903	600
Arrive On Green	0.16	0.16	0.16	0.08	0.08	0.08	0.08	0.40	0.40	0.05	0.37	0.37
Sat Flow, veh/h	1781	1900	1585	3563	1427	401	3510	3404	1585	1810	5106	1610
Grp Volume(v), veh/h	38	61	207	156	0	82	174	648	552	64	650	50
Grp Sat Flow(s),veh/h/ln	1781	1900	1585	1781	0	1828	1755	1702	1585	1810	1702	1610
Q Serve(g_s), s	1.2	1.8	8.3	2.8	0.0	2.8	3.2	9.3	21.1	2.3	6.0	1.3
Cycle Q Clear(g_c), s	1.2	1.8	8.3	2.8	0.0	2.8	3.2	9.3	21.1	2.3	6.0	1.3
Prop In Lane	1.00		1.00	1.00		0.22	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	291	310	259	286	0	147	278	1359	633	95	1903	600
V/C Ratio(X)	0.13	0.20	0.80	0.55	0.00	0.56	0.63	0.48	0.87	0.67	0.34	0.08
Avail Cap(c_a), veh/h	678	723	603	1356	0	696	1336	1555	724	689	2333	736
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.5	23.7	26.4	29.0	0.0	29.1	29.3	14.6	18.2	30.6	14.8	13.3
Incr Delay (d2), s/veh	0.1	0.1	2.2	0.6	0.0	1.2	0.9	0.1	9.4	3.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.8	3.0	1.1	0.0	1.2	1.3	3.1	8.1	1.0	2.0	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.6	23.9	28.6	29.6	0.0	30.3	30.2	14.7	27.6	33.6	14.8	13.4
LnGrp LOS	C	C	C	C	A	C	C	B	C	C	B	B
Approach Vol, veh/h		306			238			1374			764	
Approach Delay, s/veh		27.0			29.9			21.8			16.3	
Approach LOS		C			C			C			B	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	8.4	31.2		15.7	10.2	29.5		10.3
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0
Max Green Setting (Gmax), s	25.0	30.0		25.0	25.0	30.0		25.0
Max Q Clear Time (g_c+I1), s	4.3	23.1		10.3	5.2	8.0		4.8
Green Ext Time (p_c), s	0.1	3.1		0.5	0.3	2.8		0.5

Intersection Summary	
HCM 6th Ctrl Delay	21.6
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	63	0	437	36	934	0	0	603	273
Future Volume (veh/h)	0	0	0	63	0	437	36	934	0	0	603	273
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1856	1856	1870	1856	1870	0	0	1856	1856
Adj Flow Rate, veh/h				47	0	511	40	1038	0	0	670	303
Peak Hour Factor				0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %				3	3	2	3	2	0	0	3	3
Cap, veh/h				330	0	592	595	2421	0	0	1400	435
Arrive On Green				0.19	0.00	0.19	0.67	1.00	0.00	0.00	0.28	0.28
Sat Flow, veh/h				1767	0	3170	1767	3647	0	0	5233	1572
Grp Volume(v), veh/h				47	0	511	40	1038	0	0	670	303
Grp Sat Flow(s),veh/h/ln				1767	0	1585	1767	1777	0	0	1689	1572
Q Serve(g_s), s				2.2	0.0	15.6	0.8	0.0	0.0	0.0	11.0	17.3
Cycle Q Clear(g_c), s				2.2	0.0	15.6	0.8	0.0	0.0	0.0	11.0	17.3
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				330	0	592	595	2421	0	0	1400	435
V/C Ratio(X)				0.14	0.00	0.86	0.07	0.43	0.00	0.00	0.48	0.70
Avail Cap(c_a), veh/h				353	0	634	595	2421	0	0	1834	569
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.91	0.91	0.00	0.00	0.90	0.90
Uniform Delay (d), s/veh				34.0	0.0	39.4	10.9	0.0	0.0	0.0	30.2	32.4
Incr Delay (d2), s/veh				0.5	0.0	13.0	0.0	0.5	0.0	0.0	1.1	8.1
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				1.0	0.0	7.0	0.3	0.2	0.0	0.0	4.4	7.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				34.5	0.0	52.4	11.0	0.5	0.0	0.0	31.2	40.5
LnGrp LOS				C	A	D	B	A	A	A	C	D
Approach Vol, veh/h					558			1078			973	
Approach Delay, s/veh					50.9			0.9			34.1	
Approach LOS					D			A			C	

Timer - Assigned Phs	2		5	6		8
Phs Duration (G+Y+Rc), s	74.9		40.5	34.4		25.1
Change Period (Y+Rc), s	6.8		6.8	* 6.8		6.4
Max Green Setting (Gmax), s	66.8		24.9	* 36		20.0
Max Q Clear Time (g_c+I1), s	2.0		2.8	19.3		17.6
Green Ext Time (p_c), s	31.5		0.0	8.4		1.0

Intersection Summary	
HCM 6th Ctrl Delay	24.0
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	412	0	12	0	0	0	0	559	135	0	390	276
Future Volume (veh/h)	412	0	12	0	0	0	0	559	135	0	390	276
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1885	0	1856				0	1885	1870	0	1856	1856
Adj Flow Rate, veh/h	463	0	13				0	628	0	0	438	0
Peak Hour Factor	0.89	0.89	0.89				0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	1	0	3				0	1	2	0	3	3
Cap, veh/h	574	0	259				0	2569		0	2529	
Arrive On Green	0.16	0.00	0.16				0.00	0.72	0.00	0.00	1.00	0.00
Sat Flow, veh/h	3483	0	1572				0	3676	1585	0	3618	1572
Grp Volume(v), veh/h	463	0	13				0	628	0	0	438	0
Grp Sat Flow(s),veh/h/ln	1742	0	1572				0	1791	1585	0	1763	1572
Q Serve(g_s), s	12.8	0.0	0.7				0.0	6.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	12.8	0.0	0.7				0.0	6.0	0.0	0.0	0.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h	574	0	259				0	2569		0	2529	
V/C Ratio(X)	0.81	0.00	0.05				0.00	0.24		0.00	0.17	
Avail Cap(c_a), veh/h	697	0	314				0	2569		0	2529	
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	0.00	0.00	0.99	0.00
Uniform Delay (d), s/veh	40.2	0.0	35.2				0.0	4.8	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	8.1	0.0	0.2				0.0	0.2	0.0	0.0	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.0	0.0	0.3				0.0	1.8	0.0	0.0	0.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	48.3	0.0	35.4				0.0	5.1	0.0	0.0	0.1	0.0
LnGrp LOS	D	A	D				A	A		A	A	
Approach Vol, veh/h		476						628			438	
Approach Delay, s/veh		48.0						5.1			0.1	
Approach LOS		D						A			A	

Timer - Assigned Phs	2	4	6
Phs Duration (G+Y+Rc), s	78.5	21.5	78.5
Change Period (Y+Rc), s	6.8	5.0	6.8
Max Green Setting (Gmax), s	68.2	20.0	68.2
Max Q Clear Time (g_c+I1), s	8.0	14.8	2.0
Green Ext Time (p_c), s	11.5	1.7	7.4

Intersection Summary	
HCM 6th Ctrl Delay	16.9
HCM 6th LOS	B

Notes

Unsignalized Delay for [NBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Intersection	
Int Delay, s/veh	17.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	628	47	148	913	53	90
Future Vol, veh/h	628	47	148	913	53	90
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	120	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	81	81	81	81	81	81
Heavy Vehicles, %	2	0	0	1	1	2
Mvmt Flow	775	58	183	1127	65	111

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	833	0	1734	804
Stage 1	-	-	-	-	804	-
Stage 2	-	-	-	-	930	-
Critical Hdwy	-	-	4.1	-	6.615	6.23
Critical Hdwy Stg 1	-	-	-	-	5.415	-
Critical Hdwy Stg 2	-	-	-	-	5.815	-
Follow-up Hdwy	-	-	2.2	-	3.5095	3.319
Pot Cap-1 Maneuver	-	-	809	-	88	382
Stage 1	-	-	-	-	442	-
Stage 2	-	-	-	-	347	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	809	-	68	382
Mov Cap-2 Maneuver	-	-	-	-	68	-
Stage 1	-	-	-	-	442	-
Stage 2	-	-	-	-	269	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.5	219.9
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	141	-	-	809	-
HCM Lane V/C Ratio	1.252	-	-	0.226	-
HCM Control Delay (s)	219.9	-	-	10.7	-
HCM Lane LOS	F	-	-	B	-
HCM 95th %tile Q(veh)	10.7	-	-	0.9	-

Intersection	
Int Delay, s/veh	255.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	92	601	49	14	786	22	56	8	26	15	5	175
Future Vol, veh/h	92	601	49	14	786	22	56	8	26	15	5	175
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	120	-	-	110	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	80	80	80	80	80	80	80	80	80	80	80	80
Heavy Vehicles, %	0	2	0	0	1	0	1	0	2	2	0	1
Mvmt Flow	115	751	61	18	983	28	70	10	33	19	6	219

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1011	0	0	812	0	0	2158	2059	406	1630	2061	983
Stage 1	-	-	-	-	-	-	1012	1012	-	1019	1019	-
Stage 2	-	-	-	-	-	-	1146	1047	-	611	1042	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.315	6.5	6.93	7.33	6.5	6.215
Critical Hdwy Stg 1	-	-	-	-	-	-	6.515	5.5	-	6.13	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.115	5.5	-	6.53	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5095	4	3.319	3.519	4	3.3095
Pot Cap-1 Maneuver	694	-	-	823	-	-	~ 31	56	595	74	56	303
Stage 1	-	-	-	-	-	-	258	319	-	285	317	-
Stage 2	-	-	-	-	-	-	243	308	-	449	309	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	694	-	-	823	-	-	~ 7	46	595	50	46	303
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 7	46	-	50	46	-
Stage 1	-	-	-	-	-	-	215	266	-	238	310	-
Stage 2	-	-	-	-	-	-	~ 65	301	-	341	258	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.4	0.2	$ 4820.2	188.2
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	11	694	-	-	823	-	-	198
HCM Lane V/C Ratio	10.227	0.166	-	-	0.021	-	-	1.231
HCM Control Delay (s)	$ 4820.2	11.2	-	-	9.5	-	-	188.2
HCM Lane LOS	F	B	-	-	A	-	-	F
HCM 95th %tile Q(veh)	15.4	0.6	-	-	0.1	-	-	12.8

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Intersection Delay, s/veh	56.3
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	30	286	44	88	236	16	76	119	212	49	183	14
Future Vol, veh/h	30	286	44	88	236	16	76	119	212	49	183	14
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Heavy Vehicles, %	0	2	1	1	3	0	3	0	2	2	1	3
Mvmt Flow	36	345	53	106	284	19	92	143	255	59	220	17
Number of Lanes	0	1	0	0	1	0	0	1	1	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	2	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	1	1	1
HCM Control Delay	88.1	72.4	25.5	38.6
HCM LOS	F	F	D	E

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1
Vol Left, %	39%	0%	8%	26%	20%
Vol Thru, %	61%	0%	79%	69%	74%
Vol Right, %	0%	100%	12%	5%	6%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	195	212	360	340	246
LT Vol	76	0	30	88	49
Through Vol	119	0	286	236	183
RT Vol	0	212	44	16	14
Lane Flow Rate	235	255	434	410	296
Geometry Grp	7	7	2	2	5
Degree of Util (X)	0.619	0.604	1.05	0.988	0.771
Departure Headway (Hd)	9.753	8.766	8.712	8.948	9.664
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	374	414	421	410	376
Service Time	7.453	6.466	6.712	6.948	7.664
HCM Lane V/C Ratio	0.628	0.616	1.031	1	0.787
HCM Control Delay	27.1	24	88.1	72.4	38.6
HCM Lane LOS	D	C	F	F	E
HCM 95th-tile Q	4	3.8	14.1	11.9	6.3



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	193	329	120	195	497	50	89	240	47	77	349	179
Future Volume (veh/h)	193	329	120	195	497	50	89	240	47	77	349	179
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1885	1870	1885	1870	1870	1870	1870	1885
Adj Flow Rate, veh/h	230	392	143	232	592	60	106	286	56	92	415	213
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Percent Heavy Veh, %	2	2	2	2	1	2	1	2	2	2	2	1
Cap, veh/h	273	454	385	252	828	367	137	912	176	118	678	344
Arrive On Green	0.15	0.24	0.24	0.14	0.23	0.23	0.08	0.31	0.31	0.07	0.30	0.30
Sat Flow, veh/h	1781	1870	1585	1781	3582	1585	1795	2970	574	1781	2281	1158
Grp Volume(v), veh/h	230	392	143	232	592	60	106	169	173	92	322	306
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1791	1585	1795	1777	1767	1781	1777	1662
Q Serve(g_s), s	9.3	14.9	5.6	9.5	11.3	2.2	4.3	5.4	5.6	3.8	11.6	11.8
Cycle Q Clear(g_c), s	9.3	14.9	5.6	9.5	11.3	2.2	4.3	5.4	5.6	3.8	11.6	11.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.32	1.00		0.70
Lane Grp Cap(c), veh/h	273	454	385	252	828	367	137	545	542	118	528	494
V/C Ratio(X)	0.84	0.86	0.37	0.92	0.71	0.16	0.78	0.31	0.32	0.78	0.61	0.62
Avail Cap(c_a), veh/h	324	541	459	252	892	395	230	545	542	173	528	494
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.6	26.9	23.4	31.5	26.3	22.8	33.7	19.7	19.8	34.1	22.4	22.5
Incr Delay (d2), s/veh	15.9	11.9	0.6	36.2	2.5	0.2	9.0	1.5	1.5	12.7	5.2	5.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.9	7.5	2.0	6.4	4.8	0.8	2.1	2.3	2.3	1.9	5.1	4.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	46.5	38.8	24.0	67.7	28.8	23.0	42.7	21.2	21.3	46.8	27.6	28.2
LnGrp LOS	D	D	C	E	C	C	D	C	C	D	C	C
Approach Vol, veh/h		765			884			448			720	
Approach Delay, s/veh		38.3			38.6			26.3			30.3	
Approach LOS		D			D			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.4	27.3	15.0	22.5	10.2	26.6	15.9	21.7
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	7.3	22.8	10.5	21.5	9.5	20.5	13.5	18.5
Max Q Clear Time (g_c+I1), s	5.8	7.6	11.5	16.9	6.3	13.8	11.3	13.3
Green Ext Time (p_c), s	0.0	1.6	0.0	1.1	0.1	2.0	0.1	1.8

Intersection Summary	
HCM 6th Ctrl Delay	34.5
HCM 6th LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	207	48	115	4	37	4	51	421	9	2	420	102
Future Volume (veh/h)	207	48	115	4	37	4	51	421	9	2	420	102
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1796	1870	1693	1693	1841	1796	1841	1796	1870	1870	1693	1841
Adj Flow Rate, veh/h	249	58	139	5	45	5	61	507	11	2	506	123
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Percent Heavy Veh, %	7	2	14	14	4	7	4	7	2	2	14	4
Cap, veh/h	282	118	282	19	147	16	138	782	690	9	612	564
Arrive On Green	0.16	0.24	0.24	0.01	0.09	0.09	0.08	0.44	0.44	0.00	0.36	0.36
Sat Flow, veh/h	1711	489	1171	1612	1627	181	1753	1796	1585	1781	1693	1560
Grp Volume(v), veh/h	249	0	197	5	0	50	61	507	11	2	506	123
Grp Sat Flow(s),veh/h/ln	1711	0	1660	1612	0	1808	1753	1796	1585	1781	1693	1560
Q Serve(g_s), s	12.6	0.0	9.1	0.3	0.0	2.3	2.9	19.7	0.3	0.1	24.1	4.8
Cycle Q Clear(g_c), s	12.6	0.0	9.1	0.3	0.0	2.3	2.9	19.7	0.3	0.1	24.1	4.8
Prop In Lane	1.00		0.71	1.00		0.10	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	282	0	400	19	0	163	138	782	690	9	612	564
V/C Ratio(X)	0.88	0.00	0.49	0.26	0.00	0.31	0.44	0.65	0.02	0.23	0.83	0.22
Avail Cap(c_a), veh/h	295	0	400	275	0	418	299	782	690	303	709	653
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.2	0.0	29.0	43.4	0.0	37.7	38.9	19.7	14.2	43.9	25.8	19.6
Incr Delay (d2), s/veh	23.7	0.0	2.9	2.7	0.0	3.2	0.8	4.1	0.0	4.9	12.2	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.7	0.0	3.6	0.1	0.0	1.1	1.2	8.2	0.1	0.1	10.8	1.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	59.9	0.0	31.9	46.1	0.0	41.0	39.8	23.8	14.3	48.8	37.9	20.5
LnGrp LOS	E	A	C	D	A	D	D	C	B	D	D	C
Approach Vol, veh/h		446			55			579			631	
Approach Delay, s/veh		47.5			41.4			25.3			34.6	
Approach LOS		D			D			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.3	46.5	6.9	28.8	12.9	39.9	20.3	15.5
Change Period (Y+Rc), s	5.9	7.9	5.9	7.5	5.9	7.9	* 5.7	7.5
Max Green Setting (Gmax), s	15.1	37.1	15.1	20.5	15.1	37.1	* 15	20.5
Max Q Clear Time (g_c+I1), s	2.1	21.7	2.3	11.1	4.9	26.1	14.6	4.3
Green Ext Time (p_c), s	0.0	6.6	0.0	1.3	0.0	5.9	0.0	0.3

Intersection Summary	
HCM 6th Ctrl Delay	35.0
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	20.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	279	18	313	138	28	339
Future Vol, veh/h	279	18	313	138	28	339
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	150	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	1	0	0	2
Mvmt Flow	303	20	340	150	30	368

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	843	245	0	0	490	0
Stage 1	415	-	-	-	-	-
Stage 2	428	-	-	-	-	-
Critical Hdwy	6.6	6.9	-	-	4.1	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	321	762	-	-	1084	-
Stage 1	641	-	-	-	-	-
Stage 2	662	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	312	762	-	-	1084	-
Mov Cap-2 Maneuver	312	-	-	-	-	-
Stage 1	641	-	-	-	-	-
Stage 2	643	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	77.2	0	0.6
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	312	762	1084	-
HCM Lane V/C Ratio	-	-	0.972	0.026	0.028	-
HCM Control Delay (s)	-	-	81.6	9.8	8.4	-
HCM Lane LOS	-	-	F	A	A	-
HCM 95th %tile Q(veh)	-	-	10.1	0.1	0.1	-

Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	5	436	68	0	609
Future Vol, veh/h	0	5	436	68	0	609
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	1	0	0	2
Mvmt Flow	0	5	474	74	0	662

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	274	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.9	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	-	-
Pot Cap-1 Maneuver	0	730	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	730	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	730	-
HCM Lane V/C Ratio	-	-	0.007	-
HCM Control Delay (s)	-	-	10	-
HCM Lane LOS	-	-	B	-
HCM 95th %tile Q(veh)	-	-	0	-

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑↱			↱
Traffic Vol, veh/h	0	539	847	99	0	70
Future Vol, veh/h	0	539	847	99	0	70
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	2	1	0	0	0
Mvmt Flow	0	586	921	108	0	76

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	515
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.3
Pot Cap-1 Maneuver	0	-	-	-	0	510
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	510
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	13.3
HCM LOS			B

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	510
HCM Lane V/C Ratio	-	-	-	0.149
HCM Control Delay (s)	-	-	-	13.3
HCM Lane LOS	-	-	-	B
HCM 95th %tile Q(veh)	-	-	-	0.5

Intersection	
Int Delay, s/veh	186

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	122	417	837	128	257	108
Future Vol, veh/h	122	417	837	128	257	108
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	150	-	-	-	0	100
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	2	1	0	0	0
Mvmt Flow	133	453	910	139	279	117

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1049	0	-	0	1699	525
Stage 1	-	-	-	-	980	-
Stage 2	-	-	-	-	719	-
Critical Hdwy	4.1	-	-	-	6.6	6.9
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	671	-	-	-	~ 93	502
Stage 1	-	-	-	-	329	-
Stage 2	-	-	-	-	486	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	671	-	-	-	~ 75	502
Mov Cap-2 Maneuver	-	-	-	-	~ 75	-
Stage 1	-	-	-	-	~ 264	-
Stage 2	-	-	-	-	486	-

Approach	EB	WB	SB
HCM Control Delay, s	2.6	0	$ 948.8
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	671	-	-	-	75	502
HCM Lane V/C Ratio	0.198	-	-	-	3.725	0.234
HCM Control Delay (s)	11.7	-	-	-	$ 1341.5	14.3
HCM Lane LOS	B	-	-	-	F	B
HCM 95th %tile Q(veh)	0.7	-	-	-	29.1	0.9

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	0.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	243	3	0	308	0	4
Future Vol, veh/h	243	3	0	308	0	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	6	0	0	3	0	0
Mvmt Flow	264	3	0	335	0	4

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	134
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.3
Pot Cap-1 Maneuver	-	-	0	-	0	897
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	897
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	9
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	897	-	-	-
HCM Lane V/C Ratio	0.005	-	-	-
HCM Control Delay (s)	9	-	-	-
HCM Lane LOS	A	-	-	-
HCM 95th %tile Q(veh)	0	-	-	-

Intersection	
Int Delay, s/veh	1.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	245	2	51	304	4	50
Future Vol, veh/h	245	2	51	304	4	50
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	150	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	6	0	0	3	0	0
Mvmt Flow	266	2	55	330	4	54

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	268	0	707	134
Stage 1	-	-	-	-	267	-
Stage 2	-	-	-	-	440	-
Critical Hdwy	-	-	4.1	-	6.6	6.9
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1307	-	389	897
Stage 1	-	-	-	-	760	-
Stage 2	-	-	-	-	653	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1307	-	373	897
Mov Cap-2 Maneuver	-	-	-	-	373	-
Stage 1	-	-	-	-	760	-
Stage 2	-	-	-	-	626	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.1	9.8
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	812	-	-	1307	-
HCM Lane V/C Ratio	0.072	-	-	0.042	-
HCM Control Delay (s)	9.8	-	-	7.9	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0.2	-	-	0.1	-

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑↱			↱
Traffic Vol, veh/h	0	718	994	15	0	67
Future Vol, veh/h	0	718	994	15	0	67
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	2	1	0	0	0
Mvmt Flow	0	780	1080	16	0	73

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	548
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.3
Pot Cap-1 Maneuver	0	-	-	-	0	485
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	485
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	13.7
HCM LOS			B

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	485
HCM Lane V/C Ratio	-	-	-	0.15
HCM Control Delay (s)	-	-	-	13.7
HCM Lane LOS	-	-	-	B
HCM 95th %tile Q(veh)	-	-	-	0.5

Intersection	
Intersection Delay, s/veh	7.9
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	2	55	8	5	45	8	3	67	9	2	81	2
Future Vol, veh/h	2	55	8	5	45	8	3	67	9	2	81	2
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles, %	0	0	0	2	2	2	3	3	3	0	0	0
Mvmt Flow	2	65	9	6	53	9	4	79	11	2	95	2
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	7.8	7.8	7.9	7.9
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	4%	3%	9%	2%
Vol Thru, %	85%	85%	78%	95%
Vol Right, %	11%	12%	14%	2%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	79	65	58	85
LT Vol	3	2	5	2
Through Vol	67	55	45	81
RT Vol	9	8	8	2
Lane Flow Rate	93	76	68	100
Geometry Grp	1	1	1	1
Degree of Util (X)	0.112	0.092	0.083	0.12
Departure Headway (Hd)	4.327	4.343	4.387	4.32
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	831	827	819	833
Service Time	2.338	2.356	2.401	2.331
HCM Lane V/C Ratio	0.112	0.092	0.083	0.12
HCM Control Delay	7.9	7.8	7.8	7.9
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.4	0.3	0.3	0.4

Intersection	
Intersection Delay, s/veh	8.9
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	3	138	4	43	67	18	6	62	92	24	71	3
Future Vol, veh/h	3	138	4	43	67	18	6	62	92	24	71	3
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	3	155	4	48	75	20	7	70	103	27	80	3
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	9.1	8.9	8.7	8.8
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	4%	2%	34%	24%
Vol Thru, %	39%	95%	52%	72%
Vol Right, %	57%	3%	14%	3%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	160	145	128	98
LT Vol	6	3	43	24
Through Vol	62	138	67	71
RT Vol	92	4	18	3
Lane Flow Rate	180	163	144	110
Geometry Grp	1	1	1	1
Degree of Util (X)	0.221	0.214	0.19	0.149
Departure Headway (Hd)	4.433	4.736	4.755	4.875
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	805	754	751	732
Service Time	2.48	2.785	2.805	2.926
HCM Lane V/C Ratio	0.224	0.216	0.192	0.15
HCM Control Delay	8.7	9.1	8.9	8.8
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.8	0.8	0.7	0.5

Intersection	
Intersection Delay, s/veh	10.3
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	2	54	10	56	51	21	16	188	53	50	185	4
Future Vol, veh/h	2	54	10	56	51	21	16	188	53	50	185	4
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	0	0	0	1	1	1	1	1	1	1	1	1
Mvmt Flow	2	57	11	59	54	22	17	198	56	53	195	4
Number of Lanes	0	1	0	0	1	0	0	1	1	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	1	1
HCM Control Delay	9	9.7	10	11.3
HCM LOS	A	A	A	B

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	8%	0%	3%	44%	21%	0%
Vol Thru, %	92%	0%	82%	40%	79%	0%
Vol Right, %	0%	100%	15%	16%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	204	53	66	128	235	4
LT Vol	16	0	2	56	50	0
Through Vol	188	0	54	51	185	0
RT Vol	0	53	10	21	0	4
Lane Flow Rate	215	56	69	135	247	4
Geometry Grp	7	7	2	2	7	7
Degree of Util (X)	0.319	0.071	0.103	0.198	0.373	0.005
Departure Headway (Hd)	5.347	4.602	5.315	5.295	5.427	4.614
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	668	770	666	671	658	767
Service Time	3.125	2.379	3.41	3.377	3.206	2.392
HCM Lane V/C Ratio	0.322	0.073	0.104	0.201	0.375	0.005
HCM Control Delay	10.6	7.7	9	9.7	11.4	7.4
HCM Lane LOS	B	A	A	A	B	A
HCM 95th-tile Q	1.4	0.2	0.3	0.7	1.7	0



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	56	280	55	350	259	28	74	505	498	26	336	54
Future Volume (veh/h)	56	280	55	350	259	28	74	505	498	26	336	54
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	59	295	58	368	273	29	78	532	524	27	354	57
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	1	1	1	1	1	1
Cap, veh/h	91	360	305	280	558	473	105	540	482	53	514	436
Arrive On Green	0.05	0.19	0.19	0.15	0.29	0.29	0.06	0.30	0.30	0.03	0.27	0.27
Sat Flow, veh/h	1810	1900	1610	1810	1900	1610	1795	1791	1598	1795	1885	1598
Grp Volume(v), veh/h	59	295	58	368	273	29	78	532	524	27	354	57
Grp Sat Flow(s),veh/h/ln	1810	1900	1610	1810	1900	1610	1795	1791	1598	1795	1885	1598
Q Serve(g_s), s	2.1	9.6	2.0	10.0	7.7	0.8	2.8	19.1	19.5	1.0	10.9	1.7
Cycle Q Clear(g_c), s	2.1	9.6	2.0	10.0	7.7	0.8	2.8	19.1	19.5	1.0	10.9	1.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	91	360	305	280	558	473	105	540	482	53	514	436
V/C Ratio(X)	0.65	0.82	0.19	1.32	0.49	0.06	0.75	0.99	1.09	0.51	0.69	0.13
Avail Cap(c_a), veh/h	280	573	485	280	573	485	278	540	482	278	568	482
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.1	25.1	22.0	27.3	18.8	16.4	30.0	22.5	22.6	30.9	21.1	17.7
Incr Delay (d2), s/veh	2.8	2.4	0.1	165.1	0.2	0.0	3.9	34.8	67.0	2.7	2.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	4.0	0.7	16.6	2.9	0.3	1.2	12.0	15.2	0.4	4.3	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	33.0	27.5	22.1	192.5	19.1	16.5	33.9	57.3	89.6	33.7	23.4	17.8
LnGrp LOS	C	C	C	F	B	B	C	E	F	C	C	B
Approach Vol, veh/h		412			670			1134			438	
Approach Delay, s/veh		27.5			114.2			70.6			23.3	
Approach LOS		C			F			E			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.9	25.0	15.0	17.8	8.8	23.2	8.3	24.5
Change Period (Y+Rc), s	5.0	5.5	5.0	5.5	5.0	5.5	5.0	5.5
Max Green Setting (Gmax), s	10.0	19.5	10.0	19.5	10.0	19.5	10.0	19.5
Max Q Clear Time (g_c+I1), s	13.0	21.5	12.0	11.6	4.8	12.9	4.1	9.7
Green Ext Time (p_c), s	0.0	0.0	0.0	0.6	0.0	0.7	0.0	0.6

Intersection Summary	
HCM 6th Ctrl Delay	67.1
HCM 6th LOS	E



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	124	287	70	213	311	53	124	1092	259	64	623	88
Future Volume (veh/h)	124	287	70	213	311	53	124	1092	259	64	623	88
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	136	315	77	234	342	58	136	1200	285	70	685	97
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	1	1	1	1	1	1	1	1	1	1	1	1
Cap, veh/h	254	483	215	352	584	261	254	1437	641	197	1378	615
Arrive On Green	0.07	0.13	0.13	0.10	0.16	0.16	0.07	0.40	0.40	0.06	0.38	0.38
Sat Flow, veh/h	3483	3582	1598	3483	3582	1598	3483	3582	1598	3483	3582	1598
Grp Volume(v), veh/h	136	315	77	234	342	58	136	1200	285	70	685	97
Grp Sat Flow(s),veh/h/ln	1742	1791	1598	1742	1791	1598	1742	1791	1598	1742	1791	1598
Q Serve(g_s), s	2.3	5.2	2.7	4.0	5.5	2.0	2.3	18.7	8.1	1.2	9.0	2.5
Cycle Q Clear(g_c), s	2.3	5.2	2.7	4.0	5.5	2.0	2.3	18.7	8.1	1.2	9.0	2.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	254	483	215	352	584	261	254	1437	641	197	1378	615
V/C Ratio(X)	0.54	0.65	0.36	0.66	0.59	0.22	0.54	0.84	0.44	0.36	0.50	0.16
Avail Cap(c_a), veh/h	1151	1733	773	1432	2021	902	1151	1733	773	1151	1733	773
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.7	25.4	24.4	26.9	24.0	22.5	27.7	16.7	13.5	28.2	14.5	12.5
Incr Delay (d2), s/veh	0.7	0.6	0.4	0.8	0.3	0.2	0.7	2.7	0.2	0.4	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	2.0	1.0	1.6	2.1	0.7	0.9	6.6	2.4	0.5	3.0	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	28.4	26.0	24.8	27.7	24.4	22.7	28.4	19.4	13.7	28.6	14.6	12.5
LnGrp LOS	C	C	C	C	C	C	C	B	B	C	B	B
Approach Vol, veh/h		528			634			1621			852	
Approach Delay, s/veh		26.4			25.4			19.1			15.5	
Approach LOS		C			C			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.0	29.9	10.8	13.4	9.0	28.9	9.0	15.1
Change Period (Y+Rc), s	4.5	5.0	4.5	5.0	4.5	5.0	4.5	5.0
Max Green Setting (Gmax), s	20.5	30.0	25.5	30.0	20.5	30.0	20.5	35.0
Max Q Clear Time (g_c+I1), s	3.3	20.7	6.0	7.2	4.3	11.0	4.3	7.5
Green Ext Time (p_c), s	0.0	4.2	0.4	1.2	0.1	2.8	0.1	1.4

Intersection Summary	
HCM 6th Ctrl Delay	20.5
HCM 6th LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	46	61	20	53	91	116	52	1204	93	70	827	41
Future Volume (veh/h)	46	61	20	53	91	116	52	1204	93	70	827	41
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	53	70	23	61	105	133	60	1384	107	80	951	47
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	0	0	0	0	0	0	1	1	1	1	1	1
Cap, veh/h	98	236	200	108	247	209	106	1214	541	127	1256	560
Arrive On Green	0.05	0.12	0.12	0.06	0.13	0.13	0.06	0.34	0.34	0.07	0.35	0.35
Sat Flow, veh/h	1810	1900	1610	1810	1900	1610	1795	3582	1598	1795	3582	1598
Grp Volume(v), veh/h	53	70	23	61	105	133	60	1384	107	80	951	47
Grp Sat Flow(s),veh/h/ln	1810	1900	1610	1810	1900	1610	1795	1791	1598	1795	1791	1598
Q Serve(g_s), s	1.3	1.5	0.6	1.5	2.3	3.5	1.4	15.0	2.1	1.9	10.4	0.9
Cycle Q Clear(g_c), s	1.3	1.5	0.6	1.5	2.3	3.5	1.4	15.0	2.1	1.9	10.4	0.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	98	236	200	108	247	209	106	1214	541	127	1256	560
V/C Ratio(X)	0.54	0.30	0.11	0.57	0.43	0.64	0.57	1.14	0.20	0.63	0.76	0.08
Avail Cap(c_a), veh/h	654	1073	909	450	858	727	446	1214	541	243	1256	560
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.4	17.6	17.2	20.3	17.7	18.3	20.3	14.6	10.4	20.0	12.7	9.6
Incr Delay (d2), s/veh	1.7	0.3	0.1	1.7	0.4	1.2	1.8	73.6	0.1	1.9	2.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.6	0.2	0.6	0.9	1.2	0.5	16.6	0.6	0.7	3.3	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	22.1	17.9	17.3	22.0	18.2	19.5	22.0	88.2	10.4	21.9	15.1	9.6
LnGrp LOS	C	B	B	C	B	B	C	F	B	C	B	A
Approach Vol, veh/h		146			299			1551			1078	
Approach Delay, s/veh		19.3			19.5			80.3			15.4	
Approach LOS		B			B			F			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.1	20.0	6.6	10.5	6.6	20.5	6.4	10.7
Change Period (Y+Rc), s	4.0	5.0	4.0	5.0	4.0	5.0	4.0	5.0
Max Green Setting (Gmax), s	6.0	15.0	11.0	25.0	11.0	10.0	16.0	20.0
Max Q Clear Time (g_c+I1), s	3.3	17.0	3.5	3.5	3.4	12.4	3.3	5.5
Green Ext Time (p_c), s	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.3

Intersection Summary	
HCM 6th Ctrl Delay	48.7
HCM 6th LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	16	16	28	19	67	239	17	1051	6	85	814	11
Future Volume (veh/h)	16	16	28	19	67	239	17	1051	6	85	814	11
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	17	17	30	21	73	260	18	1142	7	92	885	12
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	1	1	1	1	1	1
Cap, veh/h	38	378	320	46	386	327	40	1142	509	133	1329	593
Arrive On Green	0.02	0.20	0.20	0.03	0.20	0.20	0.02	0.32	0.32	0.07	0.37	0.37
Sat Flow, veh/h	1810	1900	1610	1810	1900	1610	1795	3582	1598	1795	3582	1598
Grp Volume(v), veh/h	17	17	30	21	73	260	18	1142	7	92	885	12
Grp Sat Flow(s),veh/h/ln	1810	1900	1610	1810	1900	1610	1795	1791	1598	1795	1791	1598
Q Serve(g_s), s	0.4	0.3	0.7	0.5	1.5	7.2	0.5	15.0	0.1	2.4	9.7	0.2
Cycle Q Clear(g_c), s	0.4	0.3	0.7	0.5	1.5	7.2	0.5	15.0	0.1	2.4	9.7	0.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	38	378	320	46	386	327	40	1142	509	133	1329	593
V/C Ratio(X)	0.44	0.05	0.09	0.45	0.19	0.80	0.45	1.00	0.01	0.69	0.67	0.02
Avail Cap(c_a), veh/h	615	1010	856	423	808	685	420	1142	509	229	1329	593
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.8	15.2	15.4	22.6	15.5	17.8	22.7	16.0	11.0	21.2	12.4	9.4
Incr Delay (d2), s/veh	3.0	0.0	0.0	2.6	0.1	1.7	2.9	26.6	0.0	2.4	1.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.1	0.2	0.2	0.6	0.2	0.2	8.7	0.0	0.9	2.9	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	25.7	15.3	15.4	25.2	15.6	19.5	25.6	42.6	11.0	23.6	13.4	9.4
LnGrp LOS	C	B	B	C	B	B	C	D	B	C	B	A
Approach Vol, veh/h		64			354			1167			989	
Approach Delay, s/veh		18.1			19.0			42.2			14.3	
Approach LOS		B			B			D			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.5	20.0	5.2	14.3	5.0	22.4	5.0	14.6
Change Period (Y+Rc), s	4.0	5.0	4.0	5.0	4.0	5.0	4.0	5.0
Max Green Setting (Gmax), s	6.0	15.0	11.0	25.0	11.0	10.0	16.0	20.0
Max Q Clear Time (g_c+I1), s	4.4	17.0	2.5	2.7	2.5	11.7	2.4	9.2
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4

Intersection Summary	
HCM 6th Ctrl Delay	27.7
HCM 6th LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	330	314	145	320	435	149	171	606	89	164	665	123
Future Volume (veh/h)	330	314	145	320	435	149	171	606	89	164	665	123
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	333	317	146	323	439	151	173	612	90	166	672	124
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	1	1	1	1	1	1	1	1	1	1	1	1
Cap, veh/h	456	645	288	446	635	283	218	894	399	210	877	391
Arrive On Green	0.13	0.18	0.18	0.13	0.18	0.18	0.12	0.25	0.25	0.12	0.24	0.24
Sat Flow, veh/h	3483	3582	1598	3483	3582	1598	1795	3582	1598	1795	3582	1598
Grp Volume(v), veh/h	333	317	146	323	439	151	173	612	90	166	672	124
Grp Sat Flow(s),veh/h/ln	1742	1791	1598	1742	1791	1598	1795	1791	1598	1795	1791	1598
Q Serve(g_s), s	5.1	4.4	4.6	4.9	6.4	4.8	5.2	8.6	2.5	5.0	9.6	3.5
Cycle Q Clear(g_c), s	5.1	4.4	4.6	4.9	6.4	4.8	5.2	8.6	2.5	5.0	9.6	3.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	456	645	288	446	635	283	218	894	399	210	877	391
V/C Ratio(X)	0.73	0.49	0.51	0.72	0.69	0.53	0.79	0.68	0.23	0.79	0.77	0.32
Avail Cap(c_a), veh/h	1322	1618	722	1322	1618	722	681	1618	722	681	1618	722
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.1	20.4	20.5	23.2	21.3	20.7	23.6	18.8	16.5	23.8	19.4	17.1
Incr Delay (d2), s/veh	0.9	0.2	0.5	0.8	0.5	0.6	2.5	0.3	0.1	2.5	0.5	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	1.6	1.6	1.9	2.4	1.6	2.1	3.1	0.8	2.0	3.4	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	24.0	20.6	21.0	24.0	21.8	21.3	26.1	19.1	16.6	26.3	19.9	17.3
LnGrp LOS	C	C	C	C	C	C	C	B	B	C	B	B
Approach Vol, veh/h		796			913			875			962	
Approach Delay, s/veh		22.1			22.5			20.3			20.7	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.5	18.8	11.1	15.0	10.7	18.6	11.2	14.8
Change Period (Y+Rc), s	4.0	5.0	4.0	5.0	4.0	5.0	4.0	5.0
Max Green Setting (Gmax), s	21.0	25.0	21.0	25.0	21.0	25.0	21.0	25.0
Max Q Clear Time (g_c+I1), s	7.0	10.6	6.9	6.6	7.2	11.6	7.1	8.4
Green Ext Time (p_c), s	0.0	1.8	0.2	1.0	0.1	1.9	0.2	1.5

Intersection Summary	
HCM 6th Ctrl Delay	21.4
HCM 6th LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	107	67	191	420	126	55	348	687	211	75	874	69
Future Volume (veh/h)	107	67	191	420	126	55	348	687	211	75	874	69
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	92	101	203	447	134	59	370	731	224	80	930	73
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	1	1	1	1	1	1
Cap, veh/h	289	303	257	601	208	91	485	1299	393	104	1288	400
Arrive On Green	0.16	0.16	0.16	0.17	0.17	0.17	0.14	0.33	0.33	0.06	0.25	0.25
Sat Flow, veh/h	1810	1900	1610	3619	1250	551	3483	3917	1186	1795	5147	1598
Grp Volume(v), veh/h	92	101	203	447	0	193	370	639	316	80	930	73
Grp Sat Flow(s),veh/h/ln	1810	1900	1610	1810	0	1801	1742	1716	1672	1795	1716	1598
Q Serve(g_s), s	3.2	3.3	8.5	8.3	0.0	7.0	7.2	10.8	10.9	3.1	11.6	2.5
Cycle Q Clear(g_c), s	3.2	3.3	8.5	8.3	0.0	7.0	7.2	10.8	10.9	3.1	11.6	2.5
Prop In Lane	1.00		1.00	1.00		0.31	1.00		0.71	1.00		1.00
Lane Grp Cap(c), veh/h	289	303	257	601	0	299	485	1138	554	104	1288	400
V/C Ratio(X)	0.32	0.33	0.79	0.74	0.00	0.65	0.76	0.56	0.57	0.77	0.72	0.18
Avail Cap(c_a), veh/h	644	676	573	1288	0	641	1240	1465	714	639	2198	682
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.1	26.2	28.4	27.9	0.0	27.4	29.1	19.3	19.4	32.6	24.1	20.7
Incr Delay (d2), s/veh	0.2	0.2	2.1	0.7	0.0	0.9	0.9	0.2	0.3	4.4	0.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	1.4	3.2	3.4	0.0	2.9	2.8	3.8	3.8	1.4	4.3	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.4	26.4	30.4	28.6	0.0	28.2	30.1	19.5	19.7	37.0	24.4	20.8
LnGrp LOS	C	C	C	C	A	C	C	B	B	D	C	C
Approach Vol, veh/h		396			640			1325			1083	
Approach Delay, s/veh		28.5			28.5			22.5			25.1	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	9.1	28.3		16.2	14.8	22.6		16.7
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0
Max Green Setting (Gmax), s	25.0	30.0		25.0	25.0	30.0		25.0
Max Q Clear Time (g_c+I1), s	5.1	12.9		10.5	9.2	13.6		10.3
Green Ext Time (p_c), s	0.1	3.8		0.7	0.6	4.0		1.4

Intersection Summary	
HCM 6th Ctrl Delay	25.1
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	139	0	427	44	990	0	0	1029	573
Future Volume (veh/h)	0	0	0	139	0	427	44	990	0	0	1029	573
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1885	1885	1885	1885	1885	0	0	1885	1885
Adj Flow Rate, veh/h				101	0	518	48	1076	0	0	1118	623
Peak Hour Factor				0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %				1	1	1	1	1	0	0	1	1
Cap, veh/h				340	0	605	343	2474	0	0	2254	700
Arrive On Green				0.19	0.00	0.19	0.38	1.00	0.00	0.00	0.44	0.44
Sat Flow, veh/h				1795	0	3195	1795	3676	0	0	5316	1598
Grp Volume(v), veh/h				101	0	518	48	1076	0	0	1118	623
Grp Sat Flow(s),veh/h/ln				1795	0	1598	1795	1791	0	0	1716	1598
Q Serve(g_s), s				5.3	0.0	17.3	1.9	0.0	0.0	0.0	17.2	39.5
Cycle Q Clear(g_c), s				5.3	0.0	17.3	1.9	0.0	0.0	0.0	17.2	39.5
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				340	0	605	343	2474	0	0	2254	700
V/C Ratio(X)				0.30	0.00	0.86	0.14	0.43	0.00	0.00	0.50	0.89
Avail Cap(c_a), veh/h				369	0	656	343	2474	0	0	2302	715
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.90	0.90	0.00	0.00	0.69	0.69
Uniform Delay (d), s/veh				38.3	0.0	43.2	28.1	0.0	0.0	0.0	22.2	28.5
Incr Delay (d2), s/veh				1.2	0.0	12.1	0.1	0.5	0.0	0.0	0.5	11.6
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				2.4	0.0	7.7	0.8	0.2	0.0	0.0	6.7	16.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				39.5	0.0	55.2	28.2	0.5	0.0	0.0	22.7	40.1
LnGrp LOS				D	A	E	C	A	A	A	C	D
Approach Vol, veh/h					619			1124			1741	
Approach Delay, s/veh					52.7			1.7			29.0	
Approach LOS					D			A			C	

Timer - Assigned Phs	2		5	6		8
Phs Duration (G+Y+Rc), s	82.8		27.8	55.0		27.2
Change Period (Y+Rc), s	6.8		6.8	* 6.8		6.4
Max Green Setting (Gmax), s	74.2		19.3	* 49		22.6
Max Q Clear Time (g_c+I1), s	2.0		3.9	41.5		19.3
Green Ext Time (p_c), s	34.8		0.0	6.7		1.6

Intersection Summary	
HCM 6th Ctrl Delay	24.4
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	452	0	33	0	0	0	0	583	100	0	685	483
Future Volume (veh/h)	452	0	33	0	0	0	0	583	100	0	685	483
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1885	0	1885				0	1885	1885	0	1885	1885
Adj Flow Rate, veh/h	481	0	35				0	620	0	0	729	0
Peak Hour Factor	0.94	0.94	0.94				0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	1	0	1				0	1	1	0	1	1
Cap, veh/h	578	0	265				0	2603		0	2603	
Arrive On Green	0.17	0.00	0.17				0.00	0.73	0.00	0.00	0.24	0.00
Sat Flow, veh/h	3483	0	1598				0	3676	1598	0	3676	1598
Grp Volume(v), veh/h	481	0	35				0	620	0	0	729	0
Grp Sat Flow(s),veh/h/ln	1742	0	1598				0	1791	1598	0	1791	1598
Q Serve(g_s), s	14.7	0.0	2.1				0.0	6.3	0.0	0.0	18.2	0.0
Cycle Q Clear(g_c), s	14.7	0.0	2.1				0.0	6.3	0.0	0.0	18.2	0.0
Prop In Lane	1.00		1.00				0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h	578	0	265				0	2603		0	2603	
V/C Ratio(X)	0.83	0.00	0.13				0.00	0.24		0.00	0.28	
Avail Cap(c_a), veh/h	665	0	305				0	2603		0	2603	
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	0.33	0.33
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	0.00	0.00	0.94	0.00
Uniform Delay (d), s/veh	44.4	0.0	39.1				0.0	5.0	0.0	0.0	18.4	0.0
Incr Delay (d2), s/veh	10.0	0.0	0.5				0.0	0.2	0.0	0.0	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.0	0.0	0.8				0.0	1.9	0.0	0.0	8.8	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	54.4	0.0	39.7				0.0	5.2	0.0	0.0	18.6	0.0
LnGrp LOS	D	A	D				A	A		A	B	
Approach Vol, veh/h		516						620			729	
Approach Delay, s/veh		53.4						5.2			18.6	
Approach LOS		D						A			B	

Timer - Assigned Phs	2	4	6
Phs Duration (G+Y+Rc), s	86.8	23.2	86.8
Change Period (Y+Rc), s	6.8	5.0	6.8
Max Green Setting (Gmax), s	77.2	21.0	77.2
Max Q Clear Time (g_c+I1), s	8.3	16.7	20.2
Green Ext Time (p_c), s	11.5	1.5	13.9

Intersection Summary	
HCM 6th Ctrl Delay	23.8
HCM 6th LOS	C

Notes

Unsignalized Delay for [NBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Intersection	
Int Delay, s/veh	2.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	705	36	85	586	34	57
Future Vol, veh/h	705	36	85	586	34	57
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	120	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	1	1	1	1	0	0
Mvmt Flow	727	37	88	604	35	59

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	764	0	1224	746
Stage 1	-	-	-	-	746	-
Stage 2	-	-	-	-	478	-
Critical Hdwy	-	-	4.115	-	6.6	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	-	-	2.2095	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	852	-	187	417
Stage 1	-	-	-	-	472	-
Stage 2	-	-	-	-	595	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	852	-	168	417
Mov Cap-2 Maneuver	-	-	-	-	168	-
Stage 1	-	-	-	-	472	-
Stage 2	-	-	-	-	534	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.2	25.5
HCM LOS			D

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	268	-	-	852	-
HCM Lane V/C Ratio	0.35	-	-	0.103	-
HCM Control Delay (s)	25.5	-	-	9.7	-
HCM Lane LOS	D	-	-	A	-
HCM 95th %tile Q(veh)	1.5	-	-	0.3	-

Intersection	
Int Delay, s/veh	7.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	118	604	51	15	563	36	38	2	10	28	5	91
Future Vol, veh/h	118	604	51	15	563	36	38	2	10	28	5	91
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	120	-	-	110	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	1	1	1	1	1	1	0	0	0	0	0	0
Mvmt Flow	123	629	53	16	586	38	40	2	10	29	5	95

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	624	0	0	682	0	0	1589	1558	341	1180	1546	586
Stage 1	-	-	-	-	-	-	902	902	-	618	618	-
Stage 2	-	-	-	-	-	-	687	656	-	562	928	-
Critical Hdwy	4.115	-	-	4.115	-	-	7.3	6.5	6.9	7.3	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.5	5.5	-
Follow-up Hdwy	2.2095	-	-	2.2095	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	961	-	-	914	-	-	81	114	661	158	116	514
Stage 1	-	-	-	-	-	-	303	359	-	480	484	-
Stage 2	-	-	-	-	-	-	440	465	-	484	349	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	961	-	-	914	-	-	56	98	661	136	99	514
Mov Cap-2 Maneuver	-	-	-	-	-	-	56	98	-	136	99	-
Stage 1	-	-	-	-	-	-	264	313	-	419	475	-
Stage 2	-	-	-	-	-	-	349	457	-	413	304	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.4	0.2	142.1	27.6
HCM LOS			F	D

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	70	961	-	-	914	-	-	286
HCM Lane V/C Ratio	0.744	0.128	-	-	0.017	-	-	0.452
HCM Control Delay (s)	142.1	9.3	-	-	9	-	-	27.6
HCM Lane LOS	F	A	-	-	A	-	-	D
HCM 95th %tile Q(veh)	3.4	0.4	-	-	0.1	-	-	2.2

Intersection	
Intersection Delay, s/veh	12
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	7	136	38	131	155	16	47	91	102	26	137	14
Future Vol, veh/h	7	136	38	131	155	16	47	91	102	26	137	14
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	1	1	1	1	1	1	1	1	1	1	1	1
Mvmt Flow	7	143	40	138	163	17	49	96	107	27	144	15
Number of Lanes	0	1	0	0	1	0	0	1	1	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	2	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	1	1	1
HCM Control Delay	11	13.9	10.6	11.5
HCM LOS	B	B	B	B

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1
Vol Left, %	34%	0%	4%	43%	15%
Vol Thru, %	66%	0%	75%	51%	77%
Vol Right, %	0%	100%	21%	5%	8%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	138	102	181	302	177
LT Vol	47	0	7	131	26
Through Vol	91	0	136	155	137
RT Vol	0	102	38	16	14
Lane Flow Rate	145	107	191	318	186
Geometry Grp	7	7	2	2	5
Degree of Util (X)	0.259	0.165	0.297	0.49	0.305
Departure Headway (Hd)	6.431	5.546	5.607	5.548	5.892
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	556	644	638	649	607
Service Time	4.189	3.304	3.665	3.599	3.953
HCM Lane V/C Ratio	0.261	0.166	0.299	0.49	0.306
HCM Control Delay	11.4	9.4	11	13.9	11.5
HCM Lane LOS	B	A	B	B	B
HCM 95th-tile Q	1	0.6	1.2	2.7	1.3



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	181	348	111	149	404	68	102	357	128	64	274	107
Future Volume (veh/h)	181	348	111	149	404	68	102	357	128	64	274	107
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	185	355	113	152	412	69	104	364	131	65	280	109
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	0	0	0	0	0	1	1	1	1	1	1
Cap, veh/h	232	434	368	193	747	333	135	887	315	94	811	308
Arrive On Green	0.13	0.23	0.23	0.11	0.21	0.21	0.08	0.34	0.34	0.05	0.32	0.32
Sat Flow, veh/h	1810	1900	1610	1810	3610	1610	1795	2592	919	1795	2538	965
Grp Volume(v), veh/h	185	355	113	152	412	69	104	250	245	65	196	193
Grp Sat Flow(s),veh/h/ln	1810	1900	1610	1810	1805	1610	1795	1791	1720	1795	1791	1712
Q Serve(g_s), s	6.6	11.8	3.9	5.5	6.8	2.4	3.8	7.1	7.3	2.4	5.6	5.8
Cycle Q Clear(g_c), s	6.6	11.8	3.9	5.5	6.8	2.4	3.8	7.1	7.3	2.4	5.6	5.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.53	1.00		0.56
Lane Grp Cap(c), veh/h	232	434	368	193	747	333	135	613	589	94	573	547
V/C Ratio(X)	0.80	0.82	0.31	0.79	0.55	0.21	0.77	0.41	0.42	0.69	0.34	0.35
Avail Cap(c_a), veh/h	367	613	520	285	1003	447	256	613	589	194	573	547
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.2	24.4	21.3	29.0	23.6	21.9	30.2	16.7	16.8	31.0	17.3	17.4
Incr Delay (d2), s/veh	6.4	5.9	0.5	8.5	0.6	0.3	9.0	2.0	2.2	8.6	1.6	1.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.0	5.4	1.4	2.7	2.8	0.9	1.9	2.9	2.9	1.2	2.2	2.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	34.6	30.3	21.8	37.5	24.3	22.2	39.2	18.7	19.0	39.6	18.9	19.2
LnGrp LOS	C	C	C	D	C	C	D	B	B	D	B	B
Approach Vol, veh/h		653			633			599			454	
Approach Delay, s/veh		30.1			27.2			22.4			22.0	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.0	27.3	11.6	19.7	9.5	25.8	13.0	18.3
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	7.3	22.8	10.5	21.5	9.5	20.5	13.5	18.5
Max Q Clear Time (g_c+I1), s	4.4	9.3	7.5	13.8	5.8	7.8	8.6	8.8
Green Ext Time (p_c), s	0.0	2.3	0.1	1.4	0.1	1.6	0.2	2.0

Intersection Summary	
HCM 6th Ctrl Delay	25.8
HCM 6th LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	93	30	76	8	41	0	67	457	4	1	419	124
Future Volume (veh/h)	93	30	76	8	41	0	67	457	4	1	419	124
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1900	1900	1900	1826	1826	1826	1826	1826	1826
Adj Flow Rate, veh/h	99	32	81	9	44	0	71	486	4	1	446	132
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	3	3	3	0	0	0	5	5	5	5	5	5
Cap, veh/h	184	86	217	37	195	0	161	791	670	4	626	531
Arrive On Green	0.10	0.18	0.18	0.02	0.10	0.00	0.09	0.43	0.43	0.00	0.34	0.34
Sat Flow, veh/h	1767	465	1178	1810	1900	0	1739	1826	1547	1739	1826	1547
Grp Volume(v), veh/h	99	0	113	9	44	0	71	486	4	1	446	132
Grp Sat Flow(s),veh/h/ln	1767	0	1643	1810	1900	0	1739	1826	1547	1739	1826	1547
Q Serve(g_s), s	4.0	0.0	4.5	0.4	1.6	0.0	2.9	15.5	0.1	0.0	16.0	4.6
Cycle Q Clear(g_c), s	4.0	0.0	4.5	0.4	1.6	0.0	2.9	15.5	0.1	0.0	16.0	4.6
Prop In Lane	1.00		0.72	1.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	184	0	302	37	195	0	161	791	670	4	626	531
V/C Ratio(X)	0.54	0.00	0.37	0.24	0.23	0.00	0.44	0.61	0.01	0.23	0.71	0.25
Avail Cap(c_a), veh/h	358	0	446	362	516	0	348	897	760	348	897	760
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.1	0.0	27.0	36.4	31.1	0.0	32.4	16.5	12.2	37.6	21.6	17.8
Incr Delay (d2), s/veh	0.9	0.0	2.3	1.2	1.8	0.0	0.7	3.6	0.0	9.9	6.7	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	0.0	1.8	0.2	0.8	0.0	1.2	6.3	0.0	0.0	7.2	1.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	33.0	0.0	29.4	37.6	32.9	0.0	33.1	20.1	12.2	47.5	28.3	18.9
LnGrp LOS	C	A	C	D	C	A	C	C	B	D	C	B
Approach Vol, veh/h		212			53			561			579	
Approach Delay, s/veh		31.1			33.7			21.7			26.2	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.1	40.6	7.4	21.4	12.9	33.8	13.6	15.3
Change Period (Y+Rc), s	5.9	7.9	5.9	7.5	5.9	7.9	* 5.7	7.5
Max Green Setting (Gmax), s	15.1	37.1	15.1	20.5	15.1	37.1	* 15	20.5
Max Q Clear Time (g_c+I1), s	2.0	17.5	2.4	6.5	4.9	18.0	6.0	3.6
Green Ext Time (p_c), s	0.0	7.3	0.0	0.8	0.0	7.9	0.1	0.2

Intersection Summary	
HCM 6th Ctrl Delay	25.4
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	4.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	163	5	294	251	8	254
Future Vol, veh/h	163	5	294	251	8	254
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	150	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	1	0	0	1
Mvmt Flow	177	5	320	273	9	276

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	751	297	0	0	593	0
Stage 1	457	-	-	-	-	-
Stage 2	294	-	-	-	-	-
Critical Hdwy	6.6	6.9	-	-	4.1	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	366	705	-	-	993	-
Stage 1	610	-	-	-	-	-
Stage 2	761	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	363	705	-	-	993	-
Mov Cap-2 Maneuver	363	-	-	-	-	-
Stage 1	610	-	-	-	-	-
Stage 2	754	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	23.6	0	0.3
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	363	705	993	-
HCM Lane V/C Ratio	-	-	0.488	0.008	0.009	-
HCM Control Delay (s)	-	-	24	10.1	8.7	-
HCM Lane LOS	-	-	C	B	A	-
HCM 95th %tile Q(veh)	-	-	2.6	0	0	-

Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	4	539	47	0	414
Future Vol, veh/h	0	4	539	47	0	414
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	1	0	0	1
Mvmt Flow	0	4	586	51	0	450

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	319	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.9	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	-	-
Pot Cap-1 Maneuver	0	683	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	683	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.3	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	683	-
HCM Lane V/C Ratio	-	-	0.006	-
HCM Control Delay (s)	-	-	10.3	-
HCM Lane LOS	-	-	B	-
HCM 95th %tile Q(veh)	-	-	0	-

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑↱			↱
Traffic Vol, veh/h	0	804	582	69	0	55
Future Vol, veh/h	0	804	582	69	0	55
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	1	1	0	0	0
Mvmt Flow	0	874	633	75	0	60

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	354
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.3
Pot Cap-1 Maneuver	0	-	-	-	0	648
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	648
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	11.1
HCM LOS			B

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	648
HCM Lane V/C Ratio	-	-	-	0.092
HCM Control Delay (s)	-	-	-	11.1
HCM Lane LOS	-	-	-	B
HCM 95th %tile Q(veh)	-	-	-	0.3

Intersection	
Int Delay, s/veh	89.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	222	582	575	44	158	74
Future Vol, veh/h	222	582	575	44	158	74
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	150	-	-	-	0	100
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	1	1	0	0	0
Mvmt Flow	241	633	625	48	172	80

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	673	0	-	0	1764	337
Stage 1	-	-	-	-	649	-
Stage 2	-	-	-	-	1115	-
Critical Hdwy	4.1	-	-	-	6.6	6.9
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	927	-	-	-	~ 85	665
Stage 1	-	-	-	-	487	-
Stage 2	-	-	-	-	316	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	927	-	-	-	~ 63	665
Mov Cap-2 Maneuver	-	-	-	-	~ 63	-
Stage 1	-	-	-	-	360	-
Stage 2	-	-	-	-	316	-

Approach	EB	WB	SB
HCM Control Delay, s	2.8	0	$ 630.5
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	927	-	-	-	63	665
HCM Lane V/C Ratio	0.26	-	-	-	2.726	0.121
HCM Control Delay (s)	10.2	-	-	-	-$ 920.5	11.2
HCM Lane LOS	B	-	-	-	F	B
HCM 95th %tile Q(veh)	1	-	-	-	17.3	0.4

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	0.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	147	10	0	128	0	3
Future Vol, veh/h	147	10	0	128	0	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	1	0	0
Mvmt Flow	160	11	0	139	0	3

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	86
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.3
Pot Cap-1 Maneuver	-	-	0	-	0	962
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	962
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	8.8
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	962	-	-	-
HCM Lane V/C Ratio	0.003	-	-	-
HCM Control Delay (s)	8.8	-	-	-
HCM Lane LOS	A	-	-	-
HCM 95th %tile Q(veh)	0	-	-	-

Intersection	
Int Delay, s/veh	1.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	145	5	33	125	3	19
Future Vol, veh/h	145	5	33	125	3	19
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	150	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	1	0	0
Mvmt Flow	158	5	36	136	3	21

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	163	0	369	82
Stage 1	-	-	-	-	161	-
Stage 2	-	-	-	-	208	-
Critical Hdwy	-	-	4.1	-	6.6	6.9
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1428	-	622	968
Stage 1	-	-	-	-	857	-
Stage 2	-	-	-	-	832	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1428	-	606	968
Mov Cap-2 Maneuver	-	-	-	-	606	-
Stage 1	-	-	-	-	857	-
Stage 2	-	-	-	-	811	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.6	9.1
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	895	-	-	1428	-
HCM Lane V/C Ratio	0.027	-	-	0.025	-
HCM Control Delay (s)	9.1	-	-	7.6	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0.1	-

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑↱			↱
Traffic Vol, veh/h	0	762	627	50	0	44
Future Vol, veh/h	0	762	627	50	0	44
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	1	1	0	0	0
Mvmt Flow	0	828	682	54	0	48

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	368
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.3
Pot Cap-1 Maneuver	0	-	-	-	0	635
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	635
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	11.1
HCM LOS			B

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	635
HCM Lane V/C Ratio	-	-	-	0.075
HCM Control Delay (s)	-	-	-	11.1
HCM Lane LOS	-	-	-	B
HCM 95th %tile Q(veh)	-	-	-	0.2

Intersection	
Intersection Delay, s/veh	12.1
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	4	129	13	45	136	4	1	81	38	9	89	3
Future Vol, veh/h	4	129	13	45	136	4	1	81	38	9	89	3
Peak Hour Factor	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60
Heavy Vehicles, %	4	6	2	2	6	4	6	4	6	6	2	6
Mvmt Flow	7	215	22	75	227	7	2	135	63	15	148	5
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	11.8	13.2	11.3	11.2
HCM LOS	B	B	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	1%	3%	24%	9%
Vol Thru, %	68%	88%	74%	88%
Vol Right, %	32%	9%	2%	3%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	120	146	185	101
LT Vol	1	4	45	9
Through Vol	81	129	136	89
RT Vol	38	13	4	3
Lane Flow Rate	200	243	308	168
Geometry Grp	1	1	1	1
Degree of Util (X)	0.314	0.372	0.467	0.276
Departure Headway (Hd)	5.654	5.509	5.452	5.895
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	634	650	660	608
Service Time	3.713	3.565	3.504	3.957
HCM Lane V/C Ratio	0.315	0.374	0.467	0.276
HCM Control Delay	11.3	11.8	13.2	11.2
HCM Lane LOS	B	B	B	B
HCM 95th-tile Q	1.3	1.7	2.5	1.1

Intersection	
Intersection Delay, s/veh	17.5
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	6	114	3	122	222	16	8	83	37	28	115	4
Future Vol, veh/h	6	114	3	122	222	16	8	83	37	28	115	4
Peak Hour Factor	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72
Heavy Vehicles, %	4	3	1	1	0	4	0	4	3	3	1	0
Mvmt Flow	8	158	4	169	308	22	11	115	51	39	160	6
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	11.5	23.5	11.8	12.7
HCM LOS	B	C	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	6%	5%	34%	19%
Vol Thru, %	65%	93%	62%	78%
Vol Right, %	29%	2%	4%	3%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	128	123	360	147
LT Vol	8	6	122	28
Through Vol	83	114	222	115
RT Vol	37	3	16	4
Lane Flow Rate	178	171	500	204
Geometry Grp	1	1	1	1
Degree of Util (X)	0.299	0.285	0.756	0.353
Departure Headway (Hd)	6.059	6	5.446	6.222
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	588	593	660	574
Service Time	4.154	4.091	3.511	4.313
HCM Lane V/C Ratio	0.303	0.288	0.758	0.355
HCM Control Delay	11.8	11.5	23.5	12.7
HCM Lane LOS	B	B	C	B
HCM 95th-tile Q	1.2	1.2	6.9	1.6

Intersection	
Intersection Delay, s/veh	100
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	18	101	25	66	159	111	14	230	95	65	322	14
Future Vol, veh/h	18	101	25	66	159	111	14	230	95	65	322	14
Peak Hour Factor	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70
Heavy Vehicles, %	1	6	2	2	3	1	3	1	6	6	2	3
Mvmt Flow	26	144	36	94	227	159	20	329	136	93	460	20
Number of Lanes	0	1	0	0	1	0	0	1	1	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	1	1
HCM Control Delay	24.6	93.1	39	184.4
HCM LOS	C	F	E	F

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	6%	0%	12%	20%	17%	0%
Vol Thru, %	94%	0%	70%	47%	83%	0%
Vol Right, %	0%	100%	17%	33%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	244	95	144	336	387	14
LT Vol	14	0	18	66	65	0
Through Vol	230	0	101	159	322	0
RT Vol	0	95	25	111	0	14
Lane Flow Rate	349	136	206	480	553	20
Geometry Grp	7	7	2	2	7	7
Degree of Util (X)	0.848	0.302	0.527	1.065	1.33	0.044
Departure Headway (Hd)	9.745	8.942	10.488	8.833	9.101	8.209
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	373	404	346	413	404	439
Service Time	7.445	6.642	8.488	6.833	6.801	5.909
HCM Lane V/C Ratio	0.936	0.337	0.595	1.162	1.369	0.046
HCM Control Delay	48.2	15.5	24.6	93.1	190.7	11.3
HCM Lane LOS	E	C	C	F	F	B
HCM 95th-tile Q	7.9	1.3	2.9	14.5	24.4	0.1



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	119	292	75	441	445	56	38	354	249	19	543	83
Future Volume (veh/h)	119	292	75	441	445	56	38	354	249	19	543	83
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1870	1870	1870	1885	1885	1885	1885	1870	1870	1870	1885
Adj Flow Rate, veh/h	129	317	82	479	484	61	41	385	271	21	590	90
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	1	2	2	2	1	1	1	1	2	2	2	1
Cap, veh/h	163	472	400	200	516	437	70	640	445	43	564	482
Arrive On Green	0.09	0.25	0.25	0.11	0.27	0.27	0.04	0.32	0.32	0.02	0.30	0.30
Sat Flow, veh/h	1795	1870	1585	1781	1885	1598	1795	2020	1404	1781	1870	1598
Grp Volume(v), veh/h	129	317	82	479	484	61	41	341	315	21	590	90
Grp Sat Flow(s),veh/h/ln	1795	1870	1585	1781	1885	1598	1795	1791	1633	1781	1870	1598
Q Serve(g_s), s	5.0	10.9	2.9	8.0	17.9	2.1	1.6	11.4	11.6	0.8	21.5	3.0
Cycle Q Clear(g_c), s	5.0	10.9	2.9	8.0	17.9	2.1	1.6	11.4	11.6	0.8	21.5	3.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.86	1.00		1.00
Lane Grp Cap(c), veh/h	163	472	400	200	516	437	70	567	517	43	564	482
V/C Ratio(X)	0.79	0.67	0.21	2.40	0.94	0.14	0.59	0.60	0.61	0.49	1.05	0.19
Avail Cap(c_a), veh/h	202	512	434	200	516	437	252	567	517	250	564	482
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.7	24.0	21.0	31.6	25.3	19.5	33.7	20.5	20.6	34.4	24.9	18.4
Incr Delay (d2), s/veh	12.4	2.3	0.1	642.9	24.8	0.1	2.9	1.3	1.5	3.3	50.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	4.5	1.0	38.8	10.4	0.7	0.7	4.4	4.1	0.4	15.8	1.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	44.1	26.3	21.1	674.5	50.1	19.6	36.5	21.8	22.1	37.6	75.2	18.5
LnGrp LOS	D	C	C	F	D	B	D	C	C	D	F	B
Approach Vol, veh/h		528			1024			697			701	
Approach Delay, s/veh		29.8			340.4			22.8			66.8	
Approach LOS		C			F			C			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.7	28.1	13.0	23.5	7.8	27.0	11.5	25.0
Change Period (Y+Rc), s	5.0	5.5	5.0	5.5	5.0	5.5	5.0	5.5
Max Green Setting (Gmax), s	10.0	21.5	8.0	19.5	10.0	21.5	8.0	19.5
Max Q Clear Time (g_c+I1), s	2.8	13.6	10.0	12.9	3.6	23.5	7.0	19.9
Green Ext Time (p_c), s	0.0	1.6	0.0	0.7	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	144.7
HCM 6th LOS	F



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	120	425	102	234	334	60	82	445	167	104	915	140
Future Volume (veh/h)	120	425	102	234	334	60	82	445	167	104	915	140
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1885	1885	1885	1856	1856	1856	1856	1885	1885	1885	1856
Adj Flow Rate, veh/h	130	462	111	254	363	65	89	484	182	113	995	152
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	1	1	1	3	3	3	3	1	1	1	3
Cap, veh/h	198	1168	521	372	1341	598	167	615	279	610	1097	482
Arrive On Green	0.06	0.33	0.33	0.11	0.38	0.38	0.05	0.17	0.17	0.18	0.31	0.31
Sat Flow, veh/h	3428	3582	1598	3483	3526	1572	3428	3526	1598	3483	3582	1572
Grp Volume(v), veh/h	130	462	111	254	363	65	89	484	182	113	995	152
Grp Sat Flow(s),veh/h/ln	1714	1791	1598	1742	1763	1572	1714	1763	1598	1742	1791	1572
Q Serve(g_s), s	3.4	9.2	3.6	6.5	6.5	1.3	2.3	12.1	9.8	2.5	24.5	6.8
Cycle Q Clear(g_c), s	3.4	9.2	3.6	6.5	6.5	1.3	2.3	12.1	9.8	2.5	24.5	6.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	198	1168	521	372	1341	598	167	615	279	610	1097	482
V/C Ratio(X)	0.66	0.40	0.21	0.68	0.27	0.11	0.53	0.79	0.65	0.19	0.91	0.32
Avail Cap(c_a), veh/h	764	1168	521	966	1341	598	764	1150	521	776	1168	513
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.4	24.0	13.5	39.6	19.7	5.4	42.7	36.3	35.4	32.3	30.6	24.5
Incr Delay (d2), s/veh	1.4	1.0	0.9	0.8	0.5	0.4	1.0	0.9	1.0	0.1	9.5	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	3.7	1.8	2.7	2.6	0.9	1.0	5.0	3.7	1.0	11.2	2.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	43.8	25.0	14.4	40.4	20.2	5.8	43.7	37.2	36.3	32.4	40.1	24.6
LnGrp LOS	D	C	B	D	C	A	D	D	D	C	D	C
Approach Vol, veh/h		703			682			755			1260	
Approach Delay, s/veh		26.8			26.3			37.7			37.5	
Approach LOS		C			C			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	21.1	21.1	14.8	35.0	9.0	33.2	9.8	40.0
Change Period (Y+Rc), s	5.0	* 5	5.0	* 5	4.5	5.0	4.5	5.0
Max Green Setting (Gmax), s	20.5	* 30	25.5	* 30	20.5	30.0	20.5	35.0
Max Q Clear Time (g_c+I1), s	14.5	14.1	8.5	11.2	4.3	26.5	5.4	8.5
Green Ext Time (p_c), s	0.1	2.0	0.4	1.8	0.1	1.6	0.1	1.5

Intersection Summary	
HCM 6th Ctrl Delay	33.1
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	90	129	31	74	68	78	31	523	34	152	1146	70
Future Volume (veh/h)	90	129	31	74	68	78	31	523	34	152	1146	70
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1900	1885	1885	1900	1870	1900	1870	1900	1900	1885	1900
Adj Flow Rate, veh/h	98	140	34	80	74	85	34	568	37	165	1246	76
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	0	1	1	0	2	0	2	0	0	1	0
Cap, veh/h	148	253	213	132	235	196	71	803	364	211	1086	488
Arrive On Green	0.08	0.13	0.13	0.07	0.12	0.12	0.04	0.23	0.23	0.12	0.30	0.30
Sat Flow, veh/h	1781	1900	1598	1795	1900	1585	1810	3554	1610	1810	3582	1610
Grp Volume(v), veh/h	98	140	34	80	74	85	34	568	37	165	1246	76
Grp Sat Flow(s),veh/h/ln	1781	1900	1598	1795	1900	1585	1810	1777	1610	1810	1791	1610
Q Serve(g_s), s	2.1	2.8	0.8	1.7	1.4	2.0	0.7	5.9	0.7	3.5	12.1	1.4
Cycle Q Clear(g_c), s	2.1	2.8	0.8	1.7	1.4	2.0	0.7	5.9	0.7	3.5	12.1	1.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	148	253	213	132	235	196	71	803	364	211	1086	488
V/C Ratio(X)	0.66	0.55	0.16	0.60	0.31	0.43	0.48	0.71	0.10	0.78	1.15	0.16
Avail Cap(c_a), veh/h	714	1189	1000	494	951	794	498	1335	605	272	1086	488
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.8	16.2	15.3	17.9	15.9	16.2	18.8	14.2	12.2	17.2	13.9	10.2
Incr Delay (d2), s/veh	1.9	0.7	0.1	1.7	0.3	0.6	1.8	0.4	0.0	7.9	77.5	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	1.0	0.2	0.7	0.5	0.6	0.3	1.7	0.2	1.6	14.9	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	19.7	16.9	15.5	19.6	16.2	16.8	20.6	14.7	12.3	25.0	91.4	10.2
LnGrp LOS	B	B	B	B	B	B	C	B	B	C	F	B
Approach Vol, veh/h		272			239			639			1487	
Approach Delay, s/veh		17.7			17.5			14.9			79.9	
Approach LOS		B			B			B			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.7	14.0	6.9	10.3	5.6	17.1	7.3	9.9
Change Period (Y+Rc), s	4.0	5.0	4.0	5.0	4.0	5.0	4.0	5.0
Max Green Setting (Gmax), s	6.0	15.0	11.0	25.0	11.0	10.0	16.0	20.0
Max Q Clear Time (g_c+I1), s	5.5	7.9	3.7	4.8	2.7	14.1	4.1	4.0
Green Ext Time (p_c), s	0.0	1.1	0.0	0.3	0.0	0.0	0.0	0.2

Intersection Summary	
HCM 6th Ctrl Delay	52.1
HCM 6th LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	23	108	19	13	26	126	14	532	33	375	871	18
Future Volume (veh/h)	23	108	19	13	26	126	14	532	33	375	871	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1900	1885	1885	1900	1870	1900	1870	1900	1900	1885	1900
Adj Flow Rate, veh/h	25	117	21	14	28	137	15	578	36	408	947	20
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	0	1	1	0	2	0	2	0	0	1	0
Cap, veh/h	54	276	232	32	252	211	35	816	370	275	1297	583
Arrive On Green	0.03	0.15	0.15	0.02	0.13	0.13	0.02	0.23	0.23	0.15	0.36	0.36
Sat Flow, veh/h	1781	1900	1598	1795	1900	1585	1810	3554	1610	1810	3582	1610
Grp Volume(v), veh/h	25	117	21	14	28	137	15	578	36	408	947	20
Grp Sat Flow(s),veh/h/ln	1781	1900	1598	1795	1900	1585	1810	1777	1610	1810	1791	1610
Q Serve(g_s), s	0.5	2.2	0.5	0.3	0.5	3.2	0.3	5.9	0.7	6.0	9.1	0.3
Cycle Q Clear(g_c), s	0.5	2.2	0.5	0.3	0.5	3.2	0.3	5.9	0.7	6.0	9.1	0.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	54	276	232	32	252	211	35	816	370	275	1297	583
V/C Ratio(X)	0.46	0.42	0.09	0.43	0.11	0.65	0.43	0.71	0.10	1.49	0.73	0.03
Avail Cap(c_a), veh/h	721	1202	1011	500	961	802	504	1349	611	275	1297	583
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	18.8	15.4	14.6	19.2	15.1	16.3	19.2	14.0	12.0	16.8	10.9	8.1
Incr Delay (d2), s/veh	2.3	0.4	0.1	3.3	0.1	1.3	3.1	0.4	0.0	236.9	1.9	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.8	0.1	0.1	0.2	1.1	0.1	1.7	0.2	19.9	2.5	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	21.1	15.8	14.7	22.6	15.2	17.5	22.3	14.4	12.0	253.6	12.8	8.1
LnGrp LOS	C	B	B	C	B	B	C	B	B	F	B	A
Approach Vol, veh/h		163			179			629			1375	
Approach Delay, s/veh		16.5			17.6			14.5			84.2	
Approach LOS		B			B			B			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.0	14.1	4.7	10.7	4.8	19.3	5.2	10.2
Change Period (Y+Rc), s	4.0	5.0	4.0	5.0	4.0	5.0	4.0	5.0
Max Green Setting (Gmax), s	6.0	15.0	11.0	25.0	11.0	10.0	16.0	20.0
Max Q Clear Time (g_c+I1), s	3.0	7.9	2.3	4.2	2.3	11.1	2.5	5.2
Green Ext Time (p_c), s	0.0	1.2	0.0	0.3	0.0	0.0	0.0	0.2

Intersection Summary		
HCM 6th Ctrl Delay		55.7
HCM 6th LOS		E



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	187	412	86	142	236	63	93	342	84	177	571	129
Future Volume (veh/h)	187	412	86	142	236	63	93	342	84	177	571	129
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1885	1870	1870	1870	1870	1870	1870	1885	1885	1870	1870
Adj Flow Rate, veh/h	201	443	92	153	254	68	100	368	90	190	614	139
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	1	2	2	2	2	2	2	1	1	2	2
Cap, veh/h	329	685	303	268	617	275	127	648	291	242	873	389
Arrive On Green	0.10	0.19	0.19	0.08	0.17	0.17	0.07	0.18	0.18	0.13	0.25	0.25
Sat Flow, veh/h	3456	3582	1585	3456	3554	1585	1781	3554	1598	1795	3554	1585
Grp Volume(v), veh/h	201	443	92	153	254	68	100	368	90	190	614	139
Grp Sat Flow(s),veh/h/ln	1728	1791	1585	1728	1777	1585	1781	1777	1598	1795	1777	1585
Q Serve(g_s), s	2.4	5.0	2.2	1.9	2.8	1.6	2.4	4.1	2.1	4.5	6.8	3.2
Cycle Q Clear(g_c), s	2.4	5.0	2.2	1.9	2.8	1.6	2.4	4.1	2.1	4.5	6.8	3.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	329	685	303	268	617	275	127	648	291	242	873	389
V/C Ratio(X)	0.61	0.65	0.30	0.57	0.41	0.25	0.79	0.57	0.31	0.79	0.70	0.36
Avail Cap(c_a), veh/h	1670	2060	912	1670	2044	912	861	2044	919	867	2044	912
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	18.9	16.2	15.1	19.4	16.0	15.5	19.9	16.2	15.4	18.2	14.9	13.6
Incr Delay (d2), s/veh	0.7	0.4	0.2	0.7	0.2	0.2	4.0	0.3	0.2	2.1	0.4	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	1.7	0.7	0.7	1.0	0.5	1.0	1.4	0.7	1.6	2.1	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	19.6	16.6	15.3	20.1	16.2	15.7	23.8	16.5	15.6	20.3	15.3	13.8
LnGrp LOS	B	B	B	C	B	B	C	B	B	C	B	B
Approach Vol, veh/h		736			475			558			943	
Approach Delay, s/veh		17.3			17.3			17.7			16.1	
Approach LOS		B			B			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.9	12.9	7.4	13.3	7.1	15.7	8.1	12.5
Change Period (Y+Rc), s	4.0	5.0	4.0	5.0	4.0	5.0	4.0	5.0
Max Green Setting (Gmax), s	21.0	25.0	21.0	25.0	21.0	25.0	21.0	25.0
Max Q Clear Time (g_c+I1), s	6.5	6.1	3.9	7.0	4.4	8.8	4.4	4.8
Green Ext Time (p_c), s	0.1	1.1	0.1	1.4	0.0	1.8	0.1	0.8

Intersection Summary	
HCM 6th Ctrl Delay	17.0
HCM 6th LOS	B



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	35	57	191	165	60	17	154	600	511	58	583	46
Future Volume (veh/h)	35	57	191	165	60	17	154	600	511	58	583	46
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1900	1870	1870	1900	1870	1900	1870	1900	1900	1870	1900
Adj Flow Rate, veh/h	38	62	208	179	65	18	167	652	555	63	634	50
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	0	2	2	0	2	0	2	0	0	2	0
Cap, veh/h	291	311	259	306	123	34	268	1358	632	93	1910	602
Arrive On Green	0.16	0.16	0.16	0.09	0.09	0.09	0.08	0.40	0.40	0.05	0.37	0.37
Sat Flow, veh/h	1781	1900	1585	3563	1432	397	3510	3404	1585	1810	5106	1610
Grp Volume(v), veh/h	38	62	208	179	0	83	167	652	555	63	634	50
Grp Sat Flow(s),veh/h/ln	1781	1900	1585	1781	0	1829	1755	1702	1585	1810	1702	1610
Q Serve(g_s), s	1.2	1.9	8.4	3.2	0.0	2.9	3.1	9.5	21.6	2.3	5.9	1.3
Cycle Q Clear(g_c), s	1.2	1.9	8.4	3.2	0.0	2.9	3.1	9.5	21.6	2.3	5.9	1.3
Prop In Lane	1.00		1.00	1.00		0.22	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	291	311	259	306	0	157	268	1358	632	93	1910	602
V/C Ratio(X)	0.13	0.20	0.80	0.58	0.00	0.53	0.62	0.48	0.88	0.67	0.33	0.08
Avail Cap(c_a), veh/h	668	712	594	1336	0	686	1316	1532	713	679	2298	725
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.8	24.1	26.8	29.3	0.0	29.2	29.9	14.9	18.5	31.1	14.9	13.5
Incr Delay (d2), s/veh	0.1	0.1	2.2	0.7	0.0	1.0	0.9	0.1	10.2	3.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.8	3.1	1.3	0.0	1.2	1.2	3.2	8.5	1.0	2.0	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.9	24.2	29.0	30.0	0.0	30.2	30.8	15.0	28.8	34.2	14.9	13.5
LnGrp LOS	C	C	C	C	A	C	C	B	C	C	B	B
Approach Vol, veh/h		308			262			1374			747	
Approach Delay, s/veh		27.4			30.1			22.5			16.5	
Approach LOS		C			C			C			B	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	8.4	31.6		15.9	10.1	29.9		10.7
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0
Max Green Setting (Gmax), s	25.0	30.0		25.0	25.0	30.0		25.0
Max Q Clear Time (g_c+I1), s	4.3	23.6		10.4	5.1	7.9		5.2
Green Ext Time (p_c), s	0.1	3.0		0.5	0.3	2.8		0.6

Intersection Summary	
HCM 6th Ctrl Delay	22.1
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	75	0	460	41	998	0	0	668	275
Future Volume (veh/h)	0	0	0	75	0	460	41	998	0	0	668	275
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1856	1856	1870	1856	1870	0	0	1856	1856
Adj Flow Rate, veh/h				55	0	529	45	1085	0	0	726	299
Peak Hour Factor				0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %				3	3	2	3	2	0	0	3	3
Cap, veh/h				337	0	604	584	2407	0	0	1412	438
Arrive On Green				0.19	0.00	0.19	0.66	1.00	0.00	0.00	0.28	0.28
Sat Flow, veh/h				1767	0	3170	1767	3647	0	0	5233	1572
Grp Volume(v), veh/h				55	0	529	45	1085	0	0	726	299
Grp Sat Flow(s),veh/h/ln				1767	0	1585	1767	1777	0	0	1689	1572
Q Serve(g_s), s				2.6	0.0	16.2	0.9	0.0	0.0	0.0	12.1	16.9
Cycle Q Clear(g_c), s				2.6	0.0	16.2	0.9	0.0	0.0	0.0	12.1	16.9
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				337	0	604	584	2407	0	0	1412	438
V/C Ratio(X)				0.16	0.00	0.88	0.08	0.45	0.00	0.00	0.51	0.68
Avail Cap(c_a), veh/h				353	0	634	584	2407	0	0	1834	569
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.90	0.90	0.00	0.00	0.90	0.90
Uniform Delay (d), s/veh				33.8	0.0	39.3	11.5	0.0	0.0	0.0	30.4	32.1
Incr Delay (d2), s/veh				0.6	0.0	14.2	0.0	0.6	0.0	0.0	1.2	7.5
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				1.2	0.0	7.3	0.4	0.2	0.0	0.0	4.9	7.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				34.4	0.0	53.5	11.5	0.6	0.0	0.0	31.6	39.6
LnGrp LOS				C	A	D	B	A	A	A	C	D
Approach Vol, veh/h					584			1130			1025	
Approach Delay, s/veh					51.7			1.0			33.9	
Approach LOS					D			A			C	

Timer - Assigned Phs	2		5	6		8
Phs Duration (G+Y+Rc), s	74.5		39.9	34.7		25.5
Change Period (Y+Rc), s	6.8		6.8	* 6.8		6.4
Max Green Setting (Gmax), s	66.8		24.9	* 36		20.0
Max Q Clear Time (g_c+I1), s	2.0		2.9	18.9		18.2
Green Ext Time (p_c), s	33.5		0.0	8.9		0.8

Intersection Summary	
HCM 6th Ctrl Delay	24.1
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	436	0	13	0	0	0	0	602	160	0	453	290
Future Volume (veh/h)	436	0	13	0	0	0	0	602	160	0	453	290
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1885	0	1856				0	1885	1870	0	1856	1856
Adj Flow Rate, veh/h	474	0	14				0	654	0	0	492	0
Peak Hour Factor	0.92	0.92	0.92				0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	1	0	3				0	1	2	0	3	3
Cap, veh/h	574	0	259				0	2569		0	2528	
Arrive On Green	0.16	0.00	0.16				0.00	0.72	0.00	0.00	1.00	0.00
Sat Flow, veh/h	3483	0	1572				0	3676	1585	0	3618	1572
Grp Volume(v), veh/h	474	0	14				0	654	0	0	492	0
Grp Sat Flow(s),veh/h/ln	1742	0	1572				0	1791	1585	0	1763	1572
Q Serve(g_s), s	13.2	0.0	0.8				0.0	6.3	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	13.2	0.0	0.8				0.0	6.3	0.0	0.0	0.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h	574	0	259				0	2569		0	2528	
V/C Ratio(X)	0.83	0.00	0.05				0.00	0.25		0.00	0.19	
Avail Cap(c_a), veh/h	662	0	299				0	2569		0	2528	
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	0.00	0.00	0.98	0.00
Uniform Delay (d), s/veh	40.4	0.0	35.2				0.0	4.9	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	9.5	0.0	0.2				0.0	0.2	0.0	0.0	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.3	0.0	0.3				0.0	1.9	0.0	0.0	0.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	49.9	0.0	35.4				0.0	5.1	0.0	0.0	0.2	0.0
LnGrp LOS	D	A	D				A	A		A	A	
Approach Vol, veh/h		488						654			492	
Approach Delay, s/veh		49.5						5.1			0.2	
Approach LOS		D						A			A	

Timer - Assigned Phs	2	4	6
Phs Duration (G+Y+Rc), s	78.5	21.5	78.5
Change Period (Y+Rc), s	6.8	5.0	6.8
Max Green Setting (Gmax), s	69.2	19.0	69.2
Max Q Clear Time (g_c+I1), s	8.3	15.2	2.0
Green Ext Time (p_c), s	12.1	1.3	8.5

Intersection Summary	
HCM 6th Ctrl Delay	16.9
HCM 6th LOS	B

Notes

Unsignalized Delay for [NBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Intersection	
Int Delay, s/veh	7.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	648	48	152	937	54	92
Future Vol, veh/h	648	48	152	937	54	92
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	120	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	0	0	1	1	2
Mvmt Flow	704	52	165	1018	59	100

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	756	0	1569	730
Stage 1	-	-	-	-	730	-
Stage 2	-	-	-	-	839	-
Critical Hdwy	-	-	4.1	-	6.615	6.23
Critical Hdwy Stg 1	-	-	-	-	5.415	-
Critical Hdwy Stg 2	-	-	-	-	5.815	-
Follow-up Hdwy	-	-	2.2	-	3.5095	3.319
Pot Cap-1 Maneuver	-	-	864	-	112	421
Stage 1	-	-	-	-	478	-
Stage 2	-	-	-	-	387	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	864	-	91	421
Mov Cap-2 Maneuver	-	-	-	-	91	-
Stage 1	-	-	-	-	478	-
Stage 2	-	-	-	-	313	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.4	91.3
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	180	-	-	864	-
HCM Lane V/C Ratio	0.882	-	-	0.191	-
HCM Control Delay (s)	91.3	-	-	10.1	-
HCM Lane LOS	F	-	-	B	-
HCM 95th %tile Q(veh)	6.5	-	-	0.7	-

Intersection	
Int Delay, s/veh	98.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	98	603	50	15	817	23	57	8	27	16	5	186
Future Vol, veh/h	98	603	50	15	817	23	57	8	27	16	5	186
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	120	-	-	110	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	2	0	0	1	0	1	0	2	2	0	1
Mvmt Flow	107	655	54	16	888	25	62	9	29	17	5	202

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	913	0	0	709	0	0	1932	1841	355	1466	1843	888
Stage 1	-	-	-	-	-	-	896	896	-	920	920	-
Stage 2	-	-	-	-	-	-	1036	945	-	546	923	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.315	6.5	6.93	7.33	6.5	6.215
Critical Hdwy Stg 1	-	-	-	-	-	-	6.515	5.5	-	6.13	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.115	5.5	-	6.53	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5095	4	3.319	3.519	4	3.3095
Pot Cap-1 Maneuver	755	-	-	899	-	-	~ 45	76	642	97	76	344
Stage 1	-	-	-	-	-	-	304	362	-	324	352	-
Stage 2	-	-	-	-	-	-	280	343	-	490	351	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	755	-	-	899	-	-	~ 15	64	642	73	64	344
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 15	64	-	73	64	-
Stage 1	-	-	-	-	-	-	261	311	-	278	346	-
Stage 2	-	-	-	-	-	-	112	337	-	390	301	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.4	0.2	$ 1849.5	79.4
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	23	755	-	-	899	-	-	247
HCM Lane V/C Ratio	4.348	0.141	-	-	0.018	-	-	0.911
HCM Control Delay (s)	$ 1849.5	10.6	-	-	9.1	-	-	79.4
HCM Lane LOS	F	B	-	-	A	-	-	F
HCM 95th %tile Q(veh)	12.6	0.5	-	-	0.1	-	-	7.9

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Intersection Delay, s/veh	67
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	32	299	46	91	248	17	79	125	223	50	192	15
Future Vol, veh/h	32	299	46	91	248	17	79	125	223	50	192	15
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Heavy Vehicles, %	0	2	1	1	3	0	3	0	2	2	1	3
Mvmt Flow	39	360	55	110	299	20	95	151	269	60	231	18
Number of Lanes	0	1	0	0	1	0	0	1	1	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	2	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	1	1	1
HCM Control Delay	105.6	89.6	28	43.9
HCM LOS	F	F	D	E

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1
Vol Left, %	39%	0%	8%	26%	19%
Vol Thru, %	61%	0%	79%	70%	75%
Vol Right, %	0%	100%	12%	5%	6%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	204	223	377	356	257
LT Vol	79	0	32	91	50
Through Vol	125	0	299	248	192
RT Vol	0	223	46	17	15
Lane Flow Rate	246	269	454	429	310
Geometry Grp	7	7	2	2	5
Degree of Util (X)	0.65	0.64	1.102	1.047	0.807
Departure Headway (Hd)	10.051	9.062	9.004	9.229	10.009
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	361	400	409	395	365
Service Time	7.751	6.762	7.004	7.229	8.009
HCM Lane V/C Ratio	0.681	0.672	1.11	1.086	0.849
HCM Control Delay	29.6	26.5	105.6	89.6	43.9
HCM Lane LOS	D	D	F	F	E
HCM 95th-tile Q	4.4	4.3	15.7	13.6	7



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	194	340	129	199	517	53	92	252	50	79	356	187
Future Volume (veh/h)	194	340	129	199	517	53	92	252	50	79	356	187
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1885	1870	1885	1870	1870	1870	1870	1885
Adj Flow Rate, veh/h	211	370	140	216	562	58	100	274	54	86	387	203
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	1	2	1	2	2	2	2	1
Cap, veh/h	252	437	370	208	747	331	129	1010	196	111	749	387
Arrive On Green	0.14	0.23	0.23	0.12	0.21	0.21	0.07	0.34	0.34	0.06	0.33	0.33
Sat Flow, veh/h	1781	1870	1585	1781	3582	1585	1795	2967	576	1781	2265	1172
Grp Volume(v), veh/h	211	370	140	216	562	58	100	162	166	86	302	288
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1791	1585	1795	1777	1767	1781	1777	1659
Q Serve(g_s), s	8.4	13.8	5.4	8.5	10.7	2.2	4.0	4.8	5.0	3.5	10.0	10.2
Cycle Q Clear(g_c), s	8.4	13.8	5.4	8.5	10.7	2.2	4.0	4.8	5.0	3.5	10.0	10.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.33	1.00		0.71
Lane Grp Cap(c), veh/h	252	437	370	208	747	331	129	605	601	111	587	549
V/C Ratio(X)	0.84	0.85	0.38	1.04	0.75	0.18	0.77	0.27	0.28	0.78	0.52	0.52
Avail Cap(c_a), veh/h	281	552	468	208	910	403	234	605	601	176	587	549
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.4	26.7	23.5	32.2	27.1	23.7	33.2	17.4	17.5	33.7	19.7	19.7
Incr Delay (d2), s/veh	17.8	9.6	0.6	73.1	2.9	0.2	9.4	1.1	1.1	11.0	3.2	3.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.6	6.7	2.0	7.7	4.6	0.8	2.0	2.0	2.0	1.7	4.2	4.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	48.3	36.3	24.1	105.2	29.9	23.9	42.6	18.5	18.6	44.7	22.9	23.3
LnGrp LOS	D	D	C	F	C	C	D	B	B	D	C	C
Approach Vol, veh/h		721			836			428			676	
Approach Delay, s/veh		37.4			49.0			24.2			25.8	
Approach LOS		D			D			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.0	29.3	13.0	21.5	9.7	28.6	14.8	19.7
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	7.3	24.8	8.5	21.5	9.5	22.5	11.5	18.5
Max Q Clear Time (g_c+I1), s	5.5	7.0	10.5	15.8	6.0	12.2	10.4	12.7
Green Ext Time (p_c), s	0.0	1.6	0.0	1.3	0.1	2.4	0.1	1.9

Intersection Summary	
HCM 6th Ctrl Delay	36.0
HCM 6th LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	217	50	133	5	39	4	74	650	13	2	536	107
Future Volume (veh/h)	217	50	133	5	39	4	74	650	13	2	536	107
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1796	1870	1693	1693	1841	1796	1841	1796	1870	1870	1693	1841
Adj Flow Rate, veh/h	236	54	145	5	42	4	80	707	14	2	583	116
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	7	2	14	14	4	7	4	7	2	2	14	4
Cap, veh/h	268	103	275	19	142	14	148	829	732	9	647	596
Arrive On Green	0.16	0.23	0.23	0.01	0.09	0.09	0.08	0.46	0.46	0.00	0.38	0.38
Sat Flow, veh/h	1711	449	1205	1612	1655	158	1753	1796	1585	1781	1693	1560
Grp Volume(v), veh/h	236	0	199	5	0	46	80	707	14	2	583	116
Grp Sat Flow(s),veh/h/ln	1711	0	1653	1612	0	1812	1753	1796	1585	1781	1693	1560
Q Serve(g_s), s	12.5	0.0	9.8	0.3	0.0	2.2	4.1	32.4	0.4	0.1	30.1	4.6
Cycle Q Clear(g_c), s	12.5	0.0	9.8	0.3	0.0	2.2	4.1	32.4	0.4	0.1	30.1	4.6
Prop In Lane	1.00		0.73	1.00		0.09	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	268	0	378	19	0	156	148	829	732	9	647	596
V/C Ratio(X)	0.88	0.00	0.53	0.26	0.00	0.30	0.54	0.85	0.02	0.23	0.90	0.19
Avail Cap(c_a), veh/h	282	0	378	262	0	400	285	829	732	290	676	623
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.3	0.0	31.4	45.5	0.0	39.8	40.8	22.2	13.6	46.0	27.0	19.2
Incr Delay (d2), s/veh	24.1	0.0	3.6	2.7	0.0	3.2	1.1	10.8	0.0	4.9	18.1	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.7	0.0	4.0	0.1	0.0	1.1	1.7	14.5	0.1	0.1	14.2	1.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	62.4	0.0	35.0	48.2	0.0	43.0	41.9	33.0	13.6	50.9	45.2	19.9
LnGrp LOS	E	A	C	D	A	D	D	C	B	D	D	B
Approach Vol, veh/h		435			51			801			701	
Approach Delay, s/veh		49.9			43.5			33.5			41.0	
Approach LOS		D			D			C			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.4	50.8	7.0	28.7	13.8	43.4	20.2	15.5
Change Period (Y+Rc), s	5.9	7.9	5.9	7.5	5.9	7.9	* 5.7	7.5
Max Green Setting (Gmax), s	15.1	37.1	15.1	20.5	15.1	37.1	* 15	20.5
Max Q Clear Time (g_c+I1), s	2.1	34.4	2.3	11.8	6.1	32.1	14.5	4.2
Green Ext Time (p_c), s	0.0	2.0	0.0	1.2	0.0	3.3	0.0	0.2

Intersection Summary	
HCM 6th Ctrl Delay	40.0
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	25

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	279	18	328	138	28	367
Future Vol, veh/h	279	18	328	138	28	367
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	150	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	1	0	0	2
Mvmt Flow	303	20	357	150	30	399

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	891	254	0	0	507	0
Stage 1	432	-	-	-	-	-
Stage 2	459	-	-	-	-	-
Critical Hdwy	6.6	6.9	-	-	4.1	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	~ 300	752	-	-	1068	-
Stage 1	628	-	-	-	-	-
Stage 2	641	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	~ 292	752	-	-	1068	-
Mov Cap-2 Maneuver	~ 292	-	-	-	-	-
Stage 1	628	-	-	-	-	-
Stage 2	623	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	96.8	0	0.6
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	292	752	1068	-
HCM Lane V/C Ratio	-	-	1.039	0.026	0.028	-
HCM Control Delay (s)	-	-	102.4	9.9	8.5	-
HCM Lane LOS	-	-	F	A	A	-
HCM 95th %tile Q(veh)	-	-	11.4	0.1	0.1	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	5	451	68	0	637
Future Vol, veh/h	0	5	451	68	0	637
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	1	0	0	2
Mvmt Flow	0	5	490	74	0	692

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	282	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.9	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	-	-
Pot Cap-1 Maneuver	0	721	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	721	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	721	-
HCM Lane V/C Ratio	-	-	0.008	-
HCM Control Delay (s)	-	-	10	-
HCM Lane LOS	-	-	B	-
HCM 95th %tile Q(veh)	-	-	0	-

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑↑↱			↱
Traffic Vol, veh/h	0	560	872	99	0	70
Future Vol, veh/h	0	560	872	99	0	70
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	2	1	0	0	0
Mvmt Flow	0	609	948	108	0	76

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	528
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.3
Pot Cap-1 Maneuver	0	-	-	-	0	500
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	500
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	13.5
HCM LOS			B

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	500
HCM Lane V/C Ratio	-	-	-	0.152
HCM Control Delay (s)	-	-	-	13.5
HCM Lane LOS	-	-	-	B
HCM 95th %tile Q(veh)	-	-	-	0.5

Intersection	
Int Delay, s/veh	202.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	122	438	862	128	257	108
Future Vol, veh/h	122	438	862	128	257	108
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	150	-	-	-	0	100
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	2	1	0	0	0
Mvmt Flow	133	476	937	139	279	117

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1076	0	-	0	1749	538
Stage 1	-	-	-	-	1007	-
Stage 2	-	-	-	-	742	-
Critical Hdwy	4.1	-	-	-	6.6	6.9
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	656	-	-	-	~ 87	493
Stage 1	-	-	-	-	318	-
Stage 2	-	-	-	-	474	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	656	-	-	-	~ 69	493
Mov Cap-2 Maneuver	-	-	-	-	~ 69	-
Stage 1	-	-	-	-	~ 253	-
Stage 2	-	-	-	-	474	-

Approach	EB	WB	SB
HCM Control Delay, s	2.6	0	$ 1057
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	656	-	-	-	69	493
HCM Lane V/C Ratio	0.202	-	-	-	4.049	0.238
HCM Control Delay (s)	11.9	-	-	-	$ 1495.1	14.6
HCM Lane LOS	B	-	-	-	F	B
HCM 95th %tile Q(veh)	0.8	-	-	-	29.8	0.9

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	0.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	258	3	0	336	0	4
Future Vol, veh/h	258	3	0	336	0	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	6	0	0	3	0	0
Mvmt Flow	280	3	0	365	0	4

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	142
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.3
Pot Cap-1 Maneuver	-	-	0	-	0	886
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	886
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	9.1
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	886	-	-	-
HCM Lane V/C Ratio	0.005	-	-	-
HCM Control Delay (s)	9.1	-	-	-
HCM Lane LOS	A	-	-	-
HCM 95th %tile Q(veh)	0	-	-	-

Intersection	
Int Delay, s/veh	1.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	260	2	51	332	4	50
Future Vol, veh/h	260	2	51	332	4	50
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	150	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	6	0	0	3	0	0
Mvmt Flow	283	2	55	361	4	54

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	285	0	755	143
Stage 1	-	-	-	-	284	-
Stage 2	-	-	-	-	471	-
Critical Hdwy	-	-	4.1	-	6.6	6.9
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1289	-	364	885
Stage 1	-	-	-	-	745	-
Stage 2	-	-	-	-	632	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1289	-	348	885
Mov Cap-2 Maneuver	-	-	-	-	348	-
Stage 1	-	-	-	-	745	-
Stage 2	-	-	-	-	605	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.1	9.9
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	794	-	-	1289	-
HCM Lane V/C Ratio	0.074	-	-	0.043	-
HCM Control Delay (s)	9.9	-	-	7.9	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0.2	-	-	0.1	-

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑↑↱			↱
Traffic Vol, veh/h	0	740	1022	15	0	67
Future Vol, veh/h	0	740	1022	15	0	67
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	2	1	0	0	0
Mvmt Flow	0	804	1111	16	0	73

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	564
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.3
Pot Cap-1 Maneuver	0	-	-	-	0	474
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	474
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	14
HCM LOS			B

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	474
HCM Lane V/C Ratio	-	-	-	0.154
HCM Control Delay (s)	-	-	-	14
HCM Lane LOS	-	-	-	B
HCM 95th %tile Q(veh)	-	-	-	0.5

Intersection	
Intersection Delay, s/veh	8
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	3	79	17	7	54	9	4	70	9	2	85	2
Future Vol, veh/h	3	79	17	7	54	9	4	70	9	2	85	2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	0	0	0	2	2	2	3	3	3	0	0	0
Mvmt Flow	3	86	18	8	59	10	4	76	10	2	92	2
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8	7.9	8	8
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	5%	3%	10%	2%
Vol Thru, %	84%	80%	77%	96%
Vol Right, %	11%	17%	13%	2%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	83	99	70	89
LT Vol	4	3	7	2
Through Vol	70	79	54	85
RT Vol	9	17	9	2
Lane Flow Rate	90	108	76	97
Geometry Grp	1	1	1	1
Degree of Util (X)	0.111	0.129	0.093	0.118
Departure Headway (Hd)	4.419	4.317	4.423	4.408
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	814	833	813	816
Service Time	2.433	2.33	2.438	2.422
HCM Lane V/C Ratio	0.111	0.13	0.093	0.119
HCM Control Delay	8	8	7.9	8
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.4	0.4	0.3	0.4

Intersection	
Intersection Delay, s/veh	9.4
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	7	166	6	45	77	22	11	93	95	28	76	6
Future Vol, veh/h	7	166	6	45	77	22	11	93	95	28	76	6
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	8	180	7	49	84	24	12	101	103	30	83	7
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	9.7	9.3	9.5	9.1
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	6%	4%	31%	25%
Vol Thru, %	47%	93%	53%	69%
Vol Right, %	48%	3%	15%	5%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	199	179	144	110
LT Vol	11	7	45	28
Through Vol	93	166	77	76
RT Vol	95	6	22	6
Lane Flow Rate	216	195	157	120
Geometry Grp	1	1	1	1
Degree of Util (X)	0.278	0.264	0.214	0.167
Departure Headway (Hd)	4.634	4.886	4.919	5.042
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	768	730	723	704
Service Time	2.703	2.957	2.994	3.121
HCM Lane V/C Ratio	0.281	0.267	0.217	0.17
HCM Control Delay	9.5	9.7	9.3	9.1
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	1.1	1.1	0.8	0.6

Intersection	
Intersection Delay, s/veh	11.5
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	2	74	10	59	67	22	19	192	54	61	219	4
Future Vol, veh/h	2	74	10	59	67	22	19	192	54	61	219	4
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	0	0	0	1	1	1	1	1	1	1	1	1
Mvmt Flow	2	78	11	62	71	23	20	202	57	64	231	4
Number of Lanes	0	1	0	0	1	0	0	1	1	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	1	1
HCM Control Delay	9.7	10.5	10.7	13.2
HCM LOS	A	B	B	B

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	9%	0%	2%	40%	22%	0%
Vol Thru, %	91%	0%	86%	45%	78%	0%
Vol Right, %	0%	100%	12%	15%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	211	54	86	148	280	4
LT Vol	19	0	2	59	61	0
Through Vol	192	0	74	67	219	0
RT Vol	0	54	10	22	0	4
Lane Flow Rate	222	57	91	156	295	4
Geometry Grp	7	7	2	2	7	7
Degree of Util (X)	0.35	0.078	0.143	0.243	0.466	0.006
Departure Headway (Hd)	5.667	4.913	5.687	5.623	5.697	4.879
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	635	730	630	639	634	734
Service Time	3.392	2.638	3.725	3.657	3.421	2.603
HCM Lane V/C Ratio	0.35	0.078	0.144	0.244	0.465	0.005
HCM Control Delay	11.4	8.1	9.7	10.5	13.3	7.6
HCM Lane LOS	B	A	A	B	B	A
HCM 95th-tile Q	1.6	0.3	0.5	0.9	2.5	0



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	58	318	58	353	317	28	78	568	534	27	382	58
Future Volume (veh/h)	58	318	58	353	317	28	78	568	534	27	382	58
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	61	335	61	372	334	29	82	598	562	28	402	61
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	1	1	1	1	1	1
Cap, veh/h	92	397	337	272	587	497	106	526	469	55	500	424
Arrive On Green	0.05	0.21	0.21	0.15	0.31	0.31	0.06	0.29	0.29	0.03	0.27	0.27
Sat Flow, veh/h	1810	1900	1610	1810	1900	1610	1795	1791	1598	1795	1885	1598
Grp Volume(v), veh/h	61	335	61	372	334	29	82	598	562	28	402	61
Grp Sat Flow(s),veh/h/ln	1810	1900	1610	1810	1900	1610	1795	1791	1598	1795	1885	1598
Q Serve(g_s), s	2.2	11.2	2.1	10.0	9.8	0.8	3.0	19.5	19.5	1.0	13.2	1.9
Cycle Q Clear(g_c), s	2.2	11.2	2.1	10.0	9.8	0.8	3.0	19.5	19.5	1.0	13.2	1.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	92	397	337	272	587	497	106	526	469	55	500	424
V/C Ratio(X)	0.66	0.84	0.18	1.37	0.57	0.06	0.78	1.14	1.20	0.51	0.80	0.14
Avail Cap(c_a), veh/h	272	558	473	272	587	497	270	526	469	270	554	469
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.0	25.2	21.6	28.2	19.2	16.2	30.8	23.5	23.5	31.7	22.8	18.6
Incr Delay (d2), s/veh	3.0	5.9	0.1	186.1	0.8	0.0	4.5	82.8	108.2	2.8	6.8	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	5.0	0.7	17.9	3.8	0.3	1.3	19.2	20.4	0.4	5.8	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	34.0	31.2	21.7	214.3	20.1	16.2	35.4	106.3	131.6	34.5	29.6	18.7
LnGrp LOS	C	C	C	F	C	B	D	F	F	C	C	B
Approach Vol, veh/h		457			735			1242			491	
Approach Delay, s/veh		30.3			118.2			113.1			28.5	
Approach LOS		C			F			F			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.0	25.0	15.0	19.4	8.9	23.1	8.4	26.0
Change Period (Y+Rc), s	5.0	5.5	5.0	5.5	5.0	5.5	5.0	5.5
Max Green Setting (Gmax), s	10.0	19.5	10.0	19.5	10.0	19.5	10.0	19.5
Max Q Clear Time (g_c+I1), s	13.0	21.5	12.0	13.2	5.0	15.2	4.2	11.8
Green Ext Time (p_c), s	0.0	0.0	0.0	0.6	0.0	0.6	0.0	0.7

Intersection Summary	
HCM 6th Ctrl Delay	87.2
HCM 6th LOS	F



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	134	309	74	265	339	93	130	1193	271	104	697	91
Future Volume (veh/h)	134	309	74	265	339	93	130	1193	271	104	697	91
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	146	336	80	288	368	101	141	1297	295	113	758	99
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	1	1	1	1	1	1	1	1	1	1	1	1
Cap, veh/h	238	490	219	401	658	294	236	1458	650	224	1445	645
Arrive On Green	0.07	0.14	0.14	0.12	0.18	0.18	0.07	0.41	0.41	0.06	0.40	0.40
Sat Flow, veh/h	3483	3582	1598	3483	3582	1598	3483	3582	1598	3483	3582	1598
Grp Volume(v), veh/h	146	336	80	288	368	101	141	1297	295	113	758	99
Grp Sat Flow(s),veh/h/ln	1742	1791	1598	1742	1791	1598	1742	1791	1598	1742	1791	1598
Q Serve(g_s), s	2.8	6.1	3.1	5.5	6.4	3.8	2.7	23.1	9.2	2.2	11.0	2.7
Cycle Q Clear(g_c), s	2.8	6.1	3.1	5.5	6.4	3.8	2.7	23.1	9.2	2.2	11.0	2.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	238	490	219	401	658	294	236	1458	650	224	1445	645
V/C Ratio(X)	0.61	0.69	0.37	0.72	0.56	0.34	0.60	0.89	0.45	0.50	0.52	0.15
Avail Cap(c_a), veh/h	1039	1564	698	1293	1825	814	1039	1564	698	1039	1564	698
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.1	28.2	26.9	29.3	25.5	24.4	31.1	18.9	14.8	31.1	15.5	13.0
Incr Delay (d2), s/veh	1.0	0.6	0.4	0.9	0.3	0.3	0.9	6.1	0.2	0.7	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	2.4	1.1	2.2	2.5	1.3	1.1	9.1	2.9	0.9	3.8	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	32.1	28.9	27.3	30.2	25.8	24.7	32.0	25.0	15.0	31.7	15.6	13.1
LnGrp LOS	C	C	C	C	C	C	C	C	B	C	B	B
Approach Vol, veh/h		562			757			1733			970	
Approach Delay, s/veh		29.5			27.3			23.9			17.2	
Approach LOS		C			C			C			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.9	33.0	12.4	14.4	9.2	32.7	9.2	17.6
Change Period (Y+Rc), s	4.5	5.0	4.5	5.0	4.5	5.0	4.5	5.0
Max Green Setting (Gmax), s	20.5	30.0	25.5	30.0	20.5	30.0	20.5	35.0
Max Q Clear Time (g_c+I1), s	4.2	25.1	7.5	8.1	4.7	13.0	4.8	8.4
Green Ext Time (p_c), s	0.1	2.8	0.5	1.3	0.1	3.1	0.1	1.6

Intersection Summary	
HCM 6th Ctrl Delay	23.7
HCM 6th LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	57	68	33	61	99	119	80	1252	98	72	935	49
Future Volume (veh/h)	57	68	33	61	99	119	80	1252	98	72	935	49
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	62	74	36	66	108	129	87	1361	107	78	1016	53
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	1	1	1	1	1	1
Cap, veh/h	110	237	201	115	242	205	135	1162	518	126	1146	511
Arrive On Green	0.06	0.12	0.12	0.06	0.13	0.13	0.08	0.32	0.32	0.07	0.32	0.32
Sat Flow, veh/h	1810	1900	1610	1810	1900	1610	1795	3582	1598	1795	3582	1598
Grp Volume(v), veh/h	62	74	36	66	108	129	87	1361	107	78	1016	53
Grp Sat Flow(s),veh/h/ln	1810	1900	1610	1810	1900	1610	1795	1791	1598	1795	1791	1598
Q Serve(g_s), s	1.4	1.5	0.9	1.5	2.3	3.3	2.0	14.0	2.1	1.8	11.6	1.0
Cycle Q Clear(g_c), s	1.4	1.5	0.9	1.5	2.3	3.3	2.0	14.0	2.1	1.8	11.6	1.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	110	237	201	115	242	205	135	1162	518	126	1146	511
V/C Ratio(X)	0.56	0.31	0.18	0.58	0.45	0.63	0.65	1.17	0.21	0.62	0.89	0.10
Avail Cap(c_a), veh/h	1007	1101	933	503	573	485	458	1162	518	250	1146	511
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.7	17.2	16.9	19.6	17.4	17.9	19.4	14.6	10.5	19.5	13.9	10.3
Incr Delay (d2), s/veh	1.7	0.3	0.2	1.7	0.5	1.2	1.9	86.4	0.1	1.8	8.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.6	0.3	0.6	0.9	1.1	0.8	17.8	0.6	0.7	4.6	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	21.4	17.5	17.1	21.3	17.9	19.1	21.3	100.9	10.6	21.3	22.3	10.4
LnGrp LOS	C	B	B	C	B	B	C	F	B	C	C	B
Approach Vol, veh/h		172			303			1555			1147	
Approach Delay, s/veh		18.8			19.1			90.3			21.7	
Approach LOS		B			B			F			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.0	19.0	6.7	10.4	7.2	18.8	6.6	10.5
Change Period (Y+Rc), s	4.0	5.0	4.0	5.0	4.0	5.0	4.0	5.0
Max Green Setting (Gmax), s	6.0	14.0	12.0	25.0	11.0	9.0	24.0	13.0
Max Q Clear Time (g_c+I1), s	3.0	16.0	3.5	3.5	4.0	13.6	3.4	5.3
Green Ext Time (p_c), s	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.2

Intersection Summary	
HCM 6th Ctrl Delay	54.9
HCM 6th LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	17	34	32	27	84	303	18	1077	14	137	898	12
Future Volume (veh/h)	17	34	32	27	84	303	18	1077	14	137	898	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	18	37	35	29	91	329	20	1171	15	149	976	13
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	1	1	1	1	1	1
Cap, veh/h	40	438	371	59	459	389	43	1027	458	189	1319	588
Arrive On Green	0.02	0.23	0.23	0.03	0.24	0.24	0.02	0.29	0.29	0.11	0.37	0.37
Sat Flow, veh/h	1810	1900	1610	1810	1900	1610	1795	3582	1598	1795	3582	1598
Grp Volume(v), veh/h	18	37	35	29	91	329	20	1171	15	149	976	13
Grp Sat Flow(s),veh/h/ln	1810	1900	1610	1810	1900	1610	1795	1791	1598	1795	1791	1598
Q Serve(g_s), s	0.5	0.8	0.9	0.8	2.0	10.2	0.6	15.0	0.4	4.2	12.4	0.3
Cycle Q Clear(g_c), s	0.5	0.8	0.9	0.8	2.0	10.2	0.6	15.0	0.4	4.2	12.4	0.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	40	438	371	59	459	389	43	1027	458	189	1319	588
V/C Ratio(X)	0.45	0.08	0.09	0.49	0.20	0.85	0.46	1.14	0.03	0.79	0.74	0.02
Avail Cap(c_a), veh/h	554	908	770	381	727	616	378	1027	458	206	1319	588
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.3	15.8	15.8	24.9	15.8	18.9	25.2	18.6	13.4	22.8	14.3	10.5
Incr Delay (d2), s/veh	3.0	0.0	0.0	2.3	0.1	3.5	2.8	74.9	0.0	14.9	2.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.3	0.3	0.4	0.8	3.7	0.2	15.6	0.1	2.3	4.1	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	28.2	15.8	15.9	27.1	15.9	22.4	28.0	93.5	13.4	37.7	16.3	10.5
LnGrp LOS	C	B	B	C	B	C	C	F	B	D	B	B
Approach Vol, veh/h		90			449			1206			1138	
Approach Delay, s/veh		18.3			21.4			91.4			19.1	
Approach LOS		B			C			F			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.5	20.0	5.7	17.1	5.3	24.3	5.2	17.6
Change Period (Y+Rc), s	4.0	5.0	4.0	5.0	4.0	5.0	4.0	5.0
Max Green Setting (Gmax), s	6.0	15.0	11.0	25.0	11.0	10.0	16.0	20.0
Max Q Clear Time (g_c+I1), s	2.2	17.0	2.8	2.9	2.6	14.4	2.5	12.2
Green Ext Time (p_c), s	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.4

Intersection Summary	
HCM 6th Ctrl Delay	49.7
HCM 6th LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	382	401	166	345	576	152	234	629	112	205	748	156
Future Volume (veh/h)	382	401	166	345	576	152	234	629	112	205	748	156
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	386	405	168	348	582	154	236	635	113	207	756	158
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	1	1	1	1	1	1	1	1	1	1	1	1
Cap, veh/h	481	777	347	443	739	329	279	961	429	249	902	402
Arrive On Green	0.14	0.22	0.22	0.13	0.21	0.21	0.16	0.27	0.27	0.14	0.25	0.25
Sat Flow, veh/h	3483	3582	1598	3483	3582	1598	1795	3582	1598	1795	3582	1598
Grp Volume(v), veh/h	386	405	168	348	582	154	236	635	113	207	756	158
Grp Sat Flow(s),veh/h/ln	1742	1791	1598	1742	1791	1598	1795	1791	1598	1795	1791	1598
Q Serve(g_s), s	7.8	7.2	6.7	7.0	11.1	6.1	9.3	11.4	4.0	8.1	14.5	5.9
Cycle Q Clear(g_c), s	7.8	7.2	6.7	7.0	11.1	6.1	9.3	11.4	4.0	8.1	14.5	5.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	481	777	347	443	739	329	279	961	429	249	902	402
V/C Ratio(X)	0.80	0.52	0.48	0.78	0.79	0.47	0.85	0.66	0.26	0.83	0.84	0.39
Avail Cap(c_a), veh/h	1011	1237	552	1011	1237	552	546	1188	530	546	1188	530
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.2	25.0	24.8	30.6	27.2	25.2	29.7	23.5	20.8	30.3	25.7	22.5
Incr Delay (d2), s/veh	1.2	0.2	0.4	1.2	0.7	0.4	2.8	0.5	0.1	2.8	3.3	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.1	2.8	2.4	2.9	4.5	2.2	3.9	4.5	1.4	3.4	5.9	2.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	31.4	25.2	25.2	31.8	27.9	25.6	32.5	24.1	21.0	33.1	28.9	22.7
LnGrp LOS	C	C	C	C	C	C	C	C	C	C	C	C
Approach Vol, veh/h		959			1084			984			1121	
Approach Delay, s/veh		27.7			28.8			25.7			28.8	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.0	24.4	13.2	20.7	15.2	23.2	14.0	19.9
Change Period (Y+Rc), s	4.0	5.0	4.0	5.0	4.0	5.0	4.0	5.0
Max Green Setting (Gmax), s	22.0	24.0	21.0	25.0	22.0	24.0	21.0	25.0
Max Q Clear Time (g_c+I1), s	10.1	13.4	9.0	9.2	11.3	16.5	9.8	13.1
Green Ext Time (p_c), s	0.1	1.7	0.2	1.3	0.1	1.7	0.2	1.8

Intersection Summary	
HCM 6th Ctrl Delay	27.8
HCM 6th LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	115	69	220	512	132	57	383	777	254	78	1013	72
Future Volume (veh/h)	115	69	220	512	132	57	383	777	254	78	1013	72
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	98	107	234	545	140	61	407	827	270	83	1078	77
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	1	1	1	1	1	1
Cap, veh/h	312	328	278	670	232	101	502	1341	435	108	1362	423
Arrive On Green	0.17	0.17	0.17	0.19	0.19	0.19	0.14	0.35	0.35	0.06	0.26	0.26
Sat Flow, veh/h	1810	1900	1610	3619	1255	547	3483	3845	1247	1795	5147	1598
Grp Volume(v), veh/h	98	107	234	545	0	201	407	737	360	83	1078	77
Grp Sat Flow(s),veh/h/ln	1810	1900	1610	1810	0	1802	1742	1716	1661	1795	1716	1598
Q Serve(g_s), s	4.1	4.2	12.1	12.4	0.0	8.8	9.7	15.3	15.4	3.9	16.7	3.2
Cycle Q Clear(g_c), s	4.1	4.2	12.1	12.4	0.0	8.8	9.7	15.3	15.4	3.9	16.7	3.2
Prop In Lane	1.00		1.00	1.00		0.30	1.00		0.75	1.00		1.00
Lane Grp Cap(c), veh/h	312	328	278	670	0	334	502	1196	579	108	1362	423
V/C Ratio(X)	0.31	0.33	0.84	0.81	0.00	0.60	0.81	0.62	0.62	0.77	0.79	0.18
Avail Cap(c_a), veh/h	528	555	470	1056	0	526	1017	1202	582	524	1803	560
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.0	31.1	34.3	33.5	0.0	32.0	35.5	23.1	23.2	39.7	29.3	24.3
Incr Delay (d2), s/veh	0.2	0.2	2.7	1.3	0.0	0.7	1.2	0.7	1.5	4.3	1.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	1.9	4.7	5.3	0.0	3.7	4.0	5.8	5.8	1.8	6.6	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	31.2	31.3	37.0	34.7	0.0	32.7	36.7	23.8	24.7	43.9	30.6	24.4
LnGrp LOS	C	C	D	C	A	C	D	C	C	D	C	C
Approach Vol, veh/h		439			746			1504			1238	
Approach Delay, s/veh		34.3			34.2			27.5			31.1	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	10.1	34.9		19.8	17.3	27.7		20.9
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0
Max Green Setting (Gmax), s	25.0	30.0		25.0	25.0	30.0		25.0
Max Q Clear Time (g_c+I1), s	5.1	17.4		14.1	11.7	18.7		14.4
Green Ext Time (p_c), s	0.1	4.0		0.7	0.6	4.0		1.5

Intersection Summary	
HCM 6th Ctrl Delay	30.7
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	180	0	478	54	1175	0	0	1249	623
Future Volume (veh/h)	0	0	0	180	0	478	54	1175	0	0	1249	623
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1885	1885	1885	1885	1885	0	0	1885	1885
Adj Flow Rate, veh/h				131	0	590	59	1277	0	0	1358	677
Peak Hour Factor				0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %				1	1	1	1	1	0	0	1	1
Cap, veh/h				364	0	648	304	2426	0	0	2296	713
Arrive On Green				0.20	0.00	0.20	0.34	1.00	0.00	0.00	0.45	0.45
Sat Flow, veh/h				1795	0	3195	1795	3676	0	0	5316	1598
Grp Volume(v), veh/h				131	0	590	59	1277	0	0	1358	677
Grp Sat Flow(s),veh/h/ln				1795	0	1598	1795	1791	0	0	1716	1598
Q Serve(g_s), s				6.9	0.0	19.9	2.6	0.0	0.0	0.0	21.8	44.8
Cycle Q Clear(g_c), s				6.9	0.0	19.9	2.6	0.0	0.0	0.0	21.8	44.8
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				364	0	648	304	2426	0	0	2296	713
V/C Ratio(X)				0.36	0.00	0.91	0.19	0.53	0.00	0.00	0.59	0.95
Avail Cap(c_a), veh/h				369	0	656	315	2426	0	0	2302	715
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.89	0.89	0.00	0.00	0.60	0.60
Uniform Delay (d), s/veh				37.7	0.0	42.9	31.1	0.0	0.0	0.0	22.9	29.3
Incr Delay (d2), s/veh				1.5	0.0	17.9	0.1	0.7	0.0	0.0	0.7	16.5
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				3.2	0.0	9.3	1.1	0.2	0.0	0.0	8.5	19.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				39.2	0.0	60.7	31.2	0.7	0.0	0.0	23.6	45.8
LnGrp LOS				D	A	E	C	A	A	A	C	D
Approach Vol, veh/h					721			1336			2035	
Approach Delay, s/veh					56.8			2.1			31.0	
Approach LOS					E			A			C	

Timer - Assigned Phs	2		5	6		8
Phs Duration (G+Y+Rc), s	81.3		25.4	55.9		28.7
Change Period (Y+Rc), s	6.8		6.8	* 6.8		6.4
Max Green Setting (Gmax), s	74.2		19.3	* 49		22.6
Max Q Clear Time (g_c+I1), s	2.0		4.6	46.8		21.9
Green Ext Time (p_c), s	44.3		0.0	2.3		0.4

Intersection Summary	
HCM 6th Ctrl Delay	26.1
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	489	0	35	0	0	0	0	740	165	0	914	515
Future Volume (veh/h)	489	0	35	0	0	0	0	740	165	0	914	515
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1885	0	1885				0	1885	1885	0	1885	1885
Adj Flow Rate, veh/h	520	0	37				0	787	0	0	972	0
Peak Hour Factor	0.94	0.94	0.94				0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	1	0	1				0	1	1	0	1	1
Cap, veh/h	538	0	247				0	2644		0	2644	
Arrive On Green	0.15	0.00	0.15				0.00	0.74	0.00	0.00	0.49	0.00
Sat Flow, veh/h	3483	0	1598				0	3676	1598	0	3676	1598
Grp Volume(v), veh/h	520	0	37				0	787	0	0	972	0
Grp Sat Flow(s),veh/h/ln	1742	0	1598				0	1791	1598	0	1791	1598
Q Serve(g_s), s	16.3	0.0	2.2				0.0	8.1	0.0	0.0	18.4	0.0
Cycle Q Clear(g_c), s	16.3	0.0	2.2				0.0	8.1	0.0	0.0	18.4	0.0
Prop In Lane	1.00		1.00				0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h	538	0	247				0	2644		0	2644	
V/C Ratio(X)	0.97	0.00	0.15				0.00	0.30		0.00	0.37	
Avail Cap(c_a), veh/h	538	0	247				0	2644		0	2644	
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	0.67	0.67
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	0.00	0.00	0.88	0.00
Uniform Delay (d), s/veh	46.2	0.0	40.2				0.0	4.8	0.0	0.0	11.9	0.0
Incr Delay (d2), s/veh	30.6	0.0	0.7				0.0	0.3	0.0	0.0	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.2	0.0	0.9				0.0	2.5	0.0	0.0	8.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	76.8	0.0	40.9				0.0	5.1	0.0	0.0	12.3	0.0
LnGrp LOS	E	A	D				A	A		A	B	
Approach Vol, veh/h		557						787			972	
Approach Delay, s/veh		74.4						5.1			12.3	
Approach LOS		E						A			B	

Timer - Assigned Phs	2	4	6
Phs Duration (G+Y+Rc), s	88.0	22.0	88.0
Change Period (Y+Rc), s	6.8	5.0	6.8
Max Green Setting (Gmax), s	81.2	17.0	81.2
Max Q Clear Time (g_c+I1), s	10.1	18.3	20.4
Green Ext Time (p_c), s	16.1	0.0	21.3

Intersection Summary	
HCM 6th Ctrl Delay	24.8
HCM 6th LOS	C

Notes

Unsignalized Delay for [NBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Intersection	
Int Delay, s/veh	2.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	778	38	90	643	38	67
Future Vol, veh/h	778	38	90	643	38	67
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	120	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	1	1	1	1	0	0
Mvmt Flow	802	39	93	663	39	69

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	841	0	1340	822
Stage 1	-	-	-	-	822	-
Stage 2	-	-	-	-	518	-
Critical Hdwy	-	-	4.115	-	6.6	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	-	-	2.2095	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	798	-	158	377
Stage 1	-	-	-	-	435	-
Stage 2	-	-	-	-	568	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	798	-	140	377
Mov Cap-2 Maneuver	-	-	-	-	140	-
Stage 1	-	-	-	-	435	-
Stage 2	-	-	-	-	502	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.2	33
HCM LOS			D

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	234	-	-	798	-
HCM Lane V/C Ratio	0.463	-	-	0.116	-
HCM Control Delay (s)	33	-	-	10.1	-
HCM Lane LOS	D	-	-	B	-
HCM 95th %tile Q(veh)	2.3	-	-	0.4	-

Intersection	
Int Delay, s/veh	13.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	143	624	53	16	615	42	40	2	11	29	5	110
Future Vol, veh/h	143	624	53	16	615	42	40	2	11	29	5	110
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	120	-	-	110	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	1	1	1	1	1	1	0	0	0	0	0	0
Mvmt Flow	149	650	55	17	641	44	42	2	11	30	5	115

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	685	0	0	705	0	0	1733	1695	353	1299	1678	641
Stage 1	-	-	-	-	-	-	976	976	-	675	675	-
Stage 2	-	-	-	-	-	-	757	719	-	624	1003	-
Critical Hdwy	4.115	-	-	4.115	-	-	7.3	6.5	6.9	7.3	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.5	5.5	-
Follow-up Hdwy	2.2095	-	-	2.2095	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	912	-	-	897	-	-	63	94	649	130	96	478
Stage 1	-	-	-	-	-	-	273	332	-	447	456	-
Stage 2	-	-	-	-	-	-	403	436	-	445	322	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	912	-	-	897	-	-	~ 39	77	649	108	79	478
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 39	77	-	108	79	-
Stage 1	-	-	-	-	-	-	229	278	-	374	447	-
Stage 2	-	-	-	-	-	-	297	428	-	363	270	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.7	0.2	291	37.2
HCM LOS			F	E

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	50	912	-	-	897	-	-	256
HCM Lane V/C Ratio	1.104	0.163	-	-	0.019	-	-	0.586
HCM Control Delay (s)	291	9.7	-	-	9.1	-	-	37.2
HCM Lane LOS	F	A	-	-	A	-	-	E
HCM 95th %tile Q(veh)	4.9	0.6	-	-	0.1	-	-	3.4

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Intersection Delay, s/veh	12.7
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	9	140	45	139	156	17	59	96	105	28	147	18
Future Vol, veh/h	9	140	45	139	156	17	59	96	105	28	147	18
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	1	1	1	1	1	1	1	1	1	1	1	1
Mvmt Flow	9	147	47	146	164	18	62	101	111	29	155	19
Number of Lanes	0	1	0	0	1	0	0	1	1	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	2	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	1	1	1
HCM Control Delay	11.7	14.9	11.2	12.3
HCM LOS	B	B	B	B

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1
Vol Left, %	38%	0%	5%	45%	15%
Vol Thru, %	62%	0%	72%	50%	76%
Vol Right, %	0%	100%	23%	5%	9%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	155	105	194	312	193
LT Vol	59	0	9	139	28
Through Vol	96	0	140	156	147
RT Vol	0	105	45	17	18
Lane Flow Rate	163	111	204	328	203
Geometry Grp	7	7	2	2	5
Degree of Util (X)	0.299	0.175	0.328	0.522	0.341
Departure Headway (Hd)	6.598	5.692	5.777	5.721	6.045
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	542	626	619	627	591
Service Time	4.374	3.467	3.855	3.79	4.126
HCM Lane V/C Ratio	0.301	0.177	0.33	0.523	0.343
HCM Control Delay	12.2	9.7	11.7	14.9	12.3
HCM Lane LOS	B	A	B	B	B
HCM 95th-tile Q	1.2	0.6	1.4	3	1.5



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	191	351	121	152	428	71	124	392	141	66	285	116
Future Volume (veh/h)	191	351	121	152	428	71	124	392	141	66	285	116
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	195	358	123	155	437	72	127	400	144	67	291	118
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	0	0	0	0	0	1	1	1	1	1	1
Cap, veh/h	242	436	369	196	737	329	163	885	315	95	762	302
Arrive On Green	0.13	0.23	0.23	0.11	0.20	0.20	0.09	0.34	0.34	0.05	0.30	0.30
Sat Flow, veh/h	1810	1900	1610	1810	3610	1610	1795	2589	921	1795	2505	993
Grp Volume(v), veh/h	195	358	123	155	437	72	127	275	269	67	206	203
Grp Sat Flow(s),veh/h/ln	1810	1900	1610	1810	1805	1610	1795	1791	1719	1795	1791	1707
Q Serve(g_s), s	7.0	12.1	4.3	5.6	7.4	2.5	4.7	8.0	8.2	2.5	6.1	6.3
Cycle Q Clear(g_c), s	7.0	12.1	4.3	5.6	7.4	2.5	4.7	8.0	8.2	2.5	6.1	6.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.54	1.00		0.58
Lane Grp Cap(c), veh/h	242	436	369	196	737	329	163	612	588	95	545	519
V/C Ratio(X)	0.81	0.82	0.33	0.79	0.59	0.22	0.78	0.45	0.46	0.70	0.38	0.39
Avail Cap(c_a), veh/h	363	606	514	282	991	442	253	612	588	192	545	519
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.3	24.6	21.7	29.3	24.3	22.3	30.0	17.2	17.3	31.4	18.4	18.5
Incr Delay (d2), s/veh	7.8	6.3	0.5	9.2	0.8	0.3	7.9	2.4	2.6	9.1	2.0	2.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.3	5.6	1.6	2.8	3.0	0.9	2.2	3.3	3.3	1.2	2.5	2.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	36.2	30.9	22.2	38.5	25.0	22.7	37.9	19.6	19.8	40.5	20.4	20.7
LnGrp LOS	D	C	C	D	C	C	D	B	B	D	C	C
Approach Vol, veh/h		676			664			671			476	
Approach Delay, s/veh		30.9			27.9			23.2			23.4	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.1	27.5	11.8	20.0	10.6	25.0	13.5	18.3
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	7.3	22.8	10.5	21.5	9.5	20.5	13.5	18.5
Max Q Clear Time (g_c+I1), s	4.5	10.2	7.6	14.1	6.7	8.3	9.0	9.4
Green Ext Time (p_c), s	0.0	2.5	0.1	1.4	0.1	1.7	0.2	2.0

Intersection Summary	
HCM 6th Ctrl Delay	26.6
HCM 6th LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	98	31	112	10	43	0	96	610	5	1	646	134
Future Volume (veh/h)	98	31	112	10	43	0	96	610	5	1	646	134
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1900	1900	1900	1826	1826	1826	1826	1826	1826
Adj Flow Rate, veh/h	104	33	119	11	46	0	102	649	5	1	687	143
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	3	3	3	0	0	0	5	5	5	5	5	5
Cap, veh/h	167	56	202	44	172	0	164	921	780	4	753	638
Arrive On Green	0.09	0.16	0.16	0.02	0.09	0.00	0.09	0.50	0.50	0.00	0.41	0.41
Sat Flow, veh/h	1767	353	1273	1810	1900	0	1739	1826	1547	1739	1826	1547
Grp Volume(v), veh/h	104	0	152	11	46	0	102	649	5	1	687	143
Grp Sat Flow(s),veh/h/ln	1767	0	1626	1810	1900	0	1739	1826	1547	1739	1826	1547
Q Serve(g_s), s	5.0	0.0	7.6	0.5	2.0	0.0	4.9	24.0	0.1	0.1	31.1	5.2
Cycle Q Clear(g_c), s	5.0	0.0	7.6	0.5	2.0	0.0	4.9	24.0	0.1	0.1	31.1	5.2
Prop In Lane	1.00		0.78	1.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	167	0	258	44	172	0	164	921	780	4	753	638
V/C Ratio(X)	0.62	0.00	0.59	0.25	0.27	0.00	0.62	0.71	0.01	0.23	0.91	0.22
Avail Cap(c_a), veh/h	309	0	380	312	444	0	300	921	780	300	773	655
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.2	0.0	34.2	42.0	37.1	0.0	38.2	16.7	10.8	43.6	24.2	16.7
Incr Delay (d2), s/veh	1.4	0.0	6.4	1.1	2.5	0.0	1.4	4.5	0.0	9.9	17.3	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	0.0	3.2	0.2	1.0	0.0	2.1	9.7	0.0	0.0	15.4	1.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	39.6	0.0	40.6	43.1	39.6	0.0	39.6	21.2	10.8	53.5	41.5	17.5
LnGrp LOS	D	A	D	D	D	A	D	C	B	D	D	B
Approach Vol, veh/h		256			57			756			831	
Approach Delay, s/veh		40.2			40.3			23.6			37.4	
Approach LOS		D			D			C			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.1	52.1	8.0	21.4	14.1	44.0	14.0	15.5
Change Period (Y+Rc), s	5.9	7.9	5.9	7.5	5.9	7.9	* 5.7	7.5
Max Green Setting (Gmax), s	15.1	37.1	15.1	20.5	15.1	37.1	* 15	20.5
Max Q Clear Time (g_c+I1), s	2.1	26.0	2.5	9.6	6.9	33.1	7.0	4.0
Green Ext Time (p_c), s	0.0	6.6	0.0	1.0	0.1	3.1	0.1	0.2

Intersection Summary	
HCM 6th Ctrl Delay	32.4
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	4.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	163	5	359	251	8	305
Future Vol, veh/h	163	5	359	251	8	305
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	150	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	1	0	0	1
Mvmt Flow	177	5	390	273	9	332

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	877	332	0	0	663	0
Stage 1	527	-	-	-	-	-
Stage 2	350	-	-	-	-	-
Critical Hdwy	6.6	6.9	-	-	4.1	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	306	670	-	-	935	-
Stage 1	562	-	-	-	-	-
Stage 2	718	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	303	670	-	-	935	-
Mov Cap-2 Maneuver	303	-	-	-	-	-
Stage 1	562	-	-	-	-	-
Stage 2	711	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	31.6	0	0.2
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	303	670	935	-
HCM Lane V/C Ratio	-	-	0.585	0.008	0.009	-
HCM Control Delay (s)	-	-	32.3	10.4	8.9	-
HCM Lane LOS	-	-	D	B	A	-
HCM 95th %tile Q(veh)	-	-	3.5	0	0	-

Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	4	604	47	0	465
Future Vol, veh/h	0	4	604	47	0	465
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	1	0	0	1
Mvmt Flow	0	4	657	51	0	505

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	354	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.9	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	-	-
Pot Cap-1 Maneuver	0	648	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	648	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.6	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	648	-
HCM Lane V/C Ratio	-	-	0.007	-
HCM Control Delay (s)	-	-	10.6	-
HCM Lane LOS	-	-	B	-
HCM 95th %tile Q(veh)	-	-	0	-

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑↑↱			↱
Traffic Vol, veh/h	0	879	643	69	0	55
Future Vol, veh/h	0	879	643	69	0	55
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	1	1	0	0	0
Mvmt Flow	0	955	699	75	0	60

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	387
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.3
Pot Cap-1 Maneuver	0	-	-	-	0	617
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	617
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	11.5
HCM LOS			B

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	617
HCM Lane V/C Ratio	-	-	-	0.097
HCM Control Delay (s)	-	-	-	11.5
HCM Lane LOS	-	-	-	B
HCM 95th %tile Q(veh)	-	-	-	0.3

Intersection	
Int Delay, s/veh	116.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	222	657	636	44	158	74
Future Vol, veh/h	222	657	636	44	158	74
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	150	-	-	-	0	100
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	1	1	0	0	0
Mvmt Flow	241	714	691	48	172	80

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	739	0	-	0	1911	370
Stage 1	-	-	-	-	715	-
Stage 2	-	-	-	-	1196	-
Critical Hdwy	4.1	-	-	-	6.6	6.9
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	876	-	-	-	~ 68	633
Stage 1	-	-	-	-	451	-
Stage 2	-	-	-	-	289	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	876	-	-	-	~ 49	633
Mov Cap-2 Maneuver	-	-	-	-	~ 49	-
Stage 1	-	-	-	-	327	-
Stage 2	-	-	-	-	289	-

Approach	EB	WB	SB
HCM Control Delay, s	2.7	0	$ 889.4
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	876	-	-	-	49	633
HCM Lane V/C Ratio	0.275	-	-	-	3.505	0.127
HCM Control Delay (s)	10.7	-	-	-	$ 1300.5	11.5
HCM Lane LOS	B	-	-	-	F	B
HCM 95th %tile Q(veh)	1.1	-	-	-	18.8	0.4

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	0.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	179	10	0	148	0	3
Future Vol, veh/h	179	10	0	148	0	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	1	0	0
Mvmt Flow	195	11	0	161	0	3

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	103
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.3
Pot Cap-1 Maneuver	-	-	0	-	0	938
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	938
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	8.9
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	938	-	-	-
HCM Lane V/C Ratio	0.003	-	-	-
HCM Control Delay (s)	8.9	-	-	-
HCM Lane LOS	A	-	-	-
HCM 95th %tile Q(veh)	0	-	-	-

Intersection	
Int Delay, s/veh	1.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	177	5	33	145	3	19
Future Vol, veh/h	177	5	33	145	3	19
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	150	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	1	0	0
Mvmt Flow	192	5	36	158	3	21

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	197	0	425	99
Stage 1	-	-	-	-	195	-
Stage 2	-	-	-	-	230	-
Critical Hdwy	-	-	4.1	-	6.6	6.9
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1388	-	576	944
Stage 1	-	-	-	-	825	-
Stage 2	-	-	-	-	813	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1388	-	561	944
Mov Cap-2 Maneuver	-	-	-	-	561	-
Stage 1	-	-	-	-	825	-
Stage 2	-	-	-	-	792	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.4	9.3
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	864	-	-	1388	-
HCM Lane V/C Ratio	0.028	-	-	0.026	-
HCM Control Delay (s)	9.3	-	-	7.7	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0.1	-

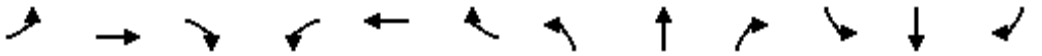
Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑↱			↱
Traffic Vol, veh/h	0	845	689	50	0	44
Future Vol, veh/h	0	845	689	50	0	44
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	1	1	0	0	0
Mvmt Flow	0	918	749	54	0	48

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	402
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.3
Pot Cap-1 Maneuver	0	-	-	-	0	604
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	604
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	11.5
HCM LOS			B

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	604
HCM Lane V/C Ratio	-	-	-	0.079
HCM Control Delay (s)	-	-	-	11.5
HCM Lane LOS	-	-	-	B
HCM 95th %tile Q(veh)	-	-	-	0.3



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	17	93	24	55	139	106	13	214	66	62	303	13
Future Volume (veh/h)	17	93	24	55	139	106	13	214	66	62	303	13
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1811	1870	1870	1856	1885	1856	1885	1811	1811	1870	1856
Adj Flow Rate, veh/h	24	133	34	79	199	151	19	306	94	89	433	19
Peak Hour Factor	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70
Percent Heavy Veh, %	1	6	2	2	3	1	3	1	6	6	2	3
Cap, veh/h	85	377	88	126	246	171	23	364	316	101	491	502
Arrive On Green	0.30	0.30	0.30	0.30	0.30	0.30	0.21	0.21	0.21	0.32	0.32	0.32
Sat Flow, veh/h	105	1278	299	233	834	580	110	1770	1535	316	1538	1572
Grp Volume(v), veh/h	191	0	0	429	0	0	325	0	94	522	0	19
Grp Sat Flow(s),veh/h/ln	1682	0	0	1647	0	0	1880	0	1535	1855	0	1572
Q Serve(g_s), s	0.0	0.0	0.0	12.0	0.0	0.0	12.5	0.0	3.9	20.0	0.0	0.6
Cycle Q Clear(g_c), s	6.5	0.0	0.0	18.5	0.0	0.0	12.5	0.0	3.9	20.0	0.0	0.6
Prop In Lane	0.13		0.18	0.18		0.35	0.06		1.00	0.17		1.00
Lane Grp Cap(c), veh/h	551	0	0	543	0	0	387	0	316	592	0	502
V/C Ratio(X)	0.35	0.00	0.00	0.79	0.00	0.00	0.84	0.00	0.30	0.88	0.00	0.04
Avail Cap(c_a), veh/h	669	0	0	661	0	0	509	0	415	705	0	597
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	20.9	0.0	0.0	24.9	0.0	0.0	28.6	0.0	25.2	24.2	0.0	17.6
Incr Delay (d2), s/veh	0.4	0.0	0.0	5.3	0.0	0.0	9.4	0.0	0.5	11.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	0.0	0.0	7.7	0.0	0.0	5.9	0.0	1.3	10.2	0.0	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	21.3	0.0	0.0	30.2	0.0	0.0	38.0	0.0	25.7	35.4	0.0	17.6
LnGrp LOS	C	A	A	C	A	A	D	A	C	D	A	B
Approach Vol, veh/h		191			429			419			541	
Approach Delay, s/veh		21.3			30.2			35.3			34.8	
Approach LOS		C			C			D			C	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		19.9		26.7		28.4		26.7				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		20.3		27.7		28.5		27.7				
Max Q Clear Time (g_c+I1), s		14.5		8.5		22.0		20.5				
Green Ext Time (p_c), s		1.0		0.9		1.9		1.7				

Intersection Summary												
HCM 6th Ctrl Delay			32.0									
HCM 6th LOS			C									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	99	248	23	421	427	55	17	325	232	17	513	74
Future Volume (veh/h)	99	248	23	421	427	55	17	325	232	17	513	74
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1870	1870	1870	1885	1885	1885	1885	1870	1870	1870	1885
Adj Flow Rate, veh/h	108	270	25	458	464	60	18	353	252	18	558	80
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	1	2	2	2	1	1	1	1	2	2	2	1
Cap, veh/h	136	307	260	490	696	590	35	651	457	35	605	517
Arrive On Green	0.08	0.16	0.16	0.28	0.37	0.37	0.02	0.32	0.32	0.02	0.32	0.32
Sat Flow, veh/h	1795	1870	1585	1781	1885	1598	1795	2011	1411	1781	1870	1598
Grp Volume(v), veh/h	108	270	25	458	464	60	18	314	291	18	558	80
Grp Sat Flow(s),veh/h/ln	1795	1870	1585	1781	1885	1598	1795	1791	1631	1781	1870	1598
Q Serve(g_s), s	5.9	14.0	1.1	24.8	20.4	2.4	1.0	14.2	14.6	1.0	28.5	3.5
Cycle Q Clear(g_c), s	5.9	14.0	1.1	24.8	20.4	2.4	1.0	14.2	14.6	1.0	28.5	3.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.87	1.00		1.00
Lane Grp Cap(c), veh/h	136	307	260	490	696	590	35	580	528	35	605	517
V/C Ratio(X)	0.80	0.88	0.10	0.93	0.67	0.10	0.51	0.54	0.55	0.51	0.92	0.15
Avail Cap(c_a), veh/h	199	368	312	594	790	670	91	751	684	90	784	670
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.0	40.4	25.4	35.0	26.1	20.5	48.0	27.5	27.6	48.1	32.3	23.8
Incr Delay (d2), s/veh	7.5	16.6	0.1	18.6	1.2	0.0	4.1	0.3	0.3	4.2	12.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.8	7.5	0.5	12.5	8.6	0.8	0.5	5.8	5.4	0.5	13.6	1.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	52.5	57.0	25.4	53.6	27.4	20.5	52.2	27.7	27.9	52.3	44.5	23.9
LnGrp LOS	D	E	C	D	C	C	D	C	C	D	D	C
Approach Vol, veh/h		403			982			623			656	
Approach Delay, s/veh		53.8			39.2			28.5			42.2	
Approach LOS		D			D			C			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.0	37.5	32.7	21.8	7.0	37.5	12.5	42.0
Change Period (Y+Rc), s	5.0	5.5	5.5	* 5.5	5.0	5.5	5.0	5.5
Max Green Setting (Gmax), s	5.0	41.5	33.0	* 20	5.0	41.5	11.0	41.5
Max Q Clear Time (g_c+I1), s	3.0	16.6	26.8	16.0	3.0	30.5	7.9	22.4
Green Ext Time (p_c), s	0.0	2.2	0.4	0.3	0.0	1.6	0.0	1.5

Intersection Summary	
HCM 6th Ctrl Delay	39.6
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	3.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	586	47	148	899	53	90
Future Vol, veh/h	586	47	148	899	53	90
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	120	-	0	-
Veh in Median Storage, #	0	-	-	0	2	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	81	81	81	81	81	81
Heavy Vehicles, %	2	0	0	1	1	2
Mvmt Flow	723	58	183	1110	65	111

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	781	0	1673	752
Stage 1	-	-	-	-	752	-
Stage 2	-	-	-	-	921	-
Critical Hdwy	-	-	4.1	-	6.615	6.23
Critical Hdwy Stg 1	-	-	-	-	5.415	-
Critical Hdwy Stg 2	-	-	-	-	5.815	-
Follow-up Hdwy	-	-	2.2	-	3.5095	3.319
Pot Cap-1 Maneuver	-	-	845	-	96	409
Stage 1	-	-	-	-	467	-
Stage 2	-	-	-	-	351	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	845	-	75	409
Mov Cap-2 Maneuver	-	-	-	-	233	-
Stage 1	-	-	-	-	467	-
Stage 2	-	-	-	-	275	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.5	29.3
HCM LOS			D

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	320	-	-	845	-
HCM Lane V/C Ratio	0.552	-	-	0.216	-
HCM Control Delay (s)	29.3	-	-	10.4	-
HCM Lane LOS	D	-	-	B	-
HCM 95th %tile Q(veh)	3.1	-	-	0.8	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	92	559	49	14	772	22	56	8	26	15	5	175
Future Volume (veh/h)	92	559	49	14	772	22	56	8	26	15	5	175
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1870	1900	1900	1885	1900	1885	1900	1870	1870	1900	1885
Adj Flow Rate, veh/h	115	699	61	18	965	28	70	10	32	19	6	219
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Percent Heavy Veh, %	0	2	0	0	1	0	1	0	2	2	0	1
Cap, veh/h	147	2055	179	38	1057	903	185	36	57	63	18	262
Arrive On Green	0.08	0.62	0.62	0.02	0.56	0.56	0.18	0.18	0.18	0.18	0.18	0.18
Sat Flow, veh/h	1810	3307	288	1810	1885	1610	598	200	319	67	100	1460
Grp Volume(v), veh/h	115	375	385	18	965	28	112	0	0	244	0	0
Grp Sat Flow(s),veh/h/ln	1810	1777	1818	1810	1885	1610	1116	0	0	1626	0	0
Q Serve(g_s), s	4.7	7.7	7.7	0.7	34.8	0.6	0.0	0.0	0.0	4.0	0.0	0.0
Cycle Q Clear(g_c), s	4.7	7.7	7.7	0.7	34.8	0.6	6.9	0.0	0.0	10.9	0.0	0.0
Prop In Lane	1.00		0.16	1.00		1.00	0.62		0.29	0.08		0.90
Lane Grp Cap(c), veh/h	147	1104	1130	38	1057	903	277	0	0	343	0	0
V/C Ratio(X)	0.78	0.34	0.34	0.48	0.91	0.03	0.40	0.00	0.00	0.71	0.00	0.00
Avail Cap(c_a), veh/h	204	1246	1275	120	1235	1055	364	0	0	448	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	34.0	6.9	6.9	36.6	14.9	7.4	28.0	0.0	0.0	29.9	0.0	0.0
Incr Delay (d2), s/veh	12.3	0.2	0.2	9.1	9.4	0.0	0.9	0.0	0.0	3.6	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	2.1	2.2	0.4	13.9	0.2	1.9	0.0	0.0	4.4	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	46.4	7.0	7.0	45.7	24.4	7.4	28.9	0.0	0.0	33.5	0.0	0.0
LnGrp LOS	D	A	A	D	C	A	C	A	A	C	A	A
Approach Vol, veh/h		875			1011			112			244	
Approach Delay, s/veh		12.2			24.3			28.9			33.5	
Approach LOS		B			C			C			C	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		18.0	6.1	51.5		18.0	10.6	46.9				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		18.5	5.0	53.0		18.5	8.5	49.5				
Max Q Clear Time (g_c+I1), s		8.9	2.7	9.7		12.9	6.7	36.8				
Green Ext Time (p_c), s		0.4	0.0	4.8		0.6	0.0	5.6				

Intersection Summary	
HCM 6th Ctrl Delay	20.8
HCM 6th LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	261	44	88	228	16	76	119	212	49	183	14
Future Volume (veh/h)	30	261	44	88	228	16	76	119	212	49	183	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1870	1885	1885	1856	1900	1856	1900	1870	1870	1885	1856
Adj Flow Rate, veh/h	36	314	53	106	275	19	92	143	255	59	220	17
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Percent Heavy Veh, %	0	2	1	1	3	0	3	0	2	2	1	3
Cap, veh/h	180	518	83	287	455	28	333	363	472	228	410	29
Arrive On Green	0.36	0.36	0.36	0.36	0.36	0.36	0.30	0.30	0.30	0.30	0.30	0.30
Sat Flow, veh/h	81	1460	233	314	1282	80	469	1222	1585	207	1379	97
Grp Volume(v), veh/h	403	0	0	400	0	0	235	0	255	296	0	0
Grp Sat Flow(s),veh/h/ln	1775	0	0	1676	0	0	1690	0	1585	1683	0	0
Q Serve(g_s), s	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.5	0.9	0.0	0.0
Cycle Q Clear(g_c), s	4.7	0.0	0.0	4.7	0.0	0.0	2.6	0.0	3.5	3.6	0.0	0.0
Prop In Lane	0.09		0.13	0.26		0.05	0.39		1.00	0.20		0.06
Lane Grp Cap(c), veh/h	781	0	0	771	0	0	696	0	472	667	0	0
V/C Ratio(X)	0.52	0.00	0.00	0.52	0.00	0.00	0.34	0.00	0.54	0.44	0.00	0.00
Avail Cap(c_a), veh/h	3256	0	0	2940	0	0	2270	0	2111	2307	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	6.9	0.0	0.0	6.9	0.0	0.0	7.3	0.0	7.6	7.6	0.0	0.0
Incr Delay (d2), s/veh	0.5	0.0	0.0	0.5	0.0	0.0	0.3	0.0	1.0	0.5	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.0	0.0	0.5	0.0	0.0	0.4	0.0	0.6	0.6	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	7.4	0.0	0.0	7.4	0.0	0.0	7.6	0.0	8.6	8.1	0.0	0.0
LnGrp LOS	A	A	A	A	A	A	A	A	A	A	A	A
Approach Vol, veh/h		403			400			490			296	
Approach Delay, s/veh		7.4			7.4			8.1			8.1	
Approach LOS		A			A			A			A	

Timer - Assigned Phs	2		4		6		8					
Phs Duration (G+Y+Rc), s	12.2		13.7		12.2		13.7					
Change Period (Y+Rc), s	4.5		4.5		4.5		4.5					
Max Green Setting (Gmax), s	34.5		46.5		34.5		46.5					
Max Q Clear Time (g_c+I1), s	5.5		6.7		5.6		6.7					
Green Ext Time (p_c), s	2.2		2.4		1.8		2.6					

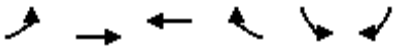
Intersection Summary												
HCM 6th Ctrl Delay			7.8									
HCM 6th LOS			A									



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	279	18	278	138	28	326
Future Volume (veh/h)	279	18	278	138	28	326
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1900	1900	1885	1900	1900	1870
Adj Flow Rate, veh/h	303	20	302	150	30	354
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	1	0	0	2
Cap, veh/h	448	399	793	385	558	634
Arrive On Green	0.25	0.25	0.34	0.34	0.34	0.34
Sat Flow, veh/h	1810	1610	2433	1134	954	1870
Grp Volume(v), veh/h	303	20	230	222	30	354
Grp Sat Flow(s),veh/h/ln	1810	1610	1791	1681	954	1870
Q Serve(g_s), s	3.3	0.2	2.1	2.2	0.5	3.4
Cycle Q Clear(g_c), s	3.3	0.2	2.1	2.2	2.7	3.4
Prop In Lane	1.00	1.00		0.67	1.00	
Lane Grp Cap(c), veh/h	448	399	607	570	558	634
V/C Ratio(X)	0.68	0.05	0.38	0.39	0.05	0.56
Avail Cap(c_a), veh/h	3032	2698	3658	3434	2182	3821
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	7.4	6.2	5.5	5.5	6.5	5.9
Incr Delay (d2), s/veh	1.8	0.1	0.4	0.4	0.0	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.0	0.1	0.1	0.0	0.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	9.2	6.3	5.8	5.9	6.6	6.6
LnGrp LOS	A	A	A	A	A	A
Approach Vol, veh/h	323		452			384
Approach Delay, s/veh	9.0		5.9			6.6
Approach LOS	A		A			A

Timer - Assigned Phs	2				6	8
Phs Duration (G+Y+Rc), s	11.9				11.9	9.9
Change Period (Y+Rc), s	4.5				4.5	4.5
Max Green Setting (Gmax), s	44.5				44.5	36.5
Max Q Clear Time (g_c+I1), s	4.2				5.4	5.3
Green Ext Time (p_c), s	2.4				2.0	1.0

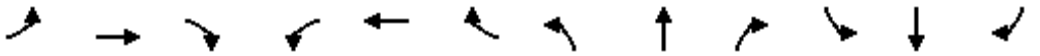
Intersection Summary	
HCM 6th Ctrl Delay	7.0
HCM 6th LOS	A



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	122	375	823	128	257	108
Future Volume (veh/h)	122	375	823	128	257	108
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1900	1870	1885	1900	1900	1900
Adj Flow Rate, veh/h	133	408	895	139	279	117
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	2	1	0	0	0
Cap, veh/h	385	1018	1691	263	405	360
Arrive On Green	0.54	0.54	0.54	0.54	0.22	0.22
Sat Flow, veh/h	554	1870	3201	482	1810	1610
Grp Volume(v), veh/h	133	408	516	518	279	117
Grp Sat Flow(s),veh/h/ln	554	1870	1791	1798	1810	1610
Q Serve(g_s), s	7.8	4.9	7.2	7.2	5.5	2.4
Cycle Q Clear(g_c), s	15.0	4.9	7.2	7.2	5.5	2.4
Prop In Lane	1.00			0.27	1.00	1.00
Lane Grp Cap(c), veh/h	385	1018	975	979	405	360
V/C Ratio(X)	0.35	0.40	0.53	0.53	0.69	0.32
Avail Cap(c_a), veh/h	976	3014	2886	2898	1330	1183
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	10.5	5.2	5.7	5.7	13.8	12.6
Incr Delay (d2), s/veh	0.5	0.3	0.4	0.4	2.1	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.7	0.9	0.9	2.0	0.7
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	11.0	5.4	6.1	6.1	15.9	13.1
LnGrp LOS	B	A	A	A	B	B
Approach Vol, veh/h		541	1034		396	
Approach Delay, s/veh		6.8	6.1		15.1	
Approach LOS		A	A		B	

Timer - Assigned Phs		4		6	8
Phs Duration (G+Y+Rc), s		25.6		13.2	25.6
Change Period (Y+Rc), s		4.5		4.5	4.5
Max Green Setting (Gmax), s		62.5		28.5	62.5
Max Q Clear Time (g_c+I1), s		17.0		7.5	9.2
Green Ext Time (p_c), s		4.1		1.2	7.1

Intersection Summary	
HCM 6th Ctrl Delay	8.1
HCM 6th LOS	A



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	2	54	8	27	51	21	15	183	36	50	176	4
Future Volume (veh/h)	2	54	8	27	51	21	15	183	36	50	176	4
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1885	1885	1885	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	2	57	8	28	54	22	16	193	38	53	185	4
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	1	1	1	1	1	1	1	1	1
Cap, veh/h	127	201	28	198	122	45	29	347	320	94	329	362
Arrive On Green	0.13	0.13	0.13	0.13	0.13	0.13	0.20	0.20	0.20	0.23	0.23	0.23
Sat Flow, veh/h	32	1595	221	367	968	358	144	1734	1598	415	1449	1598
Grp Volume(v), veh/h	67	0	0	104	0	0	209	0	38	238	0	4
Grp Sat Flow(s),veh/h/ln	1848	0	0	1693	0	0	1878	0	1598	1864	0	1598
Q Serve(g_s), s	0.0	0.0	0.0	0.7	0.0	0.0	3.0	0.0	0.6	3.4	0.0	0.1
Cycle Q Clear(g_c), s	1.0	0.0	0.0	1.7	0.0	0.0	3.0	0.0	0.6	3.4	0.0	0.1
Prop In Lane	0.03		0.12	0.27		0.21	0.08		1.00	0.22		1.00
Lane Grp Cap(c), veh/h	356	0	0	365	0	0	376	0	320	423	0	362
V/C Ratio(X)	0.19	0.00	0.00	0.29	0.00	0.00	0.56	0.00	0.12	0.56	0.00	0.01
Avail Cap(c_a), veh/h	1432	0	0	1329	0	0	1648	0	1402	1759	0	1508
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	12.0	0.0	0.0	12.2	0.0	0.0	10.9	0.0	9.9	10.4	0.0	9.1
Incr Delay (d2), s/veh	0.3	0.0	0.0	0.4	0.0	0.0	1.3	0.0	0.2	1.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	0.0	0.6	0.0	0.0	0.8	0.0	0.1	1.2	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	12.2	0.0	0.0	12.7	0.0	0.0	12.2	0.0	10.1	11.5	0.0	9.1
LnGrp LOS	B	A	A	B	A	A	B	A	B	B	A	A
Approach Vol, veh/h		67			104			247			242	
Approach Delay, s/veh		12.2			12.7			11.8			11.5	
Approach LOS		B			B			B			B	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		10.5		8.3		11.3		8.3				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		26.5		21.5		28.5		21.5				
Max Q Clear Time (g_c+I1), s		5.0		3.0		5.4		3.7				
Green Ext Time (p_c), s		1.0		0.2		1.4		0.5				

Intersection Summary												
HCM 6th Ctrl Delay			11.9									
HCM 6th LOS			B									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	45	258	20	339	222	28	18	493	492	26	315	36
Future Volume (veh/h)	45	258	20	339	222	28	18	493	492	26	315	36
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	47	272	21	357	234	29	19	519	518	27	332	38
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	1	1	1	1	1	1
Cap, veh/h	68	317	269	393	659	558	37	650	580	48	696	589
Arrive On Green	0.04	0.17	0.17	0.22	0.35	0.35	0.02	0.36	0.36	0.03	0.37	0.37
Sat Flow, veh/h	1810	1900	1610	1810	1900	1610	1795	1791	1598	1795	1885	1598
Grp Volume(v), veh/h	47	272	21	357	234	29	19	519	518	27	332	38
Grp Sat Flow(s),veh/h/ln	1810	1900	1610	1810	1900	1610	1795	1791	1598	1795	1885	1598
Q Serve(g_s), s	2.4	12.9	1.0	17.9	8.5	1.1	1.0	24.2	28.4	1.4	12.5	1.4
Cycle Q Clear(g_c), s	2.4	12.9	1.0	17.9	8.5	1.1	1.0	24.2	28.4	1.4	12.5	1.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	68	317	269	393	659	558	37	650	580	48	696	589
V/C Ratio(X)	0.69	0.86	0.08	0.91	0.36	0.05	0.51	0.80	0.89	0.56	0.48	0.06
Avail Cap(c_a), veh/h	175	500	424	545	888	753	154	799	713	96	780	661
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.2	37.7	32.7	35.5	22.6	20.2	45.1	26.6	27.9	44.7	22.5	19.0
Incr Delay (d2), s/veh	4.5	5.1	0.0	12.6	0.1	0.0	3.9	3.8	10.6	3.7	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	6.1	0.4	8.7	3.5	0.4	0.5	10.1	11.6	0.6	5.0	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	48.7	42.7	32.7	48.1	22.8	20.2	49.0	30.3	38.6	48.4	22.7	19.0
LnGrp LOS	D	D	C	D	C	C	D	C	D	D	C	B
Approach Vol, veh/h		340			620			1056			397	
Approach Delay, s/veh		42.9			37.2			34.7			24.1	
Approach LOS		D			D			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.5	39.3	25.2	21.0	6.9	39.8	8.5	37.8
Change Period (Y+Rc), s	5.0	5.5	5.0	5.5	5.0	5.5	5.0	5.5
Max Green Setting (Gmax), s	5.0	41.5	28.0	24.5	8.0	38.5	9.0	43.5
Max Q Clear Time (g_c+I1), s	3.4	30.4	19.9	14.9	3.0	14.5	4.4	10.5
Green Ext Time (p_c), s	0.0	3.3	0.3	0.6	0.0	1.0	0.0	0.7

Intersection Summary	
HCM 6th Ctrl Delay	34.8
HCM 6th LOS	C

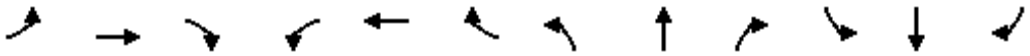
Intersection	
Int Delay, s/veh	1.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	677	36	85	538	34	57
Future Vol, veh/h	677	36	85	538	34	57
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	120	-	0	-
Veh in Median Storage, #	0	-	-	0	2	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	1	1	1	1	0	0
Mvmt Flow	698	37	88	555	35	59

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	735	0	1171	717
Stage 1	-	-	-	-	717	-
Stage 2	-	-	-	-	454	-
Critical Hdwy	-	-	4.115	-	6.6	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	-	-	2.2095	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	874	-	201	433
Stage 1	-	-	-	-	487	-
Stage 2	-	-	-	-	612	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	874	-	181	433
Mov Cap-2 Maneuver	-	-	-	-	383	-
Stage 1	-	-	-	-	487	-
Stage 2	-	-	-	-	550	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.3	16.3
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	413	-	-	874	-
HCM Lane V/C Ratio	0.227	-	-	0.1	-
HCM Control Delay (s)	16.3	-	-	9.6	-
HCM Lane LOS	C	-	-	A	-
HCM 95th %tile Q(veh)	0.9	-	-	0.3	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	118	576	51	15	515	36	38	2	10	28	5	91
Future Volume (veh/h)	118	576	51	15	515	36	38	2	10	28	5	91
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	123	600	53	16	536	38	40	2	10	29	5	95
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	1	1	1	1	1	1	0	0	0	0	0	0
Cap, veh/h	175	1559	137	37	738	625	328	31	44	156	24	168
Arrive On Green	0.10	0.47	0.47	0.02	0.39	0.39	0.14	0.14	0.14	0.14	0.14	0.14
Sat Flow, veh/h	1795	3330	294	1795	1885	1598	1082	221	310	252	170	1181
Grp Volume(v), veh/h	123	322	331	16	536	38	52	0	0	129	0	0
Grp Sat Flow(s),veh/h/ln	1795	1791	1832	1795	1885	1598	1614	0	0	1603	0	0
Q Serve(g_s), s	2.4	4.3	4.3	0.3	8.8	0.5	0.0	0.0	0.0	1.2	0.0	0.0
Cycle Q Clear(g_c), s	2.4	4.3	4.3	0.3	8.8	0.5	0.9	0.0	0.0	2.7	0.0	0.0
Prop In Lane	1.00		0.16	1.00		1.00	0.77		0.19	0.22		0.74
Lane Grp Cap(c), veh/h	175	839	858	37	738	625	404	0	0	348	0	0
V/C Ratio(X)	0.70	0.38	0.39	0.43	0.73	0.06	0.13	0.00	0.00	0.37	0.00	0.00
Avail Cap(c_a), veh/h	712	2595	2655	245	2242	1900	905	0	0	921	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	16.0	6.3	6.3	17.7	9.5	6.9	13.9	0.0	0.0	14.6	0.0	0.0
Incr Delay (d2), s/veh	5.1	0.3	0.3	7.9	1.4	0.0	0.1	0.0	0.0	0.7	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	0.8	0.8	0.2	2.2	0.1	0.3	0.0	0.0	0.8	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	21.0	6.6	6.6	25.6	10.9	7.0	14.0	0.0	0.0	15.2	0.0	0.0
LnGrp LOS	C	A	A	C	B	A	B	A	A	B	A	A
Approach Vol, veh/h		776			590			52			129	
Approach Delay, s/veh		8.9			11.0			14.0			15.2	
Approach LOS		A			B			B			B	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		9.7	5.3	21.6		9.7	8.1	18.8				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		18.5	5.0	53.0		18.5	14.5	43.5				
Max Q Clear Time (g_c+I1), s		2.9	2.3	6.3		4.7	4.4	10.8				
Green Ext Time (p_c), s		0.2	0.0	4.0		0.5	0.2	3.5				

Intersection Summary	
HCM 6th Ctrl Delay	10.4
HCM 6th LOS	B



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	7	119	38	131	126	16	47	91	102	26	137	14
Future Volume (veh/h)	7	119	38	131	126	16	47	91	102	26	137	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	7	125	40	138	133	17	49	96	107	27	144	15
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	1	1	1	1	1	1	1	1	1	1	1	1
Cap, veh/h	196	409	127	453	263	28	334	328	397	244	365	35
Arrive On Green	0.30	0.30	0.30	0.30	0.30	0.30	0.25	0.25	0.25	0.25	0.25	0.25
Sat Flow, veh/h	31	1346	417	618	867	93	378	1318	1598	157	1468	143
Grp Volume(v), veh/h	172	0	0	288	0	0	145	0	107	186	0	0
Grp Sat Flow(s),veh/h/ln	1794	0	0	1578	0	0	1696	0	1598	1768	0	0
Q Serve(g_s), s	0.0	0.0	0.0	1.4	0.0	0.0	0.0	0.0	1.1	0.0	0.0	0.0
Cycle Q Clear(g_c), s	1.5	0.0	0.0	2.9	0.0	0.0	1.3	0.0	1.1	1.7	0.0	0.0
Prop In Lane	0.04		0.23	0.48		0.06	0.34		1.00	0.15		0.08
Lane Grp Cap(c), veh/h	731	0	0	744	0	0	661	0	397	645	0	0
V/C Ratio(X)	0.24	0.00	0.00	0.39	0.00	0.00	0.22	0.00	0.27	0.29	0.00	0.00
Avail Cap(c_a), veh/h	4560	0	0	3959	0	0	2773	0	2503	2905	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	5.4	0.0	0.0	5.8	0.0	0.0	6.1	0.0	6.1	6.3	0.0	0.0
Incr Delay (d2), s/veh	0.2	0.0	0.0	0.3	0.0	0.0	0.2	0.0	0.4	0.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.0	0.1	0.2	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	5.6	0.0	0.0	6.1	0.0	0.0	6.3	0.0	6.4	6.5	0.0	0.0
LnGrp LOS	A	A	A	A	A	A	A	A	A	A	A	A
Approach Vol, veh/h		172			288			252			186	
Approach Delay, s/veh		5.6			6.1			6.4			6.5	
Approach LOS		A			A			A			A	

Timer - Assigned Phs	2	4	6	8
Phs Duration (G+Y+Rc), s	9.5	10.6	9.5	10.6
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	31.5	49.5	31.5	49.5
Max Q Clear Time (g_c+I1), s	3.3	3.5	3.7	4.9
Green Ext Time (p_c), s	1.1	0.9	0.9	1.7

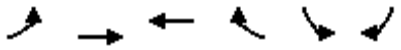
Intersection Summary	
HCM 6th Ctrl Delay	6.2
HCM 6th LOS	A



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	163	5	271	251	8	215
Future Volume (veh/h)	163	5	271	251	8	215
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1900	1900	1885	1900	1900	1885
Adj Flow Rate, veh/h	177	5	295	273	9	234
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	1	0	0	1
Cap, veh/h	288	256	698	623	587	735
Arrive On Green	0.16	0.16	0.39	0.39	0.39	0.39
Sat Flow, veh/h	1810	1610	1885	1598	857	1885
Grp Volume(v), veh/h	177	5	295	273	9	234
Grp Sat Flow(s),veh/h/ln	1810	1610	1791	1598	857	1885
Q Serve(g_s), s	1.8	0.1	2.4	2.5	0.2	1.7
Cycle Q Clear(g_c), s	1.8	0.1	2.4	2.5	2.7	1.7
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	288	256	698	623	587	735
V/C Ratio(X)	0.61	0.02	0.42	0.44	0.02	0.32
Avail Cap(c_a), veh/h	2946	2622	4352	3882	2335	4581
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	7.8	7.1	4.4	4.5	5.5	4.2
Incr Delay (d2), s/veh	2.1	0.0	0.4	0.5	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.0	0.1	0.1	0.0	0.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	9.9	7.1	4.9	5.0	5.5	4.5
LnGrp LOS	A	A	A	A	A	A
Approach Vol, veh/h	182		568			243
Approach Delay, s/veh	9.9		4.9			4.5
Approach LOS	A		A			A

Timer - Assigned Phs	2			6	8
Phs Duration (G+Y+Rc), s	12.3			12.3	7.7
Change Period (Y+Rc), s	4.5			4.5	4.5
Max Green Setting (Gmax), s	48.5			48.5	32.5
Max Q Clear Time (g_c+I1), s	4.5			4.7	3.8
Green Ext Time (p_c), s	3.3			1.2	0.5

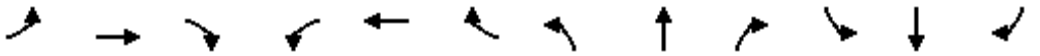
Intersection Summary	
HCM 6th Ctrl Delay	5.7
HCM 6th LOS	A



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	222	554	527	44	158	74
Future Volume (veh/h)	222	554	527	44	158	74
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1900	1885	1885	1900	1900	1900
Adj Flow Rate, veh/h	241	602	573	48	172	80
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	1	1	0	0	0
Cap, veh/h	599	1051	1865	156	306	272
Arrive On Green	0.56	0.56	0.56	0.56	0.17	0.17
Sat Flow, veh/h	816	1885	3440	280	1810	1610
Grp Volume(v), veh/h	241	602	306	315	172	80
Grp Sat Flow(s),veh/h/ln	816	1885	1791	1835	1810	1610
Q Serve(g_s), s	7.4	6.8	3.0	3.0	2.9	1.4
Cycle Q Clear(g_c), s	10.4	6.8	3.0	3.0	2.9	1.4
Prop In Lane	1.00			0.15	1.00	1.00
Lane Grp Cap(c), veh/h	599	1051	998	1023	306	272
V/C Ratio(X)	0.40	0.57	0.31	0.31	0.56	0.29
Avail Cap(c_a), veh/h	1792	3809	3618	3707	1347	1199
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	6.7	4.7	3.9	3.9	12.6	12.0
Incr Delay (d2), s/veh	0.4	0.5	0.2	0.2	1.6	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.4	0.1	0.1	1.0	0.4
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	7.1	5.2	4.1	4.1	14.2	12.5
LnGrp LOS	A	A	A	A	B	B
Approach Vol, veh/h		843	621		252	
Approach Delay, s/veh		5.8	4.1		13.7	
Approach LOS		A	A		B	

Timer - Assigned Phs		4		6	8
Phs Duration (G+Y+Rc), s		22.8		10.1	22.8
Change Period (Y+Rc), s		4.5		4.5	4.5
Max Green Setting (Gmax), s		66.5		24.5	66.5
Max Q Clear Time (g_c+I1), s		12.4		4.9	5.0
Green Ext Time (p_c), s		6.0		0.7	3.6

Intersection Summary	
HCM 6th Ctrl Delay	6.3
HCM 6th LOS	A



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	17	93	24	63	139	106	14	222	91	62	307	13
Future Volume (veh/h)	17	93	24	63	139	106	14	222	91	62	307	13
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1811	1870	1870	1856	1885	1856	1885	1811	1811	1870	1856
Adj Flow Rate, veh/h	24	133	34	90	199	151	20	317	130	89	439	19
Peak Hour Factor	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70
Percent Heavy Veh, %	1	6	2	2	3	1	3	1	6	6	2	3
Cap, veh/h	83	379	89	136	242	168	23	371	322	99	491	500
Arrive On Green	0.30	0.30	0.30	0.30	0.30	0.30	0.21	0.21	0.21	0.32	0.32	0.32
Sat Flow, veh/h	106	1265	297	270	808	563	112	1768	1535	313	1542	1572
Grp Volume(v), veh/h	191	0	0	440	0	0	337	0	130	528	0	19
Grp Sat Flow(s),veh/h/ln	1668	0	0	1640	0	0	1880	0	1535	1855	0	1572
Q Serve(g_s), s	0.0	0.0	0.0	13.2	0.0	0.0	13.5	0.0	5.7	21.2	0.0	0.7
Cycle Q Clear(g_c), s	6.7	0.0	0.0	19.9	0.0	0.0	13.5	0.0	5.7	21.2	0.0	0.7
Prop In Lane	0.13		0.18	0.20		0.34	0.06		1.00	0.17		1.00
Lane Grp Cap(c), veh/h	551	0	0	546	0	0	395	0	322	590	0	500
V/C Ratio(X)	0.35	0.00	0.00	0.81	0.00	0.00	0.85	0.00	0.40	0.89	0.00	0.04
Avail Cap(c_a), veh/h	638	0	0	633	0	0	487	0	398	675	0	573
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	21.6	0.0	0.0	26.0	0.0	0.0	29.8	0.0	26.7	25.4	0.0	18.4
Incr Delay (d2), s/veh	0.4	0.0	0.0	6.6	0.0	0.0	11.6	0.0	0.8	13.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	0.0	0.0	8.5	0.0	0.0	6.7	0.0	1.9	11.2	0.0	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	21.9	0.0	0.0	32.6	0.0	0.0	41.4	0.0	27.5	38.7	0.0	18.4
LnGrp LOS	C	A	A	C	A	A	D	A	C	D	A	B
Approach Vol, veh/h		191			440			467			547	
Approach Delay, s/veh		21.9			32.6			37.5			38.0	
Approach LOS		C			C			D			D	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		20.9		27.9		29.4		27.9				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		20.3		27.7		28.5		27.7				
Max Q Clear Time (g_c+I1), s		15.5		8.7		23.2		21.9				
Green Ext Time (p_c), s		0.9		0.9		1.7		1.5				

Intersection Summary												
HCM 6th Ctrl Delay			34.6									
HCM 6th LOS			C									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	115	281	71	424	438	55	36	344	241	17	520	80
Future Volume (veh/h)	115	281	71	424	438	55	36	344	241	17	520	80
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1870	1870	1870	1885	1885	1885	1885	1870	1870	1870	1885
Adj Flow Rate, veh/h	125	305	77	461	476	60	39	374	262	18	565	87
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	1	2	2	2	1	1	1	1	2	2	2	1
Cap, veh/h	156	353	299	387	602	510	62	700	483	36	620	529
Arrive On Green	0.09	0.19	0.19	0.22	0.32	0.32	0.03	0.35	0.35	0.02	0.33	0.33
Sat Flow, veh/h	1795	1870	1585	1781	1885	1598	1795	2025	1399	1781	1870	1598
Grp Volume(v), veh/h	125	305	77	461	476	60	39	330	306	18	565	87
Grp Sat Flow(s),veh/h/ln	1795	1870	1585	1781	1885	1598	1795	1791	1633	1781	1870	1598
Q Serve(g_s), s	6.3	14.5	3.8	20.0	21.1	2.4	2.0	13.6	13.9	0.9	26.6	3.5
Cycle Q Clear(g_c), s	6.3	14.5	3.8	20.0	21.1	2.4	2.0	13.6	13.9	0.9	26.6	3.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.86	1.00		1.00
Lane Grp Cap(c), veh/h	156	353	299	387	602	510	62	619	565	36	620	529
V/C Ratio(X)	0.80	0.86	0.26	1.19	0.79	0.12	0.63	0.53	0.54	0.50	0.91	0.16
Avail Cap(c_a), veh/h	215	559	474	387	748	634	98	905	826	97	945	808
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.2	36.2	31.8	36.0	28.5	22.1	43.9	24.1	24.2	44.6	29.5	21.7
Incr Delay (d2), s/veh	9.9	4.9	0.2	108.6	3.6	0.0	3.9	0.3	0.3	4.0	6.7	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.1	6.7	1.4	19.7	9.3	0.9	0.9	5.4	5.0	0.4	11.8	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	51.1	41.1	32.0	144.6	32.1	22.2	47.8	24.4	24.5	48.7	36.1	21.8
LnGrp LOS	D	D	C	F	C	C	D	C	C	D	D	C
Approach Vol, veh/h		507			997			675			670	
Approach Delay, s/veh		42.2			83.5			25.8			34.6	
Approach LOS		D			F			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.8	37.3	25.0	22.9	8.2	36.0	13.0	34.9
Change Period (Y+Rc), s	5.0	5.5	5.0	5.5	5.0	5.5	5.0	5.5
Max Green Setting (Gmax), s	5.0	46.5	20.0	27.5	5.0	46.5	11.0	36.5
Max Q Clear Time (g_c+I1), s	2.9	15.9	22.0	16.5	4.0	28.6	8.3	23.1
Green Ext Time (p_c), s	0.0	2.3	0.0	0.8	0.0	1.9	0.0	1.4

Intersection Summary	
HCM 6th Ctrl Delay	51.0
HCM 6th LOS	D

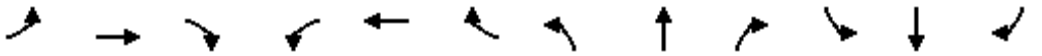
Intersection	
Int Delay, s/veh	3.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	628	47	148	913	53	90
Future Vol, veh/h	628	47	148	913	53	90
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	120	-	0	-
Veh in Median Storage, #	0	-	-	0	2	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	81	81	81	81	81	81
Heavy Vehicles, %	2	0	0	1	1	2
Mvmt Flow	775	58	183	1127	65	111

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	833	0	1734	804
Stage 1	-	-	-	-	804	-
Stage 2	-	-	-	-	930	-
Critical Hdwy	-	-	4.1	-	6.615	6.23
Critical Hdwy Stg 1	-	-	-	-	5.415	-
Critical Hdwy Stg 2	-	-	-	-	5.815	-
Follow-up Hdwy	-	-	2.2	-	3.5095	3.319
Pot Cap-1 Maneuver	-	-	809	-	88	382
Stage 1	-	-	-	-	442	-
Stage 2	-	-	-	-	347	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	809	-	68	382
Mov Cap-2 Maneuver	-	-	-	-	225	-
Stage 1	-	-	-	-	442	-
Stage 2	-	-	-	-	269	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.5	32
HCM LOS			D

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	304	-	-	809	-
HCM Lane V/C Ratio	0.581	-	-	0.226	-
HCM Control Delay (s)	32	-	-	10.7	-
HCM Lane LOS	D	-	-	B	-
HCM 95th %tile Q(veh)	3.4	-	-	0.9	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	92	601	49	14	786	22	56	8	26	15	5	175
Future Volume (veh/h)	92	601	49	14	786	22	56	8	26	15	5	175
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1870	1900	1900	1885	1900	1885	1900	1870	1870	1900	1885
Adj Flow Rate, veh/h	115	751	61	18	982	28	70	10	32	19	6	219
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Percent Heavy Veh, %	0	2	0	0	1	0	1	0	2	2	0	1
Cap, veh/h	147	2085	169	38	1067	911	181	35	56	62	18	260
Arrive On Green	0.08	0.63	0.63	0.02	0.57	0.57	0.18	0.18	0.18	0.18	0.18	0.18
Sat Flow, veh/h	1810	3328	270	1810	1885	1610	591	197	315	67	100	1464
Grp Volume(v), veh/h	115	401	411	18	982	28	112	0	0	244	0	0
Grp Sat Flow(s),veh/h/ln	1810	1777	1822	1810	1885	1610	1104	0	0	1631	0	0
Q Serve(g_s), s	4.8	8.4	8.4	0.8	36.4	0.6	0.0	0.0	0.0	3.9	0.0	0.0
Cycle Q Clear(g_c), s	4.8	8.4	8.4	0.8	36.4	0.6	7.2	0.0	0.0	11.1	0.0	0.0
Prop In Lane	1.00		0.15	1.00		1.00	0.62		0.29	0.08		0.90
Lane Grp Cap(c), veh/h	147	1113	1141	38	1067	911	272	0	0	340	0	0
V/C Ratio(X)	0.78	0.36	0.36	0.48	0.92	0.03	0.41	0.00	0.00	0.72	0.00	0.00
Avail Cap(c_a), veh/h	199	1221	1252	117	1210	1033	354	0	0	439	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	34.8	7.0	7.0	37.4	15.2	7.4	28.7	0.0	0.0	30.6	0.0	0.0
Incr Delay (d2), s/veh	13.1	0.2	0.2	9.2	10.6	0.0	1.0	0.0	0.0	3.9	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	2.4	2.4	0.4	14.9	0.2	1.9	0.0	0.0	4.5	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	47.8	7.1	7.1	46.5	25.8	7.4	29.7	0.0	0.0	34.5	0.0	0.0
LnGrp LOS	D	A	A	D	C	A	C	A	A	C	A	A
Approach Vol, veh/h		927			1028			112			244	
Approach Delay, s/veh		12.2			25.6			29.7			34.5	
Approach LOS		B			C			C			C	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		18.2	6.1	52.8		18.2	10.8	48.1				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		18.5	5.0	53.0		18.5	8.5	49.5				
Max Q Clear Time (g_c+I1), s		9.2	2.8	10.4		13.1	6.8	38.4				
Green Ext Time (p_c), s		0.4	0.0	5.2		0.6	0.0	5.2				

Intersection Summary	
HCM 6th Ctrl Delay	21.4
HCM 6th LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	286	44	88	236	16	76	119	212	49	183	14
Future Volume (veh/h)	30	286	44	88	236	16	76	119	212	49	183	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1870	1885	1885	1856	1900	1856	1900	1870	1870	1885	1856
Adj Flow Rate, veh/h	36	345	53	106	284	19	92	143	255	59	220	17
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Percent Heavy Veh, %	0	2	1	1	3	0	3	0	2	2	1	3
Cap, veh/h	173	549	80	282	479	29	326	358	465	222	404	28
Arrive On Green	0.37	0.37	0.37	0.37	0.37	0.37	0.29	0.29	0.29	0.29	0.29	0.29
Sat Flow, veh/h	74	1487	217	304	1296	78	473	1221	1585	207	1378	97
Grp Volume(v), veh/h	434	0	0	409	0	0	235	0	255	296	0	0
Grp Sat Flow(s),veh/h/ln	1777	0	0	1677	0	0	1694	0	1585	1682	0	0
Q Serve(g_s), s	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.6	1.0	0.0	0.0
Cycle Q Clear(g_c), s	5.3	0.0	0.0	4.8	0.0	0.0	2.7	0.0	3.6	3.7	0.0	0.0
Prop In Lane	0.08		0.12	0.26		0.05	0.39		1.00	0.20		0.06
Lane Grp Cap(c), veh/h	803	0	0	790	0	0	685	0	465	655	0	0
V/C Ratio(X)	0.54	0.00	0.00	0.52	0.00	0.00	0.34	0.00	0.55	0.45	0.00	0.00
Avail Cap(c_a), veh/h	3172	0	0	2842	0	0	2204	0	2048	2239	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	7.0	0.0	0.0	6.8	0.0	0.0	7.6	0.0	7.9	7.9	0.0	0.0
Incr Delay (d2), s/veh	0.6	0.0	0.0	0.5	0.0	0.0	0.3	0.0	1.0	0.5	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.0	0.0	0.6	0.0	0.0	0.5	0.0	0.6	0.7	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	7.5	0.0	0.0	7.4	0.0	0.0	7.9	0.0	9.0	8.4	0.0	0.0
LnGrp LOS	A	A	A	A	A	A	A	A	A	A	A	A
Approach Vol, veh/h		434			409			490			296	
Approach Delay, s/veh		7.5			7.4			8.4			8.4	
Approach LOS		A			A			A			A	

Timer - Assigned Phs	2		4		6		8					
Phs Duration (G+Y+Rc), s	12.3		14.4		12.3		14.4					
Change Period (Y+Rc), s	4.5		4.5		4.5		4.5					
Max Green Setting (Gmax), s	34.5		46.5		34.5		46.5					
Max Q Clear Time (g_c+I1), s	5.6		7.3		5.7		6.8					
Green Ext Time (p_c), s	2.2		2.6		1.8		2.7					

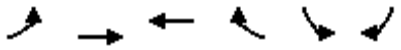
Intersection Summary												
HCM 6th Ctrl Delay			7.9									
HCM 6th LOS			A									



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	279	18	313	138	28	339
Future Volume (veh/h)	279	18	313	138	28	339
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1900	1900	1885	1900	1900	1870
Adj Flow Rate, veh/h	303	20	340	150	30	368
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	1	0	0	2
Cap, veh/h	447	398	843	365	544	648
Arrive On Green	0.25	0.25	0.35	0.35	0.35	0.35
Sat Flow, veh/h	1810	1610	2527	1054	921	1870
Grp Volume(v), veh/h	303	20	249	241	30	368
Grp Sat Flow(s),veh/h/ln	1810	1610	1791	1696	921	1870
Q Serve(g_s), s	3.4	0.2	2.3	2.4	0.6	3.5
Cycle Q Clear(g_c), s	3.4	0.2	2.3	2.4	3.0	3.5
Prop In Lane	1.00	1.00		0.62	1.00	
Lane Grp Cap(c), veh/h	447	398	620	587	544	648
V/C Ratio(X)	0.68	0.05	0.40	0.41	0.06	0.57
Avail Cap(c_a), veh/h	2983	2654	3599	3407	2076	3759
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	7.5	6.4	5.5	5.5	6.6	5.9
Incr Delay (d2), s/veh	1.8	0.1	0.4	0.5	0.0	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	0.0	0.1	0.1	0.0	0.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	9.3	6.4	5.9	6.0	6.7	6.7
LnGrp LOS	A	A	A	A	A	A
Approach Vol, veh/h	323		490			398
Approach Delay, s/veh	9.2		5.9			6.7
Approach LOS	A		A			A

Timer - Assigned Phs	2			6	8
Phs Duration (G+Y+Rc), s	12.2			12.2	10.0
Change Period (Y+Rc), s	4.5			4.5	4.5
Max Green Setting (Gmax), s	44.5			44.5	36.5
Max Q Clear Time (g_c+I1), s	4.4			5.5	5.4
Green Ext Time (p_c), s	2.7			2.1	1.0

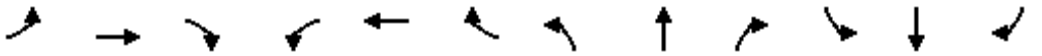
Intersection Summary	
HCM 6th Ctrl Delay	7.0
HCM 6th LOS	A



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	122	417	837	128	257	108
Future Volume (veh/h)	122	417	837	128	257	108
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1900	1870	1885	1900	1900	1900
Adj Flow Rate, veh/h	133	453	910	139	279	117
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	2	1	0	0	0
Cap, veh/h	382	1033	1720	263	401	357
Arrive On Green	0.55	0.55	0.55	0.55	0.22	0.22
Sat Flow, veh/h	546	1870	3209	476	1810	1610
Grp Volume(v), veh/h	133	453	523	526	279	117
Grp Sat Flow(s),veh/h/ln	546	1870	1791	1800	1810	1610
Q Serve(g_s), s	8.1	5.7	7.4	7.4	5.6	2.4
Cycle Q Clear(g_c), s	15.5	5.7	7.4	7.4	5.6	2.4
Prop In Lane	1.00			0.26	1.00	1.00
Lane Grp Cap(c), veh/h	382	1033	989	994	401	357
V/C Ratio(X)	0.35	0.44	0.53	0.53	0.70	0.33
Avail Cap(c_a), veh/h	952	2986	2859	2873	1251	1113
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	10.5	5.3	5.6	5.6	14.2	13.0
Incr Delay (d2), s/veh	0.5	0.3	0.4	0.4	2.2	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.8	1.0	1.0	2.1	0.8
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	11.1	5.6	6.1	6.1	16.4	13.5
LnGrp LOS	B	A	A	A	B	B
Approach Vol, veh/h		586	1049		396	
Approach Delay, s/veh		6.8	6.1		15.6	
Approach LOS		A	A		B	

Timer - Assigned Phs	4	6	8
Phs Duration (G+Y+Rc), s	26.5	13.3	26.5
Change Period (Y+Rc), s	4.5	4.5	4.5
Max Green Setting (Gmax), s	63.5	27.5	63.5
Max Q Clear Time (g_c+I1), s	17.5	7.6	9.4
Green Ext Time (p_c), s	4.5	1.2	7.3

Intersection Summary	
HCM 6th Ctrl Delay	8.1
HCM 6th LOS	A



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	2	54	10	56	51	21	16	188	53	50	185	4
Future Volume (veh/h)	2	54	10	56	51	21	16	188	53	50	185	4
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1885	1885	1885	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	2	57	11	59	54	22	17	198	56	53	195	4
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	1	1	1	1	1	1	1	1	1
Cap, veh/h	123	203	39	252	97	36	30	351	324	92	338	368
Arrive On Green	0.13	0.13	0.13	0.13	0.13	0.13	0.20	0.20	0.20	0.23	0.23	0.23
Sat Flow, veh/h	29	1526	290	644	724	266	148	1729	1598	399	1467	1598
Grp Volume(v), veh/h	70	0	0	135	0	0	215	0	56	248	0	4
Grp Sat Flow(s),veh/h/ln	1844	0	0	1635	0	0	1878	0	1598	1865	0	1598
Q Serve(g_s), s	0.0	0.0	0.0	1.3	0.0	0.0	3.2	0.0	0.9	3.7	0.0	0.1
Cycle Q Clear(g_c), s	1.1	0.0	0.0	2.3	0.0	0.0	3.2	0.0	0.9	3.7	0.0	0.1
Prop In Lane	0.03		0.16	0.44		0.16	0.08		1.00	0.21		1.00
Lane Grp Cap(c), veh/h	365	0	0	384	0	0	381	0	324	430	0	368
V/C Ratio(X)	0.19	0.00	0.00	0.35	0.00	0.00	0.56	0.00	0.17	0.58	0.00	0.01
Avail Cap(c_a), veh/h	1383	0	0	1255	0	0	1598	0	1360	1707	0	1462
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	12.2	0.0	0.0	12.7	0.0	0.0	11.2	0.0	10.3	10.6	0.0	9.2
Incr Delay (d2), s/veh	0.3	0.0	0.0	0.5	0.0	0.0	1.3	0.0	0.3	1.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	0.0	0.8	0.0	0.0	0.8	0.0	0.2	1.3	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	12.4	0.0	0.0	13.2	0.0	0.0	12.5	0.0	10.5	11.9	0.0	9.3
LnGrp LOS	B	A	A	B	A	A	B	A	B	B	A	A
Approach Vol, veh/h		70			135			271			252	
Approach Delay, s/veh		12.4			13.2			12.1			11.8	
Approach LOS		B			B			B			B	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		10.8		8.7		11.7		8.7				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		26.5		21.5		28.5		21.5				
Max Q Clear Time (g_c+I1), s		5.2		3.1		5.7		4.3				
Green Ext Time (p_c), s		1.1		0.2		1.5		0.6				

Intersection Summary												
HCM 6th Ctrl Delay			12.2									
HCM 6th LOS			B									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	56	280	55	350	259	28	74	505	498	26	336	54
Future Volume (veh/h)	56	280	55	350	259	28	74	505	498	26	336	54
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	59	295	58	368	273	29	78	532	524	27	354	57
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	1	1	1	1	1	1
Cap, veh/h	76	338	286	402	679	575	100	648	578	48	627	531
Arrive On Green	0.04	0.18	0.18	0.22	0.36	0.36	0.06	0.36	0.36	0.03	0.33	0.33
Sat Flow, veh/h	1810	1900	1610	1810	1900	1610	1795	1791	1598	1795	1885	1598
Grp Volume(v), veh/h	59	295	58	368	273	29	78	532	524	27	354	57
Grp Sat Flow(s),veh/h/ln	1810	1900	1610	1810	1900	1610	1795	1791	1598	1795	1885	1598
Q Serve(g_s), s	3.2	15.0	3.0	19.7	10.7	1.2	4.2	26.7	30.8	1.5	15.3	2.4
Cycle Q Clear(g_c), s	3.2	15.0	3.0	19.7	10.7	1.2	4.2	26.7	30.8	1.5	15.3	2.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	76	338	286	402	679	575	100	648	578	48	627	531
V/C Ratio(X)	0.77	0.87	0.20	0.92	0.40	0.05	0.78	0.82	0.91	0.57	0.56	0.11
Avail Cap(c_a), veh/h	165	470	399	512	835	708	145	751	670	91	733	622
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.9	39.6	34.7	37.6	23.9	20.8	46.1	28.7	30.0	47.6	27.1	22.9
Incr Delay (d2), s/veh	6.1	9.9	0.1	16.5	0.1	0.0	8.7	5.5	13.7	3.9	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	7.5	1.1	10.0	4.4	0.4	2.1	11.6	13.1	0.7	6.3	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	53.0	49.5	34.8	54.1	24.0	20.8	54.8	34.2	43.7	51.5	27.4	22.9
LnGrp LOS	D	D	C	D	C	C	D	C	D	D	C	C
Approach Vol, veh/h		412			670			1134			438	
Approach Delay, s/veh		47.9			40.4			40.0			28.3	
Approach LOS		D			D			D			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.6	41.3	27.0	23.1	10.5	38.4	9.2	40.9
Change Period (Y+Rc), s	5.0	5.5	5.0	5.5	5.0	5.5	5.0	5.5
Max Green Setting (Gmax), s	5.6	41.5	28.0	24.5	8.0	38.5	9.0	43.5
Max Q Clear Time (g_c+I1), s	3.5	32.8	21.7	17.0	6.2	17.3	5.2	12.7
Green Ext Time (p_c), s	0.0	3.0	0.3	0.6	0.0	1.1	0.0	0.9

Intersection Summary	
HCM 6th Ctrl Delay	39.4
HCM 6th LOS	D

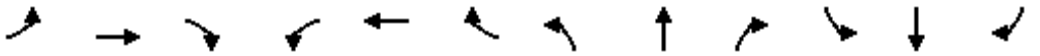
Intersection	
Int Delay, s/veh	1.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	705	36	85	586	34	57
Future Vol, veh/h	705	36	85	586	34	57
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	120	-	0	-
Veh in Median Storage, #	0	-	-	0	2	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	1	1	1	1	0	0
Mvmt Flow	727	37	88	604	35	59

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	764	0	1224	746
Stage 1	-	-	-	-	746	-
Stage 2	-	-	-	-	478	-
Critical Hdwy	-	-	4.115	-	6.6	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	-	-	2.2095	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	852	-	187	417
Stage 1	-	-	-	-	472	-
Stage 2	-	-	-	-	595	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	852	-	168	417
Mov Cap-2 Maneuver	-	-	-	-	369	-
Stage 1	-	-	-	-	472	-
Stage 2	-	-	-	-	534	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.2	16.8
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	398	-	-	852	-
HCM Lane V/C Ratio	0.236	-	-	0.103	-
HCM Control Delay (s)	16.8	-	-	9.7	-
HCM Lane LOS	C	-	-	A	-
HCM 95th %tile Q(veh)	0.9	-	-	0.3	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	118	604	51	15	563	36	38	2	10	28	5	91
Future Volume (veh/h)	118	604	51	15	563	36	38	2	10	28	5	91
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	123	629	53	16	586	38	40	2	10	29	5	95
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	1	1	1	1	1	1	0	0	0	0	0	0
Cap, veh/h	170	1640	138	37	784	664	317	30	43	149	24	164
Arrive On Green	0.09	0.49	0.49	0.02	0.42	0.42	0.14	0.14	0.14	0.14	0.14	0.14
Sat Flow, veh/h	1795	3344	281	1795	1885	1598	1091	218	312	252	171	1181
Grp Volume(v), veh/h	123	336	346	16	586	38	52	0	0	129	0	0
Grp Sat Flow(s),veh/h/ln	1795	1791	1835	1795	1885	1598	1620	0	0	1603	0	0
Q Serve(g_s), s	2.6	4.5	4.6	0.3	10.2	0.5	0.0	0.0	0.0	1.3	0.0	0.0
Cycle Q Clear(g_c), s	2.6	4.5	4.6	0.3	10.2	0.5	1.0	0.0	0.0	2.9	0.0	0.0
Prop In Lane	1.00		0.15	1.00		1.00	0.77		0.19	0.22		0.74
Lane Grp Cap(c), veh/h	170	878	900	37	784	664	390	0	0	337	0	0
V/C Ratio(X)	0.72	0.38	0.38	0.44	0.75	0.06	0.13	0.00	0.00	0.38	0.00	0.00
Avail Cap(c_a), veh/h	675	2463	2523	233	2128	1803	861	0	0	874	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	16.9	6.2	6.2	18.7	9.5	6.7	14.7	0.0	0.0	15.5	0.0	0.0
Incr Delay (d2), s/veh	5.7	0.3	0.3	8.0	1.4	0.0	0.2	0.0	0.0	0.7	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	0.8	0.9	0.2	2.6	0.1	0.4	0.0	0.0	0.9	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	22.6	6.4	6.4	26.6	11.0	6.8	14.9	0.0	0.0	16.2	0.0	0.0
LnGrp LOS	C	A	A	C	B	A	B	A	A	B	A	A
Approach Vol, veh/h		805			640			52			129	
Approach Delay, s/veh		8.9			11.1			14.9			16.2	
Approach LOS		A			B			B			B	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		9.9	5.3	23.4		9.9	8.2	20.5				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		18.5	5.0	53.0		18.5	14.5	43.5				
Max Q Clear Time (g_c+I1), s		3.0	2.3	6.6		4.9	4.6	12.2				
Green Ext Time (p_c), s		0.2	0.0	4.2		0.5	0.2	3.9				

Intersection Summary	
HCM 6th Ctrl Delay	10.6
HCM 6th LOS	B



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	7	136	38	131	155	16	47	91	102	26	137	14
Future Volume (veh/h)	7	136	38	131	155	16	47	91	102	26	137	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	7	143	40	138	163	17	49	96	107	27	144	15
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	1	1	1	1	1	1	1	1	1	1	1	1
Cap, veh/h	188	456	124	426	314	28	324	317	384	236	353	34
Arrive On Green	0.33	0.33	0.33	0.33	0.33	0.33	0.24	0.24	0.24	0.24	0.24	0.24
Sat Flow, veh/h	26	1396	379	545	962	85	383	1316	1598	158	1467	142
Grp Volume(v), veh/h	190	0	0	318	0	0	145	0	107	186	0	0
Grp Sat Flow(s),veh/h/ln	1802	0	0	1592	0	0	1700	0	1598	1767	0	0
Q Serve(g_s), s	0.0	0.0	0.0	1.6	0.0	0.0	0.0	0.0	1.1	0.0	0.0	0.0
Cycle Q Clear(g_c), s	1.6	0.0	0.0	3.3	0.0	0.0	1.3	0.0	1.1	1.8	0.0	0.0
Prop In Lane	0.04		0.21	0.43		0.05	0.34		1.00	0.15		0.08
Lane Grp Cap(c), veh/h	768	0	0	768	0	0	641	0	384	623	0	0
V/C Ratio(X)	0.25	0.00	0.00	0.41	0.00	0.00	0.23	0.00	0.28	0.30	0.00	0.00
Avail Cap(c_a), veh/h	4429	0	0	3863	0	0	2683	0	2421	2809	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	5.3	0.0	0.0	5.7	0.0	0.0	6.5	0.0	6.4	6.7	0.0	0.0
Incr Delay (d2), s/veh	0.2	0.0	0.0	0.4	0.0	0.0	0.2	0.0	0.4	0.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	0.0	0.1	0.0	0.0	0.2	0.0	0.1	0.2	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	5.4	0.0	0.0	6.1	0.0	0.0	6.7	0.0	6.8	6.9	0.0	0.0
LnGrp LOS	A	A	A	A	A	A	A	A	A	A	A	A
Approach Vol, veh/h		190			318			252			186	
Approach Delay, s/veh		5.4			6.1			6.7			6.9	
Approach LOS		A			A			A			A	

Timer - Assigned Phs	2		4		6		8					
Phs Duration (G+Y+Rc), s	9.5		11.3		9.5		11.3					
Change Period (Y+Rc), s	4.5		4.5		4.5		4.5					
Max Green Setting (Gmax), s	31.5		49.5		31.5		49.5					
Max Q Clear Time (g_c+I1), s	3.3		3.6		3.8		5.3					
Green Ext Time (p_c), s	1.1		1.0		0.9		1.9					

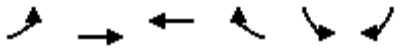
Intersection Summary												
HCM 6th Ctrl Delay		6.3										
HCM 6th LOS		A										



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	163	5	294	251	8	254
Future Volume (veh/h)	163	5	294	251	8	254
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1900	1900	1885	1900	1900	1885
Adj Flow Rate, veh/h	177	5	320	273	9	276
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	1	0	0	1
Cap, veh/h	286	255	736	614	580	749
Arrive On Green	0.16	0.16	0.40	0.40	0.40	0.40
Sat Flow, veh/h	1810	1610	1946	1546	837	1885
Grp Volume(v), veh/h	177	5	309	284	9	276
Grp Sat Flow(s),veh/h/ln	1810	1610	1791	1607	837	1885
Q Serve(g_s), s	1.8	0.1	2.5	2.6	0.2	2.1
Cycle Q Clear(g_c), s	1.8	0.1	2.5	2.6	2.8	2.1
Prop In Lane	1.00	1.00		0.96	1.00	
Lane Grp Cap(c), veh/h	286	255	712	639	580	749
V/C Ratio(X)	0.62	0.02	0.43	0.44	0.02	0.37
Avail Cap(c_a), veh/h	2903	2584	4288	3848	2252	4514
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	8.0	7.2	4.4	4.5	5.5	4.3
Incr Delay (d2), s/veh	2.2	0.0	0.4	0.5	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.0	0.1	0.1	0.0	0.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	10.1	7.2	4.9	5.0	5.5	4.6
LnGrp LOS	B	A	A	A	A	A
Approach Vol, veh/h	182		593			285
Approach Delay, s/veh	10.0		4.9			4.6
Approach LOS	B		A			A

Timer - Assigned Phs	2			6	8
Phs Duration (G+Y+Rc), s	12.6			12.6	7.7
Change Period (Y+Rc), s	4.5			4.5	4.5
Max Green Setting (Gmax), s	48.5			48.5	32.5
Max Q Clear Time (g_c+I1), s	4.6			4.8	3.8
Green Ext Time (p_c), s	3.4			1.5	0.5

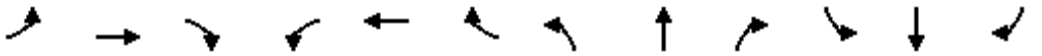
Intersection Summary	
HCM 6th Ctrl Delay	5.7
HCM 6th LOS	A



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	222	582	575	44	158	74
Future Volume (veh/h)	222	582	575	44	158	74
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1900	1885	1885	1900	1900	1900
Adj Flow Rate, veh/h	241	633	625	48	172	80
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	1	1	0	0	0
Cap, veh/h	580	1085	1940	149	299	266
Arrive On Green	0.58	0.58	0.58	0.58	0.17	0.17
Sat Flow, veh/h	777	1885	3465	259	1810	1610
Grp Volume(v), veh/h	241	633	332	341	172	80
Grp Sat Flow(s),veh/h/ln	777	1885	1791	1839	1810	1610
Q Serve(g_s), s	8.1	7.4	3.3	3.4	3.0	1.5
Cycle Q Clear(g_c), s	11.5	7.4	3.3	3.4	3.0	1.5
Prop In Lane	1.00			0.14	1.00	1.00
Lane Grp Cap(c), veh/h	580	1085	1030	1058	299	266
V/C Ratio(X)	0.42	0.58	0.32	0.32	0.58	0.30
Avail Cap(c_a), veh/h	1646	3671	3487	3580	1227	1091
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	6.8	4.7	3.8	3.8	13.4	12.7
Incr Delay (d2), s/veh	0.5	0.5	0.2	0.2	1.8	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.4	0.2	0.2	1.1	0.5
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	7.3	5.2	4.0	4.0	15.1	13.3
LnGrp LOS	A	A	A	A	B	B
Approach Vol, veh/h		874	673		252	
Approach Delay, s/veh		5.8	4.0		14.5	
Approach LOS		A	A		B	

Timer - Assigned Phs	4	6	8
Phs Duration (G+Y+Rc), s	24.4	10.2	24.4
Change Period (Y+Rc), s	4.5	4.5	4.5
Max Green Setting (Gmax), s	67.5	23.5	67.5
Max Q Clear Time (g_c+I1), s	13.5	5.0	5.4
Green Ext Time (p_c), s	6.5	0.7	3.9

Intersection Summary	
HCM 6th Ctrl Delay	6.4
HCM 6th LOS	A



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	18	101	25	66	159	111	14	230	95	65	322	14
Future Volume (veh/h)	18	101	25	66	159	111	14	230	95	65	322	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1811	1870	1870	1856	1885	1856	1885	1811	1811	1870	1856
Adj Flow Rate, veh/h	26	144	36	94	227	159	20	329	136	93	460	20
Peak Hour Factor	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70
Percent Heavy Veh, %	1	6	2	2	3	1	3	1	6	6	2	3
Cap, veh/h	81	381	88	133	260	170	23	374	324	100	494	503
Arrive On Green	0.31	0.31	0.31	0.31	0.31	0.31	0.21	0.21	0.21	0.32	0.32	0.32
Sat Flow, veh/h	108	1224	282	266	836	546	108	1772	1535	312	1543	1572
Grp Volume(v), veh/h	206	0	0	480	0	0	349	0	136	553	0	20
Grp Sat Flow(s),veh/h/ln	1613	0	0	1648	0	0	1880	0	1535	1855	0	1572
Q Serve(g_s), s	0.0	0.0	0.0	16.3	0.0	0.0	15.4	0.0	6.6	24.7	0.0	0.7
Cycle Q Clear(g_c), s	7.8	0.0	0.0	24.1	0.0	0.0	15.4	0.0	6.6	24.7	0.0	0.7
Prop In Lane	0.13		0.17	0.20		0.33	0.06		1.00	0.17		1.00
Lane Grp Cap(c), veh/h	550	0	0	563	0	0	396	0	324	594	0	503
V/C Ratio(X)	0.37	0.00	0.00	0.85	0.00	0.00	0.88	0.00	0.42	0.93	0.00	0.04
Avail Cap(c_a), veh/h	569	0	0	583	0	0	446	0	364	617	0	523
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	23.0	0.0	0.0	28.3	0.0	0.0	32.7	0.0	29.3	28.2	0.0	20.0
Incr Delay (d2), s/veh	0.4	0.0	0.0	11.4	0.0	0.0	16.8	0.0	0.9	20.6	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.0	0.0	0.0	11.0	0.0	0.0	8.2	0.0	2.3	14.0	0.0	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.4	0.0	0.0	39.7	0.0	0.0	49.5	0.0	30.1	48.8	0.0	20.1
LnGrp LOS	C	A	A	D	A	A	D	A	C	D	A	C
Approach Vol, veh/h		206			480			485			573	
Approach Delay, s/veh		23.4			39.7			44.1			47.8	
Approach LOS		C			D			D			D	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		22.6		31.2		31.9		31.2				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		20.3		27.7		28.5		27.7				
Max Q Clear Time (g_c+I1), s		17.4		9.8		26.7		26.1				
Green Ext Time (p_c), s		0.7		0.9		0.7		0.5				

Intersection Summary												
HCM 6th Ctrl Delay			41.7									
HCM 6th LOS			D									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	119	292	75	441	445	56	38	354	249	19	543	83
Future Volume (veh/h)	119	292	75	441	445	56	38	354	249	19	543	83
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1870	1870	1870	1885	1885	1885	1885	1870	1870	1870	1885
Adj Flow Rate, veh/h	129	317	82	479	484	61	41	385	271	21	590	90
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	1	2	2	2	1	1	1	1	2	2	2	1
Cap, veh/h	156	344	291	488	700	593	57	1222	541	38	619	529
Arrive On Green	0.09	0.18	0.18	0.27	0.37	0.37	0.03	0.34	0.34	0.02	0.33	0.33
Sat Flow, veh/h	1795	1870	1585	1781	1885	1598	1795	3582	1585	1781	1870	1598
Grp Volume(v), veh/h	129	317	82	479	484	61	41	385	271	21	590	90
Grp Sat Flow(s),veh/h/ln	1795	1870	1585	1781	1885	1598	1795	1791	1585	1781	1870	1598
Q Serve(g_s), s	8.3	19.5	5.2	31.2	25.4	2.9	2.6	9.3	15.9	1.4	36.0	4.7
Cycle Q Clear(g_c), s	8.3	19.5	5.2	31.2	25.4	2.9	2.6	9.3	15.9	1.4	36.0	4.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	156	344	291	488	700	593	57	1222	541	38	619	529
V/C Ratio(X)	0.83	0.92	0.28	0.98	0.69	0.10	0.73	0.31	0.50	0.56	0.95	0.17
Avail Cap(c_a), veh/h	184	344	292	488	700	593	77	1242	550	76	649	554
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.5	46.8	41.0	42.1	31.1	24.0	56.1	28.4	30.6	56.6	38.2	27.7
Incr Delay (d2), s/veh	20.0	29.0	0.2	35.7	2.5	0.0	10.9	0.1	0.3	4.7	23.4	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.5	11.4	2.0	17.8	11.3	1.1	1.3	3.9	5.8	0.6	19.3	1.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	72.4	75.9	41.2	77.8	33.5	24.0	67.0	28.4	30.8	61.3	61.6	27.8
LnGrp LOS	E	E	D	E	C	C	E	C	C	E	E	C
Approach Vol, veh/h		528			1024			697			701	
Approach Delay, s/veh		69.7			53.7			31.6			57.2	
Approach LOS		E			D			C			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.5	45.4	37.0	27.0	8.7	44.2	15.1	48.8
Change Period (Y+Rc), s	5.0	5.5	5.0	5.5	5.0	5.5	5.0	5.5
Max Green Setting (Gmax), s	5.0	40.5	32.0	21.5	5.0	40.5	12.0	41.5
Max Q Clear Time (g_c+I1), s	3.4	17.9	33.2	21.5	4.6	38.0	10.3	27.4
Green Ext Time (p_c), s	0.0	1.9	0.0	0.0	0.0	0.6	0.0	1.5

Intersection Summary	
HCM 6th Ctrl Delay	52.2
HCM 6th LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	23	108	19	13	26	126	14	532	33	375	871	18
Future Volume (veh/h)	23	108	19	13	26	126	14	532	33	375	871	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1900	1885	1885	1900	1870	1900	1870	1900	1900	1885	1900
Adj Flow Rate, veh/h	25	117	21	14	28	137	15	578	36	408	947	20
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	0	1	1	0	2	0	2	0	0	1	0
Cap, veh/h	53	257	216	32	234	195	34	775	351	468	1640	737
Arrive On Green	0.03	0.14	0.14	0.02	0.12	0.12	0.02	0.22	0.22	0.26	0.46	0.46
Sat Flow, veh/h	1781	1900	1598	1795	1900	1585	1810	3554	1610	1810	3582	1610
Grp Volume(v), veh/h	25	117	21	14	28	137	15	578	36	408	947	20
Grp Sat Flow(s),veh/h/ln	1781	1900	1598	1795	1900	1585	1810	1777	1610	1810	1791	1610
Q Serve(g_s), s	0.7	2.8	0.6	0.4	0.6	4.0	0.4	7.4	0.9	10.5	9.5	0.3
Cycle Q Clear(g_c), s	0.7	2.8	0.6	0.4	0.6	4.0	0.4	7.4	0.9	10.5	9.5	0.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	53	257	216	32	234	195	34	775	351	468	1640	737
V/C Ratio(X)	0.48	0.46	0.10	0.44	0.12	0.70	0.44	0.75	0.10	0.87	0.58	0.03
Avail Cap(c_a), veh/h	183	313	263	185	313	261	186	1244	564	1006	2876	1293
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.2	19.4	18.4	23.6	18.9	20.4	23.6	17.7	15.2	17.2	9.7	7.2
Incr Delay (d2), s/veh	2.5	0.5	0.1	3.5	0.1	2.7	3.3	0.5	0.0	2.0	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	1.1	0.2	0.2	0.3	1.5	0.2	2.5	0.3	3.7	2.4	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	25.7	19.8	18.5	27.1	19.0	23.1	26.8	18.3	15.2	19.2	9.8	7.2
LnGrp LOS	C	B	B	C	B	C	C	B	B	B	A	A
Approach Vol, veh/h		163			179			629			1375	
Approach Delay, s/veh		20.6			22.8			18.3			12.6	
Approach LOS		C			C			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.6	15.6	4.9	11.6	4.9	27.2	5.4	11.0
Change Period (Y+Rc), s	4.0	5.0	4.0	5.0	4.0	5.0	4.0	5.0
Max Green Setting (Gmax), s	27.0	17.0	5.0	8.0	5.0	39.0	5.0	8.0
Max Q Clear Time (g_c+I1), s	12.5	9.4	2.4	4.8	2.4	11.5	2.7	6.0
Green Ext Time (p_c), s	0.1	1.2	0.0	0.1	0.0	3.1	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	15.4
HCM 6th LOS	B

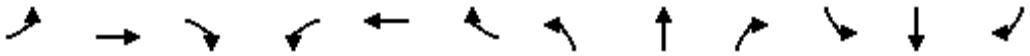
Intersection	
Int Delay, s/veh	2.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	648	48	152	937	54	92
Future Vol, veh/h	648	48	152	937	54	92
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	120	-	0	-
Veh in Median Storage, #	0	-	-	0	2	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	0	0	1	1	2
Mvmt Flow	704	52	165	1018	59	100

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	756	0	1569	730
Stage 1	-	-	-	-	730	-
Stage 2	-	-	-	-	839	-
Critical Hdwy	-	-	4.1	-	6.615	6.23
Critical Hdwy Stg 1	-	-	-	-	5.415	-
Critical Hdwy Stg 2	-	-	-	-	5.815	-
Follow-up Hdwy	-	-	2.2	-	3.5095	3.319
Pot Cap-1 Maneuver	-	-	864	-	112	421
Stage 1	-	-	-	-	478	-
Stage 2	-	-	-	-	387	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	864	-	91	421
Mov Cap-2 Maneuver	-	-	-	-	261	-
Stage 1	-	-	-	-	478	-
Stage 2	-	-	-	-	313	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.4	24.2
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	343	-	-	864	-
HCM Lane V/C Ratio	0.463	-	-	0.191	-
HCM Control Delay (s)	24.2	-	-	10.1	-
HCM Lane LOS	C	-	-	B	-
HCM 95th %tile Q(veh)	2.3	-	-	0.7	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	98	603	50	15	817	23	57	8	27	16	5	186
Future Volume (veh/h)	98	603	50	15	817	23	57	8	27	16	5	186
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1870	1900	1900	1885	1900	1885	1900	1870	1870	1900	1885
Adj Flow Rate, veh/h	107	655	54	16	888	25	62	9	29	17	5	202
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	2	0	0	1	0	1	0	2	2	0	1
Cap, veh/h	142	1950	161	35	995	850	217	43	68	73	17	257
Arrive On Green	0.08	0.59	0.59	0.02	0.53	0.53	0.18	0.18	0.18	0.18	0.18	0.18
Sat Flow, veh/h	1810	3324	274	1810	1885	1610	697	244	384	62	97	1457
Grp Volume(v), veh/h	107	350	359	16	888	25	100	0	0	224	0	0
Grp Sat Flow(s),veh/h/ln	1810	1777	1821	1810	1885	1610	1325	0	0	1615	0	0
Q Serve(g_s), s	3.6	6.3	6.3	0.5	26.1	0.5	0.0	0.0	0.0	2.8	0.0	0.0
Cycle Q Clear(g_c), s	3.6	6.3	6.3	0.5	26.1	0.5	3.9	0.0	0.0	8.2	0.0	0.0
Prop In Lane	1.00		0.15	1.00		1.00	0.62		0.29	0.08		0.90
Lane Grp Cap(c), veh/h	142	1042	1068	35	995	850	328	0	0	348	0	0
V/C Ratio(X)	0.76	0.34	0.34	0.46	0.89	0.03	0.31	0.00	0.00	0.64	0.00	0.00
Avail Cap(c_a), veh/h	539	1516	1554	146	1199	1024	490	0	0	541	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	28.0	6.6	6.6	30.1	13.1	7.0	22.5	0.0	0.0	24.4	0.0	0.0
Incr Delay (d2), s/veh	7.9	0.2	0.2	8.9	7.7	0.0	0.5	0.0	0.0	2.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	1.6	1.6	0.3	9.8	0.1	1.3	0.0	0.0	3.1	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	35.9	6.8	6.8	39.1	20.8	7.0	23.0	0.0	0.0	26.4	0.0	0.0
LnGrp LOS	D	A	A	D	C	A	C	A	A	C	A	A
Approach Vol, veh/h		816			929			100			224	
Approach Delay, s/veh		10.6			20.7			23.0			26.4	
Approach LOS		B			C			C			C	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		15.5	5.7	40.9		15.5	9.4	37.3				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		18.5	5.0	53.0		18.5	18.5	39.5				
Max Q Clear Time (g_c+I1), s		5.9	2.5	8.3		10.2	5.6	28.1				
Green Ext Time (p_c), s		0.4	0.0	4.4		0.8	0.2	4.7				

Intersection Summary	
HCM 6th Ctrl Delay	17.5
HCM 6th LOS	B



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	32	299	46	91	248	17	79	125	223	50	192	15
Future Volume (veh/h)	32	299	46	91	248	17	79	125	223	50	192	15
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1870	1885	1885	1856	1900	1856	1900	1870	1870	1885	1856
Adj Flow Rate, veh/h	39	360	55	110	299	20	95	151	269	60	231	18
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Percent Heavy Veh, %	0	2	1	1	3	0	3	0	2	2	1	3
Cap, veh/h	170	560	81	277	490	30	320	367	474	214	413	29
Arrive On Green	0.38	0.38	0.38	0.38	0.38	0.38	0.30	0.30	0.30	0.30	0.30	0.30
Sat Flow, veh/h	78	1484	215	303	1297	78	470	1227	1585	200	1380	98
Grp Volume(v), veh/h	454	0	0	429	0	0	246	0	269	309	0	0
Grp Sat Flow(s),veh/h/ln	1776	0	0	1679	0	0	1697	0	1585	1677	0	0
Q Serve(g_s), s	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.0	1.2	0.0	0.0
Cycle Q Clear(g_c), s	5.7	0.0	0.0	5.3	0.0	0.0	2.9	0.0	4.0	4.1	0.0	0.0
Prop In Lane	0.09		0.12	0.26		0.05	0.39		1.00	0.19		0.06
Lane Grp Cap(c), veh/h	811	0	0	796	0	0	687	0	474	656	0	0
V/C Ratio(X)	0.56	0.00	0.00	0.54	0.00	0.00	0.36	0.00	0.57	0.47	0.00	0.00
Avail Cap(c_a), veh/h	3033	0	0	2721	0	0	2112	0	1963	2142	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	7.2	0.0	0.0	7.0	0.0	0.0	7.9	0.0	8.2	8.2	0.0	0.0
Incr Delay (d2), s/veh	0.6	0.0	0.0	0.6	0.0	0.0	0.3	0.0	1.1	0.5	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.0	0.0	0.7	0.0	0.0	0.6	0.0	0.7	0.8	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	7.8	0.0	0.0	7.6	0.0	0.0	8.2	0.0	9.3	8.7	0.0	0.0
LnGrp LOS	A	A	A	A	A	A	A	A	A	A	A	A
Approach Vol, veh/h		454			429			515			309	
Approach Delay, s/veh		7.8			7.6			8.8			8.7	
Approach LOS		A			A			A			A	

Timer - Assigned Phs	2		4		6		8					
Phs Duration (G+Y+Rc), s	12.8		15.0		12.8		15.0					
Change Period (Y+Rc), s	4.5		4.5		4.5		4.5					
Max Green Setting (Gmax), s	34.5		46.5		34.5		46.5					
Max Q Clear Time (g_c+I1), s	6.0		7.7		6.1		7.3					
Green Ext Time (p_c), s	2.3		2.8		1.8		2.8					

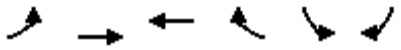
Intersection Summary												
HCM 6th Ctrl Delay			8.2									
HCM 6th LOS			A									



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	279	18	328	138	28	367
Future Volume (veh/h)	279	18	328	138	28	367
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1900	1900	1885	1900	1900	1870
Adj Flow Rate, veh/h	303	20	357	150	30	399
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	1	0	0	2
Cap, veh/h	445	396	894	369	542	677
Arrive On Green	0.25	0.25	0.36	0.36	0.36	0.36
Sat Flow, veh/h	1810	1610	2565	1021	906	1870
Grp Volume(v), veh/h	303	20	257	250	30	399
Grp Sat Flow(s),veh/h/ln	1810	1610	1791	1701	906	1870
Q Serve(g_s), s	3.5	0.2	2.5	2.5	0.6	4.0
Cycle Q Clear(g_c), s	3.5	0.2	2.5	2.5	3.1	4.0
Prop In Lane	1.00	1.00		0.60	1.00	
Lane Grp Cap(c), veh/h	445	396	648	615	542	677
V/C Ratio(X)	0.68	0.05	0.40	0.41	0.06	0.59
Avail Cap(c_a), veh/h	2879	2562	3474	3300	1972	3628
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	7.8	6.6	5.5	5.5	6.6	5.9
Incr Delay (d2), s/veh	1.8	0.1	0.4	0.4	0.0	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	0.0	0.1	0.1	0.0	0.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	9.7	6.7	5.9	5.9	6.7	6.8
LnGrp LOS	A	A	A	A	A	A
Approach Vol, veh/h	323		507			429
Approach Delay, s/veh	9.5		5.9			6.8
Approach LOS	A		A			A

Timer - Assigned Phs	2			6	8
Phs Duration (G+Y+Rc), s	12.8			12.8	10.1
Change Period (Y+Rc), s	4.5			4.5	4.5
Max Green Setting (Gmax), s	44.5			44.5	36.5
Max Q Clear Time (g_c+I1), s	4.5			6.0	5.5
Green Ext Time (p_c), s	2.8			2.3	1.0

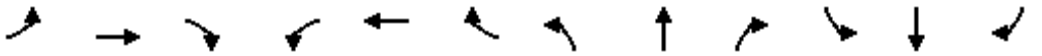
Intersection Summary	
HCM 6th Ctrl Delay	7.1
HCM 6th LOS	A



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	122	438	862	128	257	108
Future Volume (veh/h)	122	438	862	128	257	108
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1900	1870	1885	1900	1900	1900
Adj Flow Rate, veh/h	133	476	937	139	279	117
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	2	1	0	0	0
Cap, veh/h	374	1049	1755	260	397	353
Arrive On Green	0.56	0.56	0.56	0.56	0.22	0.22
Sat Flow, veh/h	533	1870	3223	464	1810	1610
Grp Volume(v), veh/h	133	476	536	540	279	117
Grp Sat Flow(s),veh/h/ln	533	1870	1791	1802	1810	1610
Q Serve(g_s), s	8.6	6.1	7.7	7.7	5.8	2.5
Cycle Q Clear(g_c), s	16.3	6.1	7.7	7.7	5.8	2.5
Prop In Lane	1.00			0.26	1.00	1.00
Lane Grp Cap(c), veh/h	374	1049	1005	1011	397	353
V/C Ratio(X)	0.36	0.45	0.53	0.53	0.70	0.33
Avail Cap(c_a), veh/h	900	2895	2772	2789	1213	1079
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	10.7	5.3	5.6	5.6	14.8	13.5
Incr Delay (d2), s/veh	0.6	0.3	0.4	0.4	2.3	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	0.9	1.1	1.1	2.2	0.8
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	11.3	5.6	6.1	6.1	17.0	14.0
LnGrp LOS	B	A	A	A	B	B
Approach Vol, veh/h		609	1076		396	
Approach Delay, s/veh		6.9	6.1		16.2	
Approach LOS		A	A		B	

Timer - Assigned Phs		4		6	8
Phs Duration (G+Y+Rc), s		27.5		13.5	27.5
Change Period (Y+Rc), s		4.5		4.5	4.5
Max Green Setting (Gmax), s		63.5		27.5	63.5
Max Q Clear Time (g_c+I1), s		18.3		7.8	9.7
Green Ext Time (p_c), s		4.8		1.2	7.6

Intersection Summary		
HCM 6th Ctrl Delay	8.2	
HCM 6th LOS	A	



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	2	74	10	59	67	22	19	192	54	61	219	4
Future Volume (veh/h)	2	74	10	59	67	22	19	192	54	61	219	4
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1885	1885	1885	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	2	78	11	62	71	23	20	202	57	64	231	4
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	1	1	1	1	1	1	1	1	1
Cap, veh/h	111	242	34	230	129	37	34	341	319	102	369	404
Arrive On Green	0.15	0.15	0.15	0.15	0.15	0.15	0.20	0.20	0.20	0.25	0.25	0.25
Sat Flow, veh/h	19	1610	224	548	861	244	169	1708	1598	405	1460	1598
Grp Volume(v), veh/h	91	0	0	156	0	0	222	0	57	295	0	4
Grp Sat Flow(s),veh/h/ln	1853	0	0	1652	0	0	1877	0	1598	1865	0	1598
Q Serve(g_s), s	0.0	0.0	0.0	1.4	0.0	0.0	3.6	0.0	1.0	4.8	0.0	0.1
Cycle Q Clear(g_c), s	1.5	0.0	0.0	2.9	0.0	0.0	3.6	0.0	1.0	4.8	0.0	0.1
Prop In Lane	0.02		0.12	0.40		0.15	0.09		1.00	0.22		1.00
Lane Grp Cap(c), veh/h	387	0	0	396	0	0	375	0	319	471	0	404
V/C Ratio(X)	0.24	0.00	0.00	0.39	0.00	0.00	0.59	0.00	0.18	0.63	0.00	0.01
Avail Cap(c_a), veh/h	1276	0	0	1156	0	0	1464	0	1246	1564	0	1340
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	12.9	0.0	0.0	13.4	0.0	0.0	12.3	0.0	11.3	11.3	0.0	9.5
Incr Delay (d2), s/veh	0.3	0.0	0.0	0.6	0.0	0.0	1.5	0.0	0.3	1.4	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.2	1.7	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	13.2	0.0	0.0	14.1	0.0	0.0	13.8	0.0	11.5	12.6	0.0	9.5
LnGrp LOS	B	A	A	B	A	A	B	A	B	B	A	A
Approach Vol, veh/h		91			156			279			299	
Approach Delay, s/veh		13.2			14.1			13.4			12.6	
Approach LOS		B			B			B			B	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		11.3		9.6		13.1		9.6				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		26.5		21.5		28.5		21.5				
Max Q Clear Time (g_c+I1), s		5.6		3.5		6.8		4.9				
Green Ext Time (p_c), s		1.1		0.3		1.8		0.8				

Intersection Summary												
HCM 6th Ctrl Delay			13.2									
HCM 6th LOS			B									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	58	318	58	353	317	28	78	568	534	27	382	58
Future Volume (veh/h)	58	318	58	353	317	28	78	568	534	27	382	58
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	61	335	61	372	334	29	82	598	562	28	402	61
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	1	1	1	1	1	1
Cap, veh/h	79	373	316	403	713	604	105	1285	573	47	616	522
Arrive On Green	0.04	0.20	0.20	0.22	0.38	0.38	0.06	0.36	0.36	0.03	0.33	0.33
Sat Flow, veh/h	1810	1900	1610	1810	1900	1610	1795	3582	1598	1795	1885	1598
Grp Volume(v), veh/h	61	335	61	372	334	29	82	598	562	28	402	61
Grp Sat Flow(s),veh/h/ln	1810	1900	1610	1810	1900	1610	1795	1791	1598	1795	1885	1598
Q Serve(g_s), s	3.6	18.5	3.4	21.6	14.3	1.2	4.8	13.8	37.3	1.7	19.6	2.9
Cycle Q Clear(g_c), s	3.6	18.5	3.4	21.6	14.3	1.2	4.8	13.8	37.3	1.7	19.6	2.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	79	373	316	403	713	604	105	1285	573	47	616	522
V/C Ratio(X)	0.77	0.90	0.19	0.92	0.47	0.05	0.78	0.47	0.98	0.59	0.65	0.12
Avail Cap(c_a), veh/h	135	469	398	489	841	713	134	1285	573	84	624	529
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.8	42.0	36.0	40.8	25.4	21.3	49.9	26.5	34.0	51.7	30.9	25.3
Incr Delay (d2), s/veh	5.9	15.0	0.1	19.4	0.2	0.0	15.5	0.1	32.4	4.3	1.9	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	9.8	1.3	11.3	6.1	0.4	2.6	5.6	18.4	0.8	8.5	1.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	56.7	57.1	36.1	60.2	25.6	21.3	65.4	26.6	66.4	56.0	32.8	25.3
LnGrp LOS	E	E	D	E	C	C	E	C	E	E	C	C
Approach Vol, veh/h		457			735			1242			491	
Approach Delay, s/veh		54.2			42.9			47.1			33.1	
Approach LOS		D			D			D			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.8	44.0	28.9	26.6	11.2	40.6	9.7	45.8
Change Period (Y+Rc), s	5.0	5.5	5.0	5.5	5.0	5.5	5.0	5.5
Max Green Setting (Gmax), s	5.0	38.5	29.0	26.5	8.0	35.5	8.0	47.5
Max Q Clear Time (g_c+I1), s	3.7	39.3	23.6	20.5	6.8	21.6	5.6	16.3
Green Ext Time (p_c), s	0.0	0.0	0.3	0.6	0.0	1.1	0.0	1.1

Intersection Summary	
HCM 6th Ctrl Delay	44.8
HCM 6th LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	17	34	32	27	84	303	18	1077	14	137	898	12
Future Volume (veh/h)	17	34	32	27	84	303	18	1077	14	137	898	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	18	37	35	29	91	329	20	1171	15	149	976	13
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	1	1	1	1	1	1
Cap, veh/h	40	277	235	60	298	253	43	1295	577	191	1589	709
Arrive On Green	0.02	0.15	0.15	0.03	0.16	0.16	0.02	0.36	0.36	0.11	0.44	0.44
Sat Flow, veh/h	1810	1900	1610	1810	1900	1610	1795	3582	1598	1795	3582	1598
Grp Volume(v), veh/h	18	37	35	29	91	329	20	1171	15	149	976	13
Grp Sat Flow(s),veh/h/ln	1810	1900	1610	1810	1900	1610	1795	1791	1598	1795	1791	1598
Q Serve(g_s), s	0.5	0.9	1.0	0.8	2.2	8.0	0.6	15.8	0.3	4.1	10.6	0.2
Cycle Q Clear(g_c), s	0.5	0.9	1.0	0.8	2.2	8.0	0.6	15.8	0.3	4.1	10.6	0.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	40	277	235	60	298	253	43	1295	577	191	1589	709
V/C Ratio(X)	0.45	0.13	0.15	0.49	0.31	1.30	0.46	0.90	0.03	0.78	0.61	0.02
Avail Cap(c_a), veh/h	178	298	253	178	298	253	176	1335	596	881	2741	1223
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.6	19.0	19.0	24.2	19.0	21.5	24.5	15.4	10.5	22.2	10.8	8.0
Incr Delay (d2), s/veh	2.9	0.1	0.1	2.2	0.2	161.5	2.8	8.5	0.0	2.6	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.3	0.3	0.4	0.9	14.1	0.2	6.3	0.1	1.6	2.9	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	27.5	19.0	19.1	26.5	19.2	183.0	27.3	23.9	10.5	24.8	11.0	8.0
LnGrp LOS	C	B	B	C	B	F	C	C	B	C	B	A
Approach Vol, veh/h		90			449			1206			1138	
Approach Delay, s/veh		20.8			139.7			23.8			12.8	
Approach LOS		C			F			C			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.4	23.4	5.7	12.4	5.2	27.6	5.1	13.0
Change Period (Y+Rc), s	4.0	5.0	4.0	5.0	4.0	5.0	4.0	5.0
Max Green Setting (Gmax), s	5.0	19.0	5.0	8.0	5.0	39.0	5.0	8.0
Max Q Clear Time (g_c+I1), s	0.1	17.8	2.8	3.0	2.6	12.6	2.5	10.0
Green Ext Time (p_c), s	0.0	0.6	0.0	0.0	0.0	3.3	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	37.4
HCM 6th LOS	D

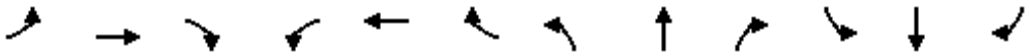
Intersection	
Int Delay, s/veh	1.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	778	38	90	643	38	67
Future Vol, veh/h	778	38	90	643	38	67
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	120	-	0	-
Veh in Median Storage, #	0	-	-	0	2	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	1	1	1	1	0	0
Mvmt Flow	802	39	93	663	39	69

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	841	0	1340	822
Stage 1	-	-	-	-	822	-
Stage 2	-	-	-	-	518	-
Critical Hdwy	-	-	4.115	-	6.6	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	-	-	2.2095	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	798	-	158	377
Stage 1	-	-	-	-	435	-
Stage 2	-	-	-	-	568	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	798	-	140	377
Mov Cap-2 Maneuver	-	-	-	-	338	-
Stage 1	-	-	-	-	435	-
Stage 2	-	-	-	-	502	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.2	19.1
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	362	-	-	798	-
HCM Lane V/C Ratio	0.299	-	-	0.116	-
HCM Control Delay (s)	19.1	-	-	10.1	-
HCM Lane LOS	C	-	-	B	-
HCM 95th %tile Q(veh)	1.2	-	-	0.4	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	143	624	53	16	615	42	40	2	11	29	5	110
Future Volume (veh/h)	143	624	53	16	615	42	40	2	11	29	5	110
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	149	650	55	17	641	44	42	2	11	30	5	115
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	1	1	1	1	1	1	0	0	0	0	0	0
Cap, veh/h	200	1744	147	38	813	689	310	28	48	131	23	180
Arrive On Green	0.11	0.52	0.52	0.02	0.43	0.43	0.15	0.15	0.15	0.15	0.15	0.15
Sat Flow, veh/h	1795	3343	283	1795	1885	1598	1117	195	328	214	161	1232
Grp Volume(v), veh/h	149	348	357	17	641	44	55	0	0	150	0	0
Grp Sat Flow(s),veh/h/ln	1795	1791	1834	1795	1885	1598	1640	0	0	1607	0	0
Q Serve(g_s), s	3.5	5.0	5.0	0.4	12.7	0.7	0.0	0.0	0.0	1.7	0.0	0.0
Cycle Q Clear(g_c), s	3.5	5.0	5.0	0.4	12.7	0.7	1.1	0.0	0.0	3.8	0.0	0.0
Prop In Lane	1.00		0.15	1.00		1.00	0.76		0.20	0.20		0.77
Lane Grp Cap(c), veh/h	200	934	957	38	813	689	386	0	0	334	0	0
V/C Ratio(X)	0.74	0.37	0.37	0.44	0.79	0.06	0.14	0.00	0.00	0.45	0.00	0.00
Avail Cap(c_a), veh/h	930	2185	2238	207	1540	1305	767	0	0	775	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	18.7	6.2	6.2	21.0	10.6	7.2	16.3	0.0	0.0	17.4	0.0	0.0
Incr Delay (d2), s/veh	5.4	0.2	0.2	7.8	1.7	0.0	0.2	0.0	0.0	0.9	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	1.0	1.0	0.2	3.6	0.2	0.4	0.0	0.0	1.3	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	24.1	6.4	6.4	28.8	12.4	7.3	16.5	0.0	0.0	18.4	0.0	0.0
LnGrp LOS	C	A	A	C	B	A	B	A	A	B	A	A
Approach Vol, veh/h		854			702			55			150	
Approach Delay, s/veh		9.5			12.5			16.5			18.4	
Approach LOS		A			B			B			B	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		10.9	5.4	27.2		10.9	9.3	23.2				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		18.5	5.0	53.0		18.5	22.5	35.5				
Max Q Clear Time (g_c+I1), s		3.1	2.4	7.0		5.8	5.5	14.7				
Green Ext Time (p_c), s		0.2	0.0	4.3		0.6	0.3	4.0				

Intersection Summary	
HCM 6th Ctrl Delay	11.7
HCM 6th LOS	B



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	9	140	45	139	156	17	59	96	105	28	147	18
Future Volume (veh/h)	9	140	45	139	156	17	59	96	105	28	147	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	9	147	47	146	164	18	62	101	111	29	155	19
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	1	1	1	1	1	1	1	1	1	1	1	1
Cap, veh/h	189	450	139	434	314	29	345	293	382	232	344	39
Arrive On Green	0.33	0.33	0.33	0.33	0.33	0.33	0.24	0.24	0.24	0.24	0.24	0.24
Sat Flow, veh/h	32	1345	415	559	937	87	457	1227	1598	157	1440	165
Grp Volume(v), veh/h	203	0	0	328	0	0	163	0	111	203	0	0
Grp Sat Flow(s),veh/h/ln	1793	0	0	1583	0	0	1684	0	1598	1761	0	0
Q Serve(g_s), s	0.0	0.0	0.0	1.6	0.0	0.0	0.0	0.0	1.2	0.2	0.0	0.0
Cycle Q Clear(g_c), s	1.8	0.0	0.0	3.4	0.0	0.0	1.5	0.0	1.2	2.0	0.0	0.0
Prop In Lane	0.04		0.23	0.45		0.05	0.38		1.00	0.14		0.09
Lane Grp Cap(c), veh/h	778	0	0	776	0	0	638	0	382	616	0	0
V/C Ratio(X)	0.26	0.00	0.00	0.42	0.00	0.00	0.26	0.00	0.29	0.33	0.00	0.00
Avail Cap(c_a), veh/h	4332	0	0	3772	0	0	2595	0	2384	2759	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	5.3	0.0	0.0	5.7	0.0	0.0	6.7	0.0	6.6	6.9	0.0	0.0
Incr Delay (d2), s/veh	0.2	0.0	0.0	0.4	0.0	0.0	0.2	0.0	0.4	0.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	0.0	0.1	0.0	0.0	0.2	0.0	0.1	0.3	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	5.4	0.0	0.0	6.1	0.0	0.0	6.9	0.0	7.0	7.2	0.0	0.0
LnGrp LOS	A	A	A	A	A	A	A	A	A	A	A	A
Approach Vol, veh/h		203			328			274			203	
Approach Delay, s/veh		5.4			6.1			6.9			7.2	
Approach LOS		A			A			A			A	

Timer - Assigned Phs	2		4		6		8					
Phs Duration (G+Y+Rc), s	9.5		11.6		9.5		11.6					
Change Period (Y+Rc), s	4.5		4.5		4.5		4.5					
Max Green Setting (Gmax), s	31.5		49.5		31.5		49.5					
Max Q Clear Time (g_c+I1), s	3.5		3.8		4.0		5.4					
Green Ext Time (p_c), s	1.2		1.1		1.1		2.0					

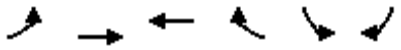
Intersection Summary												
HCM 6th Ctrl Delay		6.4										
HCM 6th LOS		A										



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	163	5	359	251	8	305
Future Volume (veh/h)	163	5	359	251	8	305
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1900	1900	1885	1900	1900	1885
Adj Flow Rate, veh/h	177	5	390	273	9	332
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	1	0	0	1
Cap, veh/h	281	250	849	587	559	791
Arrive On Green	0.16	0.16	0.42	0.42	0.42	0.42
Sat Flow, veh/h	1810	1610	2118	1400	784	1885
Grp Volume(v), veh/h	177	5	345	318	9	332
Grp Sat Flow(s),veh/h/ln	1810	1610	1791	1633	784	1885
Q Serve(g_s), s	1.9	0.1	2.9	3.0	0.2	2.6
Cycle Q Clear(g_c), s	1.9	0.1	2.9	3.0	3.2	2.6
Prop In Lane	1.00	1.00		0.86	1.00	
Lane Grp Cap(c), veh/h	281	250	751	685	559	791
V/C Ratio(X)	0.63	0.02	0.46	0.46	0.02	0.42
Avail Cap(c_a), veh/h	2779	2473	4105	3743	2028	4321
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	8.4	7.6	4.4	4.4	5.6	4.3
Incr Delay (d2), s/veh	2.3	0.0	0.4	0.5	0.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.0	0.1	0.1	0.0	0.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	10.7	7.6	4.9	4.9	5.6	4.7
LnGrp LOS	B	A	A	A	A	A
Approach Vol, veh/h	182		663			341
Approach Delay, s/veh	10.6		4.9			4.7
Approach LOS	B		A			A

Timer - Assigned Phs	2			6	8
Phs Duration (G+Y+Rc), s	13.4			13.4	7.8
Change Period (Y+Rc), s	4.5			4.5	4.5
Max Green Setting (Gmax), s	48.5			48.5	32.5
Max Q Clear Time (g_c+I1), s	5.0			5.2	3.9
Green Ext Time (p_c), s	3.9			1.8	0.5

Intersection Summary	
HCM 6th Ctrl Delay	5.7
HCM 6th LOS	A



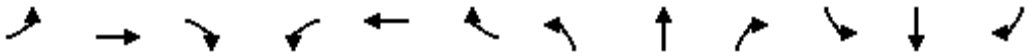
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	222	657	636	44	158	74
Future Volume (veh/h)	222	657	636	44	158	74
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1900	1885	1885	1900	1900	1900
Adj Flow Rate, veh/h	241	714	691	48	172	80
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	1	1	0	0	0
Cap, veh/h	557	1137	2049	142	287	255
Arrive On Green	0.60	0.60	0.60	0.60	0.16	0.16
Sat Flow, veh/h	731	1885	3492	236	1810	1610
Grp Volume(v), veh/h	241	714	364	375	172	80
Grp Sat Flow(s),veh/h/ln	731	1885	1791	1843	1810	1610
Q Serve(g_s), s	9.3	9.1	3.8	3.8	3.3	1.7
Cycle Q Clear(g_c), s	13.1	9.1	3.8	3.8	3.3	1.7
Prop In Lane	1.00			0.13	1.00	1.00
Lane Grp Cap(c), veh/h	557	1137	1080	1111	287	255
V/C Ratio(X)	0.43	0.63	0.34	0.34	0.60	0.31
Avail Cap(c_a), veh/h	1462	3470	3297	3392	1030	917
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	7.0	4.8	3.7	3.7	14.8	14.1
Incr Delay (d2), s/veh	0.5	0.6	0.2	0.2	2.0	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.6	0.2	0.2	1.3	0.5
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	7.5	5.4	3.9	3.9	16.8	14.8
LnGrp LOS	A	A	A	A	B	B
Approach Vol, veh/h		955	739		252	
Approach Delay, s/veh		5.9	3.9		16.1	
Approach LOS		A	A		B	

Timer - Assigned Phs		4		6	8
Phs Duration (G+Y+Rc), s		27.3		10.5	27.3
Change Period (Y+Rc), s		4.5		4.5	4.5
Max Green Setting (Gmax), s		69.5		21.5	69.5
Max Q Clear Time (g_c+I1), s		15.1		5.3	5.8
Green Ext Time (p_c), s		7.7		0.7	4.4

Intersection Summary	
HCM 6th Ctrl Delay	6.5
HCM 6th LOS	A

APPENDIX E

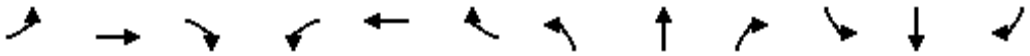
QUEUING ANALYSIS WORKSHEETS



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	90	296	29	243	510	34	21	214	151	21	321	65
v/c Ratio	0.42	0.63	0.06	0.79	0.77	0.05	0.13	0.48	0.30	0.13	0.72	0.13
Control Delay	34.7	28.6	0.2	51.3	33.5	0.1	32.9	25.5	5.1	32.9	33.2	0.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	34.7	28.6	0.2	51.3	33.5	0.1	32.9	25.5	5.1	32.9	33.2	0.5
Queue Length 50th (ft)	29	84	0	80	152	0	7	61	0	7	98	0
Queue Length 95th (ft)	73	176	0	#221	#375	0	27	128	23	27	191	0
Internal Link Dist (ft)		5249			1240			5245			5216	
Turn Bay Length (ft)	200		100	340		100	250		100	250		130
Base Capacity (vph)	309	628	646	306	665	675	309	635	646	306	628	652
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.29	0.47	0.04	0.79	0.77	0.05	0.07	0.34	0.23	0.07	0.51	0.10

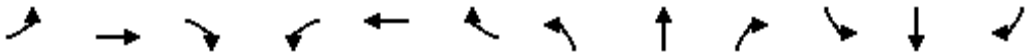
Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	84	490	94	262	390	43	87	290	195	92	581	104
v/c Ratio	0.25	0.60	0.20	0.47	0.33	0.07	0.26	0.33	0.36	0.27	0.65	0.21
Control Delay	34.5	28.1	3.2	31.0	20.3	0.3	34.5	23.0	6.1	34.4	27.1	3.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	34.5	28.1	3.2	31.0	20.3	0.3	34.5	23.0	6.1	34.4	27.1	3.7
Queue Length 50th (ft)	17	94	0	50	66	0	17	51	0	18	111	0
Queue Length 95th (ft)	39	151	9	91	107	0	40	87	31	41	169	13
Internal Link Dist (ft)		582			1436			2149			5245	
Turn Bay Length (ft)	200		125	175		150	250		200	200		150
Base Capacity (vph)	1137	1749	851	1442	2001	936	1137	1715	882	1159	1749	836
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.07	0.28	0.11	0.18	0.19	0.05	0.08	0.17	0.22	0.08	0.33	0.12

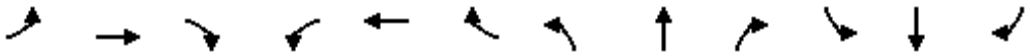
Intersection Summary



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	89	148	30	82	80	60	29	405	36	111	832	68
v/c Ratio	0.34	0.43	0.07	0.32	0.24	0.12	0.13	0.30	0.05	0.45	0.45	0.07
Control Delay	24.0	22.7	0.3	23.9	20.2	0.5	23.7	16.8	0.1	29.6	15.5	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	24.0	22.7	0.3	23.9	20.2	0.5	23.7	16.8	0.1	29.6	15.5	0.1
Queue Length 50th (ft)	23	37	0	21	19	0	7	52	0	29	85	0
Queue Length 95th (ft)	59	83	0	56	51	0	28	94	0	#86	#237	0
Internal Link Dist (ft)		783			650			1290			2149	
Turn Bay Length (ft)	185		100	150		100	250		80	255		130
Base Capacity (vph)	682	1207	1090	473	915	898	478	1632	855	260	1841	959
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.13	0.12	0.03	0.17	0.09	0.07	0.06	0.25	0.04	0.43	0.45	0.07

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

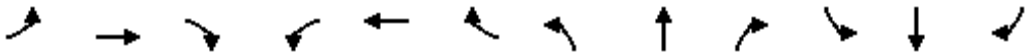


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	25	121	21	12	25	96	14	429	33	321	598	18
v/c Ratio	0.09	0.33	0.04	0.04	0.07	0.19	0.05	0.46	0.06	0.99	0.29	0.02
Control Delay	18.5	17.7	0.2	18.4	15.5	0.8	18.4	14.6	0.2	74.8	8.5	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	18.5	17.7	0.2	18.4	15.5	0.8	18.4	14.6	0.2	74.8	8.5	0.0
Queue Length 50th (ft)	4	20	0	2	4	0	2	36	0	~62	26	0
Queue Length 95th (ft)	23	64	0	15	21	0	16	86	0	#247	117	0
Internal Link Dist (ft)		902			663			1639			1290	
Turn Bay Length (ft)	80		75	190		140	250		150	250		155
Base Capacity (vph)	849	1384	1220	589	1139	1054	595	1592	838	324	2041	1034
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.03	0.09	0.02	0.02	0.02	0.09	0.02	0.27	0.04	0.99	0.29	0.02

Intersection Summary

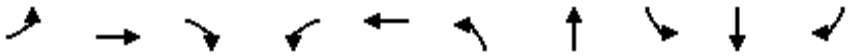
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	149	363	71	145	188	29	71	273	87	100	394	78
v/c Ratio	0.32	0.47	0.17	0.31	0.25	0.07	0.30	0.38	0.21	0.37	0.43	0.16
Control Delay	24.3	20.8	4.3	24.4	19.4	0.3	26.2	20.6	6.2	26.1	18.9	4.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	24.3	20.8	4.3	24.4	19.4	0.3	26.2	20.6	6.2	26.1	18.9	4.7
Queue Length 50th (ft)	20	50	0	20	24	0	19	36	0	27	54	0
Queue Length 95th (ft)	52	102	19	51	57	0	59	80	27	75	108	22
Internal Link Dist (ft)		982			1659			1803			1639	
Turn Bay Length (ft)	265		110	270		170	240		185	240		120
Base Capacity (vph)	1750	2086	965	1750	2066	965	902	2066	975	911	2066	965
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.09	0.17	0.07	0.08	0.09	0.03	0.08	0.13	0.09	0.11	0.19	0.08

Intersection Summary



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	30	61	180	78	150	164	1134	43	501	38
v/c Ratio	0.15	0.29	0.52	0.36	0.33	0.36	0.60	0.22	0.38	0.08
Control Delay	30.0	31.6	11.6	32.1	27.8	29.0	15.2	31.8	18.5	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	30.0	31.6	11.6	32.1	27.8	29.0	15.2	31.8	18.5	0.3
Queue Length 50th (ft)	10	22	0	29	27	28	108	15	51	0
Queue Length 95th (ft)	38	64	52	80	62	64	173	48	87	0
Internal Link Dist (ft)		687			449		1175		1803	
Turn Bay Length (ft)	260		180	230		250		180		180
Base Capacity (vph)	739	791	796	708	1454	1539	2596	793	2683	901
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.04	0.08	0.23	0.11	0.10	0.11	0.44	0.05	0.19	0.04

Intersection Summary



Lane Group	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	63	239	241	40	986	593	233
v/c Ratio	0.25	0.68	0.67	0.32	0.39	0.19	0.22
Control Delay	37.7	24.0	23.4	62.7	11.1	9.6	2.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	37.7	24.0	23.4	62.7	11.1	9.6	2.4
Queue Length 50th (ft)	38	52	52	26	208	57	0
Queue Length 95th (ft)	71	130	125	m55	318	102	39
Internal Link Dist (ft)		604			665	1175	
Turn Bay Length (ft)	270		270	400			130
Base Capacity (vph)	344	423	435	264	2560	3196	1080
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.18	0.57	0.55	0.15	0.39	0.19	0.22

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBR	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	431	13	606	152	393	278
v/c Ratio	0.64	0.04	0.25	0.10	0.16	0.18
Control Delay	41.3	0.2	6.5	0.1	3.4	0.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	41.3	0.2	6.5	0.1	3.4	0.9
Queue Length 50th (ft)	131	0	67	0	15	0
Queue Length 95th (ft)	170	1	103	0	21	30
Internal Link Dist (ft)			897		665	
Turn Bay Length (ft)	205	205		365		
Base Capacity (vph)	748	370	2478	1583	2430	1568
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.58	0.04	0.24	0.10	0.16	0.18

Intersection Summary

Queuing and Blocking Report

Intersection: 12: Fitzgerald Lane & Fargo Avenue

Movement	WB	NB
Directions Served	L	LR
Maximum Queue (ft)	72	72
Average Queue (ft)	31	39
95th Queue (ft)	58	61
Link Distance (ft)		554
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)	120	
Storage Blk Time (%)		
Queuing Penalty (veh)		

Queuing and Blocking Report

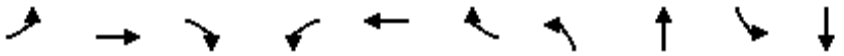
Intersection: 13: Glacier Way & Fargo Avenue

Movement	EB	WB	NB	SB
Directions Served	L	L	LTR	LTR
Maximum Queue (ft)	70	31	76	106
Average Queue (ft)	27	5	37	50
95th Queue (ft)	56	24	68	96
Link Distance (ft)			404	399
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	120	110		
Storage Blk Time (%)				
Queuing Penalty (veh)				

Queuing and Blocking Report

Intersection: 14: 11th Avenue & Flint Avenue

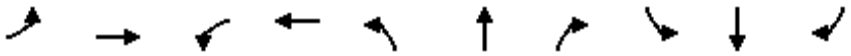
Movement	EB	WB	NB	NB	SB
Directions Served	LTR	LTR	LT	R	LTR
Maximum Queue (ft)	117	169	98	222	96
Average Queue (ft)	75	64	51	95	56
95th Queue (ft)	110	116	76	179	89
Link Distance (ft)	5239	5217	3838		634
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)				190	
Storage Blk Time (%)				2	
Queuing Penalty (veh)				4	



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	192	233	92	232	455	60	67	338	92	594
v/c Ratio	0.67	0.56	0.20	0.89	0.61	0.14	0.35	0.30	0.54	0.54
Control Delay	42.8	31.1	2.5	70.3	30.9	0.6	37.4	19.7	47.3	22.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	42.8	31.1	2.5	70.3	30.9	0.6	37.4	19.7	47.3	22.1
Queue Length 50th (ft)	87	97	0	113	105	0	31	60	43	110
Queue Length 95th (ft)	146	150	9	#232	140	0	64	91	#91	157
Internal Link Dist (ft)		1897			2561			1065		1348
Turn Bay Length (ft)	180		105	270		150	200		255	
Base Capacity (vph)	335	561	577	260	926	516	238	1123	178	1095
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.57	0.42	0.16	0.89	0.49	0.12	0.28	0.30	0.52	0.54

Intersection Summary

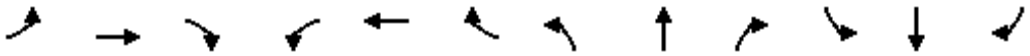
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	233	170	5	45	54	494	11	2	500	113
v/c Ratio	0.69	0.36	0.03	0.19	0.25	0.59	0.01	0.01	0.73	0.16
Control Delay	49.6	18.5	43.2	37.7	44.5	21.8	0.0	43.0	32.3	2.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	49.6	18.5	43.2	37.7	44.5	21.8	0.0	43.0	32.3	2.1
Queue Length 50th (ft)	145	39	3	23	32	193	0	1	276	0
Queue Length 95th (ft)	#267	100	14	53	67	364	0	8	#396	10
Internal Link Dist (ft)		5212		1113		1065			1624	
Turn Bay Length (ft)	195		280		430		135	330		135
Base Capacity (vph)	340	546	315	488	346	983	945	353	817	840
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.69	0.31	0.02	0.09	0.16	0.50	0.01	0.01	0.61	0.13

Intersection Summary

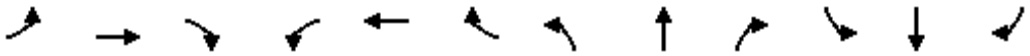
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	21	263	21	189	218	8	19	241	293	27	173	26
v/c Ratio	0.11	0.62	0.04	0.58	0.24	0.01	0.10	0.59	0.51	0.14	0.37	0.05
Control Delay	30.8	28.1	0.1	34.9	13.7	0.0	30.8	27.8	6.8	30.7	20.7	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	30.8	28.1	0.1	34.9	13.7	0.0	30.8	27.8	6.8	30.7	20.7	0.2
Queue Length 50th (ft)	6	65	0	47	27	0	5	60	0	7	41	0
Queue Length 95th (ft)	31	182	0	#196	141	0	28	167	57	36	121	0
Internal Link Dist (ft)		5249			1240			5245			5216	
Turn Bay Length (ft)	200		100	340		100	250		100	250		130
Base Capacity (vph)	356	731	726	356	902	856	352	724	795	352	762	748
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.06	0.36	0.03	0.53	0.24	0.01	0.05	0.33	0.37	0.08	0.23	0.03

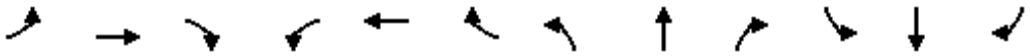
Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	75	299	59	221	319	41	108	685	265	51	358	44
v/c Ratio	0.21	0.47	0.15	0.41	0.31	0.08	0.28	0.61	0.39	0.15	0.38	0.09
Control Delay	30.6	26.8	0.8	27.9	21.4	0.4	30.3	21.0	5.4	31.0	20.4	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	30.6	26.8	0.8	27.9	21.4	0.4	30.3	21.0	5.4	31.0	20.4	0.3
Queue Length 50th (ft)	13	53	0	39	53	0	19	117	4	9	56	0
Queue Length 95th (ft)	37	106	0	82	103	2	48	196	54	28	104	0
Internal Link Dist (ft)		582			1436			2149			5245	
Turn Bay Length (ft)	200		125	175		150	250		200	200		150
Base Capacity (vph)	1281	1933	926	1593	2255	1044	1281	1933	979	1281	1933	926
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.06	0.15	0.06	0.14	0.14	0.04	0.08	0.35	0.27	0.04	0.19	0.05

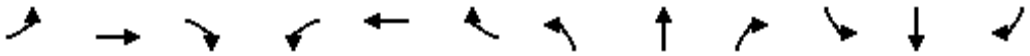
Intersection Summary



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	47	70	21	60	105	70	59	862	107	40	624	41
v/c Ratio	0.20	0.25	0.05	0.25	0.28	0.13	0.24	0.48	0.12	0.18	0.39	0.05
Control Delay	22.7	21.4	0.2	22.8	19.6	0.5	22.8	15.2	0.5	22.9	14.8	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	22.7	21.4	0.2	22.8	19.6	0.5	22.8	15.2	0.5	22.9	14.8	0.1
Queue Length 50th (ft)	11	16	0	14	18	0	14	77	0	9	77	0
Queue Length 95th (ft)	38	48	0	45	65	0	44	#227	2	35	141	0
Internal Link Dist (ft)		783			650			1290			2149	
Turn Bay Length (ft)	185		100	150		100	250		80	255		130
Base Capacity (vph)	705	1223	1112	484	927	923	479	1784	900	261	1608	863
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.07	0.06	0.02	0.12	0.11	0.08	0.12	0.48	0.12	0.15	0.39	0.05

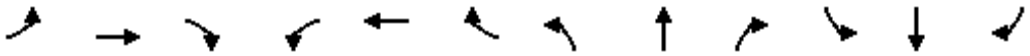
Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



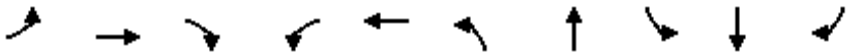
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	14	17	29	20	73	178	18	732	7	45	623	10
v/c Ratio	0.06	0.06	0.07	0.08	0.25	0.38	0.07	0.45	0.01	0.18	0.34	0.01
Control Delay	18.7	16.9	0.3	18.8	18.2	3.6	18.8	10.6	0.0	19.0	8.3	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	18.7	16.9	0.3	18.8	18.2	3.6	18.8	10.6	0.0	19.0	8.3	0.0
Queue Length 50th (ft)	2	2	0	3	10	0	2	31	0	6	26	0
Queue Length 95th (ft)	17	18	0	22	50	17	20	155	0	37	125	0
Internal Link Dist (ft)		902			663			1639			1290	
Turn Bay Length (ft)	80		75	190		140	250		150	250		155
Base Capacity (vph)	776	1277	1152	534	1021	989	528	1672	856	288	1813	940
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.02	0.01	0.03	0.04	0.07	0.18	0.03	0.44	0.01	0.16	0.34	0.01

Intersection Summary



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	284	288	135	323	391	63	155	408	90	113	547	82
v/c Ratio	0.56	0.47	0.35	0.59	0.60	0.17	0.57	0.39	0.17	0.50	0.67	0.18
Control Delay	32.9	29.4	9.0	32.4	30.5	3.6	37.6	22.3	5.6	38.5	28.6	5.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	32.9	29.4	9.0	32.4	30.5	3.6	37.6	22.3	5.6	38.5	28.6	5.4
Queue Length 50th (ft)	53	53	0	60	73	0	56	69	0	42	101	0
Queue Length 95th (ft)	117	116	47	129	153	15	141	139	30	111	196	26
Internal Link Dist (ft)		982			1659			1803			1639	
Turn Bay Length (ft)	265		110	270		170	240		185	240		120
Base Capacity (vph)	1165	1430	721	1165	1430	699	601	1441	703	601	1430	699
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.24	0.20	0.19	0.28	0.27	0.09	0.26	0.28	0.13	0.19	0.38	0.12

Intersection Summary



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	83	86	186	223	390	341	803	67	836	65
v/c Ratio	0.43	0.43	0.54	0.66	0.57	0.59	0.46	0.37	0.66	0.14
Control Delay	44.1	43.8	12.6	40.8	32.3	37.0	20.8	44.1	30.6	2.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	44.1	43.8	12.6	40.8	32.3	37.0	20.8	44.1	30.6	2.4
Queue Length 50th (ft)	38	41	0	106	89	77	101	30	130	0
Queue Length 95th (ft)	106	108	63	235	173	155	180	86	226	12
Internal Link Dist (ft)		687			449		1175		1803	
Turn Bay Length (ft)	260		180	230		250		180		180
Base Capacity (vph)	575	599	665	551	1116	1163	2071	599	2067	706
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.14	0.14	0.28	0.40	0.35	0.29	0.39	0.11	0.40	0.09

Intersection Summary



Lane Group	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	136	220	222	48	954	1068	576
v/c Ratio	0.53	0.60	0.59	0.38	0.37	0.33	0.48
Control Delay	49.6	18.3	18.2	66.2	8.0	11.3	2.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	49.6	18.3	18.2	66.2	8.0	11.3	2.8
Queue Length 50th (ft)	94	35	34	35	182	125	4
Queue Length 95th (ft)	150	112	108	m69	315	193	59
Internal Link Dist (ft)		604			665	1175	
Turn Bay Length (ft)	270		270	400			130
Base Capacity (vph)	350	437	448	281	2607	3223	1211
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.39	0.50	0.50	0.17	0.37	0.33	0.48

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBR	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	406	35	574	106	701	493
v/c Ratio	0.65	0.11	0.23	0.07	0.28	0.31
Control Delay	46.4	11.1	6.0	0.1	2.3	1.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	46.4	11.1	6.0	0.1	2.3	1.7
Queue Length 50th (ft)	138	0	64	0	31	25
Queue Length 95th (ft)	180	25	99	0	26	95
Internal Link Dist (ft)			897		665	
Turn Bay Length (ft)	205	205		365		
Base Capacity (vph)	759	379	2543	1599	2543	1599
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.53	0.09	0.23	0.07	0.28	0.31

Intersection Summary

Queuing and Blocking Report

Intersection: 12: Fitzgerald Lane & Fargo Avenue

Movement	WB	NB
Directions Served	L	LR
Maximum Queue (ft)	55	54
Average Queue (ft)	22	37
95th Queue (ft)	53	53
Link Distance (ft)		554
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)	120	
Storage Blk Time (%)		
Queuing Penalty (veh)		

Queuing and Blocking Report

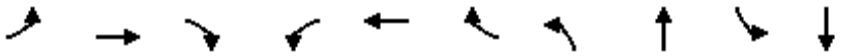
Intersection: 13: Glacier Way & Fargo Avenue

Movement	EB	WB	NB	SB
Directions Served	L	L	LTR	LTR
Maximum Queue (ft)	72	53	53	87
Average Queue (ft)	30	7	27	32
95th Queue (ft)	61	29	51	59
Link Distance (ft)			404	399
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	120	110		
Storage Blk Time (%)				
Queuing Penalty (veh)				

Queuing and Blocking Report

Intersection: 14: 11th Avenue & Flint Avenue

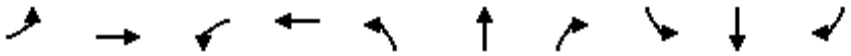
Movement	EB	WB	NB	NB	SB
Directions Served	LTR	LTR	LT	R	LTR
Maximum Queue (ft)	55	77	96	55	72
Average Queue (ft)	36	49	38	15	38
95th Queue (ft)	52	70	67	48	57
Link Distance (ft)	5239	5217	3838		634
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)				190	
Storage Blk Time (%)					
Queuing Penalty (veh)					



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	167	260	87	152	288	69	66	492	65	361
v/c Ratio	0.57	0.63	0.19	0.59	0.40	0.16	0.32	0.40	0.36	0.31
Control Delay	36.7	32.5	2.1	41.0	26.8	0.8	35.3	18.1	38.3	18.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	36.7	32.5	2.1	41.0	26.8	0.8	35.3	18.1	38.3	18.2
Queue Length 50th (ft)	71	110	0	66	61	0	28	80	28	57
Queue Length 95th (ft)	139	181	10	#148	98	1	68	137	70	105
Internal Link Dist (ft)		1897			2561			1065		1348
Turn Bay Length (ft)	180		105	270		150	200		255	
Base Capacity (vph)	367	616	620	286	1008	554	256	1223	193	1172
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.46	0.42	0.14	0.53	0.29	0.12	0.26	0.40	0.34	0.31

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	91	99	9	43	50	477	4	1	431	119
v/c Ratio	0.31	0.23	0.03	0.14	0.19	0.46	0.00	0.00	0.47	0.14
Control Delay	38.8	14.5	39.6	37.1	39.6	17.7	0.0	40.0	23.0	2.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	38.8	14.5	39.6	37.1	39.6	17.7	0.0	40.0	23.0	2.2
Queue Length 50th (ft)	45	11	4	20	24	154	0	1	193	0
Queue Length 95th (ft)	104	63	21	58	68	371	0	6	334	20
Internal Link Dist (ft)		5212		1113		1065			1624	
Turn Bay Length (ft)	195		280		430		135	330		135
Base Capacity (vph)	439	642	447	638	425	1173	1051	425	1101	996
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.21	0.15	0.02	0.07	0.12	0.41	0.00	0.00	0.39	0.12

Intersection Summary

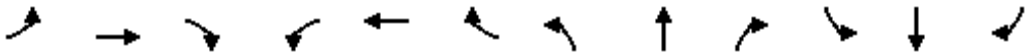


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	124	310	29	526	534	69	21	696	21	641	93
v/c Ratio	0.58	0.68	0.06	1.94	0.90	0.11	0.14	0.61	0.14	1.15	0.16
Control Delay	41.2	31.9	0.2	459.1	47.1	0.4	34.0	17.5	34.1	114.6	0.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	41.2	31.9	0.2	459.1	47.1	0.4	34.0	17.5	34.1	114.6	0.9
Queue Length 50th (ft)	45	102	0	~318	195	0	8	78	8	~291	0
Queue Length 95th (ft)	95	184	0	#516	#399	0	27	136	27	#508	0
Internal Link Dist (ft)		5249			369			5245		396	
Turn Bay Length (ft)	200		100	340			250		250		130
Base Capacity (vph)	273	556	592	271	593	620	273	1146	271	556	597
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.45	0.56	0.05	1.94	0.90	0.11	0.08	0.61	0.08	1.15	0.16

Intersection Summary

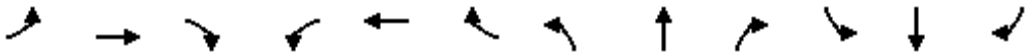
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	129	490	94	262	390	66	87	510	195	113	1068	170
v/c Ratio	0.42	0.71	0.22	0.56	0.47	0.14	0.32	0.54	0.34	0.17	0.78	0.25
Control Delay	41.1	37.0	2.9	38.8	28.6	0.6	41.2	30.9	6.3	29.3	29.5	7.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	41.1	37.0	2.9	38.8	28.6	0.6	41.2	30.9	6.3	29.3	29.5	7.1
Queue Length 50th (ft)	32	124	0	65	90	0	22	129	0	23	254	10
Queue Length 95th (ft)	57	162	4	96	121	0	42	165	34	47	336	42
Internal Link Dist (ft)		582			1436			2149			5245	
Turn Bay Length (ft)	200		125	175		150	250		200	200		150
Base Capacity (vph)	885	1362	698	1123	1558	775	885	1336	730	908	1362	684
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.15	0.36	0.13	0.23	0.25	0.09	0.10	0.38	0.27	0.12	0.78	0.25

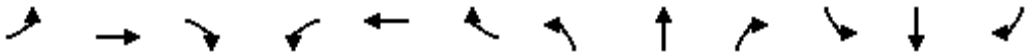
Intersection Summary



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	101	148	30	82	80	89	29	560	36	175	1208	79
v/c Ratio	0.40	0.38	0.06	0.34	0.27	0.19	0.14	0.54	0.06	0.73	0.70	0.09
Control Delay	26.4	22.5	0.2	26.1	22.7	0.9	25.1	19.1	0.2	47.2	23.3	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	26.4	22.5	0.2	26.1	22.7	0.9	25.1	19.1	0.2	47.2	23.3	0.2
Queue Length 50th (ft)	28	40	0	23	21	0	8	77	0	51	145	0
Queue Length 95th (ft)	66	86	0	57	53	0	29	129	0	#154	#383	0
Internal Link Dist (ft)		783			650			1290			2149	
Turn Bay Length (ft)	185		100	150		100	250		80	255		130
Base Capacity (vph)	631	1059	982	438	847	851	443	1184	676	241	1735	919
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.16	0.14	0.03	0.19	0.09	0.10	0.07	0.47	0.05	0.73	0.70	0.09

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

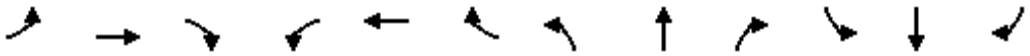


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	25	121	21	12	25	124	14	557	33	401	894	18
v/c Ratio	0.09	0.34	0.04	0.05	0.07	0.24	0.05	0.56	0.05	1.26	0.42	0.02
Control Delay	19.7	18.9	0.2	19.5	16.5	1.1	19.5	15.1	0.2	165.0	10.2	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	19.7	18.9	0.2	19.5	16.5	1.1	19.5	15.1	0.2	165.0	10.2	0.0
Queue Length 50th (ft)	4	22	0	2	4	0	3	49	0	~114	45	0
Queue Length 95th (ft)	24	68	0	15	21	0	17	111	0	#322	#191	0
Internal Link Dist (ft)		902			663			1639			1290	
Turn Bay Length (ft)	80		75	190		140	250		150	250		155
Base Capacity (vph)	834	1331	1182	579	1119	1040	585	1564	827	319	2110	1060
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.03	0.09	0.02	0.02	0.02	0.12	0.02	0.36	0.04	1.26	0.42	0.02

Intersection Summary

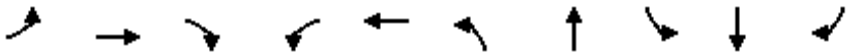
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	165	363	71	145	188	62	71	332	87	180	529	108
v/c Ratio	0.40	0.54	0.19	0.37	0.29	0.17	0.35	0.52	0.24	0.57	0.47	0.19
Control Delay	27.7	24.7	4.6	28.0	22.5	3.5	30.6	25.0	6.8	29.8	18.9	6.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	27.7	24.7	4.6	28.0	22.5	3.5	30.6	25.0	6.8	29.8	18.9	6.6
Queue Length 50th (ft)	25	55	0	22	27	0	21	50	0	53	77	2
Queue Length 95th (ft)	62	115	20	56	64	15	65	107	29	127	150	36
Internal Link Dist (ft)		982			1659			1803			1639	
Turn Bay Length (ft)	265		110	270		170	240		185	240		120
Base Capacity (vph)	1360	1686	799	1360	1669	799	701	1669	806	708	1669	799
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.12	0.22	0.09	0.11	0.11	0.08	0.10	0.20	0.11	0.25	0.32	0.14

Intersection Summary



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	32	62	180	78	156	164	1179	58	593	48
v/c Ratio	0.16	0.30	0.53	0.37	0.36	0.37	0.60	0.28	0.41	0.09
Control Delay	31.5	33.3	12.0	33.7	28.6	30.5	15.6	33.3	18.5	0.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	31.5	33.3	12.0	33.7	28.6	30.5	15.6	33.3	18.5	0.5
Queue Length 50th (ft)	12	24	0	31	29	30	119	22	62	0
Queue Length 95th (ft)	42	66	52	82	65	67	189	61	104	1
Internal Link Dist (ft)		687			449		1175		1803	
Turn Bay Length (ft)	260		180	230		250		180		180
Base Capacity (vph)	713	763	775	683	1401	1486	2514	766	2591	874
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.04	0.08	0.23	0.11	0.11	0.11	0.47	0.08	0.23	0.05

Intersection Summary



Lane Group	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	63	239	241	40	1021	621	271
v/c Ratio	0.24	0.68	0.67	0.32	0.41	0.20	0.25
Control Delay	36.9	25.4	24.8	62.5	12.0	10.0	2.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	36.9	25.4	24.8	62.5	12.0	10.0	2.4
Queue Length 50th (ft)	37	60	58	26	244	61	0
Queue Length 95th (ft)	70	137	131	m53	337	108	41
Internal Link Dist (ft)		604			665	1175	
Turn Bay Length (ft)	270		270	400			130
Base Capacity (vph)	346	416	428	436	2543	3166	1086
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.18	0.57	0.56	0.09	0.40	0.20	0.25

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBR	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	451	13	621	152	421	278
v/c Ratio	0.65	0.04	0.25	0.10	0.18	0.18
Control Delay	41.2	0.2	6.8	0.1	3.7	0.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	41.2	0.2	6.8	0.1	3.7	0.9
Queue Length 50th (ft)	137	0	71	0	16	0
Queue Length 95th (ft)	176	1	108	0	24	28
Internal Link Dist (ft)			897		665	
Turn Bay Length (ft)	205	205		365		
Base Capacity (vph)	735	364	2481	1583	2433	1568
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.61	0.04	0.25	0.10	0.17	0.18

Intersection Summary

Queuing and Blocking Report

Intersection: 12: Fitzgerald Lane & Fargo Avenue

Movement	WB	NB
Directions Served	L	LR
Maximum Queue (ft)	105	495
Average Queue (ft)	44	117
95th Queue (ft)	84	329
Link Distance (ft)		554
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)	120	
Storage Blk Time (%)	0	
Queuing Penalty (veh)	0	

Queuing and Blocking Report

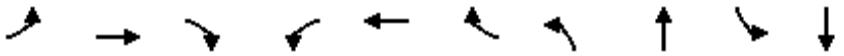
Intersection: 13: Glacier Way & Fargo Avenue

Movement	EB	EB	WB	NB	SB
Directions Served	L	TR	L	LTR	LTR
Maximum Queue (ft)	53	21	29	202	366
Average Queue (ft)	24	1	7	67	113
95th Queue (ft)	48	7	26	144	290
Link Distance (ft)		592		404	399
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)	120		110		
Storage Blk Time (%)					
Queuing Penalty (veh)					

Queuing and Blocking Report

Intersection: 14: 11th Avenue & Flint Avenue

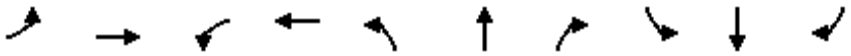
Movement	EB	WB	NB	NB	SB
Directions Served	LTR	LTR	LT	R	LTR
Maximum Queue (ft)	271	166	117	185	114
Average Queue (ft)	92	78	56	86	57
95th Queue (ft)	191	130	90	160	84
Link Distance (ft)	2592	5217	3838		634
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)				190	
Storage Blk Time (%)				1	
Queuing Penalty (veh)				1	



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	217	354	143	232	579	60	106	338	92	624
v/c Ratio	0.75	0.76	0.28	0.92	0.72	0.13	0.52	0.31	0.56	0.60
Control Delay	48.5	38.5	6.2	77.8	33.2	0.6	43.1	20.6	49.4	23.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	48.5	38.5	6.2	77.8	33.2	0.6	43.1	20.6	49.4	23.2
Queue Length 50th (ft)	104	159	0	118	140	0	50	63	45	121
Queue Length 95th (ft)	#179	231	34	#232	180	0	92	91	#91	160
Internal Link Dist (ft)		1897			2561			1065		1348
Turn Bay Length (ft)	180		105	270		150	200		255	
Base Capacity (vph)	322	541	561	251	894	503	229	1083	172	1047
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.67	0.65	0.25	0.92	0.65	0.12	0.46	0.31	0.53	0.60

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	237	197	5	50	61	494	11	2	500	118
v/c Ratio	0.77	0.39	0.03	0.22	0.31	0.58	0.01	0.01	0.79	0.17
Control Delay	59.6	19.7	43.5	40.6	47.7	22.6	0.0	43.5	38.0	2.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	59.6	19.7	43.5	40.6	47.7	22.6	0.0	43.5	38.0	2.3
Queue Length 50th (ft)	149	49	3	27	37	194	0	1	277	0
Queue Length 95th (ft)	#278	119	14	59	74	364	0	8	#403	13
Internal Link Dist (ft)		5212		1113		1065			1624	
Turn Bay Length (ft)	195		280		430		135	330		135
Base Capacity (vph)	306	540	284	440	311	951	919	317	734	771
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.77	0.36	0.02	0.11	0.20	0.52	0.01	0.01	0.68	0.15

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Queuing and Blocking Report

Intersection: 17: 12th Avenue & Project Driveway 1

Movement	WB	WB	NB	SB
Directions Served	L	R	TR	L
Maximum Queue (ft)	216	31	22	28
Average Queue (ft)	82	13	1	10
95th Queue (ft)	152	37	7	30
Link Distance (ft)	402	402	2132	
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				150
Storage Blk Time (%)				
Queuing Penalty (veh)				

Queuing and Blocking Report

Intersection: 18: 12th Avenue & Project Dwy 2

Movement	WB	NB
Directions Served	R	TR
Maximum Queue (ft)	26	30
Average Queue (ft)	3	1
95th Queue (ft)	15	10
Link Distance (ft)	385	402
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Queuing and Blocking Report

Intersection: 19: Fargo Avenue & Project Dwy 3

Movement	WB	WB	SB
Directions Served	T	TR	R
Maximum Queue (ft)	415	330	317
Average Queue (ft)	178	49	171
95th Queue (ft)	450	208	348
Link Distance (ft)	401	401	302
Upstream Blk Time (%)	4		30
Queuing Penalty (veh)	19		0
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Queuing and Blocking Report

Intersection: 20: Fargo Avenue & Project Dwy 4

Movement	EB	WB	WB	SB	SB
Directions Served	L	T	TR	L	R
Maximum Queue (ft)	118	244	231	298	150
Average Queue (ft)	45	29	18	297	91
95th Queue (ft)	86	144	108	304	212
Link Distance (ft)		340	340	283	
Upstream Blk Time (%)				100	
Queuing Penalty (veh)				0	
Storage Bay Dist (ft)	150				100
Storage Blk Time (%)				100	0
Queuing Penalty (veh)				108	1

Queuing and Blocking Report

Intersection: 21: Project Dwy 5 & Flint Avenue

Movement	NB
Directions Served	R
Maximum Queue (ft)	31
Average Queue (ft)	3
95th Queue (ft)	18
Link Distance (ft)	414
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Queuing and Blocking Report

Intersection: 22: Project Dwy 6 & Flint Avenue

Movement	WB	NB
Directions Served	L	LR
Maximum Queue (ft)	31	56
Average Queue (ft)	12	27
95th Queue (ft)	34	50
Link Distance (ft)		497
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)	150	
Storage Blk Time (%)		
Queuing Penalty (veh)		

Queuing and Blocking Report

Intersection: 23: Fargo Avenue & Project Dwy 7

Movement	SB
Directions Served	R
Maximum Queue (ft)	54
Average Queue (ft)	29
95th Queue (ft)	54
Link Distance (ft)	325
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

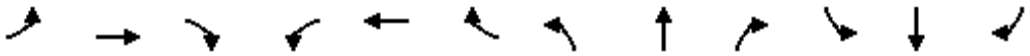


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	47	272	21	357	234	29	19	1037	27	332	38
v/c Ratio	0.27	0.69	0.04	1.23	0.36	0.04	0.13	0.83	0.17	0.51	0.06
Control Delay	33.8	33.8	0.2	159.8	20.8	0.1	33.1	24.0	33.2	21.8	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	33.8	33.8	0.2	159.8	20.8	0.1	33.1	24.0	33.2	21.8	0.2
Queue Length 50th (ft)	16	87	0	~151	65	0	6	118	9	91	0
Queue Length 95th (ft)	52	188	0	#402	157	0	28	#328	36	230	0
Internal Link Dist (ft)		5249			369			5245		396	
Turn Bay Length (ft)	200		100	340			250		250		130
Base Capacity (vph)	290	596	623	290	672	681	287	1242	287	649	663
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.16	0.46	0.03	1.23	0.35	0.04	0.07	0.83	0.09	0.51	0.06

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

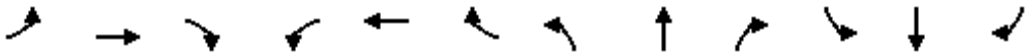
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	126	299	59	221	319	53	108	1132	265	62	636	79
v/c Ratio	0.39	0.57	0.17	0.50	0.49	0.14	0.35	0.76	0.35	0.23	0.44	0.11
Control Delay	36.6	34.5	1.0	35.0	30.3	2.6	36.6	24.3	9.2	36.3	18.7	1.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	36.6	34.5	1.0	35.0	30.3	2.6	36.6	24.3	9.2	36.3	18.7	1.2
Queue Length 50th (ft)	28	68	0	50	70	0	24	232	32	14	111	0
Queue Length 95th (ft)	57	113	0	88	114	10	51	#404	98	34	187	8
Internal Link Dist (ft)		582			1436			2149			5245	
Turn Bay Length (ft)	200		125	175		150	250		200	200		150
Base Capacity (vph)	988	1490	745	1228	1738	827	988	1490	755	988	1490	745
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.13	0.20	0.08	0.18	0.18	0.06	0.11	0.76	0.35	0.06	0.43	0.11

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

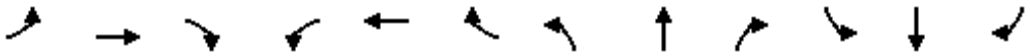


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	53	70	21	60	105	133	59	1261	107	80	868	47
v/c Ratio	0.23	0.25	0.05	0.25	0.29	0.26	0.25	0.75	0.12	0.35	0.52	0.05
Control Delay	23.7	21.9	0.2	23.8	20.5	1.2	23.8	25.3	0.6	25.8	17.9	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	23.7	21.9	0.2	23.8	20.5	1.2	23.8	25.3	0.6	25.8	17.9	0.1
Queue Length 50th (ft)	15	19	0	17	22	0	16	~242	0	22	117	0
Queue Length 95th (ft)	41	48	0	45	66	0	45	#387	2	58	#248	0
Internal Link Dist (ft)		783			650			1290			2149	
Turn Bay Length (ft)	185		100	150		100	250		80	255		130
Base Capacity (vph)	685	1127	1041	471	901	904	466	1680	860	254	1674	888
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.08	0.06	0.02	0.13	0.12	0.15	0.13	0.75	0.12	0.31	0.52	0.05

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

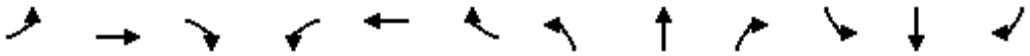
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	14	17	29	20	73	260	18	1027	7	92	805	10
v/c Ratio	0.07	0.06	0.07	0.09	0.27	0.57	0.08	0.71	0.01	0.39	0.41	0.01
Control Delay	20.1	17.6	0.3	20.3	19.9	8.9	20.3	18.2	0.0	23.8	9.0	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	20.1	17.6	0.3	20.3	19.9	8.9	20.3	18.2	0.0	23.8	9.0	0.0
Queue Length 50th (ft)	3	3	0	4	15	0	4	102	0	19	35	0
Queue Length 95th (ft)	18	18	0	22	49	50	21	#293	0	65	#177	0
Internal Link Dist (ft)		902			663			1639			1290	
Turn Bay Length (ft)	80		75	190		140	250		150	250		155
Base Capacity (vph)	685	1126	1041	471	901	903	466	1448	769	254	1974	1000
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.02	0.02	0.03	0.04	0.08	0.29	0.04	0.71	0.01	0.36	0.41	0.01

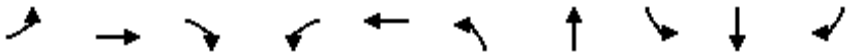
Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	313	288	135	323	391	144	155	546	90	163	633	101
v/c Ratio	0.60	0.45	0.34	0.60	0.61	0.35	0.59	0.63	0.19	0.60	0.72	0.21
Control Delay	34.9	30.2	8.8	34.8	32.5	8.7	40.5	28.6	6.4	40.1	30.3	7.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	34.9	30.2	8.8	34.8	32.5	8.7	40.5	28.6	6.4	40.1	30.3	7.5
Queue Length 50th (ft)	63	56	0	64	79	0	61	106	0	64	125	1
Queue Length 95th (ft)	132	120	48	136	159	49	148	207	32	153	240	39
Internal Link Dist (ft)		982			1659			1803			1639	
Turn Bay Length (ft)	265		110	270		170	240		185	240		120
Base Capacity (vph)	1101	1351	688	1101	1351	694	567	1351	665	567	1351	665
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.28	0.21	0.20	0.29	0.29	0.21	0.27	0.40	0.14	0.29	0.47	0.15

Intersection Summary



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	89	91	186	223	406	341	895	77	895	71
v/c Ratio	0.46	0.45	0.53	0.67	0.60	0.60	0.50	0.41	0.67	0.14
Control Delay	46.0	45.4	12.7	42.4	33.7	38.5	22.2	45.8	30.9	3.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	46.0	45.4	12.7	42.4	33.7	38.5	22.2	45.8	30.9	3.0
Queue Length 50th (ft)	44	45	0	113	98	81	122	36	145	0
Queue Length 95th (ft)	113	115	64	241	184	159	211	97	244	16
Internal Link Dist (ft)		687			449		1175		1803	
Turn Bay Length (ft)	260		180	230		250		180		180
Base Capacity (vph)	556	578	649	532	1077	1123	2017	579	1997	686
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.16	0.16	0.29	0.42	0.38	0.30	0.44	0.13	0.45	0.10

Intersection Summary



Lane Group	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	136	220	222	48	1022	1087	601
v/c Ratio	0.53	0.63	0.62	0.38	0.39	0.34	0.50
Control Delay	49.3	23.0	22.7	66.0	8.2	11.5	3.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	49.3	23.0	22.7	66.0	8.2	11.5	3.3
Queue Length 50th (ft)	94	50	49	35	198	128	12
Queue Length 95th (ft)	148	129	124	m64	345	200	77
Internal Link Dist (ft)		604			665	1175	
Turn Bay Length (ft)	270		270	400			130
Base Capacity (vph)	352	422	432	313	2607	3218	1208
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.39	0.52	0.51	0.15	0.39	0.34	0.50

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBR	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	445	35	602	106	719	493
v/c Ratio	0.67	0.10	0.24	0.07	0.29	0.31
Control Delay	46.3	10.8	6.5	0.1	2.5	1.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	46.3	10.8	6.5	0.1	2.5	1.6
Queue Length 50th (ft)	151	0	71	0	32	24
Queue Length 95th (ft)	195	25	108	0	31	124
Internal Link Dist (ft)			897		665	
Turn Bay Length (ft)	205	205		365		
Base Capacity (vph)	678	343	2589	1599	2589	1599
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.66	0.10	0.23	0.07	0.28	0.31

Intersection Summary

Queuing and Blocking Report

Intersection: 12: Fitzgerald Lane & Fargo Avenue

Movement	WB	NB
Directions Served	L	LR
Maximum Queue (ft)	71	158
Average Queue (ft)	26	45
95th Queue (ft)	58	106
Link Distance (ft)		554
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)	120	
Storage Blk Time (%)		
Queuing Penalty (veh)		

Queuing and Blocking Report

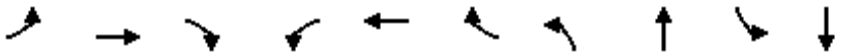
Intersection: 13: Glacier Way & Fargo Avenue

Movement	EB	WB	NB	SB
Directions Served	L	L	LTR	LTR
Maximum Queue (ft)	72	27	72	86
Average Queue (ft)	25	6	32	35
95th Queue (ft)	52	24	61	68
Link Distance (ft)			404	399
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	120	110		
Storage Blk Time (%)				
Queuing Penalty (veh)				

Queuing and Blocking Report

Intersection: 14: 11th Avenue & Flint Avenue

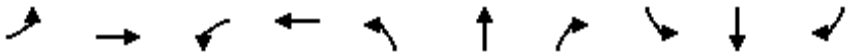
Movement	EB	WB	NB	NB	SB
Directions Served	LTR	LTR	LT	R	LTR
Maximum Queue (ft)	71	119	74	56	55
Average Queue (ft)	40	47	38	21	40
95th Queue (ft)	63	84	55	58	58
Link Distance (ft)	2592	5217	3838		634
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)				190	
Storage Blk Time (%)					
Queuing Penalty (veh)					



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	179	334	113	152	376	69	104	492	65	373
v/c Ratio	0.63	0.74	0.23	0.63	0.49	0.15	0.50	0.40	0.39	0.35
Control Delay	40.9	37.3	3.9	45.2	28.3	0.7	41.4	18.7	40.9	20.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	40.9	37.3	3.9	45.2	28.3	0.7	41.4	18.7	40.9	20.0
Queue Length 50th (ft)	80	148	0	70	84	0	47	86	30	63
Queue Length 95th (ft)	148	235	24	#148	126	1	98	137	70	106
Internal Link Dist (ft)		1897			2561			1065		1348
Turn Bay Length (ft)	180		105	270		150	200		255	
Base Capacity (vph)	343	576	589	267	942	527	239	1243	181	1064
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.52	0.58	0.19	0.57	0.40	0.13	0.44	0.40	0.36	0.35

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	93	113	9	44	71	477	4	1	431	120
v/c Ratio	0.35	0.26	0.04	0.16	0.29	0.43	0.00	0.00	0.50	0.15
Control Delay	40.7	14.0	40.8	38.1	40.9	17.0	0.0	41.0	25.1	2.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	40.7	14.0	40.8	38.1	40.9	17.0	0.0	41.0	25.1	2.3
Queue Length 50th (ft)	46	12	4	21	35	155	0	1	194	0
Queue Length 95th (ft)	108	67	21	60	89	373	0	6	348	21
Internal Link Dist (ft)		5212		1113		1065			1624	
Turn Bay Length (ft)	195		280		430		135	330		135
Base Capacity (vph)	405	607	412	589	392	1099	994	392	1015	930
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.23	0.19	0.02	0.07	0.18	0.43	0.00	0.00	0.42	0.13

Intersection Summary

Queuing and Blocking Report

Intersection: 17: 12th Avenue & Project Driveway 1

Movement	WB	WB	NB	SB
Directions Served	L	R	TR	L
Maximum Queue (ft)	118	29	22	24
Average Queue (ft)	46	4	1	3
95th Queue (ft)	87	21	8	16
Link Distance (ft)	402	402	2132	
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				150
Storage Blk Time (%)				
Queuing Penalty (veh)				

Queuing and Blocking Report

Intersection: 18: 12th Avenue & Project Dwy 2

Movement	WB
Directions Served	R
Maximum Queue (ft)	26
Average Queue (ft)	3
95th Queue (ft)	16
Link Distance (ft)	385
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Queuing and Blocking Report

Intersection: 19: Fargo Avenue & Project Dwy 3

Movement	WB	WB	SB
Directions Served	T	TR	R
Maximum Queue (ft)	328	206	116
Average Queue (ft)	72	8	45
95th Queue (ft)	239	72	94
Link Distance (ft)	401	401	302
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Queuing and Blocking Report

Intersection: 20: Fargo Avenue & Project Dwy 4

Movement	EB	WB	SB	SB
Directions Served	L	TR	L	R
Maximum Queue (ft)	96	22	298	150
Average Queue (ft)	44	2	266	106
95th Queue (ft)	81	11	386	210
Link Distance (ft)		340	283	
Upstream Blk Time (%)			73	
Queuing Penalty (veh)			0	
Storage Bay Dist (ft)	150			100
Storage Blk Time (%)			89	
Queuing Penalty (veh)			66	

Queuing and Blocking Report

Intersection: 21: Project Dwy 5 & Flint Avenue

Movement	NB
Directions Served	R
Maximum Queue (ft)	29
Average Queue (ft)	2
95th Queue (ft)	14
Link Distance (ft)	414
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Queuing and Blocking Report

Intersection: 22: Project Dwy 6 & Flint Avenue

Movement	WB	NB
Directions Served	L	LR
Maximum Queue (ft)	26	31
Average Queue (ft)	2	16
95th Queue (ft)	13	41
Link Distance (ft)		497
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)	150	
Storage Blk Time (%)		
Queuing Penalty (veh)		

Queuing and Blocking Report

Intersection: 23: Fargo Avenue & Project Dwy 7

Movement	SB
Directions Served	R
Maximum Queue (ft)	31
Average Queue (ft)	22
95th Queue (ft)	42
Link Distance (ft)	325
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

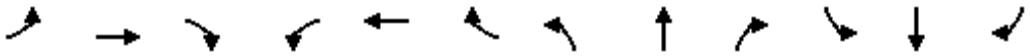


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	144	351	89	530	548	69	45	731	21	650	100
v/c Ratio	0.67	0.73	0.17	2.10	1.05	0.12	0.29	0.61	0.15	1.25	0.18
Control Delay	47.6	36.1	0.7	529.9	82.5	0.4	37.3	17.9	36.1	156.8	1.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	47.6	36.1	0.7	529.9	82.5	0.4	37.3	17.9	36.1	156.8	1.5
Queue Length 50th (ft)	65	151	0	~412	~305	0	21	91	10	~410	0
Queue Length 95th (ft)	110	217	0	#535	#427	0	45	147	27	#533	0
Internal Link Dist (ft)		5249			369			5245		396	
Turn Bay Length (ft)	200		100	340			250		250		130
Base Capacity (vph)	255	518	563	252	523	567	255	1194	252	518	567
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.56	0.68	0.16	2.10	1.05	0.12	0.18	0.61	0.08	1.25	0.18

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

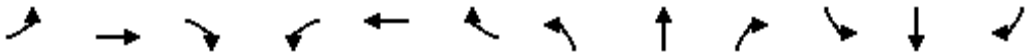
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	147	513	123	282	403	75	99	544	204	115	1134	176
v/c Ratio	0.46	0.70	0.28	0.58	0.46	0.16	0.36	0.46	0.30	0.39	0.86	0.26
Control Delay	42.3	37.1	6.5	39.7	28.7	4.4	42.7	24.2	5.0	42.5	34.5	8.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	42.3	37.1	6.5	39.7	28.7	4.4	42.7	24.2	5.0	42.5	34.5	8.3
Queue Length 50th (ft)	38	133	0	72	95	0	25	113	0	29	288	14
Queue Length 95th (ft)	65	173	24	107	126	14	48	169	32	54	#420	50
Internal Link Dist (ft)		582			1436			2149			5245	
Turn Bay Length (ft)	200		125	175		150	250		200	200		150
Base Capacity (vph)	859	1322	676	1090	1512	731	859	1296	719	876	1322	665
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.17	0.39	0.18	0.26	0.27	0.10	0.12	0.42	0.28	0.13	0.86	0.26

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	101	148	31	82	80	89	31	611	37	175	1317	79
v/c Ratio	0.40	0.39	0.06	0.35	0.28	0.19	0.15	0.56	0.06	0.74	0.75	0.09
Control Delay	26.9	23.0	0.3	26.6	23.2	0.9	25.5	19.2	0.2	49.2	24.6	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	26.9	23.0	0.3	26.6	23.2	0.9	25.5	19.2	0.2	49.2	24.6	0.2
Queue Length 50th (ft)	29	42	0	24	22	0	9	85	0	53	166	0
Queue Length 95th (ft)	66	86	0	57	53	0	30	141	0	#154	#428	0
Internal Link Dist (ft)		783			650			1290			2149	
Turn Bay Length (ft)	185		100	150		100	250		80	255		130
Base Capacity (vph)	617	1035	964	428	828	838	433	1162	667	236	1762	929
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.16	0.14	0.03	0.19	0.10	0.11	0.07	0.53	0.06	0.74	0.75	0.09

Intersection Summary

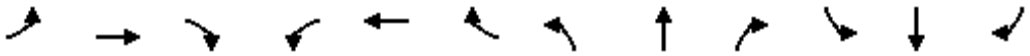
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	26	121	21	12	25	124	15	610	35	401	1001	20
v/c Ratio	0.10	0.35	0.05	0.05	0.07	0.25	0.06	0.57	0.06	1.30	0.47	0.02
Control Delay	20.0	19.5	0.2	19.8	17.0	1.2	19.9	15.0	0.2	180.9	11.2	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	20.0	19.5	0.2	19.8	17.0	1.2	19.9	15.0	0.2	180.9	11.2	0.1
Queue Length 50th (ft)	5	23	0	2	4	0	3	55	0	~121	53	0
Queue Length 95th (ft)	24	68	0	15	22	0	17	123	0	#322	#244	0
Internal Link Dist (ft)		902			663			1639			1290	
Turn Bay Length (ft)	80		75	190		140	250		150	250		155
Base Capacity (vph)	809	1305	1162	561	1085	1016	567	1517	808	309	2142	1073
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.03	0.09	0.02	0.02	0.02	0.12	0.03	0.40	0.04	1.30	0.47	0.02

Intersection Summary

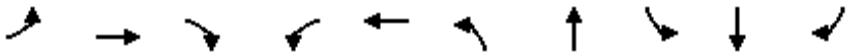
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	186	410	88	145	205	66	77	353	87	185	591	122
v/c Ratio	0.43	0.58	0.22	0.38	0.31	0.18	0.38	0.54	0.23	0.58	0.58	0.23
Control Delay	29.1	25.7	6.6	29.7	23.5	3.9	32.5	26.0	6.8	31.3	22.1	8.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	29.1	25.7	6.6	29.7	23.5	3.9	32.5	26.0	6.8	31.3	22.1	8.1
Queue Length 50th (ft)	30	65	0	23	31	0	24	56	0	57	93	6
Queue Length 95th (ft)	72	134	30	59	73	17	72	118	29	138	175	45
Internal Link Dist (ft)		982			1659			1803			1639	
Turn Bay Length (ft)	265		110	270		170	240		185	240		120
Base Capacity (vph)	1302	1614	769	1302	1598	769	671	1598	776	678	1598	769
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.14	0.25	0.11	0.11	0.13	0.09	0.11	0.22	0.11	0.27	0.37	0.16

Intersection Summary



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	34	65	207	80	158	174	1200	64	650	50
v/c Ratio	0.18	0.32	0.57	0.39	0.37	0.40	0.64	0.32	0.41	0.09
Control Delay	32.3	34.6	12.3	35.3	29.8	31.8	17.2	34.9	18.4	0.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	32.3	34.6	12.3	35.3	29.8	31.8	17.2	34.9	18.4	0.6
Queue Length 50th (ft)	13	26	0	32	30	34	124	24	70	0
Queue Length 95th (ft)	43	70	55	84	67	71	200	66	116	2
Internal Link Dist (ft)		687			449		1175		1803	
Turn Bay Length (ft)	260		180	230		250		180		180
Base Capacity (vph)	675	721	759	646	1323	1406	2387	725	2451	832
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.05	0.09	0.27	0.12	0.12	0.12	0.50	0.09	0.27	0.06

Intersection Summary



Lane Group	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	63	245	248	40	1038	670	303
v/c Ratio	0.23	0.69	0.69	0.32	0.42	0.21	0.28
Control Delay	36.1	26.7	26.2	63.2	13.0	10.4	2.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	36.1	26.7	26.2	63.2	13.0	10.4	2.4
Queue Length 50th (ft)	37	67	66	26	253	68	0
Queue Length 95th (ft)	69	145	140	m53	348	119	44
Internal Link Dist (ft)		604			665	1175	
Turn Bay Length (ft)	270		270	400			130
Base Capacity (vph)	348	414	426	436	2528	3137	1091
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.18	0.59	0.58	0.09	0.41	0.21	0.28

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBR	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	463	13	628	152	438	310
v/c Ratio	0.66	0.04	0.26	0.10	0.18	0.20
Control Delay	41.1	0.2	6.9	0.1	3.9	1.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	41.1	0.2	6.9	0.1	3.9	1.1
Queue Length 50th (ft)	140	0	72	0	20	1
Queue Length 95th (ft)	180	1	111	0	26	34
Internal Link Dist (ft)			897		665	
Turn Bay Length (ft)	205	205		365		
Base Capacity (vph)	741	367	2478	1583	2430	1568
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.62	0.04	0.25	0.10	0.18	0.20

Intersection Summary

Queuing and Blocking Report

Intersection: 12: Fitzgerald Lane & Fargo Avenue

Movement	EB	WB	WB	WB	NB
Directions Served	TR	L	T	T	LR
Maximum Queue (ft)	22	151	193	209	588
Average Queue (ft)	1	82	136	76	404
95th Queue (ft)	8	178	241	198	756
Link Distance (ft)	340		152	152	554
Upstream Blk Time (%)		0	38	5	55
Queuing Penalty (veh)		0	202	26	0
Storage Bay Dist (ft)		120			
Storage Blk Time (%)		0	54		
Queuing Penalty (veh)		0	80		

Queuing and Blocking Report

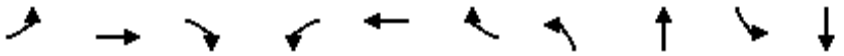
Intersection: 13: Glacier Way & Fargo Avenue

Movement	EB	WB	WB	NB	SB
Directions Served	L	L	T	LTR	LTR
Maximum Queue (ft)	52	31	160	205	414
Average Queue (ft)	26	4	11	63	227
95th Queue (ft)	53	20	79	141	483
Link Distance (ft)			1903	404	399
Upstream Blk Time (%)					31
Queuing Penalty (veh)					0
Storage Bay Dist (ft)	120	110			
Storage Blk Time (%)			1		
Queuing Penalty (veh)			0		

Queuing and Blocking Report

Intersection: 14: 11th Avenue & Flint Avenue

Movement	EB	WB	NB	NB	SB
Directions Served	LTR	LTR	LT	R	LTR
Maximum Queue (ft)	262	203	265	237	98
Average Queue (ft)	82	86	58	101	51
95th Queue (ft)	160	152	127	189	80
Link Distance (ft)	2592	5217	3838		634
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)				190	
Storage Blk Time (%)				6	
Queuing Penalty (veh)				13	



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	230	392	143	232	592	60	106	342	92	628
v/c Ratio	0.78	0.83	0.28	0.93	0.72	0.13	0.53	0.32	0.56	0.61
Control Delay	51.2	43.2	6.1	79.7	33.5	0.6	43.3	20.9	49.8	23.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	51.2	43.2	6.1	79.7	33.5	0.6	43.3	20.9	49.8	23.4
Queue Length 50th (ft)	111	181	0	118	144	0	50	64	45	121
Queue Length 95th (ft)	#194	#266	34	#232	183	0	92	92	#91	161
Internal Link Dist (ft)		1897			2561			1065		1348
Turn Bay Length (ft)	180		105	270		150	200		255	
Base Capacity (vph)	320	536	558	249	885	500	227	1073	170	1038
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.72	0.73	0.26	0.93	0.67	0.12	0.47	0.32	0.54	0.61

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	249	197	5	50	61	507	11	2	506	123
v/c Ratio	0.82	0.40	0.03	0.22	0.32	0.60	0.01	0.01	0.79	0.18
Control Delay	64.0	19.7	43.5	40.7	47.8	22.9	0.0	43.5	38.2	2.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	64.0	19.7	43.5	40.7	47.8	22.9	0.0	43.5	38.2	2.7
Queue Length 50th (ft)	157	49	3	27	37	202	0	1	282	0
Queue Length 95th (ft)	#296	119	14	59	74	377	0	8	#415	16
Internal Link Dist (ft)		5212		1113		1065			1624	
Turn Bay Length (ft)	195		280		430		135	330		135
Base Capacity (vph)	304	537	282	437	309	946	916	315	729	767
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.82	0.37	0.02	0.11	0.20	0.54	0.01	0.01	0.69	0.16

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Queuing and Blocking Report

Intersection: 17: 12th Avenue & Project Driveway 1

Movement	WB	WB	SB
Directions Served	L	R	L
Maximum Queue (ft)	207	31	29
Average Queue (ft)	92	9	6
95th Queue (ft)	151	31	24
Link Distance (ft)	402	402	
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			150
Storage Blk Time (%)			
Queuing Penalty (veh)			

Queuing and Blocking Report

Intersection: 18: 12th Avenue & Project Dwy 2

Movement	WB	SB
Directions Served	R	T
Maximum Queue (ft)	52	217
Average Queue (ft)	5	27
95th Queue (ft)	25	118
Link Distance (ft)	385	2132
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Queuing and Blocking Report

Intersection: 19: Fargo Avenue & Project Dwy 3

Movement	WB	WB	SB
Directions Served	T	TR	R
Maximum Queue (ft)	421	418	317
Average Queue (ft)	390	192	262
95th Queue (ft)	504	455	401
Link Distance (ft)	401	401	302
Upstream Blk Time (%)	42	1	77
Queuing Penalty (veh)	197	6	0
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Queuing and Blocking Report

Intersection: 20: Fargo Avenue & Project Dwy 4

Movement	EB	EB	WB	WB	SB	SB
Directions Served	L	T	T	TR	L	R
Maximum Queue (ft)	153	130	358	385	298	150
Average Queue (ft)	55	5	321	276	290	146
95th Queue (ft)	117	45	472	434	307	152
Link Distance (ft)		401	340	340	283	
Upstream Blk Time (%)			42	4	99	
Queuing Penalty (veh)			207	18	0	
Storage Bay Dist (ft)	150					100
Storage Blk Time (%)	1	0			41	75
Queuing Penalty (veh)	2	0			44	194

Queuing and Blocking Report

Intersection: 21: Project Dwy 5 & Flint Avenue

Movement	NB
Directions Served	R
Maximum Queue (ft)	31
Average Queue (ft)	3
95th Queue (ft)	18
Link Distance (ft)	414
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Queuing and Blocking Report

Intersection: 22: Project Dwy 6 & Flint Avenue

Movement	WB	NB
Directions Served	L	LR
Maximum Queue (ft)	31	75
Average Queue (ft)	17	29
95th Queue (ft)	39	52
Link Distance (ft)		497
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)	150	
Storage Blk Time (%)		
Queuing Penalty (veh)		

Queuing and Blocking Report

Intersection: 23: Fargo Avenue & Project Dwy 7

Movement	WB	WB	B39	SB
Directions Served	T	TR	T	R
Maximum Queue (ft)	1102	1013	592	340
Average Queue (ft)	554	488	54	221
95th Queue (ft)	1305	1197	316	446
Link Distance (ft)	1013	1013	592	325
Upstream Blk Time (%)	9	1	1	55
Queuing Penalty (veh)	43	3	7	0
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

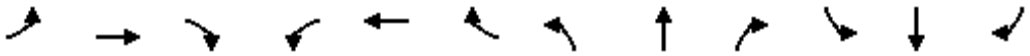


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	59	295	58	368	273	29	78	1056	27	354	57
v/c Ratio	0.35	0.74	0.12	1.39	0.44	0.04	0.42	0.78	0.19	0.70	0.10
Control Delay	37.7	38.4	0.5	226.5	24.6	0.1	39.0	21.5	36.4	34.5	0.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	37.7	38.4	0.5	226.5	24.6	0.1	39.0	21.5	36.4	34.5	0.4
Queue Length 50th (ft)	25	122	0	~229	104	0	33	135	12	144	0
Queue Length 95th (ft)	63	215	0	#432	196	0	77	#332	37	#292	0
Internal Link Dist (ft)		5249			369			5245		396	
Turn Bay Length (ft)	200		100	340			250		250		130
Base Capacity (vph)	265	544	583	265	629	648	262	1348	262	538	579
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.22	0.54	0.10	1.39	0.43	0.04	0.30	0.78	0.10	0.66	0.10

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

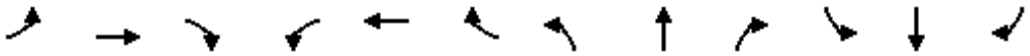
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	136	315	77	234	342	58	136	1200	285	70	685	97
v/c Ratio	0.41	0.58	0.22	0.52	0.51	0.15	0.41	0.82	0.38	0.26	0.53	0.15
Control Delay	37.2	34.8	2.5	35.5	30.7	3.2	37.2	27.3	10.2	37.1	21.4	2.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	37.2	34.8	2.5	35.5	30.7	3.2	37.2	27.3	10.2	37.1	21.4	2.3
Queue Length 50th (ft)	31	73	0	53	76	0	31	259	39	16	126	0
Queue Length 95th (ft)	62	121	9	93	123	13	62	#462	113	38	214	18
Internal Link Dist (ft)		582			1436			2149			5245	
Turn Bay Length (ft)	200		125	175		150	250		200	200		150
Base Capacity (vph)	973	1468	736	1210	1713	816	973	1468	747	973	1468	736
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.14	0.21	0.10	0.19	0.20	0.07	0.14	0.82	0.38	0.07	0.47	0.13

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	53	70	23	61	105	133	60	1384	107	80	951	47
v/c Ratio	0.23	0.25	0.06	0.26	0.29	0.26	0.26	0.82	0.12	0.35	0.57	0.05
Control Delay	23.7	21.9	0.2	23.8	20.5	1.2	23.8	28.5	0.6	25.8	19.4	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	23.7	21.9	0.2	23.8	20.5	1.2	23.8	28.5	0.6	25.8	19.4	0.1
Queue Length 50th (ft)	15	19	0	17	22	0	17	~283	0	22	132	0
Queue Length 95th (ft)	41	48	0	46	66	0	45	#435	2	58	#282	0
Internal Link Dist (ft)		783			650			1290			2149	
Turn Bay Length (ft)	185		100	150		100	250		80	255		130
Base Capacity (vph)	685	1127	1041	471	901	904	466	1680	860	254	1674	888
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.08	0.06	0.02	0.13	0.12	0.15	0.13	0.82	0.12	0.31	0.57	0.05

Intersection Summary

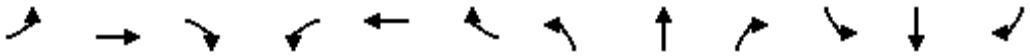
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	17	17	30	21	73	260	18	1142	7	92	885	12
v/c Ratio	0.08	0.06	0.07	0.10	0.27	0.57	0.08	0.79	0.01	0.39	0.45	0.01
Control Delay	20.2	17.6	0.4	20.3	19.9	8.9	20.3	20.7	0.0	23.9	10.0	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	20.2	17.6	0.4	20.3	19.9	8.9	20.3	20.7	0.0	23.9	10.0	0.0
Queue Length 50th (ft)	4	3	0	4	15	0	4	118	0	19	40	0
Queue Length 95th (ft)	20	18	0	23	49	50	21	#339	0	65	#226	0
Internal Link Dist (ft)		902			663			1639			1290	
Turn Bay Length (ft)	80		75	190		140	250		150	250		155
Base Capacity (vph)	684	1126	1040	471	901	903	466	1447	769	254	1974	1000
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.02	0.02	0.03	0.04	0.08	0.29	0.04	0.79	0.01	0.36	0.45	0.01

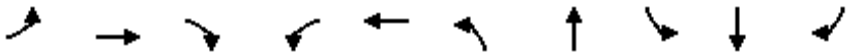
Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	333	317	146	323	439	151	173	612	90	166	672	124
v/c Ratio	0.63	0.46	0.34	0.62	0.65	0.36	0.64	0.67	0.19	0.63	0.74	0.26
Control Delay	37.8	31.1	8.3	38.0	34.9	8.4	43.8	30.4	6.4	44.0	32.9	10.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	37.8	31.1	8.3	38.0	34.9	8.4	43.8	30.4	6.4	44.0	32.9	10.5
Queue Length 50th (ft)	74	68	0	72	98	0	75	131	0	72	147	9
Queue Length 95th (ft)	146	134	50	143	184	50	169	246	33	164	275	58
Internal Link Dist (ft)		982			1659			1803			1639	
Turn Bay Length (ft)	265		110	270		170	240		185	240		120
Base Capacity (vph)	1022	1254	656	1022	1254	659	526	1258	627	526	1254	625
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.33	0.25	0.22	0.32	0.35	0.23	0.33	0.49	0.14	0.32	0.54	0.20

Intersection Summary



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	91	94	203	223	417	370	955	80	930	73
v/c Ratio	0.47	0.47	0.56	0.67	0.61	0.63	0.52	0.43	0.70	0.15
Control Delay	47.4	46.9	12.8	43.3	34.9	39.4	22.9	47.2	32.1	3.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	47.4	46.9	12.8	43.3	34.9	39.4	22.9	47.2	32.1	3.2
Queue Length 50th (ft)	47	49	0	117	105	93	139	40	159	0
Queue Length 95th (ft)	116	120	66	246	192	173	232	101	260	18
Internal Link Dist (ft)		687			449		1175		1803	
Turn Bay Length (ft)	260		180	230		250		180		180
Base Capacity (vph)	539	560	646	516	1044	1089	1988	561	1936	668
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.17	0.17	0.31	0.43	0.40	0.34	0.48	0.14	0.48	0.11

Intersection Summary



Lane Group	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	136	242	237	48	1076	1118	623
v/c Ratio	0.50	0.70	0.66	0.38	0.42	0.35	0.52
Control Delay	46.8	29.3	27.3	66.0	9.4	12.3	3.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	46.8	29.3	27.3	66.0	9.4	12.3	3.8
Queue Length 50th (ft)	94	80	71	35	213	133	17
Queue Length 95th (ft)	143	159	146	m64	379	220	100
Internal Link Dist (ft)		604			665	1175	
Turn Bay Length (ft)	270		270	400			130
Base Capacity (vph)	361	416	428	313	2594	3172	1200
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.38	0.58	0.55	0.15	0.41	0.35	0.52

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBR	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	481	35	620	106	729	514
v/c Ratio	0.69	0.10	0.25	0.07	0.30	0.32
Control Delay	45.9	10.4	7.0	0.1	2.7	1.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	45.9	10.4	7.0	0.1	2.7	1.9
Queue Length 50th (ft)	163	0	76	0	32	29
Queue Length 95th (ft)	207	24	116	0	35	215
Internal Link Dist (ft)			897		665	
Turn Bay Length (ft)	205	205		365		
Base Capacity (vph)	725	365	2537	1599	2537	1599
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.66	0.10	0.24	0.07	0.29	0.32

Intersection Summary

Queuing and Blocking Report

Intersection: 12: Fitzgerald Lane & Fargo Avenue

Movement	WB	NB
Directions Served	L	LR
Maximum Queue (ft)	53	74
Average Queue (ft)	23	38
95th Queue (ft)	51	58
Link Distance (ft)		554
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)	120	
Storage Blk Time (%)		
Queuing Penalty (veh)		

Queuing and Blocking Report

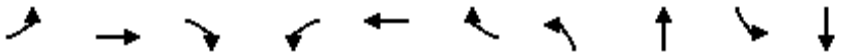
Intersection: 13: Glacier Way & Fargo Avenue

Movement	EB	WB	WB	NB	SB
Directions Served	L	L	R	LTR	LTR
Maximum Queue (ft)	115	28	21	138	66
Average Queue (ft)	35	6	1	41	40
95th Queue (ft)	80	24	7	82	66
Link Distance (ft)			1903	404	399
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)	120	110			
Storage Blk Time (%)	0				
Queuing Penalty (veh)	0				

Queuing and Blocking Report

Intersection: 14: 11th Avenue & Flint Avenue

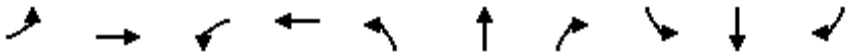
Movement	EB	WB	NB	NB	SB
Directions Served	LTR	LTR	LT	R	LTR
Maximum Queue (ft)	92	99	72	56	98
Average Queue (ft)	47	58	39	17	42
95th Queue (ft)	75	88	59	57	69
Link Distance (ft)	2592	5217	3838		634
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)				190	
Storage Blk Time (%)					
Queuing Penalty (veh)					



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	185	355	113	152	412	69	104	495	65	389
v/c Ratio	0.65	0.77	0.23	0.64	0.53	0.15	0.50	0.44	0.39	0.36
Control Delay	42.0	39.0	3.8	45.9	28.9	0.7	41.8	20.3	41.3	19.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	42.0	39.0	3.8	45.9	28.9	0.7	41.8	20.3	41.3	19.8
Queue Length 50th (ft)	84	159	0	71	93	0	48	89	30	66
Queue Length 95th (ft)	152	252	24	#148	137	1	98	138	70	109
Internal Link Dist (ft)		1897			2561			1065		1348
Turn Bay Length (ft)	180		105	270		150	200		255	
Base Capacity (vph)	340	570	584	264	932	523	237	1134	179	1066
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.54	0.62	0.19	0.58	0.44	0.13	0.44	0.44	0.36	0.36

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	99	113	9	44	71	486	4	1	446	132
v/c Ratio	0.37	0.26	0.04	0.16	0.29	0.44	0.00	0.00	0.51	0.16
Control Delay	41.5	14.0	41.4	38.8	41.8	17.2	0.0	42.0	25.4	3.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	41.5	14.0	41.4	38.8	41.8	17.2	0.0	42.0	25.4	3.2
Queue Length 50th (ft)	51	12	4	22	36	161	0	1	205	0
Queue Length 95th (ft)	113	67	21	60	89	385	0	6	366	28
Internal Link Dist (ft)		5212		1113		1065			1624	
Turn Bay Length (ft)	195		280		430		135	330		135
Base Capacity (vph)	399	602	405	579	386	1097	993	386	999	918
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.25	0.19	0.02	0.08	0.18	0.44	0.00	0.00	0.45	0.14

Intersection Summary

Queuing and Blocking Report

Intersection: 17: 12th Avenue & Project Driveway 1

Movement	WB	WB	SB
Directions Served	L	R	L
Maximum Queue (ft)	94	31	25
Average Queue (ft)	54	4	3
95th Queue (ft)	80	22	15
Link Distance (ft)	402	402	
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			150
Storage Blk Time (%)			
Queuing Penalty (veh)			

Queuing and Blocking Report

Intersection: 18: 12th Avenue & Project Dwy 2

Movement	WB
Directions Served	R
Maximum Queue (ft)	26
Average Queue (ft)	4
95th Queue (ft)	20
Link Distance (ft)	385
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Queuing and Blocking Report

Intersection: 19: Fargo Avenue & Project Dwy 3

Movement	WB	SB
Directions Served	T	R
Maximum Queue (ft)	363	92
Average Queue (ft)	29	33
95th Queue (ft)	174	64
Link Distance (ft)	401	302
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Queuing and Blocking Report

Intersection: 20: Fargo Avenue & Project Dwy 4

Movement	EB	WB	SB	SB
Directions Served	L	TR	L	R
Maximum Queue (ft)	94	22	298	150
Average Queue (ft)	42	1	286	124
95th Queue (ft)	67	7	356	215
Link Distance (ft)		340	283	
Upstream Blk Time (%)			89	
Queuing Penalty (veh)			0	
Storage Bay Dist (ft)	150			100
Storage Blk Time (%)			96	
Queuing Penalty (veh)			71	

Queuing and Blocking Report

Intersection: 21: Project Dwy 5 & Flint Avenue

Movement	NB
Directions Served	R
Maximum Queue (ft)	31
Average Queue (ft)	1
95th Queue (ft)	11
Link Distance (ft)	414
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Queuing and Blocking Report

Intersection: 22: Project Dwy 6 & Flint Avenue

Movement	WB	NB
Directions Served	L	LR
Maximum Queue (ft)	28	53
Average Queue (ft)	3	13
95th Queue (ft)	16	40
Link Distance (ft)		497
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)	150	
Storage Blk Time (%)		
Queuing Penalty (veh)		

Queuing and Blocking Report

Intersection: 23: Fargo Avenue & Project Dwy 7

Movement	SB
Directions Served	R
Maximum Queue (ft)	52
Average Queue (ft)	25
95th Queue (ft)	48
Link Distance (ft)	325
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

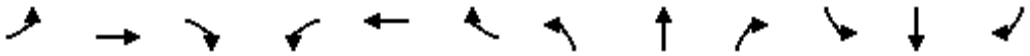


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	129	317	82	479	484	61	41	656	21	590	90
v/c Ratio	0.69	0.64	0.15	2.41	0.94	0.11	0.27	0.52	0.16	1.05	0.15
Control Delay	53.9	31.4	0.6	667.1	56.5	0.4	37.2	14.8	36.1	79.6	0.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	53.9	31.4	0.6	667.1	56.5	0.4	37.2	14.8	36.1	79.6	0.7
Queue Length 50th (ft)	60	133	0	~384	227	0	19	69	10	~324	0
Queue Length 95th (ft)	#143	226	0	#577	#435	0	48	145	31	#534	2
Internal Link Dist (ft)		5249			369			5245		396	
Turn Bay Length (ft)	200		100	340			250		250		130
Base Capacity (vph)	201	512	558	199	516	562	252	1272	249	564	603
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.64	0.62	0.15	2.41	0.94	0.11	0.16	0.52	0.08	1.05	0.15

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

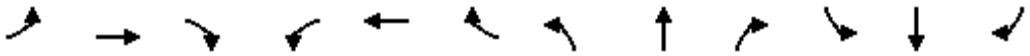
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	130	462	111	254	363	65	89	484	182	113	995	152
v/c Ratio	0.48	0.41	0.19	0.56	0.28	0.10	0.38	0.76	0.41	0.19	0.89	0.26
Control Delay	49.5	28.5	3.0	44.9	23.5	0.3	49.1	45.8	8.2	36.0	44.1	7.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	49.5	28.5	3.0	44.9	23.5	0.3	49.1	45.8	8.2	36.0	44.1	7.1
Queue Length 50th (ft)	40	120	0	77	84	0	27	153	0	30	313	5
Queue Length 95th (ft)	72	177	23	120	129	0	54	205	55	59	#470	52
Internal Link Dist (ft)		582			1436			2149			5245	
Turn Bay Length (ft)	200		125	175		150	250		200	200		150
Base Capacity (vph)	725	1116	598	920	1277	660	725	1094	624	740	1116	586
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.18	0.41	0.19	0.28	0.28	0.10	0.12	0.44	0.29	0.15	0.89	0.26

Intersection Summary

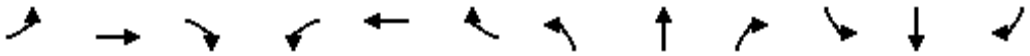
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	98	140	34	80	74	85	34	568	37	165	1246	76
v/c Ratio	0.40	0.37	0.07	0.34	0.26	0.19	0.17	0.52	0.06	0.71	0.72	0.08
Control Delay	26.5	22.6	0.3	26.2	22.8	0.9	25.1	18.6	0.2	45.8	23.8	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	26.5	22.6	0.3	26.2	22.8	0.9	25.1	18.6	0.2	45.8	23.8	0.2
Queue Length 50th (ft)	27	38	0	22	20	0	9	78	0	48	151	0
Queue Length 95th (ft)	69	88	0	61	54	0	34	141	0	#158	#438	0
Internal Link Dist (ft)		783			650			1290			2149	
Turn Bay Length (ft)	185		100	150		100	250		80	255		130
Base Capacity (vph)	609	1022	955	423	818	831	427	1213	687	233	1740	920
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.16	0.14	0.04	0.19	0.09	0.10	0.08	0.47	0.05	0.71	0.72	0.08

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

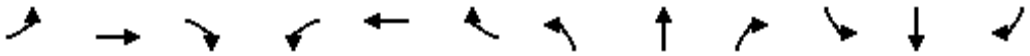


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	25	117	21	14	28	137	15	578	36	408	947	20
v/c Ratio	0.10	0.33	0.05	0.05	0.08	0.27	0.06	0.56	0.06	1.29	0.45	0.02
Control Delay	19.7	19.0	0.2	19.6	16.8	1.3	19.6	15.0	0.2	178.0	10.6	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	19.7	19.0	0.2	19.6	16.8	1.3	19.6	15.0	0.2	178.0	10.6	0.1
Queue Length 50th (ft)	5	21	0	3	5	0	3	51	0	~119	49	0
Queue Length 95th (ft)	26	72	0	18	25	1	18	126	0	#354	#252	0
Internal Link Dist (ft)		902			663			1639			1290	
Turn Bay Length (ft)	80		75	190		140	250		150	250		155
Base Capacity (vph)	827	1325	1177	574	1110	1033	580	1550	822	316	2125	1066
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.03	0.09	0.02	0.02	0.03	0.13	0.03	0.37	0.04	1.29	0.45	0.02

Intersection Summary

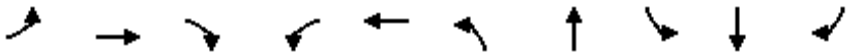
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	201	443	92	153	254	68	100	368	90	190	614	139
v/c Ratio	0.47	0.61	0.23	0.41	0.38	0.18	0.46	0.52	0.23	0.60	0.59	0.26
Control Delay	31.3	27.5	7.2	32.0	25.5	4.1	35.2	26.0	6.8	33.8	23.3	8.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	31.3	27.5	7.2	32.0	25.5	4.1	35.2	26.0	6.8	33.8	23.3	8.9
Queue Length 50th (ft)	35	76	0	26	42	0	34	62	0	63	104	9
Queue Length 95th (ft)	81	154	33	66	93	18	93	126	31	150	194	53
Internal Link Dist (ft)		982			1659			1803			1639	
Turn Bay Length (ft)	265		110	270		170	240		185	240		120
Base Capacity (vph)	1234	1530	734	1234	1515	734	636	1515	741	642	1515	738
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.16	0.29	0.13	0.12	0.17	0.09	0.16	0.24	0.12	0.30	0.41	0.19

Intersection Summary



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	34	66	208	89	173	167	1207	63	634	50
v/c Ratio	0.18	0.33	0.57	0.42	0.39	0.39	0.64	0.32	0.40	0.09
Control Delay	32.7	35.1	12.4	35.9	30.3	32.4	17.5	35.3	18.4	0.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	32.7	35.1	12.4	35.9	30.3	32.4	17.5	35.3	18.4	0.6
Queue Length 50th (ft)	13	27	0	37	35	33	127	25	69	0
Queue Length 95th (ft)	44	73	60	95	74	71	212	67	117	3
Internal Link Dist (ft)		687			449		1175		1803	
Turn Bay Length (ft)	260		180	230		250		180		180
Base Capacity (vph)	668	714	754	640	1307	1392	2364	717	2426	825
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.05	0.09	0.28	0.14	0.13	0.12	0.51	0.09	0.26	0.06

Intersection Summary



Lane Group	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	74	253	255	45	1085	726	299
v/c Ratio	0.25	0.70	0.69	0.35	0.44	0.24	0.28
Control Delay	35.2	28.7	27.8	65.2	15.1	11.4	2.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	35.2	28.7	27.8	65.2	15.1	11.4	2.6
Queue Length 50th (ft)	44	82	80	30	272	79	0
Queue Length 95th (ft)	76	158	151	m59	380	136	46
Internal Link Dist (ft)		604			665	1175	
Turn Bay Length (ft)	270		270	400			130
Base Capacity (vph)	359	412	425	436	2505	3060	1070
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.21	0.61	0.60	0.10	0.43	0.24	0.28

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBR	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	474	14	654	174	492	315
v/c Ratio	0.67	0.04	0.27	0.11	0.21	0.20
Control Delay	41.1	0.8	7.1	0.1	4.1	1.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	41.1	0.8	7.1	0.1	4.1	1.1
Queue Length 50th (ft)	144	0	77	0	22	4
Queue Length 95th (ft)	186	2	118	0	33	0
Internal Link Dist (ft)			897		665	
Turn Bay Length (ft)	205	205		365		
Base Capacity (vph)	734	364	2496	1583	2447	1568
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.65	0.04	0.26	0.11	0.20	0.20

Intersection Summary

Intersection: 12: Fitzgerald Lane & Fargo Avenue

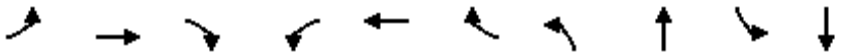
Movement	EB	WB	WB	WB	NB
Directions Served	TR	L	T	T	LR
Maximum Queue (ft)	22	151	216	223	569
Average Queue (ft)	1	97	131	65	409
95th Queue (ft)	8	196	242	202	728
Link Distance (ft)	340		152	152	554
Upstream Blk Time (%)		1	41	8	59
Queuing Penalty (veh)		0	222	41	0
Storage Bay Dist (ft)		120			
Storage Blk Time (%)			60		
Queuing Penalty (veh)			92		

Intersection: 13: Glacier Way & Fargo Avenue

Movement	EB	EB	WB	WB	WB	NB	SB
Directions Served	L	TR	L	T	R	LTR	LTR
Maximum Queue (ft)	74	22	279	1665	1345	330	414
Average Queue (ft)	27	1	12	388	175	103	153
95th Queue (ft)	66	10	97	1430	777	240	394
Link Distance (ft)		592		1903	1903	404	399
Upstream Blk Time (%)							21
Queuing Penalty (veh)							0
Storage Bay Dist (ft)	120		110				
Storage Blk Time (%)				21			
Queuing Penalty (veh)				3			

Intersection: 14: 11th Avenue & Flint Avenue

Movement	EB	WB	NB	NB	SB
Directions Served	LTR	LTR	LT	R	LTR
Maximum Queue (ft)	324	198	138	206	164
Average Queue (ft)	116	92	57	64	67
95th Queue (ft)	228	152	103	142	109
Link Distance (ft)	2592	5217	3838		634
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)				190	
Storage Blk Time (%)				0	
Queuing Penalty (veh)				1	



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	211	370	140	216	562	58	100	328	86	590
v/c Ratio	0.81	0.79	0.28	1.07	0.72	0.13	0.50	0.28	0.53	0.52
Control Delay	57.6	40.2	5.9	120.5	33.7	0.6	42.3	18.9	47.7	20.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	57.6	40.2	5.9	120.5	33.7	0.6	42.3	18.9	47.7	20.1
Queue Length 50th (ft)	104	168	0	~129	135	0	47	58	42	104
Queue Length 95th (ft)	#218	#289	39	#260	190	0	95	92	#94	156
Internal Link Dist (ft)		1897			2561			1065		1348
Turn Bay Length (ft)	180		105	270		150	200		255	
Base Capacity (vph)	273	538	559	202	889	501	228	1171	171	1137
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.77	0.69	0.25	1.07	0.63	0.12	0.44	0.28	0.50	0.52

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	236	199	5	46	80	707	14	2	583	116
v/c Ratio	0.81	0.45	0.03	0.21	0.41	0.75	0.02	0.01	0.83	0.16
Control Delay	61.9	19.6	44.2	40.2	48.7	26.7	0.0	44.0	39.8	2.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	61.9	19.6	44.2	40.2	48.7	26.7	0.0	44.0	39.8	2.2
Queue Length 50th (ft)	147	44	3	25	49	332	0	1	346	0
Queue Length 95th (ft)	#321	133	15	61	99	#748	0	9	#634	19
Internal Link Dist (ft)		5212		1113		1065			1624	
Turn Bay Length (ft)	195		280		430		135	330		135
Base Capacity (vph)	293	499	271	422	298	939	910	303	703	744
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.81	0.40	0.02	0.11	0.27	0.75	0.02	0.01	0.83	0.16

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Intersection: 17: 12th Avenue & Project Driveway 1

Movement	WB	WB	NB	SB
Directions Served	L	R	TR	L
Maximum Queue (ft)	210	31	21	28
Average Queue (ft)	96	12	1	11
95th Queue (ft)	170	36	7	31
Link Distance (ft)	402	402	2132	
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				150
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 18: 12th Avenue & Project Dwy 2

Movement	WB
Directions Served	R
Maximum Queue (ft)	26
Average Queue (ft)	2
95th Queue (ft)	12
Link Distance (ft)	385
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 19: Fargo Avenue & Project Dwy 3

Movement	WB	WB	SB
Directions Served	T	TR	R
Maximum Queue (ft)	434	436	312
Average Queue (ft)	409	212	279
95th Queue (ft)	422	486	371
Link Distance (ft)	401	401	302
Upstream Blk Time (%)	51	5	82
Queuing Penalty (veh)	250	24	0
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 20: Fargo Avenue & Project Dwy 4

Movement	EB	EB	WB	WB	SB	SB
Directions Served	L	T	T	TR	L	R
Maximum Queue (ft)	204	135	358	394	298	150
Average Queue (ft)	65	5	324	199	289	110
95th Queue (ft)	149	46	417	426	307	211
Link Distance (ft)		401	340	340	283	
Upstream Blk Time (%)			47	8	99	
Queuing Penalty (veh)			237	40	0	
Storage Bay Dist (ft)	150					100
Storage Blk Time (%)	3	0			68	52
Queuing Penalty (veh)	15	0			75	131

Intersection: 21: Project Dwy 5 & Flint Avenue

Movement	NB
Directions Served	R
Maximum Queue (ft)	31
Average Queue (ft)	5
95th Queue (ft)	22
Link Distance (ft)	414
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 22: Project Dwy 6 & Flint Avenue

Movement	WB	NB
Directions Served	L	LR
Maximum Queue (ft)	31	74
Average Queue (ft)	5	26
95th Queue (ft)	22	51
Link Distance (ft)		497
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)	150	
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 23: Fargo Avenue & Project Dwy 7

Movement	WB	WB	B39	SB
Directions Served	T	TR	T	R
Maximum Queue (ft)	1085	1085	606	340
Average Queue (ft)	673	605	230	198
95th Queue (ft)	1478	1388	691	399
Link Distance (ft)	1013	1013	592	325
Upstream Blk Time (%)	34	4	9	28
Queuing Penalty (veh)	178	18	88	0
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

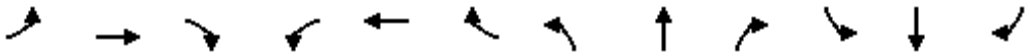


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	61	335	61	372	334	29	82	1160	28	402	61
v/c Ratio	0.36	0.80	0.12	1.46	0.52	0.04	0.45	0.86	0.20	0.78	0.11
Control Delay	38.9	42.3	0.5	255.8	26.6	0.1	40.7	26.9	37.3	39.6	0.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	38.9	42.3	0.5	255.8	26.6	0.1	40.7	26.9	37.3	39.6	0.4
Queue Length 50th (ft)	28	146	0	~251	136	0	37	176	13	178	0
Queue Length 95th (ft)	64	#266	0	#438	#247	0	80	#399	37	#350	0
Internal Link Dist (ft)		5249			369			5245		396	
Turn Bay Length (ft)	200		100	340			250		250		130
Base Capacity (vph)	255	525	569	255	637	654	253	1346	253	519	564
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.24	0.64	0.11	1.46	0.52	0.04	0.32	0.86	0.11	0.77	0.11

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

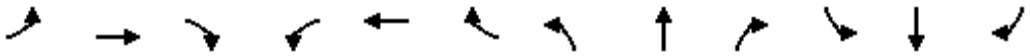
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	146	336	80	288	368	101	141	1297	295	113	758	99
v/c Ratio	0.45	0.62	0.22	0.59	0.52	0.25	0.44	0.95	0.42	0.39	0.57	0.15
Control Delay	39.8	37.4	2.8	37.9	31.5	8.0	39.9	41.7	12.1	39.9	23.1	2.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	39.8	37.4	2.8	37.9	31.5	8.0	39.9	41.7	12.1	39.9	23.1	2.4
Queue Length 50th (ft)	35	82	0	69	85	0	34	320	49	27	153	0
Queue Length 95th (ft)	70	136	10	118	137	39	68	#565	134	57	254	18
Internal Link Dist (ft)		582			1436			2149			5245	
Turn Bay Length (ft)	200		125	175		150	250		200	200		150
Base Capacity (vph)	898	1355	690	1117	1581	764	898	1363	700	898	1355	690
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.16	0.25	0.12	0.26	0.23	0.13	0.16	0.95	0.42	0.13	0.56	0.14

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

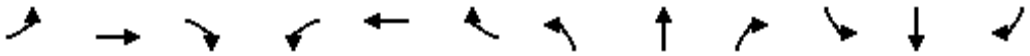


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	62	74	36	66	108	129	87	1361	107	78	1016	53
v/c Ratio	0.25	0.25	0.08	0.27	0.36	0.27	0.34	0.83	0.13	0.33	0.64	0.06
Control Delay	23.3	21.4	0.4	23.4	22.9	1.4	23.8	30.0	0.6	25.3	23.6	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	23.3	21.4	0.4	23.4	22.9	1.4	23.8	30.0	0.6	25.3	23.6	0.1
Queue Length 50th (ft)	17	20	0	18	29	0	24	~286	0	22	~156	0
Queue Length 95th (ft)	47	51	0	50	69	0	60	#454	4	59	#346	0
Internal Link Dist (ft)		783			650			1290			2149	
Turn Bay Length (ft)	185		100	150		100	250		80	255		130
Base Capacity (vph)	1048	1150	1057	524	597	687	475	1631	840	259	1585	855
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.06	0.06	0.03	0.13	0.18	0.19	0.18	0.83	0.13	0.30	0.64	0.06

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

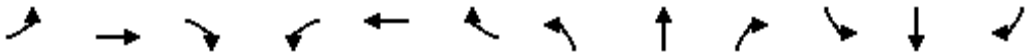
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	18	37	35	29	91	329	20	1171	15	149	976	13
v/c Ratio	0.09	0.13	0.08	0.13	0.31	0.63	0.10	0.94	0.02	0.60	0.50	0.01
Control Delay	21.0	17.9	0.4	21.2	20.1	8.8	21.1	32.8	0.1	34.0	11.8	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	21.0	17.9	0.4	21.2	20.1	8.8	21.1	32.8	0.1	34.0	11.8	0.0
Queue Length 50th (ft)	4	8	0	6	19	0	4	126	0	33	48	0
Queue Length 95th (ft)	22	30	0	29	58	54	23	#372	0	#132	#283	0
Internal Link Dist (ft)		902			663			1639			1290	
Turn Bay Length (ft)	80		75	190		140	250		150	250		155
Base Capacity (vph)	672	1105	1024	462	884	927	457	1247	691	249	1960	995
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.03	0.03	0.03	0.06	0.10	0.35	0.04	0.94	0.02	0.60	0.50	0.01

Intersection Summary

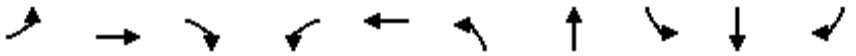
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	386	405	168	348	582	154	236	635	113	207	756	158
v/c Ratio	0.72	0.51	0.34	0.70	0.77	0.33	0.78	0.67	0.22	0.74	0.84	0.33
Control Delay	45.8	34.2	7.4	46.3	42.0	7.9	55.6	35.4	7.8	54.6	43.1	15.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	45.8	34.2	7.4	46.3	42.0	7.9	55.6	35.4	7.8	54.6	43.1	15.6
Queue Length 50th (ft)	113	110	0	102	170	0	135	171	0	118	218	26
Queue Length 95th (ft)	179	176	53	164	261	52	242	287	45	213	#387	91
Internal Link Dist (ft)		982			1659			1803			1639	
Turn Bay Length (ft)	265		110	270		170	240		185	240		120
Base Capacity (vph)	841	1041	585	841	1032	571	434	1057	552	434	1032	532
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.46	0.39	0.29	0.41	0.56	0.27	0.54	0.60	0.20	0.48	0.73	0.30

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	95	100	234	272	474	407	1097	83	1078	77
v/c Ratio	0.51	0.52	0.61	0.74	0.64	0.69	0.57	0.48	0.76	0.15
Control Delay	52.9	52.6	13.3	49.4	37.9	44.7	25.0	53.4	36.2	3.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	52.9	52.6	13.3	49.4	37.9	44.7	25.0	53.4	36.2	3.6
Queue Length 50th (ft)	60	63	0	170	141	124	189	50	219	0
Queue Length 95th (ft)	123	128	71	#335	229	192	281	107	321	20
Internal Link Dist (ft)		687			449		1175		1803	
Turn Bay Length (ft)	260		180	230		250		180		180
Base Capacity (vph)	474	492	615	454	919	959	1920	494	1704	600
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.20	0.20	0.38	0.60	0.52	0.42	0.57	0.17	0.63	0.13

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	176	270	270	59	1277	1358	677
v/c Ratio	0.54	0.73	0.71	0.44	0.52	0.46	0.59
Control Delay	44.6	36.2	34.8	65.3	12.7	15.8	7.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	44.6	36.2	34.8	65.3	12.7	15.8	7.2
Queue Length 50th (ft)	118	121	115	42	235	198	58
Queue Length 95th (ft)	173	204	193	m77	464	305	218
Internal Link Dist (ft)		604			665	1175	
Turn Bay Length (ft)	270		270	400			130
Base Capacity (vph)	380	411	422	313	2521	2982	1138
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.46	0.66	0.64	0.19	0.51	0.46	0.59

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBR	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	520	37	787	176	972	548
v/c Ratio	0.66	0.09	0.33	0.11	0.41	0.34
Control Delay	42.9	10.5	8.6	0.1	3.6	1.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	42.9	10.5	8.6	0.1	3.6	1.7
Queue Length 50th (ft)	172	0	114	0	46	20
Queue Length 95th (ft)	223	26	157	0	44	59
Internal Link Dist (ft)			897		665	
Turn Bay Length (ft)	205	205		365		
Base Capacity (vph)	788	393	2638	1599	2638	1599
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.66	0.09	0.30	0.11	0.37	0.34

Intersection Summary

Intersection: 12: Fitzgerald Lane & Fargo Avenue

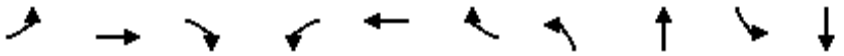
Movement	EB	WB	WB	NB
Directions Served	TR	L	T	LR
Maximum Queue (ft)	22	75	89	116
Average Queue (ft)	1	30	0	55
95th Queue (ft)	7	58	0	92
Link Distance (ft)	340		152	554
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)		120		
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 13: Glacier Way & Fargo Avenue

Movement	EB	WB	NB	SB
Directions Served	L	L	LTR	LTR
Maximum Queue (ft)	54	31	74	172
Average Queue (ft)	30	10	30	45
95th Queue (ft)	53	32	53	100
Link Distance (ft)			404	399
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	120	110		
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 14: 11th Avenue & Flint Avenue

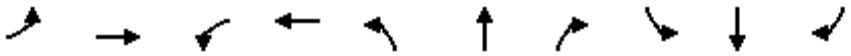
Movement	EB	WB	NB	NB	SB
Directions Served	LTR	LTR	LT	R	LTR
Maximum Queue (ft)	94	128	74	82	77
Average Queue (ft)	46	61	42	18	46
95th Queue (ft)	72	95	64	57	69
Link Distance (ft)	2592	5217	3838		634
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)				190	
Storage Blk Time (%)					
Queuing Penalty (veh)					



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	195	358	123	155	437	72	127	544	67	409
v/c Ratio	0.67	0.78	0.25	0.65	0.57	0.16	0.59	0.48	0.40	0.39
Control Delay	42.9	39.3	4.7	46.4	29.7	0.9	45.5	21.1	41.8	20.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	42.9	39.3	4.7	46.4	29.7	0.9	45.5	21.1	41.8	20.1
Queue Length 50th (ft)	89	161	0	73	101	0	60	101	31	70
Queue Length 95th (ft)	#171	254	30	#153	146	2	#127	153	71	114
Internal Link Dist (ft)		1897			2561			1065		1348
Turn Bay Length (ft)	180		105	270		150	200		255	
Base Capacity (vph)	339	568	583	263	929	521	236	1132	178	1058
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.58	0.63	0.21	0.59	0.47	0.14	0.54	0.48	0.38	0.39

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	104	152	11	46	102	649	5	1	687	143
v/c Ratio	0.46	0.36	0.06	0.20	0.47	0.64	0.01	0.01	0.85	0.19
Control Delay	47.2	13.0	44.1	42.3	47.9	20.9	0.0	44.0	39.4	4.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	47.2	13.0	44.1	42.3	47.9	20.9	0.0	44.0	39.4	4.1
Queue Length 50th (ft)	60	15	6	26	59	249	0	1	395	0
Queue Length 95th (ft)	121	77	26	65	119	#632	0	7	#763	36
Internal Link Dist (ft)		5212		1113		1065			1624	
Turn Bay Length (ft)	195		280		430		135	330		135
Base Capacity (vph)	317	529	322	461	307	1021	935	307	804	769
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.33	0.29	0.03	0.10	0.33	0.64	0.01	0.00	0.85	0.19

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Intersection: 17: 12th Avenue & Project Driveway 1

Movement	WB	WB	SB
Directions Served	L	R	L
Maximum Queue (ft)	251	31	26
Average Queue (ft)	65	3	4
95th Queue (ft)	147	19	18
Link Distance (ft)	402	402	
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			150
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 18: 12th Avenue & Project Dwy 2

Movement	WB
Directions Served	R
Maximum Queue (ft)	26
Average Queue (ft)	1
95th Queue (ft)	9
Link Distance (ft)	385
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 19: Fargo Avenue & Project Dwy 3

Movement	WB	SB
Directions Served	T	R
Maximum Queue (ft)	378	181
Average Queue (ft)	108	67
95th Queue (ft)	284	158
Link Distance (ft)	401	302
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 20: Fargo Avenue & Project Dwy 4

Movement	EB	WB	SB	SB
Directions Served	L	TR	L	R
Maximum Queue (ft)	94	22	298	150
Average Queue (ft)	49	1	267	87
95th Queue (ft)	80	7	381	200
Link Distance (ft)		340	283	
Upstream Blk Time (%)			83	
Queuing Penalty (veh)			0	
Storage Bay Dist (ft)	150			100
Storage Blk Time (%)			90	
Queuing Penalty (veh)			67	

Intersection: 21: Project Dwy 5 & Flint Avenue

Movement	NB
Directions Served	R
Maximum Queue (ft)	29
Average Queue (ft)	2
95th Queue (ft)	14
Link Distance (ft)	414
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 22: Project Dwy 6 & Flint Avenue

Movement	WB	NB
Directions Served	L	LR
Maximum Queue (ft)	28	31
Average Queue (ft)	5	14
95th Queue (ft)	23	38
Link Distance (ft)		497
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)	150	
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 23: Fargo Avenue & Project Dwy 7

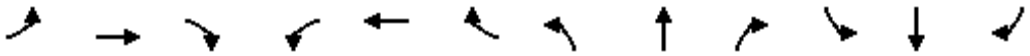
Movement	SB
Directions Served	R
Maximum Queue (ft)	55
Average Queue (ft)	24
95th Queue (ft)	49
Link Distance (ft)	325
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	108	270	25	458	464	60	18	605	18	558	80
v/c Ratio	0.67	0.82	0.07	0.87	0.64	0.09	0.20	0.49	0.21	0.90	0.12
Control Delay	69.9	64.7	0.3	55.2	33.6	0.3	59.5	21.6	59.7	52.6	0.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	69.9	64.7	0.3	55.2	33.6	0.3	59.5	21.6	59.7	52.6	0.4
Queue Length 50th (ft)	71	175	0	284	246	0	12	118	12	346	0
Queue Length 95th (ft)	#161	#362	0	#552	435	2	39	193	39	#599	0
Internal Link Dist (ft)		5249			369			5245		396	
Turn Bay Length (ft)	200		100	340			250		250		130
Base Capacity (vph)	195	360	402	580	776	727	88	1474	87	768	756
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.55	0.75	0.06	0.79	0.60	0.08	0.20	0.41	0.21	0.73	0.11

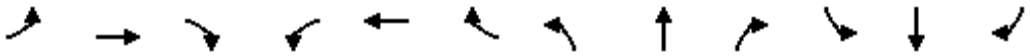
Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	129	490	94	262	390	66	87	510	195	113	1068	170
v/c Ratio	0.42	0.71	0.22	0.56	0.47	0.14	0.32	0.54	0.34	0.17	0.78	0.25
Control Delay	41.1	37.0	2.9	38.8	28.6	0.6	41.2	30.9	6.3	29.3	29.5	7.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	41.1	37.0	2.9	38.8	28.6	0.6	41.2	30.9	6.3	29.3	29.5	7.1
Queue Length 50th (ft)	32	124	0	65	90	0	22	129	0	23	254	10
Queue Length 95th (ft)	57	162	4	96	121	0	42	165	34	47	336	42
Internal Link Dist (ft)		582			1436			2149			5245	
Turn Bay Length (ft)	200		125	175		150	250		200	200		150
Base Capacity (vph)	885	1362	698	1123	1558	775	885	1336	730	908	1362	684
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.15	0.36	0.13	0.23	0.25	0.09	0.10	0.38	0.27	0.12	0.78	0.25

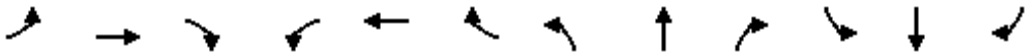
Intersection Summary



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	101	148	30	82	80	89	29	560	36	175	1208	79
v/c Ratio	0.40	0.38	0.06	0.34	0.27	0.19	0.14	0.54	0.06	0.73	0.70	0.09
Control Delay	26.4	22.5	0.2	26.1	22.7	0.9	25.1	19.1	0.2	47.2	23.3	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	26.4	22.5	0.2	26.1	22.7	0.9	25.1	19.1	0.2	47.2	23.3	0.2
Queue Length 50th (ft)	28	40	0	23	21	0	8	77	0	51	145	0
Queue Length 95th (ft)	66	86	0	57	53	0	29	129	0	#154	#383	0
Internal Link Dist (ft)		783			650			1290			2149	
Turn Bay Length (ft)	185		100	150		100	250		80	255		130
Base Capacity (vph)	631	1059	982	438	847	851	443	1184	676	241	1735	919
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.16	0.14	0.03	0.19	0.09	0.10	0.07	0.47	0.05	0.73	0.70	0.09

Intersection Summary

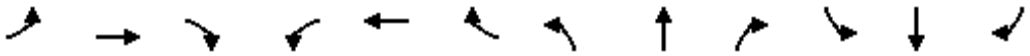
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	25	121	21	12	25	124	14	557	33	401	894	18
v/c Ratio	0.12	0.37	0.05	0.06	0.09	0.31	0.07	0.63	0.06	0.71	0.37	0.02
Control Delay	30.6	28.7	0.2	30.1	28.1	3.0	30.1	23.4	0.2	24.9	6.9	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	30.6	28.7	0.2	30.1	28.1	3.0	30.1	23.4	0.2	24.9	6.9	0.0
Queue Length 50th (ft)	7	31	0	3	6	0	4	73	0	98	50	0
Queue Length 95th (ft)	32	#101	0	20	30	3	22	164	0	218	160	0
Internal Link Dist (ft)		902			663			1639			1290	
Turn Bay Length (ft)	80		75	190		140	250		150	250		155
Base Capacity (vph)	210	399	497	213	362	466	215	1594	839	1079	2781	1289
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.12	0.30	0.04	0.06	0.07	0.27	0.07	0.35	0.04	0.37	0.32	0.01

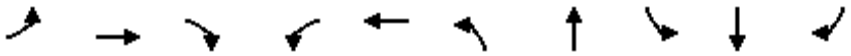
Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	165	363	71	145	188	62	71	332	87	180	529	108
v/c Ratio	0.40	0.54	0.19	0.37	0.29	0.17	0.35	0.52	0.24	0.57	0.47	0.19
Control Delay	27.7	24.7	4.6	28.0	22.5	3.5	30.6	25.0	6.8	29.8	18.9	6.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	27.7	24.7	4.6	28.0	22.5	3.5	30.6	25.0	6.8	29.8	18.9	6.6
Queue Length 50th (ft)	25	55	0	22	27	0	21	50	0	53	77	2
Queue Length 95th (ft)	62	115	20	56	64	15	65	107	29	127	150	36
Internal Link Dist (ft)		982			1659			1803			1639	
Turn Bay Length (ft)	265		110	270		170	240		185	240		120
Base Capacity (vph)	1360	1686	799	1360	1669	799	701	1669	806	708	1669	799
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.12	0.22	0.09	0.11	0.11	0.08	0.10	0.20	0.11	0.25	0.32	0.14

Intersection Summary



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	32	62	180	78	156	164	1179	58	593	48
v/c Ratio	0.16	0.30	0.53	0.37	0.36	0.37	0.60	0.28	0.41	0.09
Control Delay	31.5	33.3	12.0	33.7	28.6	30.5	15.6	33.3	18.5	0.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	31.5	33.3	12.0	33.7	28.6	30.5	15.6	33.3	18.5	0.5
Queue Length 50th (ft)	12	24	0	31	29	30	119	22	62	0
Queue Length 95th (ft)	42	66	52	82	65	67	189	61	104	1
Internal Link Dist (ft)		687			449		1175		1803	
Turn Bay Length (ft)	260		180	230		250		180		180
Base Capacity (vph)	713	763	775	683	1401	1486	2514	766	2591	874
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.04	0.08	0.23	0.11	0.11	0.11	0.47	0.08	0.23	0.05

Intersection Summary



Lane Group	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	63	239	241	40	1021	621	271
v/c Ratio	0.24	0.68	0.67	0.32	0.41	0.20	0.25
Control Delay	36.9	25.4	24.8	62.5	12.0	10.0	2.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	36.9	25.4	24.8	62.5	12.0	10.0	2.4
Queue Length 50th (ft)	37	60	58	26	244	61	0
Queue Length 95th (ft)	70	137	131	m53	337	108	41
Internal Link Dist (ft)		604			665	1175	
Turn Bay Length (ft)	270		460	400			130
Base Capacity (vph)	346	416	428	436	2543	3166	1086
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.18	0.57	0.56	0.09	0.40	0.20	0.25

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



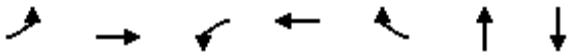
Lane Group	EBL	EBR	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	451	13	621	152	421	278
v/c Ratio	0.65	0.04	0.25	0.10	0.18	0.18
Control Delay	41.2	0.2	6.8	0.1	3.7	0.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	41.2	0.2	6.8	0.1	3.7	0.9
Queue Length 50th (ft)	137	0	71	0	16	0
Queue Length 95th (ft)	176	1	108	0	24	28
Internal Link Dist (ft)			897		665	
Turn Bay Length (ft)	1000	860		365		
Base Capacity (vph)	735	364	2481	1583	2433	1568
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.61	0.04	0.25	0.10	0.17	0.18

Intersection Summary

Queuing and Blocking Report

Intersection: 12: Fitzgerald Lane & Fargo Avenue

Movement	EB	WB	WB	NB
Directions Served	TR	L	T	LR
Maximum Queue (ft)	29	101	84	441
Average Queue (ft)	3	39	3	135
95th Queue (ft)	15	79	29	330
Link Distance (ft)	340		152	554
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)		120		
Storage Blk Time (%)		0		
Queuing Penalty (veh)		0		



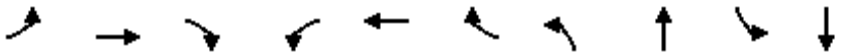
Lane Group	EBL	EBT	WBL	WBT	WBR	NBT	SBT
Lane Group Flow (vph)	115	760	18	965	28	113	244
v/c Ratio	0.58	0.33	0.14	0.88	0.03	0.83	0.56
Control Delay	51.2	6.9	42.7	27.4	0.0	72.3	14.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	51.2	6.9	42.7	27.4	0.0	72.3	14.0
Queue Length 50th (ft)	60	58	9	412	0	49	22
Queue Length 95th (ft)	#116	121	28	547	0	#106	64
Internal Link Dist (ft)		569		1897		370	367
Turn Bay Length (ft)	120		110		110		
Base Capacity (vph)	213	2567	125	1254	1101	199	559
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.54	0.30	0.14	0.77	0.03	0.57	0.44

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBT	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	403	400	235	255	296
v/c Ratio	0.54	0.61	0.46	0.36	0.53
Control Delay	11.9	14.1	15.1	3.8	15.6
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	11.9	14.1	15.1	3.8	15.6
Queue Length 50th (ft)	55	58	37	0	47
Queue Length 95th (ft)	133	144	102	30	124
Internal Link Dist (ft)	2568	5212	3820		588
Turn Bay Length (ft)				190	
Base Capacity (vph)	1659	1468	1287	1386	1416
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.24	0.27	0.18	0.18	0.21

Intersection Summary



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	217	354	143	232	579	60	106	338	92	624
v/c Ratio	0.75	0.76	0.28	0.92	0.72	0.13	0.52	0.31	0.56	0.60
Control Delay	48.5	38.5	6.2	77.8	33.2	0.6	43.1	20.6	49.4	23.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	48.5	38.5	6.2	77.8	33.2	0.6	43.1	20.6	49.4	23.2
Queue Length 50th (ft)	104	159	0	118	140	0	50	63	45	121
Queue Length 95th (ft)	#179	231	34	#232	180	0	92	91	#91	160
Internal Link Dist (ft)		1897			2561			1065		1348
Turn Bay Length (ft)	180		105	270		150	200		255	
Base Capacity (vph)	322	541	561	251	894	503	229	1083	172	1047
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.67	0.65	0.25	0.92	0.65	0.12	0.46	0.31	0.53	0.60

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	237	197	5	50	61	494	11	2	500	118
v/c Ratio	0.68	0.44	0.03	0.27	0.30	0.57	0.01	0.01	0.78	0.16
Control Delay	43.1	18.8	40.0	41.7	43.9	23.0	0.0	40.0	37.8	0.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	43.1	18.8	40.0	41.7	43.9	23.0	0.0	40.0	37.8	0.6
Queue Length 50th (ft)	130	45	3	25	33	191	0	1	273	0
Queue Length 95th (ft)	190	110	13	59	71	#420	0	8	#451	0
Internal Link Dist (ft)		5212		1113		1065			1624	
Turn Bay Length (ft)	210		280		430		135	330		135
Base Capacity (vph)	991	543	680	187	200	871	878	203	642	721
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.24	0.36	0.01	0.27	0.30	0.57	0.01	0.01	0.78	0.16

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	WBL	WBR	NBT	SBL	SBT
Lane Group Flow (vph)	303	20	452	30	354
v/c Ratio	0.50	0.04	0.32	0.08	0.48
Control Delay	12.6	4.8	6.0	8.0	10.9
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	12.6	4.8	6.0	8.0	10.9
Queue Length 50th (ft)	38	0	17	3	43
Queue Length 95th (ft)	105	9	47	15	113
Internal Link Dist (ft)	368		2114		2546
Turn Bay Length (ft)				150	
Base Capacity (vph)	1741	1558	3407	933	1863
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.17	0.01	0.13	0.03	0.19

Intersection Summary

Queuing and Blocking Report

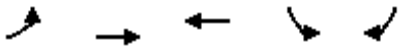
Intersection: 18: 12th Avenue & Project Dwy 2

Movement	WB	NB
Directions Served	R	TR
Maximum Queue (ft)	24	56
Average Queue (ft)	3	2
95th Queue (ft)	14	19
Link Distance (ft)	385	402
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Queuing and Blocking Report

Intersection: 19: Fargo Avenue & Project Dwy 3

Movement	WB	SB
Directions Served	T	R
Maximum Queue (ft)	31	94
Average Queue (ft)	1	35
95th Queue (ft)	11	67
Link Distance (ft)	401	302
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		



Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	133	408	1034	279	117
v/c Ratio	0.63	0.43	0.57	0.55	0.22
Control Delay	24.5	9.0	9.1	21.8	6.7
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	24.5	9.0	9.1	21.8	6.7
Queue Length 50th (ft)	21	55	77	55	2
Queue Length 95th (ft)	99	150	181	195	41
Internal Link Dist (ft)		383	328	249	
Turn Bay Length (ft)	150				100
Base Capacity (vph)	393	1776	3346	1179	1092
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.34	0.23	0.31	0.24	0.11

Intersection Summary

Queuing and Blocking Report

Intersection: 21: Project Dwy 5 & Flint Avenue

Movement	NB
Directions Served	R
Maximum Queue (ft)	31
Average Queue (ft)	6
95th Queue (ft)	26
Link Distance (ft)	414
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Queuing and Blocking Report

Intersection: 22: Project Dwy 6 & Flint Avenue

Movement	WB	NB
Directions Served	L	LR
Maximum Queue (ft)	31	31
Average Queue (ft)	13	23
95th Queue (ft)	36	43
Link Distance (ft)		497
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)	150	
Storage Blk Time (%)		
Queuing Penalty (veh)		

Queuing and Blocking Report

Intersection: 23: Fargo Avenue & Project Dwy 7

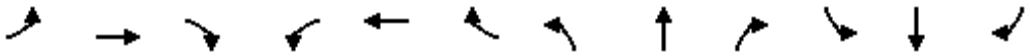
Movement	SB
Directions Served	R
Maximum Queue (ft)	70
Average Queue (ft)	26
95th Queue (ft)	51
Link Distance (ft)	325
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	47	272	21	357	234	29	19	1037	27	332	38
v/c Ratio	0.36	0.75	0.05	0.81	0.29	0.04	0.17	0.84	0.26	0.52	0.06
Control Delay	57.7	53.0	0.2	52.3	23.9	0.1	55.8	31.2	59.8	30.8	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	57.7	53.0	0.2	52.3	23.9	0.1	55.8	31.2	59.8	30.8	0.2
Queue Length 50th (ft)	31	178	0	228	113	0	13	278	18	159	0
Queue Length 95th (ft)	76	294	0	#425	199	0	40	391	53	304	0
Internal Link Dist (ft)		5249			369			5245		396	
Turn Bay Length (ft)	200		100	340			250		250		130
Base Capacity (vph)	186	533	567	579	947	862	163	1693	102	852	811
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.25	0.51	0.04	0.62	0.25	0.03	0.12	0.61	0.26	0.39	0.05

Intersection Summary

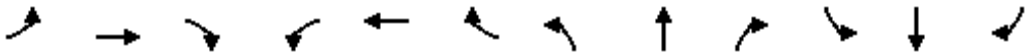
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	126	299	59	221	319	53	108	1132	265	62	636	79
v/c Ratio	0.39	0.57	0.17	0.50	0.49	0.14	0.35	0.76	0.35	0.23	0.44	0.11
Control Delay	36.6	34.5	1.0	35.0	30.3	2.6	36.6	24.3	9.2	36.3	18.7	1.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	36.6	34.5	1.0	35.0	30.3	2.6	36.6	24.3	9.2	36.3	18.7	1.2
Queue Length 50th (ft)	28	68	0	50	70	0	24	232	32	14	111	0
Queue Length 95th (ft)	57	113	0	88	114	10	51	#404	98	34	187	8
Internal Link Dist (ft)		582			1436			2149			5245	
Turn Bay Length (ft)	200		125	175		150	250		200	200		150
Base Capacity (vph)	988	1490	745	1228	1738	827	988	1490	755	988	1490	745
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.13	0.20	0.08	0.18	0.18	0.06	0.11	0.76	0.35	0.06	0.43	0.11

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

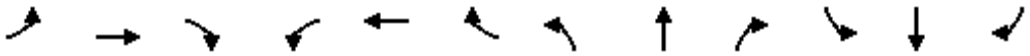


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	53	70	21	60	105	133	59	1261	107	80	868	47
v/c Ratio	0.23	0.25	0.05	0.25	0.29	0.26	0.25	0.75	0.12	0.35	0.52	0.05
Control Delay	23.7	21.9	0.2	23.8	20.5	1.2	23.8	25.3	0.6	25.8	17.9	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	23.7	21.9	0.2	23.8	20.5	1.2	23.8	25.3	0.6	25.8	17.9	0.1
Queue Length 50th (ft)	15	19	0	17	22	0	16	~242	0	22	117	0
Queue Length 95th (ft)	41	48	0	45	66	0	45	#387	2	58	#248	0
Internal Link Dist (ft)		783			650			1290			2149	
Turn Bay Length (ft)	185		100	150		100	250		80	255		130
Base Capacity (vph)	685	1127	1041	471	901	904	466	1680	860	254	1674	888
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.08	0.06	0.02	0.13	0.12	0.15	0.13	0.75	0.12	0.31	0.52	0.05

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

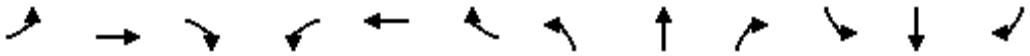
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	14	17	29	20	73	260	18	1027	7	92	805	10
v/c Ratio	0.07	0.06	0.07	0.09	0.27	0.57	0.08	0.71	0.01	0.39	0.41	0.01
Control Delay	20.1	17.6	0.3	20.3	19.9	8.9	20.3	18.2	0.0	23.8	9.0	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	20.1	17.6	0.3	20.3	19.9	8.9	20.3	18.2	0.0	23.8	9.0	0.0
Queue Length 50th (ft)	3	3	0	4	15	0	4	102	0	19	35	0
Queue Length 95th (ft)	18	18	0	22	49	50	21	#293	0	65	#177	0
Internal Link Dist (ft)		902			663			1639			1290	
Turn Bay Length (ft)	80		75	190		140	250		150	250		155
Base Capacity (vph)	685	1126	1041	471	901	903	466	1448	769	254	1974	1000
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.02	0.02	0.03	0.04	0.08	0.29	0.04	0.71	0.01	0.36	0.41	0.01

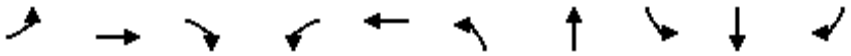
Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	313	288	135	323	391	144	155	546	90	163	633	101
v/c Ratio	0.60	0.45	0.34	0.60	0.61	0.35	0.59	0.63	0.19	0.60	0.72	0.21
Control Delay	34.9	30.2	8.8	34.8	32.5	8.7	40.5	28.6	6.4	40.1	30.3	7.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	34.9	30.2	8.8	34.8	32.5	8.7	40.5	28.6	6.4	40.1	30.3	7.5
Queue Length 50th (ft)	63	56	0	64	79	0	61	106	0	64	125	1
Queue Length 95th (ft)	132	120	48	136	159	49	148	207	32	153	240	39
Internal Link Dist (ft)		982			1659			1803			1639	
Turn Bay Length (ft)	265		110	270		170	240		185	240		120
Base Capacity (vph)	1101	1351	688	1101	1351	694	567	1351	665	567	1351	665
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.28	0.21	0.20	0.29	0.29	0.21	0.27	0.40	0.14	0.29	0.47	0.15

Intersection Summary



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	89	91	186	223	406	341	895	77	895	71
v/c Ratio	0.46	0.45	0.53	0.67	0.60	0.60	0.50	0.41	0.67	0.14
Control Delay	46.0	45.4	12.7	42.4	33.7	38.5	22.2	45.8	30.9	3.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	46.0	45.4	12.7	42.4	33.7	38.5	22.2	45.8	30.9	3.0
Queue Length 50th (ft)	44	45	0	113	98	81	122	36	145	0
Queue Length 95th (ft)	113	115	64	241	184	159	211	97	244	16
Internal Link Dist (ft)		687			449		1175		1803	
Turn Bay Length (ft)	260		180	230		250		180		180
Base Capacity (vph)	556	578	649	532	1077	1123	2017	579	1997	686
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.16	0.16	0.29	0.42	0.38	0.30	0.44	0.13	0.45	0.10

Intersection Summary



Lane Group	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	136	220	222	48	1022	1087	601
v/c Ratio	0.53	0.63	0.62	0.38	0.39	0.34	0.50
Control Delay	49.3	23.0	22.7	66.0	8.2	11.5	3.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	49.3	23.0	22.7	66.0	8.2	11.5	3.3
Queue Length 50th (ft)	94	50	49	35	198	128	12
Queue Length 95th (ft)	148	129	124	m64	345	200	77
Internal Link Dist (ft)		604			665	1175	
Turn Bay Length (ft)	270		460	400			130
Base Capacity (vph)	352	422	432	313	2607	3218	1208
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.39	0.52	0.51	0.15	0.39	0.34	0.50

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



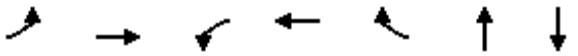
Lane Group	EBL	EBR	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	445	35	602	106	719	493
v/c Ratio	0.67	0.10	0.24	0.07	0.29	0.31
Control Delay	46.3	10.8	6.5	0.1	2.5	1.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	46.3	10.8	6.5	0.1	2.5	1.6
Queue Length 50th (ft)	151	0	71	0	32	24
Queue Length 95th (ft)	195	25	108	0	31	124
Internal Link Dist (ft)			897		665	
Turn Bay Length (ft)	1000	860		365		
Base Capacity (vph)	678	343	2589	1599	2589	1599
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.66	0.10	0.23	0.07	0.28	0.31

Intersection Summary

Queuing and Blocking Report

Intersection: 12: Fitzgerald Lane & Fargo Avenue

Movement	WB	NB
Directions Served	L	LR
Maximum Queue (ft)	53	90
Average Queue (ft)	27	40
95th Queue (ft)	57	71
Link Distance (ft)		554
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)	120	
Storage Blk Time (%)		
Queuing Penalty (veh)		

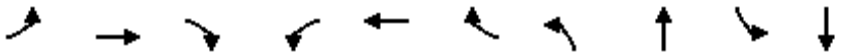


Lane Group	EBL	EBT	WBL	WBT	WBR	NBT	SBT
Lane Group Flow (vph)	123	653	16	536	38	52	129
v/c Ratio	0.35	0.30	0.08	0.67	0.05	0.23	0.39
Control Delay	24.8	4.9	29.0	17.7	0.1	22.9	14.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	24.8	4.9	29.0	17.7	0.1	22.9	14.0
Queue Length 50th (ft)	32	28	4	123	0	11	9
Queue Length 95th (ft)	96	96	25	274	0	47	59
Internal Link Dist (ft)		569		1897		370	367
Turn Bay Length (ft)	120		110		110		
Base Capacity (vph)	580	3274	200	1584	1367	586	702
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.21	0.20	0.08	0.34	0.03	0.09	0.18

Intersection Summary

Lane Group	EBT	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	172	288	145	107	186
v/c Ratio	0.24	0.51	0.31	0.19	0.35
Control Delay	6.3	10.7	11.0	3.8	11.0
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	6.3	10.7	11.0	3.8	11.0
Queue Length 50th (ft)	13	28	16	0	20
Queue Length 95th (ft)	40	80	53	21	63
Internal Link Dist (ft)	2568	5212	3820		588
Turn Bay Length (ft)				190	
Base Capacity (vph)	1792	1428	1507	1536	1669
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.10	0.20	0.10	0.07	0.11

Intersection Summary



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	179	334	113	152	376	69	104	492	65	373
v/c Ratio	0.63	0.74	0.23	0.63	0.49	0.15	0.50	0.40	0.39	0.35
Control Delay	40.9	37.3	3.9	45.2	28.3	0.7	41.4	18.7	40.9	20.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	40.9	37.3	3.9	45.2	28.3	0.7	41.4	18.7	40.9	20.0
Queue Length 50th (ft)	80	148	0	70	84	0	47	86	30	63
Queue Length 95th (ft)	148	235	24	#148	126	1	98	137	70	106
Internal Link Dist (ft)		1897			2561			1065		1348
Turn Bay Length (ft)	180		105	270		150	200		255	
Base Capacity (vph)	343	576	589	267	942	527	239	1243	181	1064
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.52	0.58	0.19	0.57	0.40	0.13	0.44	0.40	0.36	0.35

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	93	113	9	44	71	477	4	1	431	120
v/c Ratio	0.35	0.26	0.04	0.16	0.29	0.43	0.00	0.00	0.50	0.15
Control Delay	40.7	14.0	40.8	38.1	40.9	17.0	0.0	41.0	25.1	2.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	40.7	14.0	40.8	38.1	40.9	17.0	0.0	41.0	25.1	2.3
Queue Length 50th (ft)	46	12	4	21	35	155	0	1	194	0
Queue Length 95th (ft)	108	67	21	60	89	373	0	6	348	21
Internal Link Dist (ft)		5212		1113		1065			1624	
Turn Bay Length (ft)	210		280		430		135	330		135
Base Capacity (vph)	405	607	412	589	392	1099	994	392	1015	930
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.23	0.19	0.02	0.07	0.18	0.43	0.00	0.00	0.42	0.13

Intersection Summary



Lane Group	WBL	WBR	NBT	SBL	SBT
Lane Group Flow (vph)	177	5	568	9	234
v/c Ratio	0.34	0.01	0.30	0.02	0.23
Control Delay	10.4	5.0	3.8	6.1	6.9
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	10.4	5.0	3.8	6.1	6.9
Queue Length 50th (ft)	21	0	13	1	21
Queue Length 95th (ft)	45	3	34	5	52
Internal Link Dist (ft)	368		2114		2546
Turn Bay Length (ft)				150	
Base Capacity (vph)	1796	1607	3333	834	1881
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.10	0.00	0.17	0.01	0.12

Intersection Summary

Queuing and Blocking Report

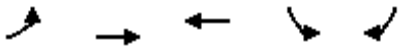
Intersection: 18: 12th Avenue & Project Dwy 2

Movement	WB
Directions Served	R
Maximum Queue (ft)	24
Average Queue (ft)	3
95th Queue (ft)	15
Link Distance (ft)	385
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Queuing and Blocking Report

Intersection: 19: Fargo Avenue & Project Dwy 3

Movement	SB
Directions Served	R
Maximum Queue (ft)	54
Average Queue (ft)	25
95th Queue (ft)	49
Link Distance (ft)	302
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	



Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	241	602	621	172	80
v/c Ratio	0.59	0.62	0.34	0.39	0.18
Control Delay	13.7	10.0	5.9	18.3	6.3
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	13.7	10.0	5.9	18.3	6.3
Queue Length 50th (ft)	29	75	32	29	0
Queue Length 95th (ft)	98	182	71	102	28
Internal Link Dist (ft)		383	328	249	
Turn Bay Length (ft)	150				100
Base Capacity (vph)	790	1881	3534	1178	1082
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.31	0.32	0.18	0.15	0.07

Intersection Summary

Queuing and Blocking Report

Intersection: 21: Project Dwy 5 & Flint Avenue

Movement	NB
Directions Served	R
Maximum Queue (ft)	30
Average Queue (ft)	1
95th Queue (ft)	10
Link Distance (ft)	414
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Queuing and Blocking Report

Intersection: 22: Project Dwy 6 & Flint Avenue

Movement	WB	NB
Directions Served	L	LR
Maximum Queue (ft)	31	31
Average Queue (ft)	5	14
95th Queue (ft)	22	38
Link Distance (ft)		497
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)	150	
Storage Blk Time (%)		
Queuing Penalty (veh)		

Queuing and Blocking Report

Intersection: 23: Fargo Avenue & Project Dwy 7

Movement	SB
Directions Served	R
Maximum Queue (ft)	56
Average Queue (ft)	26
95th Queue (ft)	56
Link Distance (ft)	325
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

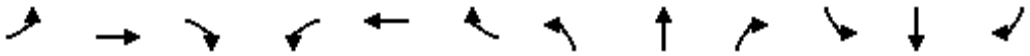


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	125	305	77	461	476	60	39	636	18	565	87
v/c Ratio	0.69	0.77	0.17	1.22	0.78	0.10	0.41	0.47	0.19	0.86	0.13
Control Delay	68.4	52.9	0.8	158.2	43.5	0.3	66.2	18.3	58.5	45.2	0.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	68.4	52.9	0.8	158.2	43.5	0.3	66.2	18.3	58.5	45.2	0.4
Queue Length 50th (ft)	83	195	0	~416	301	0	26	105	12	354	0
Queue Length 95th (ft)	#195	322	0	#712	#516	2	#79	189	39	527	0
Internal Link Dist (ft)		5249			369			5245		396	
Turn Bay Length (ft)	200		100	340			250		250		130
Base Capacity (vph)	209	546	576	377	732	692	95	1746	94	924	873
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.60	0.56	0.13	1.22	0.65	0.09	0.41	0.36	0.19	0.61	0.10

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

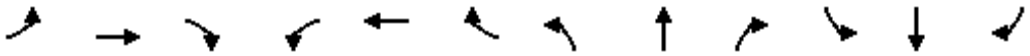
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	147	513	123	282	403	75	99	544	204	115	1134	176
v/c Ratio	0.46	0.70	0.28	0.58	0.46	0.16	0.36	0.46	0.30	0.39	0.86	0.26
Control Delay	42.3	37.1	6.5	39.7	28.7	4.4	42.7	24.2	5.0	42.5	34.5	8.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	42.3	37.1	6.5	39.7	28.7	4.4	42.7	24.2	5.0	42.5	34.5	8.3
Queue Length 50th (ft)	38	133	0	72	95	0	25	113	0	29	288	14
Queue Length 95th (ft)	65	173	24	107	126	14	48	169	32	54	#420	50
Internal Link Dist (ft)		582			1436			2149			5245	
Turn Bay Length (ft)	200		125	175		150	250		200	200		150
Base Capacity (vph)	859	1322	676	1090	1512	731	859	1296	719	876	1322	665
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.17	0.39	0.18	0.26	0.27	0.10	0.12	0.42	0.28	0.13	0.86	0.26

Intersection Summary

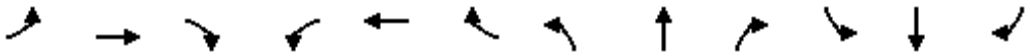
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	101	148	31	82	80	89	31	611	37	175	1317	79
v/c Ratio	0.40	0.39	0.06	0.35	0.28	0.19	0.15	0.56	0.06	0.74	0.75	0.09
Control Delay	26.9	23.0	0.3	26.6	23.2	0.9	25.5	19.2	0.2	49.2	24.6	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	26.9	23.0	0.3	26.6	23.2	0.9	25.5	19.2	0.2	49.2	24.6	0.2
Queue Length 50th (ft)	29	42	0	24	22	0	9	85	0	53	166	0
Queue Length 95th (ft)	66	86	0	57	53	0	30	141	0	#154	#428	0
Internal Link Dist (ft)		783			650			1290			2149	
Turn Bay Length (ft)	185		100	150		100	250		80	255		130
Base Capacity (vph)	617	1035	964	428	828	838	433	1162	667	236	1762	929
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.16	0.14	0.03	0.19	0.10	0.11	0.07	0.53	0.06	0.74	0.75	0.09

Intersection Summary

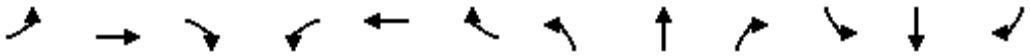
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	26	121	21	12	25	124	15	610	35	401	1001	20
v/c Ratio	0.13	0.38	0.05	0.06	0.09	0.31	0.07	0.66	0.06	0.72	0.41	0.02
Control Delay	31.1	29.3	0.2	30.5	28.5	3.0	30.5	24.0	0.2	25.6	7.2	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	31.1	29.3	0.2	30.5	28.5	3.0	30.5	24.0	0.2	25.6	7.2	0.0
Queue Length 50th (ft)	7	33	0	3	6	0	4	83	0	102	58	0
Queue Length 95th (ft)	33	#101	0	20	30	3	23	180	0	218	184	0
Internal Link Dist (ft)		902			663			1639			1290	
Turn Bay Length (ft)	80		75	190		140	250		150	250		155
Base Capacity (vph)	205	390	490	207	353	460	209	1398	761	1062	2748	1275
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.13	0.31	0.04	0.06	0.07	0.27	0.07	0.44	0.05	0.38	0.36	0.02

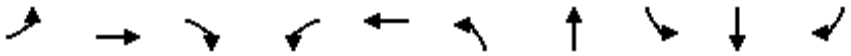
Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	186	410	88	145	205	66	77	353	87	185	591	122
v/c Ratio	0.43	0.58	0.22	0.38	0.31	0.18	0.38	0.54	0.23	0.58	0.58	0.23
Control Delay	29.1	25.7	6.6	29.7	23.5	3.9	32.5	26.0	6.8	31.3	22.1	8.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	29.1	25.7	6.6	29.7	23.5	3.9	32.5	26.0	6.8	31.3	22.1	8.1
Queue Length 50th (ft)	30	65	0	23	31	0	24	56	0	57	93	6
Queue Length 95th (ft)	72	134	30	59	73	17	72	118	29	138	175	45
Internal Link Dist (ft)		982			1659			1803			1639	
Turn Bay Length (ft)	265		110	270		170	240		185	240		120
Base Capacity (vph)	1302	1614	769	1302	1598	769	671	1598	776	678	1598	769
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.14	0.25	0.11	0.11	0.13	0.09	0.11	0.22	0.11	0.27	0.37	0.16

Intersection Summary



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	34	65	207	80	158	174	1200	64	650	50
v/c Ratio	0.18	0.32	0.57	0.39	0.37	0.40	0.64	0.32	0.41	0.09
Control Delay	32.3	34.6	12.3	35.3	29.8	31.8	17.2	34.9	18.4	0.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	32.3	34.6	12.3	35.3	29.8	31.8	17.2	34.9	18.4	0.6
Queue Length 50th (ft)	13	26	0	32	30	34	124	24	70	0
Queue Length 95th (ft)	43	70	55	84	67	71	200	66	116	2
Internal Link Dist (ft)		687			449		1175		1803	
Turn Bay Length (ft)	260		180	230		250		180		180
Base Capacity (vph)	675	721	759	646	1323	1406	2387	725	2451	832
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.05	0.09	0.27	0.12	0.12	0.12	0.50	0.09	0.27	0.06

Intersection Summary



Lane Group	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	63	245	248	40	1038	670	303
v/c Ratio	0.23	0.69	0.69	0.32	0.42	0.21	0.28
Control Delay	36.1	26.7	26.2	63.2	13.0	10.4	2.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	36.1	26.7	26.2	63.2	13.0	10.4	2.4
Queue Length 50th (ft)	37	67	66	26	253	68	0
Queue Length 95th (ft)	69	145	140	m53	348	119	44
Internal Link Dist (ft)		604			665	1175	
Turn Bay Length (ft)	270		460	400			130
Base Capacity (vph)	348	414	426	436	2528	3137	1091
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.18	0.59	0.58	0.09	0.41	0.21	0.28

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



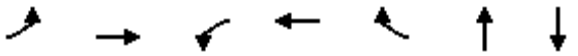
Lane Group	EBL	EBR	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	463	13	628	152	438	310
v/c Ratio	0.66	0.04	0.26	0.10	0.18	0.20
Control Delay	41.1	0.2	6.9	0.1	3.9	1.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	41.1	0.2	6.9	0.1	3.9	1.1
Queue Length 50th (ft)	140	0	72	0	20	1
Queue Length 95th (ft)	180	1	111	0	26	34
Internal Link Dist (ft)			897		665	
Turn Bay Length (ft)	1000	860		365		
Base Capacity (vph)	741	367	2478	1583	2430	1568
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.62	0.04	0.25	0.10	0.18	0.20

Intersection Summary

Queuing and Blocking Report

Intersection: 12: Fitzgerald Lane & Fargo Avenue

Movement	WB	WB	WB	NB
Directions Served	L	T	T	LR
Maximum Queue (ft)	96	116	79	246
Average Queue (ft)	37	12	3	121
95th Queue (ft)	80	69	27	241
Link Distance (ft)		152	152	554
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	120			
Storage Blk Time (%)		0		
Queuing Penalty (veh)		1		



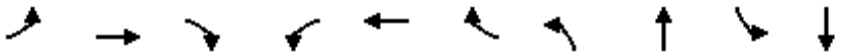
Lane Group	EBL	EBT	WBL	WBT	WBR	NBT	SBT
Lane Group Flow (vph)	115	812	18	983	28	113	244
v/c Ratio	0.59	0.34	0.15	0.88	0.03	0.86	0.57
Control Delay	52.3	7.0	42.9	27.7	0.0	80.4	14.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	52.3	7.0	42.9	27.7	0.0	80.4	14.6
Queue Length 50th (ft)	60	63	9	428	0	49	24
Queue Length 95th (ft)	#116	131	28	#582	0	#109	66
Internal Link Dist (ft)		569		1897		370	367
Turn Bay Length (ft)	120		110		110		
Base Capacity (vph)	207	2577	121	1243	1092	188	546
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.56	0.32	0.15	0.79	0.03	0.60	0.45

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBT	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	434	409	235	255	296
v/c Ratio	0.57	0.62	0.47	0.37	0.53
Control Delay	12.5	14.3	15.7	3.9	16.2
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	12.5	14.3	15.7	3.9	16.2
Queue Length 50th (ft)	61	61	38	0	48
Queue Length 95th (ft)	149	151	108	31	131
Internal Link Dist (ft)	2568	5212	3820		588
Turn Bay Length (ft)				190	
Base Capacity (vph)	1656	1447	1266	1371	1397
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.26	0.28	0.19	0.19	0.21

Intersection Summary



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	230	392	143	232	592	60	106	342	92	628
v/c Ratio	0.72	0.83	0.28	0.81	0.70	0.12	0.52	0.34	0.56	0.65
Control Delay	43.9	43.3	6.1	56.1	32.4	0.5	43.0	22.4	49.2	25.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	43.9	43.3	6.1	56.1	32.4	0.5	43.0	22.4	49.2	25.7
Queue Length 50th (ft)	107	181	0	114	144	0	50	67	45	127
Queue Length 95th (ft)	167	#266	34	#209	183	0	92	96	#91	168
Internal Link Dist (ft)		1897			2561			1065		1348
Turn Bay Length (ft)	180		105	270		150	200		255	
Base Capacity (vph)	372	543	563	300	898	505	230	994	173	961
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.62	0.72	0.25	0.77	0.66	0.12	0.46	0.34	0.53	0.65

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	249	197	5	50	61	507	11	2	506	123
v/c Ratio	0.70	0.43	0.03	0.27	0.31	0.59	0.01	0.01	0.79	0.17
Control Delay	43.4	18.5	40.5	42.2	44.4	23.9	0.0	40.5	39.1	0.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	43.4	18.5	40.5	42.2	44.4	23.9	0.0	40.5	39.1	0.9
Queue Length 50th (ft)	138	45	3	26	34	201	0	1	281	0
Queue Length 95th (ft)	198	109	13	60	72	#446	0	8	#467	0
Internal Link Dist (ft)		5212		1113		1065			1624	
Turn Bay Length (ft)	210		280		430		135	330		135
Base Capacity (vph)	984	547	676	186	198	865	873	202	638	718
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.25	0.36	0.01	0.27	0.31	0.59	0.01	0.01	0.79	0.17

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	WBL	WBR	NBT	SBL	SBT
Lane Group Flow (vph)	303	20	490	30	368
v/c Ratio	0.50	0.04	0.34	0.08	0.49
Control Delay	13.0	5.0	6.7	8.1	11.0
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	13.0	5.0	6.7	8.1	11.0
Queue Length 50th (ft)	39	0	22	3	46
Queue Length 95th (ft)	111	10	56	16	120
Internal Link Dist (ft)	368		2114		2546
Turn Bay Length (ft)				150	
Base Capacity (vph)	1721	1541	3390	891	1846
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.18	0.01	0.14	0.03	0.20

Intersection Summary

Queuing and Blocking Report

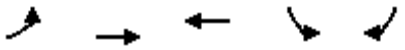
Intersection: 18: 12th Avenue & Project Dwy 2

Movement	WB	SB
Directions Served	R	T
Maximum Queue (ft)	45	31
Average Queue (ft)	6	1
95th Queue (ft)	23	11
Link Distance (ft)	385	2132
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Queuing and Blocking Report

Intersection: 19: Fargo Avenue & Project Dwy 3

Movement	WB	WB	SB
Directions Served	T	TR	R
Maximum Queue (ft)	412	409	317
Average Queue (ft)	246	51	195
95th Queue (ft)	513	262	384
Link Distance (ft)	401	401	302
Upstream Blk Time (%)	7	1	48
Queuing Penalty (veh)	33	3	0
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			



Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	133	453	1049	279	117
v/c Ratio	0.64	0.47	0.57	0.56	0.22
Control Delay	24.7	9.3	9.0	22.4	7.1
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	24.7	9.3	9.0	22.4	7.1
Queue Length 50th (ft)	21	63	79	55	2
Queue Length 95th (ft)	100	169	184	199	43
Internal Link Dist (ft)		383	328	249	
Turn Bay Length (ft)	150				100
Base Capacity (vph)	386	1777	3347	1122	1043
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.34	0.25	0.31	0.25	0.11

Intersection Summary

Queuing and Blocking Report

Intersection: 21: Project Dwy 5 & Flint Avenue

Movement	NB
Directions Served	R
Maximum Queue (ft)	27
Average Queue (ft)	2
95th Queue (ft)	13
Link Distance (ft)	414
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Queuing and Blocking Report

Intersection: 22: Project Dwy 6 & Flint Avenue

Movement	WB	NB
Directions Served	L	LR
Maximum Queue (ft)	31	53
Average Queue (ft)	12	28
95th Queue (ft)	35	45
Link Distance (ft)		497
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)	150	
Storage Blk Time (%)		
Queuing Penalty (veh)		

Queuing and Blocking Report

Intersection: 23: Fargo Avenue & Project Dwy 7

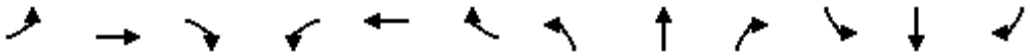
Movement	SB
Directions Served	R
Maximum Queue (ft)	71
Average Queue (ft)	31
95th Queue (ft)	60
Link Distance (ft)	325
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	59	295	58	368	273	29	78	1056	27	354	57
v/c Ratio	0.44	0.79	0.13	0.84	0.36	0.04	0.59	0.84	0.28	0.65	0.10
Control Delay	61.9	56.9	0.6	56.4	26.5	0.1	70.3	31.8	61.8	38.8	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	61.9	56.9	0.6	56.4	26.5	0.1	70.3	31.8	61.8	38.8	0.3
Queue Length 50th (ft)	42	203	0	250	140	0	55	304	19	221	0
Queue Length 95th (ft)	90	#340	0	#446	233	0	#133	405	53	331	0
Internal Link Dist (ft)		5249			369			5245		396	
Turn Bay Length (ft)	200		100	340			250		250		130
Base Capacity (vph)	174	499	542	543	887	815	153	1601	95	778	754
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.34	0.59	0.11	0.68	0.31	0.04	0.51	0.66	0.28	0.46	0.08

Intersection Summary

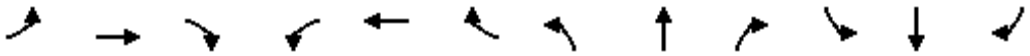
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	136	315	77	234	342	58	136	1200	285	70	685	97
v/c Ratio	0.41	0.58	0.22	0.52	0.51	0.15	0.41	0.82	0.38	0.26	0.53	0.15
Control Delay	37.2	34.8	2.5	35.5	30.7	3.2	37.2	27.3	10.2	37.1	21.4	2.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	37.2	34.8	2.5	35.5	30.7	3.2	37.2	27.3	10.2	37.1	21.4	2.3
Queue Length 50th (ft)	31	73	0	53	76	0	31	259	39	16	126	0
Queue Length 95th (ft)	62	121	9	93	123	13	62	#462	113	38	214	18
Internal Link Dist (ft)		582			1436			2149			5245	
Turn Bay Length (ft)	200		125	175		150	250		200	200		150
Base Capacity (vph)	973	1468	736	1210	1713	816	973	1468	747	973	1468	736
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.14	0.21	0.10	0.19	0.20	0.07	0.14	0.82	0.38	0.07	0.47	0.13

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

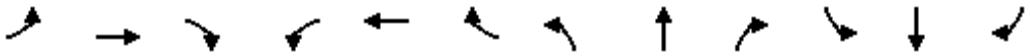


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	53	70	23	61	105	133	60	1384	107	80	951	47
v/c Ratio	0.23	0.25	0.06	0.26	0.29	0.26	0.26	0.82	0.12	0.35	0.57	0.05
Control Delay	23.7	21.9	0.2	23.8	20.5	1.2	23.8	28.5	0.6	25.8	19.4	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	23.7	21.9	0.2	23.8	20.5	1.2	23.8	28.5	0.6	25.8	19.4	0.1
Queue Length 50th (ft)	15	19	0	17	22	0	17	~283	0	22	132	0
Queue Length 95th (ft)	41	48	0	46	66	0	45	#435	2	58	#282	0
Internal Link Dist (ft)		783			650			1290			2149	
Turn Bay Length (ft)	185		100	150		100	250		80	255		130
Base Capacity (vph)	685	1127	1041	471	901	904	466	1680	860	254	1674	888
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.08	0.06	0.02	0.13	0.12	0.15	0.13	0.82	0.12	0.31	0.57	0.05

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

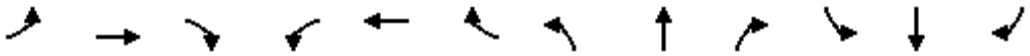
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	17	17	30	21	73	260	18	1142	7	92	885	12
v/c Ratio	0.08	0.06	0.07	0.10	0.27	0.57	0.08	0.79	0.01	0.39	0.45	0.01
Control Delay	20.2	17.6	0.4	20.3	19.9	8.9	20.3	20.7	0.0	23.9	10.0	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	20.2	17.6	0.4	20.3	19.9	8.9	20.3	20.7	0.0	23.9	10.0	0.0
Queue Length 50th (ft)	4	3	0	4	15	0	4	118	0	19	40	0
Queue Length 95th (ft)	20	18	0	23	49	50	21	#339	0	65	#226	0
Internal Link Dist (ft)		902			663			1639			1290	
Turn Bay Length (ft)	80		75	190		140	250		150	250		155
Base Capacity (vph)	684	1126	1040	471	901	903	466	1447	769	254	1974	1000
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.02	0.02	0.03	0.04	0.08	0.29	0.04	0.79	0.01	0.36	0.45	0.01

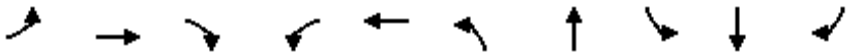
Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	333	317	146	323	439	151	173	612	90	166	672	124
v/c Ratio	0.63	0.46	0.34	0.62	0.65	0.36	0.64	0.67	0.19	0.63	0.74	0.26
Control Delay	37.8	31.1	8.3	38.0	34.9	8.4	43.8	30.4	6.4	44.0	32.9	10.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	37.8	31.1	8.3	38.0	34.9	8.4	43.8	30.4	6.4	44.0	32.9	10.5
Queue Length 50th (ft)	74	68	0	72	98	0	75	131	0	72	147	9
Queue Length 95th (ft)	146	134	50	143	184	50	169	246	33	164	275	58
Internal Link Dist (ft)		982			1659			1803			1639	
Turn Bay Length (ft)	265		110	270		170	240		185	240		120
Base Capacity (vph)	1022	1254	656	1022	1254	659	526	1258	627	526	1254	625
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.33	0.25	0.22	0.32	0.35	0.23	0.33	0.49	0.14	0.32	0.54	0.20

Intersection Summary



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	91	94	203	223	417	370	955	80	930	73
v/c Ratio	0.47	0.47	0.56	0.67	0.61	0.63	0.52	0.43	0.70	0.15
Control Delay	47.4	46.9	12.8	43.3	34.9	39.4	22.9	47.2	32.1	3.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	47.4	46.9	12.8	43.3	34.9	39.4	22.9	47.2	32.1	3.2
Queue Length 50th (ft)	47	49	0	117	105	93	139	40	159	0
Queue Length 95th (ft)	116	120	66	246	192	173	232	101	260	18
Internal Link Dist (ft)		687			449		1175		1803	
Turn Bay Length (ft)	260		180	230		250		180		180
Base Capacity (vph)	539	560	646	516	1044	1089	1988	561	1936	668
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.17	0.17	0.31	0.43	0.40	0.34	0.48	0.14	0.48	0.11

Intersection Summary



Lane Group	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	136	242	237	48	1076	1118	623
v/c Ratio	0.50	0.70	0.66	0.38	0.42	0.35	0.51
Control Delay	46.8	29.3	27.3	66.2	9.6	12.3	2.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	46.8	29.3	27.3	66.2	9.6	12.3	2.8
Queue Length 50th (ft)	94	80	71	35	213	133	0
Queue Length 95th (ft)	143	159	146	m64	379	219	57
Internal Link Dist (ft)		604			665	1175	
Turn Bay Length (ft)	270		460	400			130
Base Capacity (vph)	361	416	428	154	2594	3222	1235
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.38	0.58	0.55	0.31	0.41	0.35	0.50

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



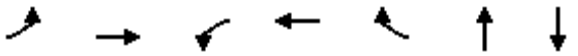
Lane Group	EBL	EBR	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	481	35	620	106	729	514
v/c Ratio	0.69	0.10	0.25	0.07	0.30	0.32
Control Delay	45.9	10.4	7.0	0.1	2.6	1.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	45.9	10.4	7.0	0.1	2.6	1.9
Queue Length 50th (ft)	163	0	76	0	32	29
Queue Length 95th (ft)	207	24	116	0	35	215
Internal Link Dist (ft)			897		665	
Turn Bay Length (ft)	1000	860		365		
Base Capacity (vph)	725	365	2537	1599	2537	1599
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.66	0.10	0.24	0.07	0.29	0.32

Intersection Summary

Queuing and Blocking Report

Intersection: 12: Fitzgerald Lane & Fargo Avenue

Movement	EB	WB	WB	NB
Directions Served	TR	L	T	LR
Maximum Queue (ft)	22	91	46	96
Average Queue (ft)	2	29	2	44
95th Queue (ft)	11	61	16	81
Link Distance (ft)	340		152	554
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)		120		
Storage Blk Time (%)				
Queuing Penalty (veh)				

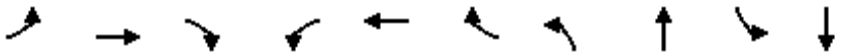


Lane Group	EBL	EBT	WBL	WBT	WBR	NBT	SBT
Lane Group Flow (vph)	123	682	16	586	38	52	129
v/c Ratio	0.36	0.31	0.08	0.70	0.05	0.24	0.40
Control Delay	26.4	4.9	30.8	18.3	0.1	24.4	14.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	26.4	4.9	30.8	18.3	0.1	24.4	14.7
Queue Length 50th (ft)	34	30	5	141	0	12	9
Queue Length 95th (ft)	101	102	26	310	0	50	61
Internal Link Dist (ft)		569		1897		370	367
Turn Bay Length (ft)	120		110		110		
Base Capacity (vph)	556	3217	192	1536	1329	551	677
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.22	0.21	0.08	0.38	0.03	0.09	0.19

Intersection Summary

Lane Group	EBT	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	190	318	145	107	186
v/c Ratio	0.26	0.54	0.31	0.20	0.36
Control Delay	6.5	11.0	11.5	3.9	11.5
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	6.5	11.0	11.5	3.9	11.5
Queue Length 50th (ft)	15	33	17	0	21
Queue Length 95th (ft)	46	91	56	22	67
Internal Link Dist (ft)	2568	5212	3820		588
Turn Bay Length (ft)				190	
Base Capacity (vph)	1799	1453	1484	1516	1647
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.11	0.22	0.10	0.07	0.11

Intersection Summary



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	185	355	113	152	412	69	104	495	65	389
v/c Ratio	0.65	0.77	0.23	0.64	0.53	0.15	0.50	0.44	0.39	0.36
Control Delay	42.0	39.0	3.8	45.9	28.9	0.7	41.8	20.3	41.3	19.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	42.0	39.0	3.8	45.9	28.9	0.7	41.8	20.3	41.3	19.8
Queue Length 50th (ft)	84	159	0	71	93	0	48	89	30	66
Queue Length 95th (ft)	152	252	24	#148	137	1	98	138	70	109
Internal Link Dist (ft)		1897			2561			1065		1348
Turn Bay Length (ft)	180		105	270		150	200		255	
Base Capacity (vph)	340	570	584	264	932	523	237	1134	179	1066
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.54	0.62	0.19	0.58	0.44	0.13	0.44	0.44	0.36	0.36

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	99	113	9	44	71	486	4	1	446	132
v/c Ratio	0.37	0.26	0.04	0.16	0.29	0.44	0.00	0.00	0.51	0.16
Control Delay	41.5	14.0	41.4	38.8	41.8	17.2	0.0	42.0	25.4	3.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	41.5	14.0	41.4	38.8	41.8	17.2	0.0	42.0	25.4	3.2
Queue Length 50th (ft)	51	12	4	22	36	161	0	1	205	0
Queue Length 95th (ft)	113	67	21	60	89	385	0	6	366	28
Internal Link Dist (ft)		5212		1113		1065			1624	
Turn Bay Length (ft)	210		280		430		135	330		135
Base Capacity (vph)	399	602	405	579	386	1097	993	386	999	918
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.25	0.19	0.02	0.08	0.18	0.44	0.00	0.00	0.45	0.14

Intersection Summary



Lane Group	WBL	WBR	NBT	SBL	SBT
Lane Group Flow (vph)	177	5	593	9	276
v/c Ratio	0.35	0.01	0.31	0.02	0.27
Control Delay	10.9	5.4	3.8	6.0	7.0
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	10.9	5.4	3.8	6.0	7.0
Queue Length 50th (ft)	22	0	14	1	26
Queue Length 95th (ft)	49	4	37	5	63
Internal Link Dist (ft)	368		2114		2546
Turn Bay Length (ft)				150	
Base Capacity (vph)	1783	1596	3343	813	1881
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.10	0.00	0.18	0.01	0.15

Intersection Summary

Queuing and Blocking Report

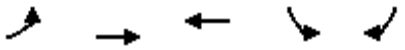
Intersection: 18: 12th Avenue & Project Dwy 2

Movement	WB
Directions Served	R
Maximum Queue (ft)	26
Average Queue (ft)	5
95th Queue (ft)	22
Link Distance (ft)	385
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Queuing and Blocking Report

Intersection: 19: Fargo Avenue & Project Dwy 3

Movement	SB
Directions Served	R
Maximum Queue (ft)	31
Average Queue (ft)	24
95th Queue (ft)	44
Link Distance (ft)	302
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	



Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	241	633	673	172	80
v/c Ratio	0.61	0.64	0.36	0.40	0.18
Control Delay	14.6	10.2	5.9	19.5	6.6
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	14.6	10.2	5.9	19.5	6.6
Queue Length 50th (ft)	31	82	36	31	0
Queue Length 95th (ft)	104	198	78	110	29
Internal Link Dist (ft)		383	328	249	
Turn Bay Length (ft)	150				100
Base Capacity (vph)	745	1881	3537	1095	1011
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.32	0.34	0.19	0.16	0.08

Intersection Summary

Queuing and Blocking Report

Intersection: 21: Project Dwy 5 & Flint Avenue

Movement	NB
Directions Served	R
Maximum Queue (ft)	27
Average Queue (ft)	1
95th Queue (ft)	9
Link Distance (ft)	414
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Queuing and Blocking Report

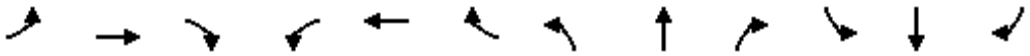
Intersection: 22: Project Dwy 6 & Flint Avenue

Movement	WB	NB
Directions Served	L	LR
Maximum Queue (ft)	28	31
Average Queue (ft)	5	11
95th Queue (ft)	22	34
Link Distance (ft)		497
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)	150	
Storage Blk Time (%)		
Queuing Penalty (veh)		

Queuing and Blocking Report

Intersection: 23: Fargo Avenue & Project Dwy 7

Movement	SB
Directions Served	R
Maximum Queue (ft)	54
Average Queue (ft)	30
95th Queue (ft)	48
Link Distance (ft)	325
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

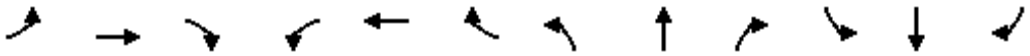


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	129	317	82	479	484	61	41	385	271	21	590	90
v/c Ratio	0.78	0.94	0.20	0.97	0.70	0.09	0.53	0.29	0.36	0.27	0.95	0.14
Control Delay	82.7	83.6	1.1	76.5	39.2	0.4	80.5	27.3	4.8	64.9	64.9	0.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	82.7	83.6	1.1	76.5	39.2	0.4	80.5	27.3	4.8	64.9	64.9	0.5
Queue Length 50th (ft)	99	245	0	~382	328	0	32	100	0	16	441	0
Queue Length 95th (ft)	#191	#422	0	#600	459	2	#84	158	58	44	#667	0
Internal Link Dist (ft)		5249			369			5245			396	
Turn Bay Length (ft)	200		100	340			250		150	250		130
Base Capacity (vph)	186	349	426	494	692	660	78	1382	778	77	658	668
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.69	0.91	0.19	0.97	0.70	0.09	0.53	0.28	0.35	0.27	0.90	0.13

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

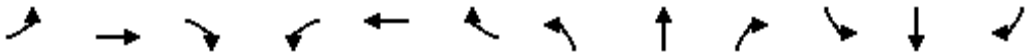
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	130	462	111	254	363	65	89	484	182	113	995	152
v/c Ratio	0.48	0.41	0.19	0.56	0.28	0.10	0.38	0.76	0.41	0.19	0.89	0.26
Control Delay	49.5	28.5	3.0	44.9	23.5	0.3	49.1	45.8	8.2	36.0	44.1	7.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	49.5	28.5	3.0	44.9	23.5	0.3	49.1	45.8	8.2	36.0	44.1	7.1
Queue Length 50th (ft)	40	120	0	77	84	0	27	153	0	30	313	5
Queue Length 95th (ft)	72	177	23	120	129	0	54	205	55	59	#470	52
Internal Link Dist (ft)		582			1436			2149			5245	
Turn Bay Length (ft)	200		125	175		150	250		200	200		150
Base Capacity (vph)	725	1116	598	920	1277	660	725	1094	624	740	1116	586
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.18	0.41	0.19	0.28	0.28	0.10	0.12	0.44	0.29	0.15	0.89	0.26

Intersection Summary

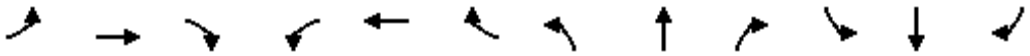
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	98	140	34	80	74	85	34	568	37	165	1246	76
v/c Ratio	0.40	0.37	0.07	0.34	0.26	0.19	0.17	0.52	0.06	0.71	0.72	0.08
Control Delay	26.5	22.6	0.3	26.2	22.8	0.9	25.1	18.6	0.2	45.8	23.8	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	26.5	22.6	0.3	26.2	22.8	0.9	25.1	18.6	0.2	45.8	23.8	0.2
Queue Length 50th (ft)	27	38	0	22	20	0	9	78	0	48	151	0
Queue Length 95th (ft)	69	88	0	61	54	0	34	141	0	#158	#438	0
Internal Link Dist (ft)		783			650			1290			2149	
Turn Bay Length (ft)	185		100	150		100	250		80	255		130
Base Capacity (vph)	609	1022	955	423	818	831	427	1213	687	233	1740	920
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.16	0.14	0.04	0.19	0.09	0.10	0.08	0.47	0.05	0.71	0.72	0.08

Intersection Summary

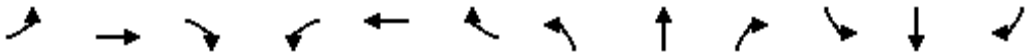
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	25	117	21	14	28	137	15	578	36	408	947	20
v/c Ratio	0.12	0.36	0.05	0.07	0.10	0.34	0.07	0.65	0.06	0.72	0.39	0.02
Control Delay	30.9	28.6	0.2	30.4	28.3	4.1	30.4	23.7	0.2	25.3	7.0	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	30.9	28.6	0.2	30.4	28.3	4.1	30.4	23.7	0.2	25.3	7.0	0.1
Queue Length 50th (ft)	7	31	0	4	7	0	4	77	0	102	53	0
Queue Length 95th (ft)	34	#113	0	23	35	17	24	186	0	245	190	0
Internal Link Dist (ft)		902			663			1639			1290	
Turn Bay Length (ft)	80		75	190		140	250		150	250		155
Base Capacity (vph)	208	396	494	210	358	463	212	1417	768	1069	2766	1282
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.12	0.30	0.04	0.07	0.08	0.30	0.07	0.41	0.05	0.38	0.34	0.02

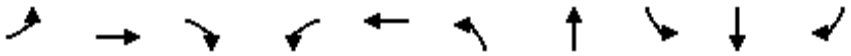
Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	201	443	92	153	254	68	100	368	90	190	614	139
v/c Ratio	0.47	0.61	0.23	0.41	0.38	0.18	0.46	0.52	0.23	0.60	0.59	0.26
Control Delay	31.3	27.5	7.2	32.0	25.5	4.1	35.2	26.0	6.8	33.8	23.3	8.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	31.3	27.5	7.2	32.0	25.5	4.1	35.2	26.0	6.8	33.8	23.3	8.9
Queue Length 50th (ft)	35	76	0	26	42	0	34	62	0	63	104	9
Queue Length 95th (ft)	81	154	33	66	93	18	93	126	31	150	194	53
Internal Link Dist (ft)		982			1659			1803			1639	
Turn Bay Length (ft)	265		110	270		170	240		185	240		120
Base Capacity (vph)	1234	1530	734	1234	1515	734	636	1515	741	642	1515	738
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.16	0.29	0.13	0.12	0.17	0.09	0.16	0.24	0.12	0.30	0.41	0.19

Intersection Summary



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	34	66	208	89	173	167	1207	63	634	50
v/c Ratio	0.18	0.33	0.57	0.42	0.39	0.39	0.64	0.32	0.40	0.09
Control Delay	32.7	35.1	12.4	35.9	30.3	32.4	17.5	35.3	18.4	0.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	32.7	35.1	12.4	35.9	30.3	32.4	17.5	35.3	18.4	0.6
Queue Length 50th (ft)	13	27	0	37	35	33	127	25	69	0
Queue Length 95th (ft)	44	73	60	95	74	71	212	67	117	3
Internal Link Dist (ft)		687			449		1175		1803	
Turn Bay Length (ft)	260		180	230		250		180		180
Base Capacity (vph)	668	714	754	640	1307	1392	2364	717	2426	825
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.05	0.09	0.28	0.14	0.13	0.12	0.51	0.09	0.26	0.06

Intersection Summary



Lane Group	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	74	253	255	45	1085	726	299
v/c Ratio	0.25	0.70	0.69	0.35	0.44	0.24	0.28
Control Delay	35.2	28.7	27.8	65.2	15.1	11.4	2.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	35.2	28.7	27.8	65.2	15.1	11.4	2.6
Queue Length 50th (ft)	44	82	80	30	272	79	0
Queue Length 95th (ft)	76	158	151	m59	380	136	46
Internal Link Dist (ft)		604			665	1175	
Turn Bay Length (ft)	270		460	400			130
Base Capacity (vph)	359	412	425	436	2505	3060	1070
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.21	0.61	0.60	0.10	0.43	0.24	0.28

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

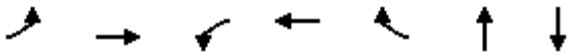


Lane Group	EBL	EBR	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	474	14	654	174	492	315
v/c Ratio	0.67	0.04	0.27	0.11	0.21	0.20
Control Delay	41.1	0.8	7.1	0.1	4.1	1.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	41.1	0.8	7.1	0.1	4.1	1.1
Queue Length 50th (ft)	144	0	77	0	22	4
Queue Length 95th (ft)	186	2	118	0	33	0
Internal Link Dist (ft)			897		665	
Turn Bay Length (ft)	1000	860		365		
Base Capacity (vph)	734	364	2496	1583	2447	1568
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.65	0.04	0.26	0.11	0.20	0.20

Intersection Summary

Intersection: 12: Fitzgerald Lane & Fargo Avenue

Movement	WB	NB
Directions Served	L	LR
Maximum Queue (ft)	87	161
Average Queue (ft)	44	70
95th Queue (ft)	70	132
Link Distance (ft)		554
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)	120	
Storage Blk Time (%)		
Queuing Penalty (veh)		



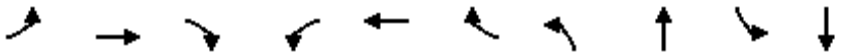
Lane Group	EBL	EBT	WBL	WBT	WBR	NBT	SBT
Lane Group Flow (vph)	107	709	16	888	25	100	224
v/c Ratio	0.44	0.29	0.12	0.84	0.03	0.76	0.54
Control Delay	36.9	5.5	38.5	26.8	0.0	60.2	11.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	36.9	5.5	38.5	26.8	0.0	60.2	11.3
Queue Length 50th (ft)	46	44	7	331	0	35	9
Queue Length 95th (ft)	100	133	28	#740	0	#102	67
Internal Link Dist (ft)		569		1897		370	367
Turn Bay Length (ft)	120		110		110		
Base Capacity (vph)	473	2665	128	1052	959	209	570
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.23	0.27	0.13	0.84	0.03	0.48	0.39

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBT	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	454	429	246	269	309
v/c Ratio	0.59	0.65	0.49	0.38	0.55
Control Delay	13.2	15.3	16.9	4.0	17.3
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	13.2	15.3	16.9	4.0	17.3
Queue Length 50th (ft)	69	68	43	0	55
Queue Length 95th (ft)	172	175	123	33	149
Internal Link Dist (ft)	2568	5212	3820		588
Turn Bay Length (ft)				190	
Base Capacity (vph)	1599	1392	1205	1333	1347
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.28	0.31	0.20	0.20	0.23

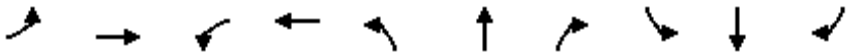
Intersection Summary



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	211	370	140	216	562	58	100	328	86	590
v/c Ratio	0.68	0.80	0.28	0.77	0.67	0.12	0.49	0.33	0.52	0.60
Control Delay	41.7	41.0	6.0	51.2	31.4	0.5	41.8	21.9	46.8	24.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	41.7	41.0	6.0	51.2	31.4	0.5	41.8	21.9	46.8	24.1
Queue Length 50th (ft)	98	168	0	104	133	0	47	63	42	114
Queue Length 95th (ft)	167	#289	39	#213	190	0	95	100	#94	171
Internal Link Dist (ft)		1897			2561			1065		1348
Turn Bay Length (ft)	180		105	270		150	200		255	
Base Capacity (vph)	377	551	569	304	913	511	233	1008	175	978
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.56	0.67	0.25	0.71	0.62	0.11	0.43	0.33	0.49	0.60

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	236	199	5	46	80	707	14	2	583	116
v/c Ratio	0.68	0.45	0.03	0.25	0.40	0.81	0.02	0.01	0.91	0.16
Control Delay	43.2	18.3	38.6	41.7	46.1	31.3	0.0	40.0	49.5	0.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	43.2	18.3	38.6	41.7	46.1	31.3	0.0	40.0	49.5	0.5
Queue Length 50th (ft)	130	41	3	24	44	327	0	1	~372	0
Queue Length 95th (ft)	209	126	14	62	96	#789	0	8	#636	0
Internal Link Dist (ft)		5212		1113		1065			1624	
Turn Bay Length (ft)	210		280		430		135	330		135
Base Capacity (vph)	993	539	682	187	200	873	887	204	643	731
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.24	0.37	0.01	0.25	0.40	0.81	0.02	0.01	0.91	0.16

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	WBL	WBR	NBT	SBL	SBT
Lane Group Flow (vph)	303	20	507	30	399
v/c Ratio	0.51	0.04	0.34	0.08	0.52
Control Delay	13.5	5.2	6.9	8.0	11.4
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	13.5	5.2	6.9	8.0	11.4
Queue Length 50th (ft)	41	0	24	3	51
Queue Length 95th (ft)	117	10	60	16	134
Internal Link Dist (ft)	368		2114		2546
Turn Bay Length (ft)				150	
Base Capacity (vph)	1696	1519	3371	869	1831
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.18	0.01	0.15	0.03	0.22

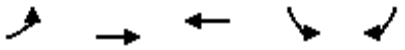
Intersection Summary

Intersection: 18: 12th Avenue & Project Dwy 2

Movement	WB	SB
Directions Served	R	T
Maximum Queue (ft)	26	457
Average Queue (ft)	5	98
95th Queue (ft)	21	340
Link Distance (ft)	385	2132
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 19: Fargo Avenue & Project Dwy 3

Movement	WB	SB
Directions Served	T	R
Maximum Queue (ft)	417	75
Average Queue (ft)	65	43
95th Queue (ft)	260	76
Link Distance (ft)	401	302
Upstream Blk Time (%)	0	
Queuing Penalty (veh)	1	
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		



Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	133	476	1076	279	117
v/c Ratio	0.65	0.49	0.58	0.56	0.22
Control Delay	26.3	9.5	9.1	23.4	7.4
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	26.3	9.5	9.1	23.4	7.4
Queue Length 50th (ft)	21	68	82	56	2
Queue Length 95th (ft)	108	185	196	210	44
Internal Link Dist (ft)		383	328	249	
Turn Bay Length (ft)	150				100
Base Capacity (vph)	368	1760	3319	1098	1023
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.36	0.27	0.32	0.25	0.11

Intersection Summary

Intersection: 21: Project Dwy 5 & Flint Avenue

Movement	NB
Directions Served	R
Maximum Queue (ft)	31
Average Queue (ft)	4
95th Queue (ft)	19
Link Distance (ft)	414
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 22: Project Dwy 6 & Flint Avenue

Movement	WB	NB
Directions Served	L	LR
Maximum Queue (ft)	55	31
Average Queue (ft)	13	24
95th Queue (ft)	39	43
Link Distance (ft)		497
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)	150	
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 23: Fargo Avenue & Project Dwy 7

Movement	SB
Directions Served	R
Maximum Queue (ft)	74
Average Queue (ft)	41
95th Queue (ft)	71
Link Distance (ft)	325
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 1: 13th Avenue & Flint Avenue

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	53	55	76	54
Average Queue (ft)	30	29	36	32
95th Queue (ft)	44	50	61	39
Link Distance (ft)	1585	5202	5239	839
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

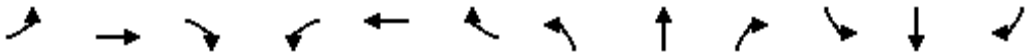
Intersection: 2: 13th Avenue & Fargo Avenue

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	57	102	93	80
Average Queue (ft)	45	39	45	41
95th Queue (ft)	63	67	69	63
Link Distance (ft)	449	5248	704	5239
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				



Lane Group	EBT	WBT	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	91	156	222	57	295	4
v/c Ratio	0.22	0.43	0.47	0.12	0.53	0.01
Control Delay	19.6	23.2	22.3	5.1	21.0	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	19.6	23.2	22.3	5.1	21.0	0.0
Queue Length 50th (ft)	20	37	55	0	72	0
Queue Length 95th (ft)	66	109	146	20	177	0
Internal Link Dist (ft)	5192	637	2546		988	
Turn Bay Length (ft)						45
Base Capacity (vph)	921	781	1118	983	1166	1029
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.10	0.20	0.20	0.06	0.25	0.00

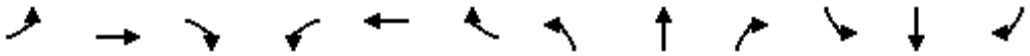
Intersection Summary



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	61	335	61	372	334	29	82	598	562	28	402	61
v/c Ratio	0.48	0.80	0.13	0.82	0.41	0.04	0.61	0.55	0.64	0.29	0.81	0.11
Control Delay	64.4	55.2	0.6	54.4	24.8	0.1	71.5	32.4	6.8	61.9	50.4	0.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	64.4	55.2	0.6	54.4	24.8	0.1	71.5	32.4	6.8	61.9	50.4	0.4
Queue Length 50th (ft)	42	224	0	245	165	0	57	191	5	20	269	0
Queue Length 95th (ft)	93	#387	0	#440	272	0	#143	255	96	54	397	0
Internal Link Dist (ft)		5249			369			5245			396	
Turn Bay Length (ft)	200		100	340			250		150	250		130
Base Capacity (vph)	154	536	570	558	962	874	152	1467	981	95	712	704
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.40	0.63	0.11	0.67	0.35	0.03	0.54	0.41	0.57	0.29	0.56	0.09

Intersection Summary

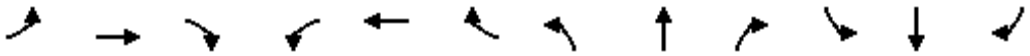
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	146	336	80	288	368	101	141	1297	295	113	758	99
v/c Ratio	0.45	0.62	0.22	0.59	0.52	0.25	0.44	0.95	0.42	0.39	0.57	0.15
Control Delay	39.8	37.4	2.8	37.9	31.5	8.0	39.9	41.7	12.1	39.9	23.1	2.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	39.8	37.4	2.8	37.9	31.5	8.0	39.9	41.7	12.1	39.9	23.1	2.4
Queue Length 50th (ft)	35	82	0	69	85	0	34	320	49	27	153	0
Queue Length 95th (ft)	70	136	10	118	137	39	68	#565	134	57	254	18
Internal Link Dist (ft)		582			1436			2149			5245	
Turn Bay Length (ft)	200		125	175		150	250		200	200		150
Base Capacity (vph)	898	1355	690	1117	1581	764	898	1363	700	898	1355	690
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.16	0.25	0.12	0.26	0.23	0.13	0.16	0.95	0.42	0.13	0.56	0.14

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

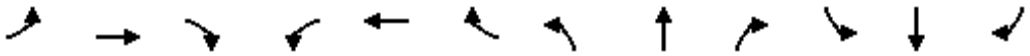


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	62	74	36	66	108	129	87	1361	107	78	1016	53
v/c Ratio	0.25	0.25	0.08	0.27	0.36	0.27	0.34	0.83	0.13	0.33	0.64	0.06
Control Delay	23.3	21.4	0.4	23.4	22.9	1.4	23.8	30.0	0.6	25.3	23.6	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	23.3	21.4	0.4	23.4	22.9	1.4	23.8	30.0	0.6	25.3	23.6	0.1
Queue Length 50th (ft)	17	20	0	18	29	0	24	~286	0	22	~156	0
Queue Length 95th (ft)	47	51	0	50	69	0	60	#454	4	59	#346	0
Internal Link Dist (ft)		783			650			1290			2149	
Turn Bay Length (ft)	185		100	150		100	250		80	255		130
Base Capacity (vph)	1048	1150	1057	524	597	687	475	1631	840	259	1585	855
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.06	0.06	0.03	0.13	0.18	0.19	0.18	0.83	0.13	0.30	0.64	0.06

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

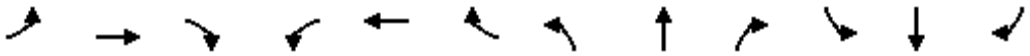
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	18	37	35	29	91	329	20	1171	15	149	976	13
v/c Ratio	0.09	0.16	0.09	0.15	0.31	0.62	0.11	0.79	0.02	0.52	0.47	0.01
Control Delay	26.1	24.6	0.5	26.7	23.9	9.6	26.2	22.8	0.1	28.1	8.7	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	26.1	24.6	0.5	26.7	23.9	9.6	26.2	22.8	0.1	28.1	8.7	0.0
Queue Length 50th (ft)	5	9	0	7	23	0	5	137	0	37	50	0
Queue Length 95th (ft)	24	37	0	32	71	#69	25	#380	0	99	205	0
Internal Link Dist (ft)		902			663			1639			1290	
Turn Bay Length (ft)	80		75	190		140	250		150	250		155
Base Capacity (vph)	190	320	441	190	364	575	188	1473	779	941	2876	1315
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.09	0.12	0.08	0.15	0.25	0.57	0.11	0.79	0.02	0.16	0.34	0.01

Intersection Summary

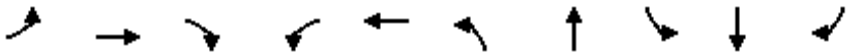
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	386	405	168	348	582	154	236	635	113	207	756	158
v/c Ratio	0.72	0.51	0.35	0.70	0.77	0.34	0.78	0.66	0.22	0.73	0.82	0.33
Control Delay	45.9	34.2	7.4	46.4	42.1	7.8	55.3	35.5	7.8	53.6	42.5	15.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	45.9	34.2	7.4	46.4	42.1	7.8	55.3	35.5	7.8	53.6	42.5	15.7
Queue Length 50th (ft)	111	107	0	100	166	0	132	170	0	116	215	26
Queue Length 95th (ft)	179	176	53	164	261	52	239	291	46	210	#399	93
Internal Link Dist (ft)		982			1659			1803			1639	
Turn Bay Length (ft)	265		110	270		170	240		185	240		120
Base Capacity (vph)	836	1036	582	836	1027	569	451	1014	534	451	985	512
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.46	0.39	0.29	0.42	0.57	0.27	0.52	0.63	0.21	0.46	0.77	0.31

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	95	100	234	272	474	407	1097	83	1078	77
v/c Ratio	0.51	0.52	0.61	0.74	0.64	0.69	0.57	0.48	0.76	0.15
Control Delay	52.9	52.6	13.3	49.4	37.9	44.7	25.0	53.4	36.2	3.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	52.9	52.6	13.3	49.4	37.9	44.7	25.0	53.4	36.2	3.6
Queue Length 50th (ft)	60	63	0	170	141	124	189	50	219	0
Queue Length 95th (ft)	123	128	71	#335	229	192	281	107	321	20
Internal Link Dist (ft)		687			449		1175		1803	
Turn Bay Length (ft)	260		180	230		250		180		180
Base Capacity (vph)	474	492	615	454	919	959	1920	494	1704	600
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.20	0.20	0.38	0.60	0.52	0.42	0.57	0.17	0.63	0.13

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	176	270	270	59	1277	1358	677
v/c Ratio	0.56	0.76	0.74	0.44	0.51	0.45	0.57
Control Delay	46.7	38.7	37.2	66.7	12.5	14.9	4.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	46.7	38.7	37.2	66.7	12.5	14.9	4.5
Queue Length 50th (ft)	118	121	115	42	235	198	24
Queue Length 95th (ft)	184	217	206	m79	453	280	117
Internal Link Dist (ft)		604			665	1175	
Turn Bay Length (ft)	270		460	400			130
Base Capacity (vph)	366	400	410	158	2521	3100	1202
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.48	0.68	0.66	0.37	0.51	0.44	0.56

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

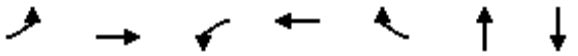


Lane Group	EBL	EBR	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	520	37	787	176	972	548
v/c Ratio	0.66	0.09	0.33	0.11	0.41	0.34
Control Delay	42.9	10.5	8.6	0.1	3.8	1.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	42.9	10.5	8.6	0.1	3.8	1.6
Queue Length 50th (ft)	172	0	114	0	46	20
Queue Length 95th (ft)	223	26	157	0	47	54
Internal Link Dist (ft)			897		665	
Turn Bay Length (ft)	1000	860		365		
Base Capacity (vph)	788	393	2638	1599	2638	1599
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.66	0.09	0.30	0.11	0.37	0.34

Intersection Summary

Intersection: 12: Fitzgerald Lane & Fargo Avenue

Movement	EB	WB	NB
Directions Served	TR	L	LR
Maximum Queue (ft)	28	82	178
Average Queue (ft)	0	40	53
95th Queue (ft)	0	72	109
Link Distance (ft)	340		554
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)		120	
Storage Blk Time (%)			
Queuing Penalty (veh)			

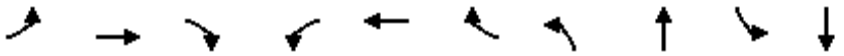


Lane Group	EBL	EBT	WBL	WBT	WBR	NBT	SBT
Lane Group Flow (vph)	149	705	17	641	44	55	150
v/c Ratio	0.43	0.30	0.10	0.72	0.05	0.30	0.46
Control Delay	28.6	4.7	32.9	19.3	0.1	27.5	15.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	28.6	4.7	32.9	19.3	0.1	27.5	15.2
Queue Length 50th (ft)	48	32	6	175	0	14	11
Queue Length 95th (ft)	115	107	27	369	0	51	65
Internal Link Dist (ft)		569		1897		370	367
Turn Bay Length (ft)	120		110		110		
Base Capacity (vph)	778	3075	172	1231	1090	438	634
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.19	0.23	0.10	0.52	0.04	0.13	0.24

Intersection Summary

Lane Group	EBT	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	203	328	163	111	203
v/c Ratio	0.27	0.56	0.36	0.20	0.39
Control Delay	6.7	11.6	12.4	4.0	12.1
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	6.7	11.6	12.4	4.0	12.1
Queue Length 50th (ft)	17	36	20	0	24
Queue Length 95th (ft)	50	100	65	23	75
Internal Link Dist (ft)	2568	5212	3820		588
Turn Bay Length (ft)				190	
Base Capacity (vph)	1786	1431	1408	1493	1613
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.11	0.23	0.12	0.07	0.13

Intersection Summary



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	195	358	123	155	437	72	127	544	67	409
v/c Ratio	0.67	0.78	0.25	0.65	0.57	0.16	0.59	0.48	0.40	0.39
Control Delay	42.9	39.3	4.7	46.4	29.7	0.9	45.5	21.1	41.8	20.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	42.9	39.3	4.7	46.4	29.7	0.9	45.5	21.1	41.8	20.1
Queue Length 50th (ft)	89	161	0	73	101	0	60	101	31	70
Queue Length 95th (ft)	#171	254	30	#153	146	2	#127	153	71	114
Internal Link Dist (ft)		1897			2561			1065		1348
Turn Bay Length (ft)	180		105	270		150	200		255	
Base Capacity (vph)	339	568	583	263	929	521	236	1132	178	1058
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.58	0.63	0.21	0.59	0.47	0.14	0.54	0.48	0.38	0.39

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	104	152	11	46	102	649	5	1	687	143
v/c Ratio	0.46	0.36	0.06	0.20	0.47	0.64	0.01	0.01	0.85	0.19
Control Delay	47.2	13.0	44.1	42.3	47.9	20.9	0.0	44.0	39.4	4.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	47.2	13.0	44.1	42.3	47.9	20.9	0.0	44.0	39.4	4.1
Queue Length 50th (ft)	60	15	6	26	59	249	0	1	395	0
Queue Length 95th (ft)	121	77	26	65	119	#632	0	7	#763	36
Internal Link Dist (ft)		5212		1113		1065			1624	
Turn Bay Length (ft)	210		280		430		135	330		135
Base Capacity (vph)	317	529	322	461	307	1021	935	307	804	769
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.33	0.29	0.03	0.10	0.33	0.64	0.01	0.00	0.85	0.19

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	WBL	WBR	NBT	SBL	SBT
Lane Group Flow (vph)	177	5	663	9	332
v/c Ratio	0.35	0.01	0.33	0.02	0.32
Control Delay	11.5	5.8	4.1	6.0	7.3
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	11.5	5.8	4.1	6.0	7.3
Queue Length 50th (ft)	23	0	18	1	33
Queue Length 95th (ft)	54	4	45	5	79
Internal Link Dist (ft)	368		2114		2546
Turn Bay Length (ft)				150	
Base Capacity (vph)	1749	1565	3366	760	1881
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.10	0.00	0.20	0.01	0.18

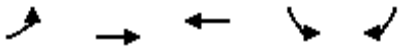
Intersection Summary

Intersection: 18: 12th Avenue & Project Dwy 2

Movement	WB	NB
Directions Served	R	TR
Maximum Queue (ft)	26	70
Average Queue (ft)	2	2
95th Queue (ft)	13	24
Link Distance (ft)	385	402
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 19: Fargo Avenue & Project Dwy 3

Movement	WB	SB
Directions Served	TR	R
Maximum Queue (ft)	22	52
Average Queue (ft)	1	29
95th Queue (ft)	8	51
Link Distance (ft)	401	302
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		



Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	241	714	739	172	80
v/c Ratio	0.63	0.68	0.37	0.42	0.19
Control Delay	15.3	10.6	5.8	22.1	7.3
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	15.3	10.6	5.8	22.1	7.3
Queue Length 50th (ft)	33	102	42	36	0
Queue Length 95th (ft)	115	242	89	122	32
Internal Link Dist (ft)		383	328	249	
Turn Bay Length (ft)	150				100
Base Capacity (vph)	676	1864	3509	916	859
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.36	0.38	0.21	0.19	0.09

Intersection Summary

Intersection: 21: Project Dwy 5 & Flint Avenue

Movement	NB
Directions Served	R
Maximum Queue (ft)	31
Average Queue (ft)	6
95th Queue (ft)	26
Link Distance (ft)	414
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 22: Project Dwy 6 & Flint Avenue

Movement	WB	NB
Directions Served	L	LR
Maximum Queue (ft)	31	31
Average Queue (ft)	4	17
95th Queue (ft)	18	42
Link Distance (ft)		497
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)	150	
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 23: Fargo Avenue & Project Dwy 7

Movement	SB
Directions Served	R
Maximum Queue (ft)	74
Average Queue (ft)	25
95th Queue (ft)	56
Link Distance (ft)	325
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Appendix E2

VMT Analysis

VEHICLE MILES TRAVELED ANALYSIS

SINGH DEVELOPMENT PROJECT

CITY OF HANFORD

KINGS COUNTY, CALIFORNIA

This Vehicle Miles Traveled Analysis has been prepared under the supervision of
Ambarish Mukherjee, P.E.

LSA

September 2023

VEHICLE MILES TRAVELED ANALYSIS

SINGH DEVELOPMENT PROJECT

CITY OF HANFORD

KINGS COUNTY, CALIFORNIA

Prepared for:

4Creeks, Inc.
324 S. Santa Fe Street, Suite A
Visalia, California 93292

Prepared by:

LSA Associates, Inc.
1500 Iowa Avenue, Suite 200
Riverside, California 92507
(951) 781-9310

Project No. FOC2203

LSA

September 2023

TABLE OF CONTENTS

1.0 EXECUTIVE SUMMARY 1
2.0 VEHICLE MILES TRAVELED ANALYSIS 3
2.1 BACKGROUND 3
2.2 METHODOLOGY 3
2.2.1 Project VMT Screening Analysis 3
2.2.2 VMT Metrics and Thresholds 4
2.2.3 Project Traffic Analysis Zone Update 4
2.3 VMT ANALYSIS 5
2.4 VMT REDUCTION MEASURES – PROJECT DESIGN FEATURES AND MITIGATION MEASURES 5
2.4.1 Limitation of Travel Demand Models Runs 6
2.4.2 Project Design Features 6
2.4 LIST OF CHAPTER 2.0 FIGURES AND TABLES 11

APPENDICES

A: VMT CALCULATIONS

TABLES

TABLES

Table 2-A: Baseline project and regional threshold Project VMT per Capita 12
Table 2-B: Calculated VMT Reduction with Project Mitigation 13

1.0 EXECUTIVE SUMMARY

The proposed Singh Development Project will be a mixed-use development including 697 single-family homes, 214 apartments, 235 townhomes, one elementary school with 600 students, 12,500 square feet (sf) of retail, a 11,000 sf sit-down restaurant, a 10,500 sf food court with outdoor seating, a 6,000 sf restaurant with drive-through window, and a gasoline station with 12 vehicle fueling positions and a 5,000 sf convenience store. It is to be noted that the commercial uses are tentative and conceptual, but under all circumstances will remain under 55,000 sf cumulatively. Additionally, the project will include passive use/open space areas within the community including playgrounds for children and areas for families to gather and socialize.

Access to the project will be provided by seven driveways – two on 12th Avenue, two on Flint Avenue, and three on Fargo Avenue. Following project driveways are full-access driveways:

- 12th Avenue/Project Driveway 1;
- Project Driveway 4/Fargo Avenue; and,
- Project Driveway 6/Flint Avenue.

Additionally, the following project driveways will function as right-in/right-out (RIRO) only:

- 12th Avenue/Project Driveway 2;
- Project Driveway 3/Fargo Avenue;
- Project Driveway 5/Flint Avenue; and,
- Project Driveway 7/Fargo Avenue.

The trip generation for the proposed project was developed using rates from the ITE *Trip Generation Manual* (11th Edition). The project is anticipated to generate 14,740 net daily trips, with 1,515 net trips occurring during the a.m. peak hour and 1,261 net trips occurring during the p.m. peak hour.

The City has recently adopted the *City of Hanford VMT Thresholds and Implementation Guidelines* (VMT Guidelines), dated November 2022. Based on the guidelines, the project being a mixed-use project, individual land use components were analyzed separately for purposes of the VMT analysis. The project VMT analysis has been conducted based on the current project description. The retail/ commercial component of the project could be screened out using the 55,000 sf screening criteria for retail projects. Similarly, the elementary school component of the project could be screened out. However, the residential component of the project doesn't meet any of the screening criteria identified in the VMT Guidelines. The VMT Guidelines further recommends that for projects/components of a project that could not be screened out using the project screening criteria, a detailed VMT analysis should be conducted using the methodology and significant threshold criteria identified in the guidelines.

Based on the VMT analysis, the residential component will have a significant transportation impact under CEQA. Therefore, the project is required to identify mitigation measures that will offset the project's VMT impact. To offset the project's VMT impact, appropriate mitigation measures related to Travel Demand Management (TDM) measures and any other mitigation measure have been identified. TDM measures and strategies aim to promote overall mobility with the goal of reducing

the number of single-occupancy vehicle trips and reducing greenhouse gas emissions. Implementation of the mitigation measures identified in this analysis may potentially result in a reduction of the project's residential VMT by approximately 4.4 percent. However, given the uncertainty of the effectiveness/lack of localized substantial evidence of the VMT reduction measures, no VMT reduction was assumed for project design features and mitigation measures as a conservative approach. Therefore, the project will have a significant and unavoidable VMT impact.

2.0 VEHICLE MILES TRAVELED ANALYSIS

2.1 BACKGROUND

On December 28, 2018, the California Office of Administrative Law cleared the revised California Environmental Quality Act (CEQA) guidelines for use. Among the changes to the guidelines was removal of vehicle delay and level of service from consideration under CEQA. With the adopted guidelines, transportation impacts are to be evaluated based on Vehicle Miles Traveled (VMT) generated by the project.

The City has adopted the *City of Hanford VMT Thresholds and Implementation Guidelines* (VMT Guidelines) in November 2022. Therefore, the project VMT analysis was conducted using the methodology and significant threshold criteria identified in the guidelines. As previously mentioned, the project includes residential, educational (elementary school), and retail/commercial land uses. As per the guidelines, mixed-use projects should be evaluated separately for each component of the project. Therefore, each project component was analyzed separately.

2.2 METHODOLOGY

2.2.1 Project VMT Screening Analysis

The VMT guidelines include multiple screening criteria for small land use projects or project components to be screened out of a detailed VMT analysis.

The screening thresholds and their applicability to the project site are as follows:

- **Transit Priority Area Screening:** The project location was compared against the Transit Priority Area from the City of Hanford VMT Screening Tool. Since the project is not located within any Transit Priority Area, this screening criteria does not apply for the project.
- **Local-serving Retail:** Based on the VMT Guidelines, retail projects with a combined area of less than 55,000 sf could be classified as local-serving and could be screened out from a detailed VMT analysis. As summarized in Chapter 1 of this report, the retail component of the project is approximately 49,000 sf, which is less than 55,000 sf. Therefore, the retail component of the project could be screened out using this criterion and a detailed VMT analysis will not be required for this project component.
- **Redevelopment Project:** The project site is currently vacant. Therefore, this criterion is not applicable for the project.
- **Affordable Housing Project:** The residential component of the project proposes market rate single-family and multifamily residential development. Therefore, this criterion is not applicable for the residential component of project.
- **Average Daily Trip Threshold:** As summarized in Chapter 1.0, the project is estimated to generate 14,070 daily trips. Therefore, the project could not be screened using the daily trip threshold criteria, which is 500 daily trips for projects requiring a General Plan Amendment (GPA), and 1,000 daily trips for projects not requiring a GPA.
- **Institutional/Government and Public Service Project:** The project land uses could not be classified as Institutional/government and public service land uses, including police stations,

fire stations, government offices, utilities, public libraries, community centers, and refuse stations. Therefore, this criterion is not applicable for the project.

- **Specific Land Use Screening:** As included in the VMT Guidelines, local parks, daycare centers, student housing projects on or adjacent to a college campus, local serving gas stations, banks, and K–12 public schools could be screened out from detailed VMT analysis. As such, the elementary school component, as well as the park/open space component of the project could be screened out using this criterion and a detailed VMT analysis will not be required.
- **Low VMT Area Screening:** The project site was evaluated using City of Hanford VMT Screening Tool to determine if the project is located within a low VMT area. Per the VMT Screening Tool, the project comprises of Kings County Association of Governments (KCAG) Travel Demand Model's traffic analysis zone (TAZ) # 651 and 652. This site is currently vacant, with these TAZs having nominal existing household or employments. As such, there's no sufficient data available to determine whether these TAZs are expected to have a low VMT profile. Therefore, the project could not be screened out using this criterion.

As noted above, the retail and the school components of the project is screened out using the screening criteria and no further VMT analysis would be required for these components. However, the residential component of the project doesn't meet any of the screening criteria identified in the guidelines. Therefore, a detailed VMT analysis was conducted to evaluate the VMT impact of the residential component.

2.2.2 VMT Metrics and Thresholds

The VMT Guidelines provide guidance regarding VMT analysis based on land use types. It recommends use of VMT per capita metric to evaluate residential land uses.

The guidelines also established Kings County as the region and 13% as the threshold for comparison of VMT metrics. Therefore, if the project VMT per capita exceeds 87% of corresponding Kings County baseline average VMT per capita, the project would have a significant VMT impact. For projects that require a detailed VMT analysis, the guidelines recommend use of KCAG model to conduct the VMT analysis. Therefore, KCAG model was used for the VMT evaluation of the project. Numerical values for the VMT metric threshold have been obtained from Table E: Significance Thresholds for VMT Analysis of the guidelines.

2.2.3 Project Traffic Analysis Zone Update

To calculate the project VMT, the first step was to update the traffic analysis zones (TAZs) in the model that include the project area. The project should be isolated in the travel model to estimate project VMT. The KCAG model includes ability to split or add new Traffic Analysis Zones (TAZs). Therefore, four separate TAZs were added to the model to incorporate the project's single-family, multifamily, school, and retail land uses. Single-family and multifamily residential uses have been separated into two TAZs because they have different household characteristics such as household size and household income. Typically, single-family residential developments have a higher household size, higher auto ownership, and higher income compared to multifamily developments. Creating new TAZs for the project help isolate project VMT and determine project specific VMT impact.

KCAG model is a socioeconomic data-based model. Therefore, in addition to the number of households, the model requires other household characteristics such as household income and household size as inputs to the socioeconomic database. The household attributes such as size and income determine the number of trips and their trip lengths. For example, based on ITE *Trip Generation Manual*, (11th edition), a single-family dwelling unit will have 9.4 daily trips, whereas a multifamily unit will have 6.7 daily trips in average. Generally, higher household sizes contribute to higher number of trips and similarly higher income households have more and longer trips. The trip rates in the travel model are disaggregated by different household attributes which are based on regional household travel survey, and census data. These household variables for the project dwelling units were obtained from similar TAZs within the City. Appropriate socioeconomic data for each of the residential land uses were included in the model prior to conducting the VMT analysis model run.

It should be noted that though the school and retail component of the project were screened out, two separate TAZs were created in the model to include these land uses. Inclusion of retail and school components will appropriately reflect the internal capture within the project. That is because, presence of retail in proximity of residential uses will help reduce the overall VMT of the project. The elementary school and retail land uses were converted to model socioeconomic data including school enrollment and employment categories using land use conversion factors for inclusion in the model. The land use to employee conversion factors were developed using ITE *Trip Generation Manual*, 11th edition. The ITE trip generation manual includes trip generation rates for different land use categories by different units such as square footage, number of units, and/or number of employees. Employee/square footage rate was determined for these uses by dividing the daily trip rate per 1,000 sf by daily trip rate per employee. This ratio was used to estimate number of employees per square feet for the retail use which in turn was used to estimate total project retail employees. Model run was conducted for this updated model after incorporating the project land uses as described above. The outputs from this updated model run were utilized to estimate project specific VMT metrics. No project specific roadway network modifications were conducted for the model runs.

2.3 VMT ANALYSIS

Table 2-A shows the result of the VMT analysis for the residential component of the project. As shown in Table 2-A, VMT per capita for residential component of the project is 4.2 percent higher than the regional threshold. As such, based on the VMT analysis, the residential component will have a significant VMT impact.

Detailed VMT calculation for the project is included in Appendix A.

2.4 VMT REDUCTION MEASURES – PROJECT DESIGN FEATURES AND MITIGATION MEASURES

When a significant CEQA impact is identified, the project must identify feasible mitigation measures to avoid or substantially reduce that impact. These measures can also be incorporated as a part of project design, local plans, policies, or regulations. Project design features that encourage mode shift from automobiles to transit or non-motorized modes can therefore help reduce project VMT. Typically, VMT reduction and benefits from these project design features are not accounted in the

project VMT calculations conducted using the regional travel demand model. Therefore, VMT reduction credit may be accounted for these design features like VMT mitigation measures to help reduce the project's VMT impact.

2.4.1 Limitation of Travel Demand Models Runs

Though travel models provide a detailed VMT estimate based on the regional and project trip patterns, they have limited ability to refine project VMT based on project design features or internal circulation patterns for mixed-use projects or specific plans. As such, project design including project site plan, internal street connectivity, adjacency of complementary land uses, availability of active transportation facilities and transit facilities among other project design features help reduce VMT further by reducing vehicle dependency and encouraging use of alternative transportation modes.

Therefore, the project VMT was further refined to account for the effect of project design features. The project design features were obtained from the project applicant.

Table F of the City's VMT Guidelines provides a list of mitigation measures/project design features that would be appropriate/feasible for implementation within the City. These measures were generally shortlisted from the *Handbook for Analyzing Greenhouse Gas Emission Reductions, Assessing Climate Vulnerabilities, and Advancing Health and Equity*, dated December 2021 (CAPCOA Green Book). The CAPCOA Green Book identifies several measures/design features that can reduce vehicular VMT based on empirical research data. The CAPCOA Green Book identifies types of environments (urban/suburban/rural) within the state where each measure will be applicable or appropriate to implement. As such, given that the City of Hanford is the largest major urban center within Kings County, VMT reduction methodologies and factors, that are appropriate for urban/suburban areas were reviewed to determine what measure may be applicable for this project. The CAPCOA Green Book also includes methodologies to estimate VMT reductions due to each of the measures/features. As such, using VMT reduction methodologies from the CAPCOA Green Book within the City would be appropriate as long as those measures are quantified using data that are applicable to the City. The methodologies from CAPCOA were tailored to reflect City of Hanford conditions where applicable and data for City of Hanford was available.

The following section offers project design features and mitigation measures that may potentially decrease the project VMT impact. Potential VMT reductions have been estimated using CAPCOA methodologies tailored to City of Hanford where applicable. However, given the uncertainty of the potential reduction in VMT as per the CAPCOA measures, the estimates provided in this analysis may not be achievable. Therefore, as a conservative approach, the VMT impact of the project has been considered significant and unavoidable.

2.4.2 Project Design Features

Evaluation of VMT reductions should be evaluated using state-of-the-practice methodologies recognizing that many of the VMT mitigation strategies/project design features are dependent on resident performance over time. As indicated before, VMT reduction that can be achieved by the project design features have been estimated using Table F of the City's VMT Guidelines, which was developed using the CAPCOA Green Book. The methodologies and factors used to estimate VMT reduction have been modified to be applicable to City of Hanford, wherever possible. Following is a

detailed description of project design features and the corresponding potential reduction that could be achieved with implementation of these measures.

Improve Street Connectivity: The project proposes to provide an internal circulation network with higher density of intersections which would help increase street connectivity, reduce trip lengths and promote use of alternative transportation modes for traveling within the site. CAPCOA Green Book, identifies measure **T-17: Improve Street Connectivity** to evaluate project street network. The measure is recommended as an appropriate design feature for plans within urban or suburban areas. The proposed project is not located in a heavily urbanized area or a suburban community. Yet, the City is the urban core of Kings County and as identified in the guidelines, majority (78 percent) of trips are contained within the City. As such, the City mostly operates as a self-sustaining community with majority of residents living and working within the City limits. Therefore, a community plan such as the proposed project would qualify under measure T-17 if it further enhances the street connectivity in addition to promoting active transportation elements that would help in reducing the project's VMT. The project proposes to create an interconnected community with residential, commercial, educational, and recreational land uses, with addition of active transportation elements and increased intersection density. Developments with single land use type in suburban/rural settings are less likely to encourage non-motorized modes/cause mode shift. However, mix of uses within a development along with appropriate design features can potentially influence mode shift for short trips. For example, retail uses within the development can attract some shopping trips from within the development by alternative mode whereas those trips would be automobile trips in the absence of other uses within the development. Therefore, applying measure T-17 from the CAPCOA Green Book would be appropriate for calculating reductions in project's VMT.

Measure T-17 estimates that an increased density of vehicular intersections improves street connectivity and helps in reduction in GHG emissions and corresponding VMT. As included in the CAPCOA handbook, this measure could be applied to a project for:

> *'Projects that increase intersection density would be building a new street network in a subdivision or retrofitting an existing street network to improve connectivity (e.g., converting cul-de-sacs or dead-end streets to grid streets)'.*

The measure establishes the following numerical formula of VMT reduction due to increased intersection density and improved street connectivity:

$$A = \frac{B - C}{C} * D$$

Where,

A = Percent Reduction in GHG/VMT emission from vehicle Travel
B = Intersection Density in project site with measure
C = Average Intersection Density for Typical developments (36)
D = Elasticity of VMT with respect to intersection density (-0.14)

The CAPCOA Green Book establishes the variable C using an average density of intersections within a square mile in a typical development as included in the *Proposed Trip Generation, Distribution, and Transit Mode Split Forecasts for the Bayview Waterfront Project Transportation Study*, Fehr & Peers. 2009. This establishes the average suburban intersection density for the entire United States. Additionally, these intersections should be at either termini of a block face measuring 750-800 ft or other intersections within the City that operate as locations addressing traffic circulation/operations issues within the jurisdiction. As explained earlier, while the City doesn't qualify as a typical suburban City, the trip characteristics of the City demonstrate that it is a self-sustaining community with majority of the trips contained within the City limits. Therefore, assuming the metrics of a suburban community presents a conservative estimate since such communities have more commuter trips than trips contained within the City. As such, assuming the metrics of a suburban community presents a conservative estimate while applying this measure for the proposed project.

Additionally, to determine applicability of this measure within the City, similar intersections within the City were identified and the intersection density was estimated by dividing the total intersection number by the City area. The City area was obtained from the Kings County Geographic Information System (GIS) database. It was estimated that the City of Hanford contains approximately 552 such intersections within an area of approximately 17.4 square miles. Therefore, the City currently has an approximate intersection density of 31.7 intersections per square mile, which is lower than the countrywide average of 36. Based, on the formula identified under measure T-17, a lower existing regional/citywide intersection density (compared to the countrywide average of 36 intersections per square mile) would result in a greater reduction on project's VMT. Since the City's existing average intersection density is lower that the countrywide average identified under measure T-17 in the CAPCOA Green Book, as a conservative estimate, the countrywide average was used to determine the percentage of VMT reduction.

Additionally, the CAPCOA Green Book adapts the variable D, Elasticity of VMT with respect to intersection density from the report 'Does Compact Development Make People Drive Less?' published in the Journal of the American Planning Association, 2016, authored by Mark R. Stevens. The elasticity was determined from a meta-regression analysis from data of fifteen studies, having studied in different urban/suburban geographic region within the Country. As explained earlier, while the City doesn't qualify as a typical suburban City, the trip characteristics of the City demonstrate that it is a self-sustaining community with majority of the trips contained within the City limits. Therefore, assuming the metrics of a suburban community presents a conservative estimate since such communities have more commuter trips than trips contained within the City. Therefore, applying this variable is applicable to the City to determine percentage of VMT reduction.

The project consists of multiple land use types (residential, retail, school, recreational) and the amount of internal capture (trips that can be fulfilled within the project; with both origin and destinations within the project site) can potentially increase with diversity of land uses. Increased intersection density can help facilitate greater number of these short trips to be accommodated by non-motorized modes (pedestrian/bike). To determine the project intersection density, a similar approach used in determining the intersection density for the City was applied. Intersections within the project and project driveways were evaluated to determine the intersection density. Project driveways and intersections inside and at the periphery of the project providing multimodal cross-

traffic access between different project land uses were included to determine the project intersection density. Figure 2-1 illustrates these intersections of the project. As shown in Figure 2-1, the project design includes 19 such intersections. The project site is approximately 304 acres, or 0.475 square miles area. Therefore, the intersection density of the project would be approximately 40 intersections per square mile.

Since project intersection density is greater than the countrywide average intersection density of 36 intersections per square miles as identified in the CAPCOA Green Book, it could be estimated that the project will help reduce project VMT due to a higher-than-average density of network intersections along with implementation of the project design features. The percentage of VMT reduction for the project could be determined as:

$$\%\, VMT\ reduction = \frac{40 - 36}{36} * (-0.14)$$

- Or -1.56 percent

As such, due to these improved network connection as a project design feature, the project may achieve 1.56 percent reduction in VMT compared to the project VMT that was estimated from the regional travel demand model. However, given the uncertainty of the effectiveness/lack of localized substantial evidence of the above listed VMT reduction measure, no VMT reduction was assumed for this project design feature as a conservative approach.

Provide Electric Vehicle (EV) Parking and EV Charging Infrastructure: Accessible EV parking and provision of charging for electric vehicles in the multifamily and retail areas of the project can possibly encourage the use of EVs. Designating EV parking with charging stations at favorable locations (e.g. near main entrances or major access points) can raise awareness about using EV to reduce GHG emissions. The latest California Green Building Standards (CALGreen), California Building Code, requires provision of infrastructure to accommodate electric vehicle chargers for new land use developments. Additional electric charging stations, in addition to CALGreen requirements, can be considered as a GHG/VMT mitigation measure according to CAPCOA. While CALGreen requirements will be met for the single family, retail, and school uses of the project, additional EV chargers (in addition to CALGreen requirements) are proposed for the multifamily use of the project to reduce project VMT impacts.

CALGreen code requires multifamily projects to provide EV charging stations for 5% of the total project parking with an additional 35% that would be EV capable and EV ready. While it is understood that provision of electric charging stations might not reduce VMT, it will reduce GHG which can be considered equivalent to reduction in VMT. CAPCOA transportation measure "**T-14. Provide Electric Vehicle Charging Infrastructure**" was used to quantify VMT reduction due to additional EV chargers proposed for the multifamily part of the project. Number of additional electric chargers required to achieve maximum GHG reduction and therefore VMT reduction, were estimated using methodology identified in CAPCOA. Project specific information such as project multifamily trip generation and carbon intensity factor for the local electricity provider (from CAPCOA appendix table E-4.3) were used to estimate VMT reduction that can be achieved. A maximum of 11.9 percent VMT reduction can be achieved by provision of 11 additional (in addition

to CALGreen requirements) EV chargers. The 11.9 percentage reduction of VMT is only applicable to multifamily VMT and therefore this reduction was applied for the VMT generated by multifamily dwelling units of the project. As such, application of this VMT reduction may reduce the overall project residential VMT per capita by 2.9 percent. However, given the uncertainty of the effectiveness/lack of localized substantial evidence of the above listed VMT reduction measure, no VMT reduction was assumed for this project design feature as a conservative approach.

Pedestrian Infrastructure: The project proposes to provide pedestrian improvements/sidewalks both internal to the project site and along the project frontage. Provision of sidewalk/pedestrian improvements encourage people to walk to various uses inside the project such as retail, school, and parks, instead of driving and thus reduces VMT. The Project would include a 10' concrete bike/pedestrian trailway around the 2.25 mile collector loop road. This would be used by the residents for accessing different uses of the project. This trailway will be integrated with the external pedestrian and bike facilities around the project, connecting the residents with the surrounding neighborhood for easy access without vehicular dependency and enhancing the neighborhood's active transportation network. As such, such an integrated active transportation network is estimated to reduce car dependency, at least for the non-commuting trips, like for recreational and other non-work purposes trips within the neighborhood and for destinations within walking/biking distance. CAPCOA transportation measure "**T-18. Provide Pedestrian Network Improvement"** was used to estimate the VMT reduction due to project related enhancements in pedestrian access and connectivity. The CAPCOA methodology requires existing sidewalk length in the project surroundings in addition to the length of sidewalk being provided by the project. In order to estimate the existing sidewalk length, a survey was conducted along the proposed project frontage. Based on the survey, it was determined that the project surroundings has minimal sidewalk coverage and therefore approximately 1 mile of sidewalk was assumed for calculation purposes. The project proposes to add approximately another 8 miles of sidewalk/pedestrian access in the entire project area. Therefore, this mitigation measure may reduce the project's VMT by approximately 6.4 percent which is the maximum reduction that can be achieved by this measure. However, "improve street connectivity" measure described above inherently accounts for bike and pedestrian facilities of the project and is believed to achieve the suggested VMT reduction in conjunction with these facilities. Therefore, no separate VMT reduction has been accounted due to this project design feature.

Bicycle Infrastructure/Improvements: The project proposes to construct a total of 2.5 miles of bike lanes along project frontage. Similar to pedestrian facilities, these bicycle design features included in the project can encourage increase active transportation mode share in the area. The CAPCOA manual was utilized to estimate the reduction of project VMT due to proposed bicycle improvements. Specifically, CAPCOA transportation measure "T-19A: Construct or Improve Bike Facility" was deemed applicable to estimate the VMT reduction due to project bicycle features. According to the measure, providing bicycle infrastructure helps to improve biking conditions within an area. This encourages a mode shift on the roadway parallel to the bicycle facility from vehicles to bicycles, displacing VMT and thus reducing GHG emissions. Based on CAPCOA estimates, the project bicycle design features have a potential to reduce up to 0.01 percent of the project VMT. Similar to the "pedestrian infrastructure" described above, no VMT reduction was accounted for this project feature.

Traffic Calming Measure: This measure would encourage walking and bicycling instead of using a vehicle through the implementation of pedestrian and bicycle safety and traffic calming measures. Traffic calming would reduce motor vehicle speeds through features such as marked crosswalks, raised intersections, median islands, tight corner radii, roundabouts or mini-circles, count-down signal timers, curb extensions, speed tables, raised crosswalks, on-street parking, planter strips with street trees, chicanes/chokers, and similar improvements. At the intersections between vehicular street network and the trail loop, the project proposes to include enhanced crossing that would be designed to easily identify the pedestrian/bike crossings for conflict free and safe maneuver. Block walls along the collector loop, adjacent to these trails have been specifically designed with pedestrian pathway connections to allow residents within the Project have easy access to these trails for walking, biking, and socializing with the community. As such, the project proposes to develop a safe and integrated active transportation network using bike and pedestrian trails that will cater to the residents' recreational requirements and thus help reduce such trips to distant locations. This measure is also in the 2021 CAPCOA guidance as **Measure T-35**. Although the 2010 guidance notes a potential decrease in VMT of up to 1 percent, the 2021 guidance includes traffic calming as a supporting, non-quantified measure. While implementation of this measure may potentially help in some reduction in project VMT, due to lack of substantial evidence no VMT reduction has been attributed to this project design feature.

Table 2-B provides methodology, assumptions, and parameters used in the estimation/calculation of VMT reduction for the project along with the potential amount of VMT reduction that can be achieved.

In conclusion, VMT mitigation measures/project design features and strategies aim to promote overall mobility with the goal of reducing VMT and reducing greenhouse gas emissions. As indicated previously, the above project design features have potential to reduce project's VMT by approximately 4.4 percent. The above listed VMT reduction measures demonstrate the project's best faith effort in reducing the project's VMT impact. However, given the uncertainty of the effectiveness of the above listed VMT reduction measures, no VMT reduction was assumed for the project design features as a conservative approach. Therefore, the project will have a significant transportation impact under CEQA. If implemented, these measures and strategies may need to be monitored for their usage and effectiveness.

2.4 LIST OF CHAPTER 2.0 FIGURES AND TABLES

- Figure 2-1: Project Intersection Density
- Table 2-A: Regional Threshold and Project VMT per capita
- Table 2-B: Calculated VMT Reduction with Project Mitigation

Table 2-A: Baseline project and regional threshold Project VMT per Capita

Threshold[1]	Project	Difference	Percentage Difference
8.99	9.36	0.38	4.2%

Source: KCAG Model.
The Kings County VMT per capita was obtained from City of Hanford VMT Guidelines, (November 2022).
VMT = vehicle miles traveled

Table 2-B: Calculated VMT Reduction with Project Mitigation

Mitigation Measure (Number corresponds to the 2021 CAPCOA Handbook)	Formula	Comments	Calculated Reduction in VMT (%)
Land Use (Maximum Reduction 30%)			
T-17: Improve Street Connectivity	A = ((B-C)/C) * D, Where B = Intersection density in project site with measure, C =Average intersection density (36 U.S. average), and D = Elasticity of VMT with respect to intersection density (-0.14 constant)	As described above, a total of 19 intersections were considered to estimate the project intersection density. The project site is approximately 304 acres. Therefore, the intersection density of the project would be approximately 40.0 intersections per square mile. A = ((40.0-36)/36)*0.14 A = 0.11*0.14 = 1.56%	1.56% (not used)
Parking or Road Pricing/ Management (Maximum Reduction 35%)			
T-14: Provide Electric Vehicle Charging Infrastructure	A= [B * D * (F−E) * (G−(H * I * K * L))] / (-C * J), Where B= Number of chargers installed at site, C= Total vehicles accessing the site per day, D= Average number of PHEVs served per day per charger installed (2) , E= Percent of PHEV miles in electric mode without measure (46), F= Percent of PHEV miles in electric mode with measure (80), G= Average emission factor of PHEV in gasoline mode (205.1), H= Energy efficiency of PHEV in electric mode (0.327), I= Carbon intensity of local electricity provider, J= Average emission factor of non-electric vehicles accessing the site (307.5), and K= conversion from lb to g (454), and L= Conversion from kWh to MWh (0.001)	The project proposes to provide an additional (in addition to CALGreen requirement) 11 electric charging stations for the multifamily portion of the project. Provision of electric chargers at multifamily will reduce 11.9 percent of GHG/VMT. 11.9 percent of multifamily VMT is approximately equal to 2.9 percent of total project residential VMT as shown in the appendix calculations.	2.9% (not used)
Neighborhood Design (Maximum Reduction 10%)			
T-18: Provide Pedestrian Network Improvement	A = ((C/B)-1) * D, Where B = Existing sidewalk length in study area, C = Sidewalk length in study area with measure, and D = Elasticity of household VMT with respect to the ratio of sidewalks-to-streets (-0.05 constant)	Based on the survey, the project study area includes approximately 1 mile of of sidewalk. The project proposes to add approximately another 8.0 miles of sidewalk/pedestrian access.	6.4% (not used)

T-19-A: Construct or Improve Bike Facility	A = (B*(F/I)*(C+D)*E*G)/H, Where B = Percent of plan/community VMT on parallel roadway, C = Active transportation adjustment factor, D = Credits for key destinations near project, E = Growth factor adjustment for facility type, F = Annual days of use of new facility, G = Existing regional average one-way bicycle trip length, H = Existing regional average one-way vehicle trip length, and I = Days per year (365)	Variables C, D, E, F, G, and H were obtained from appropriate tables listed in CAPCOA handbook. It was assumed that 20% of VMT on the parallel roadway is from the community. A = (0.2*(320/365)*(0.0029+0.000)*1*2.2)/11.7 A = (0.2*0.88*0.0034*1*2.2)/11.7 A = 0.01%	0.01% (not used)
		Potential VMT Reduction from All Subsectors[1]	4.41% (not used)
		Total VMT Reduction Required	4.2%

Source: Handbook for Analyzing Greenhouse Gas Emission Reduction, Assessing Climate Vulnerabilities, and Advancing Health and Equity, California Air Pollution Control Officers Association (CAPCOA), December 2021.

[1] Per CAPCOA total VMT reduction for multiple strategies within same subsector is calculated using the equation: 1-(1-A)*(1-B)*(1-C)... where A, B, C are equal to individual mitigation strategy reduction percentages.

APPENDIX A:

VMT CALCULATIONS

LSA

VMT Analysis - Singh - Hanford

Table 1 - VMT per Capita Calculations

2015	Project Single Family	Project Multifamily	Total Project Residential	Threshold
Households (a)	697	449	1,146	
Population (b)	2,096	1,169	3,265	
Homebased (HB) VMT ('c)	23,222	7,348	30,570	
HB VMT per capita (d = c/b)	11.08	6.28	9.36	8.99

Source: KCAG Model

The Kings County VMT per capita threshold was obtained from City of Hanford VMT Guidelines, (November 2022).

VMT = vehicle miles traveled

Appendix F

Water Supply Assessment

Water Supply Technical Memorandum

Singh Property Project

September 2022

Prepared For:

City of Hanford
317 N Douty Street
Hanford, CA, 93220

Prepared By:

4Creeks, Inc.
324 S Santa Fe, Suite A
Visalia, CA 93292

Table of Contents

1.0 Introduction and Background 4
1.1 Water Agencies and Providers 4
1.2 Water System and Supply 4

2.0 Project Description 6
2.1 Project Location and Setting 6
2.2 Description of Proposed Project 8

3.0 Project Water Demands 13
3.1 Assumptions 13
3.2 Project Water Demands 14
3.3 Hanford Water Conservation Measures 15
3.4 City-Wide Future Estimated Water Use 17
3.5 Acquisition of Water 17

4.0 Inclusion in Adopted Comprehensive Infrastructure Master Plan 18

5.0 Dry Year Water Supply Adequacy (Water Code Section 10910(C)(4)) 18

6.0 Comparison of Project Demand to Water Supply Sources 21

7.0 Water Supply Rights and Entitlements; Historic Water Usage 24

7.1 Tulare Lake Subbasin 24

8.0 Contingency Analysis Applicability 25

9.0 Assessment Findings 25

10.0 Environmental Checklist and Discussion 26

References 28

Pages Excerpted From City of Hanford 2020 UWMP ..... Appendix A

Figures

Figure 2-1: Project Site Vicinity Map 7
Figure 2-2: Project Site Plan and Phasing 12

Tables

Table 1-1: Public Water Systems....5
Table 2-1: Surrounding Land Uses....6
Table 2-2: Summary of Proposed Land Uses....10
Table 3-1: Project Water Demands....14
Table 3-2: Retail Water Supplies....17
Table 5-1: Retail Water Supplies: Basis of Water Year Data....19
Table 5-2: Retail Water Supplies: Normal Year Supply and Demand Comparison (AF)....19
Table 5-3: Retail Water Supplies: Single Dry Year Supply and Demand Comparison (AF)....19
Table 5-4: Retail Water Supplies: Multiple Dry Years Supply and Demand Comparison (AF)....20
Table 6-1: Comparison of Planned Land Uses to Proposed Project....22
Table 6-2: Anticipated City Water Demands and Available Supply: Years 2021 – 2045....23

Acronyms

AF	Acre-Feet
AFY	Acre-Feet per Year
CEQA	California Environmental Quality Act
CPUC	California Public Utilities Commission
COD	Critically Over Drafted
CWC	California Water Code
DMM	Demand Management Measures
DWR	Department of Water Resources
EIA	U.S. Energy Information Administration
EPA	U.S. Environmental Protection Agency
FAR	Floor Area Ratio
GMP	Groundwater Management Plan
GPD	Gallons Per Day
GPE	Gallons Per Employee
GSA	Groundwater Sustainability Agency
GSP	Groundwater Sustainability Plan
IE	Irrigation Efficiency
JPA	Joint Powers Agreement
IRWMP	Integrated Regional Water Management Plan
MAWA	Maximum Applied Water Allowance
MOU	Memorandum of Understanding Regarding Urban Water Conservation in California
MWELO	Model Water Efficient Landscape Ordinance
PWS	Public Water System
SGMA	Sustainable Groundwater Management Act
SOI	Sphere of Influence
sqft	Square Feet
UGB	Urban Growth Boundary
UWMP	Urban Water Management Plan
WSA	Water Supply Assessment
WSCP	Water Shortage Contingency Plan

1.0 Introduction and Background

This Water Supply Assessment (WSA) has been prepared pursuant to the requirements of Senate Bill 610 ("SB 610"), requiring public water agencies, parties, or purveyors that may supply water to certain proposed development projects to prepare a WSA for use in environmental documentation for such projects, pursuant to the California Environmental Quality Act (CEQA). The City of Hanford is conducting an environmental review under the requirements of CEQA for the proposed Singh Property Project in the City of Hanford, California.

The WSA will evaluate if the water supply determined to be available during normal, single dry, and multiple dry years will meet the Project water demand, in addition to existing and planned future uses in the City of Hanford. This WSA contains information from the City of Hanford 2020 Urban Water Management Plan (UWMP).

SB 221 defines a subdivision as proposed residential development of more than 500 units, except that for a water agency with fewer than 5,000 service connections, a subdivision includes a residential development project that would account for an increase of 10 percent or more in the number of the agency's existing service connections. Such approvals must be conditioned on the requirement that a sufficient water supply shall be available to serve the project, where proof of the availability of that supply must be based on a WV prepared by the agency providing water service to the project. As with SB 610, a "sufficient water supply" under SB 221 means that total water supplies available during normal, single-dry, and multiple-dry years within a 20-year projection will meet the projected demand associated with the proposed subdivision, in addition to existing and planned future uses, including agricultural and industrial uses. Therefore, because the Singh Property Project is proposing a development of 1,140 units, a WSA is required.

1.1 Water Agencies and Providers

The City of Hanford provides water supplies to the project area. The Project is currently within the Hanford City Limits. Hanford is not part of any regional alliance for water management planning purposes.

The City of Hanford is an urban retail water supplier, as defined by CWC §10608.12. The City of Hanford does not provide water wholesale. The City currently uses local groundwater as the sole source of water supply and does not purchase or import water from any other water suppliers or entities. The City of Hanford pumps from the Tulare Lake subbasin, which has been designated by the DWR as critically over-drafted (COD).

1.2 Water System and Supply

The Tulare Lake Subbasin of the San Joaquin Valley Groundwater Basin is the sole source of water for the City of Hanford. The Kings County Water District (KCWD) is the principal groundwater management agency. KCWD is a member agency of the Mid-Kings River GSA. KCWD has historically managed groundwater through the conjunctive use of surface water.

KCWD and the City of Hanford participate in multiple water conservation and education programs, contributing both funds and staff time. The agricultural users within the KCWD service area use the delivered water responsibly through various highly efficient irrigation systems. Additionally, water deliveries are metered and billed based on volume used and customers, therefore, have an incentive to minimize water usage.

KCWD currently delivers surface water to multiple water and canal companies. Utilization of surface water supplies decreases the demand for groundwater, serving as a form of in-lieu recharge. KCWD strives to provide surface water at a rate low enough to customers to encourage utilizing as much surface water as possible before resorting to groundwater pumping.

KCWD operates 25 direct groundwater recharge basins and also leaves many earthen canals unlined to recharge through seepage. The total recharge surface area, including both basins and unlined canals, is approximately 1,300 acres; the amount of recharge varies from year to year, and the most significant recharge effects occur during wet years.

The City of Hanford operates one Public Water System (PWS), as listed in Table 1-1. Public Water Systems are the systems that provide drinking water for human consumption and these systems are regulated by the State Water Resources Control Board (Board), Division of Drinking Water.

Table 1-1: Public Water Systems

Public Water System Number	Public Water System Name	Number of Municipal Connections, 2020	Volume of Water Supplied, 2020 (AF)
1610003	City of Hanford	17,965	11,714

2.0 Project Description

2.1 Project Location and Setting

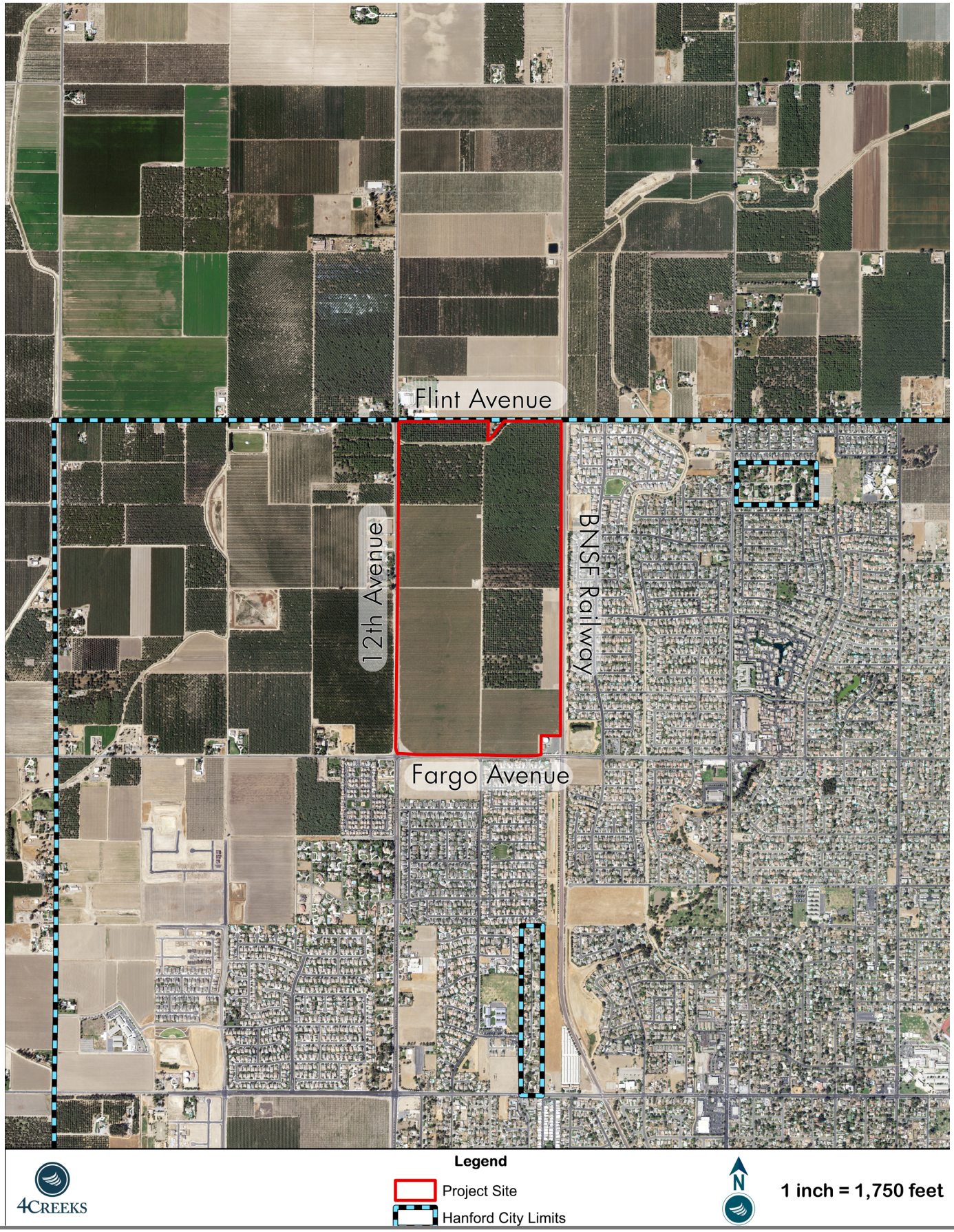
The proposed Project is located on approximately 304 acres in the northern portion of the City of Hanford, California. The Site is generally bound by Fargo Avenue to the south, 12th Avenue to the east, the BNSF Railway to the west, and Flint Avenue to the north. The site is comprised of two parcels: APN 007-010-031-000 and 007-360-016-000. APN 007-010-031-000 is 151.96 acres consisting of agricultural uses, mainly walnut orchards and vineyards. An agricultural irrigation canal, irrigation equipment, dirt access roads, and a storage building currently exist in this parcel. APN 007-360-016-000 is 150.08 acres consisting of agricultural uses, mainly walnut orchards, vineyards, and field crops. Irrigation equipment and dirt access roads currently exist in this parcel. The entire site is within the City of Hanford limits. The site is currently used for agricultural uses, however, the site has been designated by the City's General Plan for Low, Medium, and High-Density Residential, as well as Neighborhood Commercial.

The proposed Project site is in a developing area of the City of Hanford. Currently, agricultural uses and rural residential homes are located to the west and north of the site. Hanford Christian School is also located north of the site. Single Family Homes and vacant land exist to the south. To the east are Single Family Homes and the BNSF Railway. Current and Planned uses of adjacent parcels surrounding the Project site are shown in Table 2-1:

Table 2-1: Surrounding Land Uses

Location	Existing Land Use	General Plan Designated Land Use
North	Agriculture, Hanford Christian School	Agriculture, Hanford Christian School
South	Low-Density Residential, Vacant	Neighborhood Mixed Use, Low-Density Residential
West	Agriculture, Rural Residential	Low, Medium, and High-Density Residential
East	Low-Density Residential	Low-Density Residential

Figure 2-1: Project Site Vicinity Map



2.2 Description of Proposed Project

The Project Applicant is proposing to develop Low-Density residential, Medium-Density residential, High-Density residential, and Neighborhood Commercial land uses on approximately 304 acres in Hanford, California. The Project will also feature public park space, a school zone, and a stormwater retention basin.

Residential

The proposal features several different types of housing, totaling 1,146 residential units at buildout. The units are broken down as follows:

- Low-Density Residential: 697 Units
  - ◊ 399 units averaging 5,000 sqft lot size, 5 dwelling units (du) / acre
  - ◊ 185 units averaging 7,200 sqft lot size, 4 du/acre
  - ◊ 113 units averaging 11,900 sqft lot size, 2 du/acre
- Medium Density Residential (Townhomes): 235 Units, 9 du/acre
- High Density Residential (Apartments): 214 Units, 17 du/acre

The architectural character of the Low-Density Homes will be designed with two styles: contemporary farmhouse and craftsman. Individual homes will have variations in shape, exterior finishes, and color palettes from adjacent homes to create visual interest along the streetscape. Low-Density residential homes will comply with the R-L-5 development standards per the Hanford Municipal Code.

The Medium Density Townhomes are comprised of 3-, 4- and 5-plexes. The architectural character of the townhomes will be designed with two styles: contemporary farmhouse and craftsman. Each architectural style will have 2 elevations. Townhomes will also include a combination of mid-floor balconies, rooftop patios, and ground-floor porches. The variation of architectural style, elevations, and color palette will provide 10-12 different building looks to create visual interest. Townhomes will have alley-loaded garages.

The High-Density Apartments will have variations in shape, exterior finishes, and color palettes from adjacent homes to create visual interest along the streetscape. High-Density residential apartments will comply with the R-H development standards per the Hanford Municipal Code.

Commercial

The proposed Project includes 6.92 acres of Neighborhood Commercial development in the southwest corner of the site at the corner of 12th Ave and Fargo Ave. There is a total of approximately 45,000 square feet of gross leasable commercial area. Anticipated uses at this location include two retail stores, a gas station, a restaurant, a drive-thru restaurant, and an outdoor food court. The commercial facilities are located to provide efficient access for the residents of the Project and the surrounding areas.

Parks, Trails, and Open Space

The Project will provide 38.5 acres of park space. This is mainly a large, central park within proximity of the other uses. A soccer/football field, basketball courts, and playgrounds can potentially be implemented in the park area. The project would include landscaped walkways connecting to other sections of the site.

Other Project Components

Other proposed uses include approximately 17.57 acres for a future school site and 7.12 acres for a drainage basin. Various other infrastructure improvements (water, stormwater, and wastewater infrastructure, roadway improvements, and related improvements) will be required by the Project.

Phasing / Construction Schedule

As currently planned, the Project has 5 phases. However, these phases are for 584 of the Low-Density homes. The rest of the project has not been phased out and will be constructed after the first 5 phases are complete, depending on market conditions. The proposed phasing is identified in Table 2-2 and shown in Figure 2-2. Although the exact timing of construction and buildout will be determined by market conditions, the Project Applicant, and the City, it is anticipated that the remaining land uses of the Project would be built out over 15 years. Although the remaining uses may be constructed at the same time, this Project will be assumed for this assessment to construct the remaining uses in this order:

Phase 6:

- Park
- Neighborhood Commercial
- Remaining Low-Density Residential

Phase 7:

- School
- High-Density Residential Apartments
- Medium Density Townhomes

Table 2-2: Summary of Proposed Land Uses

Phase 1	Gross Acreage	Net Acerage	Units	Construction Length	First Operation Year
LDR (5,000 sqft avg)	24.0	13.4	117	4 Years	2027
LDR (7,200 sqft avg)	20.0	11.2	68		
Phase 1 Total	44.0	24.7	185.0		
Phase 2					
LDR (5,000 sqft avg)	16.7	9.6	84	2 Years, 3 Months	2030
LDR (7,200 sqft avg)	13.3	7.3	44		
Phase 2 Total	**29.9**	**16.9**	**128.0**		
Phase 3					
LDR (5,000 sqft avg)	14.3	7.6	66	2 Years	2032
LDR (7,200 sqft avg)	9.6	5.6	34		
Phase 3 Total	**23.9**	**13.2**	**100.0**		
Phase 4					
LDR (5,000 sqft avg)	12.9	7.1	62	2 Years	2034
LDR (7,200 sqft avg)	9.4	6.4	39		
Phase 4 Total	**22.3**	**13.6**	**101.0**		
Phase 5					
LDR (5,000 sqft avg)	15.2	8.0	70	1 Year, 6 Months	2036
Phase 6					
Neighborhood Commercial	6.9	1.0	0	1 Year, 3 Months	2037
Park	38.5	0.0	0	3 Months	2036
LDR	52.2	30.9	113	5 Years, 6 Months	2041
Phase 6 Total	**97.7**	**31.9**	**113**		
Phase 7					
School	17.6	0.0	0	1 Year, 6 Months	2043
HDR	15.2	13.0	214	1 Year, 6 Months	2043
MDR	26.6	15.5	235	2 Years, 6 Months	2044
Phase 7 Total	**59.3**	**28.5**	**449**		

Site Circulation and Access

Vehicular access to the project is available via Fargo Avenue, Flint Avenue, and 12th Avenue. The site will have an access point from the south on Fargo Ave, from the west on 12th Ave, and two access points from the north on Flint Ave. Two smaller access points into the commercial area will be available on 12th and Fargo Avenues. The project includes new streets, courts, roundabouts, and pathways that provide full access to the project site. A street will loop around the Project Site to connect all parts of the development. A series of pedestrian sidewalks and trails would be provided throughout the site. The single-family homes will each contain a driveway for parking, as well as available parking on the street. The townhomes would contain at least a minimum of 470 off-street parking spaces, with at least half of the spaces covered. The apartments will provide at least the minimum of 428 off-street parking spaces, with at least half being covered. The commercial area will contain 169 parking spaces. During construction, workers will utilize existing parking areas and/or temporary construction staging areas for parking vehicles and equipment.

The Project will be responsible for the construction of internal roadways as well as for potential improvements to surrounding roadways to accommodate the Project. The Project includes sidewalks, a center median, and landscaping along the frontage roads and within the site itself.

Infrastructure

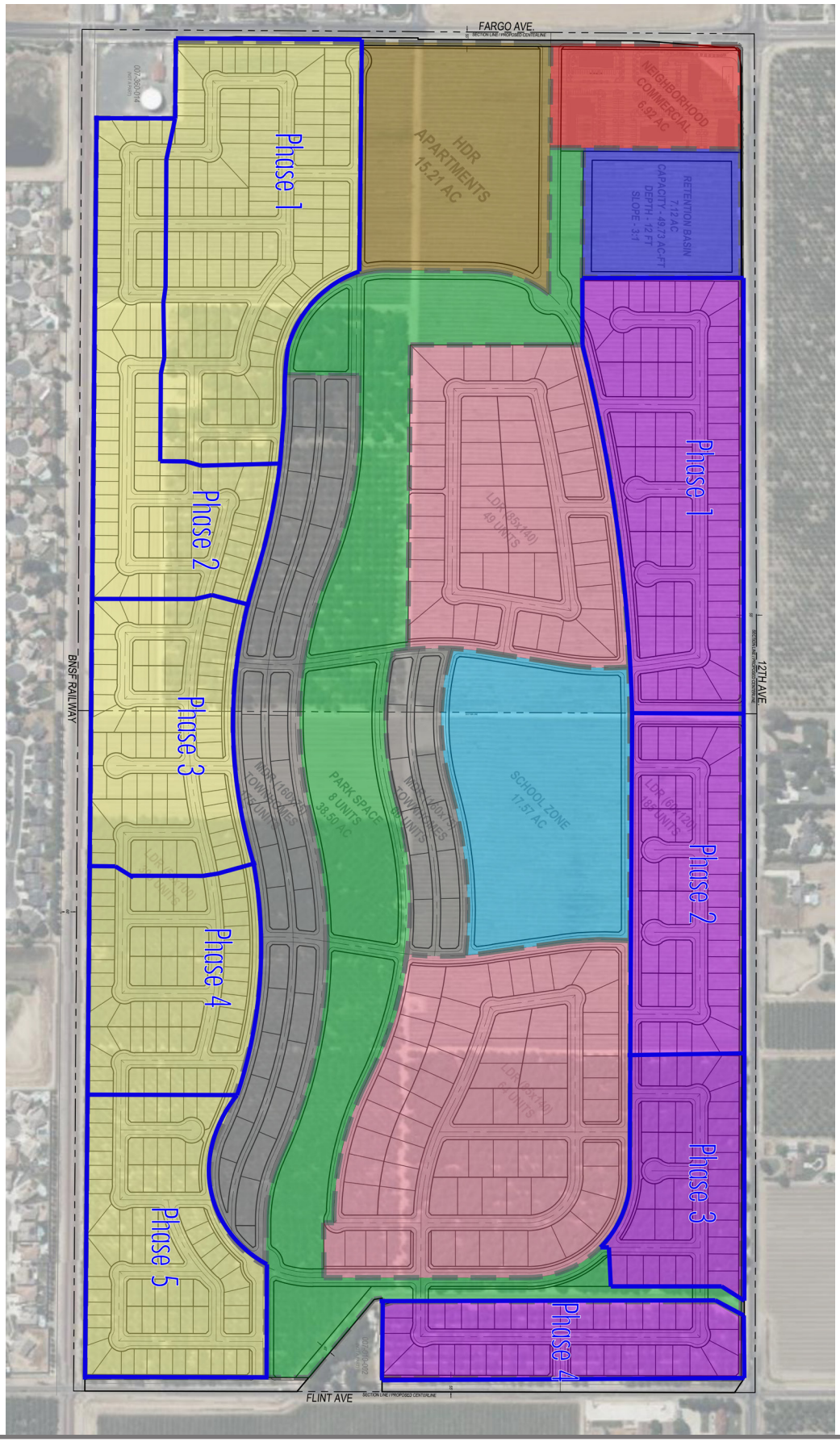
The Project will require connection to various City-operated utility and infrastructure systems. These include City-provided services such as sewer/wastewater, water, and some stormwater facilities. A stormwater basin will be provided on-site. Non-City provided infrastructure includes natural gas (to be provided by Southern California Gas Company) and electrical services (to be provided by Southern California Edison). The Project will be responsible for the construction of connection points to the City's existing infrastructure.

Other Public Agencies Approval and Consultation

The Project will require various permits and/or entitlements from regulatory agencies. Consultation may be required, and the City of Hanford will integrate the CEQA review with these related environmental review requirements. These may include, but not be limited to the following:

- Planned Unit Development Plan Approval
- Tentative Parcel Map Approval
- Tentative Tract Map Approval
- City of Hanford Variance Permit for wall heights
- San Joaquin Valley Air Pollution Control District – approval of construction and/or operational air quality permits
- Storm Water Pollution Prevention Plan
- Regional Water Quality Control Board

Figure 2-2: Project Site Plan and Phasing



3.0 Project Water Demands

3.1 Assumptions

Project water demand is estimated using information from Hanford's adopted 2020 Urban Water Management Plan (UWMP), the U.S. Energy Information Administration (EIA), a study by the Pacific Institute, and the California Department of Education. Project water demand is calculated on the following assumptions:

- Residential: The Project is proposing 1,146 residential units (see Table 2-2 for the breakdown of housing types).
- Household Size: According to the 2020 U.S. Census, the average household size in Hanford is 3 persons per household. Although some of the housing products/floor plans proposed by the Project would likely result in fewer or more than 3 persons per residence, the figure is being used to conservatively estimate Project water demand.
- Per Capita Water Use: According to the 2020 UWMP, residential uses accounted for 7,905 AFY (7,058,190 GPD) for a service area population of 61,326. Therefore, the average residential water demand in gallons per capita per day (GPCD) was 115.1 GPCD. The UWMP expects the average residential water use to decrease over time, projected at 5% by 2040. Projected GPCD per person obtained from the 2020 UWMP will be used to calculate projected water demand from the Project. This is inclusive of water used for outdoor landscaping in residential uses.
- Commercial: The project proposes 12,500 sqft of retail space, a 5,000 sqft gas station, an 11,000 sqft restaurant, a 6,000 sqft drive-thru restaurant, and a 10,500 sqft food court, for a total of 45,000 sqft of commercial space.
- Commercial Demands: To estimate the potential demand from commercial uses, gallons per employee per day (GED) were used. Although the uses listed above have been proposed, the final plan has not been approved for these specific uses. To be conservative, this WSA will assume that all of the commercial uses are the most water-intensive use: dry cleaning and laundry. According to the Pacific Institute study, dry cleaning and laundry demand 981 GED. An average dry cleaner or laundromat is 3,000 sqft with two employees.
- School: The Project is dedicating 17.57 acres to a new school. The type of school is not yet established, but the site is not large enough for a high school. It will most likely be an elementary school. Hanford's General Plan states that two new elementary schools will be planned on both sides of 12th avenue. According to the California Department of Education, the average elementary school enrollment is 468 students.
- School Demand: According to a study by the Pacific Institute, elementary and middle schools use 48.1 gallons per student per day (GSD). This number is based on a 225-day year and includes landscaping.
- Public Parks: The Project includes approximately 38.5 acres of parks/trails/recreational facilities. To be conservative, it is assumed that the entire park space acreage will be irrigated lawn and will require approximately 5 AFY per acre per year. This figure is based on information pertaining to water requirements for large, irrigated lawns such as golf courses in the region.

3.2 Project Water Demands

Based on the above assumptions, the Project water demand is calculated as follows:

Residential:

1,146 Dwelling Units X *3.0 Persons Per Dwelling Unit* = ***3,438 Persons*** X *115.1 GPCD* X *365 Days Per Year* = Total Number of Gallons Per Year

It is anticipated that when the project is complete in 2044, residential water use from the project will be 144,426,693 gallons per year (GPY), or approximately 443.2 AF per year. A breakdown of water demands for low-density residential, medium-density residential, and high-density residential is broken down in Table 3-1, below.

Table 3-1: Project Water Demands

Land Use	Phase 1 (DU)	Phase 2 (DU)	Phase 3 (DU)	Phase 4 (DU)	Phase 5 (DU)	Phase 6 (DU)	Phase 7 (DU)	Dwelling Units (Total)	Population	2044 Water Use (Gal/ Year)	2044 Water Use (AFY)
LDR	185	128	100	101	70	113	0	697	2091	87,840,668	269.5
MDR	0	0	0	0	0	0	235	235	705	29,616,294	90.9
HDR	0	0	0	0	0	0	214	214	642	26,969,732	82.8
Total	***185***	***128***	***100***	***101***	***70***	***113***	***449***	***1,146***	***3438***	***144,426,693***	***443.2***

Commercial:

(45,000 sqft of Commercial Space; Assuming Dry Cleaning and Laundromat ÷ 1500 sqft/Employee) X *981 GED* X *225 Operational Days a Year* = Total Number of Gallons Per Year

It is anticipated that the project will have a maximum Commercial water demand of 6,621,750 GPY, or 20.3 AFY, upon full buildout.

School:

468 Students X *48.1 GSD* X *225 Operational Days a Year* = Total Number of Gallons Per Year

It is anticipated that the project will have a maximum Commercial water demand of 5,064,781 GPY, or 15.5 AFY, upon full buildout.

Parks:

38.5 Acres X *5.0 AFY Per Acre* = 192.5 AFY

It is anticipated that the total Project would require approximately 671.5 AFY of water upon full buildout.

3.3 Hanford Water Conservation Measures

As identified previously, the Project would use approximately 671.5 AFY of water once completed.Hanford has an aggressive conservation program that has and will continue to reduce per-capita usage and therefore demands critical water sources. Hanford is committed to helping its customers use water efficiently and has developed a range of water conservation programs to support this goal. To ensure that it is providing the right mix of programs in the most cost-effective manner possible, Hanford routinely conducts comprehensive conservation program analysis and planning. This is done on a five-year cycle in tandem with the UWMP. Hanford's current Conservation Master Plan provides the basis for the information on the implementation of and expected water savings from Demand Management Measures (DMMs).

- **Potable Water:** The 38.5 acres of parks/public space, as well as other landscaped public spaces, will be irrigated. However, since outdoor landscaping is considered non-critical, the water available for outdoor public spaces may be limited during severe drought conditions.
- **Recycled Water:** The City of Hanford collects wastewater from residential, commercial, and industrial customers within the City limits and some unincorporated areas. The collected flows are conveyed through a trunk system to a Wastewater Treatment Facility (WWTF) in the south of the City. The City's large industrial area near the southern boundary of the City limits collects flows at a series of lift stations before being pumped north to the WWTF. Based on available data received from City staff, the WWTF treated an average annual wastewater flow of approximately 4,944 AF in 2020.
- **Demand Management Measures:** Hanford filed Schedule 14.1 with the CPUC in the spring of 2015 which went into effect on June 1, 2015. Hanford's Schedule 14.1 filing, which applies to both residential and non-residential customers, was responsive to Governor Brown's emergency drought declaration and an executive order requiring a statewide 25% reduction in urban potable water use. The following measures that were put into place could be used for future emergency droughts:
  - ◊ Limiting landscape irrigation to specific days and hours.
  - ◊ Prohibiting sprinkling, irrigating, or otherwise applying water to any yard, ground, premises, or vegetation except by the use of a handheld hose, a sprinkling device, or an approved sprinkler system controlled by an automatic shutoff device or a person who is in immediate attendance of the sprinkling device or system.
  - ◊ Prohibit sprinkling, irrigating, or otherwise applying water to any yard, ground, landscaping, or vegetation during and up to 48 hours after measurable rainfall.
  - ◊ Prohibit sprinkling, irrigating, or otherwise applying water to any ornamental turf or public street medians.
  - ◊ Prohibit sprinkling, irrigating, or otherwise applying water to any yard, ground, landscaping, or vegetation outside of a newly constructed home or a building in a manner inconsistent with regulations or other requirements established by the California Building Standards Commission and the California Department of Housing and Community Development.
  - ◊ Prohibit water used to irrigate any yard, ground, landscaping, or vegetation to run or waste onto non-irrigated areas, private or public walkways, sidewalks, driveways, streets, or adjoining or adjacent property.
  - ◊ Prohibit keeping, maintaining, operating, or using any water connection, hose, faucet, hydrant, pipe, outlet, or plumbing fixture which is not tight and free from leakage and dripping.
  - ◊ Prohibit washing any type of vehicle, boat, or trailer with water supplied by a hose unless the hose is fitted with a shut-off nozzle or device attached to it that causes it to cease dispensing water immediately when not in use.
  - ◊ Prohibit the use of water for sidewalk, driveway, or walkway washing cleaning, except as required to address an immediate public health or safety need.

- ◊ Prohibit the operation of water fountains or other decorative water fixtures without recirculation pumps.
- ◊ Prohibit draining and filling of a swimming pool or similar water feature more than once during one year (all pool drainage must occur pursuant to a permit issued by the City's public works department.
- ◊ Require operators of hotels and motels to provide guests with the option of choosing not to have towels and linens laundered daily. Each hotel and motel shall prominently display notice of this option in each bathroom using clear and easily understood language.
- ◊ Prohibit the planting of ryegrass on any property that is serviced by the city's water system.
- ◊ Prohibit charity and community vehicle wash events, including any event at which an individual or a group, which is not a commercial washing business operating legally in the city, offers to the general public or portion thereof the service of washing, with water, any type of vehicle, boat, or trailer in exchange for a fee, donation, other forms of compensation, or for no compensation.
- ◊ Eliminate watering of ornamental turf areas. Water only actively used turf areas no more than twice per week. Trees and shrubs may be watered only twice per week using a handheld hose with a positive shutoff nozzle or drip irrigation. Use of reclaimed water (if available) is exempt.
- ◊ Water no more than twice per week using only hand-held hoses with positive shutoff nozzle or drip irrigation systems. Eliminate sprinkler use.
- ◊ Prohibit the serving of drinking water, other than upon request, in eating or drinking establishments
- ◊ When a leak is discovered by a customer in a customer's water system and a customer is charged for water that has not been used, as a result of the leakage, it shall be the policy of the city to aid the customer in locating the leak. If the leak is repaired by the customer within a period of ten days of the date the leak was discovered and the customer can establish that a portion of the charges identified in its water bill are in excess of the amount normally charged to the customer, that excess amount of water use caused by the leakage shall be charged to the customer at the standard water rate. If the leak is not repaired by the customer within the 10-day period, the portion of the excess water usage which results from the leakage will be billed at two times the standard water rate until the leak is repaired by the customer. The city shall give prompt notice to a customer if the city obtains information indicating that a leak may exist within the customer's exclusive control.
- ◊ All construction water must be reclaimed or non-potable. Issuance of construction meters will be only for testing and disinfection of potable water lines.

- **MWELO:** The California Water Commission approved the State's updated Model Water Efficient Landscape Ordinance (MWELO) on July 15, 2015. The updated MWELO supersedes the State's MWELO developed pursuant to AB 1881. The size of landscapes subject to MWELO has been lowered from 2500 sq. ft. to 500 sq. ft. The size threshold applies to residential, commercial, industrial, and institutional projects that require a permit, plan check or design review. Additionally, the maximum applied water allowance (MAWA) has been lowered from 70% of the reference evapotranspiration (ETo) to 55% for residential landscape projects, and to 45% of ETo for non-residential projects. This water allowance reduces the landscape area that can be planted with high water use plants such as cool season turf. For typical residential projects, the reduction in the MAWA reduces the percentage of landscape area that can be planted to high water use plants from 33% to 25%. In typical non-residential landscapes, the reduction in MAWA limits the planting of high-water use plants to special landscape areas. The revised MWELO allows the irrigation efficiency to be entered for each area of the landscape. The site-wide irrigation efficiency of the previous ordinance (2010) was 0.71; for the purposes of estimating total water use, the revised MWELO defines the irrigation efficiency (IE) of drip irrigation as 0.81 and overhead irrigation and other technologies must meet a minimum IE of 0.75.

3.4 City-Wide Future Estimated Water Use

Table 3-2 shows the projected supply volumes through 2045. Hanford is assuming that current and planned basin recharge activities and land use conversions will result in sufficient groundwater supplies to exceed demands through 2045. In addition, recyled water is expected to supply about a third of the water supply, and is it increase it's supply as the population grows. Therefore, the supply amounts shown in Table 3-2 will exceed the projected demand each year. As the SGMA process unfolds and as Hanford and its partners gain a better understanding of the basin and what is required to sustain it, this assumption will be continually reassessed. Future decisions on basin recharge activities and the potential development of other supply sources will be based on the accumulated knowledge gained about the groundwater basin.

Table 3-2: Retail Water Supplies

Water Supply	**Projected Water Supply (AF)**				
	2025	*2030*	*2035*	*2040*	*2045*
	Reasonably Available Volume	Reasonably Available Volume	Reasonably Available Volume	Reasonably Available Volume	Reasonably Available Volume
Groundwater	10,033	10,333	10,333	10,333	10,333
Recycled	5,077	5,318	5,569	5,833	6,109
Total	**15,110**	**15,351**	**15,602**	**15,866**	**16,142**

3.5 Acquisition of Water

Hanford does not currently purchase imported water to serve demand. Hanford currently uses local groundwater as the sole source of water supply.

4.0 Inclusion in Adopted Comprehensive Infrastructure Master Plan

UWMP guidelines and the California Water Code require UWMPs to integrate local land use plans in assessing future water conditions and projections for future water use. The Guidelines state: *A UWMP that meets statutory reporting requirements will also reflect short-term and long-term land use planning assumptions and goals, account for specific plan and infill development projects over the course of the UWMP planning period, and it will allow the Supplier to handle the dynamic nature of water supplies and demands through sound water-shortage contingency planning.*

The proposed project site is currently within the City of Hanford limits and therefore is included in the UWMP.

In the Hanford UWMP, projections for future population growth and future residential water use are based on data from the California Department of Transportation's (Caltrans) long-term socio-economic forecast model, which utilizes historic growth to forecast future population growth. The Caltrans long-term socio-economic forecast model provides a county-wide forecast, so growth occurring outside of the existing Hanford city limits was incorporated into the UWMP's assessment of future water conditions and projections for future water use. As such, the adequacy of the water supply for the Project will be analyzed based on the analysis of Hanford's water supply in the Urban Water Management Plan.

5.0 Dry Year Water Supply Adequacy (Water Code Section 10910(C)(4))

The following dry-year water supply adequacy is excerpted from the adopted 2020 UWMP for the City of Hanford.

Supplies are projected to exceed Hanford's projected demands. The supply totals in Tables 5-2, 5-3, and 5-4 are greater than the projected demands for each forecast year. Average year demands and supplies in Table 5-2 come from the demand model and are not associated with a particular base year. Demands for single and multiple dry years are adjusted to reflect the effects of monthly temperature and rainfall departures from average, based on the recorded monthly temperature and rainfall amounts for those years.

The reliability of the City's groundwater supplies for the various water year types is summarized in Table 5-1. The available supplies in Table 5-1 are assumed to exceed the maximum demands across all forecast years in Tables 5-2, 5-3, and 5-4. Hanford expects that the assumption of the sufficiency of groundwater supplies, as augmented by expected enhanced recharge activities, to meet future demands through 2045 will be carefully evaluated and may be revised as part of the Groundwater Sustainability Plan required by SGMA.

Water supply and demand patterns change during normal, single-dry, and multi-dry years. Hanford has relied on the demand modeling described in Chapter 4 of the 2020 UWMP to forecast demands for normal, single dry, and multiple dry years. It is assumed that Hanford's groundwater supply for the District will be able to serve those demands. (This excludes usage reductions that are not directly a function of Hanford's supplies, but are externally imposed by other entities, such as the 2015 state-mandated cutbacks.)
will be carefully evaluated and may be revised as part of the Groundwater Sustainability Plan is required by SGMA.

Table 5-1: Retail Water Supplies: Basis of Water Year Data

Type of Year	Base Year	Available Supplies if Year Type Repeats
		% of Average Supply
Average Year	2000	100%
Single-Dry Year	1984	84%
Consecutive Dry Years, 1st Year	1987	93%
Consecutive Dry Years, 2nd Year	1988	90%
Consecutive Dry Years, 3rd Year	1989	88%
Consecutive Dry Years, 4th Year	1990	86%
Consecutive Dry Years, 5th Year	1991	87%

Table 5-2 shows the projected supply and demand totals for a normal year. The supply totals match those in Table 3-2.

Table 5-2: Retail Water Supplies: Normal Year Supply and Demand Comparison (AF)

	2025	2030	2035	2040	2045
Supply Totals	15,110	15,351	15,602	15,866	16,142
Demand Totals	11,623	12,172	12,748	13,351	13,982
Difference	**+ 3,488**	**+ 3,179**	**+ 2,855**	**+ 2,515**	**+ 2,160**

Table 5-3 shows the projected supply and demand totals for a single dry year.

Table 5-3: Retail Water Supplies: Single Dry Year Supply and Demand Comparison (AF)

	2025	2030	2035	2040	2045
Supply Totals	15,110	15,351	15,602	15,866	16,142
Demand Totals	12,971	13,584	14,227	14,899	15,604
Difference	**+ 2,140**	**+ 1,767**	**+ 1,376**	**+ 967**	**+ 538**

Table 5-4 shows the projected supply and demand totals for the multiple dry years.

Table 5-4: Retail Water Supplies: Multiple Dry Years Supply and Demand Comparison (AF)

		2025	2030	2035	2040	2045
First Dry Year	*Supply Totals*	15,110	15,351	15,602	15,866	16,142
	Demand Totals	12,971	13,584	14,227	14,899	15,604
	Difference	**2,140**	**1,767**	**1,376**	**967**	**538**
Second Dry Year	*Supply Totals*	15,110	15,351	15,602	15,866	16,142
	Demand Totals	12,971	13,584	14,227	14,899	15,604
	Difference	**2,140**	**1,767**	**1,376**	**967**	**538**
Third Dry Year	*Supply Totals*	15,110	15,351	15,602	15,866	16,142
	Demand Totals	12,971	13,584	14,227	14,899	15,604
	Difference	**2,140**	**1,767**	**1,376**	**967**	**538**
Fourth Dry Year	*Supply Totals*	15,110	15,351	15,602	15,866	16,142
	Demand Totals	12,971	13,584	14,227	14,899	15,604
	Difference	**2,140**	**1,767**	**1,376**	**967**	**538**
Fifth Dry Year	*Supply Totals*	15,110	15,351	15,602	15,866	16,142
	Demand Totals	12,971	13,584	14,227	14,899	15,604
	Difference	**2,140**	**1,767**	**1,376**	**967**	**538**

6.0 Comparison of Project Demand to Water Supply Sources

Table 6-2 provides an analysis of projected water demands needed to serve the City of Hanford for the next 25 years, comparing projected baseline community growth against the reasonably expected population growth resulting from the Singh Property Project. The table is labeled with lettering corresponding to each column of information.

Columns A through H represent the reasonably expected baseline condition for the Hanford water demand from the UWMP. Columns I through M represent the reasonably expected baseline condition for Hanford if the Project site was not developed at all and was vacant. Columns N through P represents the population added by the Singh Property Project alone. Columns Q through Z represent Hanford's projected water demand with the addition of the project.

Column A represents the calendar year projection used in the analysis. Column B displays expected daily water use per person, which decreases over time due to measures taken by Hanford to increase water efficiency. By 2045, it is expected that water usage will decrease by 5%. Column C displays the forecast for the Hanford Water District's population, which is slightly higher than Hanford's population due to a small number of services outside of the city limits. This population was excerpted from Hanford's UWMP and is derived from the California Department of Transportation's (Caltrans) long-term socio-economic forecast model, which utilizes historic growth to forecast future population growth. The annual growth rate calculated from this forecast is shown in Column D.

Column E represents the expected residential water demand forecasted by the Hanford UWMP. The values in Column E are derived from the forecasted average per capita daily water consumption (Column B). Columns F and G show the commercial water demand and all other uses (Industrial, Landscaping, Public Services) water demand from the UWMP. Column H shows the total forecasted demand. These projected demands do not include the water usage of the proposed Project.

Column I depicts the baseline future service area population with no development of the project site. This shows the expected demand if the Site was vacant and remained without development. Because the site is planned for residential and commercial development, it is important to calculate the service area population with no development of the site to identify an appropriate baseline to which project-related water use should be added. According to Hanford's General Plan, the project site was under a master plan that was planned to include 1,428 dwelling units, 135,000 square feet of neighborhood commercial space on 11.4 acres, an elementary school, church, stormwater management basins, and open space and recreation areas. Existing General Plan Land Use designations on the site were Low-Density Residential (Assumed 4 DU/acre), Medium-Density Residential (Assumed 9 DU/Acre), High-Density Residential (Assumed 16 DU/Acre), Neighborhood Commercial, Educational Facilities, and Open Space. Using 3 persons per dwelling unit, it was determined that the site was planned for 4,284 residents (See Table 6-1, below). If the Site were developed according to the Master Plan from the General Plan, it would be expected to have a water demand of 776.1 AFY. The values in Column I were calculated by subtracting 4,284 residents from the population that was expected to be added between 2027 and 2043 (Column C). These dates were selected because they coincide with the proposed buildout of the Project. The annual growth rate with no development of the site is shown in Column J. Columns K and L show the commercial and other water demands without the development of the project site. Colum M shows the total demand with no development of the project site.

Table 6-1: Comparison of Planned Land Uses to Proposed Project

Baseline Usage (City of Hanford General Plan)					Proposed (Singh Property Project)				
	Acres	Dwelling Units	Population	Water Demand (AFY)	Acres	Dwelling Units	Population	Water Demand (AFY)	Change in Water Demand (AFY)
Low Density Residential	167	678	2,034	262.2	187.6	697	2,091	269.5	**+ 7.34**
Medium Density Residential	30	270	810	104.4	26.6	235	705	90.9	**- 13.53**
High Density Residential	30	480	1,440	185.6	15.2	214	642	82.8	**- 102.86**
Neighborhood Commercial[2]	11.4	-	-	15.8	6.92	-	-	20.3	**+ 4.47**
School[1]	17.57	-	-	15.5	17.57			15.5	**-**
Park/Open Space[1]	38.5	-	-	192.5	38.5			192.5	**-**
Totals		**1,428**	**4,284**	**776.1**		**1,146**	**3,438**	**671.5**	**- 104.6**

1. The Baseline School and Park Water Demands were assumed to be equal to the Project's.
2. Commerical Demand was assumed to be average retail demand, 170 GPE, 1000 sqft per employee.

The purpose of the remainder of the table (Columns N through Z) is to demonstrate the expected reasonable impact on water demand from the Project and to quantify any necessary new water supply needed to mitigate the reasonably foreseeable impacts. Columns N and O show the expected additional population resulting from the Project by year, in dwelling units and population. Column P identifies the total accrued population of the Project for each year during construction.

Column Q represents the expected population for the Hanford Water District with the Project included. The values in Column Q were calculated by adding the accrued population of the Project to the projected population with no development of the project site (Column I). The resulting adjusted growth rate is depicted in Column R. Column S provides the resulting residential water demand for the service area with the Project included. Column T provides the change in residential water demand attributable to the Project. Column T is calculated by finding the difference between the service area residential water demand assumed by the UWMP and the residential water demand of the service area with the Project added. Columns U and V show the commercial demand and the change in demand with the Project. Columns W and X show the demand and change in demand of all other uses with the Project. Columns Y and Z show the total demand and the total change in demand from all uses with the Project developed.

The Hanford UWMP estimated the water demand within the Hanford service area to be 13,982 AFY by 2045, with an available supply of 16,142 AFY. The demand in the service area with the Singh Property Project implemented was calculated to be 13,874 AFY by 2045. Because the service area water demand forecasted by the Hanford UWMP is higher than the estimated water demand with the Project, it can be assumed that available water supplies will be able to meet the projected demand resulting from the Singh Property Project.

Table 6-2: Anticipated City Water Demands and Available Supply: Years 2021 – 2045

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z
Year	Per Capita Water Use	Service Area Projected Population[1]	Service Area Growth Rate Anticipated by Hanford UWMP	Service Area Anticipated Water Demand (AFY)				Service Area Population with No Development of Project Site	Service Area Growth Rate With No Development of Project Site	Service Area Demands With No Development of Project Site (AFY)			Added Population From Project		Total Project Population (Accrued)	Service Area Population with Project	Service Area Growth Rate with Project	Service Area Residential Demand With Project[4]		Service Area Commercial Demand With Project[4]		Service Area Other Uses Demand With Project[4]		Service Area Total Demand With Project[4]	
	Gallon/ Person/Day			Residential	Commercial[1]	All Other Uses[1]	Total Water Demand			Commercial[2]	All Other Uses[3]	Total Demands	DU Added	Population Added				AFY	Change From UWMP	AFY	Change From UWMP	AFY	Change From UWMP	AFY	Change From UWMP
2020	115	61,326	0.0%	7,905	1,005	2,804	11,714	61,326	0%	1,005	2,804	10,709	0	0	0	61,326	0%	7,905	-	1,005	-	2,804	-	11,714	-
2021	114	61,906	0.95%	7,893	1,003	2,800	11,696	61,906	0.95%	1,003	2,800	10,780	0	0	0	61,906	0.95%	7,893	-	1,003	-	2,800	-	11,696	-
2022	113	62,492	0.95%	7,880	1,002	2,796	11,678	62,492	0.95%	1,002	2,796	10,851	0	0	0	62,492	0.95%	7,880	-	1,002	-	2,796	-	11,678	-
2023	111	63,083	0.95%	7,868	1,000	2,791	11,659	63,083	0.95%	1,000	2,791	10,923	0	0	0	63,083	0.95%	7,868	-	1,000	-	2,791	-	11,659	-
2024	110	63,680	0.95%	7,855	999	2,787	11,641	63,680	0.95%	999	2,787	10,996	0	0	0	63,680	0.95%	7,855	-	999	-	2,787	-	11,641	-
2025	109	64,227	0.86%	7,843	997	2,783	11,623	64,227	0.86%	997	2,783	11,062	0	0	0	64,227	0.86%	7,843	-	997	-	2,783	-	11,623	-
2026	109	64,834	0.95%	7,917	1,006	2,809	11,733	64,834	0.95%	1,006	2,809	11,166	0	0	0	64,834	0.95%	7,917	-	1,006	-	2,809	-	11,733	-
2027	109	65,448	0.95%	7,991	1,016	2,835	11,843	65,196	0.56%	1,015	2,823	11,227	185	555	555	65,751	1.41%	8,028	37	1,015	(1)	2,823	(12)	11,866	24
2028	109	66,066	0.95%	8,066	1,025	2,862	11,952	65,562	0.56%	1,023	2,837	11,288	0	0	555	66,117	0.56%	8,072	6	1,023	(2)	2,837	(24)	11,932	(20)
2029	109	66,691	0.95%	8,140	1,035	2,888	12,062	65,935	0.57%	1,032	2,851	11,350	0	0	555	66,490	0.56%	8,115	(25)	1,032	(3)	2,851	(37)	11,998	(64)
2030	109	67,264	0.86%	8,214	1,044	2,914	12,172	66,256	0.49%	1,040	2,865	11,406	128	384	939	67,195	1.06%	8,206	(8)	1,040	(4)	2,865	(49)	12,111	(61)
2031	109	67,900	0.95%	8,292	1,054	2,941	12,287	66,640	0.58%	1,049	2,880	11,470	0	0	939	67,579	0.57%	8,253	(39)	1,049	(5)	2,880	(61)	12,182	(105)
2032	109	68,542	0.95%	8,370	1,064	2,968	12,402	67,030	0.59%	1,058	2,895	11,535	100	300	1239	68,269	1.02%	8,337	(33)	1,058	(6)	2,895	(73)	12,290	(112)
2033	109	69,190	0.95%	8,449	1,073	2,996	12,518	67,426	0.59%	1,067	2,910	11,601	0	0	1239	68,665	0.58%	8,384	(64)	1,067	(7)	2,910	(86)	12,361	(156)
2034	109	69,844	0.95%	8,527	1,083	3,023	12,633	67,828	0.60%	1,076	2,925	11,668	101	303	1542	69,370	1.03%	8,469	(58)	1,076	(7)	2,925	(98)	12,470	(163)
2035	109	70,444	0.86%	8,605	1,093	3,050	12,748	68,176	0.51%	1,085	2,940	11,728	0	0	1542	69,718	0.50%	8,516	(89)	1,085	(8)	2,940	(110)	12,541	(207)
2036	109	71,110	0.95%	8,686	1,103	3,079	12,869	68,590	0.61%	1,094	2,957	11,798	70	210	1752	70,342	0.90%	8,592	(94)	1,094	(9)	3,149	70	12,836	(33)
2037	109	71,783	0.95%	8,767	1,114	3,108	12,989	69,011	0.61%	1,104	2,974	11,869	0	0	1752	70,763	0.60%	8,642	(125)	1,124	10	3,166	58	12,933	(57)
2038	109	72,462	0.95%	8,848	1,124	3,138	13,110	69,438	0.62%	1,113	2,991	11,941	0	0	1752	71,190	0.60%	8,693	(155)	1,133	9	3,183	46	13,009	(101)
2039	109	73,148	0.95%	8,929	1,135	3,167	13,230	69,872	0.62%	1,122	3,008	12,014	0	0	1752	71,624	0.61%	8,743	(186)	1,143	8	3,200	33	13,086	(144)
2040	109	73,776	0.86%	9,010	1,145	3,196	13,351	70,248	0.54%	1,132	3,025	12,080	0	0	1752	72,000	0.53%	8,793	(217)	1,152	7	3,217	21	13,163	(188)
2041	109	74,474	0.95%	9,095	1,156	3,226	13,477	70,694	0.63%	1,142	3,043	12,155	113	339	2091	72,785	1.09%	8,889	(206)	1,162	6	3,235	9	13,286	(191)
2042	109	75,178	0.95%	9,180	1,167	3,256	13,603	71,146	0.64%	1,152	3,061	12,231	0	0	2091	73,237	0.62%	8,943	(237)	1,172	5	3,253	(3)	13,368	(235)
2043	109	75,889	0.95%	9,266	1,177	3,287	13,730	71,605	0.65%	1,162	3,079	12,309	214	642	2733	74,338	1.50%	9,076	(189)	1,182	4	3,287	-	13,545	(185)
2044	109	76,607	0.95%	9,351	1,188	3,317	13,856	72,282	0.95%	1,172	3,109	12,426	235	705	3438	75,720	1.86%	9,243	(108)	1,193	4	3,317	-	13,752	(104)
2045	109	77,265	0.86%	9,436	1,199	3,347	13,982	72,903	0.86%	1,183	3,139	12,536	0	0	3438	76,341	0.82%	9,323	(113)	1,203	4	3,347	-	13,874	(108)

1. Provided by Hanford Urban Water Management Plan
2. Calculated based on a 15.8 AFY demand reduction from 2027 to 2045 than was assumed by the Hanford UWMP. (Table 6-1).
3. Calculated based on a 208 AFY demand reduction from 2027 to 2045 than was assumed by the Hanford UWMP. (Table 6-1).
4. Calculated as: Anticipated Demand in Service Area with No Development + Demand Added from Proposed Development

7.0 Water Supply Rights and Entitlements; Historic Water Usage (Water Code Section 10910(A)(1) and 10910(D)(2))

Groundwater is the sole source of water for Hanford, and there are no new sources of supply currently planned. Hanford pumps groundwater from the Tulare Lake Subbasin (DWR Basin No. 5-022.12) of the San Joaquin Valley Basin.

Hanford's water supply contains one Public Water System (PWS) which overlies the Tulare Lake Subbasin (DWR Basin No. 5-022.12) of the San Joaquin Valley Basin. The Tulare Lake Groundwater Subbasin is not an adjudicated groundwater basin. In characterizing the groundwater budget, the DWR has classified the subbasin as Type B, which means that enough data is available to estimate groundwater extraction to meet local needs, but not enough data is available to characterize the groundwater budget. Well yields in the Tulare Lake subbasin average between 300 and 1,000 gallons per minute (gpm), with a maximum of 3,000 gpm.

The groundwater management plan acknowledges a continuing decline in groundwater levels of the aquifer system below Hanford. To assist in mitigating this groundwater decline, The City of Hanford has established fees that are expected to fund groundwater recharge and other water resource projects within the City.

7.1 Tulare Lake Subbasin

The Tulare Lake Subbasin covers an area of approximately 524,000 acres (818 square miles) in the San Joaquin Valley and lies between the Kings Groundwater Basin to the north, the Kings-Kern County Line to the south, the Westside Groundwater Basin to the east, and the California Aqueduct to the west.

The Tulare Lake Subbasin is designated as a high-priority basin under DWR's 2019 Phase 2 Basin Prioritization. Under this prioritization process, basins are ranked on eight components, and if a basin is assigned more than 21 total points, it is defined as "high priority." The main factors driving the designation in the Tulare Lake Subbasin include irrigated acreage per square mile (4 out of 5 possible points), population growth (5 out of 5 possible points), and groundwater reliance (5 out of 5 possible points). However, because the subbasin is critically over-drafted, it is assigned 40 priority points, which is the maximum total points under DWR's ranking system.

Five GSAs were formed to collectively assume responsibility for sustainable groundwater management of the Tulare Lake Subbasin. The five GSAs within the Basin include the Mid-Kings GSA, South Fork Kings GSA, the El Rico GSA, the Southwest Kings GSA, and the Tri-County. Each GSA prepared an individual GSP, but certain technical efforts (e.g., the development of a coordinated water budget) were cooperatively developed through a Coordination Agreement.

Hanford falls within the jurisdiction of the Mid-Kings GSA, which covers an area of approximately 152 square miles in the northeastern portion of the Tulare Lake Subbasin. The Mid-Kings GSA was formed in 2016 through the execution of a Joint Powers Agreement (JPA) between the Kings County Water District, the City of Hanford, and the County of Kings to represent the interests of beneficial users of groundwater in the GSA's jurisdictional boundary within the Tulare Lake Subbasin and overseeing compliance with SGMA requirements. The Mid-Tulare Lake GSA GSP was submitted to DWR in January 2020.

As defined under SGMA, sustainable yield means "the maximum quantity of water, calculated over a base period representative of long-term conditions in a basin and including any temporary surplus, that can be withdrawn annually from a groundwater supply without causing undesirable results." The five GSAs within the Tulare Lake Subbasin determined a subbasin-wide sustainable yield of 299,220 AFY, which was further apportioned among the GSAs in the Tulare Lake Subbasin Coordination Agreement.

8.0 Contingency Analysis Applicability (Government Code Section 66473.7 (2)(b))

Hanford's 2020 Water Shortage Contingency Plan (WSCP) identifies three shortage levels that increase with the severity of the water supply shortage. A Level 1 water shortage necessitates a demand reduction of up to 10%-20%, a Level 2 necessitates a demand reduction of 20%-35%, and a Level 3 shortage necessitates a demand reduction of 35%-50%.

Hanford's WSCP provides a full spectrum of Water Shortage Contingency Plan measures to reduce the City's water consumption (pages 9 through 13). The supplier may use any combination of consumption reduction measures to achieve the necessary water demand reductions depending on the water shortage level. The City's contingency planning is designed to ensure that the necessary water supply will be available under each water shortage scenario. These water supply contingency measures, applicable to the entire Hanford water service area, are fully applicable to the Project and protective of the adequacy of the Project's water supply.

Pages from the Hanford 2020 UWMP are provided in Appendix A to satisfaction of Government Code Section 66473.7 (2)(b).

9.0 Assessment Findings

It is concluded that Hanford's water system has sufficient capacity to supply the Singh Property Project and other projected demands within the City's service area through the year 2045. Hanford will provide the main source of water for this project.

Therefore, it is recommended that Hanford approve this assessment for inclusion in the CEQA documentation for the proposed Singh Property Project.

10.0 Environmental Checklist and Discussion

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	☐	☐	X	☐
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future develoment during normal, dry, and multiple dry years?	☐	☐	X	☐

Discussion

B) Would the project substantially decrease groundwater supplies or interfere with groundwater recharge such that the project may impede sustainable groundwater management of the basin?

Less than Significant Impact: The Central Valley is currently dealing with a decline of groundwater supply. To assist in mitigating groundwater decline, The City of Hanford has established fees that will fund groundwater recharge and other water resource projects within the City.

The City of Hanford will provide water services upon development. Hanford's water supply comes from groundwater extraction. The City has 14 active wells with a capacity of 31.6 million gallons (97 AF) of groundwater per day. This totals approximately 35,405 AF per year. However, this is the maximum capacity and the UWMP states that there is a reasonably available supply of 16,142 AFY by 2045. In 2020, the recorded yearly water usage was 11,714 AF of water.

Using information from the City's adopted 2020 Urban Water Management Plan (UWMP), the U.S. Energy Information Administration (EIA), a study by the Pacific Institute, and the California Department of Education, the Project is expected to demand a total of 671.5 AFY. This is based on an estimated population of 3,438 (1,146 Dwelling Units, 3 Persons per Dwelling Unit) demanding 115.1 Gallons Per Day (GPD). The total residential water demand is estimated to be 443.2 AFY. To estimate the potential demand from commercial uses, gallons per employee per day (GED) were used. Although the uses in the commercial zone have been proposed, the final plan has not been finalized. To be conservative, this WSA will assume that all of the commercial uses are the most water-intensive use: dry cleaning and laundry. According to the Pacific Institute study, dry cleaning and laundry demand 981 GED. An average dry cleaner or laundromat is 3,000 sqft with two employees. Therefore, the 45,000 sqft of commercial space would have a demand of 20.3 AFY. The school on the site is projected to use 15.5 AFY. The Project also includes 38.5 acres of parks and open space. A conservative estimate would assume that the entire landscaping acreage will be irrigated lawn and will require approximately five acre-feet of water per

acre per year. This figure is based on information on water requirements for large, irrigated lawns such as golf courses in the region. This totals 192.5 AFY for the parks and open space. The total project will require approximately 671.5 AFY.

Hanford currently demands 11,714 AFY, but the system is capable of producing at least 16,142 AFY. With an available capacity of approximately 4,428 AFY, there will be enough water supply for the proposed project. The general plan has the project site designated as Low, Medium, and High-Density Residential, as well as Neighborhood Commercial. The proposed project is planned for Low, Medium, and High-Density Residential, as well as Neighborhood Commercial, Educational/Public Space, and Parks/Open Spaces. As such, the Project would not affect groundwater supplies beyond what has already been analyzed and approved. There is a *less than significant impact.*

B) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?

Less than Significant Impact: Hanford will provide water services upon development. Hanford's water supply comes from groundwater extraction. The City has 14 active wells with a capacity of 31.6 million gallons (97 AF) of groundwater per day. This totals approximately 35,405 AF per year. However, this is the maximum capacity and the UWMP states that there is a reasonably available supply of 16,142 AFY by 2045. In 2020, the recorded yearly water usage was 11,714 AF of water.

The Hanford UWMP states that 2000 is a year that had an average amount of rain, a single dry year was 1984, while a drought occurred from 1987-1991. According to the UWMP, Hanford will have an available water volume of 16,142 AFY by 2045. A single dry year has a supply of 84% of the average. This would be 13,559 AFY on a single dry year. Over multiple dry years of 1987-1991, the UWMP states that Hanford would have 93%, 90%, 88%, 86%, and 87% of the average supply. This would be 15,012 AFY, 14,528 AFY, 14,205 AFY, 12,268 AFY, and 14,044 AFY. In 2045, the Hanford water district with the Project developed would demand 13,874 AFY. This is higher than the expected supply in a single dry year. However, the UWMP is expecting a total demand of 13,982. This includes the expected demand for the planned residential and commercial uses of the site in the General Plan. The General Plan was planning similar uses to the Project on the Site.

As such, the Project would not affect groundwater supplies beyond what has already been analyzed and approved. To compensate for new water projects, all new developments will pay impact fees for new water services, along with the reduced water use implementations from the policies outlined in the Hanford General Plan. Therefore, the impact is *less than significant*.

References

- City of Hanford, 2021. 2020 Urban Water Management Plan. Available Online at Source.
- City of Hanford, 2017. 2035 General Plan. Available online at Source.
- Energy Information Administration, 2017. Commerical Buildings Energy Consumption Survey. Available online at Source.
- Tulare Lake Subbasin GSAs, 2020. Groundwater Sustainability Plan. Available online at Source.
- Pacific Institute, 2013. Commercial Water Use and Potential Savings. Available Online at Source.

Appendix A

Pages Excerpted from City of Hanford UWMP

Provided in satisfaction of Water Code Section 10910(A)(1), Water Code Section 10910(D)(2) and Government Code Section 66473.7 (2)(b)

FINAL



City of Hanford

OCTOBER 2021

2020 Urban Water Management Plan

AKEL
ENGINEERING GROUP, INC.

CITY OF HANFORD

2020

URBAN WATER MANAGEMENT PLAN

Final



October 2021

AKEL
ENGINEERING GROUP, INC.

AKEL
ENGINEERING GROUP, INC.

Smart Planning Our Water Resources

November 8th, 2021

City of Hanford
319 North Douty Street
Hanford California, 93230

Attention: James Ross, Deputy Public Works Director

Subject: **2020 Urban Water Management Plan**

Dear Jim:

We are pleased to submit the City of Hanford 2020 Urban Water Management Plan (2020 UWMP) which is intended to address the Urban Water Management Planning Act (UWMPA) of 1983 and amendments thereof.

The City's 2015 UWMP received letters of review and completeness from the Department of Water Resources. This 2020 UWMP addresses additional amendments to the UWMPA and new guidelines established by the Department of Water Resources, including a 2020 Water Shortage Contingency Plan (2020 WSCP), as a separate document. Water supply reliabilities and demands are projected through a planning horizon of 2045.

We extend our thanks to you; John Doyel, Public Works Director; Christine Baca, Regulatory Compliance Analyst; Bob Williams, Utilities Supervisor, and other City staff whose courtesy and cooperation were valuable in reviewing and completing this study.

Sincerely,

AKEL ENGINEERING GROUP, INC.

Tony Akel, P.E.
Principal

Enclosure: 2020 Urban Water Management Plan

7433 NORTH FIRST STREET, SUITE 103 • FRESNO, CALIFORNIA 93720 • (559) 436-0600 • FAX (559) 436-0622
www.akeleng.com

City of Hanford
2020 Urban Water Management Plan

Contact Sheet

Date this plan was submitted to the Department of Water Resources:

Name of Person(s) preparing this plan:

Jim Ross, Deputy Public Works Director
City of Hanford
Phone: (559) 585-2567
Email: jross@cityofhanfordca.com

Tony Akel, P.E., Project Manager
Akel Engineering Group, Inc.
Phone: (559) 436-0600
Fax (559) 436-0622
Email: takel@akeleng.com

The Water supplier is a Municipality

The Water supplier is a Retailer

Utility Services provided by the water supplier include: Water, Sewer, Recycled Water

Is this Agency a Bureau of Reclamation Contractor? No

Is this Agency a State Water Project Contractor? No

Acknowledgements

City Council

Francisco Ramirez, Mayor

Diane Sharp, Vice Mayor

Amanda Saltray

Kalish Morrow

Art Brieno

Management Personnel

John Doyel, Director of Public Works

Jim Ross, Deputy Public Works Director

Christine Baca, Regulatory Compliance Analyst

Bob Williams, Utilities Supervisor

City of Hanford
2020 Urban Water Management Plan

Table of Contents

Page No.

CHAPTER 1 – INTRODUCTION AND OVERVIEW 1-1
1.1 BACKGROUND AND PURPOSE 1-1
1.2 URBAN WATER MANAGEMENT PLANNING AND THE CALIFORNIA WATER CODE 1-2
1.3 REPORT ORGANIZATION 1-3
1.4 PUBLIC PARTICIPATION AND PLAN ADOPTION 1-4
1.5 UWMP AND GRANT OR LOAN ELIGIBILITY 1-5
1.6 PREVIOUS URBAN WATER MANAGEMENT PLANS 1-5

CHAPTER 2 – PLAN PREPARATION 2-1
2.1 BASIS FOR PREPARING A PLAN 2-1
2.2 REGIONAL PLANNING 2-1
2.3 INDIVIDUAL OR REGIONAL PLANNING AND COMPLIANCE 2-2
2.4 FISCAL OR CALENDAR YEAR AND UNITS OF MEASURE 2-2
2.5 COORDINATION AND OUTREACH 2-2

CHAPTER 3 – SYSTEM DESCRIPTION 3-1
3.1 GENERAL DESCRIPTION 3-1
3.1.1 Location 3-1
3.1.2 Water Service Area 3-1
3.1.3 Land Use 3-1
3.1.4 Socioeconomic Conditions 3-6
3.2 CLIMATE DATA 3-6
3.2.1 Historic Climate Data 3-6
3.2.2 Climate Change 3-7
3.3 SERVICE AREA POPULATION AND DEMOGRAPHICS 3-8

CHAPTER 4 – SYSTEM WATER USE 4-1
4.1 NON-POTABLE VERSUS POTABLE WATER USE 4-1
4.2 WATER USES BY SECTOR 4-1
4.2.1 Historical Water Use 4-2
4.2.2 Projected Water Use 4-3
4.2.3 Maximum Day Demand 4-5
4.3 DISTRIBUTION SYSTEM WATER LOSSES 4-5
4.4 ESTIMATING FUTURE WATER SAVINGS 4-6
4.4.1 Active Conservation Program Savings 4-6
4.4.2 Passive Water Savings 4-7
4.5 WATER USE FOR LOWER INCOME HOUSEHOLDS 4-8
4.6 CLIMATE CHANGE 4-8

CHAPTER 5 – BASELINES AND TARGETS 5-1
5.1 2010 UWMP BASELINE AND TARGETS 5-1
5.3 BASELINE PERIODS 5-2
5.3.1 Determination of the 10-15 Year Baseline Period (Baseline GPCD) 5-2
5.3.2 Determination of the 5-year Baseline Period (Target Confirmation) 5-3

Table of Contents

Page No.

5.4 SERVICE AREA POPULATION 5-4
5.5 GROSS WATER USE 5-6
5.6 BASELINE DAILY PER CAPITA WATER USE 5-9
5.7 2020 FINAL TARGETS 5-9
5.7.1 5-Year Baseline – 2020 Target Confirmation 5-13
5.8 2020 COMPLIANCE DAILY PER CAPITA WATER USE 5-13
5.9 REGIONAL ALLIANCE 5-14

CHAPTER 6 – SYSTEM SUPPLIES 6-1
6.1 PURCHASED OR IMPORTED WATER 6-1
6.2 GROUNDWATER 6-1
6.2.1 Basin Description 6-1
6.2.2 Groundwater Management 6-3
6.2.3 Overdraft Conditions 6-4
6.2.4 Historical Groundwater Pumping 6-5
6.3 SURFACE WATER 6-7
6.4 STORMWATER 6-7
6.5 WASTEWATER AND RECYCLED WATER 6-7
6.5.1 Recycled Water Coordination 6-7
6.5.2 Wastewater Collection, Treatment, and Disposal 6-7
6.5.2.1 Wastewater Collected Within Service Area 6-7
6.5.2.2 Wastewater Treatment and Discharge Within Service Area 6-8
6.5.3 Recycled Water System 6-9
6.5.4 Recycled Water Beneficial Uses 6-9
6.5.4.1 Current and Planned Uses of Recycled Water 6-10
6.5.4.2 Planned Versus Actual Use of Recycled Water 6-10
6.5.5 Actions to Encourage and Optimize Future Recycled Water Use 6-11
6.6 DESALINATED WATER OPPORTUNITIES 6-12
6.7 EXCHANGES OR TRANSFERS 6-12
6.8 FUTURE WATER PROJECTS 6-12
6.9 SUMMARY OF EXISTING AND PLANNED SOURCES OF WATER 6-13
6.10 CLIMATE CHANGE CONSIDERATIONS 6-15
6.11 ENERGY INTENSITY 6-15

CHAPTER 7 – WATER SUPPLY RELIABILITY ASSESSMENT 7-1
7.1 CONSTRAINTS ON WATER SOURCES 7-1
7.1.1 Legal Factors 7-1
7.1.2 Environmental Factors 7-1
7.1.3 Water Quality Factors 7-2
7.1.3.1 Arsenic 7-2
7.1.4 Climatic Factors 7-3
7.2 RELIABILITY BY TYPE OF YEAR 7-3
7.2.1 Types of Years 7-3
7.2.2 Sources for Water Data 7-4
7.3 SUPPLY AND DEMAND ASSESSMENT 7-4

Table of Contents

Page No.

7.4 REGIONAL SUPPLY RELIABILITY 7-8
7.5 DROUGHT RISK ASSESSMENT 7-8
7.5.1 DRA Data, Methods, and Basis for Water Shortage Conditions 7-9
7.5.2 DRA Individual Water Source Reliability 7-9
7.5.3 DRA Total Water Supply and Use Comparison 7-9
7.5.1 Management Tools and Options 7-9

CHAPTER 8 – WATER SHORTAGE CONTINGENCY PLANNING 8-1
8.1 WATER SUPPLY RELIABILITY ANALYSIS 8-1
8.2 ANNUAL WATER SUPPLY AND DEMAND ASSESSMENT 8-1
8.3 WATER SHORTAGE LEVELS 8-2
8.4 SHORTAGE RESPONSE ACTIONS 8-3
8.5 PLAN ADOPTION, SUBMITTAL, AND AVAILABILITY 8-3

CHAPTER 9 – DEMAND MANAGEMENT MEASURES 9-1
9.1 DEMAND MANAGEMENT MEASURES AND IMPLEMENTATION 9-1
9.1.1 Waste Water Prevention Ordinances 9-1
9.1.2 Metering 9-2
9.1.3 Conservation Pricing 9-2
9.1.4 Public Outreach 9-2
9.1.4.1 Public Information Programs 9-2
9.1.4.2 School Education Program 9-3
9.1.4.3 Residential Water Audits 9-3
9.1.5 Programs to Assess and Manage Distribution System Real Loss 9-3
9.1.6 Water Conservation Program Coordination and Staffing Support 9-4
9.1.7 Other Demand Management Measures - Large Landscape Conservation Program 9-4

CHAPTER 10 – PLAN ADOPTION, SUBMITTAL, AND IMPLEMENTATION 10-1
10.1 INCLUSION OF 2015 DATA 10-1
10.2 NOTICE OF PUBLIC HEARING 10-1
10.2.1 Notice to Cities and Counties 10-1
10.2.2 Notice to the Public 10-2
10.3 PUBLIC HEARING AND ADOPTION 10-2
10.4 PLAN SUBMITTAL 10-2
10.5 PUBLIC AVAILABILITY 10-2
10.6 AMENDING AND ADOPTED UWMP 10-3

CHAPTER 11 – DWR CHECKLIST 11-1

City of Hanford
2020 Urban Water Management Plan

Figures

		Page No.
Figure 3-1	Regional Location Map	3-2
Figure 3-2	Existing Service Area	3-3
Figure 3-3	Existing Land Use	3-4
Figure 3-4	Future Land Use	3-5
Figure 3-5	Historical Annual Rainfall	3-7
Figure 4-1	Historical Water Use and Population	4-3
Figure 6-1	Groundwater Subbasins	6-2
Figure 6-2	Existing Groundwater Well Locations	6-6
Figure 7-1	Historic Per Capita Demand Variation	7-5
Figure 8-1	Annual Assessment Reporting Timeline	8-2

Tables

		Page No.
Table 2-1	Public Water Systems	2-1
Table 2-2	Plan Identification	2-1
Table 2-3	Supplier Identification	2-2
Table 2-4	Water Supplier Information Exchange	2-3
Table 3-1	Average Climate Data	3-6
Table 3-2	Population – Current and Projected	3-8
Table 4-1	Demands for Potable and Non-Potable Water – Actual	4-2
Table 4-2	Demands for Potable and Non-Potable Water – Projected	4-4
Table 4-3	Total Water Use (Potable and Non-Potable)	4-4
Table 4-4	Last Five Years of Water Loss Audit Reporting	4-6
Table 4-5	Inclusion in Water Use Projections	4-7
Table 5-1	Baselines and Targets Summary	5-1
Table 5-2	2020 Compliance	5-13
SBX7-7 Table 1	Baseline Period Ranges	5-3
SBX7-7 Table 2	Method for Population Estimates	5-4
SBX7-7 Table 3	Service Area Population	5-5
SBX7-7 Table 4	Annual Gross Water Use	5-7
SBX7-7 Table 4-A	Volume Entering the Distribution	5-8
SBX7-7 Table 5	Gallons Per Capita Per Day (GPCD)	5-10
SBX7-7 Table 6	Gallons Per Capita Per Day Summary	5-11
SBX7-7 Table 7	2020 Target Method	5-11
SBX7-7 Table 7-E	Target Method 3	5-12
SBX7-7 Table 7-F	Confirm Minimum Reduction for 2020 Target	5-13
SBX7-7 Table 9	2020 Compliance	5-13
Table 6-1	Groundwater Volume Pumped	6-5
Table 6-2	Wastewater Collected Within Service Area in 2020	6-8
Table 6-3	Wastewater Treatment and Discharge Within Service Area in 2020	6-8
Table 6-4	Current and Projected Recycled Water Direct Beneficial Uses Within Service Area	6-10
Table 6-5	2015 UWMP Recycled Water Use Projection Compared to 2020 Actual	6-11

Tables

Page No.

Table 6-6	Methods to Expand Future Recycled Water Use	6-11
Table 6-7	Expected Future Water Supply Projects or Programs	6-13
Table 6-8	Water Supplies – Actual	6-14
Table 6-9	Water Supplies – Projected	6-14
Table 7-1	Basis of Water Data	7-4
Table 7-2	Normal Year Supply and Demand Comparison	7-6
Table 7-3	Single Dry Year Supply and Demand Comparison	7-6
Table 7-4	Multiple Dry Years Supply and Demand Comparison	7-7
Table 7-5	Five-Year Drought Risk Assessment	7-10
Table 8-1	Water Shortage Contingency Plan Levels	8-3
Table 10-1	Notification to Cities and Counties	10-1
Table 11-1	DWR Checklist	11-1

Appendices

Appendix A	DWR Recommended Tables
Appendix B	Reclamation Project Agreement
Appendix C	Groundwater Sustainability Analysis
Appendix D	Water Shortage Contingency Plan
Appendix E	Water Rate Structure
Appendix F	Urban Water Management Plan Adoption Resolution and Notifications

CHAPTER 1 – INTRODUCTION AND OVERVIEW

This chapter introduces the purpose of the Urban Water Management Plan (UWMP) and its importance to the City of Hanford (City) as well as Department of Water Resources (DWR). This chapter also includes the coordination and outreach that took place for this UWMP to come to fruition as well as documenting the milestones for adopting the UWMP and for submitting it to the DWR.

1.1 BACKGROUND AND PURPOSE

Water suppliers must submit an Urban Water Management Plan to the Department of Water Resources in accordance with California Water Code requirements. The purpose of the UWMP is to review and maintain the reliability of urban water supplies, ensure that future beneficial use can be complemented by sufficient water supply, continue to promote policies and programs that benefit water conservation, and provide a means for response during water supply shortages and drought conditions. In addition to being filed every five years, the Urban Water Management Plan must satisfy requirements defined in the Urban Water Management Planning Act (UWMPA) of 1983 and any amendments thereof.

Since the passage of the UWMPA, there have been more than 20 amendments to the Act. According to the UWMPA, a UWMP must be prepared by an urban water supplier that supplies over 3,000 acre-feet (AF) of water a year, or services 3,000 or more connections.

In October 2017, DWR completed the review of the City's 2015 UWMP and its supplements, and issued a letter of completeness. The UWMPA has undergone significant expansion and revision since the last UWMP Guidebook was prepared in 2015. Prolonged droughts, groundwater overdrafts, and regulatory revisions affect not only each Supplier's water reliability determinations, but also the broad picture of statewide water reliability overseen by DWR, the State Water Resources Control Board (State Water Board), and the Legislature. Accordingly, the Act has grown to address changing conditions and it guides California's water resources management.

Thus, this 2020 UWMP includes updates to the 2015 UWMP and addresses additional amendments to the UWMPA and new guidelines established by DWR. This report references the tables required by DWR in their 2020 UWMP Guidebook published in March 2021, which have been completed and included in **Appendix A**.

1.2 URBAN WATER MANAGEMENT PLANNING AND THE CALIFORNIA WATER CODE

The drought of 1976-1977 created shortages of water supplies throughout California. With several cities and water districts/agencies witnessing reductions in their water supplies and having to look for additional water sources elsewhere, an immediate need for a statewide, local level, long-term water management planning arose. To dramatically reduce future emergencies caused by inadequate planning of water resources, the Urban Water Management Planning Act was proposed and adopted in 1983. State Assembly Bill 797 modified the California Water Code Division 6 in 1983, creating the UWMPA. Since this Assembly Bill, more than 20 amendments have changed the quantity of data required, as well as increasing the planning elements included in this 2020 plan.

Early amendments to the UWMPA required 20-year planning horizons in 5-year increments for the comparison of water use to sources of water supply. More recently, these planning projections have been extended to 25-year planning horizons in order to maintain the 20-year projections, while the subsequent UWMP is completed.

Additional amendments included requirements that water supplier's UWMP provides provisions for a Water Shortage Contingency Plan, which would meet the specifications set forth in the UWMPA; demand management measures; and provisions for recycled water use. Recycled water use was added to reporting requirements due to its additional reliability for alternative water supply, and most notably, as an additional supply for future water use demand. Individual water purveyors, in coordination with other water purveyors in the same general area and to the extent practicable, must work to prepare the Water Shortage Contingency Plan. The individual water supplier must also describe the water demand management measures that are currently in practice, or those scheduled to be practiced.

More than 15 amendments have been passed since the year 2000, amending the UWMPA and increasing reporting for the UWMP. Included in these amendments are SB 610 (Costa, 2001) and AB 901 (Daucher, 2001), which require urban water purveyors to review information regarding water to supply new large developments. Additionally, SB 318 (Alpert, 2004) requires the plan to review opportunities involved in the development of desalinated water, included but not limited to, ocean, brackish, and groundwater, as a long-term supply. AB 105 (Wiggins, 2004) requires suppliers to submit their completed UWMP to the California State Library. SBX7-7 requires the state and its municipal water purveyors to achieve a 20 percent reduction in urban per capita water usage by the year 2020. The "20X2020" plan is intended to reduce water usage per capita by 10% by the year 2015, and 20% by the year 2020.

The most recent of these amendments are:

- AB2242 (2018) requires an urban water supplier to include in its UWMP an assessment of the reliability of its water service to customers during normal, dry, and multiple dry years,

including a repeat of the five consecutive historic driest years the urban water supplier has experienced.

- SB606 (2018) adds new requirements to the UWMP process as well as established updated urban water use objectives and water use reporting requirements,
    - Prepare a drought risk assessment that examines water shortage risks for a drought lasting for the next five years.
    - Prepare a comprehensive Water Shortage Contingency Plan that will include water budgeting forecast procedures, standard water shortage levels, shortage response actions, and other protocols.

Enacts an annually required water supply and demand assessment wherein an urban water supplier will assess local demand and supply conditions and provide that information to DWR.

1.3 REPORT ORGANIZATION

This report is organized in accordance with the outline suggested by the Department of Water Resources for the 2020 Urban Water Management Plans.

Chapter 1 – Introduction and Overview. This chapter introduces the purpose of the Urban Water Management Plan (UWMP) and its importance to the City of Hanford (City) as well as the Department of Water Resources (DWR).

Chapter 2 – Plan Preparation. This chapter describes the process that was used for the development of the UWMP. This chapter also includes the coordination and outreach that took place for this UWMP to come to fruition, as well as documenting the milestones for adopting the UWMP and for submitting it to the DWR.

Chapter 3 – System Description. This chapter describes the City's water service area. This description includes discussion of the City's location, the boundaries of the water service area, existing and future land use types, and climate. This chapter also summarizes the historical and projected population as well as a review of the City's demographics and socioeconomic conditions.

Chapter 4 – System Water Use. This chapter provides a description of the current and projected water uses within the City's service area. Additionally, a description of potential recycled water uses is provided. Water demands are projected through the year 2045.

Chapter 5 – Baseline and Targets. This chapter summarizes the methods used to estimate the target water use. As part of the 2020 UWMP update, this chapter evaluates if the City achieved the required water use reduction target.

Chapter 6 – System Supplies. The purpose of this chapter is to summarize the City's current and planned water supply sources and volumes. This includes a description of the groundwater basins used by the City as a source of supply. Ongoing planning efforts for the potential use of recycled water within the City's service area are also summarized.

Chapter 7 – Water Supply Reliability. This chapter assesses the reliability of the City's water supply under normal conditions, single year dry conditions, and five-year dry conditions. The reliability assessment includes a comparison of projected water use versus expected water supply for the next 25 years. This chapter also includes the newly required Drought Risk Assessment, which is a review of the capability of the City's water supplies to meet the demand for the next five years assuming a five-year drought occurs.

Chapter 8 – Water Shortage Contingency Plan. This chapter summarizes the City's Water Shortage Contingency Plan (WSCP). The WSCP is a separately adopted planning document that most notably outlines levels of water shortage conditions, demand reduction methods to be implemented in the event of a water shortage and the process the City will implement to perform an annual Supply and Demand assessment. The WSCP also includes discussion of the City's communication protocols during a water shortage, methods of determining compliance and enforcing water use prohibitions, estimating the financial consequences of a water shortage, and the methods the City has in place to monitor and report the effectiveness of any water demand reduction methods implemented.

Chapter 9 – Demand Management Measures. This chapter summarizes the demand management measures, which are additional measures the supplier plans on implementing to achieve its water use targets and maintain ongoing water conservation.

Chapter 10 – Plan Adoption, Submittal and Implementation. This chapter summarizes the process for adopting and submitting the UWMP as well as the ways the public can access the adopted UWMP.

1.4 PUBLIC PARTICIPATION AND PLAN ADOPTION

Law

> *10642. Each urban water supplier shall encourage the active involvement of diverse social, cultural, and economic elements of the population within the service area prior to and during the preparation of the plan. Prior to adopting a plan, the urban water supplier shall make the plan available for public inspection and shall hold a public hearing thereon. Prior to the hearing, notice of the time and place of hearing shall be published ... After the hearing, the plan shall be adopted as prepared or as modified after the hearing.*

In accordance with the stated law, the City held a public hearing for members of the community to provide comments, learn about existing and future water supplies of the city, and raise concerns towards the plan being adopted. A notice of the public hearing was published in the local

newspaper on September 20th and September 28th, 2021, notifying interested parties that the draft 2020 UWMP was available at various City facilities and on the City's web page (www.cityofhanfordca.com) for review two successive weeks prior to adoption. After public review, the plan was adopted on October 19th, 2021 and subsequently submitted to DWR for approval on October 26th, 2021.

1.5 UWMP AND GRANT OR LOAN ELIGIBILITY

Law

10608.56	*(a) On and after July 1, 2016, an urban retail water supplier is not eligible for a water grant or loan awarded or administered by the state unless the supplier complies with this part.* *(c) Notwithstanding subdivision (a), the department shall determine that an urban retail water supplier …applicable to the water funds.* *(e) Notwithstanding subdivision (a), the department shall determine that an urban retail water supplier … as a disadvantaged community.* *(f) The department shall not deny eligibility to an urban retail water supplier or agricultural water supplier … is not implementing all of the requirements of this part or Part 2.8 (commencing with Section 10800).*
10656	*An urban water supplier is not eligible for a water grant or loan awarded or administered by the state unless the urban water supplier complies with this part.*

Beginning in 2016, changes to California law require that urban retail water suppliers must comply with water conservation requirements established by the Water Conservation Act of 2009 in order to be eligible for State water grants or loans. For 2020 UWMPs, compliance with the Water Conservation Act of 2009 means that a water agency must have met its 2020 Urban Water Use Target, discussed further in Chapter 5; this compliance must be reported in the 2020 UWMP.

1.6 PREVIOUS URBAN WATER MANAGEMENT PLANS

The City of Hanford prepared a 2015 UWMP, which was adopted on June 21st, 2016. This UWMP documented the SBX7-7 baseline per capita was use, as well as the interim and 2020 water use targets. This UWMP documented the groundwater conditions, future water supply projects, the water shortage contingency plan, and demand management measures implemented to reduce water demands. The 2015 UWMP serves as a benchmark for the 2020 UWMP, as the 2020 UWMP will update the target projections consistent with the final Guidebook release from the Department of Water Resources.

CHAPTER 2 – PLAN PREPARATION

This chapter describes the process that was used for the development of the UWMP. This chapter also summarizes the coordination and outreach that was conducted during the preparation of the UWMP.

2.1 BASIS FOR PREPARING A PLAN

The California Water Code (CWC) defines an "Urban water supplier" as a publicly or privately owned supplier of water for municipal purposes either directly or indirectly to more than 3,000 customers or supplying more than 3,000 acre-feet of water annually. At the time of preparation of the 2020 UWMP, the City supplied water to over 17,900 active service connections, as summarized in Table 2-1, thereby qualifying as an urban water supplier and required to prepare an Urban Water Management Plan every five years.

Table 2-1 Public Water Systems

Public Water System Number	Public Water System Name	Number of Municipal Connections 2020	Volume of Water Supplied 2020 (AF)
1610003	City of Hanford	17,965	11,714

2.2 REGIONAL PLANNING

The City's 2020 UWMP is prepared as an individual UWMP and the City is not part of any regional alliance for planning purposes, as summarized in Table 2-2.

Table 2-2 Plan Identification

Select Only One	Type of Plan		Name of RUWMP or Regional Alliance
☑	**Individual UWMP**		
	☐	Water Supplier is also a member of a RUWMP	
	☐	Water Supplier is also a member of a Regional Alliance	
☐	**Regional Urban Water Management Plan (RUWMP)**		

2.3 INDIVIDUAL OR REGIONAL PLANNING AND COMPLIANCE

Consistent with the 2015 UWMP, the 2020 UWMP reports solely on the City's service area and is not a part of a regional alliance or regional urban water management plan (RUWMP).

2.4 FISCAL OR CALENDAR YEAR AND UNITS OF MEASURE

This UWMP has been prepared using calendar year data and includes complete 2020 data, as required by the DWR guidelines. The units of measure reported in all tables are acre-feet (AF), as shown in **Table 2-3**.

Table 2-3 Supplier Identification

Type of Supplier	
☐	Supplier is a wholesaler
☑	Supplier is a retailer
Fiscal or Calendar Year	
☑	UWMP Tables Are in Calendar Years
☐	UWMP Tables Are in Fiscal Years
Units of Measure Used in UWMP[1]	
AF	

Notes:

1. Units of DWR required tables are consistent in SBX7-7 verification tables

2.5 COORDINATION AND OUTREACH

The City's 2020 UWMP is an update to the 2015 UWMP and is intended to address those aspects of the UWMPA which are under the control of the City, specifically water supply and water use. The City submitted its draft plan to regional stakeholders, and made the draft plan available to the public in hard copy form and electronic form. The City did notify wholesale water suppliers, as shown in **Table 2-4**.

Table 2-4 Water Supplier Information Exchange

Wholesale Water Supplier Informed of Projected Water Use
Kings County Water District
Kings County Water Commission

CHAPTER 3 – SYSTEM DESCRIPTION

This chapter describes the City's water service area. This description includes discussion of the City's location, the boundaries of the water service area, existing and future land use types, and climate. This chapter also summarizes the historical and projected population as well as a review of the City's demographics and socioeconomic conditions.

3.1 GENERAL DESCRIPTION

This section documents the City's location, service area, land use, and socioeconomic conditions.

3.1.1 Location

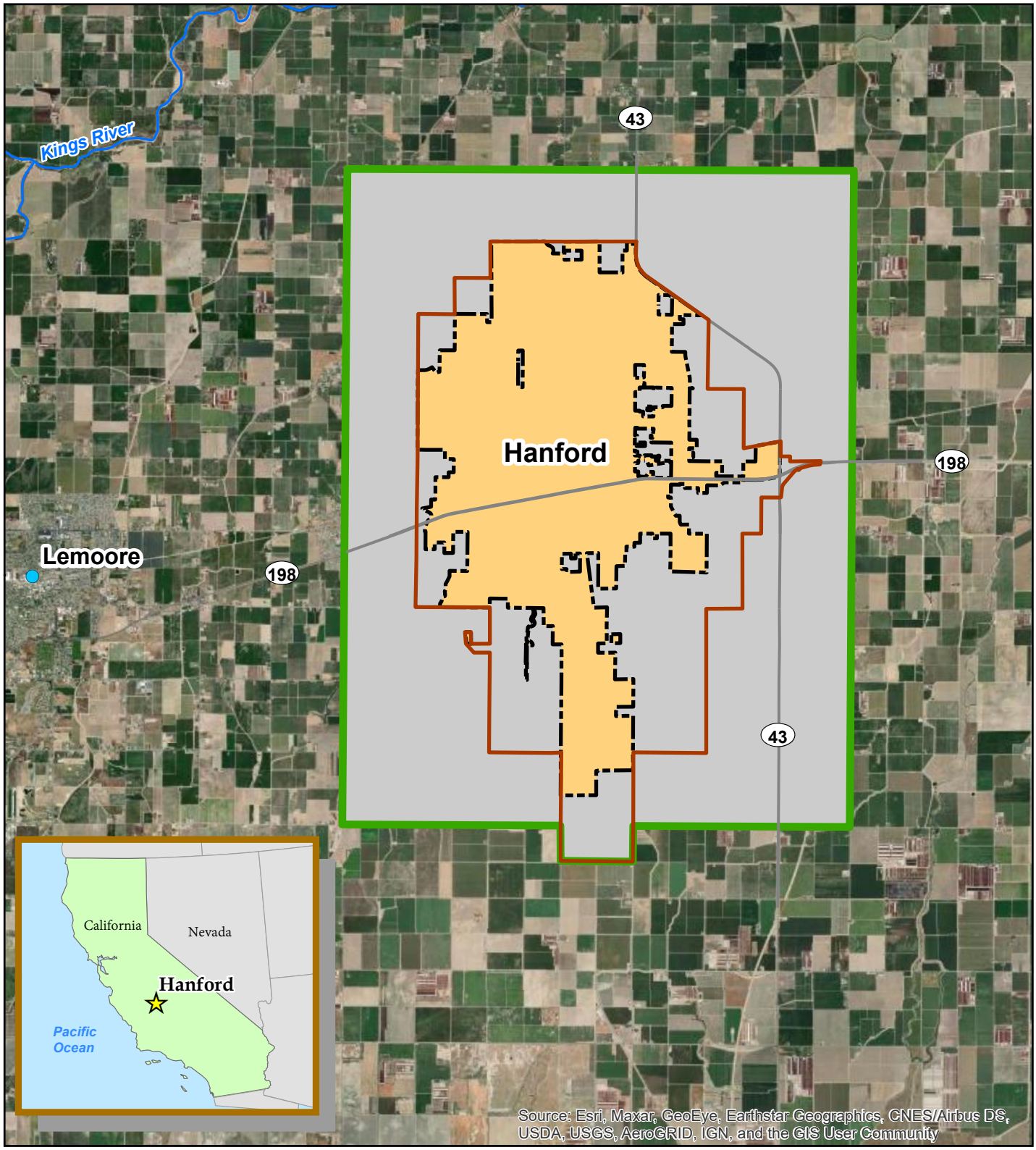
The City is located in Kings County, approximately 30 miles southeast of the city of Fresno and 20 miles west of the city of Visalia (**Figure 3-1**). The City's closest neighbor, the city of Lemoore, is located 8 miles to the west. Highway 198 bisects the southern boundary of the City in the east-west direction, and Highway 43 lies just east of the City's eastern boundary. In 2002, the City outlined the long-term Ultimate Growth Boundary (UGB), which was approved by City Council, and identified lands intended for future urbanization within the City service area.

3.1.2 Water Service Area

The City's most recent General Plan, adopted in April 2017, outlines the boundary for future growth for the City. The planned area boundary outlined in the 2035 General Plan update encompasses a gross area of approximately 31.3 square miles and it is assumed to describe the future water system service area. The City limits currently describe the existing water service area, as shown in **Figure 3-2**.

3.1.3 Land Use

The planning area boundary of the City's 2035 General Plan includes an approximate net area of 16,032 acres, which includes the following land use types: 6,872 acres of residential; 826 acres of mixed use; and 8,334 acres of non-residential, which includes commercial, industrial, institutional, and open space land use types. The residential component can be further subdivided, with 82 percent of the units as low density, and 15 and 3 percent of units being medium and high densities, respectively. The City's 2017 Water System Master Plan used the 2035 General Plan Land use as the basis for estimating future demands, and this future land use is considered acceptable for incorporation as part of the 2020 UWMP update. The City's existing and future land use maps are shown in **Figure 3-3** and **Figure 3-4**, respectively.



Legend

PRELIMINARY

- Cities
- City Limits Area
- 2035 Growth Boundary
- General Plan Area
- Highways
- River

N W GIS E S

0 0.5 1 2 Miles

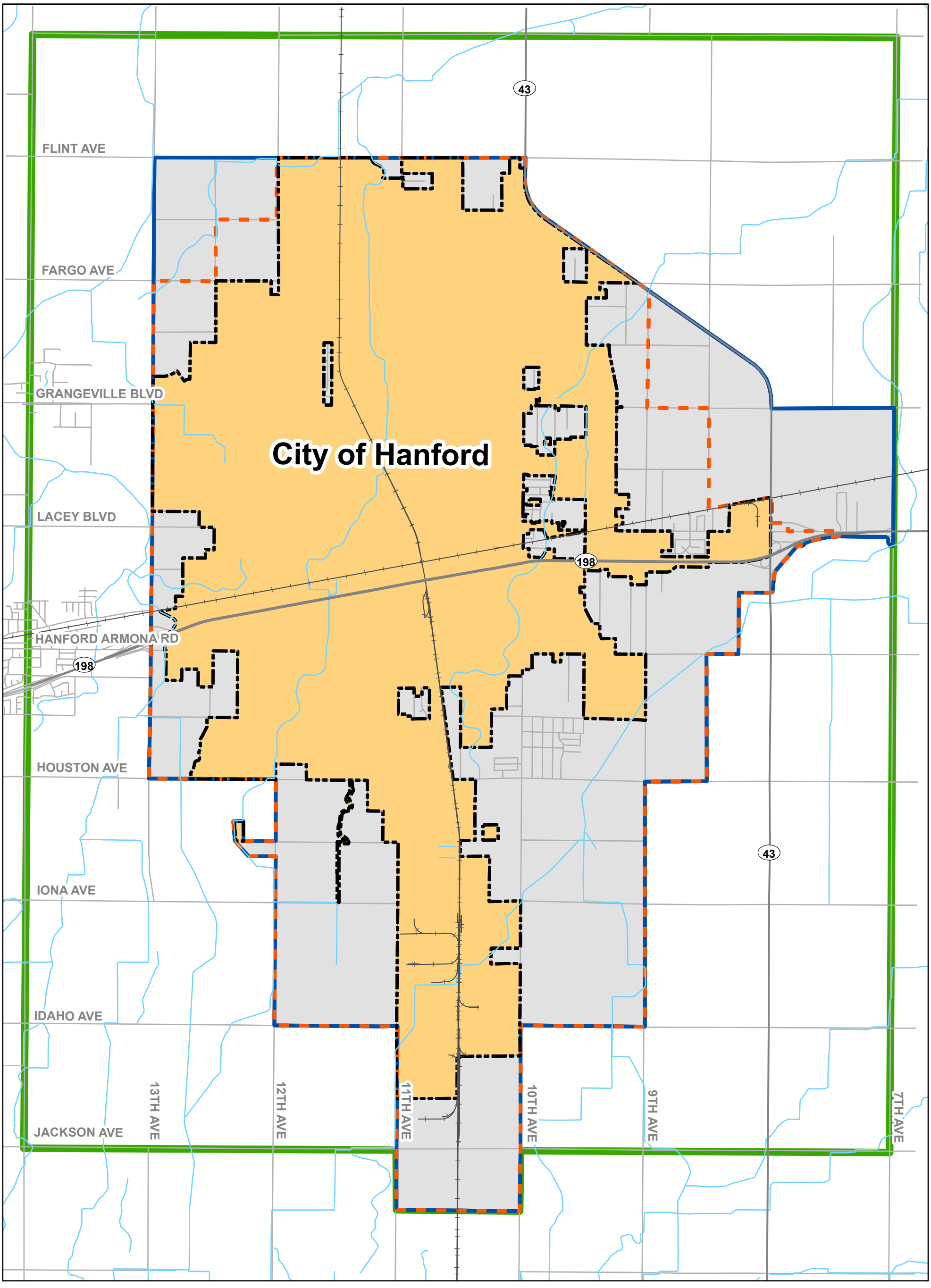
Update: May 20, 2021

AKEL ENGINEERING GROUP, INC.

File Path: P:\xGIS\GIS_Projects\Hanford\Water\2020-UWMP\HF_Fig3-1_RLM_052021.mxd

Figure 3-1
Regional Location Map

2020 Urban Water Management Plan
City of Hanford



Legend

- Streets
- Waterways
- City Limits
- 2035 Growth Boundary
- Planned Area Boundary
- General Plan Study Area Boundary

PRELIMINARY

Update: May 20, 2021

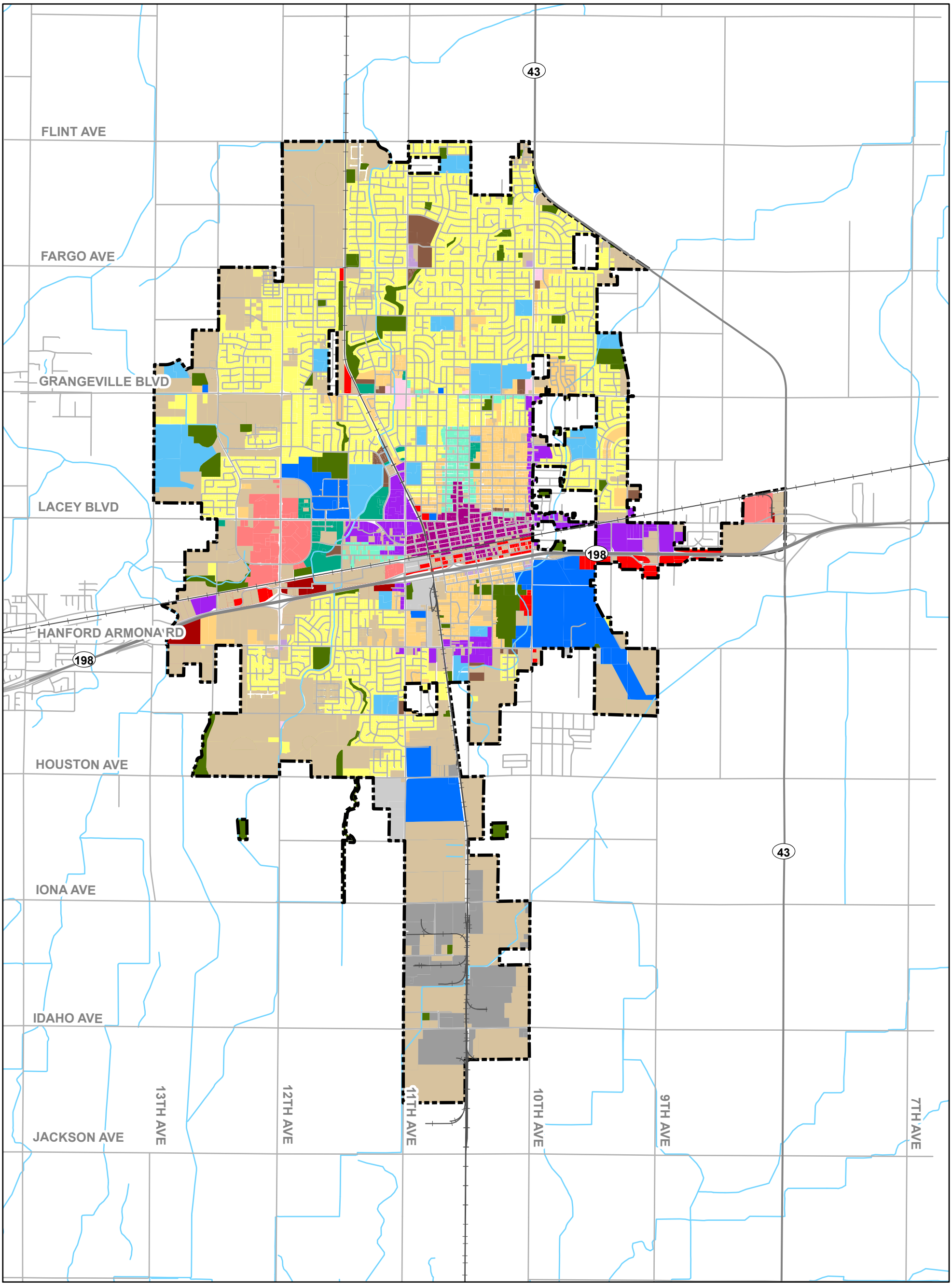
0 0.25 0.5 1 Mile

N W GIS E S

AKEL ENGINEERING GROUP, INC.

Figure 3.2
Existing Service Area

2020 Urban Water Management Plan
City of Hanford



Legend

PRELIMINARY

- Low Density Residential
- Medium Density Residential
- High Density Residential
- Neighborhood Commercial
- Regional Commercial
- Service Commercial
- Highway Commercial
- Office Residential
- Office
- Light Industrial
- Heavy Industrial
- Neighborhood Mixed Use
- Corridor Mixed Use
- Downtown Mixed Use
- Airport Protection
- Open Space
- Educational Facilities
- Public Facilities
- Interest Area
- Vacant/Agriculture
- City Limits
- Streets
- Waterways

N W GIS E S

0 0.25 0.5 1 Mile

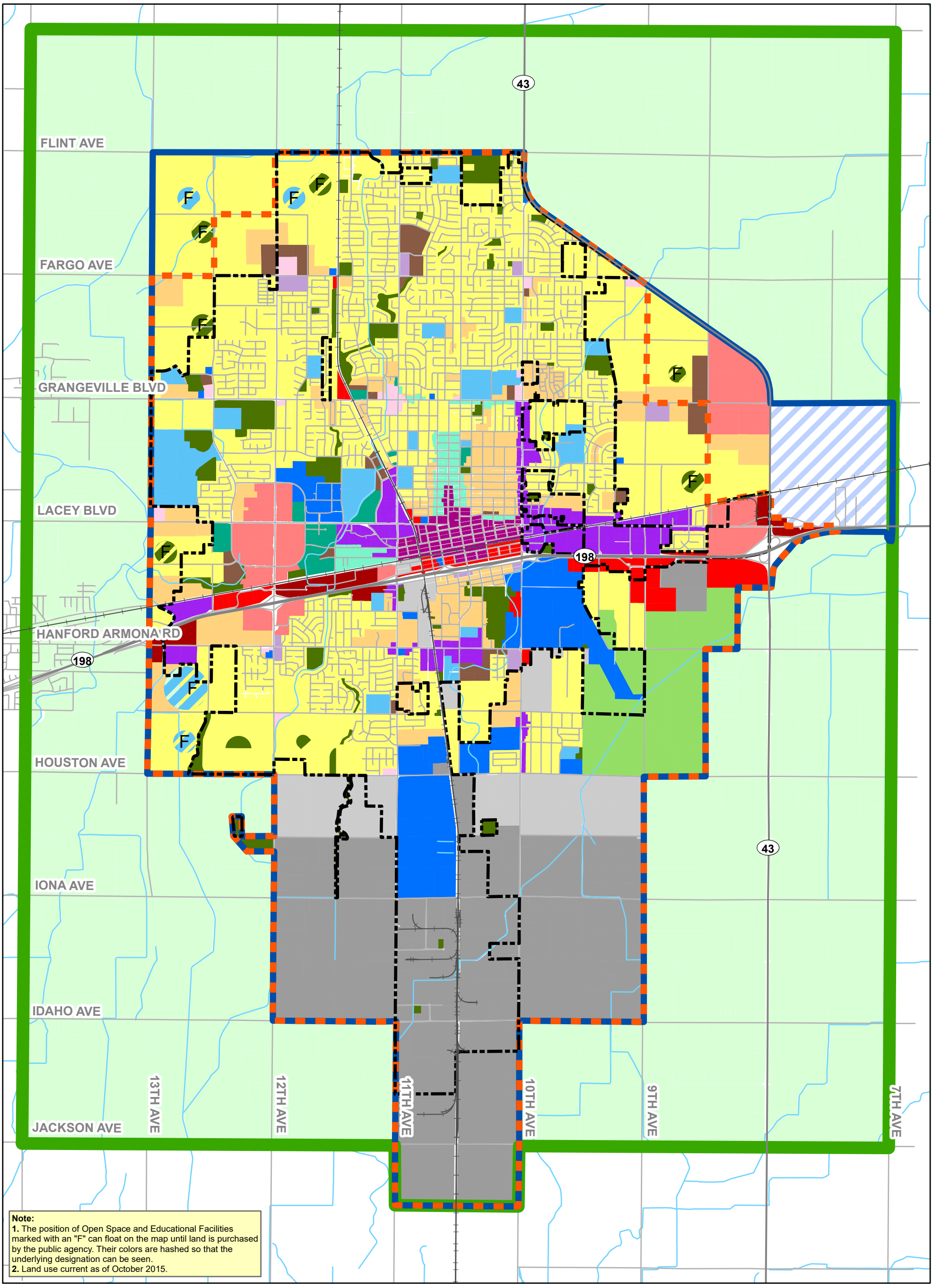
Update: May 25, 2021

Figure 3-3
Existing Land Use

2020 Urban Water Management Plan
City of Hanford

AKEL ENGINEERING GROUP, INC.

File Path: P:\xGIS\GIS_Projects\Hanford\Water\2020-UWMP\HF_Fig3-3_ExistingLandUse_052421.mxd



Legend

- Low Density Residential
- Medium Density Residential
- High Density Residential
- Neighborhood Commercial
- Regional Commercial
- Service Commercial
- Highway Commercial
- Office Residential
- Office
- Light Industrial
- Heavy Industrial
- Neighborhood Mixed Use
- Corridor Mixed Use
- Downtown Mixed Use
- Airport Protection
- Open Space
- Educational Facilities
- Public Facilities
- Interest Area
- City Limits
- 2035 Growth Boundary
- Planned Area Boundary
- General Plan Study Area Boundary
- Streets
- Highways
- Waterways

PRELIMINARY

N W GIS E S

0 0.25 0.5 1 Mile

Update: May 25, 2021

AKEL ENGINEERING GROUP, INC.

File Path: P:\xGIS\GIS_Projects\Hanford\Water\2020-UWMP\HF_Fig3-4_FutureLandUse_052421.mxd

Figure 3-4
2035 General Plan Land Use

2020 Urban Water Management Plan
City of Hanford

3.1.4 Socioeconomic Conditions

Based on data from the U.S. Census American Community Survey, the City of Hanford has a median household income of approximately $62,400 per year and a per capita income of approximately $27,400 per year as of 2019. Approximately 19% of the population has a bachelor's degree or higher, and 80% have a high school diploma or higher. Approximately 15.3% of the population lives below the poverty line.

According to population and housing statistics prepared by the California Department of Finance, the City of Hanford has an average household occupancy of 2.96 people per household. Approximately 77% of the current residential units are single family residences, with the other 23% reflecting multiple family dwelling units. The 2020 residential vacancy rate is approximately 3.1%.

According to U.S. Census American Community Survey, the primary job sectors within the City are educational and health services, retail, and agricultural production. The most recent unemployment rate was listed as 8.9%.

3.2 CLIMATE DATA

The following sections includes a description of the City's historical climate data as well as a summary of the potential impacts of climate change.

3.2.1 Historic Climate Data

Yearly extremes in temperature vary, with the peak high rising to above 100 °F and winter lows receding to the 20 °F range. The City has a historical average annual rainfall of approximately 8.4 inches, with the majority of the rainfall occurring from November to April. According to the California Irrigation Management Information System (CIMIS), the approximate average annual evapotranspiration (Eto) for the City is 61.6 inches. Average climate data is included in Table 3-1.

Table 3-1 Average Climate Data

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Rainfall (inches)	1.6	1.5	1.5	0.8	0.3	0.1	0.0	0.0	0.2	0.4	0.8	1.2	**8.4**
Max. Daily Temp. (°F)	54.7	61.9	67.5	74.9	83.6	91.4	97.8	96.1	90.5	80.0	66.2	55.4	**76.7**
Min. Daily Temp. (°F)	35.2	38.6	42.1	46.4	52.5	58.3	62.5	60.4	55.5	47.4	38.8	34.6	**47.7**
Average ETo (inches)	1.3	2.2	4.2	6.1	8.1	9.0	9.0	8.1	6.1	4.2	2.2	1.2	**61.6**

Historical rainfall in the city is shown in Figure 3-5 and has ranged from 0.89 inches in 1984 to 15.57 inches in 1983.

.

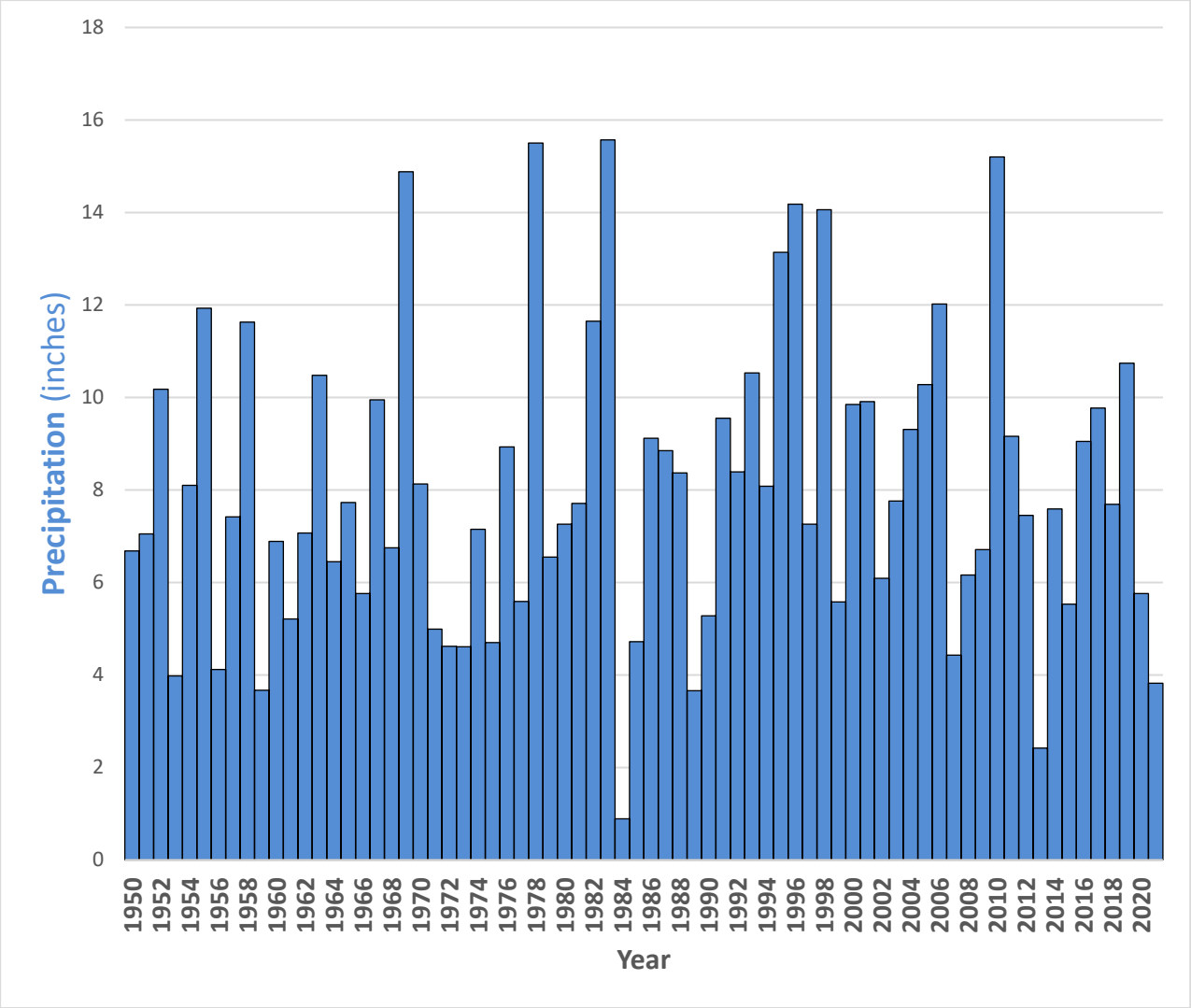


Figure 3-5 Historical Annual Rainfall

3.2.2 Climate Change

As part of the 2020 UWMP update, the California Water Code requires urban water suppliers to provide a general description of the potential effect of climate change within the service area. Based on the City's location and current climate, the most likely changes are related to increasing average temperature, intensifying storm events, and periods of extended drought. Other effects, such as decreasing snowpack or rising sea levels, do not have a direct impact on the City's water demand or supply. Changes in annual precipitation and temperature could have an impact on the City's overall water use as well as available supply volumes.

3.3 SERVICE AREA POPULATION AND DEMOGRAPHICS

The City is a growing community with an estimated 2020 population of 59,178. According to the California Department of Finance (DOF), which accounts for approximately 39 percent of the population of Kings County. Additionally, the city also supplies domestic water to 651 accounts out of the City limit, which are equaled to 2,148 population. Therefore, the City's water system serves a total population of 61,326. The City has an average historical growth rate of approximately 0.9% per year, which is used to project populations through the year 2045. The current and projected service area populations are summarized in **Table 3-2.**

According to 2019 United States Census Bureau's data, the City is comprised of predominantly Hispanic (49.9%) and white (38.9%) ethnicities, with the remaining population comprised of, Black or African American (4.0%), American Indian and Alaska Native (0.4%), and Asian, Native Hawaiian and Pacific Islander (0.2%), Hispanic or Latino (50.4%), with the rest more than one race or other race.

Table 3-2 Population - Current and Projected

2020	2025	2030	2035	2040	2045
61,326	64,227	67,264	70,444	73,776	77,265

Notes:

1. Projected population assumes historical average annual growth of 0.9%.
2. Based on Department of Finance E-5 Table, City of Hanford's 2020 population was 59,178.
3. City of Hanford also supplied 651 accounts outside of the city limit, which included 2,148 residents.

CHAPTER 4 – SYSTEM WATER USE

This chapter provides a description of the current and projected water uses within the City's service area. Additionally, a description of non-potable water use is provided. Water demands are projected through the year 2045.

4.1 NON-POTABLE VERSUS POTABLE WATER USE

The California State Water Code requires documentation of water use within the City's service area for potable, recycled, and raw water demands, as applicable. While the City does not provide any deliveries of raw water, treated wastewater effluent is used to irrigate crops on privately owned land and is discussed in more detail in Chapter 6. The remaining sections within this chapter summarize the historical and projected water use. The water use projection also includes preliminary estimation for recycled water demands, based on potable water demand and return-to-sewer ratio.

4.2 WATER USES BY SECTOR

This section documents the historical and projected water use as well as the maximum day demand.

Law

10631. (d) (1) For an urban retail water supplier, quantify, to the extent records are available, past and current water use, over the same five-year increments described in subdivision (a), and projected water use, based upon information developed pursuant to subdivision (a), identifying the uses among water use sectors, including, but not necessarily limited to, all of the following:

(A) Single-family residential.
(B) Multifamily.
(C) Commercial.
(D) Industrial.
(E) Institutional and governmental.
(F) Landscape.
(G) Sales to other agencies.
(H) Saline water intrusion barriers, groundwater recharge, or conjunctive use, or any combination thereof.
(I) Agricultural.
(J) Distribution system water loss.

(2) The water use projections shall be in the same five-year increments described in subdivision (a).

4.2.1 Historical Water Use

The City currently provides domestic water to residential, commercial, industrial and institutional customers within the City limits. At the time of preparation of the 2020 UWMP, the City had recorded metered water deliveries to 17,965 accounts. The total amount of metered water delivered in 2020 was 10,911 AF, which does not account for an additional 803 AF of unmetered use and water loss. The City's gross water use, 11,714 AF, is summarized in Table 4-1.

Table 4-1 Demands for Potable and Non-Potable Water – Actual

Use Type	Metered Delivered Volume (AF)
Single Family	6,903
Multi-Family	1,002
Commercial[1]	1,005
Industrial	334
Landscape	750
Other	854
Other[2]	62
Losses	803
Total	**11,714**

Notes

1. Includes Commercial and institutional use Types
2. Constriction Billing

Figure 4-1 displays water use compared to population, which shows decreases in water use following droughts in 2007-2010 and 2013-2015 despite a rising population during the time period.

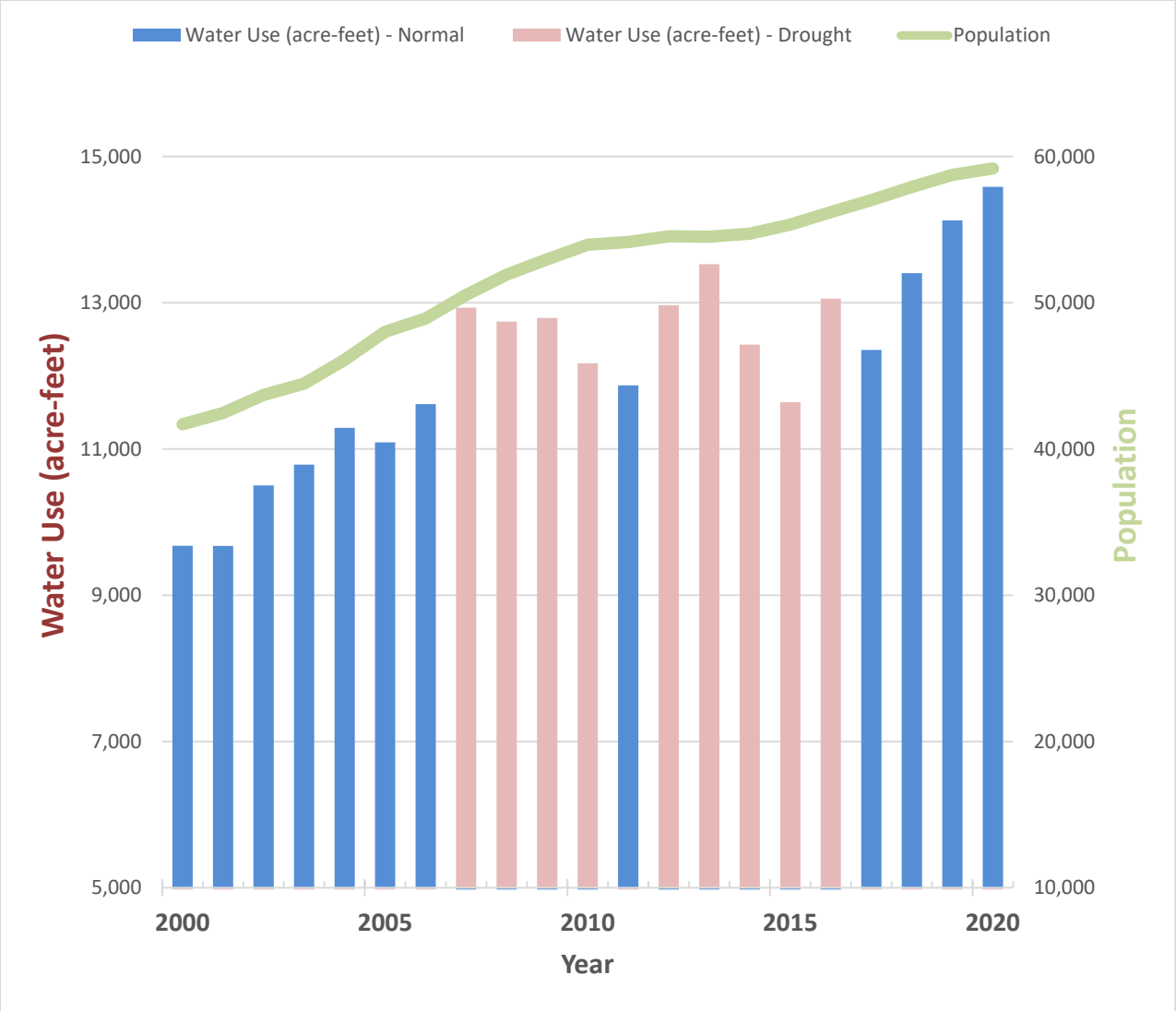


Figure 4-1 Historical Water Use and Population

4.2.2 Projected Water Use

Table 4-2 and Table 4-3, found on the following page, summarize the potable water demand projection through the year 2045. To calculate the projected potable water demand through the UWMP planning horizon of 2045, the City's 2020 urban water use target of 179 gallons per capita per day (gpcd) was applied to the projected population set forth in the 2035 General Plan. The projected demands were then reduced by five percent to account for future water use reductions of up to five percent due to active water savings, as described in more detail in Section 4.4. For conservative planning purposes, the projected water loss amount was estimated as a percentage of other potable water uses based on historical water loss audit information. Table descriptions are as follows:

- Table 4-2 summarizes the projected City-wide water demand by water use type.

- Table 4-3 summarizes the total projected water demand.

Table 4-2 Use for Potable and Non-Potable Water - Projected

Use Type	Projected Water Use				
	2025 (AF)	2030 (AF)	2035 (AF)	2040 (AF)	2045 (AF)
Single Family	6,849	7,173	7,512	7,868	8,240
Multi-Family	994	1,041	1,090	1,142	1,196
Commercial[1]	997	1,044	1,093	1,145	1,199
Industrial	332	347	364	381	399
Landscape	744	780	817	855	896
Other	848	888	930	974	1,020
Other[2]	62	65	68	71	74
Losses	797	834	874	915	959
Total	**11,623**	**12,172**	**12,748**	**13,351**	**13,982**

Notes:

1. Includes Commercial and Institutional use types
2. Construction Billing

Table 4-3 Total Water Use (Potable and Non-Potable)

Demand Type	Demand					
	2020 (AF)	2025 (AF)	2030 (AF)	2035 (AF)	2040 (AF)	2045 (AF)
Potable and Raw Water	11,714	11,623	12,172	12,748	13,351	13,982
Total	**11,714**	**11,623**	**12,172**	**12,748**	**13,351**	**13,982**

4.2.3 Maximum Day Demand

Maximum Day Demand is a significant demand condition on the water supply system. This condition is defined as the maximum 24-hour use period in the year. Peaking factors are commonly used as a way of simulating the maximum day demand for future demand scenarios. This multiplier is assessed to the average day demand, and is commonly in the order of 2 to 2.5 times greater than the average day demand. The September 2017 City Water System Master Plan specified a maximum day demand peaking factor of 1.75 for the main pressure zone and a factor of 2 for the industrial park pressure zone.

4.3 DISTRIBUTION SYSTEM WATER LOSSES

Law

10631 (d)(1) For an urban retail water supplier, quantify, to the extent records are available, past and current water use, over the same five-year increments described in subdivision (a), and projected water use, based upon information developed pursuant to subdivision (a), identifying the uses among water use sectors, including, but not necessarily limited to, all of the following…

(J) Distribution system water loss

(3)(A) The distribution system water loss shall be quantified for each of the five years preceding the plan update, in accordance with rules adopted pursuant to Section

(B) The distribution system water loss quantification shall be reported in accordance with a worksheet approved or developed by the department through a public process.

The water loss quantification worksheet shall be based on the water system balance methodology developed by the American Water Works Association.

(C) In the plan due July 1, 2021, and in each update thereafter, data shall be included to show whether the urban retail water supplier met the distribution loss standards enacted by the board pursuant to Section 10608.34.

As part of the 2020 UWMP update, urban water suppliers are required to quantify the previous five years' distribution system water losses in a manner consistent with the American Water Works Association (AWWA) water system balance methodology. The City has completed the required water loss audit worksheet in accordance with the DWR guidelines for the years 2016-2019, while the audit for 2020 will be completed before the October 2021 deadline. **Table 4-4** documents the estimated water loss volume for 2020 based on submitted Water Loss Audits and a comparison of available production and consumption records.

Table 4-4 Last Five Years of Water Loss Audit Reporting

Reporting Period Start Date	Volume of Water Loss (AF)
January 2016	1,144
January 2017	1,528
January 2018	1,742
January 2019	732
January 2020	803

Note: 2020 water loss was estimated by a comparison of groundwater wells production and billed consumption record.

4.4 ESTIMATING FUTURE WATER SAVINGS

Law

10631 (d)(4) (A) Water use projections, where available, shall display and account for the water savings estimated to result from adopted codes, standards, ordinances, or transportation and land use plans identified by the urban water supplier, as applicable to the service area.

(B) To the extent that an urban water supplier reports the information described in subparagraph (A), an urban water supplier shall do both of the following:

(i) Provide citations of the various codes, standards, ordinances, or transportation and land use plans utilized in making the projections.

(ii) Indicate the extent that the water use projections consider savings from codes, standards, ordinances, or transportation and land use plans. Water use projections that do not account for these water savings shall be noted of that fact.

The City's projected water demands include estimated future water savings from active conservation activities (Table 4-5). These estimated water savings reflect future ongoing water use reductions and do not include short-term demand reductions achieved through the implementation of the City's Water Shortage Contingency Plan.

4.4.1 Active Conservation Program Savings

Active conservation is achieved through activities and programs the City implements as part of its water conservation program. The City's water conservation programs and demand management measures are discussed in detail in Chapter 9 – Demand Management Measures. For planning purposes, it is assumed that the City will achieve up to an additional five percent reduction in

water use as a result of active water savings. This reduction is incorporated in the demand projections shown in Table 4-2 and Table 4-3.

4.4.2 Passive Water Savings

Passive water savings include water use reduction that results from codes, standards, ordinances, and other plans. These various sources of water savings typically result from state or regional requirements or guidelines, which are then implemented by the City. Examples of these codes and ordinances are as follows:

- **Model Water Efficient Landscape Ordinance (MWELO):** In 2015 DWR was tasked with updating the MWELO to increase water efficiency standards for new and retrofitted landscapes. This includes the encouragement the use of more efficient irrigation systems, graywater usage, and onsite storm water capture.
- **California Energy Commission Title 20:** This includes appliance standards for toilets, urinals, faucets, and showerheads. This standard impacts both new construction and replacement fixtures in existing homes.
- **CALGreen Building Code:** The code requires residential and non-residential water efficiency and conservation measures for new buildings and structures.

Passive water savings typically contribute less to water use reductions than active water conservation programs. Therefore, at this time, reductions from passive water savings are not included in the City's demand projections.

Table 4-5 Inclusion in Water Use Projections

Are Future Water Savings Included in Projections?	Yes
Are Lower Income Residential Demands Included In Projections?	Yes

4.5 WATER USE FOR LOWER INCOME HOUSEHOLDS

Law

> *10631.1 (a) The water use projections required by Section 10631 shall include projected water use for single-family and multifamily residential housing needed for lower income households, as defined in Section 50079.5 of the Health and Safety Code, as identified in the housing element of any city, county, or city and county in the service area of the supplier.*
>
> *California Health and Safety Code 50079.5*
> *(a) "Lower income households" means persons and families whose income does not exceed the qualifying limits for lower income families…In the event the federal standards are discontinued, the department shall, by regulation, establish income limits for lower income households for all geographic areas of the state at 80 percent of area median income, adjusted for family size and revised annually.*

SB 1087 (Florez, 2005) amended the UWMPA to require urban water suppliers to include single family and multi-family residential units for lower income households as identified by the City, County, or combination of both within the service area of the provider. In the 2015 UWMP, the low-income projected water demands were calculated based on the 2015 Draft Kings County 2016-2024 Housing Element, which identified approximately 35 percent of households as low income. According to the 2016 Adopted Kings County 2016-2024 Housing Element, approximately 35 percent of households are considered low income. As indicated by **Table 4-5**, the low-income water demands are included in the total water demand projection that is summarized in **Table 4-2**.

4.6 CLIMATE CHANGE

Based on the City's location and current climate, the most likely changes in climate are related to increasing average temperature, intensifying storm events, and periods of extended drought. While the precise effects of climate change on water demand remain uncertain, it is expected that water demands will be affected by increased temperatures and periods of extended drought. Increases in outdoor water use are expected as temperatures increase.

CHAPTER 5 – BASELINES AND TARGETS

Senate Bill X7-7 (SBX7-7) was approved by the Governor of California on November 10, 2009, This Senate Bill required urban water suppliers to set target goals for water conservation, which were to be achieved by the year 2020. These goals were referred to as the "20X2020" goals and included reducing per capita consumption by 20 percent by the year 2020. This chapter summarizes the methods used to estimate the target water use. As part of the 2020 UWMP update, this chapter evaluates if the City achieved the required water use reduction target.

Due to ongoing water conservation policies and practices within the City's service area the 2020 per capita water demand target has been achieved.

5.1 2010 UWMP BASELINE AND TARGETS

The evaluation of a supply source or storage needs for future growth is commonly achieved by evaluating past water consumption on a per person basis. The future needs of the supply source can then be evaluated by applying the per capita consumption rate, expressed as gallons per capita per day (gpcd), to the projected population. Table 5-1 summarizes the baseline periods and per capita water use targets determined as part of the SBX7-7 calculations. The City had an average gpcd of 216 from 1995 to 2000, while the average from 2001 to 2010 remained relatively flat at approximately 214 gpcd. Conservation efforts were successful in lowering the water consumption to a per capita water consumption rate of 188 gpcd in the year 2015, and 171 gpcd in the year of 2020.

Table 5-1 Baselines and Targets Summary

Baseline Period	Start Year	End Year	Per Capita Water Use	
			Average Baseline (gpcd)	Confirmed 2020 Target (gpcd)
10-15 year	1995	2004	215	179
5 Year	2006	2010	215	

5.3 BASELINE PERIODS

This section discusses the baseline periods used in the UWMP. The baseline periods discussed in this section are consistent with the 2015 UWMP.

5.3.1 Determination of the 10-15 Year Baseline Period (Baseline GPCD)

Law

> *10608.12 (b) "Base daily per capita water use" means any of the following:*
>
> *(1) The urban retail water supplier's estimate of its average gross water use, reported in gallons per capita per day and calculated over a continuous 10-year period ending no earlier than December 31, 2004, and no later than December 31, 2010.*
>
> *(2) For an urban retail water supplier that meets at least 10 percent of its measure retail water demand through recycled water that is delivered within the service area of an urban retail water supplier or its urban wholesale water supplier, the urban retail water supplier may extend the calculation described in paragraph (1) up to an additional five years to a maximum of a continuous 15-year period ending no earlier than December 31, 2004 and no later than December 31, 2010.*

To adequately project future water use, SBX7-7 must be considered with the appropriate reductions. As part of the new requirements for reductions in water use, a range in years needs to be selected for calculating the base daily (historical) per capita water use.

SBX7-7 allows the selection of either 10 or 15 years as a base period for calculating the average consumption per capita. If the recycled water use exceeds 10 percent of potable water production, a 15-year base period is allowed. Otherwise, a 10-year base period should be used. Additionally, a 5-year base period is to be identified for interim target projections.

The 10- to 15-year base period must end between December 31, 2004 and December 31, 2010; and the 5-year base period must end between December 31, 2007 and December 31, 2010.

The City's calculations for the base periods are documented on the following page in **SBX7-7 Table 1**. Since the recycled water usage in 2008 did not account for more than 10 percent of the total potable water production, the City must use the 10-year baseline period. The 10-year base period is selected based on the highest average per capita water use in any 10-year period within the DWR guidelines. The 2020 UWMP uses baseline periods consistent with 2015 UWMP, where the 10-year baseline period is defined as1995 to 2004.

SBX7-7 Table 1 Baseline Period Ranges

Baseline	Parameter	Value	Units
10- to 15-year baseline period	2008 total water deliveries	12,741	AF
	2008 total volume of delivered recycled water	0	AF
	2008 recycled water as a percent of total deliveries	0.00%	%
	Number of years in baseline period	10	Years
	Year beginning baseline period range	1995	
	Year ending baseline period range	2004	
5-year baseline period	Number of years in baseline period	5	Years
	Year beginning baseline period range	2006	
	Year ending baseline period range	2010	

5.3.2 Determination of the 5-year Baseline Period (Target Confirmation)

Law

10608.12 (b).

(3) For the purposes of Section 10608.22, the urban retail water supplier's estimate of its average gross water use, reported in gallons per capita per day and calculated over a continuous five-year period ending no earlier than December 31, 2007, and no later than December 31, 2010.

In order to confirm that the calculated 2020 Urban Water Use target meets the minimum water use reduction requirements, water use must also be calculated over a 5-year baseline period. The 2010 and 2015 UWMP selected a 5-year range of 2006-2010, and this range is not updated as part of the 2020 UWMP.

5.4 SERVICE AREA POPULATION

Law

10608.20 (e) An urban retail water supplier shall include in its urban water management plan due in 2010…the baseline daily per capita water use, …along with the bases for determining those estimates, including references to supporting data.

(f) When calculating per capita values for the purposes of this chapter, an urban retail water supplier shall determine population using federal, state, and local population reports and projections.

10644 (a)(2) The plan…shall include any standardized forms, tables, or displays specified by the department

California DOF population estimates were used to determine historical populations as part of the 10-year average per capita water use, as indicated on **SBX7-7 Table 2**. The baseline service area population is summarized on the following page in **SBX7-7 Table 3.** This population over the baseline period is used in the calculation of the baseline period average per capita water use. The City is a growing community with an estimated 2020 population of 59,178, according to the California Department of Finance (DOF). Additionally, the city also supplies domestic water to 651 accounts out of the City limit, which are equaled to 2,148 population. Therefore, the City's water system serves a total population of 61,326.

SBX7-7 Table 2 Method for Population Estimates

Method Used to Determine Population	
☑	**1. Department of Finance (DOF)** DOF Table E-8 (1990 - 2000) and (2000-2010) and DOF Table E-5 (2011 - 2020)
☐	**2. Persons-per-Connection Method**
☐	**3. DWR Population Tool**
☐	**4. Other**

SBX7-7 Table 3 Service Area Population

Year		Population
10 to 15 Year Baseline Population		
Year 1	1995	37,400
Year 2	1996	38,150
Year 3	1997	39,300
Year 4	1998	39,900
Year 5	1999	40,350
Year 6	2000	41,450
Year 7	2001	42,462
Year 8	2002	43,869
Year 9	2003	44,466
Year 10	2004	46,096
5 Year Baseline Population		
Year 1	2006	48,920
Year 2	2007	50,534
Year 3	2008	51,922
Year 4	2009	52,970
Year 5	2010	53,967
2015 Compliance Year Population		
2015		55,337
2020 Compliance Year Population		
2020		61,326

5.5 GROSS WATER USE

Law

10608.12 (g) "Gross Water Use" means the total volume of water, whether treated or untreated, entering the distribution system of an urban retail water supplier, excluding all of the following:
(1) Recycled water that is delivered within the service area of an urban retail water supplier or its urban wholesale water supplier
(2) The net volume of water that the urban retail water supplier places into long term storage
(3) The volume of water the urban retail water supplier conveys for use by another urban water supplier
(4) The volume of water delivered for agricultural use, except as otherwise provided in subdivision (f) of Section 10608.24.

California Code of Regulations Title 23 Division 2 Chapter 5.1 Article
Section 596 (a) An urban retail water supplier that has a substantial percentage of industrial water use in its service area is eligible to exclude the process water use of existing industrial water customers from the calculation of its gross water use to avoid the disproportionate burden on another customer section.

In order to determine the baseline per capita water use, gross water use entering the distribution system of the supplier must be determined for each year within the baseline period. There are a number of exclusions taken into consideration when determining the annual gross water use, including recycled water delivered in the service area; water volume placed into long term storage; water conveyed for use by another urban water supplier; water delivered; with certain exceptions, for agricultural use, and industrial water use if the total industrial use is greater than or equal to 12% of gross water use.

Based on historical production reports, and consistent with the 2015 UWMP, there are no exceptions to be taken into consideration when calculating the City's gross water use. The City's historical gross water use is summarized on the following page in **SBX7-7 Table 4**, with the gross water use in the 2020 compliance year equal to 11,714 AF. The volume of water entering the distribution system from the City's groundwater source is summarized, following **SBX7-7 Table 4**, in **SBX7-7 Table 4-A**.

SBX7-7 Table 4 Annual Gross Water Use

Baseline Year		Volume Into Distribution System (AF)	Deductions					Annual Gross Water Use (AF)
			Exported Water (AF)	Change in Dist. System Storage (+/-) (AF)	Indirect Recycled Water (AF)	Water Delivered for Agricultural Use (AF)	Process Water (AF)	
10 to 15 Year Baseline - Gross Water Use								
Year 1	1995	9,198						9,198
Year 2	1996	9,348						9,348
Year 3	1997	10,379						10,379
Year 4	1998	8,704						8,704
Year 5	1999	9,855						9,855
Year 6	2000	9,649						9,649
Year 7	2001	9,673						9,673
Year 8	2002	10,502						10,502
Year 9	2003	10,784						10,784
Year 10	2004	11,260						11,260
						10 - 15 year baseline average gross water use		**9,935**
5 Year Baseline - Gross Water Use								
Year 1	2006	11,613						11,613
Year 2	2007	12,930						12,930
Year 3	2008	12,742						12,742
Year 4	2009	12,792						12,792
Year 5	2010	12,172						12,172
						5 year baseline average gross water use		**12,450**
2015 Compliance Year - Gross Water Use								
2015		11,640				**2015 gross water use**		**11,640**
2020 Compliance Year - Gross Water Use								
2020		11,714				**2020 gross water use**		**11,714**

SBX7-7 Table 4-A Volume Entering Distribution System

Name of Water Source: Tulare Lake Groundwater Subbasin		
☑ The supplier's own water source ☐ A purchased or imported water source		
Baseline Year		Volume Entering Distribution System (AF)
10 to 15 Year Baseline - Water into Distribution System		
Year 1	1995	9,198
Year 2	1996	9,348
Year 3	1997	10,379
Year 4	1998	8,704
Year 5	1999	9,855
Year 6	2000	9,649
Year 7	2001	9,673
Year 8	2002	10,502
Year 9	2003	10,784
Year 10	2004	11,260
5 Year Baseline - Water into Distribution System		
Year 1	2006	11,613
Year 2	2007	12,930
Year 3	2008	12,742
Year 4	2009	12,792
Year 5	2010	12,172
2015 Compliance Year - Water into Distribution System		
2015		11,640
2020 Compliance Year - Water into Distribution System		
2020		11,714

5.6 BASELINE DAILY PER CAPITA WATER USE

The final baseline calculation is to determine the per capita water use in each baseline year and the average per capita water use over the entire baseline period. Using the baseline period and service area population as described in previous sections, the per capita water use for each year has been calculated as documented on the following page in **SBX7-7 Table 5**. The maximum and minimum per capita water use over the baseline period respectively are 236 gpcd in 1997 and 195 gpcd in 1998. The average per capita water use over the 10-year baseline period is 215 gpcd. In the following pages, **SBX7-7 Table 6** summarizes the 10-year baseline per capita water use, the 5-year baseline per capita water use, and the 2020 compliance year per capita water use.

5.7 2020 FINAL TARGETS

Consistent with the 2015 UWMP, the 2020 Urban Water Use Target was calculated using Method 3, which is indicated on the following pages in **SBX7-7 Table 7**. Method 3, as defined by DWR, assigns a static 2020 urban water use target based on a water supplier's location within one of the ten regional urban water use target areas. Using Method 3, the City's 2020 urban water use target is documented as 95% of the hydrologic regional (Tulare Lake) target, as 179 gpcd; the water use targets for the ten water use regions are summarized in **SBX7-7 Table 7-E** on the following pages. The 179 gpcd target is intended to be maintained through the UWMP horizon of 2045.

SBX7-7 Table 5 Gallons Per Capita Per Day (GPCD)

Baseline Year		Service Area Population	Annual Gross Water Use (AF)	Daily Per Capita Water Use (gpcd)
10 to 15 Year Baseline Per Capita Water Use				
Year 1	1995	37,400	9,198	220
Year 2	1996	38,150	9,348	219
Year 3	1997	39,300	10,379	236
Year 4	1998	39,900	8,704	195
Year 5	1999	40,350	9,855	218
Year 6	2000	41,450	9,649	208
Year 7	2001	42,462	9,673	203
Year 8	2002	43,869	10,502	214
Year 9	2003	44,466	10,784	217
Year 10	2004	46,096	11,260	218
		10-15 Year Average Baseline GPCD		215
5 Year Baseline Per Capita Water Use				
Year 1	2006	48,920	11,613	212
Year 2	2007	50,534	12,930	228
Year 3	2008	51,922	12,742	219
Year 4	2009	52,970	12,792	216
Year 5	2010	53,967	12,172	201
		5 Year Average Baseline GPCD		215
2015 Compliance Year Per Capita Water Use				
2015		55,337	11,640	188
2020 Compliance Year Population				
2020		61,326	11,714	171

SBX7-7 Table 6 Gallons per Capita per Day Summary

	Per Capita Water Use (gpcd)
10-15 Year Baseline	215
5 Year Baseline	215
2020 Compliance Year	171

SBX7-7 Table 7 2020 Target Method

Target Method		Supporting Documentation
☐	Method 1	SB X7-7 Table 7A
☐	Method 2	SB X7-7 Tables 7B, 7C, and 7D
☑	Method 3	SB X7-7 Table 7-E
☐	Method 4	Method 4 Calculator

5.7.1 5-Year Baseline – 2020 Target Confirmation

Law

> *10608.22 Notwithstanding the method adopted by an urban retail water supplier pursuant to Section 10608.20, an urban retail water supplier's per capita daily water use reduction shall be no less than 5 percent of base daily per capita water use as defined in paragraph (3) of subdivision (b) of Section 10608.12. This section does not apply to an urban retail water supplier with a base daily per capita water use at or below 100 gallons per capita per day.*

The 2020 Urban Water Use Target is required to reduce the City's 2020 water use by a minimum of 5 percent from the 5-year baseline period (2006-2010). As calculated in **SB X7-7 Table 5**, the average per capita water use for the 5-year baseline period is 215 gpcd. The 2020 urban water use target of 179 gpcd is an approximate 17 percent reduction from the 5-year average per capita water use, thereby confirming the 2020 Urban Water Use Target as documented in **SBX7-7 Table 7-F**.

SBX7-7 Table 7-E Target Method 3

Agency May Select More Than One as Applicable	Percentage of Service Area in This Hydrological Region	Hydrologic Region	"2020 Plan" Regional Targets (gpcd)	Method 3 Regional Targets (95%) (gpcd)
☐		North Coast	137	130
☐		North Lahontan	173	164
☐		Sacramento River	176	167
☐		San Francisco Bay	131	124
☐		San Joaquin River	174	165
☐		Central Coast	123	117
☑	100%	Tulare Lake	188	179
☐		South Lahontan	170	162
☐		South Coast	149	142
☐		Colorado River	211	200
			Target	**179**

SBX7-7 Table 7-F Confirm Minimum Reduction for 2020 Target

5 Year Baseline GPCD (gpcd)	Maximum 2020 Target[1] (gpcd)	Calculated 2020 Target (gpcd)	Confirmed 2020 Target (gpcd)
215	205	179	179

Notes:

1. Maximum 2020 Target is 95% of the 5-year Baseline per capita water use

5.8 2020 COMPLIANCE DAILY PER CAPITA WATER USE

Law

10608.12 (f)	*"Compliance daily per-capita water use" means the gross water use during the final year of the reporting period…*
10608.20 (e)	*An urban retail water supplier shall include in its urban water management plan due in 2010…compliance daily per capita water use, along with the bases for determining those estimates, including references to supporting data.*

Using the City population and gross water use for the 2020 compliance year, the per capita water use was calculated as 171 gpcd, meaning the City has met the 2020 target per capita water use of 179 gpcd. Table 5-2 and SBX7-7 Table 9 summarizes the City's compliance with the 2020 per capita water use targeted reduction.

SBX7-7 Table 9/Table 5-2 2020 Compliance

2020 GPCD			2020 Confirmed Target GPCD	Did Supplier Achieve Targeted Reduction for 2020?
Actual 2020 GPCD	2020 Total Adjustments	Adjusted 2020 GPCD		
171	-	171	179	Yes

5.9 REGIONAL ALLIANCE

The DWR allows water supply agencies to comply with SBX7-7 through a Regional Alliance, and the corresponding SBX7-7 compliance information must be reported in a Regional Alliance Report. The City is not part of a regional alliance and is not reporting any compliance information in a Regional Alliance Report.

CHAPTER 6 – SYSTEM SUPPLIES

The purpose of this chapter is to summarize the City's current and planned water supply sources and volumes. This includes a description of the groundwater basins used by the City as a source of supply. Ongoing planning efforts for the potential use of recycled water within the City's service area are also summarized.

6.1 PURCHASED OR IMPORTED WATER

The City currently uses local groundwater as the sole source of water supply and does not purchase or import water from any other water suppliers or entities.

6.2 GROUNDWATER

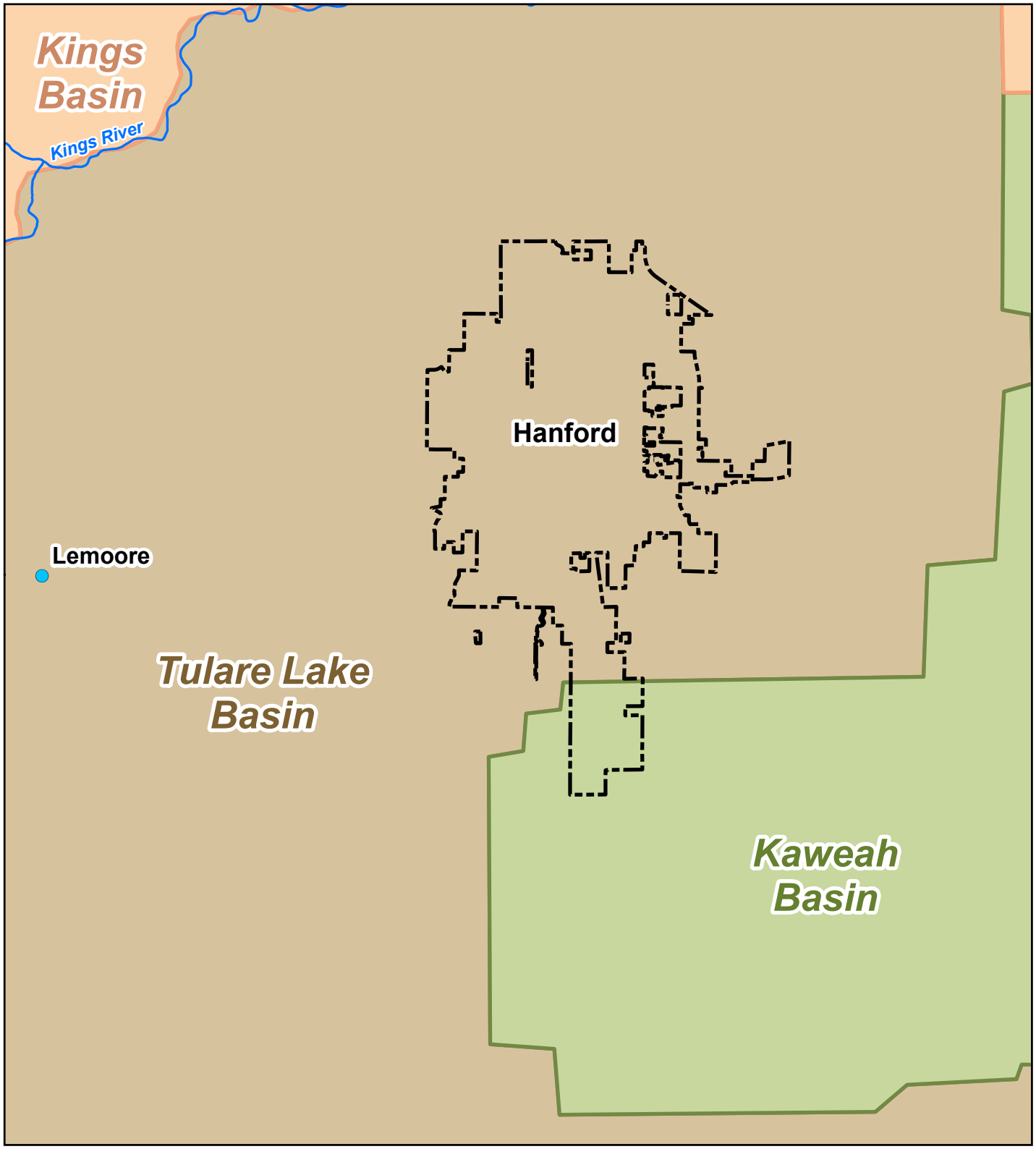
For planning purposes, the State of California has been divided into ten separate hydrologic regions by the DWR, based on the State's major drainage basins. According to the California Water Plan 2018 Update, the City is located in the Tulare Lake Hydrologic Region. Each hydrologic region is divided into distinct groundwater basins, each of which is typically divided further into smaller interconnected groundwater subbasins. The following section summarizes the groundwater basin and subbasin underlying the City.

6.2.1 Basin Description

Law

10631. (b)(4)	*If groundwater is identified as an existing or planned source of water available to the supplier, all of the following information shall be included in the plan:* *(B) A description of any groundwater basin or basins from which the urban water supplier pumps groundwater.*

The City is located above the San Joaquin Valley Groundwater Basin, for which the Kings County Water District (KCWD) is the principal groundwater management agency. This basin can further be divided into subbasins that help better define the aquifer below the city. These subbasins are interconnected and help filter, transmit, and store water. The subbasins that subdivide the San Joaquin Valley Groundwater Basin are the Kings, Kern County, Kaweah, Tulare Lake, Tule, Pleasant Valley, and Westside groundwater basin. The Tulare Lake subbasin is the specific groundwater subbasin in which the City resides and has a surface area of approximately 524,000 acres (**Figure 6-1**). It is bounded to the north by the Kings Groundwater Basin, to the south by the Kings-Kern County line, to the east by the Westside groundwater basin, and to the west by the California Aqueduct; the subbasin has a surface area of approximately 818 square miles.



Legend

PRELIMINARY

Groundwater Subbasins

Hanford City Limits

Kings (5-22.08)

Kaweah (5-22.11)

Tulare Lake (5-22.12)

N

W GIS E

S

0 0.5 1 2 Miles

Update: May 20, 2021

AKEL ENGINEERING GROUP, INC.

File Path: P:\xGIS\GIS_Projects\Hanford\Water\2020-UWMP\HF_Fig6-1_GroundWaterBasins_052021.mxd

Figure 6-1
Groundwater Subbasins

2020 Urban Water Management Plan
City of Hanford

The Tulare Lake Groundwater Subbasin is not an adjudicated groundwater basin. In characterizing the groundwater budget, the DWR has classified the subbasin as Type B, which means that enough data is available to estimate groundwater extraction to meet local needs, but not enough data is available to characterize the groundwater budget. Well yields in the Tulare Lake subbasin average between 300 and 1,000 gallons per minute (gpm), with a maximum of 3,000 gpm.

As of 1995, the DWR estimated the total water storage of the subbasin using an estimated specific yield of 8.5 percent and water levels collected by the DWR as well as other cooperators. Based on these calculations, the DWR estimates the total storage capacity of the subbasin to be 17,100,000 AF to a depth of 300 ft and 82,500,000 AF to the base of fresh groundwater.

The 2003 DWR Bulletin 118 describes the subbasin water level as declining from 1970 to 2000, with fluctuation in the intervening years. Fluctuations can range from a general increase of 24 feet to decrease of up to 23 feet, with an average decline of 17 feet. According to the DWR, fluctuations are most significant in the lakebed area of the subbasin, with the area experiencing some of the steepest decreases and increases in water levels.

According to 2020 Tulare Lake Groundwater Sustainability Plan, GSAs estimate the total annual change in storage in the Subbasin storage ranged from -392,280 AF (2015) to 361,230 AF (2011) and averaged approximately -85, 690 AF per year during the 1990-2016 period. Municipal pumping was assumed to increase slowly from about 25,060 AF (2017) to about 30,160 AF (2070).

6.2.2 Groundwater Management

Law

10631. (b)(4)	*…if groundwater is identified as an existing or planned source of water available to the supplier, all of the following information shall be included in the plan:*
	(C) The current version of any groundwater sustainability plan or … any groundwater management plan adopted by the urban water supplier…or any other specific authorization for groundwater management.
	(D) For basins that a court or the board has adjudicated the rights to pump groundwater, a copy of the order or decree adopted by the court or the board and a description of the amount of groundwater the urban water supplier has the legal right to pump under the order or decree.

The Tulare Lake Groundwater Sustainability Plan, adopted in January 2020, was developed for the Tulare Lake Subbasin pursuant to the Sustainable Groundwater Management Act. The Tulare Lake Subbasin is classified as a high-priority subbasin by DWR and is subdivided into five local GSAs. The Mid-Kings River GSA covers the portion of the Tulare Lake Subbasin from which the City extracts its groundwater supplies.

According to the Tulare Lake Subbasin GSP, the intent of the plan is to manage groundwater resources such that adequate water supplies are maintained for existing users and established management objectives maintain a sustainable groundwater yield. The sustainability goals for the Subbasin will be achieved by implementing the measures below, as extracted from the GSP.

- Understanding the interaction between existing and future conditions
- Analyzing and identifying the effects of exiting management actions on the Subbasin
- Implementing the GSP and its associated measures, including projects and management actions to halt and avoid future undesirable results
- Collaborating between agencies to achieve goals and protect beneficial uses
- Assessing at interim milestones the successes and challenges of the implemented projects and

6.2.3 Overdraft Conditions

The Tulare Lake subbasin has been identified by DWR as a high-priority groundwater basin and is one of multiple subbasins within the state listed as being in a condition of critical overdraft. The Tulare Lake Subbasin GSP indicates that the Mid-Kings Rivers GSA intends to coordinate with KCWD to implement ongoing basin management objectives and overdraft mitigation measures. Several efforts to mitigate overdraft were documented in the KCWD 2001 Groundwater Management Plan Update, which are briefly summarized below.

- **Water Conservation Efforts:** KCWD and the City of Hanford participate in several water conservation and education programs, contributing both funds and staff time. The agricultural users within the KCWD service area use the delivered water responsibly through various highly efficient irrigation systems. Additionally, water deliveries are metered and billed based on volume used and customers therefore have an incentive to minimize water usage.
- **Increasing Surface Water Imports:** KCWD currently delivers surface water to several water and canal companies. Utilization of surface water supplies decreases the demand on groundwater, serving as a form of in-lieu recharge. KCWD strives to provide surface water at a rate low enough to customers to encourage utilizing as much surface water as possible before resorting to groundwater pumping.
- **Increasing Groundwater Recharge:** KCWD operates 25 direct groundwater recharge basins and also leaves many earthen canals unlined for the purpose of recharge through seepage. The total recharge surface area, including both basins and unlined canals, is approximately 1,300 acres; the amount of recharge varies from year to year, and the most significant recharge effects occur during wet years.

6.2.4 Historical Groundwater Pumping

Law

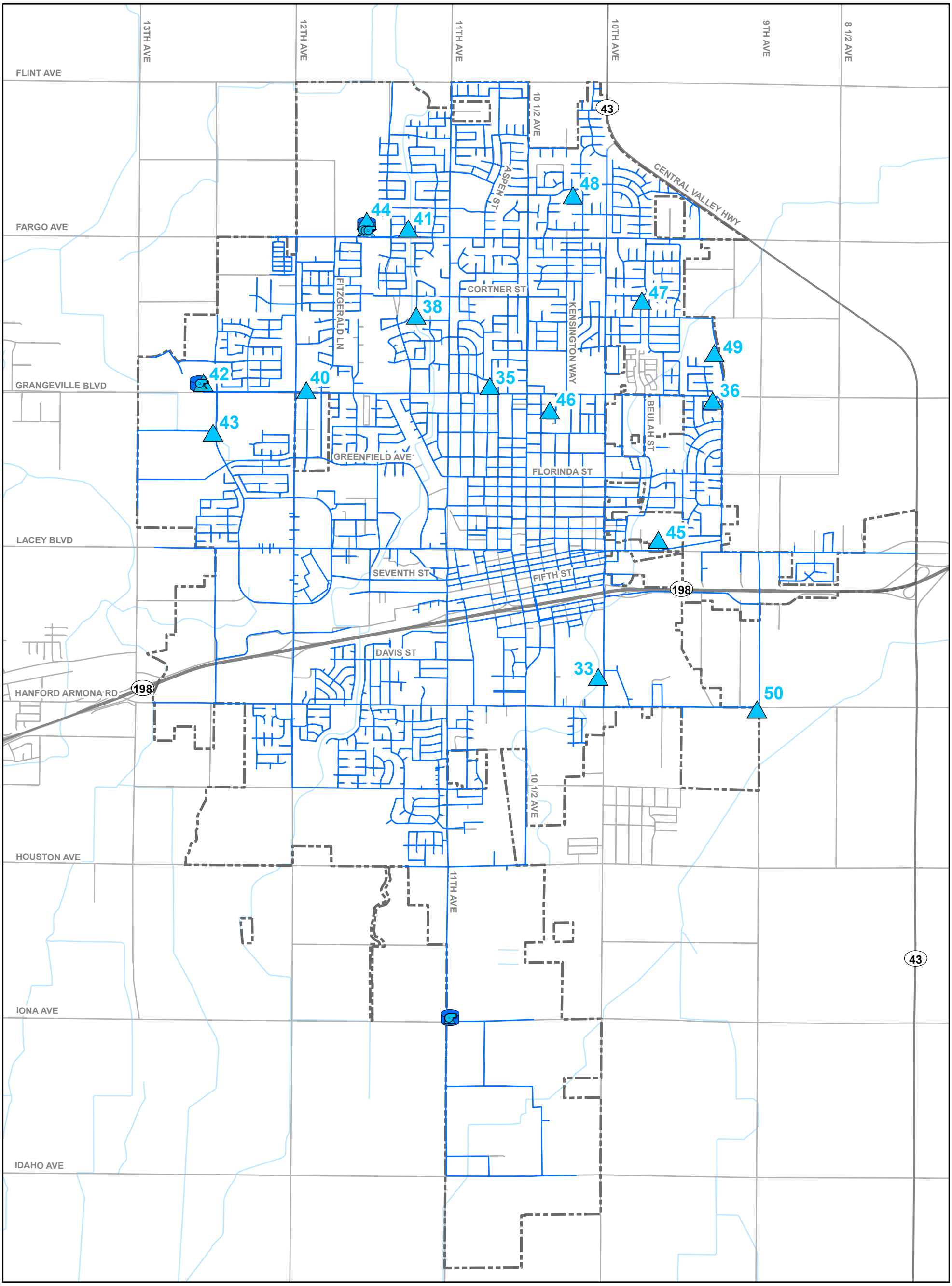
10631. (b)(4)	*…if groundwater is identified as an existing or planned source of water available to the supplier, all of the following information shall be included in the plan:* *(C) A detailed description and analysis of the location, amount, and sufficiency of groundwater pumped by the urban water supplier for the past five years. The description and analysis shall be based on information that is reasonable available, including, but not limited to, historic use records.*

According to the 2017 WSMP there are currently 14 active groundwater wells located throughout the City, as shown in **Figure 6-2**, with a combined supply capacity of approximately 34.5 million gallons per day (mgd). The firm capacity, designated as the total capacity less the largest unit out of service, of the City wells is 31.6 mgd.

The volume of groundwater pumped by the City over the past five years is summarized in **Table 6-1**. Historically, the Tulare Lake subbasin has adequately met the City's water demands, and it is anticipated that the subbasin will adequately meet the City's water demands in the future.

Table 6-1 Groundwater Volume Pumped

Groundwater Type	Location or Basin Name	Volume				
		2016 (AF)	2017 (AF)	2018 (AF)	2019 (AF)	2020 (AF)
Alluvial Basin	San Joaquin Valley Groundwater Basin, Tulare Lake Subbasin	10,910	11,073	11,557	10,927	11,714
	Total	**10,910**	**11,073**	**11,557**	**10,927**	**11,714**


13TH AVE
12TH AVE
11TH AVE
10 1/2 AVE
10TH AVE
9TH AVE
8 1/2 AVE
FLINT AVE
FARGO AVE
GRANGEVILLE BLVD
LACEY BLVD
HANFORD ARMONA RD
HOUSTON AVE
IONA AVE
IDAHO AVE
ASPEN ST
CENTRAL VALLEY HWY
CORTNER ST
FITZGERALD LN
KENSINGTON WAY
BEULAH ST
GREENFIELD AVE
FLORIDA ST
SEVENTH ST
FIFTH ST
DAVIS ST
43
198
44
41
48
38
47
49
42
40
35
46
36
43
45
33
50
Legend
Existing System
Tanks
Wells
Pump Stations
Valves
Pipes
City Limits
Streets
Waterways
PRELIMINARY
Update: May 20, 2021
0
0.25
0.5
1
Mile
N
W
GIS
E
S
Figure 6-2
Existing Groundwater Well Locations
2020 Urban Water Management Plan
City of Hanford
AKEL
ENGINEERING GROUP, INC.
File Path: P:\xGIS\GIS_Projects\Hanford\Water\2020-UWMP\HF_Fig6-2_ExistSys_052021.mxd

6.3 SURFACE WATER

At the time of preparation of the 2020 UWMP, the City does not use surface water as part of its water supply.

6.4 STORMWATER

At the time of preparation of the 2020 UWMP, the City does not use stormwater as part of its water supply.

6.5 WASTEWATER AND RECYCLED WATER

This section discusses the use of recycled water, and the characteristics of the wastewater treated at the City owned and operated treatment plant.

6.5.1 Recycled Water Coordination

Law

> *10633 The plan shall provide, to the extent available, information on recycled water and its potential for use as a water source in the service area of the urban water supplier. The preparation of the plan shall be coordinated with local water, wastewater, groundwater, and planning agencies that operate within the supplier's service area.*

The City of Hanford is responsible for the collection, treatment, and disposal of wastewater within the City limits. The subsequent sections document information regarding the wastewater treatment facility, the use of reclaimed wastewater, and the coordination between agencies regarding the treated wastewater.

6.5.2 Wastewater Collection, Treatment, and Disposal

This section describes wastewater collection and disposal.

Law

> *10633 (a) A description the wastewater collection and treatment systems in the supplier's service area, including a quantification of the amount of wastewater collected and treated and the methods of wastewater disposal*
> *(b) A description the quantity of treated wastewater that meets recycled water standards, is being discharge, and is otherwise available for use in a recycled water project.*

6.5.2.1 Wastewater Collected Within Service Area

The City collects wastewater from residential, commercial, and industrial customers within the City limits and some unincorporated areas. The collected flows are conveyed through a trunk system to a Wastewater Treatment Facility (WWTF) in the south of the City. The City's large industrial area near the southern boundary of the City limits collect flows at a series of lift stations before

being pumped north to the WWTF. Based on available data received from City staff, the WWTF treated an average annual wastewater flow of approximately 4,944AF in 2020 (Table 6-2).

Table 6-2 Wastewater Collected Within Service Area in 2020

Wastewater Collection			Recipient of Collected Wastewater			
Name of Wastewater Collection Agency	Wastewater Volume Metered or Estimated?	Volume of Wastewater Collected from UWMP Service Area 2020 (AF)	Name of Wastewater Treatment Agency Receiving Collected Wastewater	Treatment Plant Name	Is WWTP Located Within UWMP Area?	Is WWTP Operation Contracted to a Third Party?
City of Hanford	Metered	4,944	City of Hanford	City of Hanford WWTF	Yes	No

6.5.2.2 Wastewater Treatment and Discharge Within Service Area

The City's WWTF has an existing design capacity of 8.0 mgd and includes the following treatment components: a headworks, two primary clarifiers, two primary trickling filters, two secondary trickling filters, one oxidation ditch, four secondary clarifiers, three anaerobic digesters, one dissolved air flotation sludge thickener, sixteen sludge drying beds, one facultative sludge lagoon, one effluent equalization basin, six effluent disposal/percolation ponds, and two emergency effluent storage ponds. Treated wastewater is discharged to the facility's equalization basin and then pumped to evaporation/percolation ponds or farmlands for agricultural irrigation. The City's treatment and discharge of wastewater are summarized in Table 6-3.

Table 6-3 Wastewater Treatment and Discharge Within Service Area in 2020

Wastewater Treatment Plant Name	Discharge Location Name and Description	Method of Disposal	Does This Plant Treat Wastewater Generated Outside the Service Area?	Treatment Level	2020 Volume			
					Wastewater Treated (AF)	Discharged Treated Wastewater (AF)	Recycled Within Service Area (AF)	Recycled Outside of Service Area (AF)
City of Hanford WWTF	Equalization basin storage of treated effluent	Land disposal	No	Secondary Disinfected – 23 MPN	4,944	0	0	4,944

6.5.3 Recycled Water System

Law

> *10633 (c) A description the recycled water currently being used in the supplier's service area, including, but not limited to, the type, place, and quantity of use.*

The City currently distributes the chlorinated secondary-treated effluent wastewater to agriculture users, east and west of the WWTF, for crop irrigation. The irrigation of crops on privately owned land is permitted under the City's two monitoring report programs (MRP) from the Regional Water Quality Control Board (RWQCB). The first program, MRP 5-00-222, governs the use of recycled water on 11,500 acres of privately owned farmland within the Lakeside Irrigation Water Irrigation District (LIWD). In an agreement with LIWD, the City pays $30 per acre-foot to dispose of its recycled wastewater effluent. The second program, MRP 5-00-223, governs the use of recycled water on a 1,600-acre site owned by the City as well as several small privately owned farms near the WWTF. **Appendix B** includes the City's Reclamation Project Agreement, which stipulates the City's use of recycled water.

The City's recycling of the disinfected secondary effluent on agricultural farmland does not directly offset potable water use. As such this recycled water use is not able to assist the City in meeting its 2020 Urban Water Use Target and is not used in the calculations set forth in Chapter 5. However, the City's recycled water use does offset groundwater and surface water that would otherwise be used by farmers in the area. Furthermore, the recycled water consumer, LIWD locates outside of the city limit, therefore, LIWD's recycled water demand is excluded from Hanford's recycled demand projection in this report (2020 UWMP).

Delivery of the secondary treated effluent to permitted lands involves two separate pump stations, each with a 24-inch discharge pipeline. One pump station delivers recycled water from the WWTF to land west of the WWTF through a 24-inch diameter reinforced concrete pipe. Recycled water delivered to the east and south of the WWTF is pumped by the second pump station through a 24-inch diameter polyvinyl chloride (PVC) pipeline.

6.5.4 Recycled Water Beneficial Uses

This section documents the current uses of WWTF treated effluent.

Law

> *10633 (d) A description and quantification of the potential uses of recycled water, including, but not limited to, agricultural irrigation, landscape irrigation, wildlife habitat enhancement, wetlands, industrial reuse, groundwater recharge, indirect potable reuse, and other appropriate uses, and a determination with regard to the technical and economic feasibility of serving those uses.*
> *(e) A description the projected use of recycled water within the supplier's service area at the end of 5, 10, 15, 20 years and a description of the actual use of recycled water in comparison to uses previously projected pursuant to this subdivision.*

6.5.4.1 Current and Planned Uses of Recycled Water

According to the City's 2000 Recycled Water Engineering Report, irrigation demand for the LIWD lands alone are 27,103 acre-feet per year (afy). This demand will continue to exceed the amount of recycled water available from the WWTF and is the most economically and technically feasible method for the City's disposal of its treated effluent. However, the recycled water consumer, LIWD, is located outside of the city limit, therefore LIWD's recycled water demand projection is not included in Hanford's recycled water demand projection, nor documented in Table 6-4.

Table 6-4 Current and Projected Recycled Water Direct Beneficial Uses Within Service Area

☑	Recycled water is not used and is not planned for use within the service area of the supplier. The supplier will not complete the table below.						
Beneficial Use Type	General Description of 2015 Uses	Level of Treatment	Volume				
			2020 (AF)	2025 (AF)	2030 (AF)	2035 (AF)	2040 (AF)	2045 (AF)
		Total	0	0	0	0	0	0

The City may decide in the future to reevaluate the need or desirability of expanding its recycled water use to serve municipal customers. This would involve constructing a recycled water distribution system throughout the City and would require an upgrade to the WWTF to provide tertiary treatment.

6.5.4.2 Planned Versus Actual Use of Recycled Water

Law

> *10633 (e) …. (Provide) a description of the actual use of recycled water in comparison to uses previously projected pursuant to this subdivision.*

2015 UWMP have identified agricultural irrigation in Lakeside Irrigation Water District (LIWD) as the sole method of recycling the City's treated wastewater effluent., however, LIWD is located outside of the City Limit. In this report (2020 UWMP), the recycled water use in LIWD is excluded from the Hanford's Recycled water use, as shown in Table 6-5.

Table 6-5 2015 UWMP Recycled Water Use Projection Compared to 2020 Actual

Use Type	2015 Projection for 2020 (AF)	2020 Actual Use (AF)
Agricultural irrigation	5,606	0
Total	**5,606**	**0**

Note: Agricultural irrigation volumes were documented in the 2015 UWMP for the informational purposes only and reflected the recycled water demands for Lakeside Irrigation Water District, but not the City. This agricultural irrigation use is not documented as part of the 2020 UWMP.

6.5.5 Actions to Encourage and Optimize Future Recycled Water Use

Law

10633 (f) A description of actions, including financial incentives, which may be taken to encourage the use of recycled water, and the projected results of these actions in terms of acre-feet of recycled water used per year.

(g) A plan for optimizing the use of recycled water in the supplier's service area, including actions to facilitate the installation of dual distribution systems, to promote recirculating uses, to facilitate the increased use of treated wastewater that meets recycled water standards, and to overcome any obstacles to achieving that increased use.

As previously discussed, the City's current method of recycling its WWTF effluent through agricultural irrigation on LIWD permitted farmland is the most economically and technically feasible method of disposal. Therefore, additional measures taken by the City to encourage recycled water use, such as financial incentives or informational programs, are not expected to result in additional recycled water use, as summarized in Table 6-6.

Table 6-6 Methods to Expand Future Recycled Water Use

Name of Action	Description	Planned Implementation Year	Expected Increase in Recycled Water Use
TBD	The City currently does not have a plan to expand recycled water use.		

6.6 DESALINATED WATER OPPORTUNITIES

Law

> *10631 (g) Describe the opportunities for development of desalinated water, including, but not limited to, ocean water, brackish water, and groundwater, as a long-term supply*

The groundwater under the City is not brackish in nature and does not require desalination. However, the City could provide financial assistance to other water purveyors in exchange for water supplies; the City could consider this option should the need arise.

6.7 EXCHANGES OR TRANSFERS

Law

> *10631 (c) Describe the opportunities for exchanges or transfers of water on a short-term or long-term basis.*

There are currently no known exchanges, transfers, or interties that exist between the City and any other water system.

6.8 FUTURE WATER PROJECTS

Law

> *10631 (f) …The urban water supplier shall include a detailed description of expected future water projects and programs…that the urban water supplier may implement to increase the amount of the water supply available to the urban water supplier in normal and single dry water years and for a period of drought lasting five consecutive water years. The description shall identify specific projects and include a description of the increase in water supply that is expected to be available from each project. The description shall include an estimate with regard to the implementation timeline for each project or program.*

As discussed in previous sections, the City's sole source of potable water is groundwater. As such, the only method available to provide additional supply capacity for growing demand is the construction of new wells, and there are no additional types of future water projects the City plans to implement.

The City's total supply capacity is approximately 38,600 afy (34.5 MGD); its firm capacity, designated as the total capacity less the largest unit out of service, is approximately 35,400 afy (31.6 MGD). The 2017 WSMP identified needs for additional groundwater wells as the City's demands increase, which are reflected in the City's capital improvement program. Previous planning efforts have identified two additional wells for construction. The rated capacity of these additional wells has yet to be determined, but for planning purposes is assumed equal to the average rated capacity of the City's 14 existing wells, which is approximately 2,700 afy. The City also plans to construct a new tank to serve the southern industrial park, which will improve the

reliability of the industrial park's distribution system. These improvements are summarized on the following page in Table 6-7.

Table 6-7 Expected Future Water Supply Projects or Programs

Name of Future Projects or Programs	Joint Project with other agencies?	Description	Planned Implementation Year	Planned for Use in Year Type	Expected Increase in Water Supply to Supplier (AF)
Additional Wells	No	Two new wells planned for next 5 years as part of city's Capital Improvement Program	2020-2025	All Year Types	5,400
Industrial Park Tank	No	New tank to serve south Industrial Park	2020-2025	All Year Types	

Notes:

1. For planning purposes, the expected increase to the City's water supply for future wells with a capacity that is to be determined is equal to the average supply capacity of the City's existing wells. This average supply capacity is approximately equal to 2,700 afy per well site.

6.9 SUMMARY OF EXISTING AND PLANNED SOURCES OF WATER

Law

10631 (b) Identify and quantify, to the extent practicable, the existing and planned sources of water available to the supplier over the same five-year increments described in subdivision 10631(a).

(4) (Provide a) detailed description and analysis of the amount and location of groundwater that is projected to be pumped by the urban water supplier. The description and analysis shall be based on information that is reasonable available, including, but not limited to, historic use records.

The City's groundwater supply has been adequate to meet the City's historical demands and Table 6-8 summarizes the total amount of groundwater pumped in 2020. In order to meet the growing demand, new groundwater wells will have to be constructed. The City intends to continue to use groundwater as the sole source of potable water supply. Annual projections for the City's groundwater supplies are estimated based on the groundwater sustainability analysis (Appendix C), which consolidated the estimated sustainable yield information documented in Tulare Lake GSP and the City's planning water service area.

Annual projections for the City's recycled water supplies are summarized in Table 6.9 and assume that the City will continue to use 100 percent of its recycled water for agricultural irrigation, although a portion of the water will be lost to evaporation and percolation. Projected

recycled water supply was assumed to be equal to the projected annual wastewater flow of the WWTP. This projected wastewater flow was calculated based on the projected water demand and historical average of the city-wide return-to-sewer ratio, using available data between 2006 and 2020. Consistent with the 2015 UWMP all treated wastewater effluent is expected to be used to irrigate agricultural lands. Table 6-9 summarizes the total projected water supply, including groundwater and recycled water sources, available through 2045.

It should be noted that Tulare Lake subbasin which underlies the City is not adjudicated, and the projected groundwater supply volumes are not intended to and do not limit the City's water rights or maximum pumping volumes. The Mid-Kings River GSA continues to evaluate any options to enhance groundwater supplies; however, to date, Tulare Lake GSP has not restricted the maximum groundwater availabilities. The City of Hanford actively participates in the preparation of the GSP and monitors any potential changes to groundwater availability in the future.

Table 6-8 Water Supplies – Actual

Water Supply Source	2020	
	Actual Volume (AF)	Water Quality
Groundwater	11,714	Potable Water
Recycled Water	4,944	Recycled Water
Total	**16,658**	

Table 6-9 Water Supplies – Projected

Water Supply Source	Projected Water Supply				
	2025 (AF)	2030 (AF)	2035 (AF)	2040 (AF)	2045 (AF)
Groundwater	10,033	10,033	10,033	10,033	10,033
Recycled Water	5,077	5,318	5,569	5,833	6,109
Total	**15,110**	**15,351**	**15,602**	**15,866**	**16,142**

6.10 CLIMATE CHANGE CONSIDERATIONS

Potential impacts of climate change may not only influence demand throughout the City's service area, but could alter the water supply availability. Based on the City's location and current climate, the most notable changes in climate would be related to increasing average temperature, intensifying storm events, and periods of extended drought. Other potential effects, such as decreasing snowpack or rising sea levels, would not have a direct impact on the City's water demand or supply. Changes in annual precipitation and temperature could have an impact on the City's overall water use as well as available supply volumes. The City, as well as other local water supply agencies, will continue to monitor available water supply volumes and year-on-year changes to determine actions necessary to mitigate potential supply shortages.

6.11 ENERGY INTENSITY

Law

10631.2.(a)	*In addition to the requirements of Section 10631, an urban water management plan shall include any of the following information that the urban water supplier can readily obtain:* *(1) An estimate of the amount of energy used to extract or divert water supplies.* *(2) An estimate of the amount of energy used to convey water supplies to the water treatment plants or distribution systems.* *(3) An estimate of the amount of energy used to treat water supplies.* *(4) An estimate of the amount of energy used to distribute water supplies through its distribution systems.* *(5) An estimate of the amount of energy used for treated water supplies in comparison to the amount used for nontreated water supplies.* *(6) An estimate of the amount of energy used to place water into or withdraw from storage.* *(7) Any other energy-related information the urban water supplier deems appropriate.*

An urban water supplier's energy intensity (EI) is the amount of energy (kWh) consumed for the purpose of supplying water from the point that it enters the City's service area to the point at which it exits the system at the point of delivery. The 2020 Urban Water Management Plan Guidebook provides guidance for estimating energy intensity associated with the source of water used by an urban water supplier. The purpose of calculating the City's energy intensity is to:

- Develop a baseline energy use per acre-foot of treated water delivered by the water system.
- Aid in Identifying energy saving opportunities in the future.
- Allow for comparing energy use among similar agencies.

The estimate of energy intensity includes requirements for the purpose of water conveyance, extraction, treatment, placing water into and taking it from storage, and distribution. The City's water energy intensity only accounts for the water management processes occurring within its

operational control. The following water management processes are accounted for in the City's energy intensity estimate, which is based on existing processes and available records:

- Extraction of groundwater from Tulare Lake Subbasin.
- Delivery of treated water to end users.

Energy use data relating to the extraction, diversion, conveyance, treatment, distribution and placing into and taking from storage in the City's water supply system was acquired from Southern California Edison (SCE) meter data for year 2020. The City, therefore, utilized Table O-1B (**Appendix A**) for its EI calculations instead of Table O-1A or O1-C, since it is not possible to distinguish between energy used for treatment and conveyance at this time.

Total energy use and volume of water entering the City's water system for year 2020 were 9,259,222 kWh and 11,714 AF, respectively, resulting in an Energy Intensity of 790. kWh/AF (2425.8 kWh/MG).

CHAPTER 7 – WATER SUPPLY RELIABILITY ASSESSMENT

This chapter assesses the reliability of the City's water supply under normal conditions, single year dry conditions, and five-year dry conditions. The reliability assessment includes a comparison of projected water use versus expected water supply for the next 20 years. This chapter also includes the newly required Drought Risk Assessment, which is a review of the capability of the City's water supplies to meet demands for the next five years, assuming a five-year drought occurs.

7.1 CONSTRAINTS ON WATER SOURCES

Law

10631 (b)(1)	*A detailed discussion of anticipated supply availability under a normal water year, single dry year, and droughts lasting at least five years, as well as more frequent and severe periods of drought, as described in the drought risk assessment. For each source of water supply, consider any information pertinent to the reliability analysis conducted pursuant to Section 10635, including changes in supply due to climate change.*

As discussed in previous sections, the City's only current and planned source of supply is groundwater. The potential constraints on the City's water supply are summarized as follows.

7.1.1 Legal Factors

Examples of legal factors that could impact the supply reliability of a water distribution system include pumping limitations in adjudicated groundwater basins and surface water contracts. As noted in Chapter 6 the Tulare Lake Groundwater Subbasin, the sole basin from which the City extracts groundwater, is not an adjudicated groundwater basin and there are no legal limitations on the amount of groundwater the City can extract under the Mid-Kings River Groundwater Sustainability Agency's (MKR GSA) groundwater sustainability plan (GSP).

7.1.2 Environmental Factors

Environmental concerns can arise during the water planning process when a project's impact on the ecosystem is taken into consideration. These concerns can subsequently cause a lack of supply due to the enforcement of environmental legislation. The City's groundwater source is not expected to be limited by environmental concerns.

7.1.3 Water Quality Factors

If a surface water or groundwater source has water quality constituents that exceed allowable levels, the amount of water a supplier can obtain from that source can be limited. The City's

7.1.3 Water Quality Factors

If a surface water or groundwater source has water quality constituents that exceed allowable levels, the amount of water a supplier can obtain from that source can be limited. The City's groundwater supply has one water quality constituent that has historically required mitigation measures in order to ensure the supply is not limited, which is arsenic. Arsenic is concentrated in the clay strata beneath the City, and hydrogen sulfide, which may cause discoloration, adverse taste, and a smell typically compared to rotten eggs. The City has implemented a chlorination program for the water supply, and hydrogen sulfide is no longer considered a water constituent of concern. The steps taken by the City to ensure the water supply is unaffected by arsenic are summarized in the following section.

7.1.3.1 Arsenic

Congress passed the Safe Drinking Water Act (SDWA) in 1975 to protect public health. In accordance with the SDWA, the Environmental Protection Agency (EPA) established a maximum contaminant level (MCL) of 0.050 mg/L for arsenic. Amendments to the SDWA in 1996 required the EPA to establish a new MCL of arsenic, which is the current MCL of 0.010 mg/L.

Through the preparation of several studies, the City has determined the best methods for reducing the levels of arsenic in their water supply. These studies include:

- 1989 Water Quality Study (Carollo Engineers)
- 1996 Water System Master Plan (Boyle Engineers)
- 2005 Arsenic Reduction Study (Carollo Engineers)
- 2005 Water Supply and Distribution Capacity Analysis for the Arsenic Reduction Study (Carollo Engineers)

The alternative methods considered by the City to reduce arsenic concentrations below the MCL are summarized as follows:

- Abandon high arsenic wells and drill replacement wells with lower concentrations
- Blend water from wells with higher concentrations with wells of lower concentrations
- Install well head treatment
- Rehabilitate wells that produce water with high arsenic concentrations to a block of strata with low concentrations, producing water low in arsenic.

A non-treatment based approach was determined to be the most cost effective for the City and was comprised of the following three improvement projects:

- Abandon six shallow wells with low production and high arsenic concentration. Replace the abandoned wells with two wells of a higher production capacity and lower arsenic concentration.

- Abandon and replace three wells that could not be rehabilitated with new wells with higher production capacities and acceptable arsenic conditions.
- Three deep wells were rehabilitated to ensure they only extract groundwater from a zone with lower arsenic concentrations.

The City currently treats a groundwater well for Arsenic contamination. Upon the implementation of these arsenic improvement projects, the City's water supply is able to reliably produce water below the MCL for arsenic. Based on the current levels, the long-term reliability of the City's water supply is not restricted due to arsenic.

7.1.4 Climatic Factors

The primary climatic factors that affect the reliability of water supply system are precipitation and runoff characteristics, specifically the seasonal trend. Systems that rely heavily on surface water are most vulnerable to changes in water supply when a shift in precipitation and runoff amounts reduce the amount of surface water available. The City does not rely on surface water as a source of supply and is not vulnerable to these supply reductions.

7.2 RELIABILITY BY TYPE OF YEAR

This section discusses the yearly supply conditions, and the sources of data for supply evaluation.

7.2.1 Types of Years

This section discusses the type of years considered when evaluating water supply reliability. The conditions are as follows:

- **Average Water Year** – The average water year is a year that represents the median runoff levels from precipitation. The supply quantities would be similar to historical average supplies.
- **Single Dry Year** – The single dry year is defined as the individual year with the lowest usable water supply. This condition can be derived as the year with the lowest annual supply and is represented by the year 1984 (**Table 7-1**). It should be noted that under single dry year conditions the anticipated City-wide demand will increase slightly from a normal year as a response to reduced rainfall.
- **Five-Consecutive-Year Drought** – The five-consecutive year drought is defined as the five consecutive years with the lowest usable water supply. The multiple dry years are detrimental to the water supply system because of their adverse effect on the levels of local and state-wide reservoirs, as well as groundwater levels. Available supply percentage for these conditions is based on an analysis of historical per capita water use described in a later section. Consistent with the 2015 UWMP the period between 1987 and 1991 was selected to represent the five-consecutive-year drought (**Table 7-1**).

Table 7-1 Basis of Water Data

Year Type	Base Year	Percent of Average Supply (%)
Average Year	2000	100%
Single-Dry Year	1984	84%
Consecutive Dry Years 1st Year	1987	93%
Consecutive Dry Years 2nd Year	1988	90%
Consecutive Dry Years 3rd Year	1989	88%
Consecutive Dry Years 4th Year	1990	86%
Consecutive Dry Years 5th Year	1991	87%

7.2.2 Sources for Water Data

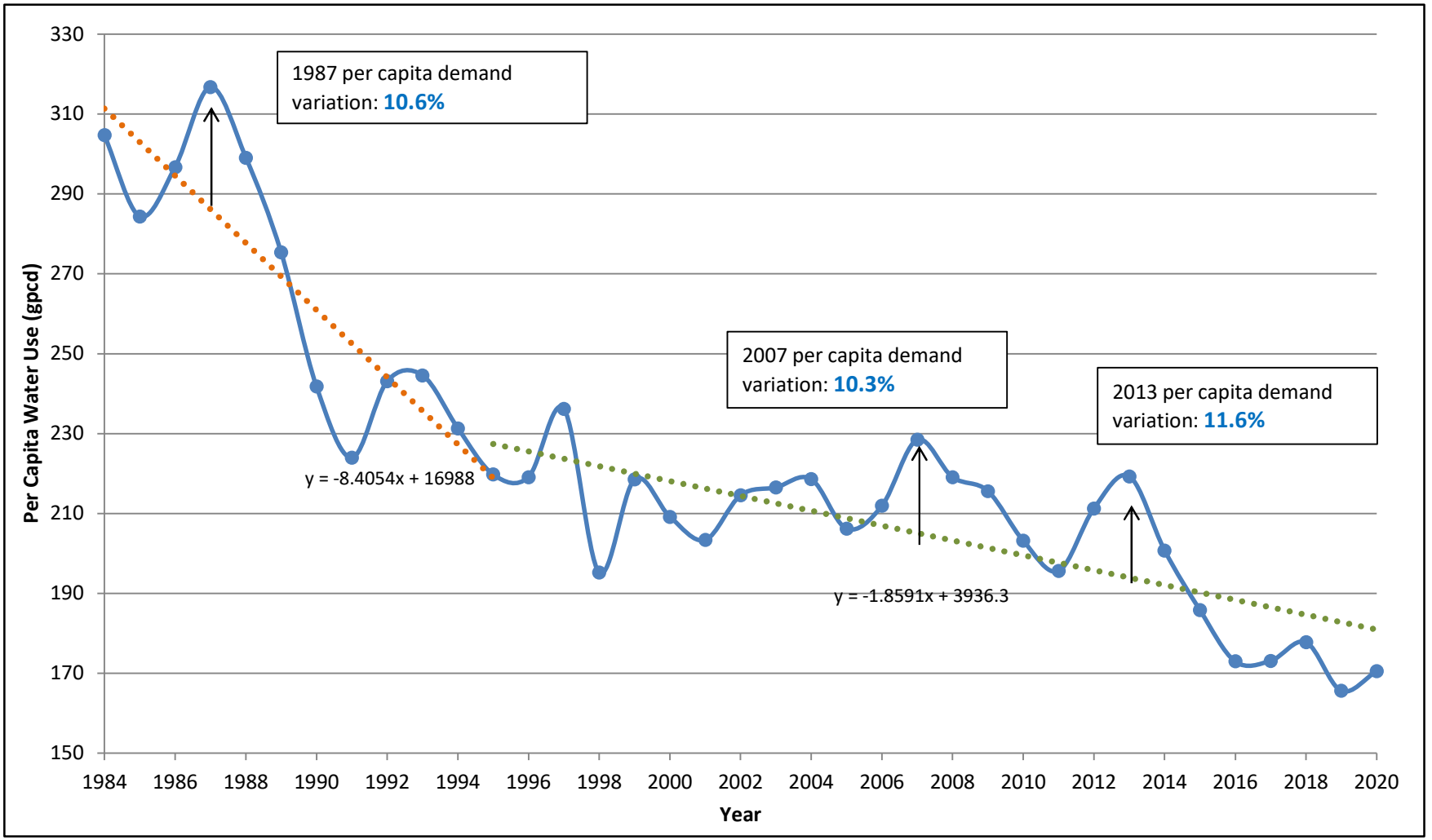
To establish a basis of normal year, single dry year, and five-consecutive-year drought's historical rainfall data available for the City of Hanford from the DWR California Data Exchange Center (CDEC) was analyzed.

7.3 SUPPLY AND DEMAND ASSESSMENT

Law

> *10635 (a) Every urban water supplier shall include, as part of its urban water management plan, an assessment of the reliability of its water service to its customers during normal, dry, and multiple dry water years. This water supply and demand assessment shall compare the total water supply sources available to the water supplier with the total projected water use over the next 20 years, in five-year increments, for a normal water year, a single dry water year, and multiple dry water years. The water service reliability assessment shall be based upon the information compiled pursuant to Section 10631, including available data from state, regional or local agency population projections within the service area of the urban water supplier.*

During prolonged years of drought, City-wide water use patterns are expected to change. Typically, outdoor water use will initially increase as irrigation is used to offset decreased rainfall. These potential water use increases can be offset, in part, by increasing water conservation measures. To characterize the City's water use during years of drought, the City's historical per capita water usage was analyzed. Analyzing per capita water usage, rather than total volume consumed, normalizes water consumption with population and eliminates the increase in demand due to growth. The 2020 UWMP expands on the analysis performed as part of the 2015 UWMP, and includes historical per capita consumption between the years 1984 and 2020, as summarized on **Figure 7-1**.



AKEL ENGINEERING GROUP, INC.

Figure 7-1
Historic Per Capita Demand Variation
2020 Urban Water Management Plan
City of Hanford

Figure 7-1 indicates a downward trend in per capita water consumption, with a sharp decrease between the 1980s and mid-1990s, and a more gradual decrease from the mid-1990s to present. To account for this downward trend in the analysis, two linear fit trend lines were developed, characterizing the trend from 1984 to 1995 and 1995 to 2020.

Table 7-1 summarizes the supply available for the various hydrologic water years. Because the City utilizes groundwater as its sole source of supply, the available "supply" drawn from the aquifer in any year is equal to the system-wide water demand for that particular year. The demand projections for the various hydrologic water years are summarized in Table 7-2, Table 7-3, and Table 7-4 and assume the projected supply will be equal to the projected demand as the City's sole source is groundwater.

Table 7-2 Normal Year Supply and Demand Comparison

	2025 (AF)	2030 (AF)	2035 (AF)	2040 (AF)	2045 (AF)
Supply	15,110	15,351	15,602	15,866	16,142
Demand	11,623	12,172	12,748	13,351	13,982
Difference	3,488	3,179	2,855	2,515	2,160

Table 7-3 Single Dry Year Supply and Demand Comparison

	2025 (AF)	2030 (AF)	2035 (AF)	2040 (AF)	2045 (AF)
Supply	15,110	15,351	15,602	15,866	16,142
Demand	12,971	13,584	14,227	14,899	15,604
Difference	2,140	1,767	1,376	967	538

Table 7-4 Multiple Dry Years Supply and Demand Comparison

		2025 (AF)	2030 (AF)	2035 (AF)	2040 (AF)	2045 (AF)
First year (1987)	Supply	15,110	15,351	15,602	15,866	16,142
	Demand	12,971	13,584	14,227	14,899	15,604
	Difference	2,140	1,767	1,376	967	538
Second year (1988)	Supply	15,110	15,351	15,602	15,866	16,142
	Demand	12,971	13,584	14,227	14,899	15,604
	Difference	2,140	1,767	1,376	967	538
Third year (1989)	Supply	15,110	15,351	15,602	15,866	16,142
	Demand	12,971	13,584	14,227	14,899	15,604
	Difference	2,140	1,767	1,376	967	538
Fourth year (1990)	Supply	15,110	15,351	15,602	15,866	16,142
	Demand	12,971	13,584	14,227	14,899	15,604
	Difference	2,140	1,767	1,376	967	538
Fifth year (1991)	Supply	15,110	15,351	15,602	15,866	16,142
	Demand	12,971	13,584	14,227	14,899	15,604
	Difference	2,140	1,767	1,376	967	538

Historical production records indicate that during drought water years, water demands during the single dry and multiple dry periods vary from the normal year baseline. **Figure 7-1** documents historical per capita water use between 1984 and 2020 and summarizes the City's historical response to periods of dry weather. 1987 is shown as the first year of the multiple dry water year period and reflects the significant variation between the annual per capita water use and the historical trend; in 1987, the per capita water use was approximately 10.6% above the historical trend. While this year remains the significant deviation between annual per capita water use and the historical trend, 2013 is another year of significant deviation. During California's recent drought, the City's per capita water use was approximately 11.6% above the historical trend. While the magnitude of the current drought is similar to that of the 1987 water year, increased water conservation measures put in place by the City have resulted in lower per capita water use.

In order to account for demand variation during drought water years, the projected water demands during the single dry and multiple dry water years (**Table 7-3** and **Table 7-4**) are increased by a factor that reflects the greatest deviation (11.6% in 2013) of per capita water use from the historical trend.

7.4 REGIONAL SUPPLY RELIABILITY

Law

> *10620 (f) An urban water supplier shall describe in the plan water management tools and options used by that entity that will maximize resources and minimize the need to import water from other regions.*

As discussed previously, the City uses groundwater as its sole source of supply and no known opportunities currently exist for diversifying sources of supply. In order to reduce the burden on groundwater resources during periods of prolonged drought, the City has an aggressive water conservation ordinance to prevent and prohibit the wasting of water, while also encouraging the community to conserve.

7.5 DROUGHT RISK ASSESSMENT

Law

> *10635 (b) Every urban water supplier shall include, as part of its urban water management plan, a drought risk assessment for its water service to its customers as part of information considered in developing the demand management measures and water supply projects and programs to be included in the urban water management plan. The urban water supplier may conduct an interim update or updates to this drought risk assessment within the five-year cycle of its urban water management plan update. The drought risk assessment shall include each of the following:*
>
> *(1) A description of the data, methodology, and basis for one or more supply shortage conditions that are necessary to conduct a drought risk assessment for a drought period that lasts five consecutive water years, starting from the year following when the assessment is conducted.*
>
> *(2) A determination of the reliability of each source of supply under a variety of water shortage conditions. This may include a determination that a particular source of water supply is fully reliable under most, if not all, conditions.*
>
> *(3) A comparison of the total water supply sources available to the water supplier with the total projected water use for the drought period.*
>
> *(4) Considerations of the historical drought hydrology, plausible changes on projected supplies and demands under climate change conditions, anticipated regulatory changes, and other locally applicable criteria.*

As part of the 2020 UWMP, the California Water Code now requires urban water suppliers to develop a drought risk assessment (DRA). The DRA is a planning exercise that considers the effects on available water supply sources should a five-year drought occur immediately following the preparation of the DRA. It is similar in nature to the supply and demand assessment described in a previous section, but only evaluates the effects of a five-year drought. The DRA also considers the effect of the City's Water Shortage Contingency Plan on available supply and total demand. Ultimately, the DRA is a proactive planning review that readies the City for the worst-case water supply condition should it occur in the immediate future.

7.5.1 DRA Data, Methods, and Basis for Water Shortage Conditions

The DRA evaluates the effect on available water supply during the course of a five-year drought. Currently, the City's sole water supply source is groundwater. As such, the same data and methodology used for preparing the supply and demand assessment through 2045, described in a previous section, can be used for the purposes of the DRA.

For conservative planning purposes, the DRA considers an unconstrained demand condition within the City's service area, which means no additional demand management measures or water use reduction methods are in place outside of the City's year-round prohibitions. This conservative planning condition allows the DRA to identify if additional water use reductions, documented in the Water Shortage Contingency Plan, should be implemented.

7.5.2 DRA Individual Water Source Reliability

The DRA water demand and supply comparisons are documented in **Table 7-5**, which assumes that the available groundwater supplies are equal to the projected unconstrained demand through 2025 should a five-year drought occur.

7.5.3 DRA Total Water Supply and Use Comparison

The City's DRA is summarized at the beginning of the following page in **Table 7-5**. Using assumptions for available supplies consistent with previous planning efforts, and accounting for an unconstrained demand condition, the DRA shows that the City will be able to meet projected water demands under a 5-consecutive-year drought starting in 2021. At this point in time no water shortage declarations or shortage response actions are required to be implemented.

7.5.4 Management Tools and Options

Law

> *10620 (f) An urban water supplier shall describe in the plan water management tools and options used by that entity that will maximize resources and minimize the need to import water from other regions.*

In order to reduce the burden on groundwater resources during periods of prolonged drought, the City has developed a Water Shortage Contingency Plan that can be implemented to prevent and prohibit the wasting of water while also encouraging the community to conserve.

The City's supply reliability is dependent on the rate of available recharge for the groundwater subbasins beneath the City. KCWD imports raw water for the purpose of recharging the groundwater subbasins they manage, which includes the Tulare Lake subbasin. During periods of drought, the imported water supplies available to KCWD can be reduced or not provided at all, which would reduce the amount of recharge available to the groundwater basins. In periods of

Table 7-5 Five-Year Drought Risk Assessment

Totals	2021	2022	2023	2024	2025
Demands					
Total Water Use	12,502	12,619	12,737	12,854	12,971
Supplies					
Groundwater Supplies	15,004	15,031	15,057	15,084	15,110
Surplus/Shortfall without WSCP Action	0	0	0	0	0
Planned WSCP Actions (use reduction and supply augmentation)					
WSCP - supply augmentation benefit	0	0	0	0	0
WSCP - use reduction savings benefit	0	0	0	0	0
Revised Surplus/(shortfall)	**2,502**	**2,411**	**2,321**	**2,230**	**2,140**
Resulting % Use Reduction from WSCP action	**0%**	**0%**	**0%**	**0%**	**0%**

water shortage, KCWD works closely with the water suppliers extracting water from groundwater subbasins they manage in order to minimize overdraft and subsidence. Typically, when KCWD identifies a risk to regional supply reliability, they call for urban water suppliers to reduce their water use through voluntary and mandatory water conservation measures.

Additionally, during a drought, KCWD anticipates the City to use groundwater reserves. Historical groundwater monitoring by KCWD in the Tulare Lake subbasin also indicates stable groundwater conditions during multiple-year droughts. Through KCWD's implementation of conjunctive use programs, the Tulare Lake groundwater subbasin has historically experienced well managed levels. As a result of this management, the Tulare Lake subbasin is considered a reliable source of supply during water shortages. While pumping may exceed recharge during a drought, basin management practices have prevented long-term adverse conditions.

CHAPTER 8 – WATER SHORTAGE CONTINGENCY PLANNING

This chapter summarizes the City's Water Shortage Contingency Plan (WSCP). The WSCP is a separately adopted planning document that most notably outlines levels of water shortage conditions, demand reduction methods to be implemented in the event of a water shortage and the process the City will implement to perform an annual Supply and Demand assessment. The WSCP also includes discussion of the City's communication protocols during a water shortage, methods of determining compliance and enforcing water use prohibitions, estimating the financial consequences of a water shortage, and the methods the City has in place to monitor and report the effectiveness of any water demand reduction methods implemented.

8.1 WATER SUPPLY RELIABILITY ANALYSIS

The City currently uses groundwater as the sole source of water supply, with wells extracting water from the Tulare Lake Subbasin of the San Joaquin Valley Groundwater Basin. These groundwater basins are managed by the Mid-Kings River Groundwater Sustainability Agency and the 2020 Tulare Lake Subbasin Groundwater Sustainability Plan lists the rates of natural recharge for these groundwater supply sources. Consistent with previous planning efforts, the City's Water Supply Reliability Analysis and the available supply drawn from the aquifer in any year is equal to the system-wide water demand for that particular year.

8.2 ANNUAL WATER SUPPLY AND DEMAND ASSESSMENT

Updates to the California Water Code now require that urban water suppliers prepare an annual water supply and demand assessment (Annual Assessment) on an annual basis. The findings of this Annual Assessment will be summarized in a report submitted to the Department of Water Resources by July 1 of each calendar year, with the first report required for submission on July 1st, 2022. The purpose of this annual assessment is to ensure water suppliers are proactively considering the available water supplies and demand requirements, as well as identifying the potential need for implementing the Water Shortage Contingency Plan.

It should be noted that DWR is in the process of preparing a stand-alone guidance document that will outline general procedures to aid urban water suppliers in preparing the Annual Assessment. The decision-making process and Annual Assessment completion steps are preliminary at this point in time and will be further refined as the DWR guidance document is completed.

The City's Water Shortage Contingency Plan is provided in **Appendix D** and summarizes the decision-making process and methodology used to prepare the Annual Assessment. The reporting timeline is shown in **Figure 8-1**.

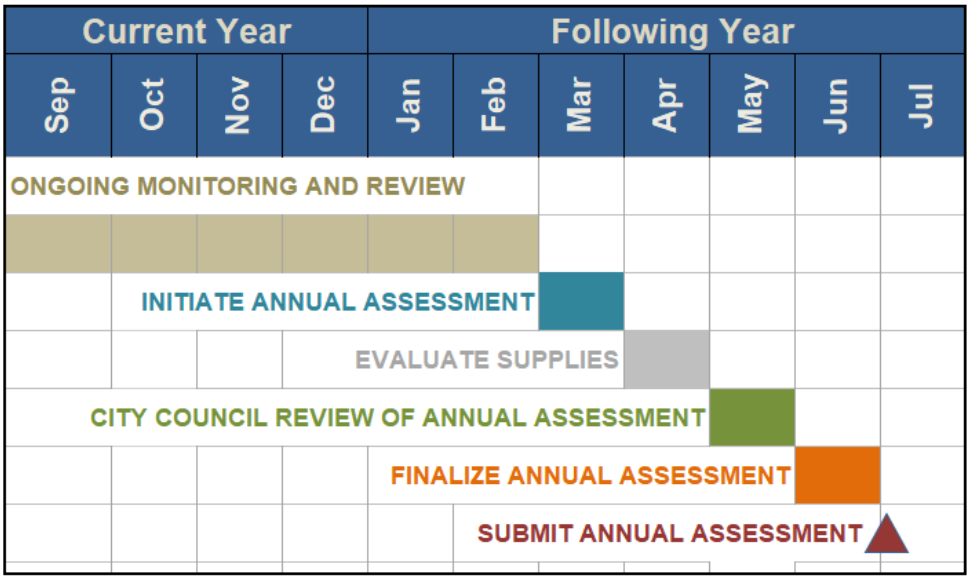


FIGURE 8-1 ANNUAL ASSESSMENT REPORTING TIMELINE

8.3 WATER SHORTAGE LEVELS

Law

> *10632 (a)(1) Stages of action to be undertaken by the urban water supplier in response to water supply shortages, including up to a 50 percent reduction in water supply and an outline of specific water supply conditions which are applicable to each stage.*

Water agencies that rely on groundwater as the sole source of supply are unlikely to experience water shortages like those agencies that rely on surface water. As the City is currently utilizing groundwater as its sole source of supply, it is not expected that the City will experience the water supply shortages that surface water dependent suppliers will.

As part of the City's efforts to conserve water, the City has permanent water use prohibitions in place. Additionally, the City's conservation ordinance describes a multiple stage water conservation plan. Each water rationing stage includes a water demand reduction percentage, which is to be applied to normal water demands. The plan is dependent on the cause, severity, and anticipated duration of the water shortage, and a combination of voluntary and mandatory water conservation measures can be put in place to reduce City-wide water usage. A comparison between the City's water shortage levels and the DWR recommended 6-level framework is documented in the WSCP. The water shortage levels are summarized in **Table 8-1**.

Table 8-1 Water Shortage Contingency Plan Levels

Stage	Percent Supply Reduction	Water Supply Condition
1	10%-20%	Minor Shortage Potential - Below average rainfall in the previous 12-24 months - 10 percent or more of municipal wells out of service - Warm weather patterns typical of summer months
2	20%-35%	Moderate Shortage Potential - Below average rainfall in the previous 24-36 months - Prolonged periods of low water pressure - 10 percent or more of municipal wells out of service - Warm weather patterns typical of summer months
3	35%-50%+	Critical Shortage Potential - Below average rainfall for over 36 months - Prolonged periods of low water pressure - 10 percent or more of municipal wells out of service - Warm weather patterns typical of summer months

The water shortage stages become effective when the City Manager declares that the City is unable to provide sufficient water supply to meet ordinary demands, to the extent that insufficient supplies would be available for human consumption, sanitation, and fire protection. The declared stage will be based on the City Manager's judgment and to the degree of the immediate or future supply deficiency.

8.4 SHORTAGE RESPONSE ACTIONS

The City's WSCP includes shortage response actions that may be implemented during a water shortage. Additionally, the City's municipal code has multiple permanent water use restrictions in place year-round that minimize water waste. These shortage response actions and permanent water use restrictions are summarized in the WSCP, provided in **Appendix D**.

8.5 PLAN ADOPTION, SUBMITTAL, AND AVAILABILITY

The WSCP adoption, submittal and availability process are the same as those for the City's UWMP. However, the WSCP may be periodically amended independently from the City's UWMP. Should an amendment to the WSCP be implemented, stakeholder and public notification methods consistent with the UWMP will be performed prior to the adoption of the amended plan.

CHAPTER 9 – DEMAND MANAGEMENT MEASURES

This chapter summarizes the demand management measures, which are additional measures the supplier plans on implementing to achieve its water use targets and maintain ongoing water conservation.

9.1 DEMAND MANAGEMENT MEASURES AND IMPLEMENTATION

The following section summarizes the Demand Management Measures planned and implemented by the City to promote water conservation. This section includes, as applicable, discussions on both the historical implementation and planned implementation of various measures.

Law

10631 (f)(A) …The narrative shall describe the water demand management measure that the supplier plans to implement to achieve its water use targets pursuant to Section 10608.20.
(B) The narrative pursuant to this paragraph shall include descriptions of the following water demand management measures:
(i) Water waste prevention ordinances.
(ii) Metering.
(iii) Conservation pricing.
(iv) Public education and outreach.
(v) Programs to assess and manage distribution system real loss.
(vi) Water conservation program coordination and staffing support.
(vii) Other demand management measures that have a significant impact on water use as measured in gallons per capita per day, including innovative measures, if implemented.

9.1.1 Waste Water Prevention Ordinances

The City adopted a Water Waste Ordinance in 1976 requiring all new connections to the water system to have meters. Citations were issued for ordinance violations and a five dollar penalty was imposed after three violations; a water meter was installed after the fourth violation, with all installation costs being charged to the customer. In 1986 the Water Waste Ordinance was revised, increasing the penalty for the first violation to 15 dollars and every subsequent penalty to ten dollars. A flow restrictor is installed if the violations continue. In 2015, the Water Waste Ordinance was revised, increasing the penalty for the second violation to 50 dollars and the fourth violation to 200 dollars.

On August 4, 2014 the City Council adopted updated Water Supply Shortage Regulations and declared a Level 1 Water Supply Shortage, with the intent of reducing water use by 20% as compared to the previous year. Over the following 8-months, the City's customers achieved a 13.6% water use reduction compared to the same time period in the previous year, which was short of the 20% reduction goal. In May 2015, City staff recommended the implementation of additional water use reduction methods and the declaration of a Level 2 Water Supply Shortage,

which was adopted by the City Council. As part of this declaration, additional water reduction methods have been put in place, including but not limited to the prohibition of irrigating public medians with potable water, washing down sidewalks and driveways, and operating a decorative water feature without a recirculation system. The full summary of water use prohibitions and consumption reduction methods for each water supply shortage level is discussed in Chapter 8, as part of the City's Water Shortage Contingency Plan.

9.1.2 Metering

Law

> *526*
> *(a) Notwithstanding any other provisions of law, an urban water supplier that, on or after January 1, 2004, receives water from the federal Central Valley Project under a water service contract or subcontract…shall do both of the following:*
> *(1) On or before January 1, 2013, install water meters on all service connections to residential and nonagricultural commercial buildings…located within its service area.*
> *527*
> *(a) An urban water supplier that is not subject to Section 526 shall do both of the following:*
> *(1) Install water meters on all municipal and industrial service connections located within its service area on or before January 1, 2015.*

Since the 1976 adoption of a Water Waste Ordinance, all new connections to the water system have been required to have meters. The City requires the installation of a water meter for any unmetered customer that installs a swimming pool or constructs an addition to an existing home valued in excess of 5,000 dollars. The City has also worked to convert previous unmetered and flat rate accounts to the new AMR metering system currently in use throughout the City.

9.1.3 Conservation Pricing

Currently, the City bills customers at a monthly rate per 100 cubic feet. In December 2015, the City adopted a resolution (**Appendix E**) to increase the monthly water rate in order to provide sufficient funds to operate, maintain, and improve the water system and to pay debt service for bonds, maintain system facilities, and provide water quality compliance. The City currently does not utilize seasonal rates and has no declining rate structure.

9.1.4 Public Outreach

The City has undertaken multiple public information programs to help reduce water consumption and raise public awareness of methods of water conservation.

9.1.4.1 Public Information Programs

In order to raise awareness of water conservation, the City implements programs for the purpose of distributing water use information to the public through varying methods, which can include

brochures, radio or television broadcasts, or through school programs and videos. Additionally, information on water use conservation can be found on the City website.

The City currently distributes information about water-saving tips, outdoor water use restriction reminders, and water saving information in the local paper, in the monthly bill stuffers, at the City's seasonal farmers market, and at the Hanford Mall.

9.1.4.2 School Education Program

As a member of the Kings County Water Education Committee (KCWEC), the City sends representatives to public schools throughout the county to give presentations on water safety and water conservation. KCWEC also provides book covers to schools detailing water conservation and water safety information.

9.1.4.3 Residential Water Audits

In 2014, the City started providing residential water audits for members of the community who wished to have their system evaluated. In 2015, the City began auditing Commercial, Institutional, and Industrial users as part of a State Conservation Order.

9.1.5 Programs to Assess and Manage Distribution System Real Loss

When water enters the transmission and distribution system, it is difficult to account for the end result of the water. As a means to better account for water use in the system, a water supplier may use a water audit. Unaccounted for water is the difference between the water supplied to the system and the cumulative total of metered water use. The City's ability to accurately determine the amount of unaccounted for water is complicated by the number of unmetered service connections, and the City has not conducted a formal water auditing and leak detection program at this time. However, the City has been implementing an automated meter reading (AMR) retrofit for its existing connections, allowing City staff to identify users with high consumption rates. Additionally, the new meters allow the City to identify connections with relatively constant consumption rates throughout both day and night, indicating the customer may have a leak. The City identifies these potential leak locations and advises potentially affected customers.

Currently, the City does not meter sewer and hydrant flushing, as well as street sweeping, and the City compares well production with water usage to determine these uses. Additionally, unaccounted for water can be an indicator of leaks, meter errors, water system repair or maintenance, or illegal connections.

The City's annual capital improvement budget currently allocates funds for system repairs, including transmission and distribution mains, as well as pump stations and storage tanks. Leaks within the system are immediately fixed upon detection. The City keeps a record of all repaired leaks in the Public Works Department.

9.1.6 Water Conservation Program Coordination and Staffing Support

The Utilities Superintendent is responsible for coordinating and expanding the City's water conservation program as well as providing useful water conservation information to residents through the various public outreach programs. The City employs part-time staff to enforce water use prohibitions and write violations; the City recently hired a full-time water conservation technician to assist with the enforcement of the water conservation program.

9.1.7 Other Demand Management Measures - Large Landscape Conservation Program

In accordance with Assembly Bill 325, the Water Conservation Landscaping Act, the City has adopted a Water Efficient Landscape Ordinance, which limits the amount of turf in landscaping, requires plant groupings according to water needs, and provides some flexibility to the landscape designer while promoting landscape water efficiency. The Parks Superintendent is responsible for reviewing all commercial landscaping plans for compliance before permits are issued.

To ensure that commercial landscape water use does not exceed allowable levels, the Water Efficient Landscape Ordinance establishes a method of breaking up landscaped areas into zones that have similar water use requirements, either none, low, medium, or high. Based on the water use requirements of each zone, a multiplier is applied to the square footage of the zone and the sum of these zone calculations must not exceed the project's total landscaped area

CHAPTER 10 – PLAN ADOPTION, SUBMITTAL, AND IMPLEMENTATION

This section includes the process undertaken for adoption and submittal of the UWMP as well as the plan required to implement the UWMP. Ways in which the public can access the UWMP is also described in this section.

10.1 INCLUSION OF 2015 DATA

The City is preparing the 2020 UWMP on the basis of a calendar year, and preparation of the plan was completed following the end of the calendar year 2020. Relevant data has been updated through December of 2020.

10.2 NOTICE OF PUBLIC HEARING

This section documents the public notification process and when a notice was given.

10.2.1 Notice to Cities and Counties

Law

> *10621 (b) Every urban water supplier required to prepare a plan shall…at least 60 days prior to the public hearing on the plan…notify any city or county within which the supplier provides water supplies that the urban water supplier will be reviewing the plan and considering amendments or changes to the plan.*
>
> *10642 …The urban water supplier shall provide notice of the time and place of hearing to any city or county within which the supplier provides water supplies. A privately owned water supplier shall provide an equivalent notice within its service area…*

The City provided notice to relevant stakeholders, summarized in Table 10-1, on April 27th, 2021; this notification date was more than the required 60 days prior to the public hearing on the 2020 UWMP.

Table 10-1 Notification to Cities and Counties

City or County Name	60 Day Notice	Notice of Public Hearing
Kings County	☑	☑
KCWD	☑	☑

10.2.2 Notice to the Public

Law

> *10642 …Prior to adopting a plan, the urban water supplier shall make the plan available for public inspection…Prior to the hearing, notice of the time and place of hearing shall be published within the jurisdiction of the publicly owned water supplier pursuant to Section 6066 of the Government Code…*
>
> *Government Code 6066*
> *Publication of notice pursuant to this section shall be once a week for two successive weeks. Two publications in a newspaper published once a week or oftener, with at least five days intervening between the respective publication dates not counting such publication dates, are sufficient. The period of notice commences upon the first day of publication and terminates at the end of the fourteenth day, including therein the first day.*

A notice of the public hearing was published in the local newspaper in a manner pursuant to the stated Government Code 6066. Documentation of the notice provided to the public is included in **Appendix E,** and the draft 2020 UWMP and WSCP were available for review at various City facilities and on the City's web page.

10.3 PUBLIC HEARING AND ADOPTION

Following the notification of relevant stakeholders, the City held a City Council meeting on October 5th, 2021, to address and review comments received from both stakeholders and members of the community. These comments were reviewed and addressed, and the final 2020 UWMP was adopted by City Council on October 19th, 2021; **Appendix F** includes a copy of the adopting resolution.

10.4 PLAN SUBMITTAL

The UWMPA requires water agencies to submit a copy of the adopted 2020 UWMP to the DWR within 30 days of adoption and before July 1st, 2021. Additionally, water agencies are required to submit a copy of the adopted 2020 UWMP to all relevant stakeholders within 30 days of adoption. The adopted 2020 UWMP was submitted to the DWR on October 26th, 2021. The adopted 2020 UWMP was submitted to relevant stakeholders and the California State Library within 30 days of adoption.

10.5 PUBLIC AVAILABILITY

Consistent with the UWMPA requirements, a copy of the 2020 UWMP was made available to the public in the office of the City Clerk at City Hall, located at 319 Douty St, and the Public Works Department, located at 900 S 10th Ave, within 30 days of adoption.

10.6 AMENDING AND ADOPTED UWMP

Any amendments to the adopted 2020 UWMP will be adopted and filed in a manner consistent with the UWMPA requirements. Additionally, all adopted amendments will be submitted to DWR and any relevant stakeholders within 30 days of adoption.

CHAPTER 11 – DWR CHECKLIST

This report is organized in accordance with the outline suggested by DWR for the 2020 Urban Water Management Plans. This additional chapter is included to guide the reviewers to the chapters or sections in this report that address the items listed in the DWR Checklist, as published in the Final Guidebook (March 2021)

Table 11-1 DWR Checklist

No.	UWMP Requirement	Subject	California Water Code Reference	UWMP Location
1	A plan shall describe and evaluate sources of supply, reasonable and practical efficient uses, reclamation and demand management activities.	Introduction and Overview	10615	Chapter 4, 6
2	Each plan shall include a simple description of the supplier's plan including water availability, future requirements, a strategy for meeting needs, and other pertinent information. Additionally, a supplier may also choose to include a simple description at the beginning of each chapter.	Summary	10630.5	Chapter 1-10
3	Every person that becomes an urban water supplier shall adopt an urban water management plan within one year after it has become an urban water supplier.	Plan Preparation	10620(b)	-
4	Coordinate the preparation of its plan with other appropriate agencies in the area, including other water suppliers that share a common source, water management agencies, and relevant public agencies, to the extent practicable.	Plan Preparation	10620(d)(2)	Section 10.2

No.	UWMP Requirement	Subject	California Water Code Reference	UWMP Location
5	Provide supporting documentation that the water supplier has encouraged active involvement of diverse social, cultural, and economic elements of the population within the service area prior to and during the preparation of the plan and contingency plan.	Plan Preparation	10642	Section 10.2
6	Retail suppliers will include documentation that they have provided their wholesale supplier(s) - if any - with water use projections from that source.	System Supplies	10631(h)	Section 4.2.2, Section 6.1
7	Wholesale suppliers will include documentation that they have provided their urban water suppliers with identification and quantification of the existing and planned sources of water available from the wholesale to the urban supplier during various water year types.	System Supplies	10631(h)	-
8	Describe the water supplier service area.	System Description	10631(a)	Section 3.1,
9	Describe the climate of the service area of the supplier.	System Description	10631(a)	Section 3.2
10	Provide population projections for 2025, 2030, 2035, 2040 and optionally 2045.	System Description	10631(a)	Section 3.3
11	Describe other social, economic, and demographic factors affecting the supplier's water management planning.	System Description	10631(a)	Section 3.1.4 Section 3.3
12	Indicate the current population of the service area.	System Description and Baselines and Targets	10631(a)	Sections 3.3
13	Describe the land uses within the service area.	System Description	10631(a)	Section 3.1.3

No.	UWMP Requirement	Subject	California Water Code Reference	UWMP Location
14	Quantify past, current, and projected water use, identifying the uses among water use sectors.	System Water Use	10631(d)(1)	Section 4.2
15	Retail suppliers shall provide data to show the distribution loss standards were met.	System Water Use	10631(d)(3)(C)	Section 4.3
16	In projected water use, include estimates of water savings from adopted codes, plans, and other policies or laws.	System Water Use	10631(d)(4)(A)	Section 4.4
17	Provide citations of codes, standards, ordinances, or plans used to make water use projections.	System Water Use	10631(d)(4)(B)	-
18	Report the distribution system water loss for each of the 5 years preceding the plan update.	System Water Use	10631(d)(3)(A)	Section 4.3
19	Include projected water use needed for lower income housing projected in the service area of the supplier.	System Water Use	10631.1(a)	Section 4.5
20	Demands under climate change considerations must be included as part of the drought risk assessment.	System Water Use	10635(b)	Section 7.5
21	Retail suppliers shall provide baseline daily per capita water use, urban water use target, interim urban water use target, and compliance daily per capita water use, along with the bases for determining those estimates, including references to supporting data.	Baselines and Targets	10608.20(e)	Chapter 5
22	Retail suppliers shall meet their water use target by December 31, 2020.	Baselines and Targets	10608.24(a)	Chapter 5
23	Wholesale suppliers shall include an assessment of present and proposed future measures, programs, and policies to help their retail water suppliers achieve targeted water use reductions.	Baselines and Targets	10608.36	-

No.	UWMP Requirement	Subject	California Water Code Reference	UWMP Location
24	If the retail supplier adjusts its compliance GPCD using weather normalization, economic adjustment, or extraordinary events, it shall provide the basis for, and data supporting the adjustment.	Baselines and Targets	10608.24(d)(2)	-
25	Retail suppliers' per capita daily water use reduction shall be no less than 5 percent of base daily per capita water use of the 5-year baseline. This does not apply if the suppliers base GPCD is at or below 100.	Baselines and Targets	10608.22	Section 5.6
26	Retail suppliers shall report on their compliance in meeting their water use targets. The data shall be reported using a standardized form in the SBX7-7 2020 Compliance Form.	Baselines and Targets	10608.4	Section 5.8
27	Provide a discussion of anticipated supply availability under a normal, single dry year, and a drought lasting five years, as well as more frequent and severe periods of drought.	System Supplies	10631(b)(1)	Sections 7.2
28	Provide a discussion of anticipated supply availability under a normal, single dry year, and a drought lasting five years, as well as more frequent and severe periods of drought, including changes in supply due to climate change.	System Supplies	10631(b)(1)	Sections 7.2
29	When multiple sources of water supply are identified, describe the management of each supply in relationship to other identified supplies.	System Supplies	10631(b)(2)	Section 6.2
30	Describe measures taken to acquire and develop planned sources of water.	System Supplies	10631(b)(3)	Section 6.1
31	Identify and quantify the existing and planned sources of water available for 2020, 2025, 2030, 2035, 2040 and optionally 2045.	System Supplies	10631(b)	Section 6.9

No.	UWMP Requirement	Subject	California Water Code Reference	UWMP Location
32	Indicate whether groundwater is an existing or planned source of water available to the supplier.	System Supplies	10631(b)	Section 6.2
33	Indicate whether a groundwater sustainability plan or groundwater management plan has been adopted by the water supplier or if there is any other specific authorization for groundwater management. Include a copy of the plan or authorization.	System Supplies	10631(b)(4)(A)	Section 6.2.2
34	Describe the groundwater basin.	System Supplies	10631(b)(4)(B)	Section 6.2.1
35	Indicate if the basin has been adjudicated and include a copy of the court order or decree and a description of the amount of water the supplier has the legal right to pump.	System Supplies	10631(b)(4)(B)	Section 6.2
36	For unadjudicated basins, indicate whether or not the department has identified the basin as a high or medium priority. Describe efforts by the supplier to coordinate with sustainability or groundwater agencies to achieve sustainable groundwater conditions.	System Supplies	10631(b)(4)(B)	Section 6.2
37	Provide a detailed description and analysis of the location, amount, and sufficiency of groundwater pumped by the urban water supplier for the past five years.	System Supplies	10631(b)(4)(C)	Section 6.2.4
38	Provide a detailed description and analysis of the amount and location of groundwater that is projected to be pumped.	System Supplies	10631(b)(4)(D)	Section 6.9
39	Describe the opportunities for exchanges or transfers of water on a short-term or long- term basis.	System Supplies	10631(c)	Section 6.7

No.	UWMP Requirement	Subject	California Water Code Reference	UWMP Location
40	Describe the quantity of treated wastewater that meets recycled water standards, is being discharged, and is otherwise available for use in a recycled water project.	System Supplies (Recycled Water)	10633(b)	Section 6.5
41	Describe the recycled water currently being used in the supplier's service area.	System Supplies (Recycled Water)	10633(c)	Section 6.5.2
42	Describe and quantify the potential uses of recycled water and provide a determination of the technical and economic feasibility of those uses.	System Supplies (Recycled Water)	10633(d)	Section 6.5.4
43	Describe the projected use of recycled water within the supplier's service area at the end of 5, 10, 15, and 20 years, and a description of the actual use of recycled water in comparison to uses previously projected.	System Supplies (Recycled Water)	10633(e)	Section 6.5.4
44	Describe the actions which may be taken to encourage the use of recycled water and the projected results of these actions in terms of acre-feet of recycled water used per year.	System Supplies (Recycled Water)	10633(f)	Section 6.5.4
45	Provide a plan for optimizing the use of recycled water in the supplier's service area.	System Supplies (Recycled Water)	10633(g)	Section 6.5.4
46	Describe desalinated water project opportunities for long-term supply.	System Supplies	10631(g)	Section 6.6
47	Describe the wastewater collection and treatment systems in the supplier’s service area with quantified amount of collection and treatment and the disposal methods.	System Supplies	10633(a)	Section 6.5.2

No.	UWMP Requirement	Subject	California Water Code Reference	UWMP Location
48	Describe the expected future water supply projects and programs that may be undertaken by the water supplier to address water supply reliability in average, single-dry, and for a period of drought lasting 5 consecutive water years.	System Supplies	10631(f)	Section 6.9
49	The UWMP must include energy information, as stated in the code, that a supplier can readily obtain.	System Suppliers, Energy Intensity	10631.2(a)	Section 6.11
50	Provide information on the quality of existing sources of water available to the supplier and the manner in which water quality affects water management strategies and supply reliability	Water Supply Reliability Assessment	10634	Section 7.1
51	Describe water management tools and options to maximize resources and minimize the need to import water from other regions.	Water Supply Reliability Assessment	10620(f)	Section 6.2.2 Section 7.5.1
52	Service Reliability Assessment: Assess the water supply reliability during normal, dry, and a drought lasting five consecutive water years by comparing the total water supply sources available to the water supplier with the total projected water use over the next 20 years.	Water Supply Reliability Assessment	10635(a)	Section 7.3
53	Provide a drought risk assessment as part of information considered in developing the demand management measures and water supply projects.	Water Supply Reliability Assessment	10635(b)	Section 7.5
54	Include a description of the data, methodology, and basis for one or more supply shortage conditions that are necessary to conduct a drought risk assessment for a drought period that lasts 5 consecutive years.	Water Supply Reliability Assessment	10635(b)(1)	Section 7.5
55	Include a determination of the reliability of each source of supply under a variety of water shortage conditions.	Water Supply Reliability Assessment	10635(b)(2)	Section 7.3

No.	UWMP Requirement	Subject	California Water Code Reference	UWMP Location
56	Include a comparison of the total water supply sources available to the water supplier with the total projected water use for the drought period.	Water Supply Reliability Assessment	10635(b)(3)	Section 7.3 Section 7.5
57	Include considerations of the historical drought hydrology, plausible changes on projected supplies and demands under climate change conditions, anticipated regulatory changes, and other locally applicable criteria.	Water Supply Reliability Assessment	10635(b)(4)	Section 7.3 Section 7.5
58	Provide a water shortage contingency plan (WSCP) with specified elements below.	Water Shortage Contingency Planning	10632(a)	Chapter 8, Appendix D
59	Provide the analysis of water supply reliability (from Chapter 7 of Guidebook) in the WSCP	Water Shortage Contingency Planning	10632(a)(1)	Chapter 8, Appendix D
60	Describe reevaluation and improvement procedures for monitoring and evaluation the water shortage contingency plan to ensure risk tolerance is adequate and appropriate water shortage mitigation strategies are implemented.	Water Shortage Contingency Planning	10632(a)(10)	Chapter 8, Appendix D
61	Provide the written decision- making process and other methods that the supplier will use each year to determine its water reliability.	Water Shortage Contingency Planning	10632(a)(2)(A)	Chapter 8, Appendix D
62	Provide data and methodology to evaluate the supplier's water reliability for the current year and one dry year pursuant to factors in the code.	Water Shortage Contingency Planning	10632(a)(2)(B)	Chapter 8, Appendix D

No.	UWMP Requirement	Subject	California Water Code Reference	UWMP Location
63	Define six standard water shortage levels of 10, 20, 30, 40, 50 percent shortage and greater than 50 percent shortage. These levels shall be based on supply conditions, including percent reductions in supply, changes in groundwater levels, changes in surface elevation, or other conditions. The shortage levels shall also apply to a catastrophic interruption of supply.	Water Shortage Contingency Planning	10632(a)(3)(A)	Chapter 8, Appendix D
64	Suppliers with an existing water shortage contingency plan that uses different water shortage levels must cross reference their categories with the six standard categories.	Water Shortage Contingency Planning	10632(a)(3)(B)	Chapter 8, Appendix D
65	Suppliers with water shortage contingency plans that align with the defined shortage levels must specify locally appropriate supply augmentation actions.	Water Shortage Contingency Planning	10632(a)(4)(A)	Chapter 8, Appendix D
66	Specify locally appropriate demand reduction actions to adequately respond to shortages.	Water Shortage Contingency Planning	10632(a)(4)(B)	Chapter 8, Appendix D
67	Specify locally appropriate operational changes.	Water Shortage Contingency Planning	10632(a)(4)(C)	Chapter 8, Appendix D
68	Specify additional mandatory prohibitions against specific water use practices that are in addition to state-mandated prohibitions are appropriate to local conditions.	Water Shortage Contingency Planning	10632(a)(4)(D)	Chapter 8, Appendix D
69	Estimate the extent to which the gap between supplies and demand will be reduced by implementation of the action.	Water Shortage Contingency Planning	10632(a)(4)(E)	Chapter 8, Appendix D
70	The plan shall include a seismic risk assessment and mitigation plan.	Water Shortage Contingency Plan	10632.5	Chapter 8, Appendix D

No.	UWMP Requirement	Subject	California Water Code Reference	UWMP Location
71	Suppliers must describe that they will inform customers, the public and others regarding any current or predicted water shortages.	Water Shortage Contingency Planning	10632(a)(5)(A)	Chapter 8, Appendix D
72	Suppliers must describe that they will inform customers, the public and others regarding any shortage response actions triggered or anticipated to be triggered and other relevant communications.	Water Shortage Contingency Planning	10632(a)(5)(B)10632(a)(5)(C)	Chapter 8, Appendix D
73	Retail supplier must describe how it will ensure compliance with and enforce provisions of the WSCP.	Water Shortage Contingency Planning	10632(a)(6)	Chapter 8, Appendix D
74	Describe the legal authority that empowers the supplier to enforce shortage response actions.	Water Shortage Contingency Planning	10632(a)(7)(A)	Chapter 8, Appendix D
75	Provide a statement that the supplier will declare a water shortage emergency Water Code Chapter 3.	Water Shortage Contingency Planning	10632(a)(7)(B)	Chapter 8, Appendix D
76	Provide a statement that the supplier will coordinate with any city or county within which it provides water for the possible proclamation of a local emergency.	Water Shortage Contingency Planning	10632(a)(7)(C)	Chapter 8, Appendix D
77	Describe the potential revenue reductions and expense increases associated with activated shortage response actions.	Water Shortage Contingency Planning	10632(a)(8)(A)	Chapter 8, Appendix D
78	Provide a description of mitigation actions needed to address revenue reductions and expense increases associated with activated shortage response actions.	Water Shortage Contingency Planning	10632(a)(8)(B)	Chapter 8, Appendix D
79	Retail suppliers must describe the cost of compliance with Water Code Chapter 3.3: Excessive Residential Water Use During Drought	Water Shortage Contingency Planning	10632(a)(8)(C)	Chapter 8, Appendix D

No.	UWMP Requirement	Subject	California Water Code Reference	UWMP Location
80	Retail suppliers must describe the monitoring and reporting requirements and procedures that ensure appropriate data is collected, tracked, and analyzed for purposes of monitoring customer compliance.	Water Shortage Contingency Planning	10632(a)(9)	Chapter 8, Appendix D
81	Analyze and define water features that are artificially supplied with water, including ponds, lakes, waterfalls, and fountains, separately from swimming pools and spas.	Water Shortage Contingency Planning	10632(b)	Chapter 8, Appendix D
82	Provide supporting documentation that Water Shortage Contingency Plan has been, or will be, provided to any city or county within which it provides water, no later than 30 days after the submission of the plan to DWR.	Plan Adoption, Submittal, and Implementation	10635(c)	Sections 8.12 and 10.4
83	Make available the Water Shortage Contingency Plan to customers and any city or county where it provides water within 30 days after adopted the plan.	Water Shortage Contingency Planning	10632(c)	Section 8.14
84	Wholesale suppliers shall describe specific demand management measures listed in code, their distribution system asset management program, and supplier assistance program.	Demand Management Measures	10631(e)(2)	Sections 9.1 and 9.3
85	Retail suppliers shall provide a description of the nature and extent of each demand management measure implemented over the past five years. The description will address specific measures listed in code.	Demand Management Measures	10631(e)(1)	Sections 9.2 and 9.3
86	Retail suppliers shall conduct a public hearing to discuss adoption, implementation, and economic impact of water use targets (recommended to discuss compliance).	Plan Adoption, Submittal, and Implementation	10608.26(a)	Chapter 10.3

No.	UWMP Requirement	Subject	California Water Code Reference	UWMP Location
87	Notify, at least 60 days prior to the public hearing, any city or county within which the supplier provides water that the urban water supplier will be reviewing the plan and considering amendments or changes to the plan. Reported in Table 10-1.	Plan Adoption, Submittal, and Implementation	10621(b)	Section 10.2.1
88	Each urban water supplier shall update and submit its 2020 plan to the department by July 1, 2021.	Plan Adoption, Submittal, and Implementation	10621(f)	Section 10.4
89	Provide supporting documentation that the urban water supplier made the plan and contingency plan available for public inspection, published notice of the public hearing, and held a public hearing about the plan and contingency plan.	Plan Adoption, Submittal, and Implementation	10642	Sections 10.2
90	The water supplier is to provide the time and place of the hearing to any city or county within which the supplier provides water.	Plan Adoption, Submittal, and Implementation	10642	Section 10.2
91	Provide supporting documentation that the plan and contingency plan has been adopted as prepared or modified.	Plan Adoption, Submittal, and Implementation	10642	Section 10.4
92	Provide supporting documentation that the urban water supplier has submitted this UWMP to the California State Library.	Plan Adoption, Submittal, and Implementation	10644(a)	Section 10.4
93	Provide supporting documentation that the urban water supplier has submitted this UWMP to any city or county within which the supplier provides water no later than 30 days after adoption.	Plan Adoption, Submittal, and Implementation	10644(a)(1)	Section 10.4
94	The plan, or amendments to the plan, submitted to the department shall be submitted electronically.	Plan Adoption, Submittal, and Implementation	10644(a)(2)	Sections 10.4

No.	UWMP Requirement	Subject	California Water Code Reference	UWMP Location
95	Provide supporting documentation that, not later than 30 days after filing a copy of its plan with the department, the supplier has or will make the plan available for public review during normal business hours.	Plan Adoption, Submittal, and Implementation	10645(a)	Section 10.5
96	Provide supporting documentation that, not later than 30 days after filing a copy of its water shortage contingency plan with the department, the supplier has or will make the plan available for public review during normal business hours.	Plan Adoption, Submittal, and Implementation	10645(b)	Section 10.5
97	If supplier is regulated by the Public Utilities Commission, include its plan and contingency plan as part of its general rate case filings.	Plan Adoption, Submittal, and Implementation	10621(c)	-
98	If revised, submit a copy of the water shortage contingency plan to DWR within 30 days of adoption.	Plan Adoption, Submittal, and Implementation	10644(b)	-

FINAL



City of Hanford

OCTOBER 2021

2020 Water Shortage Contingency Plan

AKEL
ENGINEERING GROUP, INC.

CITY OF HANFORD

2020
WATER SHORTAGE CONTINGENCY PLAN

Final

October 2021



AKEL
ENGINEERING GROUP, INC.

AKEL
ENGINEERING GROUP, INC.

Smart Planning Our Water Resources

November 8th, 2021

City of Hanford
319 Douty Street
Hanford California, 93230

Attention: James Ross, Deputy Public Works Director

Subject: **Water Shortage Contingency Plan**

Dear Jim,

We are pleased to submit the City of Hanford 2020 Water Shortage Contingency Plan (2020 WSCP) which is intended to address the Urban Water Management Planning Act (UWMPA) of 1983 and amendments thereof.

The City's Water Shortage Contingency Plan (WSCP) was originally included in the 2015 UWMP, which received letters of review and completeness from the Department of Water Resources. As part of amendments to the UWMPA the WSCP is now required to be prepared and adopted separately from the UWMP. The 2020 WSCP builds upon previous water shortage contingency planning efforts completed by the City and reflects updates to the City's water shortage levels and water conservation measures for consistency with state-wide requirements provided by the Department of Water Resources.

We extend our thanks to you; John Doyel, Public Works Director; Christine Baca, Regulatory Compliance Analyst; Bob Williams, Utilities Supervisor, and other City staff whose courtesy and cooperation were valuable in reviewing and completing this study.

Sincerely,

AKEL ENGINEERING GROUP, INC.

Tony Akel, P.E.
Principal

Enclosure: 2020 Water Shortage Contingency Plan

7433 NORTH FIRST STREET, SUITE 103 • FRESNO, CALIFORNIA 93720 • (559) 436-0600 • FAX (559) 436-0622
www.akeleng.com

Acknowledgements

City Council

Francisco Ramirez, Mayor

Diane Sharp, Vice Mayor

Amanda Saltray

Kalish Morrow

Art Brieno

Management Personnel

John Doyel, Director of Public Works

Jim Ross, Deputy Public Works Director

Christine Baca, Regulatory Compliance Analyst

Bob Williams, Utilities Supervisor

City of Hanford
2020 Water Shortage Contingency Plan

Table of Contents

Page No.

Section 1 INTRODUCTION 1
Section 2 WATER SUPPLY RELIABILITY ANALYSIS 1
Section 3 ANNUAL WATER SUPPLY AND DEMAND ASSESSMENT PROCEDURES . 2
3.1 Decision Making Process 3
3.2 Data and Methodologies 4
3.2.1 Evaluation Criteria 4
3.2.2 Water Supply 5
3.2.3 Current Year Unconstrained Customer Demand 5
3.2.4 Current Year Available Supply 5
3.2.5 Infrastructure Considerations 5
Section 4 WATER SHORTAGE LEVELS 6
Section 5 SHORTAGE RESPONSE ACTIONS 7
5.1 Demand Reduction 7
5.2 Supply Augmentation 8
5.3 Operation Changes 8
5.4 Additional Mandatory Restrictions 8
5.5 Emergency Response Plan 8
5.6 Seismic Risk Assessment and Mitigation Plan 14
5.7 Shortage Response Action Effectiveness 14
Section 6 COMMUNICATION PROTOCOLS 14
Section 7 COMPLIANCE AND ENFORCEMENT 15
Section 8 LEGAL AUTHORITIES 16
Section 9 FINANCIAL CONSEQUENCES OF WSCP ACTIVATION 16
Section 10 MONITORING AND REPORTING 17
Section 11 WSCP REFINEMENT PROCEDURES 18
Section 12 SPECIAL WATER FEATURE DISTINCTION 18
Section 13 PLAN ADOPTION, SUBMITTAL, AND AVAILABILITY 18

City of Hanford
2020 Water Shortage Contingency Plan

Figures

Page No.

Figure 3-1 Annual Assessment Report Timeline 3

Tables

Page No.

Table 4-1 Water Shortage Contingency Plan Levels 7
Table 5-1 Demand Reduction Actions 9
Table 9-1 Financial Consequences of WSCP.....17

Appendices

Appendix A Water Shortage Level Comparison
Appendix B Urban Water Management Plan Adoption Resolution and Notifications

Section 1 INTRODUCTION

This report documents the City of Hanford's Water Shortage Contingency Plan (WSCP). This 2020 WSCP document builds upon previous water shortage contingency planning efforts completed by the City and documented in the 2010 and 2015 Urban Water Management Plans (UWMP). This WSCP reflects updates to the City's water shortage levels and water conservation measures for consistency with state-wide requirements provided by the Department of Water Resources. As part of the 2020 UWMP update, the Department of Water Resources requires urban water suppliers to prepare a stand-alone 2020 WSCP, that is separate from the 2020 UWMP, and intended to manage a water shortage. As the City continues to monitor the effectiveness of the WSCP, this document can be updated and adopted separately from the UWMP.

Though it is a stand-alone document, the 2020 WSCP is still considered one of the elements of the 2020 UWMP, as required by the State Law.

Based on Department of Water Resources (DWR) requirements, and consistent with previous planning efforts, this WSCP includes the following sections:

- Water Supply Reliability Analysis
- Annual Water Supply and Demand Assessment
- Shortage Response Actions
- Communication Protocols
- Compliance and Enforcement
- Legal Authorities
- Financial Consequences of WSCP Activation
- Monitoring and Reporting
- Special Water Feature Distinction
- Plan Adoption, Submittal, and Availability

Section 2 WATER SUPPLY RELIABILITY ANALYSIS

Law

10632 (a)(1)	*The analysis of water supply reliability conducted pursuant to Section 10635.*

The City currently uses groundwater as the sole source of water supply, with wells extracting water from the Tulare Lake Subbasin of the San Joaquin Valley Groundwater Basin. These groundwater basins are managed by Mid-Kings River Groundwater Sustainability Agency, and the 2020 Tulare Lake Subbasin Groundwater Sustainability Plan lists the rates of natural recharge for these groundwater supply sources. Consistent with previous planning efforts, the City's Water

Supply Reliability Analysis, the available supply drawn from the aquifer in any year is equal to the system-wide water demand for that particular year.

As part of the 2020 UWMP the City has also prepared a Drought Risk Assessment (DRA), which is a proactive planning review that readies the City for worst-case water supply conditions should they occur in the immediate future. The DRA compares the City's projected demands over the next five years to estimated available supplies should a five-year dry period occur. The results of the DRA prepared as part of the 2020 UWMP indicate that the City has sufficient supplies to meet projected demands over the next five years.

Section 3 ANNUAL WATER SUPPLY AND DEMAND ASSESSMENT PROCEDURES

Law

10632 (a)(2)	*The procedures used in conducting an annual water supply and demand assessment that include, at a minimum, both of the following:* *(A) The written decision-making process that an urban water supplier will use each year to determine its water supply reliability.* *(B) The key data inputs and assessment methodology used to evaluate the urban water supplier's water supply reliability for the current year and one dry year, including all of the following:* *(i) Current year unconstrained demand, considering weather, growth, and other influencing factors, such as policies to manage current supplies to meet demand objectives in future years, as applicable.* *(ii) Current year available supply, considering hydrological and regulatory conditions in the current year and one dry year. The annual supply and demand assessment may consider more than one dry year solely at the discretion of the urban water supplier.* *(iii) Existing infrastructure capabilities and plausible constraints.* *(iv) A defined set of locally applicable evaluation criteria that are consistently relied upon for each annual water supply and demand assessment.* *(v) A description and quantification of each source of water supply.*
10632.1	*An urban water supplier shall conduct an annual water supply and demand assessment pursuant to subdivision (a) of Section 10632 and, on or before July 1 of each year, submit an annual water shortage assessment report to the department with information for anticipated shortage, triggered shortage response actions, compliance and enforcement actions, and communication actions consistent with the supplier's water shortage contingency plan. An urban water supplier that relies on imported water from the State Water Project or the Bureau of Reclamation shall submit its annual water supply and demand assessment within 14 days of receiving its final allocations, or by July 1 of each year, whichever is later.*

Updates to the California Water Code now require that urban water suppliers prepare a water supply and demand assessment on an annual basis (Annual Assessment). The findings of this Annual Assessment will be summarized in a report submitted to the DWR by July 1st of each calendar year, with the first report required for submission on July 1st, 2022. The purpose of this annual assessment is to ensure water suppliers are proactively considering the available water

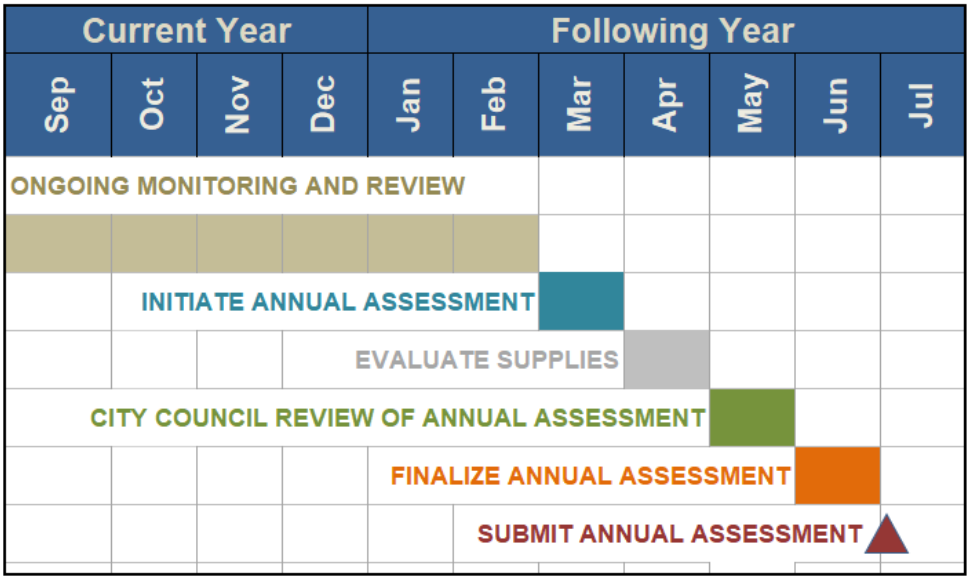
supplies and service area demand requirements, as well as identifying the potential need for implementing the Water Shortage Contingency Plan.

It should be noted that DWR is in the process of preparing a stand-alone guidance document that will outline general procedures to aid urban water suppliers in preparing the Annual Assessment. The decision-making process and Annual Assessment completion steps are preliminary at this point in time and will be further refined as the guidance document by DWR is completed.

3.1 Decision Making Process

This section describes the decision-making process to prepare and approve the Annual Assessment each year. It should be noted that the Annual Assessment and decision-making process will rely on the findings of the Tulare Lake Subbasin Annual Report, which will include documentation of available water supply information and any subbasin-wide required water shortage actions to be implemented.

Figure 3-1 Annual Assessment Report Timeline



September to February – Ongoing Monitoring and Review

For the majority of the year, City staff will continue to monitor and report monthly water consumption and production. This information will be used when the Annual Assessment is initiated to prepare a year-to-year comparison of system-wide water demands for the purpose of projecting demands for the following year.

March – Initiate WSCP Annual Assessment

City staff will initiate the Annual Assessment process by gathering the collected demand and production data. Other relevant information includes but is not limited to the following:

- Land Use/Planning: Changes in land use or number of building permits will be used in estimating the next year's demands.
- Hydrologic Year Review: The City's wet year typically ends in April and rainfall information over the past year can be gathered and reviewed.
- Climate Forecast: Any available climate projection information

The purpose of gathering this information will be to compare the various factors that affect water demand throughout the City's service area. This comparison will guide the City's projection for water demand in the upcoming year.

April – Review Available Supply Information

According to the Tulare Lake Groundwater Sustainability Plan, a Groundwater Annual Report will be completed by the month of April. City staff will review this document once available and use it as a basis for estimating the available supply in the upcoming year. If required, City staff will also prepare to initiate any water shortage response actions noted by Mid-Kings River Groundwater Sustainability Agency.

May – City Council Review of Annual Assessment

The draft of Annual Assessment will be presented to City Council for their information and discussion. If water shortage actions are recommended by the Annual Assessment, the City Council will be asked to begin the implementation of the recommended actions.

June – Finalize Annual Assessment

The Annual Assessment is finalized based on any feedback received during the City Council review process.

July – Submit Annual Assessment

The Annual Assessment will be submitted to DWR on or before July 1st.

3.2 Data and Methodologies

This section describes the key data and methodologies used in the preparation of the Annual Assessment. This includes historical water supply information, historical and projected water demand, demand and projected water supply demand, which city uses to evaluate their water supply reliability for a normal and a dry subsequent year.

3.2.1 Evaluation Criteria

The primary criteria used in preparing the City's Annual Assessment are the projected water demand and available supply. The supply information will be based on any available subarea-

wide review of available water supplies prepared by Mid-Kings River Groundwater Sustainability Agency, Kings County Water District, or other local groundwater planning agencies. The demand projections will be prepared using a combination of factors, including a comparison to historical demand, land use changes, building permits, and historical rainfall. The City will continue to review its Annual Assessment preparation process, and additional criteria may be added if considered appropriate.

3.2.2 Water Supply

The City currently relies on groundwater as the sole source of supply. There are numerous groundwater wells used by the City, each of which is monitored and has production reported on a monthly basis. These monthly production records will be used to characterize the City's current water production requirement and compared to previous years to estimate production requirements for the upcoming year.

As the Groundwater Sustainability Agency, Mid-Kings River GSA manages water supplies within the Tulare Lake Subbasin; this also includes the Mid-Kings River Subarea, which is used by the City for supply. The water supply analysis prepared by each GSAs within the Tulare Lake Subbasin in preparation of their Annual Report will provide a critical basis for water supply assumptions, regarding available water supply volumes and any pumping restrictions required to be implemented if any.

3.2.3 Current Year Unconstrained Customer Demand

Billed water consumption is reported on a monthly basis and will be used to characterize the current water consumption requirements for the City. The monthly records will be compared to corresponding months of the previous year to identify any significant changes in water use behavior throughout the City's service area. In addition to consumption records, known recent developments or current building permits will enable City staff to estimate changes to water demand in the upcoming year.

3.2.4 Current Year Available Supply

The Annual Assessment estimates the current year available supply for current hydrological conditions as well as a possible subsequent dry year. The supply estimate will be based on the Drought Risk Assessment supply estimation methodology documented in the 2020 UWMP and it will also incorporate information from the Tulare Lake Groundwater Annual Report and Mid-Kings Groundwater Sustainability Agency.

3.2.5 Infrastructure Considerations

The annual assessment will include a review of any ongoing capital projects that are expected to affect the demands and supply projections. Examples of such capital projects include water loss reductions, distribution expansion to serve the growth, or new groundwater wells.

Section 4 WATER SHORTAGE LEVELS

Law

10632 (a)(1) Stages of action to be undertaken by the urban water supplier in response to water supply shortages, including up to a 50 percent reduction in water supply and an outline of specific water supply conditions which are applicable to each stage.

10632 (a)(3)

(A) Six standard water shortage levels corresponding to progressive ranges of up to 10, 20, 30, 40, and 50 percent shortages and greater than 50 percent shortage. Urban water suppliers shall define these shortage levels based on the suppliers' water supply conditions, including groundwater levels, changes in surface elevation or level of subsidence, or other changes in hydrological or other local conditions indicative of the water supply available for use. Shortage levels shall also apply to catastrophic interruption of water supplies, including but not limited to, a regional power outrage, an earthquake, and other potential emergency events.

(B) An urban water supplier with an existing water shortage contingency plan that uses different water shortage levels may comply with the requirement in subparagraph (A) by developing and including a cross-reference relating its existing categories to the six standard water shortage

The City's current water shortage contingency plan includes three water shortage levels. These water shortage stages reflect potential supply reductions due to reductions in average rainfall, groundwater well issues, or extended periods of summer weather. The City's water shortage levels are documented in **Table 4-1**. The comparison between the City's water shortage levels and the DWR recommended 6-level framework is provided in **Appendix A**.

Identifying the appropriate shortage level will be in accordance with the procedures outlined in *Section 3 – Annual Water Supply and Demand Assessment Procedures.* With recommendations from City staff, the City Council has the authority to declare the appropriate conservation level considered necessary to manage the system demands and mitigate the water shortage. The City Council can also downgrade, upgrade, or terminate a shortage response level based on City staff recommendations.

The City's groundwater supply is dependent on recharge from surface water sources as well as deep percolation of applied irrigation water. In periods of drought when the natural recharge sources are less than in typical years, the basin is at risk of overdraft. In order to reduce water consumption city-wide, the City's water conservation ordinance will be amended as necessary to respond to severe, prolonged drought.

As part of the City's efforts to conserve water, the City has permanent water use prohibitions in place. Additionally, the City's conservation ordinance describes a multiple-stage water conservation plan. Each water rationing stage includes a water demand reduction percentage, which is to be applied to normal water demands. The plan is dependent on the cause, severity, and anticipated duration of the water shortage, and a combination of voluntary and mandatory water conservation measures, which can be put in place to reduce City-wide water usage. City manager and Council have the authority to implement additional conservation measures as needed.

Table 4-1 Water Shortage Contingency Plan Levels

Stage	Percent Supply Reduction	Water Supply Condition
1	10%-20%	Minor Shortage Potential - Below average rainfall in the previous 12-24 months - 10 percent or more of municipal wells out of service - Warm weather patterns typical of summer months
2	20%-35%	Moderate Shortage Potential - Below average rainfall in the previous 24-36 months - Prolonged periods of low water pressure - 10 percent or more of municipal wells out of service - Warm weather patterns typical of summer months
3	35%-50%	Critical Shortage Potential - Below average rainfall in the previous 36 months - Prolonged periods of low water pressure - 10 percent or more of municipal wells out of service - Warm weather patterns typical of summer months

Section 5 SHORTAGE RESPONSE ACTIONS

Law

10632 (a)(4) Shortage response actions that align with the defined shortage levels and include, at a minimum, all of the following:

(F) Locally appropriate supply augmentation actions.
(G) Locally appropriate demand reduction actions to adequately respond to shortages.
(H) Locally appropriate operational changes
(I) Additional, mandatory prohibitions against specific water use practices that are in addition to state-mandated prohibitions and appropriate to the local conditions.
(J) For each action, an estimate of the extent to which the gap between supplies and demand will be reduced by implementation of the action.

Pursuant to the CWC 10632 (a) (4), this section documented the detailed shortage response actions which align with the shortage levels into different categories.

5.1 Demand Reduction

There are a number of demand reduction measures an urban water supplier can implement as response actions to corresponded water shortage levels. Some of these may include watering and outdoor water usage prohibitions, water rate structure changes, public educations or water supply service adjustments. Other demand reduction such as infrastructure improvement or replacing, water-efficient assets installation are considered as long-term water demand reductions will not be listed in this water shortage contingency plan.

consumption reduction actions are summarized in Table 5-1. The permanent water use restrictions enforced year-round are also documented in the table.

5.2 Supply Augmentation

As noted in previous sections, groundwater is the City's sole source of potable water supply, and there are no known opportunities for water supply augmentation through actions such as exchanges, transfers, or purchase programs. Therefore, supply augmentation actions are excluded from the City's Water Shortage Contingency Plan at this time.

5.3 Operation Changes

During a water shortage, changes to water system operations may be considered. These operational changes may include improving water usage consumption and tracking, changes to fire hydrant testing frequencies, alteration in maintenance cycles, and expedited water leak repairs.

5.4 Additional Mandatory Restrictions

Additional mandatory restrictions have been reported in a previous section.

5.5 Emergency Response Plan

The City has a Local Hazard Mitigation Plan, most recently updated in 2012, that provides a framework for the City to address a catastrophic supply interruption due to various hazards, including seismic, geological, wildfire, and flooding hazards. The plan is intended to define the actions required of the City before, during, and after an emergency. It also guides the City's response to major emergencies and disasters.

Table 5-1 Demand Reduction Actions

Level	Restrictions and Prohibitions on End Users Category	Additional Explanation or Reference	Penalty, Charge, or Other Enforcement?
1-3	Landscape - Limit landscape irrigation to specific days	Prohibit sprinkling, irrigating, or otherwise applying water to any yard, ground, premises or vegetation except on the following designated days: - Properties ending with even-numbered addresses: Tuesday and Saturday - Properties ending with odd-numbered addresses: Wednesday and Sunday.	Yes
1-3	Landscape - Limit landscape irrigation to specific days	Prohibit sprinkling, irrigating, or otherwise applying water to any yard, ground, premises or vegetation on any day of the week between the hours of 10 a.m. and 6 p.m. during periods designated as "daylight savings time" (generally occurring between March and November).	Yes
1-3	Landscape - Other landscape restriction or prohibition	Prohibit sprinkling, irrigating, or otherwise applying water to any yard, ground, premises, or vegetation except by the use of a hand-held hose, a sprinkling device or an approved sprinkler system controlled by an automatic shut-off device or a person who is in immediate attendance of the sprinkling device or system.	Yes
1-3	Landscape - Other landscape restriction or prohibition	Prohibit sprinkling, irrigating, or otherwise applying water to any yard, ground, landscaping or vegetation during and up to 48 hours after measurable rainfall.	Yes
1-3	Landscape - Prohibit certain types of landscape irrigation	Prohibit sprinkling, irrigating, or otherwise applying water to any ornamental turf or public street medians.	Yes

Table 5-1 Demand Reduction Actions

Level	Restrictions and Prohibitions on End Users Category	Additional Explanation or Reference	Penalty, Charge, or Other Enforcement?
1-3	Landscape - Other landscape restriction or prohibition	Prohibit sprinkling, irrigating, or otherwise applying water to any yard, ground, landscaping or vegetation outside of a newly constructed home or a building in a manner inconsistent with regulations or other requirements established by the California Building Standards Commission and the California Department of Housing and Community Development.	Yes
1-3	Landscape - Restrict or prohibit runoff from landscape irrigation	Prohibit water used to irrigate any yard, ground, landscaping or vegetation to run or waste onto non-irrigated areas, private or public walkways, sidewalks, driveways, streets or adjoining or adjacent property.	Yes
1-3	Other - Customers must repair leaks, breaks, and malfunctions in a timely manner	Prohibit keeping, maintaining, operating, or using any water connection, hose, faucet, hydrant, pipe, outlet, or plumbing fixture which is not tight and free from leakage and dripping.	Yes
1-3	Other	Prohibit washing any type of vehicle, boat or trailer with water supplied by a hose unless the hose is fitted with a shut-off nozzle or device attached to it that causes it to cease dispensing water immediately when not in use.	Yes
1-3	Other - Prohibit use of potable water for washing hard surfaces	Prohibit use of water for sidewalk, driveway, or walkway washing cleaning, except as required to address an immediate public health or safety need.	Yes
1-3	Water Features - Restrict water use for decorative water features, such as fountains	Prohibit operation of water fountains or other decorative water fixtures without recirculation pumps.	Yes
1-3	Other water feature or swimming pool restriction	Prohibit draining and filling of a swimming pool or similar water feature more than once during a one year period (all pool drainage must occur pursuant to a permit issued by the City's public works department.	Yes

Table 5-1 Demand Reduction Actions

Level	Restrictions and Prohibitions on End Users Category	Additional Explanation or Reference	Penalty, Charge, or Other Enforcement?
1-3	Other	Prohibit willful of negligent waste of water in any manner.	Yes
1-3	CII - Lodging establishment must offer opt out of linen service	Require operators of hotels and motels to provide guests with the option of choosing not to have towels and linens laundered daily. Each hotel and motel shall prominently display notice of this option in each bathroom using clear and easily understood language.	Yes
1-3	Landscape - Prohibit certain types of landscape irrigation	Prohibit the planting of rye grass on any property that is serviced by the city's water system.	Yes
1-3	Other	The city may issue Conditional Water Permits that allow the watering of new landscaping planted outside of newly-constructed buildings on days and/or times other than those consistent with the current use restrictions.	Yes
1-3	Other - Prohibit vehicle washing except at facilities using recycled or recirculating water	Prohibit charity and community vehicle wash events, including any event at which an individual or a group, which is not a commercial washing business operating legally in the city, offers to the general public or portion thereof the service of washing, with water, any type of vehicle, boat, or trailer in exchange for a fee, donation, other form of compensation, or for no compensation.	Yes

Table 5-1 Demand Reduction Actions

Level	Restrictions and Prohibitions on End Users Category	Additional Explanation or Reference	Penalty, Charge, or Other Enforcement?
1-3	Landscape - Prohibit certain types of landscape irrigation	Eliminate watering of ornamental turf areas. Water only actively used turf areas no more than twice per week. Trees and shrubs may be water only twice per week using a handheld hose with a positive shutoff nozzle or drip irrigation. Use of reclaimed water (if available), is exempt.	Yes
1-3	Landscape - Limit landscape irrigation to specific days	Water no more than twice per week using only hand-held hoses with positive shutoff nozzle or drip irrigation systems. Eliminate sprinkler use.	Yes
1-3	CII - Restaurants may only serve water upon request	Prohibit the serving of drinking water, other than upon request, in eating or drinking establishments.	Yes

Table 5-1 Demand Reduction Actions

Level	Restrictions and Prohibitions on End Users Category	Additional Explanation or Reference	Penalty, Charge, or Other Enforcement?
1-3	Other - Customers must repair leaks, breaks, and malfunctions in a timely manner	When a leak is discovered by a customer in a customer's water system and a customer is charged for water that it has not used, as a result of the leakage, it shall be policy of the city to aid the customer in locating the leak. If the leak is repaired by the customer within a period of ten days of the date the leak was discovered and the customer can establish that a portion of the charges identified in its water bill are in excess of the amount normally charged to the customer, that excess amount of water use caused by the leakage shall be charged to the customer at the standard water rate. If the leak is not repaired by the customer within the 10 day period, the portion of the excess water usage which results from the leakage will be billed at two times the standard water rate until the leak is repaired by the customer. The city shall give prompt notice to a customer if the city obtains information indicating that a leak may exist in the customer's exclusive control.	Yes
1-3	Other - Prohibit use of potable water for construction and dust control	All construction water must be reclaimed or non-potable. Issuance of construction meters will be only for testing and disinfection of potable water lines.	Yes

5.6 Seismic Risk Assessment and Mitigation Plan

Law

10632.5 (a)	*In addition to the requirements of paragraph (3) of subdivision (a) of Section 10632, beginning January 1, 2020, the plan shall include a seismic risk assessment and mitigation plan to assess the vulnerability of each of the various facilities of a water system and mitigate those vulnerabilities.*
(b)	*An urban water supplier shall update the seismic risk assessment and mitigation plan when updating its urban water management plan as required by Section 10621.*
(c)	*An urban water supplier may comply with this section by submitting, pursuant to Section 10644, a copy of the most recent adopted local hazard mitigation plan or multi-hazard mitigation plan under the federal Disaster Mitigation Act of 2000 (Public Law 106-390) if the local hazard mitigation plan or multi-hazard mitigation plan addresses seismic risk.*

In addition to the emergency response plan described in a previous section, the California Water Code now requires urban water suppliers to document a locally appropriate multi-hazard mitigation plan, as developed under the federal Disaster Mitigation Act of 2000, that includes documentation of seismic risk assessment. Kings County developed such a hazard mitigation plan in December 2012. The City's service area is included in the boundaries reviewed as part of this mitigation plan.

5.7 Shortage Response Action Effectiveness

In addition to documenting demand reduction actions the 2020 UWMP also estimates the effectiveness of these actions on reducing system-wide demand. The City records water consumption and production on a monthly basis, and this data can be used to estimate the effect of any demand reduction actions implemented.

Section 6 COMMUNICATION PROTOCOLS

Law

10632 (a)(5)	*Communication protocols and procedures to inform customers, the public, interested parties, and local, regional, and state governments, regarding, at a minimum, and of the following:* *(A) Any current or predicted shortages as determined by the annual water supply and demand assessment described pursuant to Section 10632.1.* *(B) Any shortage response actions triggered or anticipated to be triggered by the annual water supply and demand assessment described pursuant to Section 10632.1.* *(C) Any other relevant communications.*

When the City identifies the need for short-term water use reductions as directed by the Water Shortage Contingency Plan or Annual Assessment, clear and effective communication will be critical to achieve the necessary demand reductions. Methods of public notification include newspaper publications, bill inserts, City website announcements, social media posts, and press

releases or informational campaigns. These public notification methods would be implemented in the event of a Level 2 Water Shortage and would increase in frequency in the event of a Level 3 Water Shortage.

Section 7 COMPLIANCE AND ENFORCEMENT

Law

10632 (a) (6)	*For an urban retail water supplier, customer compliance, enforcement, appeal, and exemption procedures for triggered shortage response actions as determined pursuant to Section 10632.2.*

Customers who violate the provisions noted in the water code for water shortage conditions shall receive, in accordance with the Amended Hanford Municipal Code Section 13.04.150, the following:

- The first violation shall result in a written notice of the violation from Public Works Department personnel or police department.
- The second violation shall result in a written notice of the violation and a penalty of fifty dollars imposed on the customer's water bill.
- The third violation shall result in a written notice of the violation. Additionally, for unmetered customers, a water meter shall be installed by the city to monitor all water usage on the property. Water meter purchasing cost and installation fees shall be billed to the customer and are due within thirty days of the billing. Metered customers shall have a penalty of one hundred dollars imposed on their water bill.
- The fourth violation shall result in a written notice of the violation and a penalty of two hundred dollar penalty shall be imposed on the customer's water bill.

Section 8 LEGAL AUTHORITIES

Law

10632 (a) (7) *(A) A description of the legal authorities that empower the urban water supplier to implement and enforce its shortage response actions specified in paragraph (4) that may include, but are not limited to, statutory authorities, ordinances, resolutions, and contract provisions.*
(B) A statement that an urban water supplier shall declare a water shortage emergency in accordance with Chapter 3 (commencing with Section 350) of Division 1. [see below]
(C) A statement that an urban water supplier shall coordinate with any city or county within which it provides water supply services for the possible proclamation of a local emergency, as defined in Section 8558 of the Government Code.

Water Code Section Division 1, Section 350

Declaration of water shortage emergency condition. The governing body of a distributor of a public water supply, whether publicly or privately owned and including a mutual water company, shall declare a water shortage emergency condition to prevail within the area served by such distributor whenever it finds and determines that the ordinary demands and requirements of water consumers cannot be satisfied without depleting the water supply of the distributor to the extent that there would be insufficient water for human consumption, sanitation, and fire protection.

This City has the legal authority to implement and enforce its water shortage response actions and relative penalties, water charge adjustments, and water service alteration or prohibition. City Urgency Ordinance 15-06, which amended the water supply shortage regulations for the City in June 2015, documents the demand reduction measures as well as enforcement protocols.

Section 9 FINANCIAL CONSEQUENCES OF WSCP ACTIVATION

Law

10632 (a) (8) *A description of the financial consequences of, and responses for, drought conditions, including, but not limited to, all of the following:*

- *(A) A description of potential revenue reductions and expense increases associated with activated shortage response actions described in paragraph (4).*
- *(B) A description of mitigation actions needed to address revenue reductions and expense increases associated with activated shortage response actions described in paragraph (4).*
- *(C) A description of the cost of compliance with Chapter 3.3 (commencing with Section 365) of Division 1. [retail urban suppliers only]*

The activation of the Water Shortage Contingency Plan and related Water Shortage Levels have financial consequences for the City. Reduced water consumption will contribute to reduced revenue, while proactive operational practices will contribute to higher operational and maintenance costs. Currently, the City maintains some funds as rate stabilization reserves as well as approximately 60 days of operating reserves. In addition, the City Council has the authority to increase water rates to offset reduced revenues. These reserve funds or rate modifications have the ability to mitigate financial consequences of the Water Shortage Contingency Plan.

Additionally, potential mitigation actions are documented in Table 9-1. These are preliminary actions and would be evaluated in more detail should a water shortage occur.

Table 9-1 Financial Consequences of WSCP

Stage	Supply Reduction	Financial Consequences	Anticipated Mitigation Actions
0	None	None	Funding provided for supplemental water supply reserve.
1	10%-20%	Potential increase in O&M expenses and mild reduction in revenue.	Reduce O&M costs and identify supplemental funding sources.
3	21%-35%	Moderate increase to O&M expenses and decrease in revenue.	Defer capital expenditures and consider use of reserves.
2	35%-50%+	Significant increases to O&M and decreases in revenue.	Implement long-term O&M budget reductions.

Section 10 MONITORING AND REPORTING

Law

10632 (a) (9)	*For an urban retail water supplier, monitoring and reporting requirements and procedures that ensure appropriate data is collected, tracked, and analyzed for purposes of monitoring customer compliance and to meet state reporting requirements.*

Monitoring and reporting as part of the Water Shortage Contingency Plan and Annual Assessment will be based on the metered production and consumption data. Ongoing review of this information, and comparisons to historical data for similar months, will enable the City to monitor the effectiveness of the WSCP measures. Additionally, due to implemented shortage response actions and water shortage levels, the City's Water Department may increase the frequency of reading meters in order to collect, track, and analyze the water use.

Section 11 WSCP REFINEMENT PROCEDURES

Law

10632 (a) (10)	*Reevaluation and improvement procedures for systematically monitoring and evaluating the functionality of the water shortage contingency plan in order to ensure shortage risk tolerance is adequate and appropriate water shortage mitigation strategies are implemented as needed*

While the WSCP is a standalone document adopted separately from the 2020 UWMP it should be considered a dynamic planning tool and be subject to ongoing refinement efforts as necessary. Following the declaration of a water shortage and implementation of the WSCP, the monitoring and reporting steps described in a previous section will provide valuable insight into the effectiveness of the WSCP. City staff will evaluate the effectiveness of communication protocols, demand reduction actions, operational changes, or financial consequence mitigation. If this review reveals opportunities for procedural refinements or new WSCP actions, City staff may elect to incorporate these items into an amended version of the WSCP.

Section 12 SPECIAL WATER FEATURE DISTINCTION

Law

10632 (b)	*For purposes of developing the water shortage contingency plan pursuant to subdivision (a), an urban water supplier shall analyze and define water features that are artificially supplied with water, including ponds, lakes, waterfalls, and fountains, separately from swimming pools and spas, as defined in subdivision (a) of Section 115921 of the Health and Safety Code.*

The California Water Code requires urban water suppliers to distinguish between water features that are artificially supplied with water as opposed to swimming pools and spas. The City's current demand reduction actions include this distinction, as documented in a previous section.

Section 13 PLAN ADOPTION, SUBMITTAL, AND AVAILABILITY

Law

10632 (c)	*The urban water supplier shall make available the water shortage contingency plan prepared pursuant to this article to its customers and any city or county within which it provides water supplies no later than 30 days after adoption of the water shortage contingency plan.*

The WSCP adoption and submittal process, as well as the public availability, are the same as those for the City's UWMP. However, the WSCP may be periodically amended independently from the City's UWMP. Should an amendment to the WSCP be implemented, stakeholder and public notification methods consistent with the UWMP will be performed prior to the adoption of the amended plan.

APPENDIX A

Water Shortage Level Comparison

2015 Hanford WSCP			Corresponding Relationship ("Crosswalk")	Six Standard Stages	
Stage	Percentage Supply Reduction	Water Supply		Stage	DWR 6 Standard Water Shortage Levels
1	10 to 20%	Minor Shortage Potential		1	Up to 10%
				2	10 to 20%
2	20 to 35%	Moderate Shortage Potential		3	20 to 30%
				4	30 to 40%
3	35 to 50%	Critical Shortage Potential		5	40 to 50%
				6	Greater than 50%

APPENDIX B

Urban Water Management Plan Adoption Resolution and Notifications

RESOLUTION NO. 21-45-R

RESOLUTION OF THE CITY COUNCIL OF THE CITY OF HANFORD
APPROVING THE 2020 URBAN WATER MANAGEMENT PLAN

At a regular meeting of the City Council of the City of Hanford, duly called and held on October 19, 2021, it was moved by Council Member Sharp, and seconded by Council Member Morrow, and carried that the following resolution be adopted:

WHEREAS, The State of California Urban Water Management Planning Act, SB 797 and amendments thereto, requires the local agency to adopt and file with the State of California Department of Water Resources and updated Urban Water Management Plan every five years; after a noticed public hearing; and

WHEREAS, State regulations require that a stand-alone Water Shortage Contingency Plan be prepared in conjunction with the Urban Water Management Plan; and

WHEREAS, a public hearing notice for the Urban Water Management Plan and Water Shortage Contingency Plan was published in the local newspaper and the public hearing held on Tuesday, October 5, 2021; and

WHEREAS, Section 15282 (v) of the California Environmental Quality Act states that the preparation of Urban Water Management Plans is statutorily exempt.

NOW, THEREFORE, BE IT RESOLVED that the City Council of the City of Hanford does hereby approve the attached 2020 Water Shortage Contingency Plan.

Passed and Adopted at a regular meeting of the City Council of the City of Hanford duly called and held on the 19th day of October, 2021, by the following vote:

AYES: Ramirez, Sharp, Morrow, Breno, Salray

NOES: _____

ABSTAIN: _____

ABSENT: _____

Francisco Ramirez
MAYOR of the City of Hanford

ATTEST: _____
Natalie Corral,
CITY CLERK and Clerk of the
Council of the City of Hanford

STATE OF CALIFORNIA)
COUNTY OF KINGS) ss
CITY OF HANFORD)

I, NATALIE CORRAL, City Clerk of the City of Hanford, do hereby certify the foregoing Resolution was duly passed and adopted by the City Council of the City of Hanford at a regular meeting thereof held on the 19th day of October, 2021.

Dated: 10/19/, 2021

_____
NATALIE CORRAL,
CITY CLERK and Clerk of the
Council of the City of Hanford

RESOLUTION NO. 21-46-R

RESOLUTION OF THE CITY COUNCIL OF THE CITY OF HANFORD
APPROVING THE 2020 URBAN WATER MANAGEMENT PLAN

At a regular meeting of the City Council of the City of Hanford, duly called and held on October 19, 2021, it was moved by Council Member Sharp, and seconded by Council Member Morrow, and carried that the following resolution be adopted:

WHEREAS, The State of California Urban Water Management Planning Act, SB 797 and amendments thereto, requires the local agency to adopt and file with the State of California Department of Water Resources and updated Urban Water Management Plan every five years; after a noticed public hearing; and

WHEREAS, a public hearing notice was published in the local newspaper and the public hearing held on Tuesday, October 5, 2021; and

WHEREAS, Section 15282 (v) of the California Environmental Quality Act states that the preparation of Urban Water Management Plans is statutorily exempt.

NOW, THEREFORE, BE IT RESOLVED that the City Council of the City of Hanford does hereby approve the attached 2020 Urban Water Management Plan.

Passed and Adopted at a regular meeting of the City Council of the City of Hanford duly called and held on the 19th day of October, 2021, by the following vote:

AYES: Ramirez, Sharp, Morrow, Breno, Saltray

NOES: _____

ABSTAIN: _____

ABSENT: _____

Francisco Ramirez
MAYOR of the City of Hanford

ATTEST: _____

Natalie Corral,
CITY CLERK and Clerk of the
Council of the City of Hanford

STATE OF CALIFORNIA)
COUNTY OF KINGS) ss
CITY OF HANFORD)

I, NATALIE CORRAL, City Clerk of the City of Hanford, do hereby certify the foregoing Resolution was duly passed and adopted by the City Council of the City of Hanford at a regular meeting thereof held on the 19th day of October, 2021.

Dated: 10/29/, 2021

_____

NATALIE CORRAL,
CITY CLERK and Clerk of the
Council of the City of Hanford

THE SENTINEL
P O BOX 9
HANFORD CA 93232
(559)582-0471
Fax (559)582-2431

ORDER CONFIRMATION

Salesperson: JUAN MORALES — Printed at 09/16/21 09:15 by jmora-bk

---

Acct #: 7650 — Ad #: 46328 — Status: New

CITY OF HANFORD - LEGALS
ACCOUNTS PAYABLE
315 N DOUTY ST
HANFORD CA 93230

Start: 09/17/2021 — Stop: 09/28/2021
Times Ord: 2 — Times Run: ***
3STD 2.00 X 4.73 Words: 367
Total 3STD 9.46
Class: H0986 LEGALS
Rate: LD — Cost: 296.71
Affidavits: 1

Contact:
Phone: (559)585-2500
Fax#:
Email: billing@cityofhanfordca.com
Agency:

Ad Descrpt: AD# 46328 PUBLIC NOTICE N
Given by: *
P.O. #:
Created: jmora 09/15/21 08:07
Last Changed: jmora 09/16/21 09:15

PUB	ZONE	EDT	TP	RUN DATES
HSP	A	95	S	09/17,25
HSO	A	95	S	09/17,28

AUTHORIZATION

Under this agreement rates are subject to change with 30 days notice. In the event of a cancellation before schedule completion, I understand that the rate charged will be based upon the rate for the number of insertions used.

_____ _____
Name (print or type) Name (signature)

(CONTINUED ON NEXT PAGE)

THE SENTINEL
P O BOX 9
HANFORD CA 93232
(559)582-0471
Fax (559)582-2431

ORDER CONFIRMATION (CONTINUED)

Salesperson: JUAN MORALES Printed at 09/16/21 09:15 by jmora-bk

---

Acct #: 7650 Ad #: 46328 Status: New

AD# 46328

Public Notice

Notice of Public Hearing

NOTICE IS HEREBY GIVEN that the City Council of the City of Hanford, California, will hold an informational session on October 5, 2021 at 5:00 p.m. followed by a Public Hearing on October 5, at 7:00 p.m. or as soon as possible thereafter, in the City of Council Chambers located at 400 Douty Street, Hanford, California to consider the following matter:

PUBLIC HEARING ON URBAN WATER MANAGEMENT PLAN & WATER SHORTAGE CONTINGENCY PLAN FOR 2020

The Hanford City Council will hold a Public Hearing to receive comments from the public on the final draft of the City of Hanford 2020 Urban Water Management Plan (UWMP) and 2020 Water Shortage Contingency Plan (WSCP). The City is preparing its 2020 UWMP to continue to provide adequate water supplies to meet existing and future water demands within Citys Urban Growth Boundary. The 2020 UWMP updates the information in the existing 2015 UWMP and provides an overview of the Citys efficient water uses, water supplies, and demand management measures. Additionally, the 2020 WSCP builds upon previous planning efforts and outlines the Citys plan to address potential future water shortages. At the conclusion of receipt of comments by the public, the Public Hearing will be closed.

Written communications may be filed prior to the Public Hearing. Questions or comments regarding the plans should be emailed to jross@cityofhanfordca.com. The final draft plans are available for review at the City Clerks office at 319 N. Douty Street, Hanford CA, Monday through Friday between the hours of 8:00 a.m. and 4:00 p.m. Further detail may be obtained from the City of Hanford Public Works department at (559) 585-2550. The final draft plan can be viewed and downloaded at: https://www.cityofhanfordca.com

ADOPTION OF THE 2020 URBAN WATER MANAGEMENT PLAN and 2020 WATER SHORTAGE CONTINGENCY PLAN

At the regularly scheduled meeting of the Hanford City Council on October 19, 2021, the City Council will also consider adoption of a resolution approving the City of Hanford 2020 UWMP and 2020 WSCP and directing staff to submit the plan to the State Department of Water Resources.

BY ORDER OF THE CITY COUNCIL
OF THE CITY OF HANFORD.

Publish September 17, 25, 2021

Appendix G

Phase I Environmental Site Assessment

TECHNICON
ENGINEERING SERVICES, INC.

PHASE I ENVIRONMENTAL SITE ASSESSMENT
300-ACRE RESIDENTIAL SUBDIVISION
11722 FARGO AVENUE
HANFORD, CALIFORNIA

Prepared for and Submitted To:

Woodside Homes
9 River Park Place East, Suite 430
Fresno, California 93720

March 11, 2022

TES#: 210832.003

GEOTECHNICAL & ENVIRONMENTAL ENGINEERING • CONSTRUCTION TESTING & INSPECTION

March 11, 2022 TES#: 210832.003

Mr. Matt Smith
Woodside Homes
9 River Park Place East, Suite 430
Fresno, California 93720

RE: Phase I Environmental Site Assessment
306-Acre Hanford
11722 Fargo Avenue
Hanford, California

Mr. Smith:

In accordance with your request and authorization, Technicon Engineering Services, Inc. (Technicon), has performed a Phase I Environmental Site Assessment of the above-referenced site in conformance with the scope and limitations of ASTM Practice E-1527-13. Any exceptions to, or deletions from, this practice are described in Section 2.4 of this report. The results of the investigation are detailed in the attached report.

We appreciate the opportunity to assist you with your project. If you should have questions or require additional information, please contact us at (559) 276-9311.

Respectfully,
TECHNICON Engineering Services, Inc.

Lee Curra
Staff Geologist



Steve Curra, PG
Environmental Engineering Division Manager

TABLE OF CONTENTS

Page

1.0 SUMMARY....1

2.0 INTRODUCTION....2

2.1 Objective....2
2.2 Scope of Services....2
2.3 Significant Assumptions....3
2.4 Limitations and Exceptions....3
2.5 User Reliance....4

3.0 SITE DESCRIPTION & PHYSICAL SETTING....4

3.2 Groundwater Conditions....5

4.0 ENVIRONMENTAL RECORDS REVIEW....5

4.1 Standard Environmental Record Sources....5
4.2 Additional Environmental Records Sources....10

5.0 SITE HISTORY....11

5.1 Aerial Photograph Review....11
5.2 Sanborn Fire Insurance Maps....12
5.3 Kings County Building Department....12
5.4 Local Street Directories....12
5.5 Geologic Energy Management....12

6.0 SITE RECONNAISSANCE....12

6.1 Methodology and Limiting Conditions....12
6.2 General Site Setting....13
6.3 Site Reconnaissance Observations....13
6.4 Adjoining Properties....16

7.0 INTERVIEWS....17

7.1 Property Owners & Occupants....17
7.2 Local Government Officials....17

8.0 SUBSURFACE INVESTIGATIONS....17

9.0 FINDINGS, CONCLUSIONS, & OPINIONS....19

10.0 LIST OF SOURCES....20

11.0 QUALIFICATIONS OF ENVIRONMENTAL PROFESSIONALS....21

FIGURES
Figure 1 – Vicinity Map
Figure 2 – Site Map

APPENDICES
Appendix A – Site Photographs
Appendix B – Database Search Information
Appendix C – User Provided Information
Appendix D – Analytical Reports

PHASE I ENVIRONMENTAL SITE ASSESSMENT
RESIDENTIAL 300-ACRE SUBDIVISION
11722 FARGO AVENUE
HANFORD, CALIFORNIA

1.0 SUMMARY

We have performed a Phase l Environmental Site Assessment of the Site in conformance with the scope and limitations of ASTM Practice E-1527-13. Any exceptions to, or deletions from, this practice are described in Section 2.4 of this report.

The subject site is comprised of two parcels encompassing approx. 306 acres at the northeast corner of 12th and Fargo avenues in Hanford, California. The site consists of agricultural land.

Since sometime prior to 1954 the subject site has consisted of agricultural land. A farmhouse and associated outbuildings occupied the south-central portion of the Site until sometime in the mid to late 2000s. Sometime between 2010 and 2012 an open-sided shed was constructed in the center of the Site. Peoples Ditch transects the northwest portion of the Site, and a railroad runs adjacent to the eastern edge of the Site.

On December 16, 2021, one approx. 1,000-gallon diesel AST and full, partially full, and empty agricultural and fertilizer containers were observed on the soil floor of an open-sided shed at the center of the Site. At that time, small areas of visibly stained surface soils were observed on the shed's dirt floor. The containers and AST were later removed by the property owner as part of Site cleanup activities which included removal of visibly stained surface soils. Email communications between the property owner and client indicate that the "affected soil" (and presumably the AST and agricultural chemical containers), were "disposed of properly, away from the Singh property". The results of a soil sampling and analysis investigation of the shed floor following removal of the AST, containers and stained soil revealed no environmentally persistent pesticide residues and only low diesel concentrations well below State screening levels. It does not appear that the former diesel AST or agricultural chemicals storage in the shed have adversely impacted the subject site.

This assessment has revealed no evidence of recognized environmental conditions (RECs), controlled RECs, historical RECs, or records of environmental liens in connection with the property.

2.0 INTRODUCTION

In accordance with the request and authorization of Mr. Matt Smith of Woodside Homes, TECHNICON Engineering Services, Inc. (Technicon) has conducted a Phase I Environmental Site Assessment (ESA) of the above-referenced Site. The following sections present a description of the Site and vicinity, available information obtained during this investigation, and our evaluations.

2.1 Objective

The purpose and objective of this investigation was to evaluate existing or potential environmental impacts at or near the Site and to permit the user to satisfy one of the requirements to qualify for the "innocent landowner defense" to the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) liability: that is the practices that constitute "all appropriate inquiry into the previous uses and ownership of the property consistent with good commercial or customary practices" as defined in 42 USC Section 9601 (35)(B). This practice may also qualify the user for protections under the bona fide prospective purchaser defense and the contiguous property owner defense to the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) liability.

The goal of the processes established by this practice is to identify recognized environmental conditions (RECs), meaning "presence or likely presence of any hazardous substances or petroleum products in, on, or at a property: (1) due to any release to the environment; (2) under conditions indicative of a release to the environment; or (3) under conditions that pose a material threat of a future release to the environment." The goal is to also identify any historical recognized environmental conditions (HRECs), meaning past release of any hazardous substances or petroleum products that has occurred in connection with the property and has been addressed to the satisfaction of the applicable regulatory authority or meeting unrestricted use criteria established by a regulatory authority, without subjecting the property to any required controls, or controlled recognized environmental conditions (CRECs), which are defined as recognized environmental condition resulting from a past release of hazardous substances or petroleum products that has been addressed to the satisfaction of the applicable regulatory authority.

2.2 Scope of Services

The Phase I Investigation consisted of but was not limited to a visual inspection of the Site and surrounding properties, a review of available regulatory agency records and permits, aerial photographs, and interviews with persons knowledgeable of the Site. The investigation was conducted in general accordance with the guidelines presented in American Society of Testing and

Materials (ASTM) Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process E1527-13.

The Phase I ESA included a site reconnaissance, interviews with parties knowledgeable regarding the history of the site, review of regulatory agency records, review of historical records including aerial photographs to establish a site history to the earliest development of the site, and preparation of a report detailing the findings of the ESA including any recognized environmental conditions potentially affecting the site.

2.3 Significant Assumptions

Technicon assumes that all information provided by regulatory agencies and the database provider is accurate and reliable to the extent implied.

2.4 Limitations and Exceptions

The objective of this investigation was to evaluate existing or potential environmental impacts due to the present or past usage or storage of hazardous materials or substances at or near the Site. The performance of this investigation does not certify or guarantee that the subject property is free of environmental impacts or hazardous materials, but rather presents our opinion as to the potential for such impacts to exist. The conclusions presented herein regarding the environmental integrity of the property are based on the observations and information gathered during the investigation. Many of the regulatory agency records and databases researched are several months to several years in age and may not accurately reflect current conditions or information, but these records are the most up-to-date information available from the regulatory agencies.

The focus of the ESA was to assess the potential for hazardous materials impact to the Site resulting from previous and current uses of the Site and nearby properties. As a result, this assessment does not address the presence of the following conditions unless they were specifically requested as part of the scope of work.

1. Naturally-occurring toxic or hazardous materials in the subsurface soils and water.
2. Potential effects of products commonly present on inhabited properties, such as household products, building materials, and consumer goods.
3. Constituents or contaminant concentrations that are not currently regulated but may be regulated under future statutes.

It must also be recognized that a Phase I Environmental Site Assessment is intended for the purpose of determining site conditions through limited research and investigation and can in no way be considered a conclusive site characterization. Furthermore, this document shall not be interpreted to relieve any party of its responsibility to abide by applicable laws, codes, and regulations.

2.5 User Reliance

The Phase I ESA was prepared for, is the property of, and is intended for the sole use of Woodside Homes, its successors, and agents.

3.0 SITE DESCRIPTION & PHYSICAL SETTING

The Site location and vicinity are presented in Figure 1 (Vicinity Map). According to the U.S. Geological Survey (USGS) 7.5 Minute Hanford, California, topographic quadrangle map, the Site occupies a majority of the west half of the Section 14, of Township 18 South, Range 21 East, Mount Diablo Baseline and Meridian. The site elevation is approximately 245 feet above mean sea level.

The subject site is comprised of two parcels encompassing approx. 306 acres at the northeast corner of 12th and Fargo avenues in Hanford, California. The site consists of agricultural land.

3.1 Assessors Records / User Provided Information

The Hanford County Assessor's Parcel Numbers (APNs), owner, address, and acreage are included in the following table.

APN	Address	Owner	Acres
007-010-031	*	Paul Singh Family LP	Approx. 152
007-360-016	11722 Fargo Ave.		Approx. 155

*=address not available

An ASTM User Questionnaire for Phase I Environmental Site Assessment, completed by Mr. Matt Smith of Woodside Homes, was received on December 17, 2021. According to information provided on the User Questionnaire, Mr. Smith indicated that there are no known environmental cleanup liens or activity or land use limitations recorded or in place for the Site. The User stated that he has no specialized knowledge and experience related to the property that would assist in the preparation of the ESA. A copy of the User Questionnaire is presented in Appendix C of this report.

3.2 Groundwater Conditions

The area of the Site is generally underlain by groundwater occurring in unconfined, perched, and semi-confined conditions. Within the Central Valley, regional movement of ground water is toward a topographic trough located on the western side of the valley, and from there, toward the north to the Sacramento River-Delta region.

The local groundwater table elevation fluctuates in the area of the Site. This is caused by ground water pumping for municipal and agricultural use and by groundwater recharge from rivers, canals, and ponding basins. According to the California Department of Water Resources (DWR) GIS data dated Spring 2021, groundwater in the vicinity of the subject site flows generally to the south and would be encountered at a depth of approximately 110 feet below ground surface.

4.0 ENVIRONMENTAL RECORDS REVIEW

The purpose of the records review is to obtain and review records that will help identify recognized environmental conditions in connection with the property. ASTM standard and additional environmental records were obtained from Envirosite Corporation of Shelton, Connecticut. Standard environmental records are those from federal and approximately equivalent state agencies. Additional records are those that can enhance and supplement the standard environmental record sources and generally can be obtained from local governmental and non-governmental agencies. The Envirosite Government Records Report is attached in Appendix B.

For those listed sites where the Envirosite-provided records are not sufficient to identify a listed site's potential impact to the Property, Technicon obtained and reviewed reasonably ascertainable records of the listed site from the appropriate "Additional Environmental Record Source" presented in Section 4.2.

4.1 Standard Environmental Record Sources

This section identifies record information that was reviewed from standard federal and state agency sources. Listed sites are grouped according to their ASTM-recommended approximately minimum search distance.

4.1.1 1-Mile Approximate Minimum Search Distance

Federal NPL

The National Priority List (NPL) sites are United States Environmental Protection Agency (EPA) sites on the CERCLIS list of uncontrolled or abandoned hazardous waste sites for priority cleanup under the Superfund Program. Also listed are Proposed NPL and NPL Liens-listed sites.

- *There are **no** sites identified on or within a one-mile radius of the Site.*

Response (State/Tribal Equivalent NPL)

Response-listed sites identify confirmed release sites where DTSC is involved in remediation, either in a lead or oversight capacity. These confirmed release sites are generally high-priority and high potential risk.

- *There are **no** sites identified on or within a one-mile radius of the Site.*

RCRA CORRACTS

CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

- *There are **no** sites identified on or within a one-mile radius of the Site.*

4.1.2 ½-Mile Approximate Minimum Search Distance

Delisted NPL

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425. (e), sites may be deleted from the NPL where no further response is appropriate.

- *There are **no** sites identified on or within a one-half mile radius of the Site.*

CERCLIS

Comprehensive Environmental Response, Compensation, and Liability Information System CERCLIS contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies, and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). CERCLIS contains sites which are either proposed to or on the National Priorities List (NPL) and sites which are in the screening and assessment phase for possible inclusion on the NPL. The EPA is transitioning to the Superfund Enterprise Management System, or SEMS. SEMS includes the same data fields and content as CERCLIS.

- *There are **no** sites identified on or within a one-half mile radius of the Site.*

ENVIROSTOR (State/Tribal Equivalent CERCLIS)

The Department of Toxic Substances Control's (DTSC's) Site Mitigation and Brownfields Reuse Program's (SMBRP's) EnviroStor database identifies sites that have known contamination or sites for which there may be reasons to investigate further. The database includes the following site types: Federal Superfund sites (National Priorities List (NPL)); State Response, including Military Facilities and State Superfund; Voluntary Cleanup; and School sites. EnviroStor provides similar information to the information that was available in CalSites, and provides additional site information, including, but not limited to, identification of formerly contaminated properties that have been released for reuse, properties where environmental deed restrictions have been recorded to prevent inappropriate land uses, and risk characterization information that is used to assess potential impacts to public health and the environment at contaminated sites. Includes Clandestine Drug Lab (CDL) sites.

- *There are **no** sites identified on or within a one-half mile radius of the Site.*

CERCLIS NFRAP

CERCLIS No Further Remedial Action Planned. Archived sites are sites that have been removed and archived from the inventory of CERCLIS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list this site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. This decision does not necessarily mean that there is no hazard associated with a given site; it only means that, based upon available information, the location is not judged to be a potential NPL site.

- *There are **no** sites identified on or within a one-half mile radius of the Site.*

RCRA non-CORRACTS TSD

RCRA - Treatment, Storage and Disposal. RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Transporters are individuals or entities that move hazardous waste from the generator offsite to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

- *There are **no** sites identified on or within a one-half mile radius of the Site.*

State and Tribal Landfill and/or Solid Waste Disposal Sites

The Solid Waste Information System (SWIS) database contains information on solid waste facilities, operations, and disposal sites throughout the State of California. The types of facilities found in this database include landfills, transfer stations, material recovery facilities, composting sites, transformation facilities, waste tire sites, and closed disposal sites. Also included are sites listed on the State's Waste Management Unit Database System (WMUDS) and Land Disposal Sites Listing (LDS) and U.S. EPA Open Dump Inventory (ODI) and Indian ODI listings.

- *There are **no** sites identified on or within a one-half mile radius of the Site.*

Leaking Underground Storage Tank Sites

The State of California and its Regional Water Quality Control Boards (Water Board) maintains a database of leaking underground storage tanks (LUST) on its Geotracker database. Also included are sites listed on USEPA's leaking underground storage tanks on Indian Land.

- *There are **no** sites identified on or within a one-half mile radius of the Site.*

Spills, Leaks, Investigations & Cleanup (SLIC) Program

In the Spills, Leaks, Investigations & Cleanup (SLIC) Program, the State of California and its Regional Water Quality Control Boards oversee soil and groundwater investigations, corrective actions, and human health risk assessments at sites with current or historic unauthorized discharges, which have adversely affected or threaten to adversely affect waters of the state. Includes Toxic Pits Cleanup Act Sites and Military Cleanup Sites.

- *There are **no** sites identified on or within a one-half mile radius of the Site.*

Voluntary Cleanup Sites

The California Environmental Protection Agency's Department of Toxic Substances Control (DTSC) Voluntary Cleanup Program (VCP) is a database of Brownfield and lower priority sites with either confirmed or unconfirmed releases that allows DTSC to provide investigation and/or cleanup oversight. Also included are sites listed on the State's School Property Evaluation Program.

- *There are **no** sites identified on or within a one-half mile radius of the Site.*

Brownfield Sites

Brownfields are real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. The Assessment, Cleanup and Redevelopment Exchange System (ACRES) is an online database for Brownfields Grantees to electronically submit data directly to EPA.

- *There are **no** sites identified on or within a one-half mile radius of the Site.*

4.1.3 Property and Adjoining

RCRA Generators List

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by RCRA for Large Quantity Generators (LQG), Small Quantity Generators (SQG), and Conditionally Exempt Small Quantity Generators (CESQG). Also includes HAZNET listing of hazardous waste manifests received each year by DTSC.

- *There are **two** RCRA-listed facilities identified adjacent to the Site.*

  ***Hanford Christian School Society | Hanford Christian School** is located 33 feet north northwest of the Site. It is unknown if the Site would be adversely impacted by this facility, however, should a release of hazardous materials from this facility impact the Site, the responsibility for investigation and remediation would be assigned to the designated responsible party.*

  ***A & R Trucking** is located 266 feet southwest of the Site. It is unknown if the Site would be adversely impacted by this facility, however, should a release of hazardous materials from this facility impact the Site, the responsibility for investigation and remediation would be assigned to the designated responsible party.*

Registered Underground Storage Tank (UST) Sites

The California State Water Resources Control Board maintains a database of active underground storage tank (UST) facilities. Also included are sites listed on California's Facility Inventory Database (CA FID), Hazardous Substance Storage Container Database (HIST UST), Statewide Environmental Evaluation and Planning System (SWEEPS), USEPA's Underground Storage Tanks on Indian Land (Indian USTs), and FEMA USTs.

- *The site itself is not listed as having any USTs*
- *There are **no** UST-listed sites identified on an adjacent site.*

Registered Above-ground Storage Tank (AST) Sites

The California State Water Resources Control Board maintains a database of active above-ground storage tank (AST) facilities.

- *There is **one** AST-listed facility identified on or adjacent to the Site.*

Although it is not listed as an AST Site, the Subject Site has one approx. 1,000-gallon diesel AST in the shed, and two approx. 3000–gallon fertilizer tanks in the clearing surrounding the shed.

***Hanford Christian School Society** is located 33 feet north northwest and reports no history of leaks or spills of hazardous materials. It is not expected to adversely impact the subject site.*

4.1.4 Property Only

Institutional/Engineering Control Registries

US EPA maintains a list of sites with engineering controls which include various forms of caps, building foundations, liners, and treatment methods to eliminate pathways for regulated substances to enter environmental media or effect human health. Institutional controls include administrative measures, such as groundwater use restrictions, construction restrictions, property use restrictions, and post remediation care requirements intended to prevent exposure to contaminants remaining on site. Includes Land Use Control Information System (LUCIS) sites pertaining to former Navy properties.

- *The Site is **not** reported to be subject to engineering or institutional controls.*

ERNS List

The EPA's Emergency Response Notification System (ERNS) records and stores information on reported releases of oil and hazardous substances. Includes U.S. Department of Transportation Hazardous Materials Information Reporting System (HMIRS) sites. Also includes California Hazardous Materials Information Reporting System (CHMIRS) sites.

- *The Site is **not** listed in the ERNS Database.*

4.2 Additional Environmental Records Sources

Additional Environmental Records Sources are generally described as local or regional and are intended to enhance and supplement the standard environmental record sources presented in Section 4.1, above. Records for the subject site and adjoining properties were reviewed at the environmental record sources presented below.

4.2.1 Kings County Environmental Health Services (EHS)

Information on file with the Kings County Environmental Health Services (EHS) was reviewed to determine if any records of underground storage tanks, hazardous materials handling, or releases are on file with their office for the Site and surrounding properties. According to EHS Official and

a review of the most recent Kings County Certified Unified Program Agency (CUPA) List, there are no records available for the subject site.

5.0 SITE HISTORY

Historic aerial photographs, Building Department records, and Local Street Directories, were reviewed to establish a site history. A summary of the historical information review is presented in the following sections.

5.1 Aerial Photograph Review

The following is a summary of our review of available aerial photographs dated **1954, 1971, 1974, 1976, 1982, 1984, 1986, 1989, 1994, 1995, 2002, 2005, 2009, 2010, 2012, 2014, 2016, 2018, and 2020.** Selected historic aerial photographs can be found following this report.

1954, 1971, 1974, 1976, 1982, 1984, 1986, 1989, 1994, 1995, 2002 & 2005

Site: The Site consists of what appears to be agricultural land. What appears to be a small house is and associated out-buildings are visible in the southeast of the Site. What appears to be Peoples Ditch transects the northwest portion of the Site. Sometime between 1954 and 1971 the ditch's path was adjusted and it begins to follow the path it has today.

Adjacent Property: Agricultural land surrounds the Site, with farmhouses and associated outbuildings scattered around. What appears to be a railroad runs along the east side of the Site, and a stream/river can be seen further east. Sometime before 1971 what appears to be a farmhouse was built just north of the northwest corner of the Site. Sometime before 1984 a residential development can be seen growing southeast of the Site.

2009, 2010, 2012, 2014, 2016, 2018, & 2020

Site: Sometime between 2005 and 2009 the small farmhouse and associated outbuildings in the southeast portion of the Site are removed. Sometime between 2010 and 2012 the open-sided shed was constructed in the center of the Site. Otherwise, the Site remains relatively unchanged.

Adjacent Property: The residential development to the east of the Site has expanded westward significantly. Additional housing has been constructed to the southwest. By 2009 a residential development appears south of the Site, and what is now the Fargo Tank Site appears adjacent to the southeast corner of the Site. By 2018 the residential development to the east expanded northward.

5.2 Sanborn Fire Insurance Maps

Sanborn Fire Insurance Maps are historic large-scale plans of cities and towns originally produced to assist fire insurance companies as they assessed the risks associated in insuring a particular property. These maps typically depict structures, their use, and possible fire hazards. Envirosite's review of available historic Sanborn Fire Insurance Map indices revealed that the subject site was not located in the mapped areas (Appendix B).

5.3 Kings County Building Department

Building records pertaining to the site assessor parcel numbers (007-360-016 and 007-010-031) were requested at the Kings County Building Department on December 13, 2021.Kings County Building Department has stated that no records are available for the Site.

5.4 Local Street Directories

A possible Site address of 11722 Fargo Ave. does not appear on available City directories. There are no available addresses for the site assessor parcel numbers, and therefore no information from the local street directories.

5.5 Geologic Energy Management

The Geologic Energy Management Division's (CalGEM, former Division of Oil, Gas, and Geothermal Resources) depicts oil and gas wells, as well as plugged and abandoned dry holes in the central and southern portions of California. The maps were reviewed to determine if the Site or adjacent properties were occupied by oil and gas wells. Review of the CalGEM Online Mapping System revealed that there are no wells at the Site, and the remaining adjacent properties are not reported to have been occupied by oil and gas wells or plugged and abandoned dry holes.

6.0 SITE RECONNAISSANCE

6.1 Methodology and Limiting Conditions

A site reconnaissance was conducted by Mr. Miguel Ceja (Technicon) on December 16, 2021. The objective of the site reconnaissance was to obtain information indicating the likelihood of identifying recognized environmental conditions in connection with the Site. Methods used to observe the Site included walking the Site and visually and/or physically observing site features. Photographs were taken of site features and are presented in Appendix A. A Site Map (Figure 2) showing relevant features of the Site can be found following the text of this report.

6.2 General Site Setting

Since sometime prior to 1954 the subject site has consisted of agricultural land. What appears to be a creek transects the northwest corner of the Site, and a railroad runs adjacent to the eastern edge of the Site. What appears to be a small farmhouse is located in the southeastern portion of the Site, along Fargo Avenue. By 2009 this residence is gone. Sometime between 2010 and 2012 an open sided shed was constructed in the center of the Site.

6.3 Site Reconnaissance Observations

A site reconnaissance was conducted in an effort to determine if the current uses of the Site were likely to involve the use, treatment, storage, disposal or generation of hazardous substances or petroleum products. Additionally, indications of past uses of the Site that were observed or identified in interviews or a records review are also identified.

6.3.1 Storage Tanks

6.3.1.1 Underground Storage Tanks (USTs)

An underground storage tank (UST) is any tank, including underground piping connected to the tank, that is or has been used to store hazardous substances or petroleum products and the volume of which is 10% or more beneath the ground surface.

- ***No*** *indications of existing or former USTs were observed at the Site.*

6.3.1.2 Above-ground Storage Tanks (ASTs)

An above-ground storage tank (AST) for the purposes of this report, is any tank that has a capacity to store more than 55 gallons of a hazardous substance or petroleum product and is substantially or totally above the ground surface. Does not include pressure tanks associated with a domestic well.

- ***Three*** *ASTs were observed at the Site at the time of our December 16, 2021 site reconnaissance. Two approx. 3,000-gallon plastic fertilizer ASTs, one appearing empty, and the other nearly empty located in the clearing surrounding the shed. One approx. 1,000-gallon diesel AST observed inside the open-sided shed on December 16 had been later removed by the property owner as part of Site cleanup activities which included removal of visibly stained surface soils on the shed's dirt floor.*

6.3.2 Drums

A drum is a container (typically, but not necessarily, holding 55 gallons of liquid) that may be used to store hazardous substances, petroleum products, or unidentified substances. For the purposes

of this report hazardous substances or petroleum product containers greater than 5 gallons and 275-gallon totes are considered drums.

- ***No** drums were observed at the Site.*

6.3.3 Hazardous Substances and Petroleum Products Containers

Hazardous substances or petroleum products containers for liquids are generally less than 5 gallons and may be made of metal, glass, or plastic. Containers may also contain solids and gasses and may be made of paper, plastic, cardboard, or metal.

- *What appear to be a mixture of full and partially empty/empty containers of commercially available herbicides, fungicides, and DEF, were observed on the ground in and around the open sided shed at the center of the Site. The floor of the shed was unpaved, and there was evidence of spilled agricultural chemicals at the time of the December 16, 2021 site reconnaissance. The agricultural chemical containers were later removed by the property owner as part of Site cleanup activities which also included removal of visibly stained surface soils on the shed's dirt floor.*

6.3.4 Hazardous Substances and Petroleum Products in Equipment

Hazardous substances or petroleum products can be contained in equipment such as elevator and hoist pistons, machinery, forklifts, and other equipment.

- ***No** hazardous substances or petroleum products in equipment were observed at the Site.*

6.3.5 Stained or Corroded Soil, Pavements or Floors

Observations of stained soil or pavement or staining or corrosion on floors, walls or ceilings are to be identified; this does not include staining from water.

- With the exception of what appeared to be small areas of surface staining from agricultural chemicals and/or fertilizers on the shed floor during our December 16, 2021 site reconnaissance, no stained or corroded soil, pavements or floors was observed at the Site. The agricultural chemical containers and AST were later removed by the property owner as part of Site cleanup activities which also included removal of visibly stained surface soils on the shed's dirt floor. The results of a soil sampling and analysis investigation of the shed floor following the stained soil removal are included in Section 8.0 of this report.

6.3.6 Stressed Vegetation

Areas of stressed vegetation, other than from insufficient watering, are to be identified.

- ***No** stressed vegetation was observed at the Site.*

6.3.7 Odors

Strong, pungent, or noxious odors evident of hazardous substances or petroleum products are to be identified.

- ***No** strong odors were noted at the Site.*

6.3.8 Drains and Sumps

Drains and sumps can include floor drains, floor sinks, sumps, and oil-water separators. These drains or sumps may drain to on-site septic systems, dry wells, or seepage pits. Drains or sumps may also discharge to an off-site municipal sanitary sewer system.

- *No drains or sumps were observed at the Site.*

6.3.9 Pits, Ponds or Lagoons

Pits, ponds, and lagoons are man-made or natural depressions in the ground surface that that may hold liquids or sludge containing hazardous substances or petroleum products.

- *No pits, ponds, or lagoons were observed at the Site during the December 16, 2021 site reconnaissance.*

6.3.10 Pools of Liquid

Pools of liquids include standing surface water, liquid spills, and liquids contained in sumps.

- *Areas of standing water from recent rains were observed at the Site.*

6.3.11 Solid Waste

For the purposes of this report, solid waste includes areas that are apparently filled or graded by non-natural causes (or filled by fill of unknown origin) suggesting construction debris, demolition debris, or other solid waste disposal, or mounds or depressions suggesting trash or other solid waste disposal.

- *A few piles of debris were found in the clearing surrounding the shed, and near some of the wells.*

6.3.12 Waste Water

For the purposes of this report, waste water includes water or other liquids (including storm water) or any discharge into a drain or ditch, underground injection system, stream, or pond on or adjacent to the Site.

- ***No** evidence of waste water was observed at the Site.*

6.3.13 Septic Systems

A septic system is generally an on-site sewage treatment and disposal system which can include a septic tank and disposal field consisting of leach lines, seepage pits or cesspools.

- ***No** septic systems were observed at the Site.*

6.3.14 PCBs

Polychlorinated biphenyl's (PCBs) were once widely used in dielectric and coolant oils in transformers and capacitors. PCB production was banned in the US in 1979 but some older transformers and electrical equipment may still contain PCBs. Many fluorescent light ballasts manufactured before 1979 also contained small quantities of PCBs. An inventory and inspection of fluorescent light ballasts was not conducted as part of this investigation.

- ***One*** *pole-mounted transformer was observed at the Site, just to the south of the clearing with the shed in the center of the Site. There is no evidence of any leaks or spills of hazardous materials.*

6.3.15 Asbestos-Containing Building Materials

Asbestos is a fibrous material and has been used in many different applications for its fireproofing abilities and resistance to many chemicals. Common uses of asbestos included thermal and acoustical insulation, fireproofing, textiles, concrete, plastic products such as vinyl floor tiles, roofing felts, and paper and electrical insulation.

- ***No*** *asbestos-containing building materials were observed at the Site.*

6.3.16 Heating/Cooling

Fuel sources for heating and cooling systems can include heating oil, natural gas, propane and electric.

- ***No*** *heating or cooling systems were observed at the Site.*

6.3.17 Wells

Observations of all wells, including water supply (drinking and irrigation), abandoned wells, dry wells, oil wells, injection wells, etc. are to be noted.

- ***Some*** *wells were observed at the Site. There is no evidence of leaks or spills of hazardous materials.*

6.4 Adjoining Properties

Adjoining properties are those which are contiguous or partially contiguous with the Site borders. Properties which are separated from the Site by streets, roads or other public thorough fares are considered adjoining. To the extent that the adjoining properties are visually or physically observable from the Site or publicly accessible areas, observations of the adjoining properties for the purposes of identifying possible recognized environmental conditions that could impact the Site are presented below.

North: Agricultural land and Hanford Christian School.

East: beyond Burlington Norther Railroad tracks.

Southeast: Hanford municipal well and water tank site.

South: Agricultural land and residential development beyond Fargo Avenue.

West: Agricultural land and rural residence beyond 12th Avenue.

7.0 INTERVIEWS

7.1 Property Owners & Occupants

An interview was conducted with Mr. Prince Batth, an owner of the property, regarding the history of the subject site. Mr. Batth stated that he is unaware of any USTs, ASTs, pesticide mixing facilities, agricultural-chemical storages, hazardous material spills, or buried trash on the Site. He has stated he is aware of agriculture wells on the Site, and that the Site has been used for walnuts and vineyards.

Email communications between Mr. Batth and Woodside indicate that the “affected soil” (and presumably the AST and agricultural chemical containers), were “disposed of properly, away from the Singh property”.

7.2 Local Government Officials

Interviews with local government officials were discussed previously in Sections 4.1 and 4.2.

8.0 SUBSURFACE INVESTIGATIONS

In an effort to determine if the soil floor of the open-sided shed had been impacted by environmentally persistent pesticide residues or diesel fuel, soil samples were collected from the area of the agricultural containers and diesel AST observed during the December 16, 2021 site reconnaissance. Three surface samples were collected from the former container area (S2, S3, & S4) and two samples were collected at the location of the former diesel AST; one at the surface (S1) and one at a depth of three feet (S1 @3’).

Samples S2, S3, and S4 were analyzed for the presence and concentration of organochlorine pesticides per EPA method 8081, organophosphorus pesticides per EPA method 8141, chlorinated herbicides per EPA method 8151. Samples S1 and S1@3’ were analyzed for the presence and concentration of diesel-range hydrocarbons per EPA method 8015B. The results of the soil analyses are presented in Tables 1 and 2, below. Certified analytical reports are included in Appendix D.

TABLE 1
Environmentally Persistent Pesticides
300-Acre Agricultural Property, Hanford, California
Samples Collected: January 14, 2022
Concentrations expressed in mg/kg (ppm)

Analyte	Sample ID			Reporting Limit
	S2	S3	S4	
Organochlorine Pesticides	ND	ND	ND	*
Organophosphorous Pesticides	ND	ND	ND	*
Chlorinated Herbicides	ND	ND	ND	*

mg/kg (ppm) = milligrams per kilogram (parts per million)
ND = not detected at or above the R.L.
*Please refer to attached laboratory report for multiplication factors and quality control data.

TABLE 2
Diesel-Range Hydrocarbons
300-Acre Agricultural Property, Hanford, California
Samples Collected: January 14, 2022
Concentrations expressed in mg/kg (ppm)

Analyte	Sample ID		Reporting Limit
	S1	S2@3'	
TPH-d	100	130	10

mg/kg (ppm) = milligrams per kilogram (parts per million)
ND = not detected at or above the Reporting Limit
*Please refer to attached laboratory report for quality control data.

The analytical results revealed that no environmentally persistent pesticide residues were detected in the soils in the area of the former agricultural chemical containers area. Only low concentrations of diesel-range hydrocarbons, well below the 2,400 mg/kg screening level for residential soils, were detected in the samples collected in the area of the former diesel AST.

9.0 FINDINGS, CONCLUSIONS, & OPINIONS

We have performed a Phase I Environmental Site Assessment of the subject site in conformance with the scope and limitations of ASTM Practice E-1527-13. Any exceptions to, or deletions from, this practice are described in Section 2.4 of this report.

This assessment has revealed no evidence of recognized environmental conditions (RECs) controlled RECs, historical RECs, or records of environmental liens in connection with the property.

10.0 LIST OF SOURCES

ASTM Designation: E 1527-13, Standard Practices for Environmental Site Assessments: Phase I Environmental Site Assessment Process: American Society for Testing and Materials, November 2013.

California Department of Water Resources www.water.ca.gov/waterdatalibrary

Geologic Energy Management Division's; CalGEM Online Mapping System, https://www.conservation.ca.gov/calgem/Pages/WellFinder.aspx, records review, May 18, 2021.

Envirosite Historical Aerial Photo Report December 09, 2021: Envirosite Corporation, Shelton, Connecticut.

Envirosite Government Records Report December 07, 2021: Envirosite Corporation, Shelton, Connecticut.

United States Geological Survey, 7.5-minute series topographic quadrangles, Hanford, California

11.0 QUALIFICATIONS OF ENVIRONMENTAL PROFESSIONALS

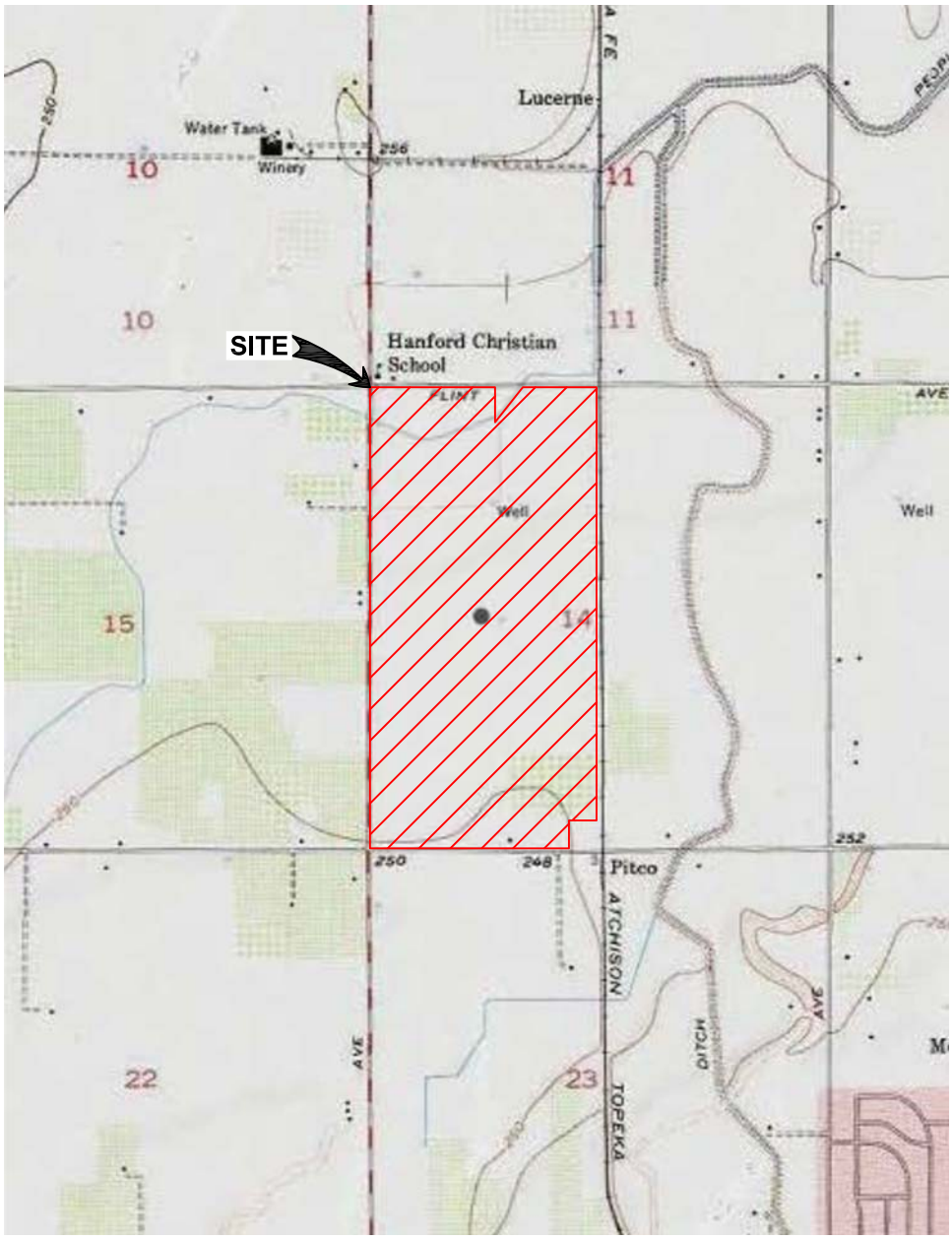
We declare that, to the best of our professional knowledge and belief, we meet the definition of Environmental professional as defined in §312.10 of 40 CFR312. We have the specific qualifications based on education, training, and experience to assess a property of the nature, history and setting of the subject property. We have developed and performed all appropriate inquiries in conformance with the standards and practices set forth in 40 CFR Part 312.

Lee Curra
Staff Geologist
Mr. Curra possesses a Bachelor of Science in Geology from the California State University Humboldt. He possesses the 40-Hour OSHA HAZWOPER Training in accordance with Title 29 Code of Federal Regulations 1910.120.

Steve Curra, PG
Environmental Department Manager
Mr. Steven Curra has over 30 years of experience in environmental engineering, with extensive experience in Phase I and II investigations. Mr. Curra is a Professional Geologist and has served as project manager for a variety of characterizations and remedial activities, including underground storage tank site investigations, landfill post-closure development, waste disposal and treatment facilities and hazardous waste management.

Mr. Curra has a thorough knowledge of the environmental engineering industry, and he has developed the ability to effectively coordinate the activities of civil engineers, geologists, subcontractors, and technicians to ensure the investigation is thorough and cost-effective. He has an excellent working knowledge of the codes governing the environmental issues facing our clients today and strong agency relationships with a variety of local, state, and federal agencies. Mr. Curra possesses a B.S. in Geology from California State University, Fresno. He also possesses the 40-Hour OSHA HAZWOPER Training in accordance with Title 29 Code of Federal Regulations 1910.120.

FIGURES



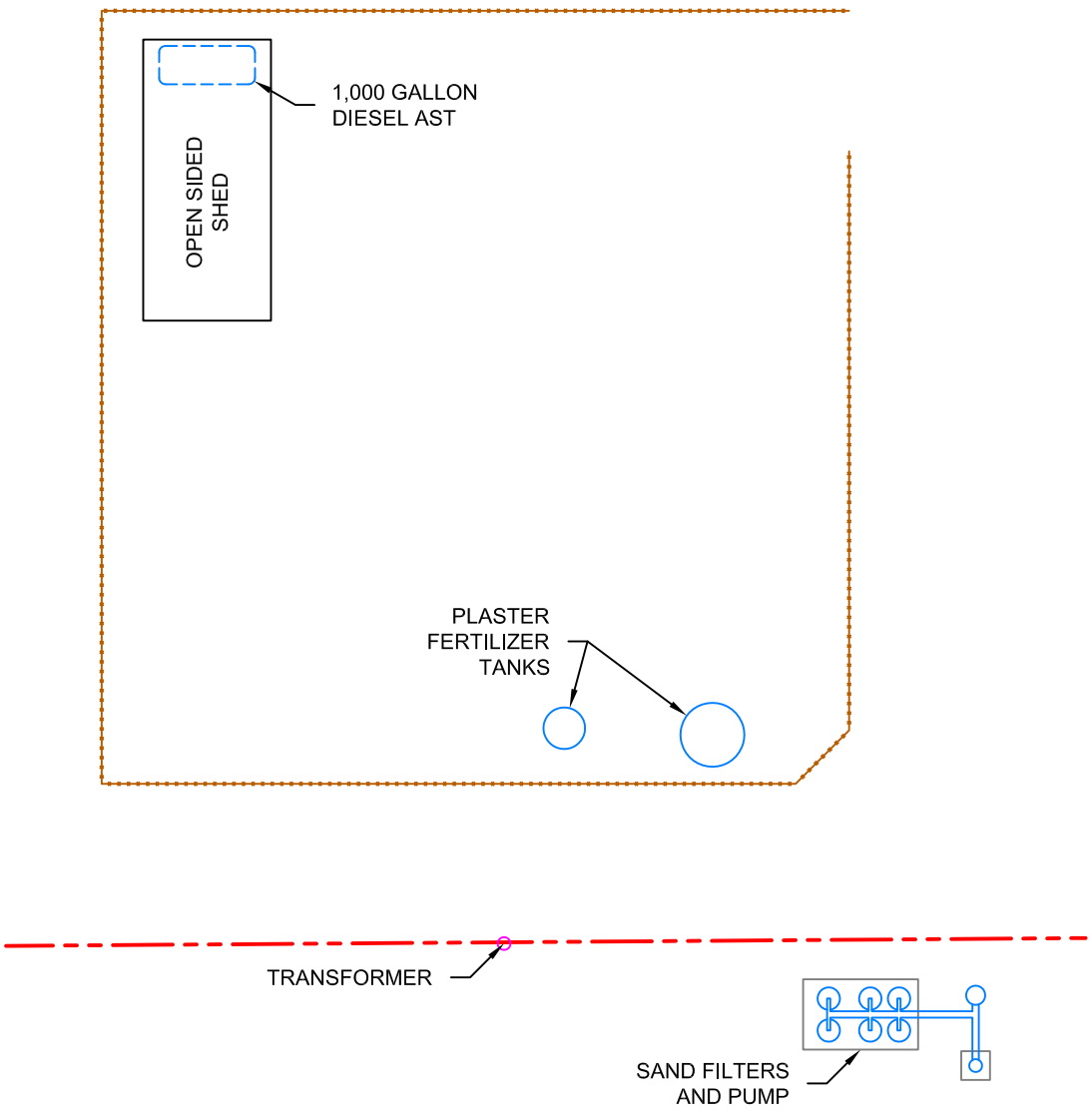
LAT.: 36.3646°N, LONG.: 119.6686°W, 14-T18S-R21E, MDB&M

NORTH

TECHNICON ENGINEERING SERVICES, INC.	PROJECT: 210832	VICINITY MAP PROPOSED RESIDENTIAL 300-ACRE SUBDIVISION NEC OF 12TH AND FARGO AVENUES HANFORD, CALIFORNIA	FIGURE 1
	SOURCE: USGS TOPOGRAPHIC MAPS		NTS



TECHNICON ENGINEERING SERVICES, INC.	PROJECT: 210832	SITE MAP PROPOSED RESIDENTIAL 300-ACRE SUBDIVISION NEC OF 12TH AND FARGO AVENUES HANFORD, CALIFORNIA	FIGURE 2
	CAD BY: MH		

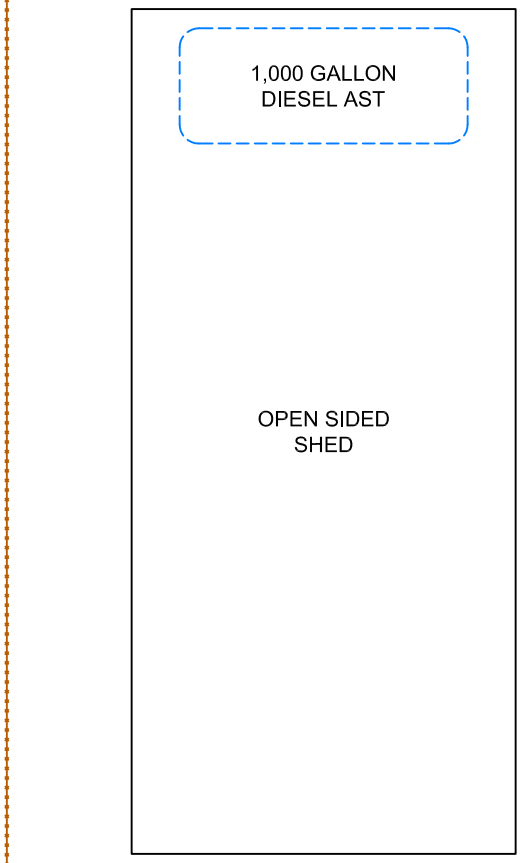


NORTH

SCALE: 1"=30'

0' 15' 30'

TECHNICON ENGINEERING SERVICES, INC.	PROJECT: 210832 CAD BY: MH	SITE DETAIL PROPOSED RESIDENTIAL 300-ACRE SUBDIVISION NEC OF 12TH AND FARGO AVENUES HANFORD, CALIFORNIA	FIGURE 3



NORTH

SCALE: 1"=10'

0' 5' 10'

TECHNICON
ENGINEERING SERVICES, INC.

PROJECT:
210832

CAD BY:
MH

SAMPLE DETAIL
PROPOSED RESIDENTIAL
300-ACRE SUBDIVISION
NEC OF 12TH AND FARGO AVENUES
HANFORD, CALIFORNIA

FIGURE
4

APPENDIX A

SITE PHOTOGRAPHS

	**Photo 1** ☜ **Northwest-facing view of open sided shed and portion of clearing surrounding it, diesel AST seen on the right wall. Piles of debris seen off to the right**
	**Photo 2** ☜ **View of inside of open sided shed, diesel AST on the right, debris and full/empty agricultural chemical bottles in the center.**
	**Photo 3** ☜ **Photo of what appears to be an agricultural chemical spill on dirt shed floor.**

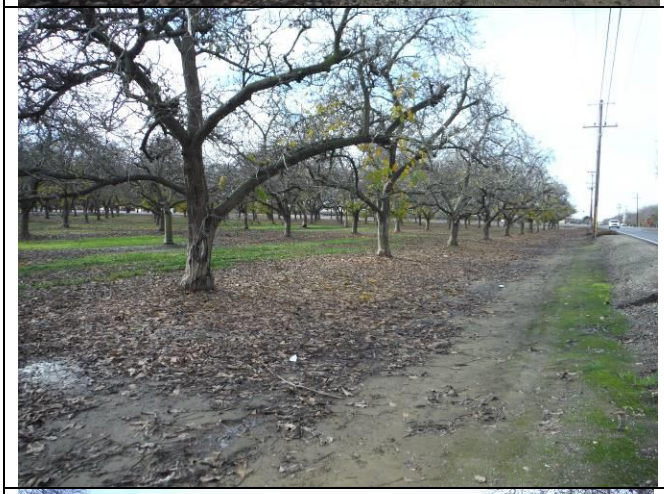
	**Photo 4** ☜ **South facing view from the northeast corner of the Site. Orchards off to the right, train tracks to the left, residences behind the wall on the left in the background.**
	**Photo 5** ☜ **West facing view of the northern portion of the Site. Flint Avenue visible to the right of the picture. Hanford Christian School is to right across Flint Avenue.**
	**Photo 6** ☜ **East facing view of orchards in the northwest portion of the Site. Peoples Ditch is to the left of the farm road.**

	**Photo 7** ☜ **North facing view of eastern edge of the Site. Vineyards to the left, and railroad tracks to the right. Residences beyond the tracks to the east.**
	**Photo 8** ☜ **Southeast view of portion of clearing surrounding open sided shed. Two fertilizer ASTs visible to the left, pole-mounted transformer in the center background, some debris in the foreground.**
  	**Photo 9** ☜ **Close up photos of diesel AST in corner of open-sided shed.**



Photo 10

Photos of agricultural chemicals stored on the floor of the shed. Includes herbicides, fungicides, and DEF.



Photo 11

Photos of debris found in the open-sided shed. Includes cardboard trash, agricultural chemical boxes, jugs, and bags.






Photo 12

Photos of debris found in the clearing surround the open-sided shed. Includes general trash, tubing, and agricultural chemical containers.







Photo 13

Photos of fertilizer tanks in the clearing surrounding the open-sided shed.



Photo 14

Photo of pole-mounted transformer just outside the clearing surrounding the open-sided shed.



Photo 15

Photo of well pump and filters to the southeast of the shed and its clearing. Pole-mounted transformer to the right.



Photo 16

Photo of well pump and meters found north of the shed. Vineyards seen in the background.



Photo 17

Photo of miticide found near above pump.



Photo 18

Photo of pump in the northern portion of the Site. Peoples Ditch visible in the foreground.

APPENDIX B

DATABASE SEARCH INFORMATION

Government Records Report | 2021

Order Number: 64555

Report Generated: 12/07/2021

Project Name: 300-Acre Hanford

Project Number: 210832

300-Acre Hanford
Portion
Hanford, CA

2 Corporate Drive
Suite 450
Shelton, CT 06484
Toll Free: 866-211-2028
www.envirositecorp.com

Table of Contents 2021

Section	Page
Executive Summary	1
Executive Summary by Distance	2
Executive Summary by Database	3
Property Proximity Map	12
Area Map	13
Map Findings Summary	14
Map Findings	25
Unmappable Summary	42
Environmental Records Searched	43
Geological Landscape Section	79
Geological Landscape Section Soil Map	82
Geological Landscape Section Summary	83
Geological Findings Map	89
Geological Landscape Section Map Findings	90
Geological Landscape Section Map Findings Radon	139
Geological Landscape Records Searched	140

Disclaimer - Copyright and Trademark Notice

All information contained in this report are based on data available from various public, government and other sources and are based upon the best data available from those sources. The information available in this report may be available from other sources and is not exclusive or the exclusive property of Envirosite Corporation.

NO WARRANTY EXPRESSED OR IMPLIED, IS MADE IN CONNECTION WITH THIS REPORT, INCLUDING WITHOUT LIMITATION, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. ALL RISK IS ASSUMED BY USER AND Envirosite assumes no liability for faulty or inaccurate information. The Reports may utilize a variety of public and other sources reasonably available to Envirosite. Envirosite cannot, and does not assure, warrant, guarantee or assume any liability for the correctness, comprehensiveness, timeliness or completeness of any of such information, nor is the information in any Report to be construed as legal advice with respect to environmental risks associated with any property. Envirosite shall not be liable to anyone for any claims, causes of action, suits, damages, losses, costs and expenses (including, without limitation, attorneys' fees and costs) arising out of or caused by this report regardless of the acts, errors or omissions, or negligence of Envirosite. Any damages shall be limited to the purchase price of the report.

Purchaser of the report accepts the report "As Is". The report is intended only to provide information only and should not be considered as providing any legal advice, prediction, forecast, or fact as to the environmental risk for any specific property. Reports are proprietary to Envirosite, and contain copyrighted material and trademarks of Envirosite. All other trademarks used herein are the property of their respective owners. All rights of Envirosite as to the Reports are reserved.

Envirosite Corporation has conducted a search of all reasonably ascertainable records in accordance with EPA's AAI (40 CFR Part 312) requirements and the ASTM E-1527-13 Environmental Site Assessments standard.

SUBJECT PROPERTY INFORMATION:

ADDRESS:

300-Acre Hanford
Portion
Hanford, CA

COORDINATES:

Latitude (North):	36.364527 - 36°21'52.3"
Longitude (West):	-119.668544 - -119°40'6.8"
Universal Transverse Mercator:	Zone 11N
UTM X (Meters):	260576.25
UTM Y (Meters):	4027688.31

ELEVATION:

Elevation:	256 ft. above sea level

USGS TOPOGRAPHIC MAP ASSOCIATED WITH SUBJECT PROPERTY:

Subject Property Map: 36119-C6 Hanford, CA
Most Recent Revision: 2018

MAP ID	SITE NAME	ADDRESS	DATABASE(S)	RELATIVE ELEVATION	DIRECTION / DISTANCE
1	ENNIS HOMES	11722 & 11742 FARGO AVE	HAZNET - CA, HWG - CA		SP
2	HANFORD CHRISTIAN SCHOOL SOCIE...	11948 FLINT AVE	AST - CA, CALEPA SITES - CA, FRS, HAZNET - C...	Higher	NNW / 0.006 mi., 33 ft.
3	A & R TRUCKING	12035 FARGO AVE	ECHO, FRS, HAZNET - CA, HIST HAZNET - CA, ...	Lower	SW / 0.050 mi., 266 ft.
4	MANUEL NUNES	8056 12TH AVE	HAZNET - CA, HWG - CA	Lower	SSW / 0.061 mi., 325 ft.
5	TRACT 794	SEC OF BNSF RAILROAD AND...	CALEPA SITES - CA, CIWQS - CA, ECHO, FRS, I...	Higher	NE / 0.156 mi., 822 ft.
6	ENNIS LANGDON	11273 FARGO AVE	HAZNET - CA, HWG - CA	Lower	SE / 0.163 mi., 862 ft.

SUBJECT PROPERTY SEARCH RESULTS:

The subject property was identified in the following records. For more information on this property, see Map Findings section on page 25.

SITE	DATABASE(S)	EPA ID
ENNIS HOMES 11722 & 11742 FARGO AVE HANFORD, CA 93230	HAZNET - CA, HWG - CA	CAC002607896

SEARCH RESULTS:

FEDERAL, STATE, AND TRIBAL REGISTERED STORAGE TANK LISTS

AST - CA: Listing of tank facilities that are subject to the California Aboveground Petroleum Storage Act **1 SITE FOUND WITHIN .25 MILE**

EQUAL/HIGHER ELEVATION

MAP ID	SITE NAME	SITE ADDRESS	DIRECTION/DISTANCE	PAGE
2	*HANFORD CHRISTIAN SCHOOL SOCIETY | HANFORD CHRISTIAN SCHOOL | CA1600009*	*11948 FLINT AVE*	*NNW / 0.006 mi., 33 ft.*	*26*

HIST AST - CA: Historical listing of tank facilities that are subject to the California Aboveground Petroleum Storage Act **1 SITE FOUND WITHIN .25 MILE**

EQUAL/HIGHER ELEVATION

MAP ID	SITE NAME	SITE ADDRESS	DIRECTION/DISTANCE	PAGE
2	*HANFORD CHRISTIAN SCHOOL SOCIETY | HANFORD CHRISTIAN SCHOOL | CA1600009*	*11948 FLINT AVE*	*NNW / 0.006 mi., 33 ft.*	*26*

FEDERAL RCRA GENERATORS LIST

RCRA_NONGEN: Resource Conservation and Recovery Act listing of licensed non-generators **1 SITE FOUND WITHIN .25 MILE**

LOWER ELEVATION

MAP ID	SITE NAME	SITE ADDRESS	DIRECTION/DISTANCE	PAGE
3	*A & R TRUCKING*	*12035 FARGO AVE*	*SW / 0.050 mi., 266 ft.*	*30*
	- ID: CAL000272494	Status: No Violation/Inspections	Date: N/A	

STATE RCRA GENERATORS LIST

HWG - CA: Hazardous waste generator listing **5 SITES FOUND WITHIN .25 MILE**

EQUAL/HIGHER ELEVATION

MAP ID	SITE NAME	SITE ADDRESS	DIRECTION/DISTANCE	PAGE
2	*HANFORD CHRISTIAN SCHOOL SOCIETY | HANFORD CHRISTIAN SCHOOL | CA1600009*	*11948 FLINT AVE*	*NNW / 0.006 mi., 33 ft.*	*26*

LOWER ELEVATION

MAP ID	SITE NAME	SITE ADDRESS	DIRECTION/DISTANCE	PAGE
3	*A & R TRUCKING*	*12035 FARGO AVE*	*SW / 0.050 mi., 266 ft.*	*30*
4	*MANUEL NUNES*	*8056 12TH AVE*	*SSW / 0.061 mi., 325 ft.*	*34*
6	*ENNIS LANGDON*	*11273 FARGO AVE*	*SE / 0.163 mi., 862 ft.*	*41*

OTHER ASCERTAINABLE RECORDS

CALEPA SITES - CA: CalEPA Regulated Sites from the Certified Unified Program Agencies (CUPA). **2 SITES FOUND WITHIN .25 MILE**

EQUAL/HIGHER ELEVATION

MAP ID	SITE NAME	SITE ADDRESS	DIRECTION/DISTANCE	PAGE
2	HANFORD CHRISTIAN SCHOOL SOCIETY | HANFORD CHRISTIAN SCHOOL | CA1600009	11948 FLINT AVE	NNW / 0.006 mi., 33 ft.	26
5	TRACT 794	SEC OF BNSF RAILROAD AND FLINT AVENUE	NE / 0.156 mi., 822 ft.	35

HAZNET - CA: Listing of hazardous waste manifests from when hazardous waste is transported from generators to permitted recycling treatment storage or disposal facilities by registered hazardous waste transporters **5 SITES FOUND WITHIN .25 MILE**

EQUAL/HIGHER ELEVATION

MAP ID	SITE NAME	SITE ADDRESS	DIRECTION/DISTANCE	PAGE
2	HANFORD CHRISTIAN SCHOOL SOCIETY | HANFORD CHRISTIAN SCHOOL | CA1600009	11948 FLINT AVE	NNW / 0.006 mi., 33 ft.	26

LOWER ELEVATION

MAP ID	SITE NAME	SITE ADDRESS	DIRECTION/DISTANCE	PAGE
3	A & R TRUCKING	12035 FARGO AVE	SW / 0.050 mi., 266 ft.	30
4	MANUEL NUNES	8056 12TH AVE	SSW / 0.061 mi., 325 ft.	34
6	ENNIS LANGDON	11273 FARGO AVE	SE / 0.163 mi., 862 ft.	41

HIST HAZNET - CA: List of hazardous waste manifests from when hazardous waste is transported from generators to permitted recycling treatment storage or disposal facilities by registered hazardous waste transporters that are no longer in current agency list. **2 SITES FOUND WITHIN .25 MILE**

EQUAL/HIGHER ELEVATION

MAP ID	SITE NAME	SITE ADDRESS	DIRECTION/DISTANCE	PAGE
2	HANFORD CHRISTIAN SCHOOL SOCIETY | HANFORD CHRISTIAN SCHOOL | CA1600009	11948 FLINT AVE	NNW / 0.006 mi., 33 ft.	26

LOWER ELEVATION

MAP ID	SITE NAME	SITE ADDRESS	DIRECTION/DISTANCE	PAGE
3	A & R TRUCKING	12035 FARGO AVE	SW / 0.050 mi., 266 ft.	30

Following sites were unable to be mapped.

SITE NAME:	ADDRESS, CITY, ZIP:	DATABASE(S):
Cornerstone Industries Recycling #2	11360 S 10TH AVE, HANFORD 93230	SWRCY - CA
KETTLEMAN, NORTH DOME	SEC 1 T23S R18E MDB&M	CIWQS - CA, LDS - CA
KETTLEMAN, NORTH DOME	SECTION 12 T23S R18E MDB&M	CIWQS - CA, LDS - CA
PYRAMID HILLS, 58-283	SECTION 7 T24S R18E MDB &	LDS - CA
PYRAMID HILLS, CCMO-17	SE1/4SW1/4SEC17 T24S R18E	HIST LDS - CA
PYRAMID HILLS, DAGANY	NE1/4SEC33T24SR18E	CIWQS - CA, LDS - CA
PYRAMID HILLS, GETTY	E1/4NW1/4Sec18T24SR18E	HIST LDS - CA
PYRAMID HILLS, NORRIS-HAND	SE 1/4SEC29 T24SR18E MDB&M	CIWQS - CA, LDS - CA
WALMART SUPERCENTER #1645	WALMART SUPERCENTER#164..., HANFOR...	MANIFEST EPA

DATABASE(S) WITH NO MAPPED SITES:

FEDERAL RCRA NON-CORRACTS TSD FACILITIES LIST

ARCHIVED RCRA TSDF	Archived Resource Conservation and Recovery Act: Treatment Storage and Disposal Facilities
RCRA_TSDF	Resource Conservation and Recovery Act: Treatment Storage and Disposal Facilities

FEDERAL, STATE, AND TRIBAL REGISTERED STORAGE TANK LISTS

AST PBS	ASTs at Bulk Petroleum Terminals
EPA UST	EPA UST Finder database
FEMA UST	FEMA Underground Storage Tanks
HIST INDIAN UST R4	Historical Underground Storage Tanks on Indian Land in EPA Region 4
HIST INDIAN UST R7	Historical Underground Storage Tanks on Indian Land in EPA Region 7
INDIAN UST R1	Underground Storage Tanks on Indian Land in EPA Region 1
INDIAN UST R10	Underground Storage Tanks on Indian Land in EPA Region 10
INDIAN UST R2	Underground Storage Tanks on Indian Land in EPA Region 2
INDIAN UST R4	Underground Storage Tanks on Indian Land in EPA Region 4
INDIAN UST R5	Underground Storage Tanks on Indian Land in EPA Region 5
INDIAN UST R6	Underground Storage Tanks on Indian Land in EPA Region 6
INDIAN UST R7	Underground Storage Tanks on Indian Land in EPA Region 7
INDIAN UST R8	Underground Storage Tanks on Indian Land in EPA Region 8
INDIAN UST R9	Underground Storage Tanks on Indian Land in EPA Region 9
AST_KERN COUNTY - CA	Kern County Aboveground Storage Tanks Facilites
AST_ORANGE COUNTY - CA	Orange County Aboveground Storage Tanks
AST_PLACER COUNTY - CA	Placer County Aboveground Storage Tanks
AST_YOLO COUNTY - CA	Yolo County Above Ground Storage Tanks
CLOSED UST_VENTURA COUNTY - CA	Ventura County Closed Underground Storage Tanks
FID UST - CA	Facility Inventory Database
HIST UST - CA	Historical Underground Storage Tanks
HIST UST_EL SEGUNDO CITY - CA	Historical City of El Segundo Underground Storage Tanks
HIST UST_KERN COUNTY - CA	Historical Kern County Underground Storage Tanks
HIST UST_SUTTER COUNTY - CA	Historical Sutter County Underground Storage Tank List
TANKS_CONTRA COSTA COUNTY - CA	Contra Costa County Aboveground Storage Tanks
UST - CA	Underground Storage Tanks
UST_ALAMEDA COUNTY - CA	Alameda County Underground Storage Tanks
UST_CITY OF LONG BEACH - CA	City of Long Beach Underground Storage Tanks
UST_CITY OF TORRANCE - CA	City of Torrance Underground Storage Tanks
UST_EL SEGUNDO CITY - CA	City of El Segundo Underground Storage Tanks
UST_KERN COUNTY - CA	Kern County Underground Storage Tanks
UST_MARIN COUNTY - CA	Marin County Underground Storage Tanks
UST_MENDOCINO COUNTY - CA	Mendocino County Underground Storage Tanks
UST_NAPA COUNTY - CA	Underground storage tank sites located in Napa county.
UST_ORANGE COUNTY - CA	Orange County Underground Storage Tanks
UST_PLACER COUNTY - CA	Placer County Underground Storage Tanks
UST_RIVERSIDE COUNTY - CA	Riverside County Underground Storage Tanks
UST_SAN FRANCISCO COUNTY - CA	San Francisco County Underground Storage Tanks
UST_SAN JOAQUIN COUNTY - CA	San Joaquin County Underground Storage Tanks
UST_SOLANO COUNTY - CA	Solano County Underground Storage Tanks
UST_SUTTER COUNTY - CA	Sutter County Underground Storage Tanks
UST_YOLO COUNTY - CA	Yolo County Underground Storage Tanks

FEDERAL CERCLIS LIST

CERCLIS NFRAP	Comprehensive Environmental Response Compensation and Liability Act No Further Remedial Action Planned
CERCLIS-HIST	Comprehensive Environmental Response Compensation and Liability Act
EPA SAA	EPA Superfund Alternative Approach
FEDERAL FACILITY	Federal Facility sites
SEMS_8R_ACTIVE SITES	Sites on SEMS Active Site Inventory

FEDERAL CERCLIS LIST *(cont.)*

SEMS_8R_ARCHIVED SITES	Sites on SEMS Archived Site Inventory

FEDERAL RCRA CORRACTS FACILITIES LIST

CORRACTS	Hazardous Waste Corrective Action
HIST CORRACTS 2	Historical Hazardous Waste Corrective Action

FEDERAL DELISTED NPL SITE LIST

DELISTED NPL	Delisted National Priority List
DELISTED PROPOSED NPL	Delisted proposed National Priority List
SEMS_DELETED NPL	Sites Deleted from National Priorities List

FEDERAL LANDFILL AND/OR SOLID WASTE DISPOSAL SITE LISTS

EPA LF MOP	EPA Landfill Methane Outreach Project Database

FEDERAL, STATE, AND TRIBAL LEAKING STORAGE TANK LISTS

EPA LUST	EPA LUST
HIST INDIAN LUST R4	Historical Leaking Underground Storage Tanks on Indian Land in EPA Region 4
HIST INDIAN LUST R8	Historical Leaking Underground Storage Tanks on Indian Land in EPA Region 8
INDIAN LUST R1	Leaking Underground Storage Tanks on Indian Land in EPA Region 1
INDIAN LUST R10	Leaking Underground Storage Tanks on Indian Land in EPA Region 10
INDIAN LUST R2	Leaking Underground Storage Tanks on Indian Land in EPA Region 2
INDIAN LUST R4	Leaking Underground Storage Tanks on Indian Land in EPA Region 4
INDIAN LUST R5	Leaking Underground Storage Tanks on Indian Land in EPA Region 5
INDIAN LUST R6	Leaking Underground Storage Tanks on Indian Land in EPA Region 6
INDIAN LUST R7	Leaking Underground Storage Tanks on Indian Land in EPA Region 7
INDIAN LUST R8	Leaking Underground Storage Tanks on Indian Land in EPA Region 8
INDIAN LUST R9	Leaking Underground Storage Tanks on Indian Land in EPA Region 9
HIST LUST_SONOMA COUNTY - CA	Historical Sonoma County Leaking Underground Storage Tanks
LUFT_ALAMEDA COUNTY - CA	Alameda County Leaking Underground Fuel Tanks
LUST ORANGE COUNTY - CA	Orange County Leaking Underground Storage Tanks
LUST REG 1 - CA	Region 1 Leaking Underground Storage Tanks
LUST REG 2 - CA	Region 2 Leaking Underground Storage Tanks
LUST REG 3 - CA	Region 3 Leaking Underground Storage Tanks
LUST REG 4 - CA	Region 4 Leaking Underground Storage Tanks
LUST REG 5 - CA	Region 5 Leaking Underground Storage Tanks
LUST REG 6 - CA	Region 6 Leaking Underground Storage Tanks
LUST REG 7 - CA	Region 7 Leaking Underground Storage Tanks
LUST REG 8 - CA	Region 8 Leaking Underground Storage Tanks
LUST REG 9 - CA	Region 9 Leaking Underground Storage Tanks
LUST_HAZMAT_YOLO COUNTY - CA	Yolo County Leaking Underground Storage tanks
LUST_KERN COUNTY - CA	Kern County leaking underground tank sites
LUST_RIVERSIDE COUNTY - CA	Riverside County Leaking Underground Storage Tanks
LUST_SAN FRANCISCO COUNTY - CA	listing of leaking underground storage tanks
LUST_SAN MATEO COUNTY - CA	San Mateo County Leaking Underground Storage Tanks
LUST_SOLANO COUNTY - CA	Solano County Leaking Underground Storage Tanks
LUST_SONOMA COUNTY - CA	Sonoma County Leaking Underground Storage Tanks
LUST_SUTTER COUNTY - CA	Sutter County Leaking Underground Storage Tanks
LUST_VENTURA COUNTY - CA	Ventura County Leaking Underground Storage Tanks
SLIC REG 1 - CA	Spills Leaks Investigation & Cleanup Program
SLIC REG 2 - CA	Spills Leaks Investigation & Cleanup Program
SLIC REG 3 - CA	Spills Leaks Investigation & Cleanup Program
SLIC REG 4 - CA	Spills Leaks Investigation & Cleanup Program
SLIC REG 5 - CA	Spills Leaks Investigation & Cleanup Program
SLIC REG 6 - CA	Spills Leaks Investigation & Cleanup Program
SLIC REG 7 - CA	Spills Leaks Investigation & Cleanup Program
SLIC REG 8 - CA	Spills Leaks Investigation & Cleanup Program
SLIC REG 9 - CA	Spills Leaks Investigation & Cleanup Program

FEDERAL, STATE, AND TRIBAL LEAKING STORAGE TANK LISTS *(cont.)*

SLIC_ALAMEDA COUNTY - CA	Alameda County Spills Leaks Investigation & Cleanup

FEDERAL ERNS LIST

ERNS	Emergency Response Notification System

FEDERAL INSTITUTIONAL CONTROLS / ENGINEERING CONTROLS REGISTRIES

FED E C	Engineering Controls
FED I C	Institutional Controls
RCRA IC_EC	RCRA sites with Institutional and Engineering Controls

FEDERAL RCRA GENERATORS LIST

HIST RCRA_CESQG	Historical Resource Conservation and Recovery Act_Conditionally Exempt Small Quantity Generators
HIST RCRA_LQG	Historical Resource Conservation and Recovery Act_ Large Quantity Generators
HIST RCRA_NONGEN	Historical Resource Conservation and Recovery Act_Non Generators
HIST RCRA_SQG	Historical Resource Conservation and Recovery Act_Small Quantity Generators
RCRA_LQG	Resource Conservation and Recovery Act_ Large Quantity Generators
RCRA_SQG	Resource Conservation and Recovery Act_Small Quantity Generators
RCRA_VSQG	Resource Conservation and Recovery Act_Very Small Quantity Generator

FEDERAL NPL SITE LIST

NPL	National Priority List
NPL EPA R1 GIS	GIS for EPA Region 1 NPL
NPL EPA R3 GIS	GIS for EPA Region 3 NPL
NPL EPA R6 GIS	GIS for EPA Region 6 NPL
NPL EPA R8 GIS	GIS for EPA Region 8 NPL
NPL EPA R9 GIS	GIS for EPA Region 9 NPL
PART NPL	Part National Priority List
PROPOSED NPL	Proposed National Priority List
SEMS_FINAL NPL	Sites included on the Final National Priorities List
SEMS_PROPOSED NPL	Sites Proposed to be Added to the National Priorities List

STATE- AND TRIBAL - EQUIVALENT CERCLIS

ENVIROSTOR - CA	EnviroStor Database
HIST TOXIC PITS - CA	Historical Toxic Pits Cleanup Act
OIL & GAS CLEANUP - CA	SWRCB Oil & Gas Cleanup Sites
SWRCB CLEANUP - CA	SWRCB Cleanup Program
SWRCB NON_CASE - CA	SWRCB Non-Case Sites
TOXIC PITS - CA	Toxic Pits Cleanup Act

STATE- AND TRIBAL - EQUIVALENT NPL

HIST RESPONSE - CA	Historical State Response Sites
RESPONSE - CA	State Response Sites

STATE AND TRIBAL LANDFILL AND/OR SOLID WASTE DISPOSAL SITE LISTS

HIST SWF/LF - CA	Historical Solid Waste Information System
SWF/LF - CA	Solid Waste Information System

STATE RCRA GENERATORS LIST

HWG_YOLO COUNTY - CA	State Hazardous Waste Generators

STATE AND TRIBAL BROWNFIELD SITES

TRIBAL BROWNFIELDS	Tribal Brownfields

STATE AND TRIBAL VOLUNTARY CLEANUP SITES

VCP - CA	Voluntary Cleanup Program sites

LOCAL BROWNFIELD LISTS

BROWNFIELDS-ACRES	EPA ACRES Brownfields

LOCAL BROWNFIELD LISTS *(cont.)*

FED BROWNFIELDS	Federal Brownfields

LOCAL LISTS OF HAZARDOUS WASTE / CONTAMINATED SITES

FED CDL	DOJ Clandestine Drug Labs
US HIST CDL	Historical Clandestine Drug Labs
CALARP_KERN COUNTY - CA	HazMat Chemical Facility List
CASE LIST_SAN DIEGO COUNTY - CA	San Diego County Environmental Case List
CDL - CA	Meth and Clandestine Drug Labs
CORRECTIVE ACTION_RIVERSIDE COUNTY - CA	Riverside County Corrective Action Sites
CS_NAPA COUNTY - CA	Contaminated Sites
CS_PLACER COUNTY - CA	Placer County Cleanup Sites
SCH - CA	School Property Evaluation Program
SITE LIST_CONTRA COSTA COUNTY - CA	Contra Costa County Sites List
TOXIC SITE_SACRAMENTO COUNTY - CA	Sacramento County Toxic Site Cleanup list

RECORDS OF EMERGENCY RELEASE REPORTS

HMIRS (DOT)	Hazardous Materials Information Reporting Systems
CHMIRS - CA	California Hazardous Material Incident Report System
HIST CHMIRS - CA	California Hazardous Material Incident Report System
INDUSTRIAL CLEANUP_ORANGE COUNTY - CA	Petroleum and non-petroleum industrial spills
SML_LOS ANGELES COUNTY - CA	Los Angeles County Emergency Response session spills

LOCAL LAND RECORDS

LIENS 2	CERCLA Lien Information
DEED - CA	Deeds
HIST LIENS - CA	Historical Liens
LIENS - CA	Liens

LOCAL LISTS OF LANDFILL / SOLID WASTE DISPOSAL SITES

HIST INDIAN ODI R8	Historical Open Dump Inventory
INDIAN ODI R8	Open Dump Inventory
ODI	Open Dump Inventory
TRIBAL ODI	Indian Open Dump Inventory Sites
HAULERS - CA	Tire Haulers
LF_SAN DIEGO COUNTY - CA	San Diego County Landfills
SWF_LOS ANGELES COUNTY - CA	Los Angeles County solid waste facilities
SWRCY - CA	Recyclers

OTHER ASCERTAINABLE RECORDS

AFS	Air Facility Systems
ALT FUELING	Alternative Fueling Stations
BRS	Biennial Reporting Systems
CDC HAZDAT	Hazardous Substance Release and Health Effects Information
COAL ASH DOE	Coal Ash: Department of Energy
COAL ASH EPA	Coal Ash: Environmental Protection Agency
COAL GAS	Coal Gas Plants
CONSENT (DECREES)	Superfund Consent Decree
CORRECTIVE ACTIONS_2020	Wastes - Hazardous Waste - Corrective Action
DEBRIS EPA LF	EPA Disaster Debris Landfill Sites
DEBRIS EPA SWRCY	EPA Disaster Debris Recovery Sites
DOD	Department of Defense
DOT OPS	Department of Transportation Office of Pipeline Safety
ECHO	EPA Enforcement and Compliance History Online
ENOI	Electronic Notice of Intent
EPA FUELS	EPA Fuels Registration, Reporting, and Compliance List
EPA OSC	EPA On-Site Coordinator
EPA WATCH	EPA Watch List
FA HWF	Financial Assurance for Hazardous Waste Facilities

OTHER ASCERTAINABLE RECORDS *(cont.)*

FEDLAND	Federal Lands
FRS	Facility Index Systems
FTTS	FIFRA/TSCA Tracking System
FTTS INSP	FIFRA/TSCA Tracking System: Inspections
FUDS	Formerly Used Defense Sites
HIST AFS	Historical Air Facility Systems
HIST AFS 2	Historical Air Facility Systems
HIST DOD	Department of Defense historical sites
HIST LEAD_SMELTER	Historical Lead Smelter Sites
HIST MLTS	Historical Material Licensing Tracking Systems
HIST PCB TRANS	Historical Polychlorinated Biphenyl (PCB) Facilities
HIST PCS ENF	Historical Enforced Permit Compliance Facilities
HIST PCS FACILITY	Historical Permit Compliance Facilities
HIST SSTS	Historical Section 7 Tracking Systems
HWC DOCKET	Hazardous Waste Compliance Docket
ICIS	Integrated Compliance Information System
INACTIVE PCS	Inactive Permit Compliance Facilities
INDIAN RESERVATION	American Indian Lands
LUCIS	Land Use Control Information Systems
LUCIS 2	Land Use Control Information Systems 2
MANIFEST EPA	EPA Hazardous Waste Manifests
MINES	Mines
MINES USGS	Mines list from USGS
MLTS	Material Licensing Tracking Systems
NPL AOC	Areas related to NPL remediation sites
NPL LIENS	National Priority List Liens
OSHA	Occupational Safety & Health Administration
PADS	PCB Activity Database Systems
PCB TRANSFORMER	Polychlorinated Biphenyl (PCB) Waste
PCS ENF	Enforced Permit Compliance Facilities
PCS FACILITY	Permit Compliance Facilities
PFAS NPL	PFAS NPL Sites
PFAS TRIS	PFAS TRIS Sites
RAATS	RCRA Administrative Action Tracking Systems
RADINFO	Radiation Information Systems
RMP	Risk Management Plans
ROD	Record of Decision
SCRD DRYCLEANERS	SCRD Drycleaners
SEMS_SMELTER	Sites on SEMS Potential Smelter Activity
SSTS	Section 7 Tracking Systems
STORMWATER	Storm Water Permits
TOSCA-PLANT	Toxic Substance Control Act: Plants
TRIS	Toxic Release Inventory Systems
UMTRA	Uranium Mill Tailing Sites
VAPOR	EPA Vapor Intrusion
AOC_SAN GABRIEL VALLEY - CA	San Gabriel Valley Superfund
BOND EXPENDITURE PLAN - CA	Bond Expenditure Plan
BP HW OUT_VENTURA COUNTY - CA	Ventura County Business Plan Hazardous Waste Producers and Operating Underground Tanks
BUSINESS INVENTORY_SAN MATEO COUNTY - CA	San Mateo County List of Underground Storage Tanks, Hazardous Materials, Business Plans, and Hazardous Waste Generators
CIWQS - CA	California Integrated Water Quality System
CIWQS 2 - CA	California Integrated Water Quality System
CORTESE - CA	The Hazardous Waste and Substances Sites List
CUPA_BUTTE COUNTY - CA	Butte County Certified Unified Program Agency
CUPA_FRESNO COUNTY - CA	Fresno County Certified Unified Program Agency
CUPA_PLACER COUNTY - CA	CUPA County Certified Unified Program Agency
DAYCARE - CA	Daycares

OTHER ASCERTAINABLE RECORDS *(cont.)*

DRYCLEANERS - CA	Drycleaners
DRYCLEANERS_AMADOR COUNTY - CA	Amador County Drycleaners
DRYCLEANERS_ANTELOPE VALLEY - CA	Antelope Valley Drycleaners
DRYCLEANERS_BAY AREA - CA	Bay Area Drycleaners
DRYCLEANERS_BUTTE COUNTY - CA	Butte County Drycleaners
DRYCLEANERS_CALAVERAS COUNTY - CA	Calaveras County Drycleaners
DRYCLEANERS_COLUSA COUNTY - CA	Colusa County Drycleaners
DRYCLEANERS_EASTERN KERN COUNTY - CA	Eastern Kern County Drycleaners
DRYCLEANERS_EL DORADO COUNTY - CA	El Dorado County Drycleaners
DRYCLEANERS_FEATHER RIVER - CA	Feather River Drycleaners
DRYCLEANERS_GLENN COUNTY - CA	Glenn County Drycleaners
DRYCLEANERS_GREAT BASIN UNIFIED - CA	Great Basin Unified Drycleaners
DRYCLEANERS_IMPERIAL COUNTY - CA	Imperial County Drycleaners
DRYCLEANERS_LAKE COUNTY - CA	Lake County Drycleaners
DRYCLEANERS_LASSEN COUNTY - CA	Lassen County Drycleaners
DRYCLEANERS_MENDOCINO COUNTY - CA	Mendocino County Drycleaners
DRYCLEANERS_MOJAVE DESERT - CA	Mojave Desert Drycleaners
DRYCLEANERS_MONTEREY BAY - CA	Monterey Bay Drycleaners
DRYCLEANERS_NORTH COAST UNIFIED - CA	North Coast Unified Drycleaners
DRYCLEANERS_NORTHERN SIERRA - CA	Northern Sierra Drycleaners
DRYCLEANERS_NORTHERN SONOMA COUNTY - CA	Northern Sonoma County Drycleaners
DRYCLEANERS_PLACER COUNTY - CA	Placer County Drycleaners
DRYCLEANERS_SACRAMENTO COUNTY - CA	Sacramento County Drycleaners
DRYCLEANERS_SAN DIEGO COUNTY - CA	San Diego County Drycleaners
DRYCLEANERS_SAN JOAQUIN VALLEY - CA	San Joaquin Valley Drycleaners
DRYCLEANERS_SAN LUIS OBISPO - CA	San Luis Obispo Drycleaners
DRYCLEANERS_SANTA BARBARA COUNTY - CA	Santa Barbara Drycleaners
DRYCLEANERS_SHASTA COUNTY - CA	Shasta County Drycleaner
DRYCLEANERS_SISKIYOU COUNTY - CA	Siskiyou County Drycleaners
DRYCLEANERS_SOUTH COAST - CA	South Coast Drycleaners
DRYCLEANERS_TEHAMA COUNTY - CA	Tehama County Drycleaners
DRYCLEANERS_TUOLUMNE COUNTY - CA	Tuolumne County Drycleaners
DRYCLEANERS_VENTURA COUNTY - CA	Ventura County Drycleaners
DRYCLEANERS_YOLO-SOLANO COUNTIES - CA	Yolo and Solano Counties Drycleaners
EMI - CA	Emissions Inventory Data
FA - CA	Financial Assurance
FA 2 - CA	Financial Assurance for Solid Waste Facilities
FIRE AREAS - CA	Fire Perimeters
GCC_SANTA CLARA VALLEY - CA	Santa Clara Valley Groundwater Contamination Cleanups
HAZMAT INCIDENT_CONTRA COSTA COUNTY - CA	Contra Costa County Hazardous Materials Incident list
HAZMAT_CITY OF SAN JOSE - CA	City of San Jose Hazardous Material Facilities
HAZMAT_SACRAMENTO COUNTY - CA	Sacramento County Master Hazardous Materials Facility list
HAZMAT_SAN BERNARDINO COUNTY - CA	San Bernardino County Hazardous Material Permits
HAZMAT_SAN DIEGO COUNTY - CA	Hazardous Materials Management Division Database
HAZMAT_SANTA CLARA COUNTY - CA	Santa Clara County Hazardous Material Facilities
HAZWASTE_ORANGE COUNTY - CA	Orange County hazardous waste facilities
HIGH FIRE - CA	Fire Hazard Severity Zones
HIST CORTESE - CA	The Historical Hazardous Waste and Substances Sites List
HIST HMS_LOS ANGELES COUNTY - CA	Historical Los Angeles County Street Number List
HIST HWP - CA	Historical EnviroStor Permitted Facilities
HIST LDS - CA	Historical Land Disposal Sites
HIST MCS - CA	Historical Military Cleanup Sites
HIST NFA - CA	Historical No Further Action Sites
HMS_LOS ANGELES COUNTY - CA	Los Angeles County Street Number List

OTHER ASCERTAINABLE RECORDS *(cont.)*

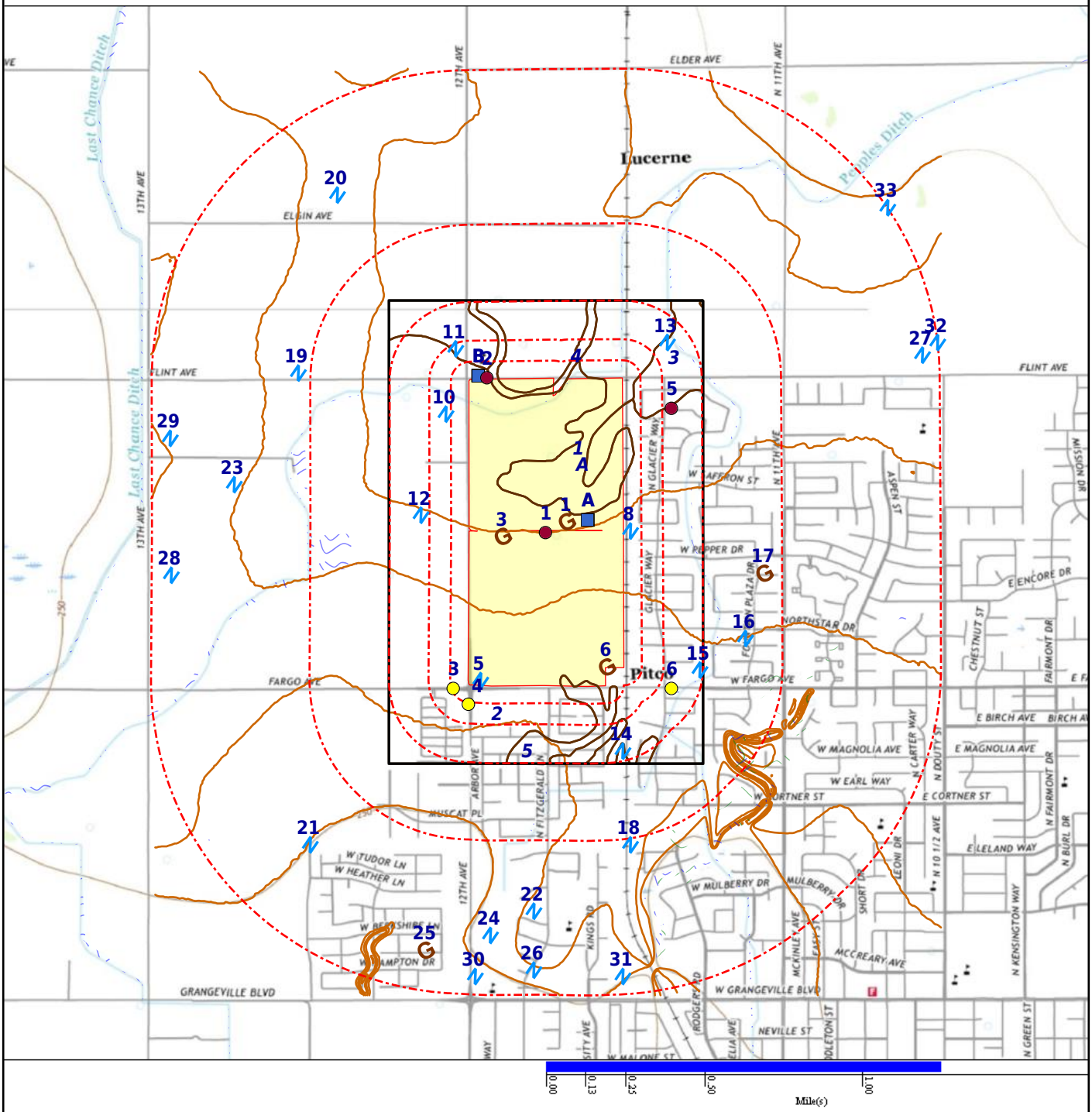
HWM COMMERCIAL FACILITIES - CA	Hazardous Waste Management Commercial Facilities
HWP - CA	EnviroStor Permitted Facilities
HWT - CA	Hazardous Waste Transporters
LDS - CA	Land Disposal Sites
LOP_SANTA CLARA COUNTY - CA	Santa Clara County Local Oversight Program
MCS - CA	Military Cleanup Sites
MWMP - CA	Medical Waste Management Program
MWMP 2 - CA	Medical Waste Management Program
NFA - CA	No Further Action Sites
NFE - CA	Unconfirmed contaminated properties
NPDES - CA	State Wastewater and NPDES Permits
PERCHLORATE 2 - CA	Perchlorate contaminted sites
PFAS - CA	PFAS Site Listing
PFAS DOD - CA	PFAS Site Listing
PROPOSITION 65 - CA	Proposition 65 Records
RFR - CA	Regulated Facility Report
SITES INVENTORY_VENTURA COUNTY - CA	Ventura County Inventory of Closed Illegal Abandoned and Inactive Sites
SMU_SANTA BARBARA COUNTY - CA	Site Mitigation Unit Sites
SWAT - CA	SWAT Reports Summary Data
VCCP_VENTURA COUNTY - CA	Ventura County County Cleanup Program
WDS - CA	Waste Discharge System
WILDLANDS - CA	Preserves List
WIP - CA	Well Investigation Program

OTHER

SEISMIC - CA	Seismic Hazards Zonation Program

SUBJECT NAME: 300-Acre Hanford
ADDRESS: Portion, Hanford, CA
LAT/LONG: 36.364527 / -119.668544

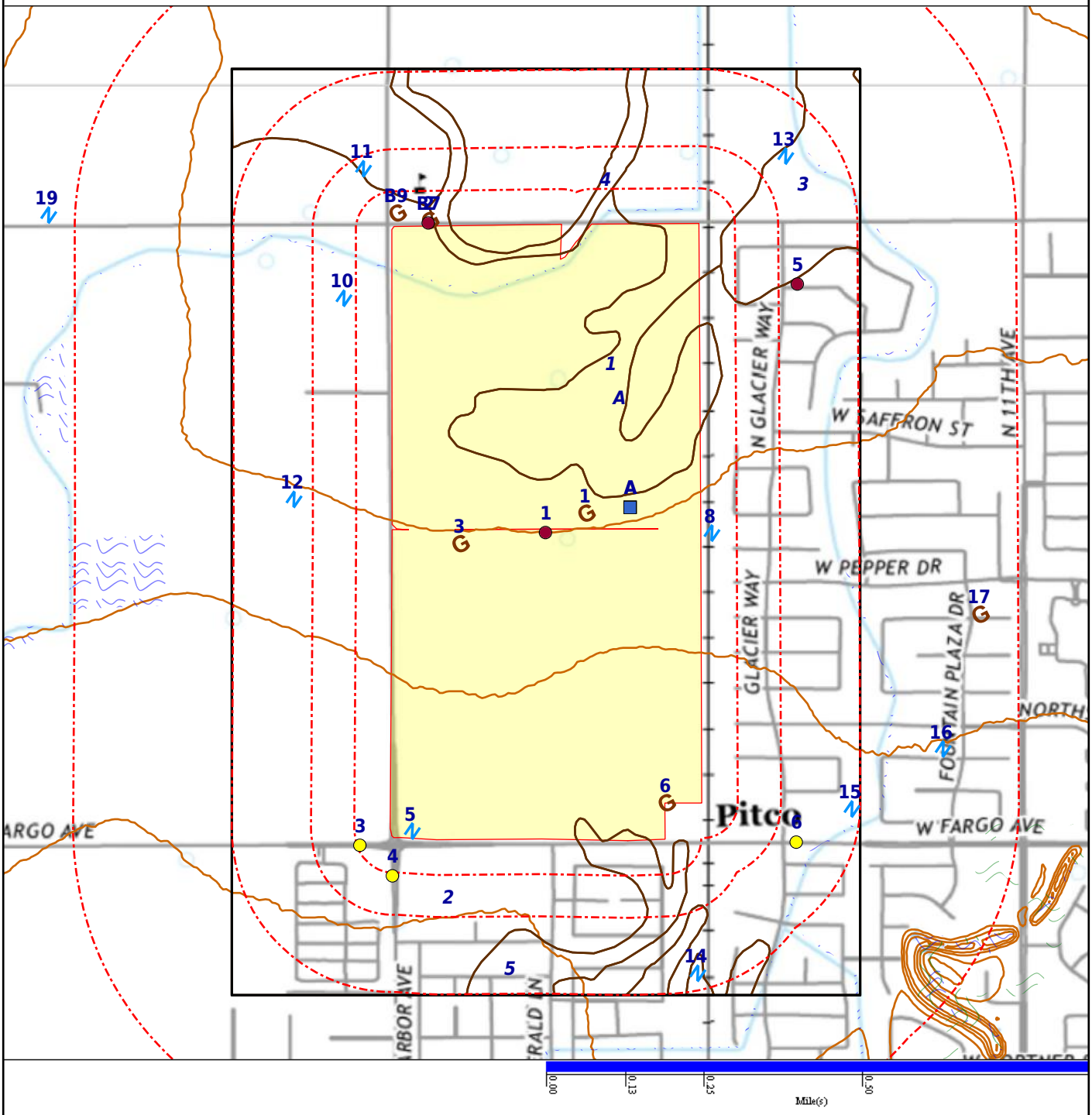
PREPARED FOR: Technicon Engineering Services
ORDER #: 64555
REPORT DATE: December 07, 2021



- Subject Property
- CDC HAZDAT (No Data)
- Federal Lands (No Data)
- Fire Hazard Zone (No Data)
- NWI
- Equal/Higher Elevation
- Department of Defense (No Data)
- FEMA FloodZone 100
- Historical DOD (No Data)
- Seismic (No Data)
- Lower Elevation
- DFIRM Floodzone 100
- FEMA FloodZone 500 (No Data)
- Indian Reservation (No Data)
- Area Of Concern (No Data)
- DFIRM Floodzone 500 (No Data)
- Fire Areas (No Data)
- National Priority List (No Data)

SUBJECT NAME: 300-Acre Hanford
ADDRESS: Portion, Hanford, CA
LAT/LONG: 36.364527 / -119.668544

PREPARED FOR: Technicon Engineering Services
ORDER #: 64555
REPORT DATE: December 07, 2021



- Subject Property
- CDC HAZDAT (No Data)
- Federal Lands (No Data)
- Fire Hazard Zone (No Data)
- NWI
- Equal/Higher Elevation
- Department of Defense (No Data)
- FEMA FloodZone 100
- Historical DOD (No Data)
- Seismic (No Data)
- Lower Elevation
- DFIRM Floodzone 100
- FEMA FloodZone 500 (No Data)
- Indian Reservation (No Data)
- Area Of Concern (No Data)
- DFIRM Floodzone 500 (No Data)
- Fire Areas (No Data)
- National Priority List (No Data)

DATABASE	SUBJECT PROPERTY	SEARCH DISTANCE (MILES)	<1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	>1	TOTAL MAPPED
FEDERAL RCRA NON-CORRACTS TSD FACILITIES LIST								
ARCHIVED RCRA TSDF		0.500	0	0	0	--	--	0
RCRA_TSDF		0.500	0	0	0	--	--	0
FEDERAL, STATE, AND TRIBAL REGISTERED STORAGE TANK LISTS								
AST PBS		0.250	0	0	--	--	--	0
EPA UST		0.250	0	0	--	--	--	0
FEMA UST		0.250	0	0	--	--	--	0
HIST INDIAN UST R4		0.250	0	0	--	--	--	0
HIST INDIAN UST R7		0.250	0	0	--	--	--	0
INDIAN UST R1		0.250	0	0	--	--	--	0
INDIAN UST R10		0.250	0	0	--	--	--	0
INDIAN UST R2		0.250	0	0	--	--	--	0
INDIAN UST R4		0.250	0	0	--	--	--	0
INDIAN UST R5		0.250	0	0	--	--	--	0
INDIAN UST R6		0.250	0	0	--	--	--	0
INDIAN UST R7		0.250	0	0	--	--	--	0
INDIAN UST R8		0.250	0	0	--	--	--	0
INDIAN UST R9		0.250	0	0	--	--	--	0
AST - CA		0.250	1	0	--	--	--	1
AST_KERN COUNTY - CA		0.250	0	0	--	--	--	0
AST_ORANGE COUNTY - CA		0.250	0	0	--	--	--	0
AST_PLACER COUNTY - CA		0.250	0	0	--	--	--	0
AST_YOLO COUNTY - CA		0.250	0	0	--	--	--	0
CLOSED UST_VENTURA COUNTY - CA		0.250	0	0	--	--	--	0
FID UST - CA		0.250	0	0	--	--	--	0
HIST AST - CA		0.250	1	0	--	--	--	1
HIST UST - CA		0.250	0	0	--	--	--	0
HIST UST_EL SEGUNDO CITY - CA		0.250	0	0	--	--	--	0
HIST UST_KERN COUNTY - CA		0.250	0	0	--	--	--	0
HIST UST_SUTTER COUNTY - CA		0.250	0	0	--	--	--	0
TANKS_CONTRA COSTA COUNTY - CA		0.250	0	0	--	--	--	0
UST - CA		0.250	0	0	--	--	--	0
UST_ALAMEDA COUNTY - CA		0.250	0	0	--	--	--	0
UST_CITY OF LONG BEACH - CA		0.250	0	0	--	--	--	0
UST_CITY OF TORRANCE - CA		0.250	0	0	--	--	--	0
UST_EL SEGUNDO CITY - CA		0.250	0	0	--	--	--	0

DATABASE	SUBJECT PROPERTY	SEARCH DISTANCE (MILES)	<1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	>1	TOTAL MAPPED
FEDERAL, STATE, AND TRIBAL REGISTERED STORAGE TANK LISTS *(cont.)*								
UST_KERN COUNTY - CA		0.250	0	0	--	--	--	0
UST_MARIN COUNTY - CA		0.250	0	0	--	--	--	0
UST_MENDOCINO COUNTY - CA		0.250	0	0	--	--	--	0
UST_NAPA COUNTY - CA		0.250	0	0	--	--	--	0
UST_ORANGE COUNTY - CA		0.250	0	0	--	--	--	0
UST_PLACER COUNTY - CA		0.250	0	0	--	--	--	0
UST_RIVERSIDE COUNTY - CA		0.250	0	0	--	--	--	0
UST_SAN FRANCISCO COUNTY - CA		0.250	0	0	--	--	--	0
UST_SAN JOAQUIN COUNTY - CA		0.250	0	0	--	--	--	0
UST_SOLANO COUNTY - CA		0.250	0	0	--	--	--	0
UST_SUTTER COUNTY - CA		0.250	0	0	--	--	--	0
UST_YOLO COUNTY - CA		0.250	0	0	--	--	--	0
FEDERAL CERCLIS LIST								
CERCLIS NFRAP		0.500	0	0	0	--	--	0
CERCLIS-HIST		0.500	0	0	0	--	--	0
EPA SAA		0.500	0	0	0	--	--	0
FEDERAL FACILITY		1.000	0	0	0	0	--	0
SEMS_8R_ACTIVE SITES		0.500	0	0	0	--	--	0
SEMS_8R_ARCHIVED SITES		0.500	0	0	0	--	--	0
FEDERAL RCRA CORRACTS FACILITIES LIST								
CORRACTS		1.000	0	0	0	0	--	0
HIST CORRACTS 2		1.000	0	0	0	0	--	0
FEDERAL DELISTED NPL SITE LIST								
DELISTED NPL		1.000	0	0	0	0	--	0
DELISTED PROPOSED NPL		1.000	0	0	0	0	--	0
SEMS_DELETED NPL		1.000	0	0	0	0	--	0
FEDERAL LANDFILL AND/OR SOLID WASTE DISPOSAL SITE LISTS								
EPA LF MOP		0.500	0	0	0	--	--	0
FEDERAL, STATE, AND TRIBAL LEAKING STORAGE TANK LISTS								
EPA LUST		0.500	0	0	0	--	--	0
HIST INDIAN LUST R4		0.500	0	0	0	--	--	0
HIST INDIAN LUST R8		0.500	0	0	0	--	--	0
INDIAN LUST R1		0.500	0	0	0	--	--	0

DATABASE	SUBJECT PROPERTY	SEARCH DISTANCE (MILES)	<1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	>1	TOTAL MAPPED
FEDERAL, STATE, AND TRIBAL LEAKING STORAGE TANK LISTS *(cont.)*								
INDIAN LUST R10		0.500	0	0	0	--	--	0
INDIAN LUST R2		0.500	0	0	0	--	--	0
INDIAN LUST R4		0.500	0	0	0	--	--	0
INDIAN LUST R5		0.500	0	0	0	--	--	0
INDIAN LUST R6		0.500	0	0	0	--	--	0
INDIAN LUST R7		0.500	0	0	0	--	--	0
INDIAN LUST R8		0.500	0	0	0	--	--	0
INDIAN LUST R9		0.500	0	0	0	--	--	0
HIST LUST_SONOMA COUNTY - CA		0.500	0	0	0	--	--	0
LUFT_ALAMEDA COUNTY - CA		0.500	0	0	0	--	--	0
LUST ORANGE COUNTY - CA		0.500	0	0	0	--	--	0
LUST REG 1 - CA		0.500	0	0	0	--	--	0
LUST REG 2 - CA		0.500	0	0	0	--	--	0
LUST REG 3 - CA		0.500	0	0	0	--	--	0
LUST REG 4 - CA		0.500	0	0	0	--	--	0
LUST REG 5 - CA		0.500	0	0	0	--	--	0
LUST REG 6 - CA		0.500	0	0	0	--	--	0
LUST REG 7 - CA		0.500	0	0	0	--	--	0
LUST REG 8 - CA		0.500	0	0	0	--	--	0
LUST REG 9 - CA		0.500	0	0	0	--	--	0
LUST_HAZMAT_YOLO COUNTY - CA		0.500	0	0	0	--	--	0
LUST_KERN COUNTY - CA		0.500	0	0	0	--	--	0
LUST_RIVERSIDE COUNTY - CA		0.500	0	0	0	--	--	0
LUST_SAN FRANCISCO COUNTY - CA		0.500	0	0	0	--	--	0
LUST_SAN MATEO COUNTY - CA		0.500	0	0	0	--	--	0
LUST_SOLANO COUNTY - CA		0.500	0	0	0	--	--	0
LUST_SONOMA COUNTY - CA		0.500	0	0	0	--	--	0
LUST_SUTTER COUNTY - CA		0.500	0	0	0	--	--	0
LUST_VENTURA COUNTY - CA		0.500	0	0	0	--	--	0
SLIC REG 1 - CA		0.500	0	0	0	--	--	0
SLIC REG 2 - CA		0.500	0	0	0	--	--	0
SLIC REG 3 - CA		0.500	0	0	0	--	--	0
SLIC REG 4 - CA		0.500	0	0	0	--	--	0
SLIC REG 5 - CA		0.500	0	0	0	--	--	0
SLIC REG 6 - CA		0.500	0	0	0	--	--	0

DATABASE	SUBJECT PROPERTY	SEARCH DISTANCE (MILES)	<1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	>1	TOTAL MAPPED
FEDERAL, STATE, AND TRIBAL LEAKING STORAGE TANK LISTS *(cont.)*								
SLIC REG 7 - CA		0.500	0	0	0	--	--	0
SLIC REG 8 - CA		0.500	0	0	0	--	--	0
SLIC REG 9 - CA		0.500	0	0	0	--	--	0
SLIC_ALAMEDA COUNTY - CA		0.500	0	0	0	--	--	0
FEDERAL ERNS LIST								
ERNS		SP	0	--	--	--	--	0
FEDERAL INSTITUTIONAL CONTROLS / ENGINEERING CONTROLS REGISTRIES								
FED E C		0.500	0	0	0	--	--	0
FED I C		0.500	0	0	0	--	--	0
RCRA IC_EC		0.250	0	0	--	--	--	0
FEDERAL RCRA GENERATORS LIST								
HIST RCRA_CESQG		0.250	0	0	--	--	--	0
HIST RCRA_LQG		0.250	0	0	--	--	--	0
HIST RCRA_NONGEN		0.250	0	0	--	--	--	0
HIST RCRA_SQG		0.250	0	0	--	--	--	0
RCRA_LQG		0.250	0	0	--	--	--	0
RCRA_NONGEN		0.250	1	0	--	--	--	1
RCRA_SQG		0.250	0	0	--	--	--	0
RCRA_VSQG		0.250	0	0	--	--	--	0
FEDERAL NPL SITE LIST								
NPL		1.000	0	0	0	0	--	0
NPL EPA R1 GIS		1.000	0	0	0	0	--	0
NPL EPA R3 GIS		1.000	0	0	0	0	--	0
NPL EPA R6 GIS		1.000	0	0	0	0	--	0
NPL EPA R8 GIS		1.000	0	0	0	0	--	0
NPL EPA R9 GIS		1.000	0	0	0	0	--	0
PART NPL		1.000	0	0	0	0	--	0
PROPOSED NPL		1.000	0	0	0	0	--	0
SEMS_FINAL NPL		1.000	0	0	0	0	--	0
SEMS_PROPOSED NPL		1.000	0	0	0	0	--	0
STATE- AND TRIBAL - EQUIVALENT CERCLIS								
ENVIROSTOR - CA		1.000	0	0	0	0	--	0
HIST TOXIC PITS - CA		1.000	0	0	0	0	--	0
OIL & GAS CLEANUP - CA		0.500	0	0	0	--	--	0

DATABASE	SUBJECT PROPERTY	SEARCH DISTANCE (MILES)	<1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	>1	TOTAL MAPPED
STATE- AND TRIBAL - EQUIVALENT CERCLIS *(cont.)*								
SWRCB CLEANUP - CA		0.500	0	0	0	--	--	0
SWRCB NON_CASE - CA		0.500	0	0	0	--	--	0
TOXIC PITS - CA		1.000	0	0	0	0	--	0
STATE- AND TRIBAL - EQUIVALENT NPL								
HIST RESPONSE - CA		1.000	0	0	0	0	--	0
RESPONSE - CA		1.000	0	0	0	0	--	0
STATE AND TRIBAL LANDFILL AND/OR SOLID WASTE DISPOSAL SITE LISTS								
HIST SWF/LF - CA		0.500	0	0	0	--	--	0
SWF/LF - CA		0.500	0	0	0	--	--	0
STATE RCRA GENERATORS LIST								
HWG - CA	X	0.250	3	1	--	--	--	5
HWG_YOLO COUNTY - CA		0.250	0	0	--	--	--	0
STATE AND TRIBAL BROWNFIELD SITES								
TRIBAL BROWNFIELDS		0.500	0	0	0	--	--	0
STATE AND TRIBAL VOLUNTARY CLEANUP SITES								
VCP - CA		0.500	0	0	0	--	--	0
LOCAL BROWNFIELD LISTS								
BROWNFIELDS-ACRES		0.500	0	0	0	--	--	0
FED BROWNFIELDS		0.500	0	0	0	--	--	0
LOCAL LISTS OF HAZARDOUS WASTE / CONTAMINATED SITES								
FED CDL		SP	0	--	--	--	--	0
US HIST CDL		SP	0	--	--	--	--	0
CALARP_KERN COUNTY - CA		0.250	0	0	--	--	--	0
CASE LIST_SAN DIEGO COUNTY - CA		0.500	0	0	0	--	--	0
CDL - CA		SP	0	--	--	--	--	0
CORRECTIVE ACTION_RIVERSIDE COUNTY - CA		1.000	0	0	0	0	--	0
CS_NAPA COUNTY - CA		0.500	0	0	0	--	--	0
CS_PLACER COUNTY - CA		1.000	0	0	0	0	--	0
SCH - CA		0.250	0	0	--	--	--	0
SITE LIST_CONTRA COSTA COUNTY - CA		0.250	0	0	--	--	--	0

DATABASE	SUBJECT PROPERTY	SEARCH DISTANCE (MILES)	<1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	>1	TOTAL MAPPED
LOCAL LISTS OF HAZARDOUS WASTE / CONTAMINATED SITES *(cont.)*								
TOXIC SITE_SACRAMENTO COUNTY - CA		1.000	0	0	0	0	--	0
RECORDS OF EMERGENCY RELEASE REPORTS								
HMIRS (DOT)		SP	0	--	--	--	--	0
CHMIRS - CA		SP	0	--	--	--	--	0
HIST CHMIRS - CA		SP	0	--	--	--	--	0
INDUSTRIAL CLEANUP_ORANGE COUNTY - CA		0.125	0	--	--	--	--	0
SML_LOS ANGELES COUNTY - CA		0.125	0	--	--	--	--	0
LOCAL LAND RECORDS								
LIENS 2		SP	0	--	--	--	--	0
DEED - CA		0.500	0	0	0	--	--	0
HIST LIENS - CA		SP	0	--	--	--	--	0
LIENS - CA		SP	0	--	--	--	--	0
LOCAL LISTS OF LANDFILL / SOLID WASTE DISPOSAL SITES								
HIST INDIAN ODI R8		0.500	0	0	0	--	--	0
INDIAN ODI R8		0.500	0	0	0	--	--	0
ODI		0.500	0	0	0	--	--	0
TRIBAL ODI		0.500	0	0	0	--	--	0
HAULERS - CA		0.500	0	0	0	--	--	0
LF_SAN DIEGO COUNTY - CA		0.500	0	0	0	--	--	0
SWF_LOS ANGELES COUNTY - CA		0.500	0	0	0	--	--	0
SWRCY - CA		0.500	0	0	0	--	--	0
OTHER ASCERTAINABLE RECORDS								
AFS		SP	0	--	--	--	--	0
ALT FUELING		0.250	0	0	--	--	--	0
BRS		SP	0	--	--	--	--	0
CDC HAZDAT		1.000	0	0	0	0	--	0
COAL ASH DOE		0.500	0	0	0	--	--	0
COAL ASH EPA		0.500	0	0	0	--	--	0
COAL GAS		1.000	0	0	0	0	--	0
CONSENT (DECREES)		1.000	0	0	0	0	--	0
CORRECTIVE ACTIONS_2020		0.500	0	0	0	--	--	0
DEBRIS EPA LF		0.500	0	0	0	--	--	0
DEBRIS EPA SWRCY		0.500	0	0	0	--	--	0

DATABASE	SUBJECT PROPERTY	SEARCH DISTANCE (MILES)	<1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	>1	TOTAL MAPPED
OTHER ASCERTAINABLE RECORDS *(cont.)*								
DOD		1.000	0	0	0	0	--	0
DOT OPS		SP	0	--	--	--	--	0
ECHO		SP	0	--	--	--	--	0
ENOI		SP	0	--	--	--	--	0
EPA FUELS		SP	0	--	--	--	--	0
EPA OSC		0.125	0	--	--	--	--	0
EPA WATCH		SP	0	--	--	--	--	0
FA HWF		SP	0	--	--	--	--	0
FEDLAND		1.000	0	0	0	0	--	0
FRS		SP	0	--	--	--	--	0
FTTS		SP	0	--	--	--	--	0
FTTS INSP		SP	0	--	--	--	--	0
FUDS		1.000	0	0	0	0	--	0
HIST AFS		SP	0	--	--	--	--	0
HIST AFS 2		SP	0	--	--	--	--	0
HIST DOD		1.000	0	0	0	0	--	0
HIST LEAD_SMELTER		SP	0	--	--	--	--	0
HIST MLTS		SP	0	--	--	--	--	0
HIST PCB TRANS		SP	0	--	--	--	--	0
HIST PCS ENF		SP	0	--	--	--	--	0
HIST PCS FACILITY		SP	0	--	--	--	--	0
HIST SSTS		SP	0	--	--	--	--	0
HWC DOCKET		SP	0	--	--	--	--	0
ICIS		SP	0	--	--	--	--	0
INACTIVE PCS		SP	0	--	--	--	--	0
INDIAN RESERVATION		1.000	0	0	0	0	--	0
LUCIS		0.500	0	0	0	--	--	0
LUCIS 2		0.500	0	0	0	--	--	0
MANIFEST EPA		0.250	0	0	--	--	--	0
MINES		0.250	0	0	--	--	--	0
MINES USGS		0.250	0	0	--	--	--	0
MLTS		SP	0	--	--	--	--	0
NPL AOC		1.000	0	0	0	0	--	0
NPL LIENS		SP	0	--	--	--	--	0
OSHA		SP	0	--	--	--	--	0
PADS		SP	0	--	--	--	--	0

DATABASE	SUBJECT PROPERTY	SEARCH DISTANCE (MILES)	<1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	>1	TOTAL MAPPED
OTHER ASCERTAINABLE RECORDS *(cont.)*								
PCB TRANSFORMER		SP	0	--	--	--	--	0
PCS ENF		SP	0	--	--	--	--	0
PCS FACILITY		SP	0	--	--	--	--	0
PFAS NPL		0.500	0	0	0	--	--	0
PFAS TRIS		0.500	0	0	0	--	--	0
RAATS		SP	0	--	--	--	--	0
RADINFO		SP	0	--	--	--	--	0
RMP		0.500	0	0	0	--	--	0
ROD		1.000	0	0	0	0	--	0
SCRD DRYCLEANERS		0.250	0	0	--	--	--	0
SEMS_SMELTER		SP	0	--	--	--	--	0
SSTS		SP	0	--	--	--	--	0
STORMWATER		SP	0	--	--	--	--	0
TOSCA-PLANT		SP	0	--	--	--	--	0
TRIS		SP	0	--	--	--	--	0
UMTRA		0.500	0	0	0	--	--	0
VAPOR		0.500	0	0	0	--	--	0
AOC_SAN GABRIEL VALLEY - CA		1.000	0	0	0	0	--	0
BOND EXPENDITURE PLAN - CA		1.000	0	0	0	0	--	0
BP HW OUT_VENTURA COUNTY - CA		0.250	0	0	--	--	--	0
BUSINESS INVENTORY_SAN MATEO COUNTY - CA		0.250	0	0	--	--	--	0
CALEPA SITES - CA		0.250	1	1	--	--	--	2
CIWQS - CA		SP	0	--	--	--	--	0
CIWQS 2 - CA		SP	0	--	--	--	--	0
CORTESE - CA		0.500	0	0	0	--	--	0
CUPA_BUTTE COUNTY - CA		0.250	0	0	--	--	--	0
CUPA_FRESNO COUNTY - CA		0.250	0	0	--	--	--	0
CUPA_PLACER COUNTY - CA		0.250	0	0	--	--	--	0
DAYCARE - CA		SP	0	--	--	--	--	0
DRYCLEANERS - CA		0.250	0	0	--	--	--	0
DRYCLEANERS_AMADOR COUNTY - CA		0.250	0	0	--	--	--	0
DRYCLEANERS_ANTELOPE VALLEY - CA		0.250	0	0	--	--	--	0
DRYCLEANERS_BAY AREA - CA		0.250	0	0	--	--	--	0

DATABASE	SUBJECT PROPERTY	SEARCH DISTANCE (MILES)	<1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	>1	TOTAL MAPPED
OTHER ASCERTAINABLE RECORDS *(cont.)*								
DRYCLEANERS_BUTTE COUNTY - CA		0.250	0	0	--	--	--	0
DRYCLEANERS_CALAVERAS COUNTY - CA		0.250	0	0	--	--	--	0
DRYCLEANERS_COLUSA COUNTY - CA		0.250	0	0	--	--	--	0
DRYCLEANERS_EASTERN KERN COUNTY - CA		0.250	0	0	--	--	--	0
DRYCLEANERS_EL DORADO COUNTY - CA		0.250	0	0	--	--	--	0
DRYCLEANERS_FEATHER RIVER - CA		0.250	0	0	--	--	--	0
DRYCLEANERS_GLENN COUNTY - CA		0.250	0	0	--	--	--	0
DRYCLEANERS_GREAT BASIN UNIFIED - CA		0.250	0	0	--	--	--	0
DRYCLEANERS_IMPERIAL COUNTY - CA		0.250	0	0	--	--	--	0
DRYCLEANERS_LAKE COUNTY - CA		0.250	0	0	--	--	--	0
DRYCLEANERS_LASSEN COUNTY - CA		0.250	0	0	--	--	--	0
DRYCLEANERS_MENDOCINO COUNTY - CA		0.250	0	0	--	--	--	0
DRYCLEANERS_MOJAVE DESERT - CA		0.250	0	0	--	--	--	0
DRYCLEANERS_MONTEREY BAY - CA		0.250	0	0	--	--	--	0
DRYCLEANERS_NORTH COAST UNIFIED - CA		0.250	0	0	--	--	--	0
DRYCLEANERS_NORTHERN SIERRA - CA		0.250	0	0	--	--	--	0
DRYCLEANERS_NORTHERN SONOMA COUNTY - CA		0.250	0	0	--	--	--	0
DRYCLEANERS_PLACER COUNTY - CA		0.250	0	0	--	--	--	0
DRYCLEANERS_SACRAMENTO COUNTY - CA		0.250	0	0	--	--	--	0
DRYCLEANERS_SAN DIEGO COUNTY - CA		0.250	0	0	--	--	--	0
DRYCLEANERS_SAN JOAQUIN VALLEY - CA		0.250	0	0	--	--	--	0
DRYCLEANERS_SAN LUIS OBISPO - CA		0.250	0	0	--	--	--	0

DATABASE	SUBJECT PROPERTY	SEARCH DISTANCE (MILES)	<1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	>1	TOTAL MAPPED
OTHER ASCERTAINABLE RECORDS *(cont.)*								
DRYCLEANERS_SANTA BARBARA COUNTY - CA		0.250	0	0	--	--	--	0
DRYCLEANERS_SHASTA COUNTY - CA		0.250	0	0	--	--	--	0
DRYCLEANERS_SISKIYOU COUNTY - CA		0.250	0	0	--	--	--	0
DRYCLEANERS_SOUTH COAST - CA		0.250	0	0	--	--	--	0
DRYCLEANERS_TEHAMA COUNTY - CA		0.250	0	0	--	--	--	0
DRYCLEANERS_TUOLUMNE COUNTY - CA		0.250	0	0	--	--	--	0
DRYCLEANERS_VENTURA COUNTY - CA		0.250	0	0	--	--	--	0
DRYCLEANERS_YOLO-SOLANO COUNTIES - CA		0.250	0	0	--	--	--	0
EMI - CA		SP	0	--	--	--	--	0
FA - CA		SP	0	--	--	--	--	0
FA 2 - CA		SP	0	--	--	--	--	0
FIRE AREAS - CA		1.000	0	0	0	0	--	0
GCC_SANTA CLARA VALLEY - CA		0.500	0	0	0	--	--	0
HAZMAT INCIDENT_CONTRA COSTA COUNTY - CA		0.250	0	0	--	--	--	0
HAZMAT_CITY OF SAN JOSE - CA		0.250	0	0	--	--	--	0
HAZMAT_SACRAMENTO COUNTY - CA		0.250	0	0	--	--	--	0
HAZMAT_SAN BERNARDINO COUNTY - CA		0.250	0	0	--	--	--	0
HAZMAT_SAN DIEGO COUNTY - CA		0.250	0	0	--	--	--	0
HAZMAT_SANTA CLARA COUNTY - CA		0.250	0	0	--	--	--	0
HAZNET - CA	X	0.250	3	1	--	--	--	5
HAZWASTE_ORANGE COUNTY - CA		0.500	0	0	0	--	--	0
HIGH FIRE - CA		1.000	0	0	0	0	--	0
HIST CORTESE - CA		0.500	0	0	0	--	--	0
HIST HAZNET - CA		0.250	2	0	--	--	--	2
HIST HMS_LOS ANGELES COUNTY - CA		0.250	0	0	--	--	--	0
HIST HWP - CA		1.000	0	0	0	0	--	0
HIST LDS - CA		0.500	0	0	0	--	--	0

DATABASE	SUBJECT PROPERTY	SEARCH DISTANCE (MILES)	<1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	>1	TOTAL MAPPED
OTHER ASCERTAINABLE RECORDS *(cont.)*								
HIST MCS - CA		1.000	0	0	0	0	--	0
HIST NFA - CA		0.500	0	0	0	--	--	0
HMS_LOS ANGELES COUNTY - CA		0.250	0	0	--	--	--	0
HWM COMMERCIAL FACILITIES - CA		0.250	0	0	--	--	--	0
HWP - CA		1.000	0	0	0	0	--	0
HWT - CA		0.250	0	0	--	--	--	0
LDS - CA		0.500	0	0	0	--	--	0
LOP_SANTA CLARA COUNTY - CA		0.500	0	0	0	--	--	0
MCS - CA		1.000	0	0	0	0	--	0
MWMP - CA		0.250	0	0	--	--	--	0
MWMP 2 - CA		0.250	0	0	--	--	--	0
NFA - CA		0.500	0	0	0	--	--	0
NFE - CA		0.500	0	0	0	--	--	0
NPDES - CA		SP	0	--	--	--	--	0
PERCHLORATE 2 - CA		0.500	0	0	0	--	--	0
PFAS - CA		0.500	0	0	0	--	--	0
PFAS DOD - CA		0.500	0	0	0	--	--	0
PROPOSITION 65 - CA		1.000	0	0	0	0	--	0
RFR - CA		SP	0	--	--	--	--	0
SITES INVENTORY_VENTURA COUNTY - CA		1.000	0	0	0	0	--	0
SMU_SANTA BARBARA COUNTY - CA		1.000	0	0	0	0	--	0
SWAT - CA		SP	0	--	--	--	--	0
VCCP_VENTURA COUNTY - CA		0.500	0	0	0	--	--	0
WDS - CA		SP	0	--	--	--	--	0
WILDLANDS - CA		1.000	0	0	0	0	--	0
WIP - CA		0.250	0	0	--	--	--	0
OTHER								
SEISMIC - CA		1.000	0	0	0	0	--	0

Map Id: 1
Direction:
Distance:
Elevation:
Relative:

Site Name : ENNIS HOMES
11722 & 11742 FARGO AVE
HANFORD, CA 93230

Database(s) : [HAZNET - CA, HWG - CA]

Envirosite ID: 553035
EPA ID: CAC002607896

HAZNET - CA

Facility Name :	ENNIS HOMES
Facility Address :	11722 & 11742 FARGO AVE, HANFORD, CA 93230
County :	KINGS

Site Details

Generator EPA ID :	CAC002607896
Active :	Inactive
Category :	STATE
Facility Types :	N/R
Type :	TEMPORARY
Contact Name :	N/R
Contact Phone :	N/R
Facility Mailing Address :	643 N WESTWOOD, PORTERVILLE, CA 93257
Latitude :	36.35729243
Longitude :	-119.66771777
Agency Hyperlink :	Click here for hyperlink provided by the agency.
Last Date in Agency List :	2021-07-08

Waste Generator Details

State Waste :	2006: 151 - Asbestos containing waste, 26 tons to CAL000190080

HWG - CA

Facility Name :	ENNIS HOMES
Facility Address :	11722 & 11742 FARGO AVE, HANFORD, CA 93230
County :	KINGS

EPA ID :	CAC002607896
Status :	Inactive
Category :	STATE
Type :	TEMPORARY
Facility Type :	N/R
Mailing Address :	643 N WESTWOOD, PORTERVILLE, CA 93257
Owner Name :	ENNIS HOMES
Owner Address :	643 N WESTWOOD, PORTERVILLE, CA 93257
Operator Name :	TAMMY HICKS
Operator Address :	643 N WESTWOOD, PORTERVILLE, CA 93257
Latitude :	36.357292
Longitude :	-119.667718

Map Id: 2
Direction: NNW
Distance: 0.006 mi., 33 ft.
Elevation: 258 ft.
Relative: Higher

Site Name : HANFORD CHRISTIAN SCHOOL SOCIETY | HANFORD CHRISTIAN SCHOOL | CA1600009
11948 FLINT AVE
HANFORD | Hanford, CA

Database(s) : [AST - CA, CALEPA SITES - CA, FRS, HAZNET - CA, HIST AST - CA, HIST HAZNET - CA, HWG - CA]

Envirosite ID: 241613
EPA ID: N/R

AST - CA

Facility Name :	Hanford Christian School Society
Facility Address :	11948 FLINT AVE, HANFORD, CA 93230
County :	Kings County
Site ID :	394332
Facility Identifer :	FA0000290
EPA Identifier :	N/R
Facility Explorer ID :	394332
Dun and Bradsheet Number :	N/R
Regulatory Programs :	Chemical Storage Facilities, Aboveground Petroleum Storage
SIC :	N/R
NAICS :	N/R
Latitude :	36.372742
Longitude :	-119.671852
Hyperlink :	Click here for hyperlink provided by the agency.
Last Date in Agency List :	2021-12-03

Violations

Violation Date :	N/R
Citation :	N/R
Description :	N/R
Notes :	N/R
Division :	N/R
Program :	N/R
Source :	N/R

Enforcements

Enforcement Action Date :	N/R
Type :	N/R
Description :	N/R
Notes :	N/R
Division :	N/R
Program :	N/R
Source :	N/R

Chemicals

Chemical Name :	Propane
CAS Number :	74-98-6
Hazard Type(s) :	-
Max Daily Amount / Unit :	0-2599 Cubic Feet
Average Daily Amount / Unit :	0-2599 Cubic Feet
Days Onsite :	365
Physical State(s) :	Gas, Pure

Map Id: 2
Direction: NNW
Distance: 0.006 mi., 33 ft.
Elevation: 258 ft.
Relative: Higher

Site Name : HANFORD CHRISTIAN SCHOOL SOCIETY | HANFORD CHRISTIAN SCHOOL | CA1600009
11948 FLINT AVE
HANFORD | Hanford, CA

Database(s) : [AST - CA, CALEPA SITES - CA, FRS, HAZNET - CA, HIST AST - CA, HIST HAZNET - CA, HWG - CA] ***(cont.)***

Envirosite ID: 241613
EPA ID: N/R

CALEPA SITES - CA

Facility Name :	HANFORD CHRISTIAN SCHOOL SOCIETY
Facility Address :	11948 FLINT AVE, HANFORD, 93230
Site ID :	394332
EI ID :	10447093
EI Description :	Chemical Storage Facilities
Latitude :	36.372742
Longitude :	-119.671852
Agency Hyperlink :	Click here for hyperlink provided by the agency.
Last Date in Agency List :	2021-10-14

Site ID :	394332
EI ID :	10447093
EI Description :	Aboveground Petroleum Storage
Latitude :	36.372742
Longitude :	-119.671852
Agency Hyperlink :	Click here for hyperlink provided by the agency.
Last Date in Agency List :	2021-10-14

FRS

Facility Name :	HANFORD CHRISTIAN SCHOOL SOCIETY
Facility Address :	11948 FLINT AVE, HANFORD, CA 93230
County :	KINGS

Site Details

Registry ID :	110055773890
FRS Facility URL :	Click here for hyperlink provided by the agency.
Last Date in Agency List :	2021-10-09

Source Description

Source Description :

The California Environmental Reporting System (CERS) is a statewide web-based user and information exchange system to support over 140,000 regulated businesses and over 130 local agencies in electronically collecting and reporting significant hazardous materials, hazardous waste and compliance and enforcement data as mandated by California law. Under oversight by Cal/EPA, certified local governing agencies (Unified Program Agencies - UPAs) consolidate, coordinate and provide consistent regulatory activities for six state and federal environmental programs.

Map Id: 2
Direction: NNW
Distance: 0.006 mi., 33 ft.
Elevation: 258 ft.
Relative: Higher

Site Name : HANFORD CHRISTIAN SCHOOL SOCIETY | HANFORD CHRISTIAN SCHOOL | CA1600009
11948 FLINT AVE
HANFORD | Hanford, CA

Database(s) : [AST - CA, CALEPA SITES - CA, FRS, HAZNET - CA, HIST AST - CA, HIST HAZNET - CA, HWG - CA] ***(cont.)***

Envirosite ID: 241613
EPA ID: N/R

FRS ***(cont.)***

The California Environmental Protection Agency (CalEPA) has recently implemented a new data warehouse system (nSite). This data warehouse combines and merges facility and site information from five different systems managed within CalEPA. The five systems are: California Environmental Reporting System (CERS), EnviroStor, GeoTracker, California Integrated Water Quality System (CIWQS), and Toxic Release Inventory (TRI).

FRS Environmental Interest

Source and System ID :	CA-CERS - 10447093 CA-ENVIROVIEW - 121482

HAZNET - CA

Facility Name :	HANFORD CHRISTIAN SCHOOL
Facility Address :	11948 FLINT AVE, HANFORD, CA 93230
County :	KINGS

Site Details

Generator EPA ID :	CAL000270559
Active :	Inactive
Category :	STATE
Facility Types :	N/R
Type :	PERMANENT
Contact Name :	N/R
Contact Phone :	N/R
Facility Mailing Address :	11948 FLINT AVE, HANFORD, CA 932309022
Latitude :	36.37181855
Longitude :	-119.67208691
Agency Hyperlink :	Click here for hyperlink provided by the agency.
Last Date in Agency List :	2021-07-08

HIST AST - CA

Facility Name :	Hanford Christian School Society
Facility Address :	11948 Flint Ave, Hanford, CA 93230
County :	Kings

Site Details

CERS ID :	10447093
Facility ID :	FA0000290
EPA ID :	N/R
Business Name :	Hanford Christian School Society
Phone :	5595849207
Fax :	5595849208
Mailing Address :	11948 Flint Ave., Hanford, CA 93230

Map Id: 2
Direction: NNW
Distance: 0.006 mi., 33 ft.
Elevation: 258 ft.
Relative: Higher

Site Name : HANFORD CHRISTIAN SCHOOL SOCIETY | HANFORD CHRISTIAN SCHOOL | CA1600009
11948 FLINT AVE
HANFORD | Hanford, CA

Database(s) : [AST - CA, CALEPA SITES - CA, FRS, HAZNET - CA, HIST AST - CA, HIST HAZNET - CA, HWG - CA] ***(cont.)***

Envirosite ID: 241613
EPA ID: N/R

HIST AST - CA ***(cont.)***

Owner Name :	Hanford Christian School Society
Owner Phone :	5595849207
Owner Mailing Address :	11948 Flint Ave., Hanford, CA 93230
Property Owner Name :	N/R
Property Owner Phone :	N/R
Property Owner Mailing Address :	N/R
Operator Name :	Monique Ouwinga
Operator Phone :	5595849207
CUPA :	N/R
Total Gallons :	N/R
Facility Latitude Measure :	36.3718
Facility Longitude Measure :	-119.672
Last Date in Agency List :	2018-01-31

HIST HAZNET - CA

Facility Name :	HANFORD CHRISTIAN SCHOOL
Facility Address :	11948 FLINT AVE, HANFORD, 93230-9022
ID Number :	CAL000270559
Last Date in Agency List :	2014-11-17

HWG - CA

Facility Name :	HANFORD CHRISTIAN SCHOOL
Facility Address :	11948 FLINT AVE, HANFORD, CA 93230
County :	KINGS
EPA ID :	CAL000270559
Status :	Inactive
Category :	STATE
Type :	PERMANENT
Facility Type :	N/R
Mailing Address :	11948 FLINT AVE, HANFORD, CA 932309022
Owner Name :	HANFORD CHRISTIAN SCHOOL SOCIE
Owner Address :	11948 FLINT AVE, HANFORD, CA 932309022
Operator Name :	MONIQUE OUWINGA, PRINCIPAL
Operator Address :	11948 FLINT AVE, HANFORD, CA 932309022
Latitude :	36.371627
Longitude :	-119.672263

Map Id: 3
Direction: SW
Distance: 0.050 mi., 266 ft.
Elevation: 253 ft.
Relative: Lower

Site Name : A & R TRUCKING
12035 FARGO AVE
HANFORD, CA 93230

Database(s) : [ECHO, FRS, HAZNET - CA, HIST HAZNET - CA, HWG - CA, RCRA_NONGEN]

Envirosite ID: 1095760
EPA ID: N/R

ECHO

Facility Name :	A & R TRUCKING
Facility Address :	12035 FARGO AVE, HANFORD, CA 93230
County :	KINGS
Last Inspection Date :	N/R
Registry ID :	110070456180
FIPS Code :	N/R
EPA Region :	09
Inspection Count :	0
Last Inspection Days :	N/R
Informal Count :	0
Last Informal Action Date :	N/R
Formal Action Count :	0
Last Formal Action Date :	N/R
Total Penalties :	0
Penalty Count :	N/R
Last Penalty Date :	N/R
Last Penalty Amount :	N/R
QTRS IN NC :	0
Programs IN SNC :	0
Current Compliance Status :	No Violation Identified
Three-Year Compliance Status :	_____
Collection Method :	Zip Code Centroid
Reference Point :	N/R
Accuracy Meters :	10000
Derived Tribes :	N/R
Derived HUC :	N/R
Derived WBD :	N/R
Derived STCTY FIPS :	N/R
Derived Zip :	N/R
Derived CD113 :	N/R
Derived CB2010 :	N/R
MYRTK Universe :	NNN
NPDES IDs :	N/R
CWA Permit Types :	N/R
CWA Compliance Tracking :	N/R
CWA NAICS :	N/R
CWA SICS :	N/R
CWA Inspection Count :	N/R
CWA Last Inspection Days :	N/R
CWA Informal Count :	N/R
CWA Formal Action Count :	N/R
CWA Last Formal Action Date :	N/R
CWA Penalties :	N/R
CWA Last Penalty Date :	N/R
CWA Last Penalty Amount :	N/R
CWA Quarters IN NC :	N/R
CWA Current Compliance Status :	N/R
CWA Current SNC Flag :	N
CWA 13 Quarters Compliance Status :	N/R
CWA 13 Quarters Effluent Exceedances:	N/R
CWA Three-Year QNCR Codes :	N/R
DFR URL :	Click here for hyperlink provided by the agency.
Facility SIC :	N/R
Facility NAICS :	562119 - Other Waste Collection

Map Id: 3
Direction: SW
Distance: 0.050 mi., 266 ft.
Elevation: 253 ft.
Relative: Lower

Site Name : A & R TRUCKING
12035 FARGO AVE
HANFORD, CA 93230

Database(s) : [ECHO, FRS, HAZNET - CA, HIST HAZNET - CA, HWG - CA, RCRA_NONGEN] ***(cont.)***

Envirosite ID: 1095760
EPA ID: N/R

ECHO ***(cont.)***

Facility Last Inspection EPA Date :	N/R
Facility Last Inspection State Date :	N/R
Facility Last Formal Act EPA Date :	N/R
Facility Last Formal Act State Date :	N/R
Facility Last Informal Act EPA Date :	N/R
Facility Last Informal Act State Date:	N/R
Facility Federal Agency :	N/R
TRI Reporter :	N/R
Facility Imp Water Flag :	N/R
Current SNC Flag :	N
Indian County Flag :	N
Federal Flag :	N/R
US Mexico Border Flag :	N/R
Chesapeak Bay Flag :	N/R
AIR Flag :	N
NPDES Flag :	N
SDWIS Flag :	N
RCRA Flag :	Y
TRI Flag :	N
GHG Flag :	N
Major Flag :	N/R
Active Flag :	Y
NAA Flag :	N
Latitude :	36.310326
Longitude :	-119.64597
Last Date in Agency List :	2021-10-15

FRS

Facility Name :	A & R TRUCKING
Facility Address :	12035 FARGO AVE, HANFORD, CA 93230
County :	KINGS

Site Details

Registry ID :	110070456180
FRS Facility URL :	Click here for hyperlink provided by the agency.
Last Date in Agency List :	2021-10-09

Source Description

Source Description :

RCRAInfo is EPA’s comprehensive information system that supports the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984 through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA. RCRAInfo also supports generation of the National Hazardous Waste Biennial Report. All generators and treatment, storage, and disposal facilities who handle hazardous waste are required to report to the EPA Administrator at least once every two years to support creation of the Biennial Report.

Map Id: 3
Direction: SW
Distance: 0.050 mi., 266 ft.
Elevation: 253 ft.
Relative: Lower

Site Name : A & R TRUCKING
12035 FARGO AVE
HANFORD, CA 93230

Database(s) : [ECHO, FRS, HAZNET - CA, HIST HAZNET - CA, HWG - CA, RCRA_NONGEN] ***(cont.)***

Envirosite ID: 1095760
EPA ID: N/R

FRS ***(cont.)***

FRS Environmental Interest

Source and System ID :	RCRAINFO - CAL000272494

HAZNET - CA

Facility Name :	A & R TRUCKING
Facility Address :	12035 FARGO AVE, HANFORD, CA 93230
County :	KINGS

Site Details

Generator EPA ID :	CAL000272494
Active :	Active
Category :	STATE
Facility Types :	N/R
Type :	PERMANENT
Contact Name :	N/R
Contact Phone :	N/R
Facility Mailing Address :	12035 FARGO AVE, HANFORD, CA 932300000
Latitude :	36.35713902
Longitude :	-119.67349779
Agency Hyperlink :	Click here for hyperlink provided by the agency.
Last Date in Agency List :	2021-07-08

HIST HAZNET - CA

Facility Name :	A & R TRUCKING
Facility Address :	12035 FARGO AVE, HANFORD, 93230
ID Number :	CAL000272494
Last Date in Agency List :	2014-11-17

HWG - CA

Facility Name :	A & R TRUCKING
Facility Address :	12035 FARGO AVE, HANFORD, CA 93230
County :	KINGS
EPA ID :	CAL000272494
Status :	Active
Category :	STATE
Type :	PERMANENT
Facility Type :	N/R
Mailing Address :	12035 FARGO AVE, HANFORD, CA 932300000
Owner Name :	ANTONIO BRASIL
Owner Address :	12035 FARGO AVE, HANFORD, CA 932300000
Operator Name :	ANTONIO V. BRASIL
Operator Address :	12035 FARGO AVE, HANFORD, CA 93230
Latitude :	36.357327
Longitude :	-119.637017

Map Id: 3
Direction: SW
Distance: 0.050 mi., 266 ft.
Elevation: 253 ft.
Relative: Lower

Site Name : A & R TRUCKING
12035 FARGO AVE
HANFORD, CA 93230

Database(s) : [ECHO, FRS, HAZNET - CA, HIST HAZNET - CA, HWG - CA, RCRA_NONGEN] ***(cont.)***

Envirosite ID: 1095760
EPA ID: N/R

RCRA_NONGEN

Facility Name :	A & R TRUCKING
Facility Address :	12035 FARGO AVE, HANFORD, CA 93230
County :	KINGS
Date Form Received by Agency :	2003-06-26
EPA ID :	CAL000272494
Mailing Address :	12035 FARGO AVE, HANFORD, CA 93230-0000
Contact :	ANTONIO V. BRASIL
Contact Address :	12035 FARGO AVE, HANFORD, CA 93230
Contact Country :	N/R
Contact Telephone :	559-582-5540
Contact Email :	DELIA.TEIXEIRA@YAHOO.COM
EPA Region :	09
Land Type :	Not Reported
Source Type :	Implementer
Classification :	Not a generator, verified
Description :	Not a generator, verified
Last Date in Agency List :	2021-10-13

Owner/Operator Summary

Owner/Operator Name :	ANTONIO BRASIL
Owner/Operator Address :	12035 FARGO AVE, HANFORD, CA 93230-0000
Owner/Operator Country :	N/R
Owner/Operator Telephone :	559-582-5540
Owner/Operator Email :	N/R
Owner/Operator Fax :	N/R
Legal Status :	Other land type
Owner/Operator Type :	Owner
Owner/Operator Start Date :	N/R
Owner/Operator End Date :	N/R

Owner/Operator Name :	ANTONIO V. BRASIL
Owner/Operator Address :	12035 FARGO AVE, HANFORD, CA 93230
Owner/Operator Country :	N/R
Owner/Operator Telephone :	559-582-5540
Owner/Operator Email :	N/R
Owner/Operator Fax :	N/R
Legal Status :	Other land type
Owner/Operator Type :	Operator
Owner/Operator Start Date :	N/R
Owner/Operator End Date :	N/R

Handler Activities Summary

U.S. Importer of Hazardous Waste :	N
Mixed Waste (Haz. and Radioactive) :	N
Recycler of Hazardous Waste :	N
Transporter of Hazardous Waste :	N
Treater, Storer or Disposer of HW :	N
Underground Injection Activity :	N
On-site Burner Exemption :	N

Map Id: 3
Direction: SW
Distance: 0.050 mi., 266 ft.
Elevation: 253 ft.
Relative: Lower

Site Name : A & R TRUCKING
12035 FARGO AVE
HANFORD, CA 93230

Database(s) : [ECHO, FRS, HAZNET - CA, HIST HAZNET - CA, HWG - CA, RCRA_NONGEN] ***(cont.)***

Envirosite ID: 1095760
EPA ID: N/R

RCRA_NONGEN ***(cont.)***

Furnace Exemption :	N
Used Oil Fuel Burner :	N
Used Oil Processor :	N
Used Oil Refiner :	N
Used Oil Fuel Marketer to Burner :	N
Used Oil Specification Marketer :	N
Used Oil Transfer Facility :	N
Used Oil Transporter :	N

Notices of Violations Summary

Regulation Violated :	N

Map Id: 4
Direction: SSW
Distance: 0.061 mi., 325 ft.
Elevation: 253 ft.
Relative: Lower

Site Name : MANUEL NUNES
8056 12TH AVE
HANFORD, CA 93230

Database(s) : [HAZNET - CA, HWG - CA]

Envirosite ID: 540647
EPA ID: CAC002622978

HAZNET - CA

Facility Name :	MANUEL NUNES
Facility Address :	8056 12TH AVE, HANFORD, CA 93230
County :	KINGS

Site Details

Generator EPA ID :	CAC002622978
Active :	Inactive
Category :	STATE
Facility Types :	N/R
Type :	TEMPORARY
Contact Name :	N/R
Contact Phone :	N/R
Facility Mailing Address :	9934 7TH AVE, HANFORD, CA 932308917
Latitude :	36.35646338
Longitude :	-119.67288730
Agency Hyperlink :	Click here for hyperlink provided by the agency.
Last Date in Agency List :	2021-07-08

Waste Generator Details

State Waste :	2007: 223 - Unspecified oil-containing waste, 1.8765 tons to CAD982446882

Map Id: 4
Direction: SSW
Distance: 0.061 mi., 325 ft.
Elevation: 253 ft.
Relative: Lower

Site Name : MANUEL NUNES
8056 12TH AVE
HANFORD, CA 93230

Database(s) : [HAZNET - CA, HWG - CA] ***(cont.)***

Envirosite ID: 540647
EPA ID: CAC002622978

HWG - CA

Facility Name :	MANUEL NUNES
Facility Address :	8056 12TH AVE, HANFORD, CA 93230
County :	KINGS
EPA ID :	CAC002622978
Status :	Inactive
Category :	STATE
Type :	TEMPORARY
Facility Type :	N/R
Mailing Address :	9934 7TH AVE, HANFORD, CA 932308917
Owner Name :	MANUEL NUNES
Owner Address :	9934 7TH AVE, HANFORD, CA 932308917
Operator Name :	MANUEL NUNES
Operator Address :	9934 7TH AVE, HANFORD, CA 932308917
Latitude :	36.356147
Longitude :	-119.672839

Map Id: 5
Direction: NE
Distance: 0.156 mi., 822 ft.
Elevation: 258 ft.
Relative: Higher

Site Name : TRACT 794
SEC OF BNSF RAILROAD AND FLINT AVENUE
HANFORD | Hanford, CA 93230

Database(s) : [CALEPA SITES - CA, CIWQS - CA, ECHO, FRS, ICIS, INACTIVE PCS, NPDES - CA, PCS ENF, RFR - CA]

Envirosite ID: 1016719
EPA ID: N/R

CALEPA SITES - CA

Facility Name :	TRACT 794
Facility Address :	SEC OF BNSF RAILROAD AND FLINT AVENUE, HANFORD, 93230
Site ID :	544944
EI ID :	824843
EI Description :	Construction Storm Water
Latitude :	36.370367
Longitude :	-119.661394
Agency Hyperlink :	Click here for hyperlink provided by the agency.
Last Date in Agency List :	2021-10-14

CIWQS - CA

Facility Name :	TRACT 794
Facility Address :	SEC OF BNSF RAILROAD AND FLINT AVENUE, HANFORD, CA 93230
County :	KINGS
Place ID :	S824843
Agency Name :	WOODSIDE HOMES OF FRESNO INCORPORATED
Last Date in Agency List :	2021-10-11

Map Id: 5
Direction: NE
Distance: 0.156 mi., 822 ft.
Elevation: 258 ft.
Relative: Higher

Site Name : TRACT 794
SEC OF BNSF RAILROAD AND FLINT AVENUE
HANFORD | Hanford, CA 93230

Database(s) : [CALEPA SITES - CA, CIWQS - CA, ECHO, FRS, ICIS, INACTIVE PCS, NPDES - CA, PCS ENF, RFR - CA] ***(cont.)***

Envirosite ID: 1016719
EPA ID: N/R

ECHO

Facility Name :	TRACT 794
Facility Address :	SEC OF BNSF RAILROAD AND FLINT AVENUE, HANFORD, CA 93230
County :	KINGS COUNTY
Last Inspection Date :	N/R
Registry ID :	110070092806
FIPS Code :	06031
EPA Region :	09
Inspection Count :	0
Last Inspection Days :	N/R
Informal Count :	1
Last Informal Action Date :	2021-06-04
Formal Action Count :	0
Last Formal Action Date :	N/R
Total Penalties :	0
Penalty Count :	N/R
Last Penalty Date :	N/R
Last Penalty Amount :	N/R
QTRS IN NC :	0
Programs IN SNC :	0
Current Compliance Status :	No Violation Identified
Three-Year Compliance Status :	_____
Collection Method :	N/R
Reference Point :	N/R
Accuracy Meters :	17531
Derived Tribes :	Santa Rosa Indian Community of the Santa Rosa Rancheria, California - 10.1 mile(s)
Derived HUC :	18030012
Derived WBD :	180300122004
Derived STCTY FIPS :	06031
Derived Zip :	93230
Derived CD113 :	21
Derived CB2010 :	060310006011004
MYRTK Universe :	NNN
NPDES IDs :	CAZ440042
CWA Permit Types :	Minor
CWA Compliance Tracking :	On
CWA NAICS :	N/R
CWA SICS :	N/R
CWA Inspection Count :	N/R
CWA Last Inspection Days :	N/R
CWA Informal Count :	1
CWA Formal Action Count :	N/R
CWA Last Formal Action Date :	N/R
CWA Penalties :	N/R
CWA Last Penalty Date :	N/R
CWA Last Penalty Amount :	N/R
CWA Quarters IN NC :	0
CWA Current Compliance Status :	No Violation Identified
CWA Current SNC Flag :	N
CWA 13 Quarters Compliance Status :	_____

Map Id: 5
Direction: NE
Distance: 0.156 mi., 822 ft.
Elevation: 258 ft.
Relative: Higher

Site Name : TRACT 794
SEC OF BNSF RAILROAD AND FLINT AVENUE
HANFORD | Hanford, CA 93230

Database(s) : [CALEPA SITES - CA, CIWQS - CA, ECHO, FRS, ICIS, INACTIVE PCS, NPDES - CA, PCS ENF, RFR - CA] ***(cont.)***

Envirosite ID: 1016719
EPA ID: N/R

ECHO ***(cont.)***

CWA 13 Quarters Effluent Exceedances:	N/R
CWA Three-Year QNCR Codes :	N/R
DFR URL :	Click here for hyperlink provided by the agency.
Facility SIC :	N/R
Facility NAICS :	N/R
Facility Last Inspection EPA Date :	N/R
Facility Last Inspection State Date :	N/R
Facility Last Formal Act EPA Date :	N/R
Facility Last Formal Act State Date :	N/R
Facility Last Informal Act EPA Date :	N/R
Facility Last Informal Act State Date:	2021-06-04
Facility Federal Agency :	N/R
TRI Reporter :	N/R
Facility Imp Water Flag :	N/R
Current SNC Flag :	N
Indian County Flag :	N
Federal Flag :	N/R
US Mexico Border Flag :	N
Chesapeak Bay Flag :	N/R
AIR Flag :	N
NPDES Flag :	Y
SDWIS Flag :	N
RCRA Flag :	N
TRI Flag :	N
GHG Flag :	N
Major Flag :	N/R
Active Flag :	Y
NAA Flag :	Y
Latitude :	36.370367
Longitude :	-119.661394
Last Date in Agency List :	2021-10-15

FRS

Facility Name :	TRACT 794
Facility Address :	SEC OF BNSF RAILROAD AND FLINT AVENUE, HANFORD, CA 93230
County :	KINGS COUNTY

Site Details

Registry ID :	110070092806
FRS Facility URL :	Click here for hyperlink provided by the agency.
Last Date in Agency List :	2021-10-09

Source Description

Map Id: 5
Direction: NE
Distance: 0.156 mi., 822 ft.
Elevation: 258 ft.
Relative: Higher

Site Name : TRACT 794
SEC OF BNSF RAILROAD AND FLINT AVENUE
HANFORD | Hanford, CA 93230

Database(s) : [CALEPA SITES - CA, CIWQS - CA, ECHO, FRS, ICIS, INACTIVE PCS, NPDES - CA, PCS ENF, RFR - CA] ***(cont.)***

Envirosite ID: 1016719
EPA ID: N/R

FRS ***(cont.)***

Source Description :

The NPDES module of the Compliance Information System (ICIS) tracks surface water permits issued under the Clean Water Act. Under NPDES, all facilities that discharge pollutants from any point source into waters of the United States are required to obtain a permit. The permit will likely contain limits on what can be discharged, impose monitoring and reporting requirements, and include other provisions to ensure that the discharge does not adversely affect water quality.

FRS Environmental Interest

Source and System ID :	ICIS - CAZ440042

ICIS

Facility Name :	TRACT 794
Facility Address :	SEC OF BNSF RAILROAD AND FLINT AVENUE, HANFORD, CA 93230

Site Details

NPDES ID :	CAZ440042
ICIS Facility Interest ID :	3600730465
Facility UIN :	110070092806
Facility Type Code :	Privately Owned Facility
Impaired Waters :	N/R
Latitude :	36.370367
Longitude :	-119.661394
Last Date in Agency List :	2021-11-09

Facility NAICS

NAICS Code :	N/R
NAICS Description :	N/R

Facility SIC

SIC Code :	N/R
SIC Description :	N/R

INACTIVE PCS

Issue Date :	2013-08-06
Original Issue Date :	2013-08-06
Effective Date :	2013-08-06
Expiration Date :	2014-09-02
Retirement Date :	N/R
Termination Date :	N/R
Issuing Agency :	CA Waterboards
Agency Type :	State
Activity ID :	3601109832

Map Id: 5
Direction: NE
Distance: 0.156 mi., 822 ft.
Elevation: 258 ft.
Relative: Higher

Site Name : TRACT 794
SEC OF BNSF RAILROAD AND FLINT AVENUE
HANFORD | Hanford, CA 93230

Database(s) : [CALEPA SITES - CA, CIWQS - CA, ECHO, FRS, ICIS, INACTIVE PCS, NPDES - CA, PCS ENF, RFR - CA] ***(cont.)***

Envirosite ID: 1016719
EPA ID: N/R

INACTIVE PCS ***(cont.)***

External Permit Number :	CAZ440042
Facility Type Indicator :	NON-POTW
Permit Type :	General Permit Covered Facility-NPDES)
Major Minor Status :	N
Permit Status :	Expired
Total Design Flow Number :	N/R
Actual Average Flow Number :	N/R
State Water Body :	N/R
State Water Body Name :	N/R
Permit Name :	Woodside Homes of Fresno Incorporated
Permit Comp Status :	Y
RNC Tracking :	Y
Master External Permit Number :	CAS000002
TMDL Interface :	N/R
EDMR Authorization :	N
Pretreatment Indicator :	N/R
Last Date in Agency List :	2021-11-10

NPDES - CA

Facility Name :	Tract 794
Facility Address :	SEC of BNSF railroad and Flint Avenue, Hanford, 93230
County :	Kings
Effective Date :	2013-08-06
Adoption Date :	N/R
Expiration Date :	N/R
Termination Date :	N/R
Order Number :	2009-0009-DWQ
NPDES Number :	CAS000002
WDID :	5F16C367351
RM Status :	Active
Reg Meas ID :	440042
Reg Meas Type :	Enrollee
Program :	Construction
Facility Place ID :	N/R
Region Code :	5F
Discharger ID :	0
Discharger :	Woodside Homes of Fresno Incorporated
Discharger Address :	7675 North Ingram Avenue Suite 104, Fresno, California 93711
Last Date in Agency List :	2021-09-03

PCS ENF

Site Details

NPDES ID :	CAZ440042
Last Date in Agency List :	2021-11-10

Formal Enforcement Actions

Settlement Entered Date :	N/R
ENF Identifier :	N/R

Map Id: 5
Direction: NE
Distance: 0.156 mi., 822 ft.
Elevation: 258 ft.
Relative: Higher

Site Name : TRACT 794
SEC OF BNSF RAILROAD AND FLINT AVENUE
HANFORD | Hanford, CA 93230

Database(s) : [CALEPA SITES - CA, CIWQS - CA, ECHO, FRS, ICIS, INACTIVE PCS, NPDES - CA, PCS ENF, RFR - CA] ***(cont.)***

Envirosite ID: 1016719
EPA ID: N/R

PCS ENF ***(cont.)***

Activity ID :	N/R
Activity Type :	N/R
ENF Type :	N/R
Agency :	N/R
Fed Penalty Assessed Amount :	N/R
State Local Penalty Amount :	N/R

Informal Enforcement Actions

Achieved Date :	06/04/2021
Registry ID :	110070092806
ENF Identifier :	CA-ZIEA440998
Activity ID :	3602769146
Activity Type :	Administrative - Informal
ENF Type :	Notice of Noncompliance Issued
Agency :	State

RFR - CA

Facility Name :	Tract 794
Facility Address :	SEC of BNSF railroad and Flint Avenue, Hanford, CA 93230
County :	Kings
Effective Date :	2013-08-06
Adoption Date :	N/R
Termination Date :	N/R
Expiration/Review Date :	N/R
NPDES Number :	CAS000002
Order Number :	2009-0009-DWQ
WDID :	5F16C367351
SIC/NAICS :	N/R
Program :	CONSTW
Regulatory Measure Status :	Active
Regulatory Measure Type :	Storm water construction
Place/Project Type :	Construction - Residential
Region :	5F
Design Flow :	N/R
Major/Minor :	N/R
Complexity :	N/R
TTWQ :	N/R
Number of Enforcement Actions within Five Years:	2
Number of Violations within Five Years:	N/R
Agency :	Woodside Homes of Fresno Incorporated
Agency Address :	7675 North Ingram Avenue Suite 104, Fresno, CA 93711
Latitude :	36.370367
Longitude :	-119.661394
Last Date in Agency List :	2021-10-15

Map Id: 6
Direction: SE
Distance: 0.163 mi., 862 ft.
Elevation: 254 ft.
Relative: Lower

Site Name : ENNIS LANGDON
11273 FARGO AVE
HANFORD, CA 93230

Database(s) : [HAZNET - CA, HWG - CA]

Envirosite ID: 528771
EPA ID: CAC002572856

HAZNET - CA

Facility Name :	ENNIS LANGDON
Facility Address :	11273 FARGO AVE, HANFORD, CA 93230
County :	KINGS

Site Details

Generator EPA ID :	CAC002572856
Active :	Inactive
Category :	STATE
Facility Types :	N/R
Type :	TEMPORARY
Contact Name :	N/R
Contact Phone :	N/R
Facility Mailing Address :	643 N WESTWOOD, PORTERVILLE, CA 93257
Latitude :	36.35719302
Longitude :	-119.66145082
Agency Hyperlink :	Click here for hyperlink provided by the agency.
Last Date in Agency List :	2021-07-08

Waste Generator Details

State Waste :	2003: 151 - Asbestos containing waste, 3.3712 tons to CAL000190080

HWG - CA

Facility Name :	ENNIS LANGDON
Facility Address :	11273 FARGO AVE, HANFORD, CA 93230
County :	KINGS

EPA ID :	CAC002572856
Status :	Inactive
Category :	STATE
Type :	TEMPORARY
Facility Type :	N/R
Mailing Address :	643 N WESTWOOD, PORTERVILLE, CA 93257
Owner Name :	ENNIS LANGDON
Owner Address :	643 N WESTWOOD, PORTERVILLE, CA 93257
Operator Name :	ENNIS LANGDON
Operator Address :	643 N WESTWOOD, PORTERVILLE, CA 93257
Latitude :	36.357474
Longitude :	-119.547055

ENVIROSITE ID	NAME	ADDRESS	CITY	ZIP	DATABASE(S)
37135301	Cornerstone Industries Re...	11360 S 10TH AVE	HANFORD	93230	SWRCY - CA
9008519	KETTLEMAN, NORTH DOME	SEC 1, T23S, R18E, MDB&M			CIWQS - CA, LDS - CA
9008554	KETTLEMAN, NORTH DOME	SECTION 12, T23S, R18E, M...			CIWQS - CA, LDS - CA
9011156	PYRAMID HILLS, 58-283	SECTION 7, T24S, R18E, MD...			LDS - CA
8999793	PYRAMID HILLS, CCMO-17	SE1/4,SW1/4,SEC17, T24S, ...			HIST LDS - CA
9011190	PYRAMID HILLS, DAGANY	NE1/4,SEC33,T24S,R18E			CIWQS - CA, LDS - CA
8999804	PYRAMID HILLS, GETTY	E1/4,NW1/4,Sec18,T24S,R18...			HIST LDS - CA
9011240	PYRAMID HILLS, NORRIS-HAN...	SE 1/4SEC29, T24S,R18E, M...			CIWQS - CA, LDS - CA
42435021	WALMART SUPERCENTER #1645	WALMART SUPERCENTER#1645...	HANFORD	93230	MANIFEST EPA

FEDERAL RCRA NON-CORRACTS TSD FACILITIES LIST

ARCHIVED RCRA TSDF: Resource Conservation and Recovery Act hazardous waste transportation storage disposal and treatment facilities

Agency Version Date: 10/05/2021
Agency Update Frequency: Quarterly
Planned Next Contact: 12/30/2021
Agency: U.S. Environmental Protection Agency
Agency Contact: 215-814-2469
Most Recent Contact: 10/05/2021

RCRA_TSDF: Resource Conservation and Recovery Act hazardous waste transportation storage disposal and treatment facilities

Agency Version Date: 10/05/2021
Agency Update Frequency: Quarterly
Planned Next Contact: 12/30/2021
Agency: U.S. Environmental Protection Agency
Agency Contact: 215-814-2469
Most Recent Contact: 10/05/2021

FEDERAL, STATE, AND TRIBAL REGISTERED STORAGE TANK LISTS

AST PBS: Bulk petroleum terminals with a total bulk storage capacity of 50,000 barrels or more.

Agency Version Date: 11/26/2021
Agency Update Frequency: Quarterly
Planned Next Contact: 02/22/2022
Agency: Department of Homeland Security
Agency Contact: 202-853-5361
Most Recent Contact: 11/26/2021

EPA UST: Facilities listed in the EPA UST Finder database

Agency Version Date: 08/23/2021
Agency Update Frequency: Quarterly
Planned Next Contact: 02/15/2022
Agency: EPA
Agency Contact: (202) 566-1667
Most Recent Contact: 11/19/2021

FEMA UST: FEMA underground storage tank listing

Agency Version Date: 10/08/2021
Agency Update Frequency: Varies
Planned Next Contact: 01/04/2022
Agency: FEMA
Agency Contact: 202-212-5283
Most Recent Contact: 10/08/2021

HIST INDIAN UST R4: Historical Underground Storage Tanks on Indian Land in EPA Region 4

Agency Version Date: 08/23/2021
Agency Update Frequency: Quarterly
Planned Next Contact: 02/15/2022
Agency: U.S. Environmental Protection Agency Region 4
Agency Contact: 855-246-3642
Most Recent Contact: 11/19/2021

HIST INDIAN UST R7: Historical Underground Storage Tanks on Indian Land in EPA Region 7

Agency Version Date: 08/10/2021
Agency Update Frequency: Quarterly
Planned Next Contact: 02/15/2022
Agency: U.S. Environmental Protection Agency Region 7
Agency Contact: 855-246-3642
Most Recent Contact: 11/19/2021

INDIAN UST R1: Underground Storage Tanks on Indian Land in EPA Region 1

Agency Version Date: 10/21/2021
Agency Update Frequency: Quarterly
Planned Next Contact: 01/18/2022
Agency: U.S. Environmental Protection Agency Region 1
Agency Contact: 855-246-3642
Most Recent Contact: 10/21/2021

INDIAN UST R10: Underground Storage Tanks on Indian Land in EPA Region 10

Agency Version Date: 11/18/2021
Agency Update Frequency: Quarterly
Planned Next Contact: 02/14/2022
Agency: U.S. Environmental Protection Agency Region 10
Agency Contact: 855-246-3642
Most Recent Contact: 11/18/2021

FEDERAL, STATE, AND TRIBAL REGISTERED STORAGE TANK LISTS (cont.)

INDIAN UST R2: Underground Storage Tanks on Indian Land in EPA Region 2

Agency Version Date: 12/07/2016
Agency Update Frequency: Quarterly
Planned Next Contact: 01/21/2022
Agency: U.S. Environmental Protection Agency Region 2
Agency Contact: 855-246-3642
Most Recent Contact: 10/26/2021

INDIAN UST R4: Underground Storage Tanks on Indian Land in EPA Region 4

Agency Version Date: 08/23/2021
Agency Update Frequency: Semi Annually
Planned Next Contact: 02/14/2022
Agency: U.S. Environmental Protection Agency Region 4
Agency Contact: 855-246-3642
Most Recent Contact: 11/18/2021

INDIAN UST R5: Underground Storage Tanks on Indian Land in EPA Region 5

Agency Version Date: 08/10/2021
Agency Update Frequency: Varies
Planned Next Contact: 01/31/2022
Agency: U.S. Environmental Protection Agency Region 5
Agency Contact: 855-246-3642
Most Recent Contact: 11/04/2021

INDIAN UST R6: Underground Storage Tanks on Indian Land in EPA Region 6

Agency Version Date: 12/18/2020
Agency Update Frequency: Semi Annually
Planned Next Contact: 03/01/2022
Agency: U.S. Environmental Protection Agency Region 6
Agency Contact: 855-246-3642
Most Recent Contact: 12/03/2021

INDIAN UST R7: Underground Storage Tanks on Indian Land in EPA Region 7

Agency Version Date: 11/04/2021
Agency Update Frequency: Varies
Planned Next Contact: 01/31/2022
Agency: U.S. Environmental Protection Agency Region 7
Agency Contact: 855-246-3642
Most Recent Contact: 11/04/2021

INDIAN UST R8: Underground Storage Tanks on Indian Land in EPA Region 8

Agency Version Date: 10/21/2021
Agency Update Frequency: Quarterly
Planned Next Contact: 01/17/2022
Agency: U.S. Environmental Protection Agency Region 8
Agency Contact: 855-246-3642
Most Recent Contact: 10/21/2021

INDIAN UST R9: Underground Storage Tanks on Indian Land in EPA Region 9

Agency Version Date: 10/21/2021
Agency Update Frequency: Quarterly
Planned Next Contact: 01/17/2022
Agency: U.S. Environmental Protection Agency Region 9
Agency Contact: 855-246-3642
Most Recent Contact: 10/21/2021

AST - CA: Listing of tank facilities that are subject to the California Aboveground Petroleum Storage Act

Agency Version Date: 07/08/2021
Agency Update Frequency: No update
Planned Next Contact: 12/29/2021
Agency: California Environmental Protection Agency Unified Program Section
Agency Contact: 916-327-5092
Most Recent Contact: 10/04/2021

AST_KERN COUNTY - CA: Kern County aboveground storage tank sites

Agency Version Date: 09/21/2021
Agency Update Frequency: Quarterly
Planned Next Contact: 12/17/2021
Agency: Kern County Environment Health Division
Agency Contact: 661-862-8774
Most Recent Contact: 09/21/2021

AST_ORANGE COUNTY - CA: Orange county aboveground storage tanks

Agency Version Date: 11/26/2021
Agency Update Frequency: Quarterly
Planned Next Contact: 02/22/2022
Agency: Orange County Health Care Agency
Agency Contact: 714-433-6000
Most Recent Contact: 11/26/2021

FEDERAL, STATE, AND TRIBAL REGISTERED STORAGE TANK LISTS (cont.)

AST_PLACER COUNTY - CA: Placer county aboveground storage tank sites

Agency Version Date: 10/29/2021
Agency Update Frequency: Semi Annually
Planned Next Contact: 01/25/2022
Agency: Placer County Environmental Health
Agency Contact: 530-745-2350
Most Recent Contact: 10/29/2021

AST_YOLO COUNTY - CA: Yolo county above ground storage tank sites listing

Agency Version Date: 11/04/2021
Agency Update Frequency: Annually
Planned Next Contact: 01/31/2022
Agency: Yolo County Environmental Health
Agency Contact: 530-666-8646
Most Recent Contact: 11/04/2021

CLOSED UST_VENTURA COUNTY - CA: Ventura County closed underground storage tank site listing

Agency Version Date: 05/17/2021
Agency Update Frequency: Varies
Planned Next Contact: 02/01/2022
Agency: Environmental Health Division
Agency Contact: 805-654-2815
Most Recent Contact: 11/05/2021

FID UST - CA: The State Water Resource Control Board's Facility Inventory Database underground storage tank locations listing

Agency Version Date: 09/17/2021
Agency Update Frequency: Varies
Planned Next Contact: 12/14/2021
Agency: California Environmental Protection Agency
Agency Contact: 916-341-5791
Most Recent Contact: 09/17/2021

HIST AST - CA: Historical listing of tank facilities that are subject to the California Aboveground Petroleum Storage Act

Agency Version Date: 07/19/2019
Agency Update Frequency: Quarterly
Planned Next Contact: 01/10/2022
Agency: California Environmental Protection Agency Unified Program Section
Agency Contact: 916-327-5092
Most Recent Contact: 10/19/2021

HIST UST - CA: Historical UST listing

Agency Version Date: 09/24/2021
Agency Update Frequency: Varies
Planned Next Contact: 12/23/2021
Agency: State Water Resources Control Board
Agency Contact: 916-341-5791
Most Recent Contact: 09/24/2021

HIST UST_EL SEGUNDO CITY - CA: List of City of El Segundo Underground Storage Tanks that are no longer in current agency list.

Agency Version Date: 01/29/2018
Agency Update Frequency: Annually
Planned Next Contact: 12/27/2021
Agency: City of El Segundo Fire Department
Agency Contact: 310-524-2242
Most Recent Contact: 09/30/2021

HIST UST_KERN COUNTY - CA: List of Kern County underground storage tank records that is no longer in current agency list.

Agency Version Date: 11/28/2018
Agency Update Frequency: Annually
Planned Next Contact: 03/04/2022
Agency: Kern County Environment Health Division
Agency Contact: 661-862-8774
Most Recent Contact: 12/07/2021

HIST UST_SUTTER COUNTY - CA: List of Sutter County Underground Storage Tank records that are no longer in current agency list.

Agency Version Date: 10/22/2018
Agency Update Frequency: Annually
Planned Next Contact: 01/10/2022
Agency: Sutter County Department of Agriculture
Agency Contact: 530-822-7400
Most Recent Contact: 10/14/2021

FEDERAL, STATE, AND TRIBAL REGISTERED STORAGE TANK LISTS (cont.)

TANKS_CONTRA COSTA COUNTY - CA: Listing of aboveground storage tanks in Contra Costa County

Agency Version Date: 08/20/2021
Agency Update Frequency: Varies
Planned Next Contact: 02/04/2022
Agency: Contra Costa Health Services Department
Agency Contact: 925-335-3200
Most Recent Contact: 11/10/2021

UST - CA: Listing of active underground storage tank facilities

Agency Version Date: 09/10/2021
Agency Update Frequency: Quarterly
Planned Next Contact: 12/07/2021
Agency: CA Gov geotracker state water resources control board
Agency Contact: N/R
Most Recent Contact: 09/10/2021

UST_ALAMEDA COUNTY - CA: Alameda County Underground Storage Tank sites

Agency Version Date: 09/10/2021
Agency Update Frequency: Varies
Planned Next Contact: 12/07/2021
Agency: CA Gov geotracker state water resources control board
Agency Contact: 916-341-5791
Most Recent Contact: 09/10/2021

UST_CITY OF LONG BEACH - CA: City of Long Beach underground storage tank sites

Agency Version Date: 06/29/2021
Agency Update Frequency: Quarterly
Planned Next Contact: 02/08/2022
Agency: City of Long Beach Fire Department
Agency Contact: 562-570-6782
Most Recent Contact: 11/12/2021

UST_CITY OF TORRANCE - CA: City of Torrance underground storage tank sites

Agency Version Date: 05/07/2021
Agency Update Frequency: Quarterly
Planned Next Contact: 01/25/2022
Agency: City of Torrance Fire Department
Agency Contact: 310-618-2872
Most Recent Contact: 10/29/2021

UST_EL SEGUNDO CITY - CA: City of El Segundo Underground Storage Tanks

Agency Version Date: 01/29/2018
Agency Update Frequency: Annually
Planned Next Contact: 01/04/2022
Agency: City of El Segundo Fire Department
Agency Contact: 310-524-2242
Most Recent Contact: 10/08/2021

UST_KERN COUNTY - CA: Kern County underground storage tank sites

Agency Version Date: 09/21/2021
Agency Update Frequency: Quarterly
Planned Next Contact: 12/17/2021
Agency: Kern County Environment Health Division
Agency Contact: 661-862-8774
Most Recent Contact: 09/21/2021

UST_MARIN COUNTY - CA: Marin county underground storage tank sites

Agency Version Date: 08/04/2018
Agency Update Frequency: Semi Annually
Planned Next Contact: 02/04/2022
Agency: Marin County Department of Public Works
Agency Contact: 415-473-5051
Most Recent Contact: 11/09/2021

UST_MENDOCINO COUNTY - CA: A listing of underground storage tank locations in Mendocino County

Agency Version Date: 09/10/2021
Agency Update Frequency: Varies
Planned Next Contact: 12/07/2021
Agency: CA Gov geotracker state water resources control board
Agency Contact: 916-341-5791
Most Recent Contact: 09/10/2021

UST_NAPA COUNTY - CA: Underground storage tank sites located in Napa county.

Agency Version Date: 09/10/2021
Agency Update Frequency: Varies
Planned Next Contact: 12/07/2021
Agency: CA Gov geotracker state water resources control board
Agency Contact: 916-341-5791
Most Recent Contact: 09/10/2021

FEDERAL, STATE, AND TRIBAL REGISTERED STORAGE TANK LISTS (cont.)

UST_ORANGE COUNTY - CA: Orange county underground storage tanks

Agency Version Date: 11/16/2021
Agency Update Frequency: Quarterly
Planned Next Contact: 02/11/2022
Agency: Orange County Health Care Agency
Agency Contact: 714-433-6000
Most Recent Contact: 11/16/2021

UST_PLACER COUNTY - CA: Placer county underground storage tank sites

Agency Version Date: 10/29/2021
Agency Update Frequency: Semi Annually
Planned Next Contact: 01/25/2022
Agency: Placer County Environmental Health
Agency Contact: 530-745-2350
Most Recent Contact: 10/29/2021

UST_RIVERSIDE COUNTY - CA: Riverside county underground storage tank sites

Agency Version Date: 09/10/2021
Agency Update Frequency: Quarterly
Planned Next Contact: 12/07/2021
Agency: CA Gov geotracker state water resources control board
Agency Contact: N/R
Most Recent Contact: 09/10/2021

UST_SAN FRANCISCO COUNTY - CA: San Francisco county Underground storage tank sites listing

Agency Version Date: 09/03/2021
Agency Update Frequency: Quarterly
Planned Next Contact: 02/25/2022
Agency: San Francisco Department of Public Health
Agency Contact: N/R
Most Recent Contact: 11/29/2021

UST_SAN JOAQUIN COUNTY - CA: San Joaquin County Underground storage tank sites listing

Agency Version Date: 09/10/2021
Agency Update Frequency: Semi Annually
Planned Next Contact: 12/07/2021
Agency: CA Gov geotracker state water resources control board
Agency Contact: 916-341-5791
Most Recent Contact: 09/10/2021

UST_SOLANO COUNTY - CA: Solano county underground storage tank listing

Agency Version Date: 09/10/2021
Agency Update Frequency: Quarterly
Planned Next Contact: 12/07/2021
Agency: CA Gov geotracker state water resources control board
Agency Contact: N/R
Most Recent Contact: 09/10/2021

UST_SUTTER COUNTY - CA: Sutter county underground storage tank listing

Agency Version Date: 10/26/2021
Agency Update Frequency: Semi Annually
Planned Next Contact: 01/21/2022
Agency: Sutter County Department of Agriculture
Agency Contact: 530-822-7400
Most Recent Contact: 10/26/2021

UST_YOLO COUNTY - CA: Yolo county underground storage tank sites listing

Agency Version Date: 11/09/2021
Agency Update Frequency: Annually
Planned Next Contact: 02/04/2022
Agency: Yolo County Environmental Health
Agency Contact: 530-666-8646
Most Recent Contact: 11/09/2021

FEDERAL CERCLIS LIST

CERCLIS NFRAP: The CERCLIS sites with No Further Remedial Action Planned from the CERCLIS program database. The Environmental Protection Agency decommissioned the CERCLIS data in 2014. The last update was November 12, 2013.

Agency Version Date: 10/25/2013
Agency Update Frequency: Quarterly
Planned Next Contact: 01/28/2022
Agency: U.S. Environmental Protection Agency
Agency Contact: 800-424-9346
Most Recent Contact: 11/02/2021

FEDERAL CERCLIS LIST (cont.)

CERCLIS-HIST: The CERCLIS program database contains information on the assessment and remediation of federal hazardous waste sites. The Environmental Protection Agency decommissioned the CERCLIS data in 2014. The last update was November 12, 2013.

Agency Version Date: 10/29/2013
Agency Update Frequency: Quarterly
Planned Next Contact: 01/28/2022
Agency: U.S. Environmental Protection Agency
Agency Contact: 800-424-9346
Most Recent Contact: 11/02/2021

EPA SAA: Listing of Sites with Superfund Alternative Approach Agreements.

Agency Version Date: 11/01/2021
Agency Update Frequency: Quarterly
Planned Next Contact: 01/27/2022
Agency: U.S. Environmental Protection Agency
Agency Contact: 800-424-9346
Most Recent Contact: 11/01/2021

FEDERAL FACILITY: Sites where Federal Facilities Restoration and Reuse Office (FFRRO) arranged cleanup for Base Closure and Property Transfer at Federal Facilities

Agency Version Date: 08/06/2021
Agency Update Frequency: Varies
Planned Next Contact: 01/28/2022
Agency: U.S. Environmental Protection Agency
Agency Contact: 703-603-8712
Most Recent Contact: 11/02/2021

SEMS_8R_ACTIVE SITES: The Active Site Inventory Report displays site and location information at active SEMS sites. An active site is one at which site assessment, removal, remedial, enforcement, cost recovery, or oversight activities are being planned or conducted. NPL sites include latitude and longitude information. For non-NPL sites, a brief site status is provided.

Agency Version Date: 08/06/2021
Agency Update Frequency: Quarterly
Planned Next Contact: 01/28/2022
Agency: U.S. Environmental Protection Agency
Agency Contact: 703-603-8867
Most Recent Contact: 11/02/2021

SEMS_8R_ARCHIVED SITES: The Archived Site Inventory displays site and location information at sites archived from SEMS. An archived site is one at which EPA has determined that assessment has been completed and no further remedial action is planned under the Superfund program at this time.

Agency Version Date: 08/06/2021
Agency Update Frequency: Quarterly
Planned Next Contact: 01/28/2022
Agency: U.S. Environmental Protection Agency
Agency Contact: 703-603-8867
Most Recent Contact: 11/02/2021

FEDERAL RCRA CORRACTS FACILITIES LIST

CORRACTS: List of facilities where Resource Conservation and Recovery Act Corrective Action Program used to investigate and remediate hazardous releases

Agency Version Date: 10/05/2021
Agency Update Frequency: Quarterly
Planned Next Contact: 12/30/2021
Agency: U.S. Environmental Protection Agency
Agency Contact: 202-566-1667
Most Recent Contact: 10/05/2021

HIST CORRACTS 2: List of facilities where Resource Conservation and Recovery Act Corrective Action Program used to investigate and remediate hazardous releases that are no longer in current agency list.

Agency Version Date: 10/12/2018
Agency Update Frequency: Annually
Planned Next Contact: 02/24/2022
Agency: U.S. Environmental Protection Agency
Agency Contact: 202-566-1667
Most Recent Contact: 11/30/2021

FEDERAL DELISTED NPL SITE LIST

DELISTED NPL: National Priority List of sites that were delisted and no longer require action

Agency Version Date: 08/06/2021
Agency Update Frequency: Quarterly
Planned Next Contact: 01/28/2022
Agency: U.S. Environmental Protection Agency
Agency Contact: 703-603-8867
Most Recent Contact: 11/02/2021

FEDERAL DELISTED NPL SITE LIST (cont.)

DELISTED PROPOSED NPL: Sites that have been delisted from the proposed National Priority List

Agency Version Date: 08/06/2021
Agency Update Frequency: Quarterly
Planned Next Contact: 01/28/2022
Agency: U.S. Environmental Protection Agency
Agency Contact: 703-603-8867
Most Recent Contact: 11/02/2021

SEMS_DELETED NPL: All Deleted National Priority List Sties

Agency Version Date: 08/06/2021
Agency Update Frequency: Quarterly
Planned Next Contact: 01/28/2022
Agency: U.S. Environmental Protection Agency
Agency Contact: 703-603-8867
Most Recent Contact: 11/02/2021

FEDERAL LANDFILL AND/OR SOLID WASTE DISPOSAL SITE LISTS

EPA LF MOP: Sites in the EPA Landfill Methane Outreach Program

Agency Version Date: 10/04/2021
Agency Update Frequency: Quarterly
Planned Next Contact: 12/29/2021
Agency: U.S. Environmental Protection Agency
Agency Contact: 703-603-8867
Most Recent Contact: 10/04/2021

FEDERAL, STATE, AND TRIBAL LEAKING STORAGE TANK LISTS

EPA LUST: Releases listed in the EPA UST Finder database

Agency Version Date: 08/23/2021
Agency Update Frequency: Quarterly
Planned Next Contact: 02/15/2022
Agency: EPA
Agency Contact: (202) 566-1667
Most Recent Contact: 11/19/2021

HIST INDIAN LUST R4: Historical Leaking Underground Storage Tanks on Indian Land in EPA Region 4

Agency Version Date: 08/23/2021
Agency Update Frequency: Quarterly
Planned Next Contact: 02/15/2022
Agency: U.S. Environmental Protection Agency Region 4
Agency Contact: 855-246-3642
Most Recent Contact: 11/19/2021

HIST INDIAN LUST R8: Historical Leaking Underground Storage Tanks on Indian Land in EPA Region 8

Agency Version Date: 08/16/2021
Agency Update Frequency: Quarterly
Planned Next Contact: 02/07/2022
Agency: U.S. Environmental Protection Agency Region 8
Agency Contact: 855-246-3642
Most Recent Contact: 11/11/2021

INDIAN LUST R1: Leaking Underground Storage Tanks on Indian Land in EPA Region 1

Agency Version Date: 10/21/2021
Agency Update Frequency: Quarterly
Planned Next Contact: 01/18/2022
Agency: U.S. Environmental Protection Agency Region 1
Agency Contact: 855-246-3642
Most Recent Contact: 10/21/2021

INDIAN LUST R10: Leaking Underground Storage Tanks on Indian Land in EPA Region 10

Agency Version Date: 11/18/2021
Agency Update Frequency: Quarterly
Planned Next Contact: 02/14/2022
Agency: U.S. Environmental Protection Agency Region 10
Agency Contact: 855-246-3642
Most Recent Contact: 11/18/2021

INDIAN LUST R2: Leaking Underground Storage Tanks on Indian Land in EPA Region 2

Agency Version Date: 12/07/2016
Agency Update Frequency: Quarterly
Planned Next Contact: 01/21/2022
Agency: U.S. Environmental Protection Agency Region 2
Agency Contact: 855-246-3642
Most Recent Contact: 10/26/2021

FEDERAL, STATE, AND TRIBAL LEAKING STORAGE TANK LISTS (cont.)

INDIAN LUST R4: Leaking Underground Storage Tanks on Indian Land in EPA Region 4

Agency Version Date: 08/23/2021
Agency Update Frequency: Semi Annually
Planned Next Contact: 02/14/2022
Agency: U.S. Environmental Protection Agency Region 4
Agency Contact: 855-246-3642
Most Recent Contact: 11/18/2021

INDIAN LUST R5: Leaking Underground Storage Tanks on Indian Land in EPA Region 5

Agency Version Date: 11/04/2021
Agency Update Frequency: Varies
Planned Next Contact: 01/31/2022
Agency: U.S. Environmental Protection Agency Region 5
Agency Contact: 855-246-3642
Most Recent Contact: 11/04/2021

INDIAN LUST R6: Leaking Underground Storage Tanks on Indian Land in EPA Region 6

Agency Version Date: 11/08/2021
Agency Update Frequency: Quarterly
Planned Next Contact: 02/03/2022
Agency: U.S. Environmental Protection Agency Region 6
Agency Contact: 855-246-3642
Most Recent Contact: 11/08/2021

INDIAN LUST R7: Leaking Underground Storage Tanks on Indian Land in EPA Region 7

Agency Version Date: 08/10/2021
Agency Update Frequency: Varies
Planned Next Contact: 01/31/2022
Agency: U.S. Environmental Protection Agency Region 7
Agency Contact: 855-246-3642
Most Recent Contact: 11/04/2021

INDIAN LUST R8: Leaking Underground Storage Tanks on Indian Land in EPA Region 8

Agency Version Date: 11/11/2021
Agency Update Frequency: Quarterly
Planned Next Contact: 02/04/2022
Agency: U.S. Environmental Protection Agency Region 8
Agency Contact: 855-246-3642
Most Recent Contact: 11/11/2021

INDIAN LUST R9: Leaking Underground Storage Tanks on Indian Land in EPA Region 9

Agency Version Date: 10/21/2021
Agency Update Frequency: Quarterly
Planned Next Contact: 01/17/2022
Agency: U.S. Environmental Protection Agency Region 9
Agency Contact: 855-246-3642
Most Recent Contact: 10/21/2021

HIST LUST_SONOMA COUNTY - CA: List of Sonoma County leaking underground storage tank sites that is no longer in current agency list.

Agency Version Date: 08/23/2018
Agency Update Frequency: Annually
Planned Next Contact: 01/04/2022
Agency: CA Gov geotracker state water resources control board
Agency Contact: 916-341-5791
Most Recent Contact: 10/08/2021

LUFT_ALAMEDA COUNTY - CA: Listing of Alameda County leaking underground fuel tank sites

Agency Version Date: 11/19/2018
Agency Update Frequency: No Longer Maintained
Planned Next Contact: 02/17/2022
Agency: Alameda County Environmental Health Services
Agency Contact: 510-567-6721
Most Recent Contact: 11/23/2021

LUST ORANGE COUNTY - CA: Orange county leaking underground storage tanks

Agency Version Date: 10/25/2021
Agency Update Frequency: Quarterly
Planned Next Contact: 01/19/2022
Agency: Orange County Health Care Agency
Agency Contact: 714-433-6000
Most Recent Contact: 10/25/2021

FEDERAL, STATE, AND TRIBAL LEAKING STORAGE TANK LISTS (cont.)

LUST REG 1 - CA: Leaking underground storage tanks in Region 1: Del Norte Glenn Humboldt Lake Marin Mendocino Modoc Siskiyou Sonoma andTrinity counties.

Agency Version Date: 08/03/2021
Agency Update Frequency: Quarterly
Planned Next Contact: 01/25/2022
Agency: State Water Resources Control Board
Agency Contact: 916-341-5791
Most Recent Contact: 10/29/2021

LUST REG 2 - CA: Leaking underground storage tanks in Region 2: Alameda Contra Costa San Francisco Santa Clara (north of Morgan Hill) San Mateo Marin Sonoma Napa Solano counties

Agency Version Date: 08/03/2021
Agency Update Frequency: Quarterly
Planned Next Contact: 01/25/2022
Agency: State Water Resources Control Board
Agency Contact: 916-341-5791
Most Recent Contact: 10/29/2021

LUST REG 3 - CA: Leaking underground storage tanks in Region 3: Santa Clara (south of Morgan Hill) San Mateo (southern part) Santa Cruz SanBenito Monterey Kern (some parts) San Luis Obispo Santa Barbara Ventura(northern part) counties

Agency Version Date: 08/03/2021
Agency Update Frequency: Quarterly
Planned Next Contact: 01/25/2022
Agency: State Water Resources Control Board
Agency Contact: 916-341-5791
Most Recent Contact: 10/29/2021

LUST REG 4 - CA: Leaking underground storage tanks in Region 4: Los Angeles Ventura counties (Small parts of Kern and Santa Barbara counties).

Agency Version Date: 08/03/2021
Agency Update Frequency: Quarterly
Planned Next Contact: 01/25/2022
Agency: State Water Resources Control Board
Agency Contact: 916-341-5791
Most Recent Contact: 10/29/2021

LUST REG 5 - CA: Leaking underground storage tanks in Region 5: Modoc Shasta Lassen Plumas Butte Glen Colusa Lake Sutter Yuba Sierra Nevada Placer Yolo Napa (Northeast) Solano (West) Sacramento El Dorado Amador Calaveras San Joaquin Contra Costa (East) Stanislaus Toulumne Merced Mariposa Madera Kings Fresno Tulare Kern (Very small portions of San Benito and SanLuis Obispo) counties

Agency Version Date: 08/03/2021
Agency Update Frequency: Quarterly
Planned Next Contact: 01/25/2022
Agency: State Water Resources Control Board
Agency Contact: 916-341-5791
Most Recent Contact: 10/29/2021

LUST REG 6 - CA: Leaking underground storage tanks in Region 6: Modoc (East) Lassen (East side and Eagle Lake) Sierra Nevada Placer El Dorado Alpine Mono Inyo Kern (East) San Bernardino Los Angeles (Northeast corner) counties

Agency Version Date: 08/03/2021
Agency Update Frequency: Quarterly
Planned Next Contact: 01/25/2022
Agency: State Water Resources Control Board
Agency Contact: 916-341-5791
Most Recent Contact: 10/29/2021

LUST REG 7 - CA: Leaking underground storage tanks in Region 7: Imperial San Bernardino Riverside and San Diego counties.

Agency Version Date: 08/03/2021
Agency Update Frequency: Quarterly
Planned Next Contact: 01/25/2022
Agency: State Water Resources Control Board
Agency Contact: 916-341-5791
Most Recent Contact: 10/29/2021

LUST REG 8 - CA: Leaking underground storage tanks in Region 8: Orange Riverside San Bernardino counties.

Agency Version Date: 08/03/2021
Agency Update Frequency: Quarterly
Planned Next Contact: 01/25/2022
Agency: State Water Resources Control Board
Agency Contact: 916-341-5791
Most Recent Contact: 10/29/2021

FEDERAL, STATE, AND TRIBAL LEAKING STORAGE TANK LISTS (cont.)

LUST REG 9 - CA: Leaking underground storage tanks in Region 9: San Diego Imperial Riverside counties.

Agency Version Date: 08/03/2021
Agency Update Frequency: Quarterly
Planned Next Contact: 01/25/2022
Agency: State Water Resources Control Board
Agency Contact: 916-341-5791
Most Recent Contact: 10/29/2021

LUST_HAZMAT_YOLO COUNTY - CA: Yolo county leaking underground storage tank sites listing

Agency Version Date: 10/26/2021
Agency Update Frequency: Varies
Planned Next Contact: 01/21/2022
Agency: Yolo County Environmental Health
Agency Contact: 530-666-8646
Most Recent Contact: 10/26/2021

LUST_KERN COUNTY - CA: Kern County leaking underground tank sites

Agency Version Date: 10/26/2021
Agency Update Frequency: Quarterly
Planned Next Contact: 01/21/2022
Agency: CA Gov geotracker state water resources control bo
Agency Contact: 916-341-5791
Most Recent Contact: 10/26/2021

LUST_RIVERSIDE COUNTY - CA: Riverside county leaking underground storage tank sites

Agency Version Date: 10/26/2021
Agency Update Frequency: Quarterly
Planned Next Contact: 01/21/2022
Agency: CA Gov geotracker state water resources control board
Agency Contact: 916-341-5791
Most Recent Contact: 10/26/2021

LUST_SAN FRANCISCO COUNTY - CA: A listing of leaking underground storage tank sites located in San Francisco county.

Agency Version Date: 10/26/2021
Agency Update Frequency: Quarterly
Planned Next Contact: 01/21/2022
Agency: CA Gov geotracker state water resources control board
Agency Contact: 916-341-5791
Most Recent Contact: 10/26/2021

LUST_SAN MATEO COUNTY - CA: San Mateo county leaking underground storage tank listing

Agency Version Date: 10/26/2021
Agency Update Frequency: Quarterly
Planned Next Contact: 01/21/2022
Agency: CA Gov geotracker state water resources control board
Agency Contact: 916-341-5791
Most Recent Contact: 10/26/2021

LUST_SOLANO COUNTY - CA: Solano county leaking underground storage tank listing

Agency Version Date: 10/26/2021
Agency Update Frequency: Quarterly
Planned Next Contact: 01/21/2022
Agency: CA Gov geotracker state water resources control board
Agency Contact: 916-341-5791
Most Recent Contact: 10/26/2021

LUST_SONOMA COUNTY - CA: Sonoma county leaking underground storage tank sites listing

Agency Version Date: 10/26/2021
Agency Update Frequency: Quarterly
Planned Next Contact: 01/21/2022
Agency: CA Gov geotracker state water resources control board
Agency Contact: 916-341-5791
Most Recent Contact: 10/26/2021

LUST_SUTTER COUNTY - CA: Sutter County Leaking Underground Storage Tanks

Agency Version Date: 10/26/2021
Agency Update Frequency: Quarterly
Planned Next Contact: 01/21/2022
Agency: CA Gov geotracker state water resources control board
Agency Contact: 916-341-5791
Most Recent Contact: 10/26/2021

LUST_VENTURA COUNTY - CA: Ventura County leaking underground storage tank site listing

Agency Version Date: 10/26/2021
Agency Update Frequency: Quarterly
Planned Next Contact: 01/21/2022
Agency: CA Gov geotracker state water resources control bo
Agency Contact: 916-341-5791
Most Recent Contact: 10/26/2021

FEDERAL, STATE, AND TRIBAL LEAKING STORAGE TANK LISTS (cont.)

SLIC REG 1 - CA: List of Region 1 sites from GeoTracker Site Cleanup Program (formerly known as SLIC) database.

Agency Version Date: 08/03/2021
Agency Update Frequency: Quarterly
Planned Next Contact: 01/25/2022
Agency: State Water Resources Control Board
Agency Contact: 916-341-5791
Most Recent Contact: 10/29/2021

SLIC REG 2 - CA: List of Region 2 sites from GeoTracker Site Cleanup Program (formerly known as SLIC) database.

Agency Version Date: 08/03/2021
Agency Update Frequency: Quarterly
Planned Next Contact: 01/25/2022
Agency: State Water Resources Control Board
Agency Contact: 916-341-5791
Most Recent Contact: 10/29/2021

SLIC REG 3 - CA: List of Region 3 sites from GeoTracker Site Cleanup Program (formerly known as SLIC) database.

Agency Version Date: 08/03/2021
Agency Update Frequency: Quarterly
Planned Next Contact: 01/25/2022
Agency: State Water Resources Control Board
Agency Contact: 916-341-5791
Most Recent Contact: 10/29/2021

SLIC REG 4 - CA: List of Region 4 sites from GeoTracker Site Cleanup Program (formerly known as SLIC) database.

Agency Version Date: 08/03/2021
Agency Update Frequency: Quarterly
Planned Next Contact: 01/25/2022
Agency: State Water Resources Control Board
Agency Contact: 916-341-5791
Most Recent Contact: 10/29/2021

SLIC REG 5 - CA: List of Region 5 sites from GeoTracker Site Cleanup Program (formerly known as SLIC) database.

Agency Version Date: 08/03/2021
Agency Update Frequency: Quarterly
Planned Next Contact: 01/25/2022
Agency: State Water Resources Control Board
Agency Contact: 916-341-5791
Most Recent Contact: 10/29/2021

SLIC REG 6 - CA: List of Region 6 sites from GeoTracker Site Cleanup Program (formerly known as SLIC) database that is no longer in current agency list.

Agency Version Date: 08/03/2021
Agency Update Frequency: Quarterly
Planned Next Contact: 01/25/2022
Agency: State Water Resources Control Board
Agency Contact: 916-341-5791
Most Recent Contact: 10/29/2021

SLIC REG 7 - CA: List of Region 7 sites from GeoTracker Site Cleanup Program (formerly known as SLIC) database.

Agency Version Date: 08/03/2021
Agency Update Frequency: Quarterly
Planned Next Contact: 01/25/2022
Agency: State Water Resources Control Board
Agency Contact: 916-341-5791
Most Recent Contact: 10/29/2021

SLIC REG 8 - CA: List of Region 8 sites from GeoTracker Site Cleanup Program (formerly known as SLIC) database.

Agency Version Date: 08/03/2021
Agency Update Frequency: Quarterly
Planned Next Contact: 01/25/2022
Agency: State Water Resources Control Board
Agency Contact: 916-341-5791
Most Recent Contact: 10/29/2021

SLIC REG 9 - CA: List of Region 9 sites from GeoTracker Site Cleanup Program (formerly known as SLIC) database that is no longer in current agency list.

Agency Version Date: 08/03/2021
Agency Update Frequency: Quarterly
Planned Next Contact: 01/25/2022
Agency: State Water Resources Control Board
Agency Contact: 916-341-5791
Most Recent Contact: 10/29/2021

FEDERAL, STATE, AND TRIBAL LEAKING STORAGE TANK LISTS (cont.)

SLIC_ALAMEDA COUNTY - CA: Listing of spills leaks investigation & cleanup sites

Agency Version Date: 01/16/2019
Agency Update Frequency: Quarterly
Planned Next Contact: 02/03/2022
Agency: Alameda County Environmental Health Services
Agency Contact: 510-567-6721
Most Recent Contact: 11/08/2021

FEDERAL ERNS LIST

ERNS: Emergency Response Notification System records of reported spills

Agency Version Date: 10/26/2021
Agency Update Frequency: Annually
Planned Next Contact: 01/21/2022
Agency: National Response Center United States Coast Guard
Agency Contact: N/R
Most Recent Contact: 10/26/2021

FEDERAL INSTITUTIONAL CONTROLS / ENGINEERING CONTROLS REGISTRIES

FED E C: Federal listing of remediation sites with engineering controls

Agency Version Date: 11/26/2021
Agency Update Frequency: Varies
Planned Next Contact: 02/22/2022
Agency: U.S. Environmental Protection Agency
Agency Contact: 800-424-9346
Most Recent Contact: 11/26/2021

FED I C: Federal listing of remediation sites with institutional controls

Agency Version Date: 11/26/2021
Agency Update Frequency: Varies
Planned Next Contact: 02/22/2022
Agency: U.S. Environmental Protection Agency
Agency Contact: 800-424-9346
Most Recent Contact: 11/26/2021

RCRA IC_EC: Sites with institutional or engineering controls related to Resource Conservation and Recovery Act

Agency Version Date: 11/11/2021
Agency Update Frequency: Varies
Planned Next Contact: 02/04/2022
Agency: U.S. Environmental Protection Agency
Agency Contact: 215-814-2469
Most Recent Contact: 11/11/2021

FEDERAL RCRA GENERATORS LIST

HIST RCRA_CESQG: List of Resource Conservation and Recovery Act licensed conditionally exempt small quantity generators that are no longer in current agency list.

Agency Version Date: 10/12/2018
Agency Update Frequency: Annually
Planned Next Contact: 02/24/2022
Agency: U.S. Environmental Protection Agency
Agency Contact: 215-814-2469
Most Recent Contact: 11/30/2021

HIST RCRA_LQG: List of Resource Conservation and Recovery Act licensed large quantity generators that are no longer in current agency list.

Agency Version Date: 10/12/2018
Agency Update Frequency: Annually
Planned Next Contact: 02/24/2022
Agency: U.S. Environmental Protection Agency
Agency Contact: 215-814-2469
Most Recent Contact: 11/30/2021

HIST RCRA_NONGEN: List of Resource Conservation and Recovery Act licensed non-generators that are no longer in current agency list.

Agency Version Date: 10/12/2018
Agency Update Frequency: Annually
Planned Next Contact: 02/24/2022
Agency: U.S. Environmental Protection Agency
Agency Contact: 215-814-2469
Most Recent Contact: 11/30/2021

FEDERAL RCRA GENERATORS LIST (cont.)

HIST RCRA_SQG: List of Resource Conservation and Recovery Act licensed small quantity generators that are no longer in current agency list.

Agency Version Date: 10/12/2018
Agency Update Frequency: Annually
Planned Next Contact: 02/24/2022
Agency: U.S. Environmental Protection Agency
Agency Contact: 215-814-2469
Most Recent Contact: 11/30/2021

RCRA_LQG: Resource Conservation and Recovery Act listing of licensed large quantity generators

Agency Version Date: 10/05/2021
Agency Update Frequency: Quarterly
Planned Next Contact: 12/30/2021
Agency: U.S. Environmental Protection Agency
Agency Contact: 215-814-2469
Most Recent Contact: 10/05/2021

RCRA_NONGEN: Resource Conservation and Recovery Act listing of licensed non-generators

Agency Version Date: 10/05/2021
Agency Update Frequency: Varies
Planned Next Contact: 12/30/2021
Agency: U.S. Environmental Protection Agency
Agency Contact: 215-814-2469
Most Recent Contact: 10/05/2021

RCRA_SQG: Resource Conservation and Recovery Act listing of licensed small quantity generators

Agency Version Date: 10/05/2021
Agency Update Frequency: Quarterly
Planned Next Contact: 12/30/2021
Agency: U.S. Environmental Protection Agency
Agency Contact: 215-814-2469
Most Recent Contact: 10/05/2021

RCRA_VSQG: Resource Conservation and Recovery Act listing of licensed very small quantity generators.

Agency Version Date: 10/05/2021
Agency Update Frequency: Varies
Planned Next Contact: 12/30/2021
Agency: U.S. Environmental Protection Agency
Agency Contact: 215-814-2469
Most Recent Contact: 10/05/2021

FEDERAL NPL SITE LIST

NPL: List of priority contaminated sites among identified releases or threatened releases of hazardous substances pollutants or contaminants nationally

Agency Version Date: 08/06/2021
Agency Update Frequency: Quarterly
Planned Next Contact: 01/28/2022
Agency: U.S. Environmental Protection Agency
Agency Contact: 703-603-8867
Most Recent Contact: 11/02/2021

NPL EPA R1 GIS: Geospatial data for the Environmental Protection Agency Region 1 National Priority List subject to environmental regulation

Agency Version Date: 08/06/2021
Agency Update Frequency: Quarterly
Planned Next Contact: 01/28/2022
Agency: U.S. Environmental Protection Agency
Agency Contact: 202-566-2132
Most Recent Contact: 11/02/2021

NPL EPA R3 GIS: Geospatial data for the Environmental Protection Agency Region 3 National Priority List subject to environmental regulation

Agency Version Date: 08/06/2021
Agency Update Frequency: Quarterly
Planned Next Contact: 01/28/2022
Agency: U.S. Environmental Protection Agency
Agency Contact: 202-566-2132
Most Recent Contact: 11/02/2021

NPL EPA R6 GIS: Geospatial data for the Environmental Protection Agency Region 6 National Priority List subject to environmental regulation

Agency Version Date: 08/06/2021
Agency Update Frequency: Quarterly
Planned Next Contact: 01/28/2022
Agency: U.S. Environmental Protection Agency
Agency Contact: 202-566-2132
Most Recent Contact: 11/02/2021

FEDERAL NPL SITE LIST (cont.)

NPL EPA R8 GIS: Geospatial data for the Environmental Protection Agency Region 8 National Priority List subject to environmental regulation

Agency Version Date: 08/06/2021
Agency Update Frequency: Quarterly
Planned Next Contact: 01/28/2022
Agency: U.S. Environmental Protection Agency
Agency Contact: 202-566-2132
Most Recent Contact: 11/02/2021

NPL EPA R9 GIS: Geospatial data for the Environmental Protection Agency Region 9 National Priority List subject to environmental regulation

Agency Version Date: 08/06/2021
Agency Update Frequency: Quarterly
Planned Next Contact: 01/28/2022
Agency: U.S. Environmental Protection Agency
Agency Contact: 202-566-2132
Most Recent Contact: 11/02/2021

PART NPL: Sites that are a part of an National Priority List site referred to as the parent site

Agency Version Date: 08/06/2021
Agency Update Frequency: Quarterly
Planned Next Contact: 01/28/2022
Agency: U.S. Environmental Protection Agency
Agency Contact: 703-603-8867
Most Recent Contact: 11/02/2021

PROPOSED NPL: Sites that have been proposed for the National Priority List

Agency Version Date: 08/06/2021
Agency Update Frequency: Quarterly
Planned Next Contact: 01/28/2022
Agency: U.S. Environmental Protection Agency
Agency Contact: 703-603-8867
Most Recent Contact: 11/02/2021

SEMS_FINAL NPL: All Included National Priority List Sites

Agency Version Date: 08/06/2021
Agency Update Frequency: Quarterly
Planned Next Contact: 01/28/2022
Agency: U.S. Environmental Protection Agency
Agency Contact: 703-603-8867
Most Recent Contact: 11/02/2021

SEMS_PROPOSED NPL: All Proposed National Priority List Sites

Agency Version Date: 08/06/2021
Agency Update Frequency: Quarterly
Planned Next Contact: 01/28/2022
Agency: U.S. Environmental Protection Agency
Agency Contact: 703-603-8867
Most Recent Contact: 11/02/2021

STATE- AND TRIBAL - EQUIVALENT CERCLIS

ENVIROSTOR - CA: Department of Toxic Substances Controls

Agency Version Date: 09/28/2021
Agency Update Frequency: Quarterly
Planned Next Contact: 12/23/2021
Agency: Department of Toxic Substances Control
Agency Contact: 916-327-1077
Most Recent Contact: 09/28/2021

HIST TOXIC PITS - CA: Listing of Toxic Pit Cleanup Act sites that are no longer in current agency list.

Agency Version Date: 10/12/2018
Agency Update Frequency: Quarterly
Planned Next Contact: 01/10/2022
Agency: State Water Resources Control Board
Agency Contact: 916-341-5810
Most Recent Contact: 10/14/2021

OIL & GAS CLEANUP - CA: List of SWRCB Oil & Gas Cleanup Sites from GeoTracker Site Cleanup Program database.

Agency Version Date: 08/03/2021
Agency Update Frequency: Quarterly
Planned Next Contact: 01/25/2022
Agency: California Regional Water Quality Control Board
Agency Contact: 916-341-5791
Most Recent Contact: 10/29/2021

STATE- AND TRIBAL - EQUIVALENT CERCLIS (cont.)

SWRCB CLEANUP - CA: List of SWRCB Cleanups from Geotracker including CAF, Sampling Points, and Projects.

Agency Version Date: 08/03/2021
Agency Update Frequency: Quarterly
Planned Next Contact: 01/25/2022
Agency: California Regional Water Quality Control Board
Agency Contact: 916-341-5791
Most Recent Contact: 10/29/2021

SWRCB NON_CASE - CA: List of SWRCB Non-Case sites from GeoTracker Site Cleanup Program database.

Agency Version Date: 08/03/2021
Agency Update Frequency: Quarterly
Planned Next Contact: 01/25/2022
Agency: California Regional Water Quality Control Board
Agency Contact: 916-341-5791
Most Recent Contact: 10/29/2021

TOXIC PITS - CA: Listing of Toxic Pit Cleanup Act sites

Agency Version Date: 07/20/2021
Agency Update Frequency: Quarterly
Planned Next Contact: 01/10/2022
Agency: State Water Resources Control Board
Agency Contact: 916-341-5810
Most Recent Contact: 10/14/2021

STATE- AND TRIBAL - EQUIVALENT NPL

HIST RESPONSE - CA: List of state response sites with confirmed releases and potential high risk that are no longer in current agency list.

Agency Version Date: 10/19/2017
Agency Update Frequency: Annually
Planned Next Contact: 02/15/2022
Agency: Department of Toxic Substances Control
Agency Contact: 916-327-1077
Most Recent Contact: 11/19/2021

RESPONSE - CA: State response sites with confirmed releases and potential high risk

Agency Version Date: 09/28/2021
Agency Update Frequency: Annually
Planned Next Contact: 12/23/2021
Agency: Department of Toxic Substances Control
Agency Contact: 916-327-1077
Most Recent Contact: 09/28/2021

STATE AND TRIBAL LANDFILL AND/OR SOLID WASTE DISPOSAL SITE LISTS

HIST SWF/LF - CA: List of Solid Waste Information System's solid waste facilities and landfills that is no longer in current agency list.

Agency Version Date: 03/05/2018
Agency Update Frequency: Annually
Planned Next Contact: 02/10/2022
Agency: Department of Resources Recycling and Recovery
Agency Contact: 916-341-6066
Most Recent Contact: 11/16/2021

SWF/LF - CA: Solid Waste Information System's facility listing of solid waste facilities and landfills

Agency Version Date: 09/17/2021
Agency Update Frequency: Quarterly
Planned Next Contact: 12/14/2021
Agency: Department of Resources Recycling and Recovery
Agency Contact: 916-341-6066
Most Recent Contact: 09/17/2021

STATE RCRA GENERATORS LIST

HWG - CA: Hazardous waste generator listing

Agency Version Date: 09/27/2021
Agency Update Frequency: Quarterly
Planned Next Contact: 12/22/2021
Agency: Department of Toxic Substances Control
Agency Contact: N/R
Most Recent Contact: 09/27/2021

STATE RCRA GENERATORS LIST (cont.)

HWG_YOLO COUNTY - CA: Listing of permitted hazardous waste generators

Agency Version Date: 10/26/2021
Agency Update Frequency: Quarterly
Planned Next Contact: 01/21/2022
Agency: Yolo County Environmental Health
Agency Contact: 530-666-8646
Most Recent Contact: 10/26/2021

STATE AND TRIBAL BROWNFIELD SITES

TRIBAL BROWNFIELDS: Tribal brownfield remediation site listing

Agency Version Date: 02/10/2017
Agency Update Frequency: No Longer Maintained
Planned Next Contact: 12/21/2021
Agency: U.S. Environmental Protection Agency
Agency Contact: 855-246-3642
Most Recent Contact: 09/24/2021

STATE AND TRIBAL VOLUNTARY CLEANUP SITES

VCP - CA: Voluntary Cleanup Program remediation sites listing

Agency Version Date: 09/28/2021
Agency Update Frequency: Quarterly
Planned Next Contact: 12/23/2021
Agency: Department of Toxic Substances Control
Agency Contact: 916-322-2861
Most Recent Contact: 09/28/2021

LOCAL BROWNFIELD LISTS

BROWNFIELDS-ACRES: EPA Brownfields Assessment, Cleanup and Redevelopment Exchange System.

Agency Version Date: 09/17/2021
Agency Update Frequency: Quarterly
Planned Next Contact: 12/14/2021
Agency: U.S. Environmental Protection Agency
Agency Contact: 855-246-3642
Most Recent Contact: 09/17/2021

FED BROWNFIELDS: Federal brownfield remediation sites

Agency Version Date: 07/30/2021
Agency Update Frequency: Semi Annually
Planned Next Contact: 01/24/2022
Agency: U.S. Environmental Protection Agency
Agency Contact: 855-246-3642
Most Recent Contact: 10/27/2021

LOCAL LISTS OF HAZARDOUS WASTE / CONTAMINATED SITES

FED CDL: The U.S. Department of Justice listing of clandestine drug lab locations

Agency Version Date: 10/19/2021
Agency Update Frequency: Quarterly
Planned Next Contact: 01/12/2022
Agency: U.S. Department of Justice
Agency Contact: 202-307-7610
Most Recent Contact: 10/19/2021

US HIST CDL: The U.S. Department of Justice historical listing of clandestine drug lab locations

Agency Version Date: 08/05/2019
Agency Update Frequency: Quarterly
Planned Next Contact: 02/16/2022
Agency: U.S. Department of Justice
Agency Contact: 202-307-7610
Most Recent Contact: 11/22/2021

CALARP_KERN COUNTY - CA: Kern County hazardous material permitted facilities

Agency Version Date: 09/06/2021
Agency Update Frequency: Varies
Planned Next Contact: 02/24/2022
Agency: County of Kern Public Health Services Department
Agency Contact: 661-862-8740
Most Recent Contact: 12/01/2021

LOCAL LISTS OF HAZARDOUS WASTE / CONTAMINATED SITES (cont.)

CASE LIST_SAN DIEGO COUNTY - CA: San Diego county listing of hazardous chemical releases

Agency Version Date: 08/03/2021
Agency Update Frequency: Varies
Planned Next Contact: 01/25/2022
Agency: County of San Diego Department of Environmental Health
Agency Contact: 619-338-2259
Most Recent Contact: 10/29/2021

CDL - CA: Listing of Meth and clandestine drug labs maintained by the Department of Toxic Substances Control

Agency Version Date: 07/30/2020
Agency Update Frequency: Varies
Planned Next Contact: 01/07/2022
Agency: Department of Toxic Substances Control
Agency Contact: 916-322-2861
Most Recent Contact: 10/12/2021

CORRECTIVE ACTION_RIVERSIDE COUNTY - CA: Riverside county corrective action sites list

Agency Version Date: 11/15/2017
Agency Update Frequency: No Longer Maintained
Planned Next Contact: 12/17/2021
Agency: Riverside County Environmental Health
Agency Contact: 888-722-4234
Most Recent Contact: 09/22/2021

CS_NAPA COUNTY - CA: Napa county listing of Contaminated sites

Agency Version Date: 11/02/2021
Agency Update Frequency: Varies
Planned Next Contact: 01/28/2022
Agency: Napa County Department of Environmental Management
Agency Contact: 707-253-4471
Most Recent Contact: 11/02/2021

CS_PLACER COUNTY - CA: Placer county cleanup sites listing

Agency Version Date: 10/29/2021
Agency Update Frequency: Semi Annually
Planned Next Contact: 01/25/2022
Agency: Placer County Environmental Health
Agency Contact: 530-745-2350
Most Recent Contact: 10/29/2021

SCH - CA: Listing of possible hazardous material contamination sites on existing school properties

Agency Version Date: 10/29/2021
Agency Update Frequency: Varies
Planned Next Contact: 01/25/2022
Agency: Department of Toxic Substances Control
Agency Contact: 916-322-2861
Most Recent Contact: 10/29/2021

SITE LIST_CONTRA COSTA COUNTY - CA: Listing of underground tank hazardous waste generator and business plan sites in Contra Costa County

Agency Version Date: 08/20/2021
Agency Update Frequency: Varies
Planned Next Contact: 02/04/2022
Agency: Contra Costa Health Services Department
Agency Contact: 925-335-3200
Most Recent Contact: 11/10/2021

TOXIC SITE_SACRAMENTO COUNTY - CA: Sacramento County listing of historical sites where unauthorized releases of potentially hazardous materials have occurred

Agency Version Date: 08/24/2021
Agency Update Frequency: No Longer Maintained
Planned Next Contact: 02/15/2022
Agency: Sacramento County Environmental Management
Agency Contact: 916-875-8550
Most Recent Contact: 11/19/2021

RECORDS OF EMERGENCY RELEASE REPORTS

HMIRS (DOT): Hazardous Material spills reported by the Department of Transportation

Agency Version Date: 09/27/2021
Agency Update Frequency: Varies
Planned Next Contact: 12/22/2021
Agency: U.S. Department of Transportation
Agency Contact: (202) 366-4996
Most Recent Contact: 09/27/2021

RECORDS OF EMERGENCY RELEASE REPORTS (cont.)

CHMIRS - CA: California Hazardous Material Incident Reporting System's reported accidental hazardous material incidents releases or spills

Agency Version Date: 07/21/2021
Agency Update Frequency: Varies
Planned Next Contact: 01/11/2022
Agency: California Emergency Management Agency
Agency Contact: 916-845-8275
Most Recent Contact: 10/15/2021

HIST CHMIRS - CA: California Hazardous Material Incident Reporting System's reported accidental hazardous material incidents releases or spills

Agency Version Date: 04/06/2017
Agency Update Frequency: Quarterly
Planned Next Contact: 02/09/2022
Agency: California Emergency Management Agency
Agency Contact: 916-845-8275
Most Recent Contact: 11/15/2021

INDUSTRIAL CLEANUP_ORANGE COUNTY - CA: Petroleum and non-petroleum industrial spills

Agency Version Date: 11/30/2021
Agency Update Frequency: Annually
Planned Next Contact: 02/23/2022
Agency: Orange County Health Care Agency
Agency Contact: 714-433-6000
Most Recent Contact: 11/30/2021

SML_LOS ANGELES COUNTY - CA: Listing of all Emergency Response session spills

Agency Version Date: 07/12/2017
Agency Update Frequency: Quarterly
Planned Next Contact: 01/26/2022
Agency: Los Angeles Department of Public Health
Agency Contact: 323-890-7808
Most Recent Contact: 11/01/2021

LOCAL LAND RECORDS

LIENS 2: Comprehensive Environmental Response Compensation and Liability Act sites with liens

Agency Version Date: 05/11/2017
Agency Update Frequency: No Longer Maintained
Planned Next Contact: 12/20/2021
Agency: U.S. Environmental Protection Agency
Agency Contact: 800-424-9346
Most Recent Contact: 09/23/2021

DEED - CA: The Department of Toxic Substances Control's listing of property locations with Deed restrictions

Agency Version Date: 11/01/2021
Agency Update Frequency: Semi Annually
Planned Next Contact: 01/27/2022
Agency: Department of Toxic Substances Control
Agency Contact: 916-341-5791
Most Recent Contact: 11/01/2021

HIST LIENS - CA: The Department of Toxic Substances Control's listing of property locations with environmental liens that is no longer in current agency list.

Agency Version Date: 12/04/2018
Agency Update Frequency: Annually
Planned Next Contact: 02/08/2022
Agency: Department of Toxic Substances Control
Agency Contact: 916-322-2861
Most Recent Contact: 11/12/2021

LIENS - CA: The Department of Toxic Substances Control's listing of property locations with environmental liens

Agency Version Date: 09/15/2021
Agency Update Frequency: Varies
Planned Next Contact: 12/13/2021
Agency: Department of Toxic Substances Control
Agency Contact: 916-322-2861
Most Recent Contact: 09/15/2021

LOCAL LISTS OF LANDFILL / SOLID WASTE DISPOSAL SITES

HIST INDIAN ODI R8: List of Region 8 Indian land open dump inventory sites maintained within the STARS program that is no longer in current agency list.

Agency Version Date: 11/12/2018
Agency Update Frequency: Annually
Planned Next Contact: 01/11/2022
Agency: Indian Health Service
Agency Contact: 855-246-3642
Most Recent Contact: 10/19/2021

INDIAN ODI R8: Region 8 Indian land open dump inventory sites maintained within the STARS program

Agency Version Date: 11/02/2021
Agency Update Frequency: Varies
Planned Next Contact: 01/28/2022
Agency: Indian Health Service
Agency Contact: 855-246-3642
Most Recent Contact: 11/02/2021

ODI: Open dump inventory sites

Agency Version Date: 10/03/2017
Agency Update Frequency: No Update
Planned Next Contact: 02/11/2022
Agency: U.S. Environmental Protection Agency
Agency Contact: 855-246-3642
Most Recent Contact: 11/17/2021

TRIBAL ODI: Indian land open dump inventory for all regions

Agency Version Date: 11/25/2021
Agency Update Frequency: Varies
Planned Next Contact: 02/21/2022
Agency: Indian Health Service
Agency Contact: 301-443-3593
Most Recent Contact: 11/25/2021

HAULERS - CA: Waste Tire Manifest Program Hauler Registration listing

Agency Version Date: 07/07/2021
Agency Update Frequency: Varies
Planned Next Contact: 12/29/2021
Agency: California Department of Resources Recycling and Recovery (CalRecycle)
Agency Contact: 916-341-6066
Most Recent Contact: 10/04/2021

LF_SAN DIEGO COUNTY - CA: San Diego county landfill listing

Agency Version Date: 08/06/2021
Agency Update Frequency: Varies
Planned Next Contact: 01/25/2022
Agency: County of San Diego Department of Environmental Health
Agency Contact: 858-694-2801
Most Recent Contact: 10/29/2021

SWF_LOS ANGELES COUNTY - CA: Listing of Los Angeles County solid waste facilities

Agency Version Date: 11/30/2021
Agency Update Frequency: Varies
Planned Next Contact: 02/23/2022
Agency: LA County Department of Public Works
Agency Contact: 800-320-1771
Most Recent Contact: 11/30/2021

SWRCY - CA: Listing of facilities which perform recycled material processing activities

Agency Version Date: 11/19/2021
Agency Update Frequency: Quarterly
Planned Next Contact: 02/15/2022
Agency: California Department of Resources Recycling and Recovery (CalRecycle)
Agency Contact: 916-341-6066
Most Recent Contact: 11/19/2021

OTHER ASCERTAINABLE RECORDS

AFS: Air Facility Systems Quarterly Extract

Agency Version Date: 11/04/2021
Agency Update Frequency: Quarterly
Planned Next Contact: 01/31/2022
Agency: Environmental Protection Agency
Agency Contact: (202) 566-1667
Most Recent Contact: 11/04/2021

OTHER ASCERTAINABLE RECORDS (cont.)

ALT FUELING: Alternative Fueling Stations by fuel type.

Agency Version Date: 10/04/2021
Agency Update Frequency: Quarterly
Planned Next Contact: 12/29/2021
Agency: U.S. Department of Energy
Agency Contact: N/R
Most Recent Contact: 10/04/2021

BRS: Reporting of hazardous waste generation and management from large quantity generators

Agency Version Date: 10/05/2021
Agency Update Frequency: Biennial
Planned Next Contact: 12/30/2021
Agency: Environmental Protection Agency
Agency Contact: (202) 566-1667
Most Recent Contact: 10/05/2021

CDC HAZDAT: The Agency for Toxic Substances and Disease Registry's Hazardous Substance Release/Health Effects Database.

Agency Version Date: 08/21/2020
Agency Update Frequency: Varies
Planned Next Contact: 01/28/2022
Agency: Agency for Toxic Substances and Disease Registry
Agency Contact: 770-488-6399
Most Recent Contact: 11/02/2021

COAL ASH DOE: List of existing and planned generators with 1 megawatt or greater of combined capacity that are utilizing coal ash impoundments.

Agency Version Date: 09/29/2021
Agency Update Frequency: Varies
Planned Next Contact: 12/24/2021
Agency: Department of Energy
Agency Contact: (202) 586-8800
Most Recent Contact: 09/29/2021

COAL ASH EPA: Coal Combustion Residues Surface Impoundments List

Agency Version Date: 02/18/2021
Agency Update Frequency: Varies
Planned Next Contact: 02/01/2022
Agency: Environmental Protection Agency
Agency Contact: (202) 566-1667
Most Recent Contact: 11/05/2021

COAL GAS: Manufactured Gas Plant locations

Agency Version Date: 10/12/2021
Agency Update Frequency: Quarterly
Planned Next Contact: 01/07/2022
Agency: U.S. Environmental Protection Agency
Agency Contact: 855-246-3642
Most Recent Contact: 10/12/2021

CONSENT (DECREES): Legal decisions regarding responsibility for Superfund locations

Agency Version Date: 08/06/2021
Agency Update Frequency: Varies
Planned Next Contact: 01/28/2022
Agency: Environmental Protection Agency
Agency Contact: (800) 424-9346
Most Recent Contact: 11/02/2021

CORRECTIVE ACTIONS_2020: In 2009 the EPA created the 2020 Corrective Action Baseline list of contaminated or potentially contaminated sites with a cleanup goal to complete 95% by the year 2020. The names on the list indicate the facility owners who may or may not have caused the contamination.

Agency Version Date: 12/21/2018
Agency Update Frequency: No Longer Maintained
Planned Next Contact: 01/21/2022
Agency: U.S. Environmental Protection Agency
Agency Contact: N/R
Most Recent Contact: 10/26/2021

DEBRIS EPA LF: EPA list of designated landfill facilities for the safe disposal of disaster debris.

Agency Version Date: 10/20/2021
Agency Update Frequency: Quarterly
Planned Next Contact: 01/14/2022
Agency: U.S. Environmental Protection Agency
Agency Contact: 855-246-3642
Most Recent Contact: 10/20/2021

OTHER ASCERTAINABLE RECORDS (cont.)

DEBRIS EPA SWRCY: EPA list of facilities for the safe recovery, recycling, and disposal of disaster debris.

Agency Version Date: 10/20/2021
Agency Update Frequency: Quarterly
Planned Next Contact: 01/14/2022
Agency: U.S. Environmental Protection Agency
Agency Contact: 855-246-3642
Most Recent Contact: 10/20/2021

DOD: Department of Defense sites from the Protected Areas Database (PAD-US)

Agency Version Date: 08/06/2021
Agency Update Frequency: Varies
Planned Next Contact: 01/28/2022
Agency: United States Geologic Survey (USGS)
Agency Contact: 1-888-275-8747
Most Recent Contact: 11/02/2021

DOT OPS: Incident Data Report

Agency Version Date: 08/23/2021
Agency Update Frequency: Varies
Planned Next Contact: 02/14/2022
Agency: U.S. Department of Transportation
Agency Contact: (202) 366-4996
Most Recent Contact: 11/18/2021

ECHO: ECHO is EPA Enforcement and Compliance History Online website to search for facilities in your community to assess their compliance with environmental regulations related to CAA, CWA, RCRA, & SDWA.

Agency Version Date: 09/28/2021
Agency Update Frequency: Quarterly
Planned Next Contact: 12/24/2021
Agency: U.S. Environmental Protection Agency
Agency Contact: 202-566-1667
Most Recent Contact: 09/28/2021

ENOI: The Electronic Notice of Intent (eNOI) database contains construction sites and industrial facilities that submit permit requests to EPA for Construction General Permits (CGP) and Multi-Sector General Permits (MSGP).

Agency Version Date: 03/19/2021
Agency Update Frequency: Quarterly
Planned Next Contact: 12/10/2021
Agency: Environmental Protection Agency
Agency Contact: (202) 566-1667
Most Recent Contact: 09/13/2021

EPA FUELS: List of companies and facilities registered to participate in EPA Fuel Programs under Title 40 CFR Part 80.

Agency Version Date: 11/11/2021
Agency Update Frequency: Quarterly
Planned Next Contact: 02/04/2022
Agency: U.S. Environmental Protection Agency
Agency Contact: (202) 564-2307
Most Recent Contact: 11/11/2021

EPA OSC: Listing of oil spills and hazardous substance release sites requiring EPA On-Site Coordinators.

Agency Version Date: 06/29/2021
Agency Update Frequency: Quarterly
Planned Next Contact: 12/21/2021
Agency: U.S. Environmental Protection Agency
Agency Contact: (202) 564-2307
Most Recent Contact: 09/24/2021

EPA WATCH: The EPA Watch List was used to facilitate dialogue between EPA, state and local environmental agencies on enforcement matters relating to facilities with alleged violations identified as either significant or high priority. EPA maintained the lists from 2011 - 2013.

Agency Version Date: 02/09/2018
Agency Update Frequency: No Longer Maintained
Planned Next Contact: 12/20/2021
Agency: U.S. Environmental Protection Agency
Agency Contact: (202) 564-2307
Most Recent Contact: 09/23/2021

FA HWF: Hazardous Waste Facilities with Financial Assurance

Agency Version Date: 10/11/2021
Agency Update Frequency: Varies
Planned Next Contact: 01/06/2022
Agency: Environmental Protection Agency
Agency Contact: (800) 424-9346
Most Recent Contact: 10/11/2021

OTHER ASCERTAINABLE RECORDS (cont.)

FEDLAND: Federal Lands from the Protected Areas Database (PAD-US)

Agency Version Date: 08/06/2021
Agency Update Frequency: Varies
Planned Next Contact: 01/28/2022
Agency: United States Geologic Survey (USGS)
Agency Contact: 1-888-275-8747
Most Recent Contact: 11/02/2021

FRS: Facility Registry Systems

Agency Version Date: 08/19/2021
Agency Update Frequency: Varies
Planned Next Contact: 02/09/2022
Agency: Environmental Protection Agency
Agency Contact: (202) 566-1667
Most Recent Contact: 11/15/2021

FTTS: Tracking of administrative and enforcement activities related to FIFRA/TSCA

Agency Version Date: 04/16/2013
Agency Update Frequency: No Longer Maintained
Planned Next Contact: 01/05/2022
Agency: Environmental Protection Agency
Agency Contact: (202) 564-2280
Most Recent Contact: 10/11/2021

FTTS INSP: Tracking of inspections related to FIFRA/TSCA

Agency Version Date: 05/08/2017
Agency Update Frequency: No Longer Maintained
Planned Next Contact: 12/30/2021
Agency: Environmental Protection Agency
Agency Contact: (202) 564-2280
Most Recent Contact: 10/05/2021

FUDS: Defense sites that require cleanup

Agency Version Date: 08/16/2021
Agency Update Frequency: Varies
Planned Next Contact: 02/07/2022
Agency: US Army Corps of Engineering
Agency Contact: (202) 761-0011
Most Recent Contact: 11/11/2021

HIST AFS: List of Air Facility Systems Quarterly Extract that are no longer in current agency list.

Agency Version Date: 06/14/2019
Agency Update Frequency: Quarterly
Planned Next Contact: 12/20/2021
Agency: Environmental Protection Agency
Agency Contact: (202) 566-1667
Most Recent Contact: 09/23/2021

HIST AFS 2: List of Air Facility Systems Quarterly Extract that are no longer in current agency list.

Agency Version Date: 11/26/2018
Agency Update Frequency: Quarterly
Planned Next Contact: 01/18/2022
Agency: Environmental Protection Agency
Agency Contact: (202) 566-1667
Most Recent Contact: 10/22/2021

HIST DOD: Department of Defense historical sites

Agency Version Date: 08/17/2018
Agency Update Frequency: No Longer Maintained
Planned Next Contact: 01/28/2022
Agency: Environmental Protection Agency
Agency Contact: (800) 424-9346
Most Recent Contact: 11/02/2021

HIST LEAD_SMELTER: List of former lead smelter sites that is no longer in current agency list.

Agency Version Date: 12/12/2018
Agency Update Frequency: Annually
Planned Next Contact: 01/05/2022
Agency: Environmental Protection Agency
Agency Contact: (202) 566-1667
Most Recent Contact: 10/11/2021

HIST MLTS: List of sites in possession/use of radioactive materials regulated by NRC that is no longer in current agency list.

Agency Version Date: 07/13/2016
Agency Update Frequency: Annually
Planned Next Contact: 01/12/2022
Agency: Nuclear Regulatory Commission
Agency Contact: (800) 397-4209
Most Recent Contact: 10/19/2021

OTHER ASCERTAINABLE RECORDS (cont.)

HIST PCB TRANS: List of PCB Disposal Facilities that are no longer in current agency list.

Agency Version Date: 01/18/2018
Agency Update Frequency: No Update
Planned Next Contact: 02/04/2022
Agency: Environmental Protection Agency
Agency Contact: (703) 308-8404
Most Recent Contact: 11/09/2021

HIST PCS ENF: List of permitted facilities to discharge wastewater (Federal equivalent to NPDES) that are no longer in current agency list.

Agency Version Date: 12/08/2018
Agency Update Frequency: Annually
Planned Next Contact: 02/18/2022
Agency: Environmental Protection Agency
Agency Contact: (202) 564-6582
Most Recent Contact: 11/24/2021

HIST PCS FACILITY: List of Permitted facilities to discharge wastewater (Federal equivalent to NPDES) that are no longer in current agency list.

Agency Version Date: 12/18/2018
Agency Update Frequency: Annually
Planned Next Contact: 02/18/2022
Agency: Environmental Protection Agency
Agency Contact: (202) 564-6582
Most Recent Contact: 11/24/2021

HIST SSTS: List of tracking of facilities who produce pesticides and their quantity that are no longer in current agency list.

Agency Version Date: 02/13/2019
Agency Update Frequency: Annually
Planned Next Contact: 02/08/2022
Agency: Environmental Protection Agency
Agency Contact: (202) 566-1667
Most Recent Contact: 11/12/2021

HWC DOCKET: Listing of Federal facilities which are managing or have managed hazardous waste; or have had a release of hazardous waste.

Agency Version Date: 05/17/2021
Agency Update Frequency: Quarterly
Planned Next Contact: 02/03/2022
Agency: U.S. Environmental Protection Agency
Agency Contact: (202) 564-2307
Most Recent Contact: 11/09/2021

ICIS: Comprised of all Federal Administrative and Judicial enforcement information [intended to replace PCS] by tracking enforcement and compliance information (also contains what used to be known as FFTS)

Agency Version Date: 10/01/2021
Agency Update Frequency: Varies
Planned Next Contact: 12/28/2021
Agency: Environmental Protection Agency
Agency Contact: (202) 566-1667
Most Recent Contact: 10/01/2021

INACTIVE PCS: Inactive Permitted facilities to discharge wastewater

Agency Version Date: 10/01/2021
Agency Update Frequency: Varies
Planned Next Contact: 12/28/2021
Agency: Environmental Protection Agency
Agency Contact: (202) 564-6582
Most Recent Contact: 10/01/2021

INDIAN RESERVATION: American Indian Lands from the Protected Areas Database (PAD-US)

Agency Version Date: 11/02/2021
Agency Update Frequency: Varies
Planned Next Contact: 01/28/2022
Agency: United States Geologic Survey (USGS)
Agency Contact: 1-888-275-8747
Most Recent Contact: 11/02/2021

LUCIS: Land Use Control Information Systems

Agency Version Date: 09/24/2021
Agency Update Frequency: Quarterly
Planned Next Contact: 12/21/2021
Agency: Department of the Navy: BRAC PMO
Agency Contact: (619) 532-0900
Most Recent Contact: 09/24/2021

OTHER ASCERTAINABLE RECORDS (cont.)

LUCIS 2: Land Use Control Information Systems

Agency Version Date: 01/17/2018
Agency Update Frequency: No Longer Maintained
Planned Next Contact: 02/04/2022
Agency: Department of the Navy: BRAC PMO
Agency Contact: (619) 532-0900
Most Recent Contact: 11/09/2021

MANIFEST EPA: EPA Hazardous Waste Electronic Manifest System (e-Manifest)

Agency Version Date: 08/16/2021
Agency Update Frequency: Quarterly
Planned Next Contact: 02/08/2022
Agency: Environmental Protection Agency
Agency Contact: (202) 566-1667
Most Recent Contact: 11/12/2021

MINES: Mines Master Index Files

Agency Version Date: 10/04/2021
Agency Update Frequency: Varies
Planned Next Contact: 12/29/2021
Agency: Department of Labor
Agency Contact: (202) 693-9400
Most Recent Contact: 10/04/2021

MINES USGS: Listing of all active mines and mineral plants in 2003

Agency Version Date: 10/05/2021
Agency Update Frequency: Varies
Planned Next Contact: 02/11/2022
Agency: USGS Mineral Resources Program
Agency Contact: (703) 648-5953
Most Recent Contact: 11/17/2021

MLTS: Sites in possession/use of radioactive materials regulated by NRC

Agency Version Date: 07/30/2021
Agency Update Frequency: Varies
Planned Next Contact: 01/21/2022
Agency: Nuclear Regulatory Commission
Agency Contact: (800) 397-4209
Most Recent Contact: 10/26/2021

NPL AOC: Areas of Concern related to NPL remediation sites

Agency Version Date: 08/06/2021
Agency Update Frequency: Quarterly
Planned Next Contact: 01/28/2022
Agency: Environmental Protection Agency
Agency Contact: N/R
Most Recent Contact: 11/02/2021

NPL LIENS: National Priority List of sites with Liens

Agency Version Date: 08/06/2021
Agency Update Frequency: Varies
Planned Next Contact: 01/28/2022
Agency: U.S. Environmental Protection Agency
Agency Contact: 703-603-8867
Most Recent Contact: 11/02/2021

OSHA: OSHA's listing of inspections violations and fatality information

Agency Version Date: 07/05/2021
Agency Update Frequency: Varies
Planned Next Contact: 12/27/2021
Agency: Occupational Safety & Health Administration
Agency Contact: 800-321-6742
Most Recent Contact: 09/30/2021

PADS: Listing of generators transporters commercial store/ brokers and disposers of PCB

Agency Version Date: 11/02/2021
Agency Update Frequency: Varies
Planned Next Contact: 01/28/2022
Agency: Environmental Protection Agency
Agency Contact: (703) 308-8404
Most Recent Contact: 11/02/2021

PCB TRANSFORMER: Disposal and Storage of Polychlorinated Biphenyl (PCB) Waste

Agency Version Date: 11/16/2021
Agency Update Frequency: Quarterly
Planned Next Contact: 02/11/2022
Agency: Environmental Protection Agency
Agency Contact: (703) 308-8404
Most Recent Contact: 11/16/2021

OTHER ASCERTAINABLE RECORDS (cont.)

PCS ENF: Permitted facilities to discharge wastewater (Federal equivalent to NPDES)

Agency Version Date: 10/01/2021
Agency Update Frequency: Varies
Planned Next Contact: 12/28/2021
Agency: Environmental Protection Agency
Agency Contact: (202) 564-6582
Most Recent Contact: 10/01/2021

PCS FACILITY: Permitted facilities to discharge wastewater (Federal equivalent to NPDES)

Agency Version Date: 10/01/2021
Agency Update Frequency: Varies
Planned Next Contact: 12/28/2021
Agency: Environmental Protection Agency
Agency Contact: (202) 564-6582
Most Recent Contact: 10/01/2021

PFAS NPL: List of NPL sites with PFAS or PFOA contamination

Agency Version Date: 10/11/2021
Agency Update Frequency: Quarterly
Planned Next Contact: 01/05/2022
Agency: U.S. Environmental Protection Agency
Agency Contact: 703-603-8867
Most Recent Contact: 10/11/2021

PFAS TRIS: List of TRIS sites where PFAS or PFOA are used/manufactured/ treated/ transported/released.

Agency Version Date: 10/01/2021
Agency Update Frequency: Varies
Planned Next Contact: 12/28/2021
Agency: U.S. Environmental Protection Agency
Agency Contact: (202) 566-1667
Most Recent Contact: 10/01/2021

RAATS: Listing of major violators with enforcement actions issued under RCRA. Includes administrative and civil actions filed by the EPA. This dataset is no longer maintained.

Agency Version Date: 09/23/2019
Agency Update Frequency: Varies
Planned Next Contact: 01/20/2022
Agency: Environmental Protection Agency
Agency Contact: (202) 566-1667
Most Recent Contact: 10/26/2021

RADINFO: EPA regulated facilities with radiation and radioactive materials

Agency Version Date: 08/01/2019
Agency Update Frequency: Varies
Planned Next Contact: 01/10/2022
Agency: Environmental Protection Agency
Agency Contact: (202) 566-1667
Most Recent Contact: 10/14/2021

RMP: Facilities producing/handling/ process/ distribute/ store specific chemicals report plans required by the Clean Air Act

Agency Version Date: 07/13/2021
Agency Update Frequency: Monthly
Planned Next Contact: 01/04/2022
Agency: Environmental Protection Agency
Agency Contact: (202) 564-2534
Most Recent Contact: 10/08/2021

ROD: Permanent remedy at an NPL site

Agency Version Date: 08/06/2021
Agency Update Frequency: Varies
Planned Next Contact: 01/28/2022
Agency: Environmental Protection Agency
Agency Contact: (800) 424-9346
Most Recent Contact: 11/02/2021

SCRD DRYCLEANERS: State Coalition for Remediation of Drycleaners

Agency Version Date: 06/14/2021
Agency Update Frequency: No Update
Planned Next Contact: 03/02/2022
Agency: Environmental Protection Agency
Agency Contact: (202) 566-1667
Most Recent Contact: 12/06/2021

OTHER ASCERTAINABLE RECORDS (cont.)

SEMS_SMELTER: This report includes sites that have smelting-related, or potentially smelting-related, indicators in the SEMS database. The report includes information on the site location as well as contaminants of concern.

Agency Version Date: 08/06/2021
Agency Update Frequency: Quarterly
Planned Next Contact: 01/28/2022
Agency: U.S. Environmental Protection Agency
Agency Contact: 703-603-8867
Most Recent Contact: 11/02/2021

SSTS: Tracking of facilities who produce pesticides and their quantity

Agency Version Date: 09/14/2021
Agency Update Frequency: Annually
Planned Next Contact: 12/10/2021
Agency: Environmental Protection Agency
Agency Contact: (202) 566-1667
Most Recent Contact: 09/14/2021

STORMWATER: Permitted storm water sites

Agency Version Date: 09/24/2021
Agency Update Frequency: Varies
Planned Next Contact: 12/21/2021
Agency: Environmental Protection Agency
Agency Contact: (202) 566-1667
Most Recent Contact: 09/24/2021

TOSCA-PLANT: Plants controlled by the Toxic Substance Control Act

Agency Version Date: 06/23/2021
Agency Update Frequency: Varies
Planned Next Contact: 12/16/2021
Agency: Environmental Protection Agency
Agency Contact: (202) 566-1667
Most Recent Contact: 09/20/2021

TRIS: Information regarding toxic chemicals that are being used/manufactured/ treated/ transported/released into the environment

Agency Version Date: 10/01/2021
Agency Update Frequency: Varies
Planned Next Contact: 12/28/2021
Agency: Environmental Protection Agency
Agency Contact: (202) 566-1667
Most Recent Contact: 10/01/2021

UMTRA: Uranium Recovery Sites

Agency Version Date: 07/08/2021
Agency Update Frequency: Varies
Planned Next Contact: 12/29/2021
Agency: United States Nuclear Regulatory Commission
Agency Contact: (301) 415-8200
Most Recent Contact: 10/04/2021

VAPOR: EPA Vapor Intrusion Database

Agency Version Date: 03/19/2021
Agency Update Frequency: Varies
Planned Next Contact: 12/09/2021
Agency: U.S. Environmental Protection Agency
Agency Contact: 855-246-3642
Most Recent Contact: 09/13/2021

AOC_SAN GABRIEL VALLEY - CA: San Gabriel Valley Superfund sites

Agency Version Date: 02/12/2021
Agency Update Frequency: Varies
Planned Next Contact: 01/28/2022
Agency: U.S. Environmental Protection Agency
Agency Contact: 415-972-3181
Most Recent Contact: 11/02/2021

BOND EXPENDITURE PLAN - CA: Hazardous Substance Cleanup Bond Act of 1984 Article 7.5 of Health and Safety Code 25385 listing of orphan sites

Agency Version Date: 09/28/2021
Agency Update Frequency: Quarterly
Planned Next Contact: 12/23/2021
Agency: Department of Toxic Substance Control
Agency Contact: 916-322-2861
Most Recent Contact: 09/28/2021

OTHER ASCERTAINABLE RECORDS (cont.)

BP HW OUT_VENTURA COUNTY - CA: Ventura County Business Plan Hazardous Waste Producers and Operating Underground Tanks

Agency Version Date: 11/12/2021
Agency Update Frequency: Quarterly
Planned Next Contact: 02/08/2022
Agency: Ventura County Environmental Health Division
Agency Contact: 805-654-2815
Most Recent Contact: 11/12/2021

BUSINESS INVENTORY_SAN MATEO COUNTY - CA: San Mateo County listing of underground storage tanks, hazardous materials, business plans, and hazardous waste generators

Agency Version Date: 10/11/2021
Agency Update Frequency: Annually
Planned Next Contact: 01/05/2022
Agency: San Mateo County Environmental Health Services Division
Agency Contact: 650-372-6200
Most Recent Contact: 10/11/2021

CALEPA SITES - CA: CalEPA Regulated Sites from the Certified Unified Program Agencies (CUPA).

Agency Version Date: 10/08/2021
Agency Update Frequency: Quarterly
Planned Next Contact: 12/31/2021
Agency: California Environmental Protection Agency Unified Program Section
Agency Contact: 916-327-5092
Most Recent Contact: 10/08/2021

CIWQS - CA: California Integrated Water Quality System database facilities listing which includes owner information, violations, inspections, and other regulatory matters

Agency Version Date: 09/24/2021
Agency Update Frequency: Varies
Planned Next Contact: 12/21/2021
Agency: CA State Water Resources Control Board
Agency Contact: 916-341-5791
Most Recent Contact: 09/24/2021

CIWQS 2 - CA: California Integrated Water Quality System database facilities listing which includer owner information violations inspections and other regulatory matters

Agency Version Date: 10/14/2021
Agency Update Frequency: Quarterly
Planned Next Contact: 01/10/2022
Agency: CA State Water Resources Control Board
Agency Contact: 916-341-5791
Most Recent Contact: 10/14/2021

CORTESE - CA: Compliance document used in providing information about the location of hazardous material release sites utilized by the state local agencies and developers

Agency Version Date: 07/01/2021
Agency Update Frequency: Quarterly
Planned Next Contact: 12/23/2021
Agency: Department of Toxic Substance Control
Agency Contact: 916-322-2861
Most Recent Contact: 09/27/2021

CUPA_BUTTE COUNTY - CA: Listing of the Butte County Certified Unified Program Agency`s hazardous material program sites

Agency Version Date: 03/19/2018
Agency Update Frequency: No Longer Maintained
Planned Next Contact: 02/23/2022
Agency: Butte County Environmental Health
Agency Contact: 530.538.7281
Most Recent Contact: 11/29/2021

CUPA_FRESNO COUNTY - CA: Listing of the Fresno County Certified Unified Program Agency's hazardous material program sites

Agency Version Date: 10/04/2021
Agency Update Frequency: Quarterly
Planned Next Contact: 12/29/2021
Agency: Fresno County Department of Public Health
Agency Contact: 559-600-3271
Most Recent Contact: 10/04/2021

CUPA_PLACER COUNTY - CA: Listing of the Placer County Certified Unified Program Agency's hazardous material program sites

Agency Version Date: 10/29/2021
Agency Update Frequency: Quarterly
Planned Next Contact: 01/25/2022
Agency: Placer County Environmental Health
Agency Contact: 530-745-2350
Most Recent Contact: 10/29/2021

OTHER ASCERTAINABLE RECORDS (cont.)

DAYCARE - CA: List of daycare locations

Agency Version Date: 07/26/2021
Agency Update Frequency: Quarterly
Planned Next Contact: 01/18/2022
Agency: California Department of Social Services
Agency Contact: 916-651-6040
Most Recent Contact: 10/22/2021

DRYCLEANERS - CA: Listing of drycleaning facilities

Agency Version Date: 09/09/2014
Agency Update Frequency: Quarterly
Planned Next Contact: 12/22/2021
Agency: California EPA Air Resources Board
Agency Contact: 916-324-3013
Most Recent Contact: 09/27/2021

DRYCLEANERS_AMADOR COUNTY - CA: Listing of drycleaning facilities in Amador County

Agency Version Date: 11/02/2016
Agency Update Frequency: Varies
Planned Next Contact: 12/10/2021
Agency: Amador County APCD
Agency Contact: (209) 223-6439
Most Recent Contact: 09/13/2021

DRYCLEANERS_ANTELOPE VALLEY - CA: Listing of drycleaning facilities in Antelope Valley

Agency Version Date: 11/16/2021
Agency Update Frequency: Varies
Planned Next Contact: 02/11/2022
Agency: Antelope Valley AQMD
Agency Contact: 661-723-8070
Most Recent Contact: 11/16/2021

DRYCLEANERS_BAY AREA - CA: Listing of drycleaning facilities in Bay Area

Agency Version Date: 07/01/2021
Agency Update Frequency: Quarterly
Planned Next Contact: 12/21/2021
Agency: Bay Area AQMD
Agency Contact: 415-749-4784
Most Recent Contact: 09/24/2021

DRYCLEANERS_BUTTE COUNTY - CA: Listing of drycleaning facilities in Butte County

Agency Version Date: 12/11/2019
Agency Update Frequency: Semi Annually
Planned Next Contact: 01/25/2022
Agency: Butte County AQMD
Agency Contact: 530-332-9400 ext. 107
Most Recent Contact: 10/29/2021

DRYCLEANERS_CALAVERAS COUNTY - CA: Listing of drycleaning facilities in Calaveras County

Agency Version Date: 11/19/2015
Agency Update Frequency: Varies
Planned Next Contact: 01/21/2022
Agency: Calaveras County APCD
Agency Contact: 209-754-6504
Most Recent Contact: 10/26/2021

DRYCLEANERS_COLUSA COUNTY - CA: Listing of drycleaning facilities in Colusa County

Agency Version Date: 09/08/2014
Agency Update Frequency: Quarterly
Planned Next Contact: 01/25/2022
Agency: Colusa County APCD
Agency Contact: 530-458-0590
Most Recent Contact: 10/29/2021

DRYCLEANERS_EASTERN KERN COUNTY - CA: Listing of drycleaning facilities in Eastern Kern County

Agency Version Date: 10/29/2021
Agency Update Frequency: Varies
Planned Next Contact: 01/25/2022
Agency: Eastern Kern County APCD
Agency Contact: 661-862-5250
Most Recent Contact: 10/29/2021

DRYCLEANERS_EL DORADO COUNTY - CA: Listing of drycleaning facilities in El Dorado County

Agency Version Date: 03/18/2016
Agency Update Frequency: Varies
Planned Next Contact: 01/25/2022
Agency: El Dorado County AQMD
Agency Contact: 530-621-7503
Most Recent Contact: 10/29/2021

OTHER ASCERTAINABLE RECORDS (cont.)

DRYCLEANERS_FEATHER RIVER - CA: Listing of drycleaning facilities in Feather River

Agency Version Date: 09/24/2021
Agency Update Frequency: Varies
Planned Next Contact: 12/21/2021
Agency: Feather River AQMD
Agency Contact: 530-634-7659 ext. 205
Most Recent Contact: 09/24/2021

DRYCLEANERS_GLENN COUNTY - CA: Listing of drycleaning facilities in Glenn County

Agency Version Date: 10/29/2012
Agency Update Frequency: Varies
Planned Next Contact: 02/11/2022
Agency: Glenn County APCD
Agency Contact: 530-934-6500
Most Recent Contact: 11/16/2021

DRYCLEANERS_GREAT BASIN UNIFIED - CA: Listing of drycleaning facilities in the Great Basin Unified region

Agency Version Date: 09/09/2014
Agency Update Frequency: Varies
Planned Next Contact: 01/04/2022
Agency: Great Basin Unified APCD
Agency Contact: 760-872-8211 ext. 228
Most Recent Contact: 10/08/2021

DRYCLEANERS_IMPERIAL COUNTY - CA: Listing of drycleaning facilities in Imperial County

Agency Version Date: 02/12/2021
Agency Update Frequency: Annually
Planned Next Contact: 01/25/2022
Agency: Imperial County APCD
Agency Contact: 760-482-4606
Most Recent Contact: 10/29/2021

DRYCLEANERS_LAKE COUNTY - CA: Listing of drycleaning facilities in Lake County

Agency Version Date: 03/29/2016
Agency Update Frequency: Varies
Planned Next Contact: 01/21/2022
Agency: Lake County AQMD
Agency Contact: 707-263-7000
Most Recent Contact: 10/26/2021

DRYCLEANERS_LASSEN COUNTY - CA: Listing of drycleaning facilities in Lassen County

Agency Version Date: 05/16/2013
Agency Update Frequency: Varies
Planned Next Contact: 02/08/2022
Agency: Lassen County APCD
Agency Contact: 530-257-1045
Most Recent Contact: 11/12/2021

DRYCLEANERS_MENDOCINO COUNTY - CA: Listing of drycleaning facilities in Mendocino County

Agency Version Date: 08/24/2016
Agency Update Frequency: Varies
Planned Next Contact: 01/17/2022
Agency: Mendocino County AQMD
Agency Contact: 707-463-4354
Most Recent Contact: 10/21/2021

DRYCLEANERS_MOJAVE DESERT - CA: Listing of drycleaning facilities in the Mojave Desert region

Agency Version Date: 11/16/2021
Agency Update Frequency: Varies
Planned Next Contact: 02/11/2022
Agency: Mojave Desert AQMD
Agency Contact: 661-723-8070
Most Recent Contact: 11/16/2021

DRYCLEANERS_MONTEREY BAY - CA: Listing of drycleaning facilities in the Monterey Bay region

Agency Version Date: 09/13/2021
Agency Update Frequency: Varies
Planned Next Contact: 12/10/2021
Agency: Monterey Bay Unified APCD
Agency Contact: 831-647-9418 ext.240
Most Recent Contact: 09/13/2021

DRYCLEANERS_NORTH COAST UNIFIED - CA: Listing of drycleaning facilities in the North Coast region

Agency Version Date: 11/01/2017
Agency Update Frequency: Varies
Planned Next Contact: 12/29/2021
Agency: North Coast Unified AQMD
Agency Contact: 707-443-3093 ext. 111
Most Recent Contact: 10/05/2021

OTHER ASCERTAINABLE RECORDS (cont.)

DRYCLEANERS_NORTHERN SIERRA - CA: Listing of drycleaning facilities in the Northern Sierra region

Agency Version Date: 09/08/2014
Agency Update Frequency: No Update
Planned Next Contact: 03/03/2022
Agency: Northern Sierra AQMD
Agency Contact: 530-274-9360 ext. 106
Most Recent Contact: 12/07/2021

DRYCLEANERS_NORTHERN SONOMA COUNTY - CA: Listing of drycleaning facilities in Northern Sonoma County

Agency Version Date: 06/01/2018
Agency Update Frequency: Varies
Planned Next Contact: 02/11/2022
Agency: Northern Sonoma County APCD
Agency Contact: 707-433-5911
Most Recent Contact: 11/16/2021

DRYCLEANERS_PLACER COUNTY - CA: Listing of drycleaning facilities in Placer County

Agency Version Date: 05/02/2018
Agency Update Frequency: Quarterly
Planned Next Contact: 02/21/2022
Agency: Placer County APCD
Agency Contact: 530-745-2324
Most Recent Contact: 11/25/2021

DRYCLEANERS_SACRAMENTO COUNTY - CA: Listing of drycleaning facilities in Sacramento County

Agency Version Date: 09/13/2021
Agency Update Frequency: Quarterly
Planned Next Contact: 12/10/2021
Agency: Sacramento Metro AQMD
Agency Contact: 916-874-4817
Most Recent Contact: 09/13/2021

DRYCLEANERS_SAN DIEGO COUNTY - CA: Listing of drycleaning facilities in San Diego County

Agency Version Date: 05/20/2019
Agency Update Frequency: Varies
Planned Next Contact: 02/11/2022
Agency: San Diego County APCD
Agency Contact: 858-586-2618
Most Recent Contact: 11/16/2021

DRYCLEANERS_SAN JOAQUIN VALLEY - CA: Listing of drycleaning facilities in the San Joaquin Valley

Agency Version Date: 08/13/2021
Agency Update Frequency: Varies
Planned Next Contact: 02/04/2022
Agency: San Joaquin Valley APCD
Agency Contact: 559-230-5936
Most Recent Contact: 11/09/2021

DRYCLEANERS_SAN LUIS OBISPO - CA: Listing of drycleaning facilities in the San Luis Obispo region

Agency Version Date: 08/24/2021
Agency Update Frequency: Varies
Planned Next Contact: 02/15/2022
Agency: San Luis Obispo County APCD
Agency Contact: 805-781-5912
Most Recent Contact: 11/19/2021

DRYCLEANERS_SANTA BARBARA COUNTY - CA: Listing of drycleaning facilities in Santa Barbara County

Agency Version Date: 08/20/2021
Agency Update Frequency: Varies
Planned Next Contact: 02/09/2022
Agency: Santa Barbara County APCD
Agency Contact: 805-961-8867
Most Recent Contact: 11/16/2021

DRYCLEANERS_SHASTA COUNTY - CA: Listing of drycleaning facilities in Shasta County

Agency Version Date: 02/12/2021
Agency Update Frequency: Varies
Planned Next Contact: 01/25/2022
Agency: Shasta County AQMD
Agency Contact: 530-225-5674
Most Recent Contact: 10/29/2021

DRYCLEANERS_SISKIYOU COUNTY - CA: Listing of drycleaning facilities in Siskiyou County

Agency Version Date: 09/08/2014
Agency Update Frequency: Varies
Planned Next Contact: 01/13/2022
Agency: Siskiyou County APCD
Agency Contact: N/R
Most Recent Contact: 10/19/2021

OTHER ASCERTAINABLE RECORDS (cont.)

DRYCLEANERS_SOUTH COAST - CA: Listing of drycleaning facilities in the South Coast region

Agency Version Date: 08/27/2021
Agency Update Frequency: Varies
Planned Next Contact: 02/18/2022
Agency: South Coast AQMD
Agency Contact: 909-396-2000
Most Recent Contact: 11/23/2021

DRYCLEANERS_TEHAMA COUNTY - CA: Listing of drycleaning facilities in Tehama County

Agency Version Date: 11/29/2021
Agency Update Frequency: Varies
Planned Next Contact: 02/25/2022
Agency: Tehama County APCD
Agency Contact: 530-527-3717 ext.100
Most Recent Contact: 11/29/2021

DRYCLEANERS_TUOLUMNE COUNTY - CA: Listing of drycleaning facilities in Tuolumne County

Agency Version Date: 09/21/2020
Agency Update Frequency: Varies
Planned Next Contact: 03/03/2022
Agency: Tuolumne County APCD
Agency Contact: 209-533-6678
Most Recent Contact: 12/07/2021

DRYCLEANERS_VENTURA COUNTY - CA: Listing of drycleaning facilities in Ventura County

Agency Version Date: 08/04/2021
Agency Update Frequency: Varies
Planned Next Contact: 01/25/2022
Agency: Ventura County APCD
Agency Contact: 805-645-1405
Most Recent Contact: 10/29/2021

DRYCLEANERS_YOLO-SOLANO COUNTIES - CA: Listing of drycleaning facilities in Yolo and Solano Counties

Agency Version Date: 11/19/2021
Agency Update Frequency: Varies
Planned Next Contact: 02/15/2022
Agency: Yolo-Solano AQMD
Agency Contact: 530-757-3664
Most Recent Contact: 11/19/2021

EMI - CA: An estimation of air pollution for a listing of air permitted facilities

Agency Version Date: 09/14/2021
Agency Update Frequency: Varies
Planned Next Contact: 12/10/2021
Agency: California Air Resources Board
Agency Contact: 916-327-6251
Most Recent Contact: 09/14/2021

FA - CA: Listing of the Department of Toxic Substance Control's Financial Assurance report sites and facilities

Agency Version Date: 07/30/2021
Agency Update Frequency: Varies
Planned Next Contact: 01/21/2022
Agency: Department of Toxic Substance Control
Agency Contact: 916-322-2861
Most Recent Contact: 10/26/2021

FA 2 - CA: Financial Assurance Information for solid waste facilities

Agency Version Date: 02/27/2020
Agency Update Frequency: Varies
Planned Next Contact: 01/13/2022
Agency: Department of Environment & Natural Resources
Agency Contact: 916-341-6066
Most Recent Contact: 10/19/2021

FIRE AREAS - CA: The multi-agency statewide database of fire perimeters.

Agency Version Date: 07/15/2021
Agency Update Frequency: No Update
Planned Next Contact: 01/06/2022
Agency: California Department of Forestry and Fire Protection
Agency Contact: 916-445-4302
Most Recent Contact: 10/11/2021

GCC_SANTA CLARA VALLEY - CA: Santa Clara Valley groundwater contamination cleanups listing

Agency Version Date: 09/01/2021
Agency Update Frequency: Varies
Planned Next Contact: 02/23/2022
Agency: CA State Water Resources Control Board
Agency Contact: 916-341-5791
Most Recent Contact: 11/29/2021

OTHER ASCERTAINABLE RECORDS (cont.)

HAZMAT INCIDENT_CONTRA COSTA COUNTY - CA: Listing of hazardous material incident sites since 1993 in Contra Costa County

Agency Version Date: 08/13/2021
Agency Update Frequency: Varies
Planned Next Contact: 02/04/2022
Agency: Contra Costa Health Services Department
Agency Contact: 925-335-3200
Most Recent Contact: 11/09/2021

HAZMAT_CITY OF SAN JOSE - CA: City of San Jose hazardous material facilities listing

Agency Version Date: 01/05/2021
Agency Update Frequency: Quarterly
Planned Next Contact: 12/21/2021
Agency: Santa Clara County Department of Environmental Health
Agency Contact: 408-918-1951
Most Recent Contact: 09/24/2021

HAZMAT_SACRAMENTO COUNTY - CA: Sacramento county hazardous material facilities listing

Agency Version Date: 08/20/2021
Agency Update Frequency: Quarterly
Planned Next Contact: 02/09/2022
Agency: Sacramento County Environmental Management
Agency Contact: 916-875-8550
Most Recent Contact: 11/16/2021

HAZMAT_SAN BERNARDINO COUNTY - CA: San Bernardino county listing of hazardous material permitted facilities

Agency Version Date: 11/09/2021
Agency Update Frequency: Quarterly
Planned Next Contact: 02/04/2022
Agency: San Bernardino County Fire Department Hazardous Materials Division
Agency Contact: 909-386-8419
Most Recent Contact: 11/09/2021

HAZMAT_SAN DIEGO COUNTY - CA: San Diego county listing of hazardous material permitted facilities

Agency Version Date: 11/09/2021
Agency Update Frequency: Quarterly
Planned Next Contact: 02/03/2022
Agency: Hazardous Materials Management Division
Agency Contact: 858-505-6700
Most Recent Contact: 11/09/2021

HAZMAT_SANTA CLARA COUNTY - CA: Santa Clara county hazardous material facilities listing

Agency Version Date: 11/19/2021
Agency Update Frequency: Annually
Planned Next Contact: 02/15/2022
Agency: Santa Clara Department of Environmental Health
Agency Contact: 408-918-3428
Most Recent Contact: 11/19/2021

HAZNET - CA: Listing of hazardous waste manifests from when hazardous waste is transported from generators to permitted recycling treatment storage or disposal facilities by registered hazardous waste transporters

Agency Version Date: 04/05/2021
Agency Update Frequency: Annually
Planned Next Contact: 12/22/2021
Agency: California Environmental Protection Agency
Agency Contact: 916-341-5791
Most Recent Contact: 09/27/2021

HAZWASTE_ORANGE COUNTY - CA: Orange County hazardous waste facilities

Agency Version Date: 11/12/2021
Agency Update Frequency: Annually
Planned Next Contact: 02/08/2022
Agency: Orange County Health Care Agency
Agency Contact: 714-433-6000
Most Recent Contact: 11/12/2021

HIGH FIRE - CA: Fire hazard severity zones mapped as areas of significant fire hazards on the basis of fuels terrain weather and other factors

Agency Version Date: 03/22/2021
Agency Update Frequency: No update
Planned Next Contact: 12/09/2021
Agency: California Department of Forestry and Fire Protection
Agency Contact: 916-445-4302
Most Recent Contact: 09/13/2021

OTHER ASCERTAINABLE RECORDS (cont.)

HIST CORTESE - CA: The historical compliance document used in providing information about the location of hazardous material release sites utilized by the state local agencies and developers

Agency Version Date: 11/09/2021
Agency Update Frequency: Quarterly
Planned Next Contact: 02/03/2022
Agency: Department of Toxic Substance Control
Agency Contact: 916-322-2861
Most Recent Contact: 11/09/2021

HIST HAZNET - CA: List of hazardous waste manifests from when hazardous waste is transported from generators to permitted recycling treatment storage or disposal facilities by registered hazardous waste transporters that are no longer in current agency list.

Agency Version Date: 10/10/2018
Agency Update Frequency: Annually
Planned Next Contact: 02/18/2022
Agency: California Environmental Protection Agency
Agency Contact: 916-341-5791
Most Recent Contact: 11/24/2021

HIST HMS_LOS ANGELES COUNTY - CA: List of Los Angeles county industrial waste and underground storage tank sites that are no longer in current agency list.

Agency Version Date: 09/15/2018
Agency Update Frequency: Annually
Planned Next Contact: 12/20/2021
Agency: County of Los Angeles Department of Public Works
Agency Contact: 626-458-3518
Most Recent Contact: 09/23/2021

HIST HWP - CA: List of the Department of Toxic Substance Control's hazardous waste transporters and corrective action that are no longer in current agency list.

Agency Version Date: 01/18/2019
Agency Update Frequency: Annually
Planned Next Contact: 01/25/2022
Agency: Department of Toxic Substance Control
Agency Contact: 916-322-2861
Most Recent Contact: 10/29/2021

HIST LDS - CA: List of areas of land on or in which hazardous waste is placed or the largest area in which there is significant likelihood of mixing hazardous waste constituents in the same area that are no longer in current agency list.

Agency Version Date: 05/20/2018
Agency Update Frequency: Annually
Planned Next Contact: 02/24/2022
Agency: State Water Qualilty Control Board
Agency Contact: 916-341-5791
Most Recent Contact: 11/30/2021

HIST MCS - CA: List of the State Water Resources Control Boards investigation and remediation of water quality issues at military facilities that is no longer in current agency list.

Agency Version Date: 09/24/2018
Agency Update Frequency: No Longer Maintained
Planned Next Contact: 12/20/2021
Agency: State Water Resources Control Board
Agency Contact: 916-341-5791
Most Recent Contact: 09/23/2021

HIST NFA - CA: Historical No further action cleanup sites listing

Agency Version Date: 02/21/2019
Agency Update Frequency: Quarterly
Planned Next Contact: 02/10/2022
Agency: Department of Toxic Substances Control
Agency Contact: 916-322-2861
Most Recent Contact: 11/16/2021

HMS_LOS ANGELES COUNTY - CA: Listing of Los Angeles county industrial waste and underground storage tank sites

Agency Version Date: 04/02/2021
Agency Update Frequency: Monthly
Planned Next Contact: 12/21/2021
Agency: County of Los Angeles Department of Public Works
Agency Contact: 626-458-3518
Most Recent Contact: 09/24/2021

OTHER ASCERTAINABLE RECORDS (cont.)

HWM COMMERCIAL FACILITIES - CA: Listing of all commercial hazardous waste permitted off-site transfer recycling treatment storage and disposal facilities

Agency Version Date: 10/25/2021
Agency Update Frequency: Varies
Planned Next Contact: 01/20/2022
Agency: Department of Toxic Substance Control
Agency Contact: 916-322-5308
Most Recent Contact: 10/25/2021

HWP - CA: Facility listing of the Department of Toxic Substance Control's hazardous waste transporters and corrective action

Agency Version Date: 11/02/2021
Agency Update Frequency: Quarterly
Planned Next Contact: 01/28/2022
Agency: Department of Toxic Substance Control
Agency Contact: 916-322-2861
Most Recent Contact: 11/02/2021

HWT - CA: Listing of registered hazardous waste transporters

Agency Version Date: 11/05/2021
Agency Update Frequency: Quarterly
Planned Next Contact: 02/01/2022
Agency: Department of Toxic Substance Control
Agency Contact: 916-322-2861
Most Recent Contact: 11/05/2021

LDS - CA: List of Land Disposal Cleanup Sites from Geotracker

Agency Version Date: 08/03/2021
Agency Update Frequency: Quarterly
Planned Next Contact: 01/25/2022
Agency: State Water Resources Control Board
Agency Contact: 916-341-5791
Most Recent Contact: 10/29/2021

LOP_SANTA CLARA COUNTY - CA: Santa Clara county leaking underground storage tank sites

Agency Version Date: 07/21/2017
Agency Update Frequency: No Longer Maintained
Planned Next Contact: 01/20/2022
Agency: Department of Environmental Health
Agency Contact: 408-280-6479
Most Recent Contact: 10/26/2021

MCS - CA: List of Military Cleanup Sites from Geotracker

Agency Version Date: 08/03/2021
Agency Update Frequency: Quarterly
Planned Next Contact: 01/25/2022
Agency: State Water Resources Control Board
Agency Contact: 916-341-5791
Most Recent Contact: 10/29/2021

MWMP - CA: Listing of treatment and transfer stations that properly handle and dispose of medical waste that are permitted and inspected by the Medical Waste Management Program

Agency Version Date: 11/02/2021
Agency Update Frequency: Varies
Planned Next Contact: 01/28/2022
Agency: California-Health Human Services Department of Public Health
Agency Contact: 916-449-5661
Most Recent Contact: 11/02/2021

MWMP 2 - CA: Listing of facilities that generate permitted medical waste and are inspected by the Medical Waste Management Program

Agency Version Date: 10/19/2021
Agency Update Frequency: Quarterly
Planned Next Contact: 01/13/2022
Agency: California-Health Human Services Department of Public Health
Agency Contact: 916-449-5661
Most Recent Contact: 10/19/2021

NFA - CA: No further action cleanup sites listing

Agency Version Date: 09/28/2021
Agency Update Frequency: Quarterly
Planned Next Contact: 12/23/2021
Agency: Department of Toxic Substances Control
Agency Contact: 916-322-2861
Most Recent Contact: 09/28/2021

OTHER ASCERTAINABLE RECORDS (cont.)

NFE - CA: Unconfirmed contaminated properties listing

Agency Version Date: 09/24/2021
Agency Update Frequency: Quarterly
Planned Next Contact: 12/22/2021
Agency: Department of Toxic Substances Control
Agency Contact: 916-322-2861
Most Recent Contact: 09/24/2021

NPDES - CA: Listing of facilities with wastewater and NPDES permits including stormwater

Agency Version Date: 09/03/2021
Agency Update Frequency: Quarterly
Planned Next Contact: 02/24/2022
Agency: State Water Resources Control Board
Agency Contact: 916-341-5810
Most Recent Contact: 11/30/2021

PERCHLORATE 2 - CA: Listing of contaminated sites where the primary known chemical is perchlorate

Agency Version Date: 09/24/2021
Agency Update Frequency: Quarterly
Planned Next Contact: 12/21/2021
Agency: Department of Toxic Substances Control
Agency Contact: 916-322-2861
Most Recent Contact: 09/24/2021

PFAS - CA: List of PFAS sites and areas of interest

Agency Version Date: 10/12/2021
Agency Update Frequency: Quarterly
Planned Next Contact: 01/07/2022
Agency: California State Water Resources Control Board
Agency Contact: N/R
Most Recent Contact: 10/12/2021

PFAS DOD - CA: List of DoD facilities conducting PFAS investigations

Agency Version Date: 10/12/2021
Agency Update Frequency: Quarterly
Planned Next Contact: 01/07/2022
Agency: California State Water Resources Control Board
Agency Contact: N/R
Most Recent Contact: 10/12/2021

PROPOSITION 65 - CA: Listing of Proposition 65 enforcement reporting notice sites in accordance with "The Safe Drinking Water and Toxic Enforcement Act of 1986"

Agency Version Date: 06/11/2021
Agency Update Frequency: No update
Planned Next Contact: 03/01/2022
Agency: State of California Department of JusticeOffice of the Attorney General
Agency Contact: 510-873-6321
Most Recent Contact: 12/03/2021

RFR - CA: State Water Resources Control Board Regulated Facility Report database listing which includes program agency type and their permit status

Agency Version Date: 09/10/2021
Agency Update Frequency: Varies
Planned Next Contact: 03/03/2022
Agency: CA State Water Resources Control Board
Agency Contact: 916-341-5810
Most Recent Contact: 12/07/2021

SITES INVENTORY_VENTURA COUNTY - CA: Listing of Ventura County inventory of closed illegal abandoned and inactive sites

Agency Version Date: 05/14/2021
Agency Update Frequency: Annually
Planned Next Contact: 02/01/2022
Agency: Environmental Health Division
Agency Contact: 805-654-2815
Most Recent Contact: 11/05/2021

SMU_SANTA BARBARA COUNTY - CA: Site Mitigation Unit site assessment and corrective actions at properties in Santa Barbara County

Agency Version Date: 10/08/2021
Agency Update Frequency: Varies
Planned Next Contact: 12/31/2021
Agency: Santa Barbara County APCD
Agency Contact: (805) 681-4900
Most Recent Contact: 10/08/2021

OTHER ASCERTAINABLE RECORDS (cont.)

SWAT - CA: The SWAT Reports Summary Data and the Waste Management Unit Database were published by State Water Resources Control Board staff and the Regional Water Quality Control Boards for tracking and inventory of waste management units.

Agency Version Date: 08/08/2015
Agency Update Frequency: No Longer Maintained
Planned Next Contact: 02/17/2022
Agency: Department of Ecology
Agency Contact: 916-322-2861
Most Recent Contact: 11/23/2021

VCCP_VENTURA COUNTY - CA: Listing of Ventura County cleanup program sites

Agency Version Date: 05/13/2021
Agency Update Frequency: Annually
Planned Next Contact: 01/31/2022
Agency: Environmental Health Division
Agency Contact: 805-654-2815
Most Recent Contact: 11/04/2021

WDS - CA: Listing of waste discharge system reporting facilities

Agency Version Date: 10/22/2021
Agency Update Frequency: Quarterly
Planned Next Contact: 01/18/2022
Agency: State Water Resources Control Board
Agency Contact: 916-341-5810
Most Recent Contact: 10/22/2021

WILDLANDS - CA: The Wildlands Conservancy listing of preserves in California

Agency Version Date: 08/23/2021
Agency Update Frequency: Varies
Planned Next Contact: 02/14/2022
Agency: The Wildlands Conservancy
Agency Contact: 909-797-8507
Most Recent Contact: 11/18/2021

WIP - CA: Listing of Well Investigation Program cases in the San Gabriel and San Fernando Valley area

Agency Version Date: 07/01/2009
Agency Update Frequency: Varies
Planned Next Contact: 02/08/2022
Agency: Los Angeles Water Quality Control Board
Agency Contact: 916-341-5810
Most Recent Contact: 11/12/2021

OTHER

SEISMIC - CA: Earthquake Zones of Required Investigation. Shows the location of both Seismic Hazard Zones and Earthquake Fault Zones

Agency Version Date: 04/30/2021
Agency Update Frequency: Varies
Planned Next Contact: 01/18/2022
Agency: State of California Department of Conservation
Agency Contact: 916-324-7299
Most Recent Contact: 10/22/2021

SUBJECT PROPERTY ADDRESS:

300-Acre Hanford
Portion
Hanford, CA

SUBJECT PROPERTY COORDINATES:

Latitude(North):	36.364527 - 36°21'52.3"
Longitude(West):	-119.668544 - -119°40'6.8"
Universal Transverse Mercator:	Zone 11N
UTM X (Meters):	260576.25
UTM Y (Meters):	4027688.31

ELEVATION:

Elevation:	256 ft. above sea level

USGS TOPOGRAPHIC MAP:

Subject Property Map:	36119-C6 Hanford, CA
Most Recent Revision:	2018

GEOHYDROLOGY DATA:

SUBJECT PROPERTY TOPOGRAPHY:

Topographic Gradient: South

DFIRM FLOOD ZONE:

	DFIRM Flood
Subject Property County:	Electronic Data:
KINGS	Yes - refer to the PROPERTY PROXIMITY MAP and AREA MAP
Flood Plain Panel at Subject Property:	06031C0185C (Eff. date 6/16/2009)
Additional Panels in search area:	06031C0180C (Eff. date 6/16/2009) 06019C2925J (Eff. date 1/20/2016) 06031C0075C (Eff. date 6/16/2009)

FEMA FLOOD ZONE:

	FEMA Flood
Subject Property County:	Electronic Data:
KINGS	Yes - refer to the PROPERTY PROXIMITY MAP and AREA MAP
Flood Plain Panel at Subject Property:	0600860075B
Additional Panels in search area:	0600880005B

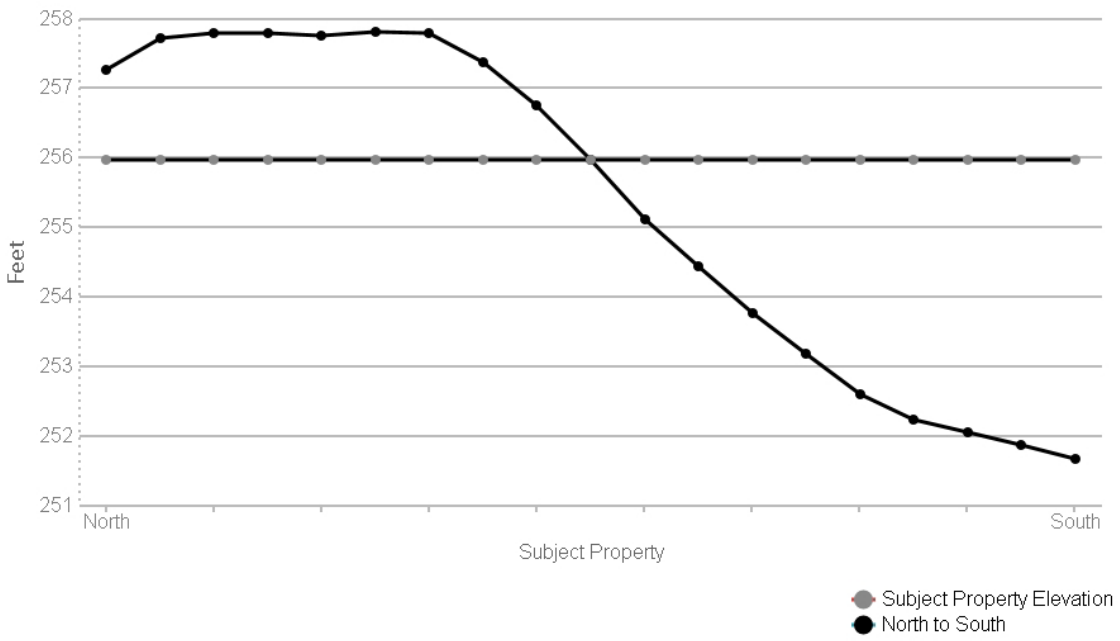
NATIONAL WETLAND INVENTORY:

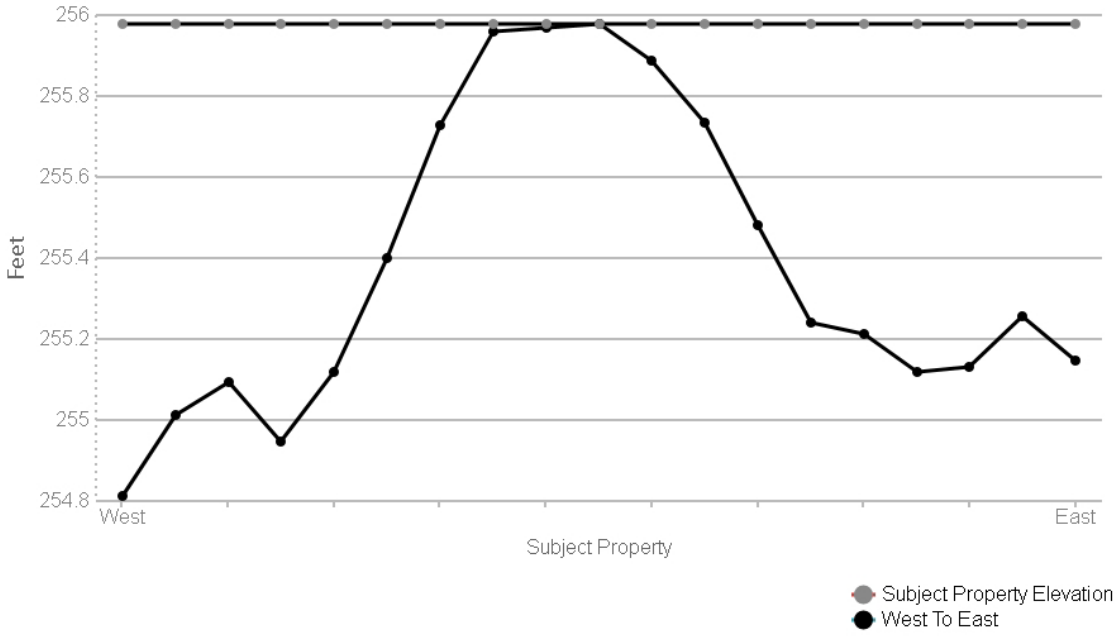
	NWI Electronic
NWI Quad at Subject Property:	Data Coverage:
Hanford	Yes - refer to the Geological Findings Map

LITHOSTRATIGRAPHIC INFORMATION:

ROCK STRATIGRAPHIC UNIT:		GEOLOGIC AGE IDENTIFICATION
Era:	Cenozoic	Category: 4 Q Quaternary
System:	Quaternary	
Series:	Quaternary	
Code:	Q	

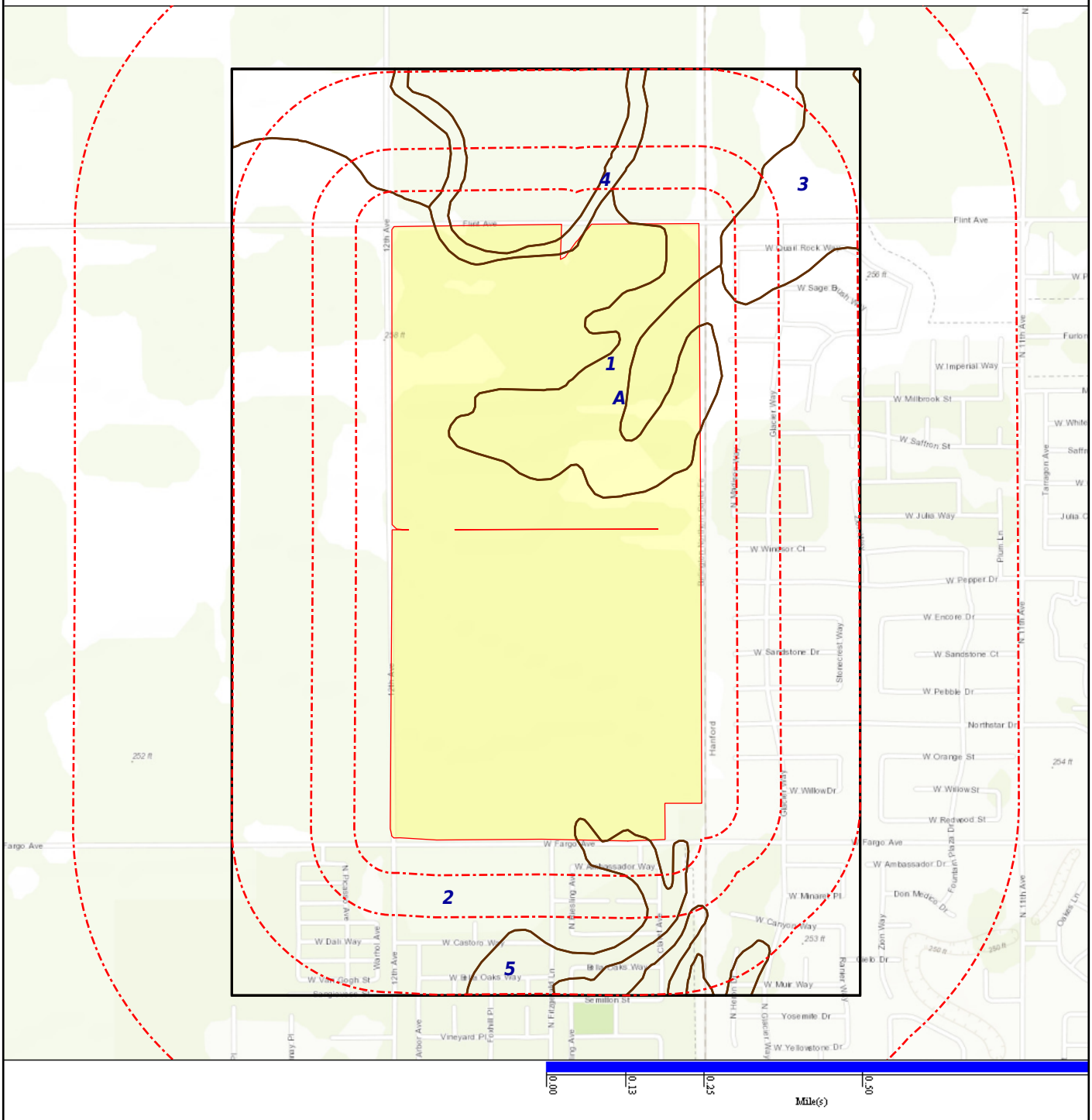
SURROUNDING ELEVATION PROFILES:





SUBJECT NAME: 300-Acre Hanford
ADDRESS: Portion, Hanford, CA
LAT/LONG: 36.364527 / -119.668544

PREPARED FOR: Technicon Engineering Services
ORDER #: 64555
REPORT DATE: December 07, 2021



Subject Property — SSURGO — STATSGO

SOIL COMPOSITION IN GENERAL AREA OF SUBJECT PROPERTY:

Agency source: Soil Conservation Service, US Department of Agriculture

SOIL MAP ID 1	SSURGO
USDA Soil Name	Nord,Series
USDA Soil Texture	Fine sandy loam
Hydrologic Soil Group	B
Soil Drainage Class	Well drained
Hydric Classification	7
Corrosion Potential - Uncoated Steel	High

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
1	0-46	Fine sandy loam	Silt-Clay materials (more than 35% passing NO. 200), silty soils. Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand. Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM, 1984).	4-14	6.6-8.4
2	46-183	Sandy loam	Silt-Clay materials (more than 35% passing NO. 200), silty soils. Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM, 1984).	4-14	7.4-8.4

SOIL MAP ID 2	SSURGO
USDA Soil Name	Nord,Series
USDA Soil Texture	Fine sandy loam
Hydrologic Soil Group	B
Soil Drainage Class	Well drained
Hydric Classification	5
Corrosion Potential - Uncoated Steel	High

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
1	0-46	Fine sandy loam	Silt-Clay materials (more than 35% passing NO. 200), silty soils. Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	FINE-GRAINED SOILS, Silts and clays, (liquid limit is less than 50%), Silt. Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM, 1984).	4-14	6.6-8.4
2	46-183	Sandy loam	Silt-Clay materials (more than 35% passing NO. 200), silty soils. Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM, 1984).	4-14	7.4-8.4

SOIL MAP ID 3 **SSURGO**

USDA Soil Name	Whitewolf,Series
USDA Soil Texture	Coarse sandy loam
Hydrologic Soil Group	A
Soil Drainage Class	Somewhat excessively drained
Hydric Classification	3
Corrosion Potential - Uncoated Steel	Moderate

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
1	0-25	Coarse sandy loam	Granular materials (35% or less passing No. 200), silty or clayey gravel and sand. Reference: This is a classification of soil material for highway and airfield construction (Procedure	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand. Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75	14-42	6.1-8.4

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
1	0-25	Coarse sandy loam	M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM, 1984).	14-42	6.1-8.4
2	25-152	Sand	Granular materials (35% or less passing No. 200 sieve), silty or clayey gravel and sand. Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand. Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM, 1984).	42-141	6.1-8.4

SOIL MAP ID 4 **SSURGO**

USDA Soil Name	Whitewolf,Series
USDA Soil Texture	Coarse sandy loam
Hydrologic Soil Group	A
Soil Drainage Class	Somewhat excessively drained
Hydric Classification	3
Corrosion Potential - Uncoated Steel	Moderate

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
1	0-25	Coarse sandy loam	Granular materials (35% or less passing No. 200), silty or clayey gravel and sand. Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand. Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM,	14-42	6.1-8.4

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
1	0-25	Coarse sandy loam	Granular materials (35% or less passing No. 200), silty or clayey gravel and sand. Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	1984).	14-42	6.1-8.4
2	25-152	Sand	Granular materials (35% or less passing No. 200 sieve), silty or clayey gravel and sand. Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand. Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM, 1984).	42-141	6.1-8.4

SOIL MAP ID 5 **SSURGO**

USDA Soil Name	Nord,Series
USDA Soil Texture	Fine sandy loam
Hydrologic Soil Group	B
Soil Drainage Class	Well drained
Hydric Classification	7
Corrosion Potential - Uncoated Steel	High

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
1	0-46	Fine sandy loam	Silt-Clay materials (more than 35% passing NO. 200), silty soils. Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand. Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and	4-14	6.6-8.4

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
1	0-46	Fine sandy loam	Transportation Officials, 1984.	the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM, 1984).	4-14	6.6-8.4
2	46-183	Sandy loam	Silt-Clay materials (more than 35% passing NO. 200), silty soils. Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM, 1984).	4-14	7.4-8.4

SOIL MAP ID A **STATSGO**

USDA Soil Name	Nord,Series
USDA Soil Texture	Fine sandy loam
Hydrologic Soil Group	B
Soil Drainage Class	Well drained
Hydric Classification	0
Corrosion Potential - Uncoated Steel	High

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
1	0-18	Fine sandy loam	No data	No data	4.2343-14.1143	6.6-8.4
2	18-72	Sandy loam	No data	No data	4.2343-14.1143	7.4-8.4

WATER AGENCY DATA:

WATER AGENCY SEARCH DISTANCES:

DATABASE:	SEARCH DISTANCE (MILES):
NWIS	1.000
OIL & GAS WELLS - CA	1.000
PWS	1.000

WATER AGENCY SEARCH DISTANCES: *(cont.)*

DATABASE:	SEARCH DISTANCE (MILES):
WELLS - GAMA - CA	0.000

DISTANCE TO NEAREST:	DISTANCE:
NWIS	0.000 mi / 0 ft
OIL & GAS WELLS - CA	N/A
PWS	0.006 mi / 33 ft
WELLS - GAMA - CA	0.000 mi / 0 ft

FEDERAL WATER AGENCY DATA SUMMARY:

MAP ID:	WELL ID:	LOCATION FROM SP:
A2	362155119395501	< 1/8 Mile ENE
5	362127119401701	< 1/8 Mile SSW
B7	HANFORD CHRISTIAN SCHOOL SOCIETY | HANFORD CHRISTIAN SCHOOL | CA1600009	< 1/8 Mile NNW
8	362152119395001	< 1/8 Mile E
10	362212119402401	< 1/8 Mile NW
11	362223119402201	< 1/8 Mile NNW
12	362155119402901	1/8 - 1/4 Mile W
13	362224119393901	1/8 - 1/4 Mile NE
14	362115119394801	1/8 - 1/4 Mile SSE
15	TLR-04 | USGS-362128119390001 | 362128119390001	1/8 - 1/4 Mile SE
16	362134119392301	1/4 - 1/2 Mile ESE
17	CA1000625	1/4 - 1/2 Mile E
18	362059119395001	1/2 - 1 Mile SSE
19	362219119405401	1/2 - 1 Mile WNW
20	362249119404601	1/2 - 1 Mile NW
21	362059119405501 | 362059119405502	1/2 - 1 Mile SW
22	362048119400601	1/2 - 1 Mile S
23	362200119410701	1/2 - 1 Mile W
24	362044119401501	1/2 - 1 Mile S
25	CA5402030	1/2 - 1 Mile SSW
26	362038119400601	1/2 - 1 Mile S
27	362222119384701	1/2 - 1 Mile ENE
28	S4-TUSK-TLA10 | USGS-362100119410001 | 362100119410001	1/2 - 1 Mile W
29	362208119412001	1/2 - 1 Mile WNW
30	362037119401801	1/2 - 1 Mile S
31	362037119394801	1/2 - 1 Mile SSE
32	362224119384401	1/2 - 1 Mile ENE
33	362247119385401	1/2 - 1 Mile NE

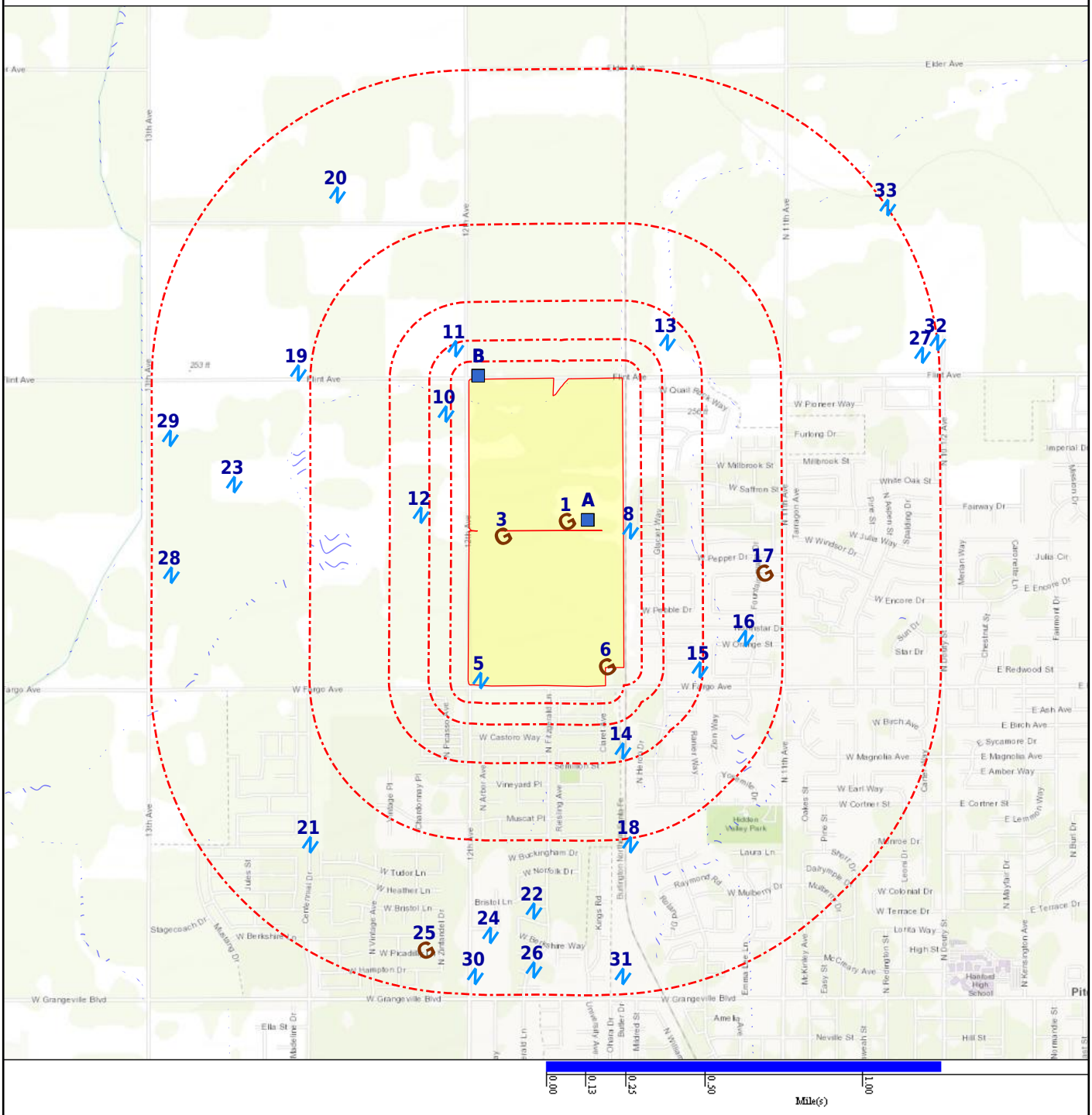
Note: PWS System location is not always the same as well location.

STATE/LOCAL WATER AGENCY DATA SUMMARY:

MAP ID:	WELL ID:	LOCATION FROM SP:
1	88429	< 1/8 Mile ENE
3	18S21E14F001M	< 1/8 Mile W
A4	88429	< 1/8 Mile E
6	1610003-038	< 1/8 Mile SSE
B9	1600009-001	< 1/8 Mile NNW
15	TLR-04 | USGS-362128119390001 | 362128119390001	1/8 - 1/4 Mile SE
28	S4-TUSK-TLA10 | USGS-362100119410001 | 362100119410001	1/2 - 1 Mile W

SUBJECT NAME: 300-Acre Hanford
ADDRESS: Portion, Hanford, CA
LAT/LONG: 36.364527 / -119.668544

PREPARED FOR: Technicon Engineering Services
ORDER #: 64555
REPORT DATE: December 07, 2021



Map Id: 1
Direction: ENE
Distance: 0.000 mi., 0 ft.
Elevation: 257 ft.
Relative: Higher

Site Name : 88429
36.364914, -119.667427
CA

Database(s) : [WELLS - GAMA - CA]

Envirosite ID: 36441192
EPA ID: N/R

WELLS - GAMA - CA

Well ID :	88429
Well Type :	UNK
Well Depth (Ft.) :	150.0
Top of Screen (Ft.) :	N/R
Screen Length (Ft.) :	N/R
Source :	DPR
Source Name :	88429
Other Names :	88429
RL :	UNK
Approximate Latitude :	36.364914
Approximate Longitude :	-119.667427
Last Date in Agency List :	2021-11-26
Chemicals :	1992-05-28 - PROMETON = 0 UG/L 1992-05-28 - ATRAZINE = 0 UG/L 1992-05-28 - SIMAZINE = 0 UG/L 1992-05-28 - DIURON = 0 UG/L

Map Id: A2
Direction: ENE
Distance: 0.000 mi., 0 ft.
Elevation: 257 ft.
Relative: Higher

Site Name : 362155119395501
36.365228, -119.666241
CA

Database(s) : [NWIS]

Envirosite ID: 9256869
EPA ID: N/R

NWIS

Site Identification Number :	362155119395501
Site Type :	Well
Station Name :	018S021E14F001M
Agency :	U.S. Geological Survey
District :	N/R
State :	CA
County :	Kings County
Country :	USA
Land Net Location :	SENWS14 T18S R21E M
Name of Location Map :	HANFORD VISALIA F2
Scale of Location Map :	63360
Altitude of Gage/Land Surface :	252.00
Method Altitude Determined :	Interpolated from topographic map.
Altitude Accuracy :	52
Altitude Datum :	National Geodetic Vertical Datum of 1929
Hydrologic Unit :	Tulare Lake Bed
Drainage Basin :	N/R
Topographic Setting :	N/R
Flags for the Type of Data Collected:	NNNNNNNNNNNNNNNNNNNNNNNNNNNNNO
Flags for Instruments at Site :	NNNNNNNNNNNNNNNNNNNNNNNNNNNNN
Date of First Construction :	1952-01-01
Date Site Established or Inventoried:	N/R
Drainage Area :	N/R
Contributing Drainage Area :	N/R

Map Id: A2
Direction: ENE
Distance: 0.000 mi., 0 ft.
Elevation: 257 ft.
Relative: Higher

Site Name : 362155119395501
36.365228, -119.666241
CA

Database(s) : [NWIS] ***(cont.)***

Envirosite ID: 9256869
EPA ID: N/R

NWIS ***(cont.)***

Data Reliability :	Unchecked data.
Data-Other GW Files :	YYNNNYNN
National Aquifer :	Central Valley aquifer system
Local Aquifer :	N/R
Local Aquifer Type :	N/R
Well Depth :	325
Hole Depth :	N/R
Source of Depth Data :	N/R
Project Number :	N/R
Real-Time Data Flag :	0
Peak-Streamflow Data Begin Date :	N/R
Peak-Streamflow Data End Date :	N/R
Peak-Streamflow Data Count :	0
Water-Quality Data Begin Date :	N/R
Water-Quality Data End Date :	N/R
Water-Quality Data Count :	0
Field Water-Level Measurements Begin Date:	1961-04-05
Field Water-level Measurements End Date:	1961-04-05
Field Water-Level Measurements Count:	1
Site-Visit Data Begin Date :	N/R
Site-Visit Data End Date :	N/R
Site-Visit Data Count :	0
Latitude :	36.365228
Longitude :	-119.666241
Last Date in Agency List :	2021-10-11

Map Id: 3
Direction: W
Distance: 0.000 mi., 0 ft.
Elevation: 256 ft.
Relative: Lower

Site Name : 18S21E14F001M
36.3642, -119.671
CA

Database(s) : [WELLS - GAMA - CA]

Envirosite ID: 36472529
EPA ID: N/R

WELLS - GAMA - CA

Well ID :	18S21E14F001M
Well Type :	UNK
Well Depth (Ft.) :	N/R
Top of Screen (Ft.) :	N/R
Screen Length (Ft.) :	N/R
Source :	DWR
Source Name :	18S21E14F001M
Other Names :	18S21E14F001M
RL :	.1
Approximate Latitude :	36.3642
Approximate Longitude :	-119.671
Last Date in Agency List :	2021-11-26

Map Id: 3
Direction: W
Distance: 0.000 mi., 0 ft.
Elevation: 256 ft.
Relative: Lower

Site Name : 18S21E14F001M
36.3642, -119.671
CA

Database(s) : [WELLS - GAMA - CA] ***(cont.)***

Envirosite ID: 36472529
EPA ID: N/R

WELLS - GAMA - CA ***(cont.)***

Well ID :	18S21E14F001M
Well Type :	UNK
Well Depth (Ft.) :	N/R
Top of Screen (Ft.) :	N/R
Screen Length (Ft.) :	N/R
Source :	DWR
Source Name :	18S21E14F001M
Other Names :	18S21E14F001M
RL :	1
Approximate Latitude :	36.3642
Approximate Longitude :	-119.671
Last Date in Agency List :	2021-11-26

Well ID :	18S21E14F001M
Well Type :	UNK
Well Depth (Ft.) :	N/R
Top of Screen (Ft.) :	N/R
Screen Length (Ft.) :	N/R
Source :	DWR
Source Name :	18S21E14F001M
Other Names :	18S21E14F001M
RL :	.001
Approximate Latitude :	36.3642
Approximate Longitude :	-119.671
Last Date in Agency List :	2021-11-26

Details for this site have been truncated due to the large number of available details for this site within this dataset. For the complete details for this site, contact your Envirosite account representative for a complimentary site report containing all of the details available.

Chemicals :

1963-07-10 - CL = 10 MG/L
1963-07-10 - B = 0 MG/L
1962-08-29 - CL = 14 MG/L
1962-08-29 - B = .65 MG/L
1962-08-29 - K = 1.1 MG/L
1961-08-08 - B = .04 MG/L
1961-08-08 - CL = 11 MG/L
1961-08-08 - ALKCACO3 = 85 MG/L
1961-08-08 - SO4 = 26 MG/L
1961-08-08 - K = .9 MG/L
1961-08-08 - PH = 8.1 PH UNITS
1961-08-08 - MG = 2.8 MG/L
1961-08-08 - F = .1 MG/L
1961-08-08 - NO3N = .32 MG/L
1960-08-02 - ALKCACO3 = 93 MG/L
1960-08-02 - K = 1 MG/L
1960-08-02 - F = .2 MG/L
1960-08-02 - PH = 8.1 PH UNITS
1960-08-02 - SO4 = 31 MG/L
1960-08-02 - MG = 3.5 MG/L

Map Id: A4
Direction: E
Distance: 0.000 mi., 0 ft.
Elevation: 257 ft.
Relative: Higher

Site Name : 88429
36.365, -119.666
CA

Database(s) : [WELLS - GAMA - CA]

Envirosite ID: 30984387
EPA ID: N/R

WELLS - GAMA - CA

Well ID :	88429
Well Type :	UNK
Well Depth (Ft.) :	150.0
Top of Screen (Ft.) :	N/R
Screen Length (Ft.) :	N/R
Source :	DPR
Source Name :	88429
Other Names :	88429
RL :	UNK
Approximate Latitude :	36.365
Approximate Longitude :	-119.666
Last Date in Agency List :	2021-07-27
Chemicals :	1992-05-28 - DIURON = 0 UG/L 1992-05-28 - SIMAZINE = 0 UG/L 1992-05-28 - PROMETON = 0 UG/L 1992-05-28 - ATRAZINE = 0 UG/L

Map Id: 5
Direction: SSW
Distance: 0.000 mi., 0 ft.
Elevation: 253 ft.
Relative: Lower

Site Name : 362127119401701
36.35745, -119.672353
CA

Database(s) : [NWIS]

Envirosite ID: 9214602
EPA ID: N/R

NWIS

Site Identification Number :	362127119401701
Site Type :	Well
Station Name :	018S021E22A001M
Agency :	U.S. Geological Survey
District :	N/R
State :	CA
County :	Kings County
Country :	USA
Land Net Location :	SWSWS14 T18S R21E M
Name of Location Map :	HANFORD VISALIA F2
Scale of Location Map :	63360
Altitude of Gage/Land Surface :	250.00
Method Altitude Determined :	Interpolated from topographic map.
Altitude Accuracy :	52
Altitude Datum :	National Geodetic Vertical Datum of 1929
Hydrologic Unit :	Tulare Lake Bed
Drainage Basin :	N/R
Topographic Setting :	N/R
Flags for the Type of Data Collected:	NNNNNNNNNNNNNNNNNNNNNNNNNNNNNO
Flags for Instruments at Site :	NNNNNNNNNNNNNNNNNNNNNNNNNNNNN
Date of First Construction :	1951-01-01
Date Site Established or Inventoried:	N/R
Drainage Area :	N/R
Contributing Drainage Area :	N/R

Map Id: 5
Direction: SSW
Distance: 0.000 mi., 0 ft.
Elevation: 253 ft.
Relative: Lower

Site Name : 362127119401701
36.35745, -119.672353
CA

Database(s) : [NWIS] ***(cont.)***

Envirosite ID: 9214602
EPA ID: N/R

NWIS ***(cont.)***

Data Reliability :	Unchecked data.
Data-Other GW Files :	YYNNNYNN
National Aquifer :	Central Valley aquifer system
Local Aquifer :	N/R
Local Aquifer Type :	N/R
Well Depth :	55.0
Hole Depth :	N/R
Source of Depth Data :	N/R
Project Number :	N/R
Real-Time Data Flag :	0
Peak-Streamflow Data Begin Date :	N/R
Peak-Streamflow Data End Date :	N/R
Peak-Streamflow Data Count :	0
Water-Quality Data Begin Date :	N/R
Water-Quality Data End Date :	N/R
Water-Quality Data Count :	0
Field Water-Level Measurements Begin Date:	1961-12-12
Field Water-level Measurements End Date:	1961-12-12
Field Water-Level Measurements Count:	1
Site-Visit Data Begin Date :	N/R
Site-Visit Data End Date :	N/R
Site-Visit Data Count :	0
Latitude :	36.35745
Longitude :	-119.672353
Last Date in Agency List :	2021-10-11

Map Id: 6
Direction: SSE
Distance: 0.001 mi., 7 ft.
Elevation: 253 ft.
Relative: Lower

Site Name : 1610003-038
36.3581, -119.665141
CA

Database(s) : [WELLS - GAMA - CA]

Envirosite ID: 23663320
EPA ID: N/R

WELLS - GAMA - CA

Well ID :	1610003-038
Well Type :	MUNICIPAL
Well Depth (Ft.) :	N/R
Top of Screen (Ft.) :	1080.0
Screen Length (Ft.) :	460.0
Source :	DHS
Source Name :	1610003-038
Other Names :	WELL 44 - RAW INAC2020
RL :	UNK
Approximate Latitude :	36.3581
Approximate Longitude :	-119.665141
Last Date in Agency List :	2021-11-26

Map Id: 6
Direction: SSE
Distance: 0.001 mi., 7 ft.
Elevation: 253 ft.
Relative: Lower

Site Name : 1610003-038
36.3581, -119.665141
CA

Database(s) : [WELLS - GAMA - CA] ***(cont.)***

Envirosite ID: 23663320
EPA ID: N/R

WELLS - GAMA - CA ***(cont.)***

Details for this site have been truncated due to the large number of available details for this site within this dataset. For the complete details for this site, contact your Envirosite account representative for a complimentary site report containing all of the details available.

Chemicals :

2018-10-23 - TCPR123 < 0 UG/L
2018-07-24 - TCPR123 < 0 UG/L
2018-05-01 - NO3N < 0 MG/L
2018-05-01 - NO2 < 0 MG/L
2018-04-25 - TCPR123 < 0 UG/L
2017-07-27 - TCPR123 < 0 UG/L
2017-04-19 - NO2 < 0 MG/L
2017-04-19 - NO3N < 0 MG/L
2016-03-08 - BTBZT < 0 UG/L
2016-03-08 - TAME < 0 UG/L
2016-03-08 - TCA112 < 0 UG/L
2016-03-08 - TCE < 0 UG/L
2016-03-08 - BTBZN < 0 UG/L
2016-03-08 - TCB124 < 0 UG/L
2016-03-08 - NO3N < 0 MG/L
2016-03-08 - TBA < 0 UG/L
2016-03-08 - PBZN < 0 UG/L
2016-03-08 - DBCME < 0 UG/L
2016-03-08 - DIPE < 0 UG/L
2016-03-08 - FC11 < 0 UG/L

Map Id: B7
Direction: NNW
Distance: 0.006 mi., 33 ft.
Elevation: 258 ft.
Relative: Higher

Site Name : HANFORD CHRISTIAN SCHOOL SOCIETY | HANFORD CHRISTIAN SCHOOL | CA1600009
11948 FLINT AVE
HANFORD | Hanford, CA

Database(s) : [PWS, PWS ENF]

Envirosite ID: 241613
EPA ID: N/R

PWS

Facility Address : 11948 Flint Avenue, HANFORD, CA 93230

PWS ID :	CA1600009
PWS Type :	Non-Transient non-community system
PWS Name :	HANFORD CHRISTIAN SCHOOL
Activity Status :	Active
Primary Source :	Ground water
Submission Year :	2021
Submission Year Quarter :	2021Q2
Population Served Count :	175
Service Connections Count :	14
Population Category 2 :	<10,000
Population Category 3 :	<=3300
Population Category 4 :	<10K
Population Category 5 :	<=500

Map Id: B7
Direction: NNW
Distance: 0.006 mi., 33 ft.
Elevation: 258 ft.
Relative: Higher

Site Name : HANFORD CHRISTIAN SCHOOL SOCIETY | HANFORD CHRISTIAN SCHOOL | CA1600009
11948 FLINT AVE
HANFORD | Hanford, CA

Database(s) : [PWS, PWS ENF] ***(cont.)***

Envirosite ID: 241613
EPA ID: N/R

PWS ***(cont.)***

Population Category 11 :	101-500
Submission Quarter :	2
Submission Status Code :	Y
First Reported Date :	1979-03-22
Last Reported Date :	2021-06-30
Deactivation Date :	N/R
GW or SW :	Groundwater
Is Grant Eligible :	Y
Is Outstanding Performer :	N/R
Is School or Daycare :	Y
Is Source Water Protected :	N/R
Primacy Agency :	California
Primacy Type :	State
Org Name :	SCHMIDT, DIANA
EPA Region :	Region 9
Admin Name :	SCHMIDT, DIANA
Owner Type :	Private
Phone Number :	559-584-9207
Phone Ext Number :	N/R
Alt Phone Number :	N/R
Email Address :	principal@hanfordchristian.org
Fax Number :	N/R
Is Wholesaler :	N
LT2 Schedule Category :	N/R
NPM Candidate :	Y
CDS ID :	N/R
DBPR Schedule Category :	N/R
Outstanding Performer Date :	N/R
Season Begin Date :	01-Jan
Season End Date :	31-Dec
Source Water Protection Date :	N/R
Seasonal Startup System :	N/R
Reduced Monitoring Begin Date :	N/R
Reduced Monitoring End Date :	N/R
Reduced RTCR Monitoring :	N/R
Last Date in Agency List :	2021-08-30

PWS ENF

Facility Address :	11948 Flint Avenue, HANFORD, CA 93230

Site Details

PWS ID :	CA1600009
PWS Name :	HANFORD CHRISTIAN SCHOOL
EPA Region :	Region 9
Primacy Agency :	California
PWS Type :	Non-Transient non-community system
Primacy Type :	State
Primary Source :	Ground water
Activity Status :	Active
Deactivation Date :	N/R
Owner Type :	Private
Phone Number :	559-584-9207

Map Id: B7
Direction: NNW
Distance: 0.006 mi., 33 ft.
Elevation: 258 ft.
Relative: Higher

Site Name : HANFORD CHRISTIAN SCHOOL SOCIETY | HANFORD CHRISTIAN SCHOOL | CA1600009
11948 FLINT AVE
HANFORD | Hanford, CA

Database(s) : [PWS, PWS ENF] ***(cont.)***

Envirosite ID: 241613
EPA ID: N/R

PWS ENF ***(cont.)***

Last Date in Agency List : 2021-09-28

Violation Details

RTC Enforcement ID :	1400251
Violation ID :	800001
Submission Year :	2021
Violation First Reported Date :	2014-08-19
Contaminant Name :	Coliform (TCR)
Rule Family :	Total Coliform Rules
Rule Group :	Microbials
Rule Name :	Total Coliform Rule
Violation Type :	Maximum Contaminant Level Violation, Monthly (TCR)
Is Health Based :	Y
Is Major Violation :	N/R
Severity Indicator Count :	N/R
Public Notification Tier :	2
Address Line 1 :	11948 Flint Avenue, HANFORD, 93230
Address Line 2 :	N/R
Compliance Status :	Returned to Compliance
RTC Date :	2007-11-30
Enforcement Action Description :	State Compliance achieved
Admin Name :	SCHMIDT, DIANA
Email Address :	principal@hanfordchristian.org

RTC Enforcement ID :	1400252
Violation ID :	1100002
Submission Year :	2021
Violation First Reported Date :	2013-06-26
Contaminant Name :	Coliform (TCR)
Rule Family :	Total Coliform Rules
Rule Group :	Microbials
Rule Name :	Total Coliform Rule
Violation Type :	Maximum Contaminant Level Violation, Monthly (TCR)
Is Health Based :	Y
Is Major Violation :	N/R
Severity Indicator Count :	N/R
Public Notification Tier :	2
Address Line 1 :	11948 Flint Avenue, HANFORD, 93230
Address Line 2 :	N/R
Compliance Status :	Returned to Compliance
RTC Date :	2011-01-31
Enforcement Action Description :	State Compliance achieved
Admin Name :	SCHMIDT, DIANA
Email Address :	principal@hanfordchristian.org

RTC Enforcement ID :	1400253
Violation ID :	1100003
Submission Year :	2021
Violation First Reported Date :	2013-06-26
Contaminant Name :	Coliform (TCR)
Rule Family :	Total Coliform Rules

Map Id: B7
Direction: NNW
Distance: 0.006 mi., 33 ft.
Elevation: 258 ft.
Relative: Higher

Site Name : HANFORD CHRISTIAN SCHOOL SOCIETY | HANFORD CHRISTIAN SCHOOL | CA1600009
11948 FLINT AVE
HANFORD | Hanford, CA

Database(s) : [PWS, PWS ENF] ***(cont.)***

Envirosite ID: 241613
EPA ID: N/R

PWS ENF ***(cont.)***

Rule Group :	Microbials
Rule Name :	Total Coliform Rule
Violation Type :	Maximum Contaminant Level Violation, Monthly (TCR)
Is Health Based :	Y
Is Major Violation :	N/R
Severity Indicator Count :	N/R
Public Notification Tier :	2
Address Line 1 :	11948 Flint Avenue, HANFORD, 93230
Address Line 2 :	N/R
Compliance Status :	Returned to Compliance
RTC Date :	2011-05-30
Enforcement Action Description :	State Compliance achieved
Admin Name :	SCHMIDT, DIANA
Email Address :	principal@hanfordchristian.org

RTC Enforcement ID :	1400254
Violation ID :	1400004
Submission Year :	2021
Violation First Reported Date :	2014-08-19
Contaminant Name :	Coliform (TCR)
Rule Family :	Total Coliform Rules
Rule Group :	Microbials
Rule Name :	Total Coliform Rule
Violation Type :	Maximum Contaminant Level Violation, Monthly (TCR)
Is Health Based :	Y
Is Major Violation :	N/R
Severity Indicator Count :	N/R
Public Notification Tier :	2
Address Line 1 :	11948 Flint Avenue, HANFORD, 93230
Address Line 2 :	N/R
Compliance Status :	Returned to Compliance
RTC Date :	2014-05-30
Enforcement Action Description :	State Compliance achieved
Admin Name :	SCHMIDT, DIANA
Email Address :	principal@hanfordchristian.org

Map Id: 8
Direction: E
Distance: 0.014 mi., 76 ft.
Elevation: 256 ft.
Relative: Lower

Site Name : 362152119395001
36.364444, -119.663889
CA

Database(s) : [NWIS]

Envirosite ID: 9192194
EPA ID: N/R

NWIS

Site Identification Number :	362152119395001
Site Type :	Well
Station Name :	018S021E14Z001M MENDENHALL 1916
Agency :	U.S. Geological Survey

Map Id: 8
Direction: E
Distance: 0.014 mi., 76 ft.
Elevation: 256 ft.
Relative: Lower

Site Name : 362152119395001
36.364444, -119.663889
CA

Database(s) : [NWIS] ***(cont.)***

Envirosite ID: 9192194
EPA ID: N/R

NWIS ***(cont.)***

District :	N/R
State :	CA
County :	Kings County
Country :	USA
Land Net Location :	N/R
Name of Location Map :	N/R
Scale of Location Map :	N/R
Altitude of Gage/Land Surface :	N/R
Method Altitude Determined :	N/R
Altitude Accuracy :	N/R
Altitude Datum :	N/R
Hydrologic Unit :	Tulare Lake Bed
Drainage Basin :	N/R
Topographic Setting :	N/R
Flags for the Type of Data Collected:	NNNNNNNNNNNNNNNNNNNNNNNNNNNNNN
Flags for Instruments at Site :	NNNNNNNNNNNNNNNNNNNNNNNNNNNNNN
Date of First Construction :	N/R
Date Site Established or Inventoried:	N/R
Drainage Area :	N/R
Contributing Drainage Area :	N/R
Data Reliability :	Location not accurate.
Data-Other GW Files :	N/R
National Aquifer :	N/R
Local Aquifer :	N/R
Local Aquifer Type :	N/R
Well Depth :	44
Hole Depth :	N/R
Source of Depth Data :	N/R
Project Number :	N/R
Real-Time Data Flag :	N/R
Peak-Streamflow Data Begin Date :	N/R
Peak-Streamflow Data End Date :	N/R
Peak-Streamflow Data Count :	N/R
Water-Quality Data Begin Date :	N/R
Water-Quality Data End Date :	N/R
Water-Quality Data Count :	N/R
Field Water-Level Measurements Begin Date:	N/R
Field Water-level Measurements End Date:	N/R
Field Water-Level Measurements Count:	N/R
Site-Visit Data Begin Date :	N/R
Site-Visit Data End Date :	N/R
Site-Visit Data Count :	N/R
Latitude :	36.364444
Longitude :	-119.663889
Last Date in Agency List :	2021-10-11

Map Id: B9
Direction: NNW
Distance: 0.019 mi., 99 ft.
Elevation: 258 ft.
Relative: Higher

Site Name : 1600009-001
36.371959, -119.672748
CA

Database(s) : [WELLS - GAMA - CA]

Envirosite ID: 23663213
EPA ID: N/R

WELLS - GAMA - CA

Well ID :	1600009-001
Well Type :	MUNICIPAL
Well Depth (Ft.) :	N/R
Top of Screen (Ft.) :	0.0
Screen Length (Ft.) :	0.0
Source :	DHS
Source Name :	1600009-001
Other Names :	WELL #1
RL :	UNK
Approximate Latitude :	36.371959
Approximate Longitude :	-119.672748
Last Date in Agency List :	2021-11-26

Details for this site have been truncated due to the large number of available details for this site within this dataset. For the complete details for this site, contact your Envirosite account representative for a complimentary site report containing all of the details available.

Chemicals :

2021-01-05 - FC11 < .5 UG/L
2021-01-05 - XYLENES < .5 UG/L
2021-01-05 - TCA111 < .5 UG/L
2021-01-05 - STY < .5 UG/L
2021-01-05 - TCE < .5 UG/L
2021-01-05 - TCB124 < .5 UG/L
2021-01-05 - PCE < .5 UG/L
2021-01-05 - BZ < .5 UG/L
2021-01-05 - MTBE < .5 UG/L
2021-01-05 - BDCME < .5 UG/L
2021-01-05 - DCPA12 < .5 UG/L
2021-01-05 - DCMA < .5 UG/L
2021-01-05 - DCBZ12 < .5 UG/L
2021-01-05 - FC12 < .0005 MG/L
2021-01-05 - BZME < .5 UG/L
2021-01-05 - DCE12T < .5 UG/L
2021-01-05 - DCBZ13 < .5 UG/L
2021-01-05 - VC < .5 UG/L
2021-01-05 - DCE12C < .5 UG/L
2021-01-05 - DCP13 < .5 UG/L

Map Id: 10
Direction: NW
Distance: 0.079 mi., 417 ft.
Elevation: 258 ft.
Relative: Higher

Site Name : 362212119402401
36.36995, -119.674297
CA

Database(s) : [NWIS]

Envirosite ID: 9207157
EPA ID: N/R

NWIS

Site Identification Number :	362212119402401
Site Type :	Well
Station Name :	018S021E15A001M

Map Id: 10
Direction: NW
Distance: 0.079 mi., 417 ft.
Elevation: 258 ft.
Relative: Higher

Site Name : 362212119402401
36.36995, -119.674297
CA

Database(s) : [NWIS] ***(cont.)***

Envirosite ID: 9207157
EPA ID: N/R

NWIS ***(cont.)***

Agency :	U.S. Geological Survey
District :	N/R
State :	CA
County :	Kings County
Country :	USA
Land Net Location :	NENES15 T18S R21E M
Name of Location Map :	HANFORD VISALIA F2
Scale of Location Map :	63360
Altitude of Gage/Land Surface :	253.00
Method Altitude Determined :	Interpolated from topographic map.
Altitude Accuracy :	52
Altitude Datum :	National Geodetic Vertical Datum of 1929
Hydrologic Unit :	Tulare Lake Bed
Drainage Basin :	N/R
Topographic Setting :	N/R
Flags for the Type of Data Collected:	NNNNNNNNNNNNNNNNNNNNNNNNNNNNN
Flags for Instruments at Site :	NNNNNNNNNNNNNNNNNNNNNNNNNNNNN
Date of First Construction :	1959-01-01
Date Site Established or Inventoried:	N/R
Drainage Area :	N/R
Contributing Drainage Area :	N/R
Data Reliability :	Unchecked data.
Data-Other GW Files :	NYNNNNNN
National Aquifer :	Central Valley aquifer system
Local Aquifer :	N/R
Local Aquifer Type :	N/R
Well Depth :	244
Hole Depth :	N/R
Source of Depth Data :	N/R
Project Number :	N/R
Real-Time Data Flag :	N/R
Peak-Streamflow Data Begin Date :	N/R
Peak-Streamflow Data End Date :	N/R
Peak-Streamflow Data Count :	N/R
Water-Quality Data Begin Date :	N/R
Water-Quality Data End Date :	N/R
Water-Quality Data Count :	N/R
Field Water-Level Measurements Begin Date:	N/R
Field Water-level Measurements End Date:	N/R
Field Water-Level Measurements Count:	N/R
Site-Visit Data Begin Date :	N/R
Site-Visit Data End Date :	N/R
Site-Visit Data Count :	N/R
Latitude :	36.36995
Longitude :	-119.674297
Last Date in Agency List :	2021-10-11

Map Id: 11
Direction: NNW
Distance: 0.105 mi., 553 ft.
Elevation: 258 ft.
Relative: Higher

Site Name : 362223119402201
36.373006, -119.673742
CA

Database(s) : [NWIS]

Envirosite ID: 9214783
EPA ID: N/R

NWIS

Site Identification Number :	362223119402201
Site Type :	Well
Station Name :	018S021E10R001M
Agency :	U.S. Geological Survey
District :	N/R
State :	CA
County :	Kings County
Country :	USA
Land Net Location :	SESES10 T18S R21E M
Name of Location Map :	HANFORD VISALIA F2
Scale of Location Map :	63360
Altitude of Gage/Land Surface :	254.00
Method Altitude Determined :	Interpolated from topographic map.
Altitude Accuracy :	52
Altitude Datum :	National Geodetic Vertical Datum of 1929
Hydrologic Unit :	Tulare Lake Bed
Drainage Basin :	N/R
Topographic Setting :	N/R
Flags for the Type of Data Collected:	NNNNNNNNNNNNNNNNNNNNNNNNNNNNO
Flags for Instruments at Site :	NNNNNNNNNNNNNNNNNNNNNNNNNNNNN
Date of First Construction :	N/R
Date Site Established or Inventoried:	N/R
Drainage Area :	N/R
Contributing Drainage Area :	N/R
Data Reliability :	Unchecked data.
Data-Other GW Files :	YNNNNYNN
National Aquifer :	Central Valley aquifer system
Local Aquifer :	N/R
Local Aquifer Type :	N/R
Well Depth :	N/R
Hole Depth :	N/R
Source of Depth Data :	N/R
Project Number :	N/R
Real-Time Data Flag :	0
Peak-Streamflow Data Begin Date :	N/R
Peak-Streamflow Data End Date :	N/R
Peak-Streamflow Data Count :	0
Water-Quality Data Begin Date :	N/R
Water-Quality Data End Date :	N/R
Water-Quality Data Count :	0
Field Water-Level Measurements Begin Date:	1961-11-21
Field Water-level Measurements End Date:	1961-11-21
Field Water-Level Measurements Count:	1
Site-Visit Data Begin Date :	N/R
Site-Visit Data End Date :	N/R
Site-Visit Data Count :	0
Latitude :	36.373006
Longitude :	-119.673742
Last Date in Agency List :	2021-10-11

Map Id: 12
Direction: W
Distance: 0.157 mi., 827 ft.
Elevation: 256 ft.
Relative: Lower

Site Name : 362155119402901
36.365228, -119.675686
CA

Database(s) : [NWIS]

Envirosite ID: 9213785
EPA ID: N/R

NWIS

Site Identification Number :	362155119402901
Site Type :	Well
Station Name :	018S021E15J001M
Agency :	U.S. Geological Survey
District :	N/R
State :	CA
County :	Kings County
Country :	USA
Land Net Location :	SENES15 T18S R21E M
Name of Location Map :	HANFORD VISALIA F2
Scale of Location Map :	63360
Altitude of Gage/Land Surface :	252.00
Method Altitude Determined :	Interpolated from topographic map.
Altitude Accuracy :	52
Altitude Datum :	National Geodetic Vertical Datum of 1929
Hydrologic Unit :	Tulare Lake Bed
Drainage Basin :	N/R
Topographic Setting :	N/R
Flags for the Type of Data Collected:	NNNNNNNNNNNNNNNNNNNNNNNNNNNNN
Flags for Instruments at Site :	NNNNNNNNNNNNNNNNNNNNNNNNNNNNN
Date of First Construction :	1960-01-01
Date Site Established or Inventoried:	N/R
Drainage Area :	N/R
Contributing Drainage Area :	N/R
Data Reliability :	Unchecked data.
Data-Other GW Files :	NYNNNNNN
National Aquifer :	Central Valley aquifer system
Local Aquifer :	N/R
Local Aquifer Type :	N/R
Well Depth :	525
Hole Depth :	N/R
Source of Depth Data :	N/R
Project Number :	N/R
Real-Time Data Flag :	N/R
Peak-Streamflow Data Begin Date :	N/R
Peak-Streamflow Data End Date :	N/R
Peak-Streamflow Data Count :	N/R
Water-Quality Data Begin Date :	N/R
Water-Quality Data End Date :	N/R
Water-Quality Data Count :	N/R
Field Water-Level Measurements Begin Date:	N/R
Field Water-level Measurements End Date:	N/R
Field Water-Level Measurements Count:	N/R
Site-Visit Data Begin Date :	N/R
Site-Visit Data End Date :	N/R
Site-Visit Data Count :	N/R
Latitude :	36.365228
Longitude :	-119.675686
Last Date in Agency List :	2021-10-11

Map Id: 13
Direction: NE
Distance: 0.170 mi., 900 ft.
Elevation: 258 ft.
Relative: Higher

Site Name : 362224119393901
36.373283, -119.661797
CA

Database(s) : [NWIS]

Envirosite ID: 31366577
EPA ID: N/R

NWIS

Site Identification Number :	362224119393901
Site Type :	Well
Station Name :	018S021E11Q001M
Agency :	U.S. Geological Survey
District :	N/R
State :	CA
County :	Kings County
Country :	USA
Land Net Location :	SWSES11 T18S R21E M
Name of Location Map :	HANFORD VISALIA F2
Scale of Location Map :	63360
Altitude of Gage/Land Surface :	255.00
Method Altitude Determined :	Interpolated from topographic map.
Altitude Accuracy :	52
Altitude Datum :	National Geodetic Vertical Datum of 1929
Hydrologic Unit :	Tulare Lake Bed
Drainage Basin :	N/R
Topographic Setting :	N/R
Flags for the Type of Data Collected:	NNNNNNNNNNNNNNNNNNNNNNNNNNNNN
Flags for Instruments at Site :	NNNNNNNNNNNNNNNNNNNNNNNNNNNNN
Date of First Construction :	1957-01-01
Date Site Established or Inventoried:	N/R
Drainage Area :	N/R
Contributing Drainage Area :	N/R
Data Reliability :	Unchecked data.
Data-Other GW Files :	NYNNNNNN
National Aquifer :	Central Valley aquifer system
Local Aquifer :	N/R
Local Aquifer Type :	N/R
Well Depth :	140
Hole Depth :	N/R
Source of Depth Data :	N/R
Project Number :	N/R
Real-Time Data Flag :	N/R
Peak-Streamflow Data Begin Date :	N/R
Peak-Streamflow Data End Date :	N/R
Peak-Streamflow Data Count :	N/R
Water-Quality Data Begin Date :	N/R
Water-Quality Data End Date :	N/R
Water-Quality Data Count :	N/R
Field Water-Level Measurements Begin Date:	N/R
Field Water-level Measurements End Date:	N/R
Field Water-Level Measurements Count:	N/R
Site-Visit Data Begin Date :	N/R
Site-Visit Data End Date :	N/R
Site-Visit Data Count :	N/R
Latitude :	36.373283
Longitude :	-119.661797
Last Date in Agency List :	2021-10-11

Map Id: 14
Direction: SSE
Distance: 0.226 mi., 1192 ft.
Elevation: 253 ft.
Relative: Lower

Site Name : 362115119394801
36.354117, -119.664297
CA

Database(s) : [NWIS]

Envirosite ID: 9191930
EPA ID: N/R

NWIS

Site Identification Number :	362115119394801
Site Type :	Well
Station Name :	018S021E23C001M
Agency :	U.S. Geological Survey
District :	N/R
State :	CA
County :	Kings County
Country :	USA
Land Net Location :	NENWS23 T18S R21E M
Name of Location Map :	HANFORD VISALIA F2
Scale of Location Map :	63360
Altitude of Gage/Land Surface :	249.00
Method Altitude Determined :	Interpolated from topographic map.
Altitude Accuracy :	52
Altitude Datum :	National Geodetic Vertical Datum of 1929
Hydrologic Unit :	Tulare Lake Bed
Drainage Basin :	N/R
Topographic Setting :	N/R
Flags for the Type of Data Collected:	NNNNNNNNNNNNNNNNNNNNNNNNNNNNO
Flags for Instruments at Site :	NNNNNNNNNNNNNNNNNNNNNNNNNNNNN
Date of First Construction :	1955-01-01
Date Site Established or Inventoried:	N/R
Drainage Area :	N/R
Contributing Drainage Area :	N/R
Data Reliability :	Unchecked data.
Data-Other GW Files :	YYNNNYNN
National Aquifer :	Central Valley aquifer system
Local Aquifer :	N/R
Local Aquifer Type :	N/R
Well Depth :	232
Hole Depth :	N/R
Source of Depth Data :	N/R
Project Number :	N/R
Real-Time Data Flag :	0
Peak-Streamflow Data Begin Date :	N/R
Peak-Streamflow Data End Date :	N/R
Peak-Streamflow Data Count :	0
Water-Quality Data Begin Date :	N/R
Water-Quality Data End Date :	N/R
Water-Quality Data Count :	0
Field Water-Level Measurements Begin Date:	1961-11-21
Field Water-level Measurements End Date:	1961-11-21
Field Water-Level Measurements Count:	1
Site-Visit Data Begin Date :	N/R
Site-Visit Data End Date :	N/R
Site-Visit Data Count :	0
Latitude :	36.354117
Longitude :	-119.664297
Last Date in Agency List :	2021-10-11

Map Id: 15
Direction: SE
Distance: 0.233 mi., 1230 ft.
Elevation: 254 ft.
Relative: Lower

Site Name : TLR-04 | USGS-362128119390001 | 362128119390001
36.357972, -119.659944
CA

Database(s) : [NWIS, WELLS - GAMA - CA]

Envirosite ID: 9192011
EPA ID: N/R

NWIS

Site Identification Number :	362128119390001
Site Type :	Well
Station Name :	018S021E14Q001M
Agency :	U.S. Geological Survey
District :	N/R
State :	CA
County :	Kings County
Country :	USA
Land Net Location :	N/R
Name of Location Map :	HANFORD
Scale of Location Map :	24000
Altitude of Gage/Land Surface :	251
Method Altitude Determined :	Interpolated from topographic map.
Altitude Accuracy :	2.5
Altitude Datum :	National Geodetic Vertical Datum of 1929
Hydrologic Unit :	Tulare Lake Bed
Drainage Basin :	N/R
Topographic Setting :	Flat surface
Flags for the Type of Data Collected:	NONONNNNNNNNNNNNNNNNNNNNNNNO
Flags for Instruments at Site :	NNNNNNNNNNNNNNNNNNNNNNNNNNNN
Date of First Construction :	1998-01-30
Date Site Established or Inventoried:	2005-12-01
Drainage Area :	N/R
Contributing Drainage Area :	N/R
Data Reliability :	Data have been checked by the reporting agency.
Data-Other GW Files :	YY Y
National Aquifer :	Central Valley aquifer system
Local Aquifer :	N/R
Local Aquifer Type :	N/R
Well Depth :	1320
Hole Depth :	1520
Source of Depth Data :	D
Project Number :	9677BHM45
Real-Time Data Flag :	0
Peak-Streamflow Data Begin Date :	N/R
Peak-Streamflow Data End Date :	N/R
Peak-Streamflow Data Count :	0
Water-Quality Data Begin Date :	2005-12-01
Water-Quality Data End Date :	2021-02-17
Water-Quality Data Count :	6
Field Water-Level Measurements Begin Date:	1998-03-28
Field Water-level Measurements End Date:	1998-03-28
Field Water-Level Measurements Count:	1
Site-Visit Data Begin Date :	N/R
Site-Visit Data End Date :	N/R
Site-Visit Data Count :	0
Latitude :	36.357972
Longitude :	-119.659944
Last Date in Agency List :	2021-10-11

WELLS - GAMA - CA

Well ID :	USGS-362128119390001
Well Type :	UNK

Map Id: 15
Direction: SE
Distance: 0.233 mi., 1230 ft.
Elevation: 254 ft.
Relative: Lower

Site Name : TLR-04 | USGS-362128119390001 | 362128119390001
36.357972, -119.659944
CA

Database(s) : [NWIS, WELLS - GAMA - CA] ***(cont.)***

Envirosite ID: 9192011
EPA ID: N/R

WELLS - GAMA - CA ***(cont.)***

Well Depth (Ft.) :	N/R
Top of Screen (Ft.) :	N/R
Screen Length (Ft.) :	N/R
Source :	USGSNEW
Source Name :	USGS-362128119390001
Other Names :	USGS-362128119390001
RL :	UNK
Approximate Latitude :	36.3579722
Approximate Longitude :	-119.6599444
Last Date in Agency List :	2021-11-26

Details for this site have been truncated due to the large number of available details for this site within this dataset. For the complete details for this site, contact your Envirosite account representative for a complimentary site report containing all of the details available.

Chemicals :
2015-10-27 - H-3 = -.9 pCi/L
2015-10-27 - SR = 45.3 UG/L
2015-10-27 - PROMETRYN ND 0 UG/L
2015-10-27 - NA = 143 MG/L
2015-10-27 - PB = .26 UG/L
2015-10-27 - LI = 1.74 UG/L
2015-10-27 - CD = .042 UG/L
2015-10-27 - BE = .156 UG/L
2015-10-27 - I = 362 UG/L
2015-10-27 - SO4 = .32 MG/L
2015-10-27 - CYANAZ ND 0 UG/L
2015-10-27 - SEVIN ND 0 UG/L
2015-10-27 - OXYFLUOREN ND 0 UG/L
2015-10-27 - ENDOSULFANS ND 0 UG/L
2015-10-27 - METALAXYL ND 0 UG/L
2015-10-27 - ENDOSULFANA ND 0 UG/L
2015-10-27 - PCATE ND 0 UG/L
2015-10-27 - MG = .293 MG/L
2015-10-27 - FONOFOS ND 0 UG/L
2015-10-27 - NO2 = .001 MG/L

Well ID :	TLR-04
Well Type :	MUNICIPAL
Well Depth (Ft.) :	1320.0
Top of Screen (Ft.) :	N/R
Screen Length (Ft.) :	N/R
Source :	USGS
Source Name :	TLR-04
Other Names :	TLR-04
RL :	UNK
Approximate Latitude :	36.35797222
Approximate Longitude :	-119.65994444
Last Date in Agency List :	2021-11-26

Well ID :	TLR-04
Well Type :	MUNICIPAL
Well Depth (Ft.) :	1320.0

Map Id: 15
Direction: SE
Distance: 0.233 mi., 1230 ft.
Elevation: 254 ft.
Relative: Lower

Site Name : TLR-04 | USGS-362128119390001 | 362128119390001
36.357972, -119.659944
CA

Database(s) : [NWIS, WELLS - GAMA - CA] ***(cont.)***

Envirosite ID: 9192011
EPA ID: N/R

WELLS - GAMA - CA ***(cont.)***

Top of Screen (Ft.) :	N/R
Screen Length (Ft.) :	N/R
Source :	USGS
Source Name :	TLR-04
Other Names :	TLR-04
RL :	.032
Approximate Latitude :	36.35797222
Approximate Longitude :	-119.65994444
Last Date in Agency List :	2021-11-26

Well ID :	TLR-04
Well Type :	MUNICIPAL
Well Depth (Ft.) :	1320.0
Top of Screen (Ft.) :	N/R
Screen Length (Ft.) :	N/R
Source :	USGS
Source Name :	TLR-04
Other Names :	TLR-04
RL :	2
Approximate Latitude :	36.35797222
Approximate Longitude :	-119.65994444
Last Date in Agency List :	2021-11-26

Well ID :	TLR-04
Well Type :	MUNICIPAL
Well Depth (Ft.) :	1320.0
Top of Screen (Ft.) :	N/R
Screen Length (Ft.) :	N/R
Source :	USGS
Source Name :	TLR-04
Other Names :	TLR-04
RL :	.005
Approximate Latitude :	36.35797222
Approximate Longitude :	-119.65994444
Last Date in Agency List :	2021-11-26

Well ID :	TLR-04
Well Type :	MUNICIPAL
Well Depth (Ft.) :	1320.0
Top of Screen (Ft.) :	N/R
Screen Length (Ft.) :	N/R
Source :	USGS
Source Name :	TLR-04
Other Names :	TLR-04
RL :	.042
Approximate Latitude :	36.35797222
Approximate Longitude :	-119.65994444
Last Date in Agency List :	2021-11-26

Well ID :	TLR-04
Well Type :	MUNICIPAL
Well Depth (Ft.) :	1320.0

Map Id: 15
Direction: SE
Distance: 0.233 mi., 1230 ft.
Elevation: 254 ft.
Relative: Lower

Site Name : TLR-04 | USGS-362128119390001 | 362128119390001
36.357972, -119.659944
CA

Database(s) : [NWIS, WELLS - GAMA - CA] ***(cont.)***

Envirosite ID: 9192011
EPA ID: N/R

WELLS - GAMA - CA ***(cont.)***

Top of Screen (Ft.) :	N/R
Screen Length (Ft.) :	N/R
Source :	USGS
Source Name :	TLR-04
Other Names :	TLR-04
RL :	.06
Approximate Latitude :	36.35797222
Approximate Longitude :	-119.65994444
Last Date in Agency List :	2021-11-26

Well ID :	TLR-04
Well Type :	MUNICIPAL
Well Depth (Ft.) :	1320.0
Top of Screen (Ft.) :	N/R
Screen Length (Ft.) :	N/R
Source :	USGS
Source Name :	TLR-04
Other Names :	TLR-04
RL :	.5
Approximate Latitude :	36.35797222
Approximate Longitude :	-119.65994444
Last Date in Agency List :	2021-11-26

Well ID :	TLR-04
Well Type :	MUNICIPAL
Well Depth (Ft.) :	1320.0
Top of Screen (Ft.) :	N/R
Screen Length (Ft.) :	N/R
Source :	USGS
Source Name :	TLR-04
Other Names :	TLR-04
RL :	10
Approximate Latitude :	36.35797222
Approximate Longitude :	-119.65994444
Last Date in Agency List :	2021-11-26

Well ID :	TLR-04
Well Type :	MUNICIPAL
Well Depth (Ft.) :	1320.0
Top of Screen (Ft.) :	N/R
Screen Length (Ft.) :	N/R
Source :	USGS
Source Name :	TLR-04
Other Names :	TLR-04
RL :	.0073
Approximate Latitude :	36.35797222
Approximate Longitude :	-119.65994444
Last Date in Agency List :	2021-11-26

Well ID :	TLR-04
Well Type :	MUNICIPAL
Well Depth (Ft.) :	1320.0

Map Id: 15
Direction: SE
Distance: 0.233 mi., 1230 ft.
Elevation: 254 ft.
Relative: Lower

Site Name : TLR-04 | USGS-362128119390001 | 362128119390001
36.357972, -119.659944
CA

Database(s) : [NWIS, WELLS - GAMA - CA] ***(cont.)***

Envirosite ID: 9192011
EPA ID: N/R

WELLS - GAMA - CA ***(cont.)***

Top of Screen (Ft.) :	N/R
Screen Length (Ft.) :	N/R
Source :	USGS
Source Name :	TLR-04
Other Names :	TLR-04
RL :	.04
Approximate Latitude :	36.35797222
Approximate Longitude :	-119.65994444
Last Date in Agency List :	2021-11-26

Chemicals :

2015-10-27 - O18O16RAT -10.64 per mil
2015-10-27 - ZN < .002 MG/L
2015-10-27 - CYPERM < .02 UG/L
2015-10-27 - MALA < .016 UG/L
2015-10-27 - DBCME < .12 UG/L
2015-10-27 - DCA12 < .08 UG/L
2015-10-27 - SR 45.3 UG/L
2015-10-27 - CLBZ < .026 UG/L
2015-10-27 - NO2 .001 MG/L
2015-10-27 - AG < .02 UG/L
2015-10-27 - ALKCACO3 147 MG/L
2015-10-27 - METALAXYL < .014 UG/L
2015-10-27 - DIAZ < .006 UG/L
2015-10-27 - CRBFN < .06 UG/L
2015-10-27 - B 1.11 MG/L
2015-10-27 - SIMAZINE < .006 UG/L
2015-10-27 - K .68 MG/L
2015-10-27 - TRIFLURALIN < .018 UG/L
2015-10-27 - PBZN < .036 UG/L
2015-10-27 - CU < .0008 MG/L

Map Id: 16
Direction: ESE
Distance: 0.377 mi., 1991 ft.
Elevation: 254 ft.
Relative: Lower

Site Name : 362134119392301
36.359395, -119.657352
CA

Database(s) : [NWIS]

Envirosite ID: 9225902
EPA ID: N/R

NWIS

Site Identification Number :	362134119392301
Site Type :	Well
Station Name :	018S021E14R001M
Agency :	U.S. Geological Survey
District :	N/R
State :	CA
County :	Kings County
Country :	USA
Land Net Location :	SESES14 T18S R21E M
Name of Location Map :	HANFORD VISALIA F2

Map Id: 16
Direction: ESE
Distance: 0.377 mi., 1991 ft.
Elevation: 254 ft.
Relative: Lower

Site Name : 362134119392301
36.359395, -119.657352
CA

Database(s) : [NWIS] ***(cont.)***

Envirosite ID: 9225902
EPA ID: N/R

NWIS ***(cont.)***

Scale of Location Map :	63360
Altitude of Gage/Land Surface :	251.00
Method Altitude Determined :	Interpolated from topographic map.
Altitude Accuracy :	52
Altitude Datum :	National Geodetic Vertical Datum of 1929
Hydrologic Unit :	Tulare Lake Bed
Drainage Basin :	N/R
Topographic Setting :	N/R
Flags for the Type of Data Collected:	NNNNNNNNNNNNNNNNNNNNNNNNNNNNN
Flags for Instruments at Site :	NNNNNNNNNNNNNNNNNNNNNNNNNNNNN
Date of First Construction :	N/R
Date Site Established or Inventoried:	N/R
Drainage Area :	N/R
Contributing Drainage Area :	N/R
Data Reliability :	Unchecked data.
Data-Other GW Files :	YNNNNNNN
National Aquifer :	Central Valley aquifer system
Local Aquifer :	N/R
Local Aquifer Type :	N/R
Well Depth :	N/R
Hole Depth :	N/R
Source of Depth Data :	N/R
Project Number :	N/R
Real-Time Data Flag :	N/R
Peak-Streamflow Data Begin Date :	N/R
Peak-Streamflow Data End Date :	N/R
Peak-Streamflow Data Count :	N/R
Water-Quality Data Begin Date :	N/R
Water-Quality Data End Date :	N/R
Water-Quality Data Count :	N/R
Field Water-Level Measurements Begin Date:	N/R
Field Water-level Measurements End Date:	N/R
Field Water-Level Measurements Count:	N/R
Site-Visit Data Begin Date :	N/R
Site-Visit Data End Date :	N/R
Site-Visit Data Count :	N/R
Latitude :	36.359395
Longitude :	-119.657352
Last Date in Agency List :	2021-10-11

Map Id: 17
Direction: E
Distance: 0.438 mi., 2312 ft.
Elevation: 255 ft.
Relative: Lower

Site Name : CA1000625
889 W. Encore Drive
HANFORD, CA 93230

Database(s) : [PWS, PWS ENF]

Envirosite ID: 841475
EPA ID: N/R

PWS

Facility Address :	889 W. Encore Drive, HANFORD, CA 93230

Map Id: 17
Direction: E
Distance: 0.438 mi., 2312 ft.
Elevation: 255 ft.
Relative: Lower

Site Name : CA1000625
889 W. Encore Drive
HANFORD, CA 93230

Database(s) : [PWS, PWS ENF] ***(cont.)***

Envirosite ID: 841475
EPA ID: N/R

PWS ***(cont.)***

PWS ID :	CA1000625
PWS Type :	Transient non-community system
PWS Name :	DINO MART 1
Activity Status :	Active
Primary Source :	Ground water
Submission Year :	2019
Submission Year Quarter :	2019Q4
Population Served Count :	25
Service Connections Count :	4
Population Category 2 :	<10,000
Population Category 3 :	<=3300
Population Category 4 :	<10K
Population Category 5 :	<=500
Population Category 11 :	<=100
Submission Quarter :	4
Submission Status Code :	Y
First Reported Date :	2015-11-20
Last Reported Date :	2019-12-16
Deactivation Date :	N/R
GW or SW :	Groundwater
Is Grant Eligible :	Y
Is Outstanding Performer :	N/R
Is School or Daycare :	N
Is Source Water Protected :	N/R
Primacy Agency :	California
Primacy Type :	State
Org Name :	ALKOBADI, SALEH
EPA Region :	Region 9
Admin Name :	ALKOBADI, SALEH
Owner Type :	Private
Phone Number :	N/R
Phone Ext Number :	N/R
Alt Phone Number :	N/R
Email Address :	naz2007inc@yahoo.com
Fax Number :	N/R
Is Wholesaler :	N
LT2 Schedule Category :	N/R
NPM Candidate :	Y
CDS ID :	N/R
DBPR Schedule Category :	N/R
Outstanding Performer Date :	N/R
Season Begin Date :	01-01
Season End Date :	12-31
Source Water Protection Date :	N/R
Seasonal Startup System :	N/R
Reduced Monitoring Begin Date :	N/R
Reduced Monitoring End Date :	N/R
Reduced RTCR Monitoring :	N/R
Last Date in Agency List :	2020-02-20

PWS ENF

Facility Address :	889 W. Encore Drive, HANFORD, CA 93230

Map Id: 17
Direction: E
Distance: 0.438 mi., 2312 ft.
Elevation: 255 ft.
Relative: Lower

Site Name : CA1000625
889 W. Encore Drive
HANFORD, CA 93230

Database(s) : [PWS, PWS ENF] ***(cont.)***

Envirosite ID: 841475
EPA ID: N/R

PWS ENF ***(cont.)***

Site Details

PWS ID :	CA1000625
PWS Name :	DINO MART 1
EPA Region :	Region 9
Primacy Agency :	California
PWS Type :	Transient non-community system
Primacy Type :	State
Primary Source :	Ground water
Activity Status :	Active
Deactivation Date :	N/R
Owner Type :	Private
Phone Number :	N/R
Last Date in Agency List :	2019-10-03

Violation Details

RTC Enforcement ID :	N/R
Violation ID :	2
Submission Year :	2019
Violation First Reported Date :	2017-02-14
Contaminant Name :	N/R
Rule Family :	Miscellaneous
Rule Group :	Other
Rule Name :	Miscellaneous
Violation Type :	Variance/Exemption/Other Compliance
Is Health Based :	N
Is Major Violation :	N/R
Severity Indicator Count :	N/R
Public Notification Tier :	3
Address Line 1 :	889 W. Encore Drive, HANFORD, 93230
Address Line 2 :	N/R
Compliance Status :	Known
RTC Date :	N/R
Enforcement Action Description :	N/R
Admin Name :	ALKOBADI, SALEH
Email Address :	naz2007inc@yahoo.com

RTC Enforcement ID :	5
Violation ID :	10
Submission Year :	2019
Violation First Reported Date :	2018-11-15
Contaminant Name :	Nitrate
Rule Family :	Inorganic Chemicals
Rule Group :	Chemicals
Rule Name :	Nitrates
Violation Type :	Maximum Contaminant Level Violation, Single Sample
Is Health Based :	Y
Is Major Violation :	N/R
Severity Indicator Count :	N/R
Public Notification Tier :	1
Address Line 1 :	889 W. Encore Drive, HANFORD, 93230
Address Line 2 :	N/R
Compliance Status :	Returned to Compliance
RTC Date :	2019-02-22
Enforcement Action Description :	State Compliance achieved

Map Id: 17
Direction: E
Distance: 0.438 mi., 2312 ft.
Elevation: 255 ft.
Relative: Lower

Site Name : CA1000625
889 W. Encore Drive
HANFORD, CA 93230

Database(s) : [PWS, PWS ENF] ***(cont.)***

Envirosite ID: 841475
EPA ID: N/R

PWS ENF ***(cont.)***

Admin Name :	ALKOBADI, SALEH
Email Address :	naz2007inc@yahoo.com

RTC Enforcement ID :	5
Violation ID :	6
Submission Year :	2019
Violation First Reported Date :	2018-02-12
Contaminant Name :	Nitrate
Rule Family :	Inorganic Chemicals
Rule Group :	Chemicals
Rule Name :	Nitrates
Violation Type :	Maximum Contaminant Level Violation, Single Sample
Is Health Based :	Y
Is Major Violation :	N/R
Severity Indicator Count :	N/R
Public Notification Tier :	1
Address Line 1 :	889 W. Encore Drive, HANFORD, 93230
Address Line 2 :	N/R
Compliance Status :	Returned to Compliance
RTC Date :	2019-02-22
Enforcement Action Description :	State Compliance achieved
Admin Name :	ALKOBADI, SALEH
Email Address :	naz2007inc@yahoo.com

RTC Enforcement ID :	5
Violation ID :	4
Submission Year :	2019
Violation First Reported Date :	2017-07-03
Contaminant Name :	Nitrate
Rule Family :	Inorganic Chemicals
Rule Group :	Chemicals
Rule Name :	Nitrates
Violation Type :	Maximum Contaminant Level Violation, Average
Is Health Based :	Y
Is Major Violation :	N/R
Severity Indicator Count :	N/R
Public Notification Tier :	1
Address Line 1 :	889 W. Encore Drive, HANFORD, 93230
Address Line 2 :	N/R
Compliance Status :	Returned to Compliance
RTC Date :	2019-02-22
Enforcement Action Description :	State Compliance achieved
Admin Name :	ALKOBADI, SALEH
Email Address :	naz2007inc@yahoo.com

RTC Enforcement ID :	5
Violation ID :	8
Submission Year :	2019
Violation First Reported Date :	2018-02-12
Contaminant Name :	Nitrate
Rule Family :	Inorganic Chemicals
Rule Group :	Chemicals
Rule Name :	Nitrates
Violation Type :	Maximum Contaminant Level Violation, Single Sample

Map Id: 17
Direction: E
Distance: 0.438 mi., 2312 ft.
Elevation: 255 ft.
Relative: Lower

Site Name : CA1000625
889 W. Encore Drive
HANFORD, CA 93230

Database(s) : [PWS, PWS ENF] ***(cont.)***

Envirosite ID: 841475
EPA ID: N/R

PWS ENF ***(cont.)***

Is Health Based :	Y
Is Major Violation :	N/R
Severity Indicator Count :	N/R
Public Notification Tier :	1
Address Line 1 :	889 W. Encore Drive, HANFORD, 93230
Address Line 2 :	N/R
Compliance Status :	Returned to Compliance
RTC Date :	2019-02-22
Enforcement Action Description :	State Compliance achieved
Admin Name :	ALKOBADI, SALEH
Email Address :	naz2007inc@yahoo.com

RTC Enforcement ID :	5
Violation ID :	1
Submission Year :	2019
Violation First Reported Date :	2016-12-03
Contaminant Name :	Nitrate
Rule Family :	Inorganic Chemicals
Rule Group :	Chemicals
Rule Name :	Nitrates
Violation Type :	Maximum Contaminant Level Violation, Single Sample
Is Health Based :	Y
Is Major Violation :	N/R
Severity Indicator Count :	N/R
Public Notification Tier :	1
Address Line 1 :	889 W. Encore Drive, HANFORD, 93230
Address Line 2 :	N/R
Compliance Status :	Returned to Compliance
RTC Date :	2019-02-22
Enforcement Action Description :	State Compliance achieved
Admin Name :	ALKOBADI, SALEH
Email Address :	naz2007inc@yahoo.com

RTC Enforcement ID :	5
Violation ID :	7
Submission Year :	2019
Violation First Reported Date :	2018-02-12
Contaminant Name :	Nitrate
Rule Family :	Inorganic Chemicals
Rule Group :	Chemicals
Rule Name :	Nitrates
Violation Type :	Maximum Contaminant Level Violation, Single Sample
Is Health Based :	Y
Is Major Violation :	N/R
Severity Indicator Count :	N/R
Public Notification Tier :	1
Address Line 1 :	889 W. Encore Drive, HANFORD, 93230
Address Line 2 :	N/R
Compliance Status :	Returned to Compliance
RTC Date :	2019-02-22
Enforcement Action Description :	State Compliance achieved
Admin Name :	ALKOBADI, SALEH
Email Address :	naz2007inc@yahoo.com

Map Id: 17
Direction: E
Distance: 0.438 mi., 2312 ft.
Elevation: 255 ft.
Relative: Lower

Site Name : CA1000625
889 W. Encore Drive
HANFORD, CA 93230

Database(s) : [PWS, PWS ENF] ***(cont.)***

Envirosite ID: 841475
EPA ID: N/R

PWS ENF ***(cont.)***

RTC Enforcement ID :	5
Violation ID :	3
Submission Year :	2019
Violation First Reported Date :	2017-02-14
Contaminant Name :	Nitrate
Rule Family :	Inorganic Chemicals
Rule Group :	Chemicals
Rule Name :	Nitrates
Violation Type :	Maximum Contaminant Level Violation, Average
Is Health Based :	Y
Is Major Violation :	N/R
Severity Indicator Count :	N/R
Public Notification Tier :	1
Address Line 1 :	889 W. Encore Drive, HANFORD, 93230
Address Line 2 :	N/R
Compliance Status :	Returned to Compliance
RTC Date :	2019-02-22
Enforcement Action Description :	State Compliance achieved
Admin Name :	ALKOBADI, SALEH
Email Address :	naz2007inc@yahoo.com

RTC Enforcement ID :	5
Violation ID :	9
Submission Year :	2019
Violation First Reported Date :	2018-11-15
Contaminant Name :	Nitrate
Rule Family :	Inorganic Chemicals
Rule Group :	Chemicals
Rule Name :	Nitrates
Violation Type :	Maximum Contaminant Level Violation, Single Sample
Is Health Based :	Y
Is Major Violation :	N/R
Severity Indicator Count :	N/R
Public Notification Tier :	1
Address Line 1 :	889 W. Encore Drive, HANFORD, 93230
Address Line 2 :	N/R
Compliance Status :	Returned to Compliance
RTC Date :	2019-02-22
Enforcement Action Description :	State Compliance achieved
Admin Name :	ALKOBADI, SALEH
Email Address :	naz2007inc@yahoo.com

RTC Enforcement ID :	5
Violation ID :	11
Submission Year :	2019
Violation First Reported Date :	2018-11-15
Contaminant Name :	Nitrate
Rule Family :	Inorganic Chemicals
Rule Group :	Chemicals
Rule Name :	Nitrates
Violation Type :	Maximum Contaminant Level Violation, Single Sample
Is Health Based :	Y
Is Major Violation :	N/R
Severity Indicator Count :	N/R
Public Notification Tier :	1

Map Id: 17
Direction: E
Distance: 0.438 mi., 2312 ft.
Elevation: 255 ft.
Relative: Lower

Site Name : CA1000625
889 W. Encore Drive
HANFORD, CA 93230

Database(s) : [PWS, PWS ENF] ***(cont.)***

Envirosite ID: 841475
EPA ID: N/R

PWS ENF ***(cont.)***

Address Line 1 :	889 W. Encore Drive, HANFORD, 93230
Address Line 2 :	N/R
Compliance Status :	Returned to Compliance
RTC Date :	2019-02-22
Enforcement Action Description :	State Compliance achieved
Admin Name :	ALKOBADI, SALEH
Email Address :	naz2007inc@yahoo.com

Map Id: 18
Direction: SSE
Distance: 0.529 mi., 2793 ft.
Elevation: 253 ft.
Relative: Lower

Site Name : 362059119395001
36.349722, -119.663889
CA

Database(s) : [NWIS]

Envirosite ID: 9218621
EPA ID: N/R

NWIS

Site Identification Number :	362059119395001
Site Type :	Well
Station Name :	018S021E23Z001M MENDENHALL 1916
Agency :	U.S. Geological Survey
District :	N/R
State :	CA
County :	Kings County
Country :	USA
Land Net Location :	N/R
Name of Location Map :	N/R
Scale of Location Map :	N/R
Altitude of Gage/Land Surface :	N/R
Method Altitude Determined :	N/R
Altitude Accuracy :	N/R
Altitude Datum :	N/R
Hydrologic Unit :	Tulare Lake Bed
Drainage Basin :	N/R
Topographic Setting :	N/R
Flags for the Type of Data Collected:	NNNNNNNNNNNNNNNNNNNNNNNNNNNNNN
Flags for Instruments at Site :	NNNNNNNNNNNNNNNNNNNNNNNNNNNNNN
Date of First Construction :	N/R
Date Site Established or Inventoried:	N/R
Drainage Area :	N/R
Contributing Drainage Area :	N/R
Data Reliability :	Location not accurate.
Data-Other GW Files :	N/R
National Aquifer :	N/R
Local Aquifer :	N/R
Local Aquifer Type :	N/R
Well Depth :	100
Hole Depth :	N/R
Source of Depth Data :	N/R
Project Number :	N/R
Real-Time Data Flag :	N/R
Peak-Streamflow Data Begin Date :	N/R

Map Id: 18
Direction: SSE
Distance: 0.529 mi., 2793 ft.
Elevation: 253 ft.
Relative: Lower

Site Name : 362059119395001
36.349722, -119.663889
CA

Database(s) : [NWIS] ***(cont.)***

Envirosite ID: 9218621
EPA ID: N/R

NWIS ***(cont.)***

Peak-Streamflow Data End Date :	N/R
Peak-Streamflow Data Count :	N/R
Water-Quality Data Begin Date :	N/R
Water-Quality Data End Date :	N/R
Water-Quality Data Count :	N/R
Field Water-Level Measurements Begin Date:	N/R
Field Water-level Measurements End Date:	N/R
Field Water-Level Measurements Count:	N/R
Site-Visit Data Begin Date :	N/R
Site-Visit Data End Date :	N/R
Site-Visit Data Count :	N/R
Latitude :	36.349722
Longitude :	-119.663889
Last Date in Agency List :	2021-10-11

Map Id: 19
Direction: WNW
Distance: 0.543 mi., 2867 ft.
Elevation: 255 ft.
Relative: Lower

Site Name : 362219119405401
36.371895, -119.682631
CA

Database(s) : [NWIS]

Envirosite ID: 9222224
EPA ID: N/R

NWIS

Site Identification Number :	362219119405401
Site Type :	Well
Station Name :	018S021E15C001M
Agency :	U.S. Geological Survey
District :	N/R
State :	CA
County :	Kings County
Country :	USA
Land Net Location :	SESWS10 T18S R21E M
Name of Location Map :	HANFORD VISALIA F2
Scale of Location Map :	63360
Altitude of Gage/Land Surface :	252.00
Method Altitude Determined :	Interpolated from topographic map.
Altitude Accuracy :	52
Altitude Datum :	National Geodetic Vertical Datum of 1929
Hydrologic Unit :	Tulare Lake Bed
Drainage Basin :	N/R
Topographic Setting :	N/R
Flags for the Type of Data Collected:	NNNNNNNNNNNNNNNNNNNNNNNNNNNNO
Flags for Instruments at Site :	NNNNNNNNNNNNNNNNNNNNNNNNNNNNN
Date of First Construction :	1950-01-01
Date Site Established or Inventoried:	N/R
Drainage Area :	N/R
Contributing Drainage Area :	N/R
Data Reliability :	Unchecked data.
Data-Other GW Files :	YYNNNYNN

Map Id: 19
Direction: WNW
Distance: 0.543 mi., 2867 ft.
Elevation: 255 ft.
Relative: Lower

Site Name : 362219119405401
36.371895, -119.682631
CA

Database(s) : [NWIS] ***(cont.)***

Envirosite ID: 9222224
EPA ID: N/R

NWIS ***(cont.)***

National Aquifer :	Central Valley aquifer system
Local Aquifer :	N/R
Local Aquifer Type :	N/R
Well Depth :	550
Hole Depth :	N/R
Source of Depth Data :	N/R
Project Number :	N/R
Real-Time Data Flag :	0
Peak-Streamflow Data Begin Date :	N/R
Peak-Streamflow Data End Date :	N/R
Peak-Streamflow Data Count :	0
Water-Quality Data Begin Date :	N/R
Water-Quality Data End Date :	N/R
Water-Quality Data Count :	0
Field Water-Level Measurements Begin Date:	1961-04-05
Field Water-level Measurements End Date:	1961-04-05
Field Water-Level Measurements Count:	1
Site-Visit Data Begin Date :	N/R
Site-Visit Data End Date :	N/R
Site-Visit Data Count :	0
Latitude :	36.371895
Longitude :	-119.682631
Last Date in Agency List :	2021-10-11

Map Id: 20
Direction: NW
Distance: 0.726 mi., 3832 ft.
Elevation: 255 ft.
Relative: Lower

Site Name : 362249119404601
36.380228, -119.680409
CA

Database(s) : [NWIS]

Envirosite ID: 9219688
EPA ID: N/R

NWIS

Site Identification Number :	362249119404601
Site Type :	Well
Station Name :	018S021E10F001M
Agency :	U.S. Geological Survey
District :	N/R
State :	CA
County :	Kings County
Country :	USA
Land Net Location :	SWNES10 T18S R21E M
Name of Location Map :	HANFORD VISALIA F2
Scale of Location Map :	63360
Altitude of Gage/Land Surface :	251.00
Method Altitude Determined :	Interpolated from topographic map.
Altitude Accuracy :	52
Altitude Datum :	National Geodetic Vertical Datum of 1929
Hydrologic Unit :	Tulare Lake Bed
Drainage Basin :	N/R

Map Id: 20
Direction: NW
Distance: 0.726 mi., 3832 ft.
Elevation: 255 ft.
Relative: Lower

Site Name : 362249119404601
36.380228, -119.680409
CA

Database(s) : [NWIS] ***(cont.)***

Envirosite ID: 9219688
EPA ID: N/R

NWIS ***(cont.)***

Topographic Setting :	N/R
Flags for the Type of Data Collected:	NNNNNNNNNNNNNNNNNNNNNNNNNNNNNO
Flags for Instruments at Site :	NNNNNNNNNNNNNNNNNNNNNNNNNNNNN
Date of First Construction :	1930-01-01
Date Site Established or Inventoried:	N/R
Drainage Area :	N/R
Contributing Drainage Area :	N/R
Data Reliability :	Unchecked data.
Data-Other GW Files :	YYNNNYNN
National Aquifer :	Central Valley aquifer system
Local Aquifer :	N/R
Local Aquifer Type :	N/R
Well Depth :	128
Hole Depth :	N/R
Source of Depth Data :	N/R
Project Number :	N/R
Real-Time Data Flag :	0
Peak-Streamflow Data Begin Date :	N/R
Peak-Streamflow Data End Date :	N/R
Peak-Streamflow Data Count :	0
Water-Quality Data Begin Date :	N/R
Water-Quality Data End Date :	N/R
Water-Quality Data Count :	0
Field Water-Level Measurements Begin Date:	1962-01-27
Field Water-level Measurements End Date:	1962-01-27
Field Water-Level Measurements Count:	1
Site-Visit Data Begin Date :	N/R
Site-Visit Data End Date :	N/R
Site-Visit Data Count :	0
Latitude :	36.380228
Longitude :	-119.680409
Last Date in Agency List :	2021-10-11

Map Id: 21
Direction: SW
Distance: 0.731 mi., 3863 ft.
Elevation: 250 ft.
Relative: Lower

Site Name : 362059119405501 | 362059119405502
36.349722, -119.681944
CA

Database(s) : [NWIS]

Envirosite ID: 9203365
EPA ID: N/R

NWIS

Site Identification Number :	362059119405501
Site Type :	Well
Station Name :	018S021E22Z001M MENDENHALL 1916
Agency :	U.S. Geological Survey
District :	N/R
State :	CA
County :	Kings County
Country :	USA

Map Id: 21
Direction: SW
Distance: 0.731 mi., 3863 ft.
Elevation: 250 ft.
Relative: Lower

Site Name : 362059119405501 | 362059119405502
36.349722, -119.681944
CA

Database(s) : [NWIS] ***(cont.)***

Envirosite ID: 9203365
EPA ID: N/R

NWIS ***(cont.)***

Land Net Location :	N/R
Name of Location Map :	N/R
Scale of Location Map :	N/R
Altitude of Gage/Land Surface :	N/R
Method Altitude Determined :	N/R
Altitude Accuracy :	N/R
Altitude Datum :	N/R
Hydrologic Unit :	Tulare Lake Bed
Drainage Basin :	N/R
Topographic Setting :	N/R
Flags for the Type of Data Collected:	NNNNNNNNNNNNNNNNNNNNNNNNNNNNNN
Flags for Instruments at Site :	NNNNNNNNNNNNNNNNNNNNNNNNNNNNNN
Date of First Construction :	N/R
Date Site Established or Inventoried:	N/R
Drainage Area :	N/R
Contributing Drainage Area :	N/R
Data Reliability :	Location not accurate.
Data-Other GW Files :	N/R
National Aquifer :	N/R
Local Aquifer :	N/R
Local Aquifer Type :	N/R
Well Depth :	50
Hole Depth :	N/R
Source of Depth Data :	N/R
Project Number :	N/R
Real-Time Data Flag :	N/R
Peak-Streamflow Data Begin Date :	N/R
Peak-Streamflow Data End Date :	N/R
Peak-Streamflow Data Count :	N/R
Water-Quality Data Begin Date :	N/R
Water-Quality Data End Date :	N/R
Water-Quality Data Count :	N/R
Field Water-Level Measurements Begin Date:	N/R
Field Water-level Measurements End Date:	N/R
Field Water-Level Measurements Count:	N/R
Site-Visit Data Begin Date :	N/R
Site-Visit Data End Date :	N/R
Site-Visit Data Count :	N/R
Latitude :	36.349722
Longitude :	-119.681944
Last Date in Agency List :	2021-10-11

Site Identification Number :	362059119405502
Site Type :	Well
Station Name :	018S021E22Z002M MENDENHALL 1916
Agency :	U.S. Geological Survey
District :	N/R
State :	CA
County :	Kings County
Country :	USA
Land Net Location :	N/R
Name of Location Map :	N/R
Scale of Location Map :	N/R
Altitude of Gage/Land Surface :	N/R

Map Id: 21
Direction: SW
Distance: 0.731 mi., 3863 ft.
Elevation: 250 ft.
Relative: Lower

Site Name : 362059119405501 | 362059119405502
36.349722, -119.681944
CA

Database(s) : [NWIS] ***(cont.)***

Envirosite ID: 9203365
EPA ID: N/R

NWIS ***(cont.)***

Method Altitude Determined :	N/R
Altitude Accuracy :	N/R
Altitude Datum :	N/R
Hydrologic Unit :	Tulare Lake Bed
Drainage Basin :	N/R
Topographic Setting :	N/R
Flags for the Type of Data Collected:	NNNNNNNNNNNNNNNNNNNNNNNNNNNNN
Flags for Instruments at Site :	NNNNNNNNNNNNNNNNNNNNNNNNNNNNN
Date of First Construction :	N/R
Date Site Established or Inventoried:	N/R
Drainage Area :	N/R
Contributing Drainage Area :	N/R
Data Reliability :	Location not accurate.
Data-Other GW Files :	N/R
National Aquifer :	N/R
Local Aquifer :	N/R
Local Aquifer Type :	N/R
Well Depth :	61
Hole Depth :	N/R
Source of Depth Data :	N/R
Project Number :	N/R
Real-Time Data Flag :	N/R
Peak-Streamflow Data Begin Date :	N/R
Peak-Streamflow Data End Date :	N/R
Peak-Streamflow Data Count :	N/R
Water-Quality Data Begin Date :	N/R
Water-Quality Data End Date :	N/R
Water-Quality Data Count :	N/R
Field Water-Level Measurements Begin Date:	N/R
Field Water-level Measurements End Date:	N/R
Field Water-Level Measurements Count:	N/R
Site-Visit Data Begin Date :	N/R
Site-Visit Data End Date :	N/R
Site-Visit Data Count :	N/R
Latitude :	36.349722
Longitude :	-119.681944
Last Date in Agency List :	2021-10-11

Map Id: 22
Direction: S
Distance: 0.739 mi., 3901 ft.
Elevation: 253 ft.
Relative: Lower

Site Name : 362048119400601
36.346617, -119.669297
CA

Database(s) : [NWIS]

Envirosite ID: 9203344
EPA ID: N/R

NWIS

Site Identification Number :	362048119400601
Site Type :	Well
Station Name :	018S021E23N002M

Map Id: 22
Direction: S
Distance: 0.739 mi., 3901 ft.
Elevation: 253 ft.
Relative: Lower

Site Name : 362048119400601
36.346617, -119.669297
CA

Database(s) : [NWIS] ***(cont.)***

Envirosite ID: 9203344
EPA ID: N/R

NWIS ***(cont.)***

Agency :	U.S. Geological Survey
District :	N/R
State :	CA
County :	Kings County
Country :	USA
Land Net Location :	NWSWS23 T18S R21E M
Name of Location Map :	HANFORD VISALIA F2
Scale of Location Map :	63360
Altitude of Gage/Land Surface :	249.00
Method Altitude Determined :	Interpolated from topographic map.
Altitude Accuracy :	52
Altitude Datum :	National Geodetic Vertical Datum of 1929
Hydrologic Unit :	Tulare Lake Bed
Drainage Basin :	N/R
Topographic Setting :	N/R
Flags for the Type of Data Collected:	NNNNNNNNNNNNNNNNNNNNNNNNNNNNO
Flags for Instruments at Site :	NNNNNNNNNNNNNNNNNNNNNNNNNNNNN
Date of First Construction :	N/R
Date Site Established or Inventoried:	N/R
Drainage Area :	N/R
Contributing Drainage Area :	N/R
Data Reliability :	Unchecked data.
Data-Other GW Files :	YNNNNYNN
National Aquifer :	Central Valley aquifer system
Local Aquifer :	N/R
Local Aquifer Type :	N/R
Well Depth :	214
Hole Depth :	N/R
Source of Depth Data :	N/R
Project Number :	N/R
Real-Time Data Flag :	0
Peak-Streamflow Data Begin Date :	N/R
Peak-Streamflow Data End Date :	N/R
Peak-Streamflow Data Count :	0
Water-Quality Data Begin Date :	N/R
Water-Quality Data End Date :	N/R
Water-Quality Data Count :	0
Field Water-Level Measurements Begin Date:	1961-11-21
Field Water-level Measurements End Date:	1961-11-21
Field Water-Level Measurements Count:	1
Site-Visit Data Begin Date :	N/R
Site-Visit Data End Date :	N/R
Site-Visit Data Count :	0
Latitude :	36.346617
Longitude :	-119.669297
Last Date in Agency List :	2021-10-11

Map Id: 23
Direction: W
Distance: 0.744 mi., 3928 ft.
Elevation: 254 ft.
Relative: Lower

Site Name : 362200119410701
36.366617, -119.686242
CA

Database(s) : [NWIS]

Envirosite ID: 9253189
EPA ID: N/R

NWIS

Site Identification Number :	362200119410701
Site Type :	Well
Station Name :	018S021E15E001M
Agency :	U.S. Geological Survey
District :	N/R
State :	CA
County :	Kings County
Country :	USA
Land Net Location :	SENWS15 T18S R21E M
Name of Location Map :	HANFORD VISALIA F2
Scale of Location Map :	63360
Altitude of Gage/Land Surface :	251.00
Method Altitude Determined :	Interpolated from topographic map.
Altitude Accuracy :	52
Altitude Datum :	National Geodetic Vertical Datum of 1929
Hydrologic Unit :	Tulare Lake Bed
Drainage Basin :	N/R
Topographic Setting :	N/R
Flags for the Type of Data Collected:	NNNNNNNNNNNNNNNNNNNNNNNNNNNNO
Flags for Instruments at Site :	NNNNNNNNNNNNNNNNNNNNNNNNNNNNN
Date of First Construction :	1954-01-01
Date Site Established or Inventoried:	N/R
Drainage Area :	N/R
Contributing Drainage Area :	N/R
Data Reliability :	Unchecked data.
Data-Other GW Files :	YYNNNYNN
National Aquifer :	Central Valley aquifer system
Local Aquifer :	N/R
Local Aquifer Type :	N/R
Well Depth :	71.0
Hole Depth :	N/R
Source of Depth Data :	N/R
Project Number :	N/R
Real-Time Data Flag :	0
Peak-Streamflow Data Begin Date :	N/R
Peak-Streamflow Data End Date :	N/R
Peak-Streamflow Data Count :	0
Water-Quality Data Begin Date :	N/R
Water-Quality Data End Date :	N/R
Water-Quality Data Count :	0
Field Water-Level Measurements Begin Date:	1961-12-14
Field Water-level Measurements End Date:	1961-12-14
Field Water-Level Measurements Count:	1
Site-Visit Data Begin Date :	N/R
Site-Visit Data End Date :	N/R
Site-Visit Data Count :	0
Latitude :	36.366617
Longitude :	-119.686242
Last Date in Agency List :	2021-10-11

Map Id: 24
Direction: S
Distance: 0.815 mi., 4302 ft.
Elevation: 251 ft.
Relative: Lower

Site Name : 362044119401501
36.345506, -119.671797
CA

Database(s) : [NWIS]

Envirosite ID: 9225786
EPA ID: N/R

NWIS

Site Identification Number :	362044119401501
Site Type :	Well
Station Name :	018S021E22R001M
Agency :	U.S. Geological Survey
District :	N/R
State :	CA
County :	Kings County
Country :	USA
Land Net Location :	SWSWS23 T18S R21E M
Name of Location Map :	HANFORD VISALIA F2
Scale of Location Map :	63360
Altitude of Gage/Land Surface :	246.00
Method Altitude Determined :	Interpolated from topographic map.
Altitude Accuracy :	52
Altitude Datum :	National Geodetic Vertical Datum of 1929
Hydrologic Unit :	Tulare Lake Bed
Drainage Basin :	N/R
Topographic Setting :	N/R
Flags for the Type of Data Collected:	NNNNNNNNNNNNNNNNNNNNNNNNNNNNN
Flags for Instruments at Site :	NNNNNNNNNNNNNNNNNNNNNNNNNNNNN
Date of First Construction :	1954-01-01
Date Site Established or Inventoried:	N/R
Drainage Area :	N/R
Contributing Drainage Area :	N/R
Data Reliability :	Unchecked data.
Data-Other GW Files :	NYNNNNNN
National Aquifer :	Central Valley aquifer system
Local Aquifer :	N/R
Local Aquifer Type :	N/R
Well Depth :	52.0
Hole Depth :	N/R
Source of Depth Data :	N/R
Project Number :	N/R
Real-Time Data Flag :	N/R
Peak-Streamflow Data Begin Date :	N/R
Peak-Streamflow Data End Date :	N/R
Peak-Streamflow Data Count :	N/R
Water-Quality Data Begin Date :	N/R
Water-Quality Data End Date :	N/R
Water-Quality Data Count :	N/R
Field Water-Level Measurements Begin Date:	N/R
Field Water-level Measurements End Date:	N/R
Field Water-Level Measurements Count:	N/R
Site-Visit Data Begin Date :	N/R
Site-Visit Data End Date :	N/R
Site-Visit Data Count :	N/R
Latitude :	36.345506
Longitude :	-119.671797
Last Date in Agency List :	2021-10-11

Map Id: 25
Direction: SSW
Distance: 0.878 mi., 4634 ft.
Elevation: 250 ft.
Relative: Lower

Site Name : CA5402030
1840 W. Picadilly Lane
HANFORD, CA 93230

Database(s) : [PWS]

Envirosite ID: 1051213
EPA ID: N/R

PWS

Facility Address :	1840 W. Picadilly Lane, HANFORD, CA 93230
PWS ID :	CA5402030
PWS Type :	Transient non-community system
PWS Name :	WAUKENA MARKET
Activity Status :	Active
Primary Source :	Ground water
Submission Year :	2019
Submission Year Quarter :	2019Q4
Population Served Count :	100
Service Connections Count :	1
Population Category 2 :	<10,000
Population Category 3 :	<=3300
Population Category 4 :	<10K
Population Category 5 :	<=500
Population Category 11 :	<=100
Submission Quarter :	4
Submission Status Code :	Y
First Reported Date :	1992-12-21
Last Reported Date :	2019-12-16
Deactivation Date :	N/R
GW or SW :	Groundwater
Is Grant Eligible :	Y
Is Outstanding Performer :	N/R
Is School or Daycare :	N
Is Source Water Protected :	N/R
Primacy Agency :	California
Primacy Type :	State
Org Name :	AHMED, ABDU
EPA Region :	Region 9
Admin Name :	AHMED, ABDU
Owner Type :	Private
Phone Number :	559-772-7252
Phone Ext Number :	N/R
Alt Phone Number :	N/R
Email Address :	abduahmed1920@gmail.com
Fax Number :	N/R
Is Wholesaler :	N
LT2 Schedule Category :	N/R
NPM Candidate :	Y
CDS ID :	N/R
DBPR Schedule Category :	N/R
Outstanding Performer Date :	N/R
Season Begin Date :	01-01
Season End Date :	12-31
Source Water Protection Date :	N/R
Seasonal Startup System :	N/R
Reduced Monitoring Begin Date :	N/R
Reduced Monitoring End Date :	N/R
Reduced RTCR Monitoring :	N/R
Last Date in Agency List :	2020-02-20

Map Id: 26
Direction: S
Distance: 0.931 mi., 4915 ft.
Elevation: 252 ft.
Relative: Lower

Site Name : 362038119400601
36.343839, -119.669297
CA

Database(s) : [NWIS]

Envirosite ID: 9214440
EPA ID: N/R

NWIS

Site Identification Number :	362038119400601
Site Type :	Well
Station Name :	018S021E23N001M
Agency :	U.S. Geological Survey
District :	N/R
State :	CA
County :	Kings County
Country :	USA
Land Net Location :	SWSWS23 T18S R21E M
Name of Location Map :	HANFORD VISALIA F2
Scale of Location Map :	63360
Altitude of Gage/Land Surface :	246.00
Method Altitude Determined :	Interpolated from topographic map.
Altitude Accuracy :	52
Altitude Datum :	National Geodetic Vertical Datum of 1929
Hydrologic Unit :	Tulare Lake Bed
Drainage Basin :	N/R
Topographic Setting :	N/R
Flags for the Type of Data Collected:	NNNNNNNNNNNNNNNNNNNNNNNNNNNNN
Flags for Instruments at Site :	NNNNNNNNNNNNNNNNNNNNNNNNNNNNN
Date of First Construction :	1959-01-01
Date Site Established or Inventoried:	N/R
Drainage Area :	N/R
Contributing Drainage Area :	N/R
Data Reliability :	Unchecked data.
Data-Other GW Files :	NYNNNNNN
National Aquifer :	Central Valley aquifer system
Local Aquifer :	N/R
Local Aquifer Type :	N/R
Well Depth :	170
Hole Depth :	N/R
Source of Depth Data :	N/R
Project Number :	N/R
Real-Time Data Flag :	N/R
Peak-Streamflow Data Begin Date :	N/R
Peak-Streamflow Data End Date :	N/R
Peak-Streamflow Data Count :	N/R
Water-Quality Data Begin Date :	N/R
Water-Quality Data End Date :	N/R
Water-Quality Data Count :	N/R
Field Water-Level Measurements Begin Date:	N/R
Field Water-level Measurements End Date:	N/R
Field Water-Level Measurements Count:	N/R
Site-Visit Data Begin Date :	N/R
Site-Visit Data End Date :	N/R
Site-Visit Data Count :	N/R
Latitude :	36.343839
Longitude :	-119.669297
Last Date in Agency List :	2021-10-11

Map Id: 27
Direction: ENE
Distance: 0.940 mi., 4963 ft.
Elevation: 257 ft.
Relative: Higher

Site Name : 362222119384701
36.372728, -119.647352
CA

Database(s) : [NWIS]

Envirosite ID: 9256883
EPA ID: N/R

NWIS

Site Identification Number :	362222119384701
Site Type :	Well
Station Name :	018S021E13C001M
Agency :	U.S. Geological Survey
District :	N/R
State :	CA
County :	Kings County
Country :	USA
Land Net Location :	SESWS12 T18S R21E M
Name of Location Map :	HANFORD VISALIA F2
Scale of Location Map :	63360
Altitude of Gage/Land Surface :	253.00
Method Altitude Determined :	Interpolated from topographic map.
Altitude Accuracy :	52
Altitude Datum :	National Geodetic Vertical Datum of 1929
Hydrologic Unit :	Tulare Lake Bed
Drainage Basin :	N/R
Topographic Setting :	N/R
Flags for the Type of Data Collected:	NNNNNNNNNNNNNNNNNNNNNNNNNNNNN
Flags for Instruments at Site :	NNNNNNNNNNNNNNNNNNNNNNNNNNNNN
Date of First Construction :	1960-01-01
Date Site Established or Inventoried:	N/R
Drainage Area :	N/R
Contributing Drainage Area :	N/R
Data Reliability :	Unchecked data.
Data-Other GW Files :	NYNNNNNN
National Aquifer :	Central Valley aquifer system
Local Aquifer :	N/R
Local Aquifer Type :	N/R
Well Depth :	N/R
Hole Depth :	N/R
Source of Depth Data :	N/R
Project Number :	N/R
Real-Time Data Flag :	N/R
Peak-Streamflow Data Begin Date :	N/R
Peak-Streamflow Data End Date :	N/R
Peak-Streamflow Data Count :	N/R
Water-Quality Data Begin Date :	N/R
Water-Quality Data End Date :	N/R
Water-Quality Data Count :	N/R
Field Water-Level Measurements Begin Date:	N/R
Field Water-level Measurements End Date:	N/R
Field Water-Level Measurements Count:	N/R
Site-Visit Data Begin Date :	N/R
Site-Visit Data End Date :	N/R
Site-Visit Data Count :	N/R
Latitude :	36.372728
Longitude :	-119.647352
Last Date in Agency List :	2021-10-11

Map Id: 28
Direction: W
Distance: 0.941 mi., 4971 ft.
Elevation: 254 ft.
Relative: Lower

Site Name : S4-TUSK-TLA10 | USGS-362100119410001 | 362100119410001
36.362417, -119.689806
CA

Database(s) : [NWIS, WELLS - GAMA - CA]

Envirosite ID: 9253157
EPA ID: N/R

NWIS

Site Identification Number :	362100119410001
Site Type :	Well
Station Name :	018S021E15M001M
Agency :	U.S. Geological Survey
District :	N/R
State :	CA
County :	Kings County
Country :	USA
Land Net Location :	NWSWS15 T18S R21E M
Name of Location Map :	HANFORD
Scale of Location Map :	24000
Altitude of Gage/Land Surface :	250
Method Altitude Determined :	Interpolated from topographic map.
Altitude Accuracy :	5
Altitude Datum :	National Geodetic Vertical Datum of 1929
Hydrologic Unit :	Tulare Lake Bed
Drainage Basin :	N/R
Topographic Setting :	Valley flat
Flags for the Type of Data Collected:	NONONNNNNNNNNNNNNNNNNNNNNNNO
Flags for Instruments at Site :	NNNNNNNNNNNNNNNNNNNNNNNNNNNN
Date of First Construction :	2003-11-04
Date Site Established or Inventoried:	2015-02-03
Drainage Area :	N/R
Contributing Drainage Area :	N/R
Data Reliability :	Data have been checked by the reporting agency.
Data-Other GW Files :	YY Y
National Aquifer :	N/R
Local Aquifer :	N/R
Local Aquifer Type :	N/R
Well Depth :	200
Hole Depth :	205
Source of Depth Data :	D
Project Number :	00FC1S400
Real-Time Data Flag :	0
Peak-Streamflow Data Begin Date :	N/R
Peak-Streamflow Data End Date :	N/R
Peak-Streamflow Data Count :	0
Water-Quality Data Begin Date :	2015-02-24
Water-Quality Data End Date :	2020-02-03
Water-Quality Data Count :	3
Field Water-Level Measurements Begin Date:	2020-02-03
Field Water-level Measurements End Date:	2020-02-03
Field Water-Level Measurements Count:	1
Site-Visit Data Begin Date :	N/R
Site-Visit Data End Date :	N/R
Site-Visit Data Count :	0
Latitude :	36.362417
Longitude :	-119.689806
Last Date in Agency List :	2021-10-11

WELLS - GAMA - CA

Details for this site have been truncated due to the large number of available details for this site within this dataset. For the complete details for this site, contact your Envirosite account representative for a complimentary site report containing all of the details available.

Map Id: 28
Direction: W
Distance: 0.941 mi., 4971 ft.
Elevation: 254 ft.
Relative: Lower

Site Name : S4-TUSK-TLA10 | USGS-362100119410001 | 362100119410001
36.362417, -119.689806
CA

Database(s) : [NWIS, WELLS - GAMA - CA] ***(cont.)***

Envirosite ID: 9253157
EPA ID: N/R

WELLS - GAMA - CA ***(cont.)***

Well ID :	S4-TUSK-TLA10
Well Type :	MUNICIPAL
Well Depth (Ft.) :	200.0
Top of Screen (Ft.) :	180.0
Screen Length (Ft.) :	20.0
Source :	USGS
Source Name :	S4-TUSK-TLA10
Other Names :	S4-TUSK-TLA10
RL :	UNK
Approximate Latitude :	36.36241667
Approximate Longitude :	-119.68980556
Last Date in Agency List :	2021-11-26

Well ID :	S4-TUSK-TLA10
Well Type :	MUNICIPAL
Well Depth (Ft.) :	200.0
Top of Screen (Ft.) :	180.0
Screen Length (Ft.) :	20.0
Source :	USGS
Source Name :	S4-TUSK-TLA10
Other Names :	S4-TUSK-TLA10
RL :	.8
Approximate Latitude :	36.36241667
Approximate Longitude :	-119.68980556
Last Date in Agency List :	2021-11-26

Well ID :	S4-TUSK-TLA10
Well Type :	MUNICIPAL
Well Depth (Ft.) :	200.0
Top of Screen (Ft.) :	180.0
Screen Length (Ft.) :	20.0
Source :	USGS
Source Name :	S4-TUSK-TLA10
Other Names :	S4-TUSK-TLA10
RL :	.008
Approximate Latitude :	36.36241667
Approximate Longitude :	-119.68980556
Last Date in Agency List :	2021-11-26

Well ID :	S4-TUSK-TLA10
Well Type :	MUNICIPAL
Well Depth (Ft.) :	200.0
Top of Screen (Ft.) :	180.0
Screen Length (Ft.) :	20.0
Source :	USGS
Source Name :	S4-TUSK-TLA10
Other Names :	S4-TUSK-TLA10
RL :	.036
Approximate Latitude :	36.36241667
Approximate Longitude :	-119.68980556
Last Date in Agency List :	2021-11-26

Map Id: 28
Direction: W
Distance: 0.941 mi., 4971 ft.
Elevation: 254 ft.
Relative: Lower

Site Name : S4-TUSK-TLA10 | USGS-362100119410001 | 362100119410001
36.362417, -119.689806
CA

Database(s) : [NWIS, WELLS - GAMA - CA] ***(cont.)***

Envirosite ID: 9253157
EPA ID: N/R

WELLS - GAMA - CA ***(cont.)***

Well ID :	S4-TUSK-TLA10
Well Type :	MUNICIPAL
Well Depth (Ft.) :	200.0
Top of Screen (Ft.) :	180.0
Screen Length (Ft.) :	20.0
Source :	USGS
Source Name :	S4-TUSK-TLA10
Other Names :	S4-TUSK-TLA10
RL :	.012
Approximate Latitude :	36.36241667
Approximate Longitude :	-119.68980556
Last Date in Agency List :	2021-11-26

Well ID :	S4-TUSK-TLA10
Well Type :	MUNICIPAL
Well Depth (Ft.) :	200.0
Top of Screen (Ft.) :	180.0
Screen Length (Ft.) :	20.0
Source :	USGS
Source Name :	S4-TUSK-TLA10
Other Names :	S4-TUSK-TLA10
RL :	.044
Approximate Latitude :	36.36241667
Approximate Longitude :	-119.68980556
Last Date in Agency List :	2021-11-26

Well ID :	S4-TUSK-TLA10
Well Type :	MUNICIPAL
Well Depth (Ft.) :	200.0
Top of Screen (Ft.) :	180.0
Screen Length (Ft.) :	20.0
Source :	USGS
Source Name :	S4-TUSK-TLA10
Other Names :	S4-TUSK-TLA10
RL :	.14
Approximate Latitude :	36.36241667
Approximate Longitude :	-119.68980556
Last Date in Agency List :	2021-11-26

Well ID :	S4-TUSK-TLA10
Well Type :	MUNICIPAL
Well Depth (Ft.) :	200.0
Top of Screen (Ft.) :	180.0
Screen Length (Ft.) :	20.0
Source :	USGS
Source Name :	S4-TUSK-TLA10
Other Names :	S4-TUSK-TLA10
RL :	.01
Approximate Latitude :	36.36241667
Approximate Longitude :	-119.68980556
Last Date in Agency List :	2021-11-26

Map Id: 28
Direction: W
Distance: 0.941 mi., 4971 ft.
Elevation: 254 ft.
Relative: Lower

Site Name : S4-TUSK-TLA10 | USGS-362100119410001 | 362100119410001
36.362417, -119.689806
CA

Database(s) : [NWIS, WELLS - GAMA - CA] ***(cont.)***

Envirosite ID: 9253157
EPA ID: N/R

WELLS - GAMA - CA ***(cont.)***

Well ID :	S4-TUSK-TLA10
Well Type :	MUNICIPAL
Well Depth (Ft.) :	200.0
Top of Screen (Ft.) :	180.0
Screen Length (Ft.) :	20.0
Source :	USGS
Source Name :	S4-TUSK-TLA10
Other Names :	S4-TUSK-TLA10
RL :	.05
Approximate Latitude :	36.36241667
Approximate Longitude :	-119.68980556
Last Date in Agency List :	2021-11-26

Well ID :	S4-TUSK-TLA10
Well Type :	MUNICIPAL
Well Depth (Ft.) :	200.0
Top of Screen (Ft.) :	180.0
Screen Length (Ft.) :	20.0
Source :	USGS
Source Name :	S4-TUSK-TLA10
Other Names :	S4-TUSK-TLA10
RL :	.034
Approximate Latitude :	36.36241667
Approximate Longitude :	-119.68980556
Last Date in Agency List :	2021-11-26

Chemicals :
2020-02-03 - SIMAZINE < .008 UG/L
2020-02-03 - EBZ < .036 UG/L
2020-02-03 - PERMETHRIN < .012 UG/L
2020-02-03 - DCA11 < .044 UG/L
2020-02-03 - TBME < .14 UG/L
2020-02-03 - MG .032 MG/L
2020-02-03 - METRIBUZ < .008 UG/L
2020-02-03 - PFHA < 4.3 NG/L
2020-02-03 - CA 6.57 MG/L
2020-02-03 - CO < .03 UG/L
2020-02-03 - XYLENES < .032 UG/L
2020-02-03 - CU .00082 MG/L
2020-02-03 - BR .03 MG/L
2020-02-03 - DBCP < .02 UG/L
2020-02-03 - TCA112 < .046 UG/L
2020-02-03 - THIOBENCARB < .016 UG/L
2020-02-03 - PH 9.2 PH UNITS
2020-02-03 - CTCL < .06 UG/L
2020-02-03 - TCE < .025 UG/L
2020-02-03 - NH3NH4N .02 MG/L

Well ID :	USGS-362100119410001
Well Type :	UNK
Well Depth (Ft.) :	N/R
Top of Screen (Ft.) :	N/R
Screen Length (Ft.) :	N/R
Source :	USGSNEW

Map Id: 28
Direction: W
Distance: 0.941 mi., 4971 ft.
Elevation: 254 ft.
Relative: Lower

Site Name : S4-TUSK-TLA10 | USGS-362100119410001 | 362100119410001
36.362417, -119.689806
CA

Database(s) : [NWIS, WELLS - GAMA - CA] ***(cont.)***

Envirosite ID: 9253157
EPA ID: N/R

WELLS - GAMA - CA ***(cont.)***

Source Name :	USGS-362100119410001
Other Names :	USGS-362100119410001
RL :	UNK
Approximate Latitude :	36.3624167
Approximate Longitude :	-119.6898056
Last Date in Agency List :	2021-11-26

Chemicals :

2015-02-24 - MO = 4.37 UG/L
2015-02-24 - C-14 = .21 PCT MODERN
2015-02-24 - NI = .29 UG/L
2015-02-24 - SC = 247 UMHOS/CM
2015-02-24 - NH3NH4N = .02 MG/L
2015-02-24 - CL = 7.4 MG/L
2015-02-24 - MG = .061 MG/L
2015-02-24 - TEMP = 19 CELSIUS
2015-02-24 - SE = .26 UG/L
2015-02-24 - BA = .00601 MG/L
2015-02-24 - H-3 = 17.6 pCi/L
2015-02-24 - NO3N ND 0 MG/L
2015-02-24 - TDS = 166 MG/L
2015-02-24 - PB = 1.15 UG/L
2015-02-24 - DCMA ND 0 UG/L
2015-02-24 - SO4 = 41.1 MG/L
2015-02-24 - LI = .44 UG/L
2015-02-24 - B = .031 MG/L
2015-02-24 - PCATE ND 0 UG/L
2015-02-24 - BR ND 0 MG/L

Map Id: 29
Direction: WNW
Distance: 0.944 mi., 4987 ft.
Elevation: 253 ft.
Relative: Lower

Site Name : 362208119412001
36.368839, -119.689853
CA

Database(s) : [NWIS]

Envirosite ID: 31315264
EPA ID: N/R

NWIS

Site Identification Number :	362208119412001
Site Type :	Well
Station Name :	018S021E16A001M
Agency :	U.S. Geological Survey
District :	N/R
State :	CA
County :	Kings County
Country :	USA
Land Net Location :	NWNWS15 T18S R21E M
Name of Location Map :	HANFORD VISALIA F2
Scale of Location Map :	63360
Altitude of Gage/Land Surface :	248.00
Method Altitude Determined :	Interpolated from topographic map.

Map Id: 29
Direction: WNW
Distance: 0.944 mi., 4987 ft.
Elevation: 253 ft.
Relative: Lower

Site Name : 362208119412001
36.368839, -119.689853
CA

Database(s) : [NWIS] ***(cont.)***

Envirosite ID: 31315264
EPA ID: N/R

NWIS ***(cont.)***

Altitude Accuracy :	52
Altitude Datum :	National Geodetic Vertical Datum of 1929
Hydrologic Unit :	Tulare Lake Bed
Drainage Basin :	N/R
Topographic Setting :	N/R
Flags for the Type of Data Collected:	NNNNNNNNNNNNNNNNNNNNNNNNNNNNN
Flags for Instruments at Site :	NNNNNNNNNNNNNNNNNNNNNNNNNNNNN
Date of First Construction :	1959-01-01
Date Site Established or Inventoried:	N/R
Drainage Area :	N/R
Contributing Drainage Area :	N/R
Data Reliability :	Unchecked data.
Data-Other GW Files :	YYNNNNNN
National Aquifer :	Central Valley aquifer system
Local Aquifer :	N/R
Local Aquifer Type :	N/R
Well Depth :	64.0
Hole Depth :	N/R
Source of Depth Data :	N/R
Project Number :	N/R
Real-Time Data Flag :	N/R
Peak-Streamflow Data Begin Date :	N/R
Peak-Streamflow Data End Date :	N/R
Peak-Streamflow Data Count :	N/R
Water-Quality Data Begin Date :	N/R
Water-Quality Data End Date :	N/R
Water-Quality Data Count :	N/R
Field Water-Level Measurements Begin Date:	N/R
Field Water-level Measurements End Date:	N/R
Field Water-Level Measurements Count:	N/R
Site-Visit Data Begin Date :	N/R
Site-Visit Data End Date :	N/R
Site-Visit Data Count :	N/R
Latitude :	36.368839
Longitude :	-119.689853
Last Date in Agency List :	2021-10-11

Map Id: 30
Direction: S
Distance: 0.951 mi., 5020 ft.
Elevation: 250 ft.
Relative: Lower

Site Name : 362037119401801
36.343561, -119.67263
CA

Database(s) : [NWIS]

Envirosite ID: 9213627
EPA ID: N/R

NWIS

Site Identification Number :	362037119401801
Site Type :	Well
Station Name :	018S021E27A001M
Agency :	U.S. Geological Survey

Map Id: 30
Direction: S
Distance: 0.951 mi., 5020 ft.
Elevation: 250 ft.
Relative: Lower

Site Name : 362037119401801
36.343561, -119.67263
CA

Database(s) : [NWIS] ***(cont.)***

Envirosite ID: 9213627
EPA ID: N/R

NWIS ***(cont.)***

District :	N/R
State :	CA
County :	Kings County
Country :	USA
Land Net Location :	SWSWS23 T18S R21E M
Name of Location Map :	HANFORD VISALIA F2
Scale of Location Map :	63360
Altitude of Gage/Land Surface :	246.00
Method Altitude Determined :	Interpolated from topographic map.
Altitude Accuracy :	52
Altitude Datum :	National Geodetic Vertical Datum of 1929
Hydrologic Unit :	Tulare Lake Bed
Drainage Basin :	N/R
Topographic Setting :	N/R
Flags for the Type of Data Collected:	NNNNNNNNNNNNNNNNNNNNNNNNNNNNO
Flags for Instruments at Site :	NNNNNNNNNNNNNNNNNNNNNNNNNNNNN
Date of First Construction :	N/R
Date Site Established or Inventoried:	N/R
Drainage Area :	N/R
Contributing Drainage Area :	N/R
Data Reliability :	Unchecked data.
Data-Other GW Files :	YNNNNYNN
National Aquifer :	Central Valley aquifer system
Local Aquifer :	N/R
Local Aquifer Type :	N/R
Well Depth :	N/R
Hole Depth :	N/R
Source of Depth Data :	N/R
Project Number :	N/R
Real-Time Data Flag :	0
Peak-Streamflow Data Begin Date :	N/R
Peak-Streamflow Data End Date :	N/R
Peak-Streamflow Data Count :	0
Water-Quality Data Begin Date :	N/R
Water-Quality Data End Date :	N/R
Water-Quality Data Count :	0
Field Water-Level Measurements Begin Date:	1961-11-21
Field Water-level Measurements End Date:	1961-11-21
Field Water-Level Measurements Count:	1
Site-Visit Data Begin Date :	N/R
Site-Visit Data End Date :	N/R
Site-Visit Data Count :	0
Latitude :	36.343561
Longitude :	-119.67263
Last Date in Agency List :	2021-10-11

Map Id: 31
Direction: SSE
Distance: 0.951 mi., 5022 ft.
Elevation: 251 ft.
Relative: Lower

Site Name : 362037119394801
36.343561, -119.664297
CA

Database(s) : [NWIS]

Envirosite ID: 9225742
EPA ID: N/R

NWIS

Site Identification Number :	362037119394801
Site Type :	Well
Station Name :	018S021E36C001M
Agency :	U.S. Geological Survey
District :	N/R
State :	CA
County :	Kings County
Country :	USA
Land Net Location :	SESWS23 T18S R21E M
Name of Location Map :	HANFORD VISALIA F2
Scale of Location Map :	63360
Altitude of Gage/Land Surface :	246.00
Method Altitude Determined :	Interpolated from topographic map.
Altitude Accuracy :	52
Altitude Datum :	National Geodetic Vertical Datum of 1929
Hydrologic Unit :	Tulare Lake Bed
Drainage Basin :	N/R
Topographic Setting :	N/R
Flags for the Type of Data Collected:	NNNNNNNNNNNNNNNNNNNNNNNNNNNNN
Flags for Instruments at Site :	NNNNNNNNNNNNNNNNNNNNNNNNNNNNN
Date of First Construction :	1950-01-01
Date Site Established or Inventoried:	N/R
Drainage Area :	N/R
Contributing Drainage Area :	N/R
Data Reliability :	Unchecked data.
Data-Other GW Files :	YYNNNNNN
National Aquifer :	Central Valley aquifer system
Local Aquifer :	N/R
Local Aquifer Type :	N/R
Well Depth :	136
Hole Depth :	N/R
Source of Depth Data :	N/R
Project Number :	N/R
Real-Time Data Flag :	N/R
Peak-Streamflow Data Begin Date :	N/R
Peak-Streamflow Data End Date :	N/R
Peak-Streamflow Data Count :	N/R
Water-Quality Data Begin Date :	N/R
Water-Quality Data End Date :	N/R
Water-Quality Data Count :	N/R
Field Water-Level Measurements Begin Date:	N/R
Field Water-level Measurements End Date:	N/R
Field Water-Level Measurements Count:	N/R
Site-Visit Data Begin Date :	N/R
Site-Visit Data End Date :	N/R
Site-Visit Data Count :	N/R
Latitude :	36.343561
Longitude :	-119.664297
Last Date in Agency List :	2021-10-11

Map Id: 32
Direction: ENE
Distance: 0.989 mi., 5224 ft.
Elevation: 257 ft.
Relative: Higher

Site Name : 362224119384401
36.373284, -119.646519
CA

Database(s) : [NWIS]

Envirosite ID: 9207542
EPA ID: N/R

NWIS

Site Identification Number :	362224119384401
Site Type :	Well
Station Name :	018S021E12P001M
Agency :	U.S. Geological Survey
District :	N/R
State :	CA
County :	Kings County
Country :	USA
Land Net Location :	SESWS12 T18S R21E M
Name of Location Map :	HANFORD VISALIA F2
Scale of Location Map :	63360
Altitude of Gage/Land Surface :	253.00
Method Altitude Determined :	Interpolated from topographic map.
Altitude Accuracy :	52
Altitude Datum :	National Geodetic Vertical Datum of 1929
Hydrologic Unit :	Tulare Lake Bed
Drainage Basin :	N/R
Topographic Setting :	N/R
Flags for the Type of Data Collected:	NNNNNNNNNNNNNNNNNNNNNNNNNNNNN
Flags for Instruments at Site :	NNNNNNNNNNNNNNNNNNNNNNNNNNNNN
Date of First Construction :	1958-01-01
Date Site Established or Inventoried:	N/R
Drainage Area :	N/R
Contributing Drainage Area :	N/R
Data Reliability :	Unchecked data.
Data-Other GW Files :	NYNNNNNN
National Aquifer :	Central Valley aquifer system
Local Aquifer :	N/R
Local Aquifer Type :	N/R
Well Depth :	118
Hole Depth :	N/R
Source of Depth Data :	N/R
Project Number :	N/R
Real-Time Data Flag :	N/R
Peak-Streamflow Data Begin Date :	N/R
Peak-Streamflow Data End Date :	N/R
Peak-Streamflow Data Count :	N/R
Water-Quality Data Begin Date :	N/R
Water-Quality Data End Date :	N/R
Water-Quality Data Count :	N/R
Field Water-Level Measurements Begin Date:	N/R
Field Water-level Measurements End Date:	N/R
Field Water-Level Measurements Count:	N/R
Site-Visit Data Begin Date :	N/R
Site-Visit Data End Date :	N/R
Site-Visit Data Count :	N/R
Latitude :	36.373284
Longitude :	-119.646519
Last Date in Agency List :	2021-10-11

Map Id: 33
Direction: NE
Distance: 0.993 mi., 5245 ft.
Elevation: 260 ft.
Relative: Higher

Site Name : 362247119385401
36.379672, -119.649297
CA

Database(s) : [NWIS]

Envirosite ID: 9256890
EPA ID: N/R

NWIS

Site Identification Number :	362247119385401
Site Type :	Well
Station Name :	018S021E12L001M
Agency :	U.S. Geological Survey
District :	N/R
State :	CA
County :	Kings County
Country :	USA
Land Net Location :	SENWS12 T18S R21E M
Name of Location Map :	HANFORD VISALIA F2
Scale of Location Map :	63360
Altitude of Gage/Land Surface :	257.00
Method Altitude Determined :	Interpolated from topographic map.
Altitude Accuracy :	52
Altitude Datum :	National Geodetic Vertical Datum of 1929
Hydrologic Unit :	Tulare Lake Bed
Drainage Basin :	N/R
Topographic Setting :	N/R
Flags for the Type of Data Collected:	NNNNNNNNNNNNNNNNNNNNNNNNNNNNO
Flags for Instruments at Site :	NNNNNNNNNNNNNNNNNNNNNNNNNNNNN
Date of First Construction :	1960-01-01
Date Site Established or Inventoried:	N/R
Drainage Area :	N/R
Contributing Drainage Area :	N/R
Data Reliability :	Unchecked data.
Data-Other GW Files :	YYNNNYNN
National Aquifer :	Central Valley aquifer system
Local Aquifer :	N/R
Local Aquifer Type :	N/R
Well Depth :	320
Hole Depth :	N/R
Source of Depth Data :	N/R
Project Number :	N/R
Real-Time Data Flag :	0
Peak-Streamflow Data Begin Date :	N/R
Peak-Streamflow Data End Date :	N/R
Peak-Streamflow Data Count :	0
Water-Quality Data Begin Date :	N/R
Water-Quality Data End Date :	N/R
Water-Quality Data Count :	0
Field Water-Level Measurements Begin Date:	1961-05-11
Field Water-level Measurements End Date:	1961-05-11
Field Water-Level Measurements Count:	1
Site-Visit Data Begin Date :	N/R
Site-Visit Data End Date :	N/R
Site-Visit Data Count :	0
Latitude :	36.379672
Longitude :	-119.649297
Last Date in Agency List :	2021-10-11

RADON DATA:

STATE SOURCE: CA

Radon Test Results:

Zip:	Total Sites:	Cnt >=4 pCi/L:	Pct >= 4 pCi/L:	Max Result (pCi/L):
93230	25	1	4	5.3

FEDERAL AREA RADON INFORMATION FOR: 93230

NUMBER OF SAMPLE SITES: 6

Area:	Average Activity:	% <4 pCi/L:	% 4-20 pCi/L:	% >20 pCi/L:
first floor	2.3 pCi/L	83.33%	16.67%	0%

FEDERAL EPA RADON ZONE FOR KINGS COUNTY: Zone = 3

Note: Zone 1 indoor average level > 4 pCI/L

: Zone 2 indoor average level > = 2 pCI/L and <= 4 pCI/L

: Zone 3 indoor average < 2 pCI/L

HIST PWS ENF
Historical Public Water Supply locations with Enforcement Violations
Environmental Protection Agency
(800) 426-4791
List of Safe Drinking Water Information Systems (SDWIS) with enforcement violations that are no longer in current agency list.

NWIS
National Water Information Systems
United States Geological Society
(703) 648-5953
Information on all water resources for the United States. This database contains all current and historical data for the nation.

PWS
Public Water Supply
Environmental Protection Agency
(800) 426-4791
Safe drinking water information Systems

PWS ENF
Public Water Supply locations with Enforcement Violations
Environmental Protection Agency
(800) 426-4791
Safe drinking water information Systems with enforcememnt violations

WELLS - GAMA - CA
California Groundwater Ambient Monitoring Assessment
State Water Resources Control Board
916-341-5791
Brings together datasets from California state agencies including: Public Health Water Resources and Pesticide Regulation as well as from the US Geological Survey Lawrence Livermore National Laboratory and the Water Boards. It shows results for untreated raw water in different types of wells for naturally-occurring and man-made chemicals.

FLOOD Q3
Flood data
Environmental Protection Agency
(202) 566-1667
Q3 Flood Data

HYDROLOGIC UNIT
Hydrologic Unit Maps
USGS
The United States Geological Survey created a hierarchical system of hydrologic units originally called regions, sub-regions, accounting units, and cataloging units. Each unit was assigned a unique Hydrologic Unit Code (HUC). As first implemented the system had 21 regions, 221 subregions, 378 accounting units, and 2,264 cataloging units. Over time the system was changed and expanded. As of 2010 there are six levels in the hierarchy, represented by hydrologic unit codes from 2 to 12 digits long, called regions, subregions, basins, subbasins, watersheds, and subwatersheds. The table below describes the system's hydrologic unit levels and their characteristics, along with example names and codes.

WETLANDS NWI
National Wetland Inventory
U.S. Fish and Wildlife Service
(703) 358-2171
Wetland Inventory for the United States

SSURGO
Detailed Soil Data Map
Natural Resources Conservation Service: U.S. Department of Agriculture
(202) 690-4985
Detailed Soil Data Map

STATSGO & MUI
General Soil Data Map
Natural Resources Conservation Service: U.S. Department of Agriculture
(202) 690-4985
General Soil Data Map

USGS GEOLOGIC AGE
USGS Digital Data Series DDS
Natural Resources Conservation Service: U.S. Department of Agriculture
(202) 690-4985
USGS Digital Data Series DDS: Geologic Age and Rock Stratigraphic Unit

DAMS - CA
California Dam Inundation Maps
Department of Water Resources
916-845-8275
Dam inundation maps show the maximum extent of damage of a flood wave from a dam failure

OIL & GAS WELLS - CA
Oil and Gas Well Data
State of California Department of Conservation
916-327-1042
Oil and gas well locations and detail for all 6 districts

RADON
National Radon Database
U.S. Environmental Protection Agency
215-814-2469
A study of the EPA/State Residential Radon Survey and the National Residential Radon Survey.

RADON - CA
Radon tested locations in California
California Department of Health Services
(916) 449-5674
A table of long term and short term indoor radon measurments

RADON EPA
RADON EPA
U.S. Environmental Protection Agency
215-814-2469
EPA list of Radon zones

AIRPORT FACILITIES
Airport landing facilities
Federal Aviation Administration
(866) 835-5322
Airport landing facilities

BASINS
Better Assessment Science Integrating point & Non-point Sources
U.S. Environmental Protection Agency
855-246-3642
Integrated geographical information system national watershed data and environmental assessment known as Better Assessment Science Integrating point & Non-point Sources

DIGITAL OBSTACLE
Obstacles of interest to aviation users
Federal Aviation Administration
855-379-6518
The Digital Obstacle File describes all known obstacles of interest to aviation users in the U.S. with limited coverage of the Pacific the Caribbean Canada and Mexico. The obstacles are assigned unique numerical identifiers; accuracy codes and listed in order of ascending latitude within each state or area by FAA Region.

EPICENTERS
National Geographical Data Center
National Geographical Data Center
303-497-6826
List of recent and historic earthquakes and information.

FLOOD DFIRM
National Flood Hazard Layer Database
Federal Emergency Management Agency
The National Flood Hazard Layer Database (NFHL) is a computer database that contains the flood hazard map information from FEMAs Flood Map Modernization program. These map data are from Digital Flood Insurance Rate Map (DFIRM) databases and Letters of Map Revision.

Research Summary for City Directory Abstract

Site Location
300-Acre Hanford
1119 Flint St.
Hanford, CA

Conducted For
Envirosite Corporation
2 Corporate Drive, Suite 450
Shelton, CT

HIG Project #
2058352
Client Project #
64555
Date Created
12/15/2021

Historical Information Gatherers

HIG has produced a city directory abstract for one or more streets associated with the site location indicated above. The publications used to create the CD Abstract are listed below.

The information below is taken directly from the city directory books. The following are definitions as they are found in the Haines books:

XXXX = is no phone, no people or non-published phone.

600 XXXX = Correct address only. No other information.

X Streetname = intersecting cross street

Publication year, publisher and title

2018-19 Haines Central San Joaquin Valley

2010-11 Haines Central San Joaquin Valley

2005-06 Haines Central San Joaquin Valley

2000-01 Haines Central San Joaquin Valley

1995 Haines Central San Joaquin

1990 Haines Central San Joaquin

1985 Haines Central San Joaquin

1980 Haines Central San Joaquin

1975 Haines Central San Joaquin

Abstract Section 1- This section includes the city directory data sorted by address.

11097 Flint Avenue	
2018-19	ROBISON Robert
2010-11	ROBISON Robert
2005-06	ROBISON Robert
2000-01	ROBISON Robert
1995	ROBISON Robert
1990	ROBISON Robert
1985	ROBISON Robert
1980	ROBISON Robert
1975	XXXX
11120 Flint Avenue	
2018-19	SEMAS Michael
2010-11	SEMAS Michael
11135 Flint Avenue	
2018-19	VINCENT Timothy
2010-11	VINCENT Elva
2005-06	VINCENT Tim
2000-01	VINCENT Tim
1995	XXXX
1990	XXXX
1985	TOLLIVER WILBERT
1980	XXXX
11173 Flint Avenue	
2018-19	DAVIS Vince C
2018-19	FLORES Terri
2010-11	DAVIS Vince
2005-06	DAVIS Vince
11230 Flint Avenue	
2018-19	HANSEN Julie
2010-11	XXXX
11256 Flint Avenue	
2018-19	SPARKS Joel
2010-11	BERNSTEIN Marian F
2005-06	BERNSTEIN Wim
2000-01	BERNSTEIN Wim

1995	BERNSTEIN Wm
1990	BERNSTEIN Wm
1985	XXXX
1980	BERNSTEIN WILLIAM
1975	BERNSTEIN WM
11408 Flint Avenue	
1995	GARCIA A
1990	GARCIA A
1985	GARCIA A
1980	GARCIA A
1975	GARCIA A
11701 Flint Avenue	
2018-19	DESILVA Teema
2010-11	DESILVA David
2005-06	DESILVA Pdavid
1995	XXXX
1990	XXXX
1985	XXXX
1980	DEVRIES JOHN
1975	DEVRIES JOHN
11940 Flint Avenue	
2000-01	XXXX
1995	HOWELL Edward L
1990	HOEKER Henry
1985	HOEKER HENRY
1980	HOEKER HENRY
1975	HOEKER HENRY
11948 Flint Avenue	
2018-19	HANFORD CHRSTN SC
2010-11	HANFORD CHRSTN SC
2005-06	HANFORD CHRSTN SC
2000-01	HANFORD CHRSTN SC
1995	HANFORD CHRSTN SC
1990	CENTRL VLY CHRISTN
1990	HANFORD CHRSTN SC
1985	CENTRL VLY CHRISTN

1985	HANFORD CHRSTN SC
1980	HANFORD CHRSTN SCH
1975	HANFORD CHRISTN SCH
12235 Flint Avenue	
2018-19	PAROLINI Leo B
2010-11	CASTRO Frank S
2005-06	CASTRO Frank S
2000-01	CASTRO Frank S
1995	CASTRO Frank S
1990	CASTRO Frank S
1985	CASTRO FRANK S
1980	CASTRO FRANK S
1975	CASTRO FRANK S
12357 Flint Avenue	
2018-19	DECARLO Mindy
2010-11	MONTGOMERY Gary E
2005-06	MONTGOMERY Gary E
2000-01	MONTGOMERY Gary E
1995	MONTGOMERY Gary E
1990	MONTGOMERY Gary E
1985	MNOTGOMERY GARY E
1980	MONTGOMERY GARY DV
1975	MONTGOMERY GARY DVMS
12383 Flint Avenue	
2018-19	AZEVEDO Anthony
2018-19	DURHAM Terri
2010-11	AZEVEDO Mika
2005-06	XXXX
2000-01	AZEVEDO Anthony S
2000-01	AZEVEDO Tern
1995	AZEVEDO Anthony S
1995	AZEVEDO Terri
1990	AZEVEDO Anthony S
1990	AZEVEDO Terri
1985	AZEVEDO ANTHONY JR
1980	VERBURG CLARENCE
1980	VERBURG MELINDA

1975	VERBURG CLARENCE
1975	VERBURG MELINDA
12532 Flint Avenue	
2018-19	SIMAS Arlene
2010-11	SIMAS Louie
2005-06	SIMAS Louis
2000-01	SIMAS Louis
1995	SIMAS Louis
1990	SIMAS Louis
1985	SIMAS LOUIS
1980	SIMAS LOUIS
12613 Flint Avenue	
2018-19	XXXX
2010-11	XXXX
2005-06	XXXX
2000-01	MCCLELLAND Dennis E
1995	XXXX
1990	ARIEAS Devid
1985	XXXX
1980	XXXX
1975	REYES MIKE
12793 Flint Avenue	
2018-19	SOARES Ron
2018-19	SOARES Ronald
2010-11	SOARES Ron
2005-06	SOARES Ron
2000-01	SOARES Lisa
2000-01	SOARES Ron
1995	SOARES Lisa
1995	SOARES Ron
12937 Flint Avenue	
2018-19	COSTAMAGNA Luz
2010-11	COSTAMAGNA Patty

Abstract Section 2: This section includes the city directory data sorted by the year the city directory was published.

2018-19

	X N 11TH AVE
11097	ROBISON Robert
11120	SEMAS Michael
11135	VINCENT Timothy
11173	DAVIS Vince C
11173	FLORES Terri
11230	HANSEN Julie
11256	SPARKS Joel
11701	DESILVA Teema
11948	HANFORD CHRSTN SC
	X 12TH AVE
12235	PAROLINI Leo B
12357	DECARLO Mindy
12383	AZEVEDO Anthony
12383	DURHAM Terri
12532	SIMAS Arlene
12613	XXXX
12793	SOARES Ron
12793	SOARES Ronald
12937	COSTAMAGNA Luz
2010-11	
	X N 11TH AVE
11097	ROBISON Robert
11120	SEMAS Michael
11135	VINCENT Elva
11173	DAVIS Vince
11230	XXXX
11256	BERNSTEIN Marian F
11701	DESILVA David
11948	HANFORD CHRSTN SC
	X 12TH AVE
12235	CASTRO Frank S
12357	MONTGOMERY Gary E
12383	AZEVEDO Mika
12532	SIMAS Louie
12613	XXXX
12793	SOARES Ron

12937	COSTAMAGNA Patty
2005-06	
11097	ROBISON Robert
11135	VINCENT Tim
11173	DAVIS Vince
11256	BERNSTEIN Wim
11701	DESILVA Pdavid
11948	HANFORD CHRSTN SC
	X 12TH AVE
12235	CASTRO Frank S
12357	MONTGOMERY Gary E
12383	XXXX
12532	SIMAS Louis
12613	XXXX
12793	SOARES Ron
2000-01	
	X 11TH AV N
11097	ROBISON Robert
11135	VINCENT Tim
11256	BERNSTEIN Wim
11940	XXXX
11948	HANFORD CHRSTN SC
	X 12TH AV
12235	CASTRO Frank S
12357	MONTGOMERY Gary E
12383	AZEVEDO Anthony S
12383	AZEVEDO Tern
12532	SIMAS Louis
12613	MCCLELLAND Dennis E
12793	SOARES Lisa
12793	SOARES Ron
1995	
11097	ROBISON Robert
11135	XXXX
11256	BERNSTEIN Wm
11408	GARCIA A
11701	XXXX

11940	HOWELL Edward L
11948	HANFORD CHRSTN SC
12235	CASTRO Frank S
12357	MONTGOMERY Gary E
12383	AZEVEDO Anthony S
12383	AZEVEDO Terri
12532	SIMAS Louis
12613	XXXX
12793	SOARES Lisa
12793	SOARES Ron
1990	
11097	ROBISON Robert
11135	XXXX
11256	BERNSTEIN Wm
11408	GARCIA A
11701	XXXX
11940	HOEKER Henry
11948	CENTRL VLY CHRISTN
11948	HANFORD CHRSTN SC
12235	CASTRO Frank S
12357	MONTGOMERY Gary E
12383	AZEVEDO Anthony S
12383	AZEVEDO Terri
12532	SIMAS Louis
12613	ARIEAS Devid
1985	
11097	ROBISON Robert
11135	TOLLIVER WILBERT
11256	XXXX
11408	GARCIA A
11701	XXXX
11940	HOEKER HENRY
11948	CENTRL VLY CHRISTN
11948	HANFORD CHRSTN SC
12235	CASTRO FRANK S
12357	MNOTGOMERY GARY E
12383	AZEVEDO ANTHONY JR

12532	SIMAS LOUIS
12613	XXXX
1980	
11097	ROBISON Robert
11135	XXXX
11256	BERNSTEIN WILLIAM
11408	GARCIA A
11701	DEVRIES JOHN
11940	HOEKER HENRY
11948	HANFORD CHRSTN SCH
12235	CASTRO FRANK S
12357	MONTGOMERY GARY DV
12383	VERBURG CLARENCE
12383	VERBURG MELINDA
12532	SIMAS LOUIS
12613	XXXX
1975	
11097	XXXX
11256	BERNSTEIN WM
11408	GARCIA A
11701	DEVRIES JOHN
11940	HOEKER HENRY
11948	HANFORD CHRISTN SCH
12235	CASTRO FRANK S
12357	MONTGOMERY GARY DVMS
12383	VERBURG CLARENCE
12383	VERBURG MELINDA
12613	REYES MIKE

Historical Aerial Photo Report | 2021

Order Number: 64555
Report Generated: 12/09/2021

Project Name: 300-Acre Hanford
Project Number: 210832

300-Acre Hanford
Portion
Hanford, CA

---

2 Corporate Dr
Suite 450
Shelton, CT 06484
Toll Free: 866-211-2028
www.envirositecorp.com

Historical Aerial Photo Report 2021

Envirosite's Historical Aerial Photo Report is designed to assist in evaluating a subject property resulting from past activities. Envirosite's Historical Aerial Photo Report includes a search of available historical aerial photographs, dating back to the 1930s, or earliest available photographs.

ENVIROSITE SEARCHED SOURCES

SUBJECT PROPERTY:

300-Acre Hanford
Portion
Hanford, CA

YEAR:	***SCALE:***	***SOURCE:***
1954	1" = 1,000'	U.S.G.S
1971	1" = 1,000'	U.S.G.S
1974	1" = 1,000'	U.S.G.S
1976	1" = 1,000'	U.S.G.S
1982	1" = 1,000'	U.S.G.S
1984	1" = 1,000'	U.S.G.S
1986	1" = 1,000'	U.S.G.S
1989	1" = 1,000'	U.S.D.A
1994	1" = 1,000'	DOQ
1995	1" = 1,000'	U.S.G.S
2002	1" = 1,000'	U.S.D.A
2005	1" = 1,000'	NAIP
2009	1" = 1,000'	NAIP
2010	1" = 1,000'	NAIP
2012	1" = 1,000'	NAIP
2014	1" = 1,000'	NAIP
2016	1" = 1,000'	NAIP
2018	1" = 1,000'	NAIP
2020	1" = 1,000'	NAIP

Disclaimer - Copyright and Trademark Notice

All information contained in this report are based on data available from various public, government and other sources and are based upon the best data available from those sources. The information available in this report may be available from other sources and is not exclusive or the exclusive property of Envirosite Corporation.

NO WARRANTY EXPRESSED OR IMPLIED, IS MADE IN CONNECTION WITH THIS REPORT, INCLUDING WITHOUT LIMITATION, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. ALL RISK IS ASSUMED BY USER AND Envirosite assumes no liability for faulty or inaccurate information. The Reports may utilize a variety of public and other sources reasonably available to Envirosite. Envirosite cannot, and does not assure, warrant, guarantee or assume any liability for the correctness, comprehensiveness, timeliness or completeness of any of such information, nor is the information in any Report to be construed as legal advice with respect to environmental risks associated with any property. Envirosite shall not be liable to anyone for any claims, causes of action, suits, damages, losses, costs and expenses (including, without limitation, attorneys' fees and costs) arising out of or caused by this report regardless of the acts, errors or omissions, or negligence of Envirosite. Any damages shall be limited to the purchase price of the report.

Purchaser of the report accepts the report "As Is". The report is intended only to provide information only and should not be considered as providing any legal advice, prediction, forecast, or fact as to the environmental risk for any specific property. Reports are proprietary to Envirosite, and contain copyrighted material and trademarks of Envirosite. All other trademarks used herein are the property of their respective owners. All rights of Envirosite as to the Reports are reserved.

FLIGHT YEAR:
1954

N
W E
S

Scale: 1" = 1,000'



FLIGHT YEAR:
1971

N
W E
S

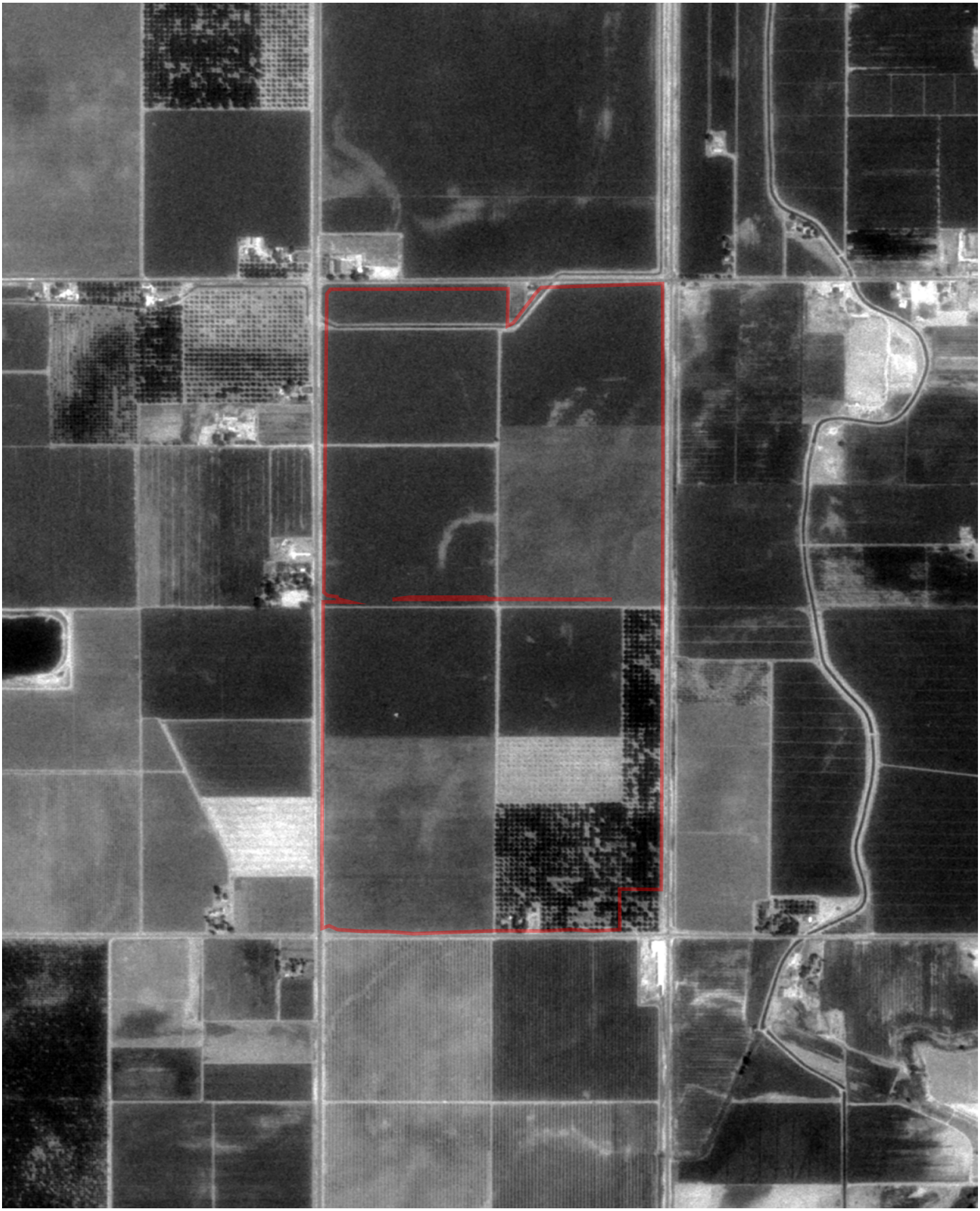
Scale: 1" = 1,000'



FLIGHT YEAR:
1974

N
W E
S

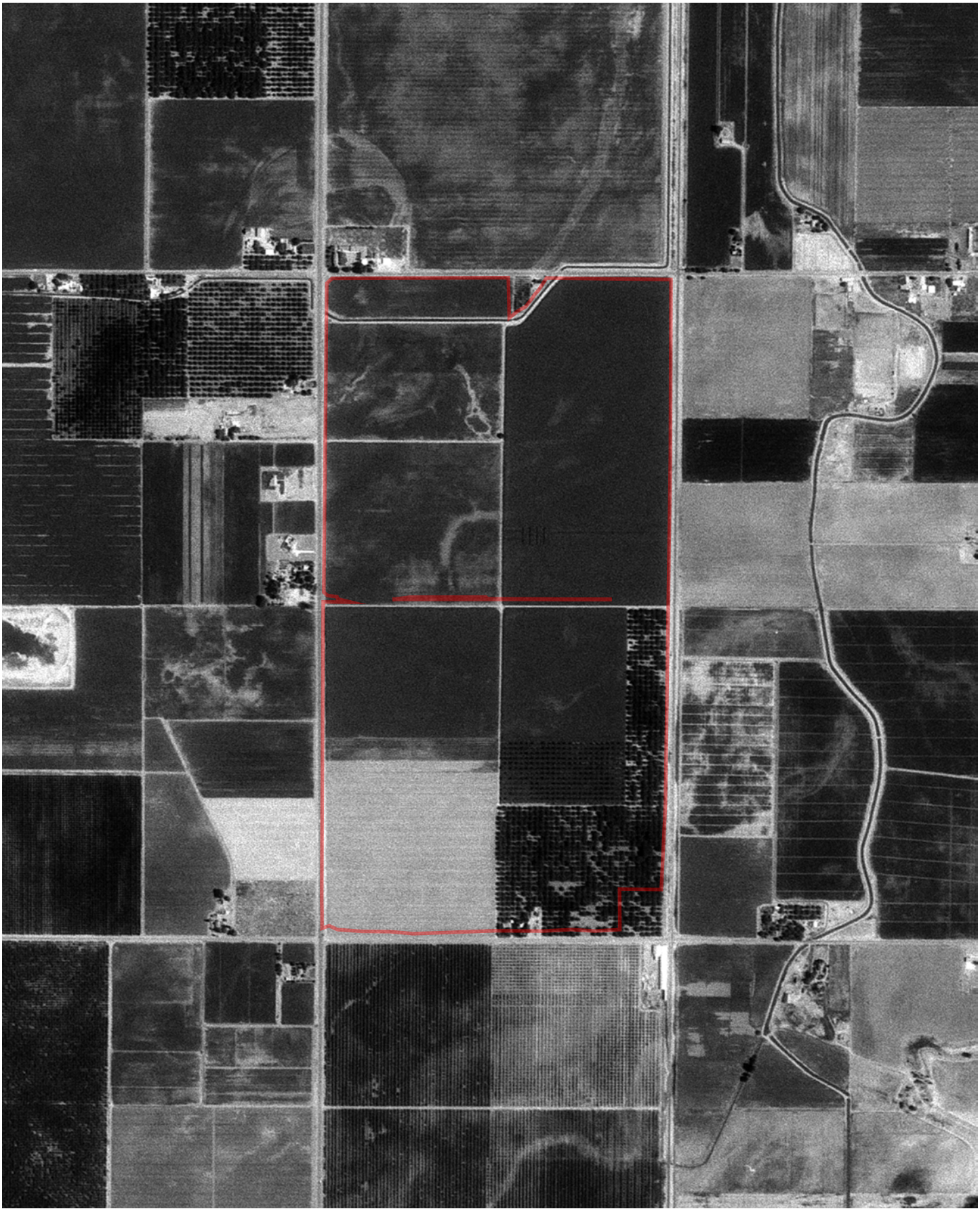
Scale: 1" = 1,000'



FLIGHT YEAR:
1976

N
W E
S

Scale: 1" = 1,000'



FLIGHT YEAR:
1982

N
W E
S

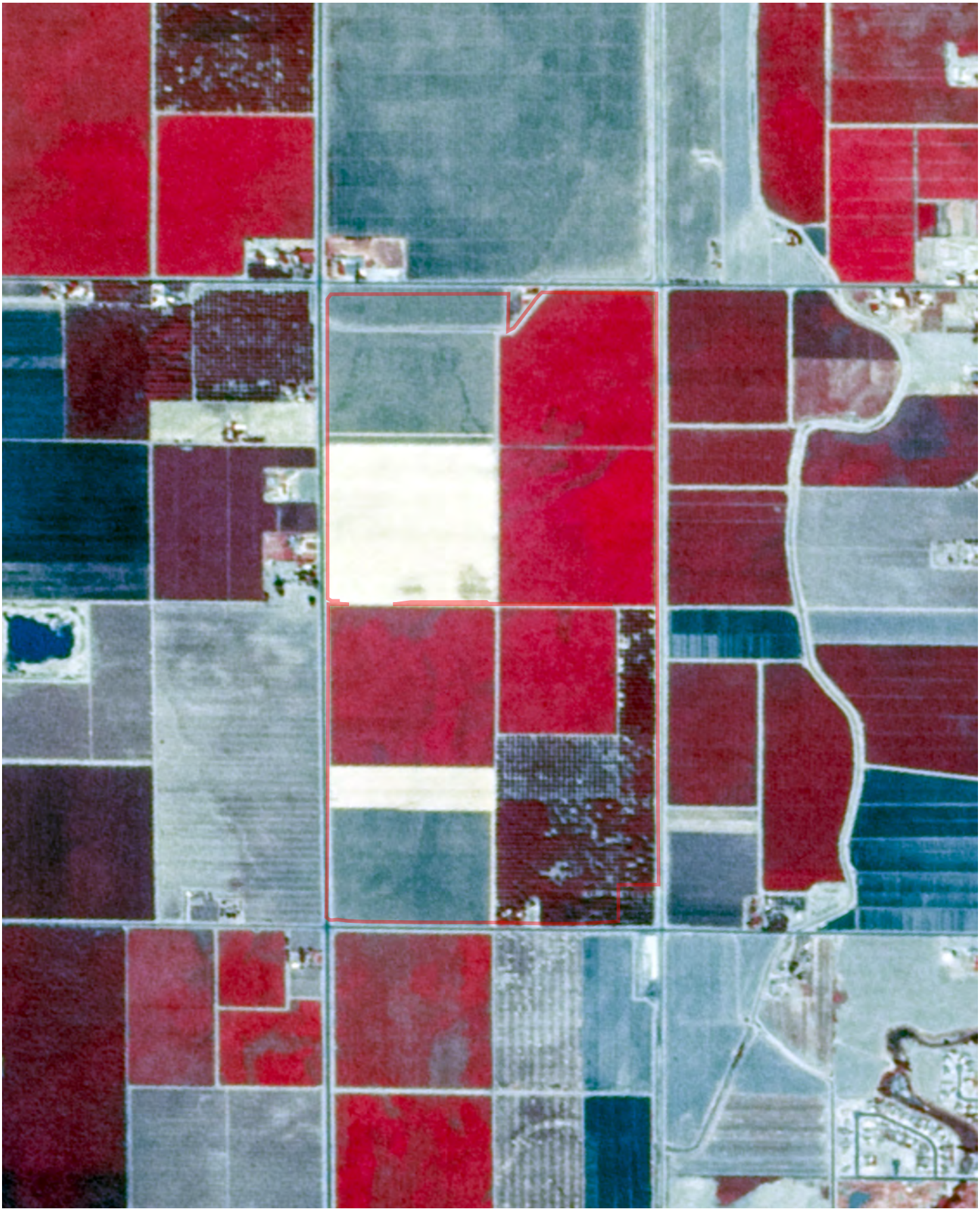
Scale: 1" = 1,000'



FLIGHT YEAR:
1984

N
W E
S

Scale: 1" = 1,000'



FLIGHT YEAR:
1986

N
W E
S

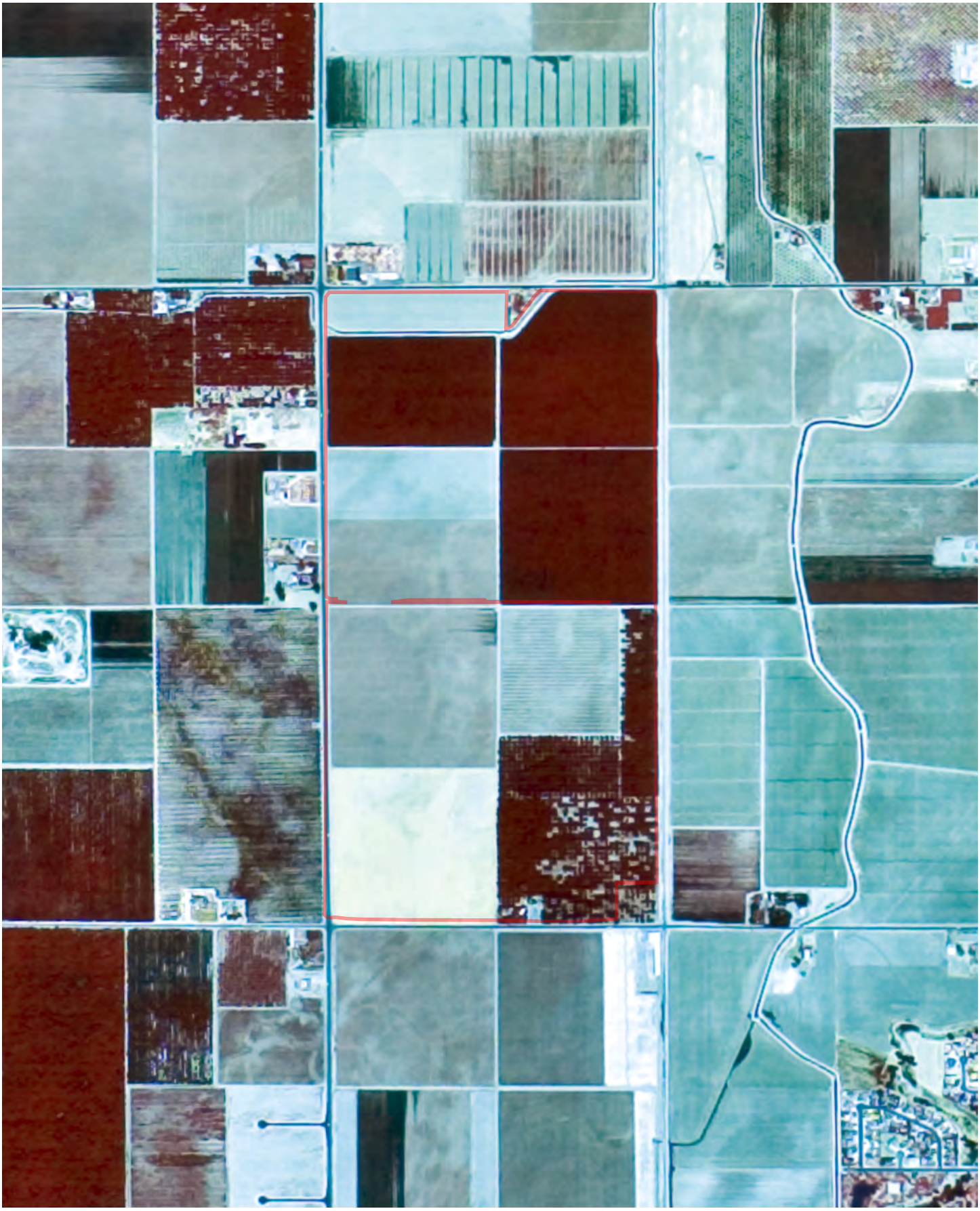
Scale: 1" = 1,000'



FLIGHT YEAR:
1989

N
W E
S

Scale: 1" = 1,000'



FLIGHT YEAR:
1994

N
W E
S

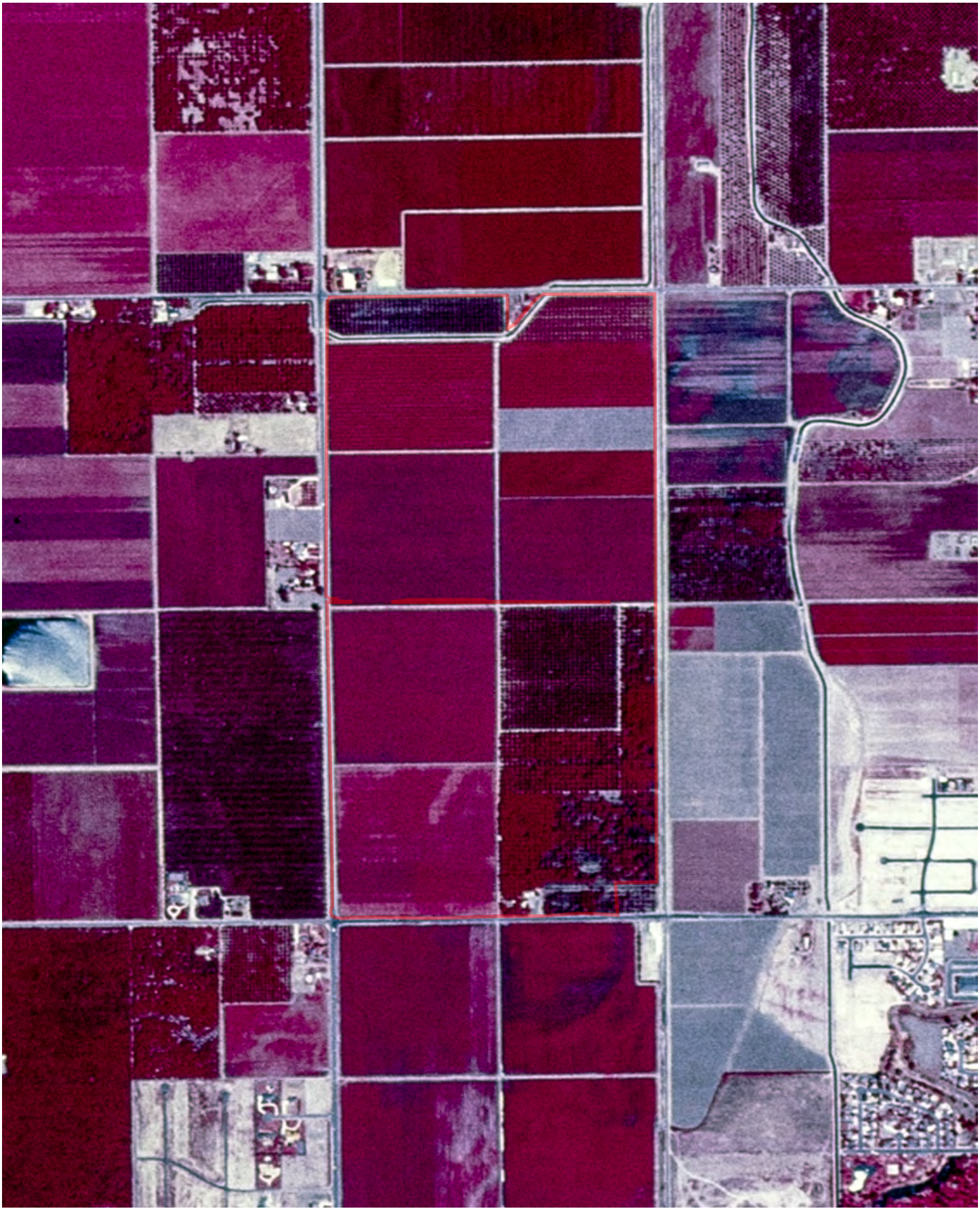
Scale: 1" = 1,000'



FLIGHT YEAR:
1995

N
W E
S

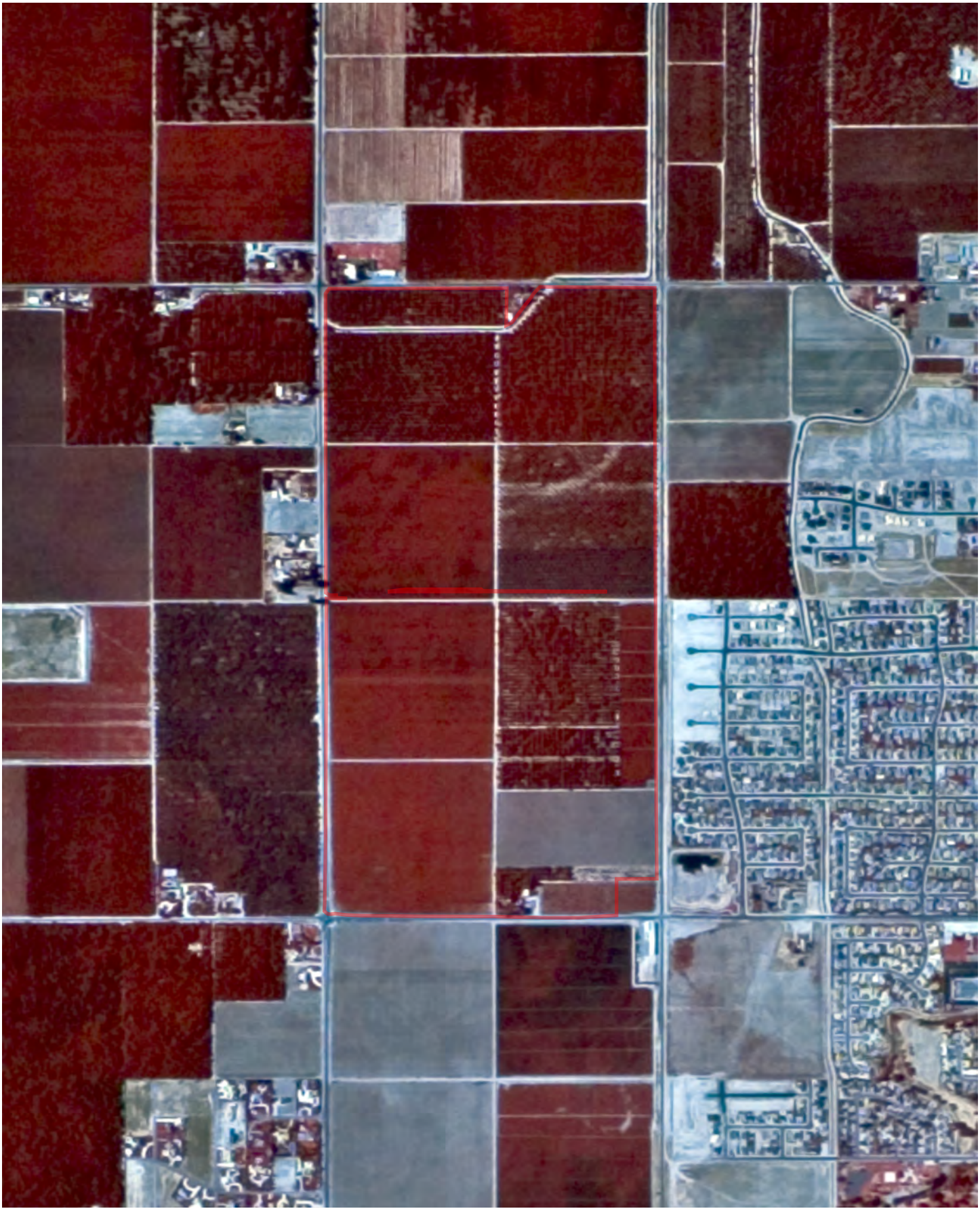
Scale: 1" = 1,000'



FLIGHT YEAR:
2002

N
W E
S

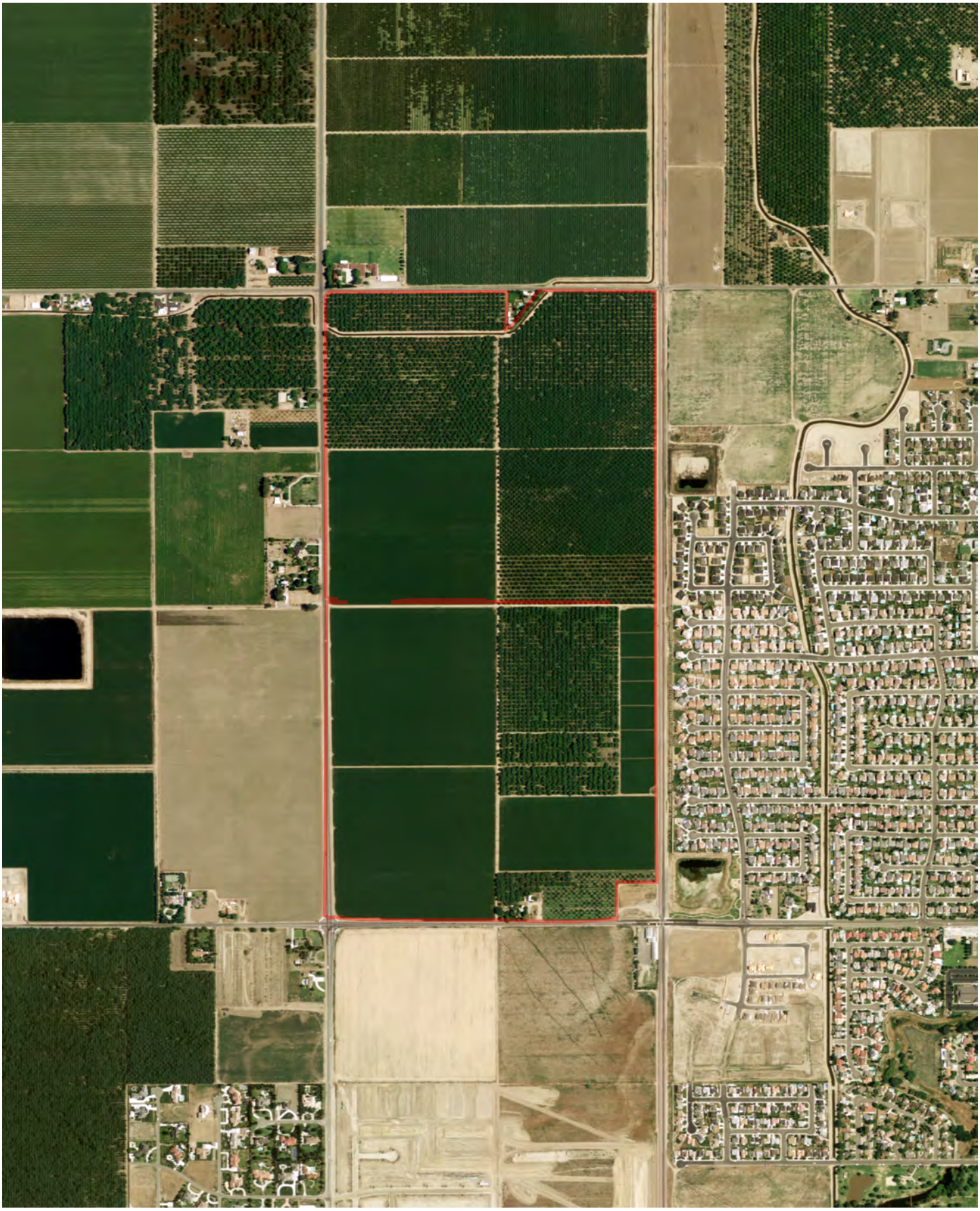
Scale: 1" = 1,000'



FLIGHT YEAR:
2005

N
W E
S

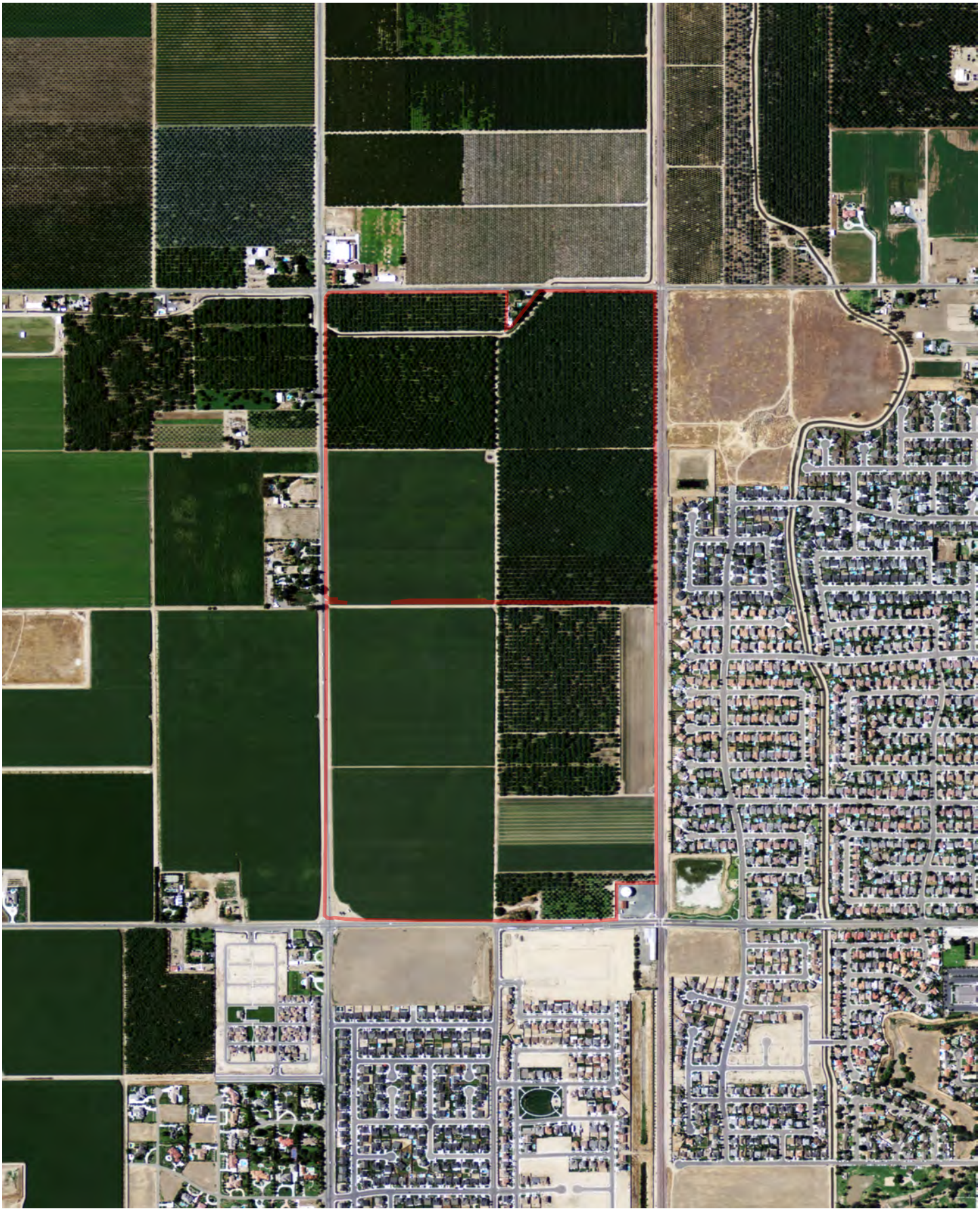
Scale: 1" = 1,000'



FLIGHT YEAR:
2009

N
W E
S

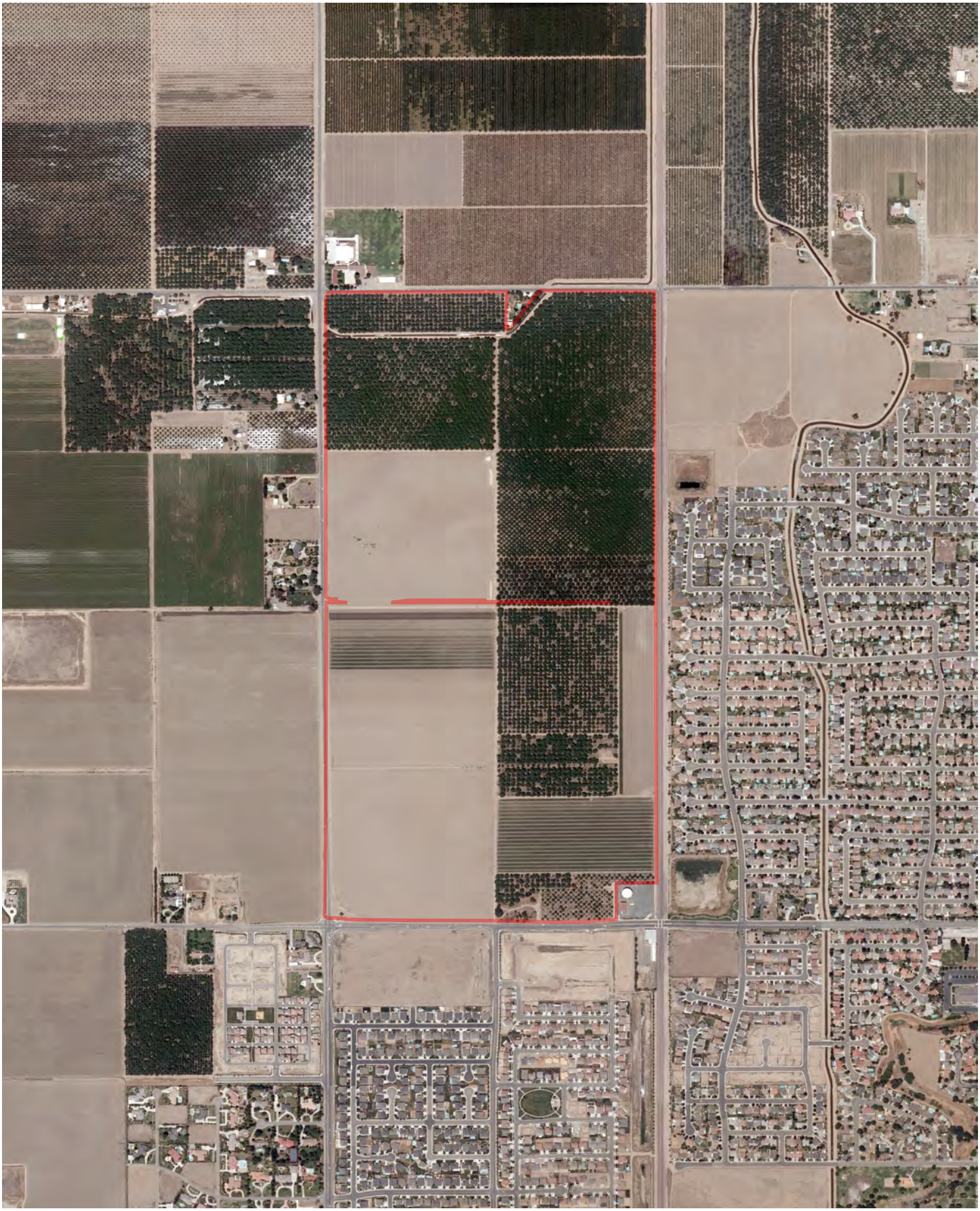
Scale: 1" = 1,000'



FLIGHT YEAR:
2010

N
W E
S

Scale: 1" = 1,000'



FLIGHT YEAR:
2012

N
W E
S

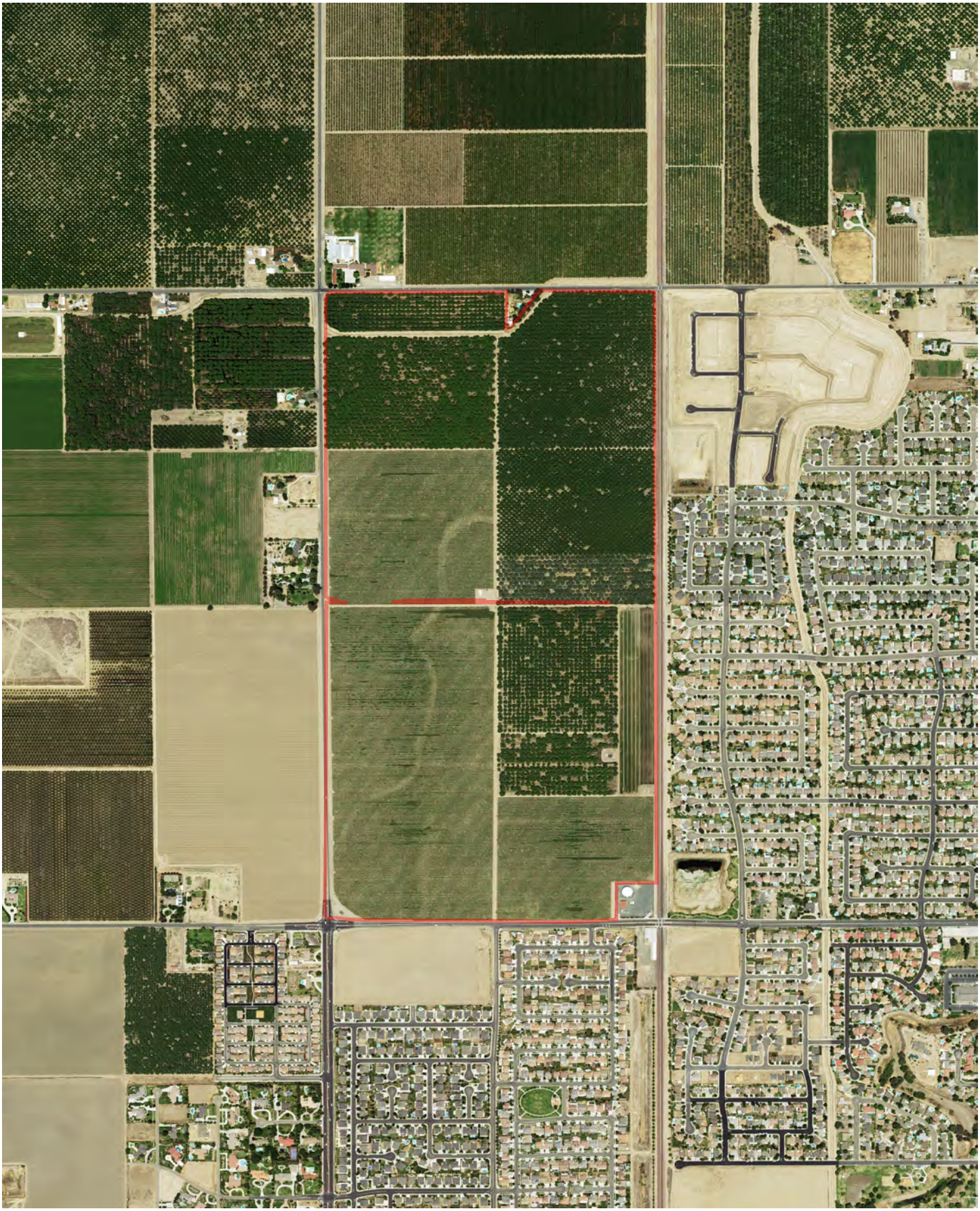
Scale: 1" = 1,000'



FLIGHT YEAR:
2014

N
W E
S

Scale: 1" = 1,000'



FLIGHT YEAR:
2016

N
W E
S

Scale: 1" = 1,000'



FLIGHT YEAR:
2018

N
W E
S

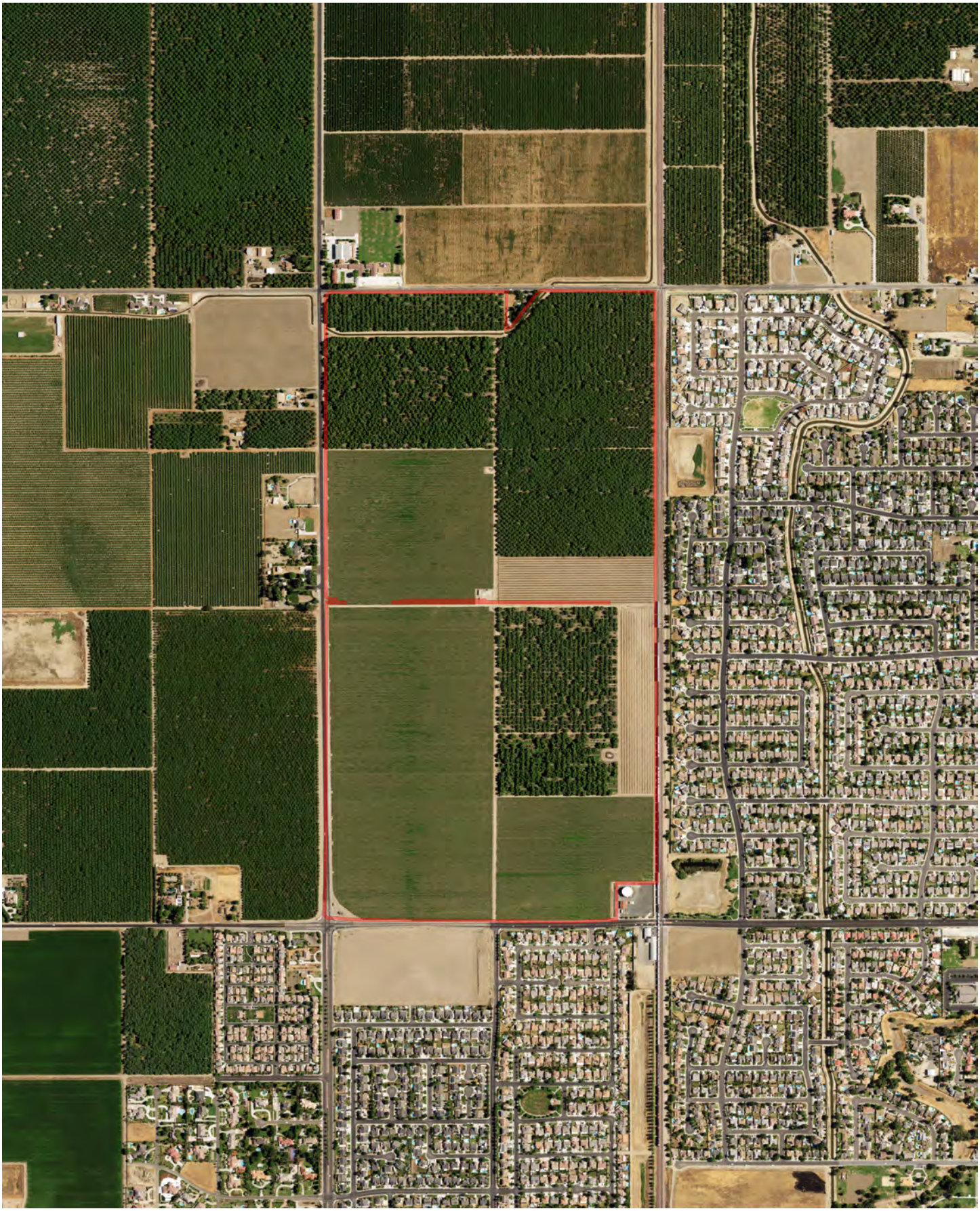
Scale: 1" = 1,000'



FLIGHT YEAR:
2020

N
W E
S

Scale: 1" = 1,000'



APPENDIX C

USER PROVIDED INFORMATION

TECHNICON
ENGINEERING SERVICES, INC.
GEOTECHNICAL & ENVIRONMENTAL ENGINEERING ▲ CONSTRUCTION TESTING & INSPECTION

USER-PROVIDED INFORMATION

Per ASTM Practice E 1527-13

The provision of the following is a requirement to qualify for the various protections provided the innocent landowner, or contiguous property owner under CERCLA. This information should be provided to the best of the user's (client) knowledge. Incomplete information can result in an EPA determination if the report does not satisfy "all appropriate inquiry."

Phase I ESA Information

Property Name & Address:

Property Type: RURAL AGRICULTURAL LAND

Type of Property Transaction: PURCHASE

Site Contact: PRINCE BATTH

User Name(s): WOODSIDE 06N, LP

Company: WOODSIDE HOMES (WOODSIDE 06N, LP)

Title: MATT SMITH (LAND ACQUISITION VP)

Signature:

Date: 12/17/21

The following information is required of the user under the November 1, 2005 "All Appropriate Inquiries (AAI) Rule.

Enclosure: ASTM X.3 Questionnaire

X3. USER QUESTIONNAIRE
INTRODUCTION

In order to qualify for one of the *Landowner Liability Protections (LLPs)*[35] offered by the Small Business Liability Relief and Brownfields Revitalization Act of 2001 (the "*Brownfields Amendments*"),[36] the *user* must provide the following information (if available) to the *environmental professional.* Failure to provide this information could result in a determination that "*all appropriate inquiry*" is not complete.

(1.) Environmental cleanup liens that are filed or recorded against the site (40 CFR 312.25).
Are you aware of any environmental cleanup liens against the *property* that are filed or recorded under federal, tribal, state or local law?

NO

(2.) Activity and land use limitations that are in place on the site or that have been filed or recorded in a registry (40 CFR 312.26).
Are you aware of any AULs, such as *engineering controls,* land use restrictions or *institutional controls* that are in place at the site and/or have been filed or recorded in a registry under federal, tribal, state or local law?

NO

(3.) Specialized knowledge or experience of the person seeking to qualify for the LLP (40 CFR 312.28).
As the *user* of this *ESA* do you have any specialized knowledge or experience related to the *property* or nearby properties? For example, are you involved in the same line of business as the current or former *occupants* of the *property* or an adjoining *property* so that you would have specialized knowledge of the chemicals and processes used by this type of business?

NO

More on Reverse Side >>

[35] *Landowner Liability Protections,* or *LLPs,* is the term used to describe the three types of potential defenses to Superfund liability in EPA's *Interim Guidance Regarding Criteria Landowners Must Meet in Order to Qualify for Bona Fide Prospective Purchaser, Contiguous Property Owner, or Innocent Landowner Limitations on CERCLA Liability* ("*Common Elements*" Guide) issued on March 6, 2003.

[36] P.L. 107-118.

Copyright © 2005 ASTM International, West Conshohocken, PA
This document is an excerpt of E 1527-05; Standard Practice for Environmental Site Assessments: Phase 1 Environmental Site Assessment Process, which is under the jurisdiction of ASTM Committee E50 on Environmental Assessments and is the direct responsibility of Subcommittee E50.02 on Commercial Real Estate Transactions. This questionnaire represents only Appendix X3 of Practice E 1527-05 and should not be construed as being the complete standard. It is necessary to refer to the full standard prior to using this questionnaire. For the complete standard, or to order additional copies of this questionnaire, contact ASTM Customer Service at 610/832-9595.

(4.) Relationship of the purchase price to the fair market value of the *property* if it were not contaminated (40 CFR 312.29).
Does the purchase price being paid for this *property* reasonably reflect the fair market value of the *property*? If you conclude that there is a difference, have you considered whether the lower purchase price is because contamination is known or believed to be present at the *property*?

THE PURCHASE PRICE IS THE FAIR MARKET VALUE OF THE LAND.

(5.) Commonly known or *reasonably ascertainable* information about the *property* (40 CFR 312.30).
Are you aware of commonly known or *reasonably ascertainable* information about the *property* that would help the *environmental professional* to identify conditions indicative of releases or threatened releases? For example, as *user*,
(a.) Do you know the past uses of the *property*?
(b.) Do you know of specific chemicals that are present or once were present at the *property*?
(c.) Do you know of spills or other chemical releases that have taken place at the *property*?
(d.) Do you know of any environmental cleanups that have taken place at the *property*?

I DO NOT KNOW THE PAST USES OF THE PROPERTY OR IF ANY OF THE ITEMS IN (A-D) HAVE OCCURRED.

(6.) The degree of obviousness of the presence of likely presence of contamination at the *property*, and the ability to detect the contamination by appropriate investigation (40 CFR 312.31).
As the *user* of this *ESA*, based on your knowledge and experience related to the *property* are there any *obvious* indicators that point to the presence or likely presence of contamination at the *property*?

NO.

X3.1 In addition, certain information should be collected, if available, and provided to the *environmental professional* selected to conduct the Phase I. This information is intended to assist the *environmental professional* but is not necessarily required to qualify for one of the *LLPs*. The information includes:

(*a*) the reason why the Phase I is required,

(*b*) the type of *property* and type of *property* transaction, for example, sale, purchase, exchange, etc.,

(*c*) the complete and correct address for the *property* (a map or other documentation showing *property* location and boundaries is helpful),

(*d*) the scope of services desired for the Phase I (including whether any parties to the *property* transaction may have a required standard scope of services on whether any considerations beyond the requirements of Practice E 1527 are to be considered),

(*e*) identification of all parties who will rely on the Phase I *report*,

(*f*) identification of the site contact and how the contact can be reached,

(*g*) any special terms and conditions which must be agreed upon by the *environmental professional*, and

(*h*) any other knowledge or experience with the *property* that may be pertinent to the *environmental professional* (for example, copies of any available prior *environmental site assessment reports*, documents, correspondence, etc., concerning the *property* and its environmental condition).

Copyright © 2005 ASTM International, West Conshohocken, PA
This document is an excerpt of E 1527-05; Standard Practice for Environmental Site Assessments: Phase 1 Environmental Site Assessment Process, which is under the jurisdiction of ASTM Committee E50 on Environmental Assessments and is the direct responsibility of Subcommittee E50.02 on Commercial Real Estate Transactions. This questionnaire represents only Appendix X3 of Practice E 1527-05 and should not be construed as being the complete standard. It is necessary to refer to the full standard prior to using this questionnaire. For the complete standard, or to order additional copies of this questionnaire, contact ASTM Customer Service at 610/832-9595.

Steve Curra

From: Matt Smith <MattS@woodsidehomes.com>
Sent: Friday, March 11, 2022 7:22 AM
To: Steve Curra
Subject: Fwd: Singh Property- Environmental

Steve- the Seller has affirmed that my email statement to him is accurate (see below). Can you please send me the final report?

Get Outlook for iOS

From: Walter Smith <WSmith@pearsonrealty.com>

Sent: Thursday, March 10, 2022 7:20:59 PM

To: Dan Kevorkian <DKevorkian@pearsonrealty.com>

Cc: Matt Smith <MattS@woodsidehomes.com>

Subject: Re: Singh Property- Environmental

Thank you Dan.

Walter Smith
wsmith@pearsonrealty.com
559.447.6222

> On Mar 10, 2022, at 6:44 PM, Dan Kevorkian <DKevorkian@pearsonrealty.com> wrote:
>
> Walter,
>
> Please see the email response below.
>
> Thank you,
>
> **Dan Kevorkian**
> **Pearson Realty | Farm Lands Department**
> dkevorkian@pearsonrealty.com
> 7480 North Palm Avenue, Suite 101 | Fresno CA 93711
> PH: 559.447.6237 | FAX: 559.432.2938 | CELL: 559.905.8073
> CA DRE# 00830646

PearsonRealty.com | View My Listings

CONFIDENTIALITY NOTICE: This e-mail transmission, and any documents, files or previous e-mail messages attached to it may contain confidential information that is legally privileged and intended for the designated recipient only. If you have received it in error, please notify the sender immediately and delete the original. Any other use of the email by you is STRICTLY PROHIBITED.

Begin forwarded message:

From: Prince Batth <princebatth99@gmail.com>
Date: March 10, 2022 at 6:21:53 PM PST
To: Dan Kevorkian <DKevorkian@pearsonrealty.com>
Subject: Re: Singh Property- Environmental

Hi Dan,

Yes, the below email is correct. Thank you.

Best,
Prince

Sent from my iPhone

On Mar 10, 2022, at 11:11 AM, Dan Kevorkian <DKevorkian@pearsonrealty.com> wrote:

Hi Prince,

Please read the email below and confirm by email response that you disposed of the affected soil properly away from the Hanford property that Woodside is buying.

Thank you,

Dan Kevorkian

Pearson Realty | Farm Lands Department

PH: 559.447.6237 | FAX: 559.432.2938 | CELL: 559.905.8073

CA DRE# 00830646

CONFIDENTIALITY NOTICE: This e-mail transmission, and any documents, files or previous e-mail messages attached to it may contain confidential information that is legally privileged and intended for the designated recipient only. If you have received it in error, please notify the sender immediately and delete the original. Any other use of the email by you is STRICTLY PROHIBITED.

From: Matt Smith <MattS@woodsidehomes.com>

Sent: Thursday, March 10, 2022 10:50 AM

To: Walter Smith <WSmith@pearsonrealty.com>

Cc: Dan Kevorkian <DKevorkian@pearsonrealty.com>

Subject: Singh Property- Environmental

Hello Walter:

Would you mind confirming with the Seller of the Singh property, that the affected soil mentioned in the Phase 1 Environmental Report by Technicon, was disposed of properly, away from the Singh property Woodside is purchasing?

Thanks- Matt

Matt Smith, DRE #02031520

VP- Land Acquisition and Development

Woodside Homes

9 River Park Place East, Suite 430

Fresno, CA 93720

(D) 559-437-5010

(C) 559-320-6775

APPENDIX D

Analytical Reports

CASTLE ANALYTICAL LABORATORY

Environmental Testing Services 2333 Shuttle Drive, Atwater, CA 95301 Phone: (209) 384-2930
Certificate No. 2480 Fax: (209) 500-1848

Steve Curra
Technicon Engineering
4539 N. Brawley #108
Fresno, CA 93722

Enclosed are the results of analyses for **Soil Testing - 210832.**

Castle Workorder Number: **2201051**

If you have any questions concerning this report, please feel free to contact us at (209) 384-2930 or e-mail main@castle-lab.com.

NOTES AND DEFINITIONS

AJ	Heavier hydrocarbons than diesel
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
mg/kg	milligrams per kilogram or parts per million (ppm)
mg/L	milligrams per liter or parts per million (ppm)
ug/L	micrograms per liter or parts per billion (ppb)



Clari J. Cone - Technical Manager

CASTLE ANALYTICAL LABORATORY

Environmental Testing Services
Certificate No. 2480

2333 Shuttle Drive, Atwater, CA 95301

Phone: (209) 384-2930
Fax: (209) 500-1848

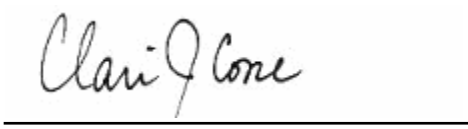
Technicon Engineering
4539 N. Brawley #108
Fresno, CA 95301
Attn: Steve Curra

Project Name: Soil Testing
Project Number: 210832
Work Order: 2201051

Sampled: 01/14/22
Received: 01/17/22
Reported: 01/25/22

Total Petroleum Hydrocarbons by GC

Analyte	Result	Reporting Limit	Units	Dilution	Notes
S1 (2201051-01) Soil Sampled: 01/14/22					
Prepared: 01/20/22 Analyzed: 01/21/22		**Batch: B201062**			**Analysis Method: 8015B**
Diesel Range Organics (C10-C28)	**100**	10	mg/kg	1	AJ
Surrogate: o-Terphenyl	*90.3 %*	*60-130*			
S1- A@3' (2201051-02) Soil Sampled: 01/14/22					
Prepared: 01/20/22 Analyzed: 01/21/22		**Batch: B201062**			**Analysis Method: 8015B**
Diesel Range Organics (C10-C28)	**130**	10	mg/kg	1	AJ
Surrogate: o-Terphenyl	*93.6 %*	*60-130*			



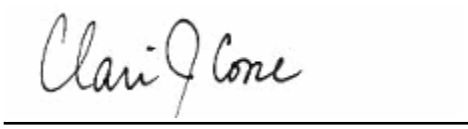
Clari J. Cone - Technical Manager

CASTLE ANALYTICAL LABORATORY
Environmental Testing Services 2333 Shuttle Drive, Atwater, CA 95301 Phone: (209) 384-2930
Certificate No. 2480 Fax: (209) 500-1848

Total Petroleum Hydrocarbons by GC - Quality Control

Castle Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B201062 - CATPH-D										
Blank (B201062-BLK1)				Prepared & Analyzed: 01/20/22						
Surrogate: o-Terphenyl	*0.391*		*mg/kg*	*0.400*		*97.7*	*60-130*			
Diesel Range Organics (C10-C28)	ND	1.0	"							
LCS (B201062-BS1)				Prepared & Analyzed: 01/20/22						
Surrogate: o-Terphenyl	*0.375*		*mg/kg*	*0.400*		*93.7*	*60-130*			
Diesel Range Organics (C10-C24)	4.53	1.0	"	5.00		90.7	70-130			
Diesel Range Organics (C10-C28)	4.64	1.0	"	5.00		92.7	70-130			
LCS Dup (B201062-BSD1)				Prepared & Analyzed: 01/20/22						
Surrogate: o-Terphenyl	*0.382*		*mg/kg*	*0.400*		*95.6*	*60-130*			
Diesel Range Organics (C10-C24)	4.74	1.0	"	5.00		94.8	70-130	4.46	20	
Diesel Range Organics (C10-C28)	4.83	1.0	"	5.00		96.6	70-130	4.09	20	



Clari J. Cone - Technical Manager

McCampbell Analytical, Inc.

"When Quality Counts"

Analytical Report

WorkOrder: 2201684

Report Created for: Castle Analytical Laboratory

2333 Shuttle Drive Bldg 908/909
Atwater, CA 95301

Project Contact: Clari Cone
Project P.O.:
Project: 2201051 / 210832

Project Received: 01/18/2022

Analytical Report reviewed & approved for release on 01/24/2022 by:



Jennifer Lagerbom
Project Manager

The report shall not be reproduced except in full, without the written approval of the laboratory. The analytical results relate only to the items tested. Results reported conform to the most current NELAP standards, where applicable, unless otherwise stated in a case narrative.

1534 Willow Pass Rd. Pittsburg, CA 94565 ♦ TEL: (877) 252-9262 ♦ FAX: (925) 252-9269 ♦ www.mccampbell.com
CA ELAP 1644 ♦ NELAP 4033 ORELAP

McCampbell Analytical, Inc.
"When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701
Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269
http://www.mccampbell.com / E-mail: main@mccampbell.com

Glossary of Terms & Qualifier Definitions

Client: Castle Analytical Laboratory **WorkOrder:** 2201684

Project: 2201051 / 210832

Glossary Abbreviation

%D	Serial Dilution Percent Difference
95% Interval	95% Confident Interval
CPT	Consumer Product Testing not NELAP Accredited
DF	Dilution Factor
DI WET	(DISTLC) Waste Extraction Test using DI water
DISS	Dissolved (direct analysis of 0.45 µm filtered and acidified water sample)
DLT	Dilution Test (Serial Dilution)
DUP	Duplicate
EDL	Estimated Detection Limit
ERS	External reference sample. Second source calibration verification.
ITEF	International Toxicity Equivalence Factor
LCS	Laboratory Control Sample
LQL	Lowest Quantitation Level
MB	Method Blank
MB % Rec	% Recovery of Surrogate in Method Blank, if applicable
MDL	Method Detection Limit
ML	Minimum Level of Quantitation
MS	Matrix Spike
MSD	Matrix Spike Duplicate
NA	Not Applicable
ND	Not detected at or above the indicated MDL or RL
NR	Data Not Reported due to matrix interference or insufficient sample amount.
PDS	Post Digestion Spike
PDSD	Post Digestion Spike Duplicate
PF	Prep Factor
RD	Relative Difference
RL	Reporting Limit (The RL is the lowest calibration standard in a multipoint calibration.)
RPD	Relative Percent Deviation
RRT	Relative Retention Time
SPK Val	Spike Value
SPKRef Val	Spike Reference Value
SPLP	Synthetic Precipitation Leachate Procedure
ST	Sorbent Tube
TCLP	Toxicity Characteristic Leachate Procedure
TEQ	Toxicity Equivalents
TZA	TimeZone Net Adjustment for sample collected outside of MAI's UTC.
WET (STLC)	Waste Extraction Test (Soluble Threshold Limit Concentration)

McCampbell Analytical, Inc.
"When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701
Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269
http://www.mccampbell.com / E-mail: main@mccampbell.com

Glossary of Terms & Qualifier Definitions

Client: Castle Analytical Laboratory **WorkOrder:** 2201684
Project: 2201051 / 210832

Analytical Qualifiers

S	Surrogate recovery outside accepted recovery limits.
a1	Sample diluted due to matrix interference.
a3	Sample diluted due to high organic content interfering with quantitative/or qualitative analysis.
c1	Surrogate recovery outside of the control limits due to the dilution of the sample.

Quality Control Qualifiers

F2	LCS/LCSD recovery and/or RPD/RSD is out of acceptance criteria.

McCampbell Analytical, Inc.
"When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701
Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269
http://www.mccampbell.com / E-mail: main@mccampbell.com

Analytical Report

Client:	Castle Analytical Laboratory	**WorkOrder:**	2201684
Date Received:	01/18/2022 9:25	**Extraction Method:**	SW3550B
Date Prepared:	01/18/2022	**Analytical Method:**	SW8081A
Project:	2201051 / 210832	**Unit:**	mg/kg

Organochlorine Pesticides

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
S2	2201684-001A	Soil	01/14/2022 12:40	GC23 01192232.d	237567

Analytes	Result	RL	DF	Date Analyzed
Aldrin	ND	0.010	10	01/19/2022 17:42
a-BHC	ND	0.010	10	01/19/2022 17:42
b-BHC	ND	0.010	10	01/19/2022 17:42
d-BHC	ND	0.010	10	01/19/2022 17:42
g-BHC	ND	0.010	10	01/19/2022 17:42
Chlordane (Technical)	ND	0.25	10	01/19/2022 17:42
a-Chlordane	ND	0.010	10	01/19/2022 17:42
g-Chlordane	ND	0.010	10	01/19/2022 17:42
p,p-DDD	ND	0.010	10	01/19/2022 17:42
p,p-DDE	ND	0.010	10	01/19/2022 17:42
p,p-DDT	ND	0.010	10	01/19/2022 17:42
Dieldrin	ND	0.010	10	01/19/2022 17:42
Endosulfan I	ND	0.010	10	01/19/2022 17:42
Endosulfan II	ND	0.010	10	01/19/2022 17:42
Endosulfan sulfate	ND	0.010	10	01/19/2022 17:42
Endrin	ND	0.010	10	01/19/2022 17:42
Endrin aldehyde	ND	0.010	10	01/19/2022 17:42
Endrin ketone	ND	0.010	10	01/19/2022 17:42
Heptachlor	ND	0.010	10	01/19/2022 17:42
Heptachlor epoxide	ND	0.010	10	01/19/2022 17:42
Hexachlorobenzene	ND	0.10	10	01/19/2022 17:42
Hexachlorocyclopentadiene	ND	0.20	10	01/19/2022 17:42
Methoxychlor	ND	0.010	10	01/19/2022 17:42
Toxaphene	ND	0.50	10	01/19/2022 17:42

Surrogates	REC (%)	Limits	
Decachlorobiphenyl	122	60-130	01/19/2022 17:42

Analyst(s): KVE Analytical Comments: a3

(Cont.)

CA ELAP 1644 • NELAP 4033ORELAP

McCampbell Analytical, Inc.
"When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701
Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269
http://www.mccampbell.com / E-mail: main@mccampbell.com

Analytical Report

Client:	Castle Analytical Laboratory	**WorkOrder:**	2201684
Date Received:	01/18/2022 9:25	**Extraction Method:**	SW3550B
Date Prepared:	01/18/2022	**Analytical Method:**	SW8081A
Project:	2201051 / 210832	**Unit:**	mg/kg

Organochlorine Pesticides

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
S3	2201684-002A	Soil	01/14/2022 13:10	GC23 01192233.d	237567

Analytes	Result	RL	DF	Date Analyzed
Aldrin	ND	0.050	50	01/19/2022 17:58
a-BHC	ND	0.050	50	01/19/2022 17:58
b-BHC	ND	0.050	50	01/19/2022 17:58
d-BHC	ND	0.050	50	01/19/2022 17:58
g-BHC	ND	0.050	50	01/19/2022 17:58
Chlordane (Technical)	ND	1.2	50	01/19/2022 17:58
a-Chlordane	ND	0.050	50	01/19/2022 17:58
g-Chlordane	ND	0.050	50	01/19/2022 17:58
p,p-DDD	ND	0.050	50	01/19/2022 17:58
p,p-DDE	ND	0.050	50	01/19/2022 17:58
p,p-DDT	ND	0.050	50	01/19/2022 17:58
Dieldrin	ND	0.050	50	01/19/2022 17:58
Endosulfan I	ND	0.050	50	01/19/2022 17:58
Endosulfan II	ND	0.050	50	01/19/2022 17:58
Endosulfan sulfate	ND	0.050	50	01/19/2022 17:58
Endrin	ND	0.050	50	01/19/2022 17:58
Endrin aldehyde	ND	0.050	50	01/19/2022 17:58
Endrin ketone	ND	0.050	50	01/19/2022 17:58
Heptachlor	ND	0.050	50	01/19/2022 17:58
Heptachlor epoxide	ND	0.050	50	01/19/2022 17:58
Hexachlorobenzene	ND	0.50	50	01/19/2022 17:58
Hexachlorocyclopentadiene	ND	1.0	50	01/19/2022 17:58
Methoxychlor	ND	0.050	50	01/19/2022 17:58
Toxaphene	ND	2.5	50	01/19/2022 17:58

Surrogates	REC (%)	Limits	
Decachlorobiphenyl	114	60-130	01/19/2022 17:58

Analyst(s): KVE Analytical Comments: a3

(Cont.)

McCampbell Analytical, Inc.
"When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701
Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269
http://www.mccampbell.com / E-mail: main@mccampbell.com

Analytical Report

Client:	Castle Analytical Laboratory	**WorkOrder:**	2201684
Date Received:	01/18/2022 9:25	**Extraction Method:**	SW3550B
Date Prepared:	01/18/2022	**Analytical Method:**	SW8081A
Project:	2201051 / 210832	**Unit:**	mg/kg

Organochlorine Pesticides

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
S4	2201684-003A	Soil	01/14/2022 13:40	GC23 01192234.d	237567

Analytes	Result	RL	DF	Date Analyzed
Aldrin	ND	0.020	20	01/19/2022 18:13
a-BHC	ND	0.020	20	01/19/2022 18:13
b-BHC	ND	0.020	20	01/19/2022 18:13
d-BHC	ND	0.020	20	01/19/2022 18:13
g-BHC	ND	0.020	20	01/19/2022 18:13
Chlordane (Technical)	ND	0.50	20	01/19/2022 18:13
a-Chlordane	ND	0.020	20	01/19/2022 18:13
g-Chlordane	ND	0.020	20	01/19/2022 18:13
p,p-DDD	ND	0.020	20	01/19/2022 18:13
p,p-DDE	ND	0.020	20	01/19/2022 18:13
p,p-DDT	ND	0.020	20	01/19/2022 18:13
Dieldrin	ND	0.020	20	01/19/2022 18:13
Endosulfan I	ND	0.020	20	01/19/2022 18:13
Endosulfan II	ND	0.020	20	01/19/2022 18:13
Endosulfan sulfate	ND	0.020	20	01/19/2022 18:13
Endrin	ND	0.020	20	01/19/2022 18:13
Endrin aldehyde	ND	0.020	20	01/19/2022 18:13
Endrin ketone	ND	0.020	20	01/19/2022 18:13
Heptachlor	ND	0.020	20	01/19/2022 18:13
Heptachlor epoxide	ND	0.020	20	01/19/2022 18:13
Hexachlorobenzene	ND	0.20	20	01/19/2022 18:13
Hexachlorocyclopentadiene	ND	0.40	20	01/19/2022 18:13
Methoxychlor	ND	0.020	20	01/19/2022 18:13
Toxaphene	ND	1.0	20	01/19/2022 18:13

Surrogates	REC (%)	Limits	
Decachlorobiphenyl	105	60-130	01/19/2022 18:13

Analyst(s): KVE

Analytical Comments: a3

McCampbell Analytical, Inc.
"When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701
Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269
http://www.mccampbell.com / E-mail: main@mccampbell.com

Analytical Report

Client:	Castle Analytical Laboratory	**WorkOrder:**	2201684
Date Received:	01/18/2022 9:25	**Extraction Method:**	SW3550B
Date Prepared:	01/19/2022	**Analytical Method:**	SW8270C
Project:	2201051 / 210832	**Unit:**	mg/kg

Organophosphorous Pesticides by GC-MS (EPA 8141 Basic Target List)

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
S2	2201684-001A	Soil	01/14/2022 12:40	GC25 F0123220707.D	237666

Analytes	Result	RL	DF	Date Analyzed
Alachlor	ND	2.0	20	01/23/2022 23:20
Atrazine	ND	2.0	20	01/23/2022 23:20
Azinphos methyl (Guthion)	ND	2.0	20	01/23/2022 23:20
Bolstar (Sulprofos)	ND	2.0	20	01/23/2022 23:20
Chlorpyrifos	ND	2.0	20	01/23/2022 23:20
Coumaphos	ND	2.0	20	01/23/2022 23:20
Demeton	ND	2.0	20	01/23/2022 23:20
Diazinon	ND	2.0	20	01/23/2022 23:20
Dichlorvos (DDVP)	ND	2.0	20	01/23/2022 23:20
Dimethoate	ND	2.0	20	01/23/2022 23:20
Disulfoton (Di-Syston)	ND	2.0	20	01/23/2022 23:20
EPN	ND	2.0	20	01/23/2022 23:20
EPTC	ND	2.0	20	01/23/2022 23:20
Ethion	ND	2.0	20	01/23/2022 23:20
Ethoprop	ND	2.0	20	01/23/2022 23:20
Ethyl parathion	ND	2.0	20	01/23/2022 23:20
Fensulfothion	ND	2.0	20	01/23/2022 23:20
Fenthion	ND	2.0	20	01/23/2022 23:20
Fonofos	ND	2.0	20	01/23/2022 23:20
Malathion	ND	2.0	20	01/23/2022 23:20
Mevinphos (Phosdrin)	ND	2.0	20	01/23/2022 23:20
Molinate	ND	2.0	20	01/23/2022 23:20
Methyl parathion	ND	2.0	20	01/23/2022 23:20
Phorate (Thimet)	ND	2.0	20	01/23/2022 23:20
Prometon	ND	2.0	20	01/23/2022 23:20
Ronnel	ND	2.0	20	01/23/2022 23:20
Simazine	ND	2.0	20	01/23/2022 23:20
Stirofos (Tetrachlorvinphos)	ND	2.0	20	01/23/2022 23:20
Terbacil	ND	2.0	20	01/23/2022 23:20
Terbufos (Terbuphos)	ND	2.0	20	01/23/2022 23:20
Thiobencarb	ND	2.0	20	01/23/2022 23:20
Tokuthion (Prothiofos)	ND	2.0	20	01/23/2022 23:20
Trichloronate (Agritox)	ND	2.0	20	01/23/2022 23:20

(Cont.)

McCampbell Analytical, Inc.
"When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701
Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269
http://www.mccampbell.com / E-mail: main@mccampbell.com

Analytical Report

Client:	Castle Analytical Laboratory	**WorkOrder:**	2201684
Date Received:	01/18/2022 9:25	**Extraction Method:**	SW3550B
Date Prepared:	01/19/2022	**Analytical Method:**	SW8270C
Project:	2201051 / 210832	**Unit:**	mg/kg

Organophosphorous Pesticides by GC-MS (EPA 8141 Basic Target List)

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
S2	2201684-001A	Soil	01/14/2022 12:40	GC25 F0123220707.D	237666

Analytes	Result	RL	DF	Date Analyzed
Surrogates	**REC (%)**	**Qualifiers**	**Limits**	
1-Bromo-2-Nitrobenzene	0	S	60-140	01/23/2022 23:20
Triphenyl phosphate	0	S	60-140	01/23/2022 23:20

Analyst(s): STA Analytical Comments: a1,c1

(Cont.)

McCampbell Analytical, Inc.
"When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701
Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269
http://www.mccampbell.com / E-mail: main@mccampbell.com

Analytical Report

Client:	Castle Analytical Laboratory	**WorkOrder:**	2201684
Date Received:	01/18/2022 9:25	**Extraction Method:**	SW3550B
Date Prepared:	01/19/2022	**Analytical Method:**	SW8270C
Project:	2201051 / 210832	**Unit:**	mg/kg

Organophosphorous Pesticides by GC-MS (EPA 8141 Basic Target List)

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
S3	2201684-002A	Soil	01/14/2022 13:10	GC25 F0123220708.D	237666

Analytes	Result	RL	DF	Date Analyzed
Alachlor	ND	5.0	50	01/23/2022 23:46
Atrazine	ND	5.0	50	01/23/2022 23:46
Azinphos methyl (Guthion)	ND	5.0	50	01/23/2022 23:46
Bolstar (Sulprofos)	ND	5.0	50	01/23/2022 23:46
Chlorpyrifos	ND	5.0	50	01/23/2022 23:46
Coumaphos	ND	5.0	50	01/23/2022 23:46
Demeton	ND	5.0	50	01/23/2022 23:46
Diazinon	ND	5.0	50	01/23/2022 23:46
Dichlorvos (DDVP)	ND	5.0	50	01/23/2022 23:46
Dimethoate	ND	5.0	50	01/23/2022 23:46
Disulfoton (Di-Syston)	ND	5.0	50	01/23/2022 23:46
EPN	ND	5.0	50	01/23/2022 23:46
EPTC	ND	5.0	50	01/23/2022 23:46
Ethion	ND	5.0	50	01/23/2022 23:46
Ethoprop	ND	5.0	50	01/23/2022 23:46
Ethyl parathion	ND	5.0	50	01/23/2022 23:46
Fensulfothion	ND	5.0	50	01/23/2022 23:46
Fenthion	ND	5.0	50	01/23/2022 23:46
Fonofos	ND	5.0	50	01/23/2022 23:46
Malathion	ND	5.0	50	01/23/2022 23:46
Mevinphos (Phosdrin)	ND	5.0	50	01/23/2022 23:46
Molinate	ND	5.0	50	01/23/2022 23:46
Methyl parathion	ND	5.0	50	01/23/2022 23:46
Phorate (Thimet)	ND	5.0	50	01/23/2022 23:46
Prometon	ND	5.0	50	01/23/2022 23:46
Ronnel	ND	5.0	50	01/23/2022 23:46
Simazine	ND	5.0	50	01/23/2022 23:46
Stirofos (Tetrachlorvinphos)	ND	5.0	50	01/23/2022 23:46
Terbacil	ND	5.0	50	01/23/2022 23:46
Terbufos (Terbuphos)	ND	5.0	50	01/23/2022 23:46
Thiobencarb	ND	5.0	50	01/23/2022 23:46
Tokuthion (Prothiofos)	ND	5.0	50	01/23/2022 23:46
Trichloronate (Agritox)	ND	5.0	50	01/23/2022 23:46

(Cont.)

McCampbell Analytical, Inc.
"When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701
Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269
http://www.mccampbell.com / E-mail: main@mccampbell.com

Analytical Report

Client:	Castle Analytical Laboratory	**WorkOrder:**	2201684
Date Received:	01/18/2022 9:25	**Extraction Method:**	SW3550B
Date Prepared:	01/19/2022	**Analytical Method:**	SW8270C
Project:	2201051 / 210832	**Unit:**	mg/kg

Organophosphorous Pesticides by GC-MS (EPA 8141 Basic Target List)

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
S3	2201684-002A	Soil	01/14/2022 13:10	GC25 F0123220708.D	237666

Analytes	Result	RL	DF	Date Analyzed
Surrogates	**REC (%)**	**Qualifiers**	**Limits**	
1-Bromo-2-Nitrobenzene	0	S	60-140	01/23/2022 23:46
Triphenyl phosphate	0	S	60-140	01/23/2022 23:46

Analyst(s): STA Analytical Comments: a1,c1

(Cont.)

McCampbell Analytical, Inc.
"When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701
Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269
http://www.mccampbell.com / E-mail: main@mccampbell.com

Analytical Report

Client:	Castle Analytical Laboratory	**WorkOrder:**	2201684
Date Received:	01/18/2022 9:25	**Extraction Method:**	SW3550B
Date Prepared:	01/19/2022	**Analytical Method:**	SW8270C
Project:	2201051 / 210832	**Unit:**	mg/kg

Organophosphorous Pesticides by GC-MS (EPA 8141 Basic Target List)

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
S4	2201684-003A	Soil	01/14/2022 13:40	GC25 F0123220709.D	237666

Analytes	Result	RL	DF	Date Analyzed
Alachlor	ND	5.0	50	01/24/2022 00:13
Atrazine	ND	5.0	50	01/24/2022 00:13
Azinphos methyl (Guthion)	ND	5.0	50	01/24/2022 00:13
Bolstar (Sulprofos)	ND	5.0	50	01/24/2022 00:13
Chlorpyrifos	ND	5.0	50	01/24/2022 00:13
Coumaphos	ND	5.0	50	01/24/2022 00:13
Demeton	ND	5.0	50	01/24/2022 00:13
Diazinon	ND	5.0	50	01/24/2022 00:13
Dichlorvos (DDVP)	ND	5.0	50	01/24/2022 00:13
Dimethoate	ND	5.0	50	01/24/2022 00:13
Disulfoton (Di-Syston)	ND	5.0	50	01/24/2022 00:13
EPN	ND	5.0	50	01/24/2022 00:13
EPTC	ND	5.0	50	01/24/2022 00:13
Ethion	ND	5.0	50	01/24/2022 00:13
Ethoprop	ND	5.0	50	01/24/2022 00:13
Ethyl parathion	ND	5.0	50	01/24/2022 00:13
Fensulfothion	ND	5.0	50	01/24/2022 00:13
Fenthion	ND	5.0	50	01/24/2022 00:13
Fonofos	ND	5.0	50	01/24/2022 00:13
Malathion	ND	5.0	50	01/24/2022 00:13
Mevinphos (Phosdrin)	ND	5.0	50	01/24/2022 00:13
Molinate	ND	5.0	50	01/24/2022 00:13
Methyl parathion	ND	5.0	50	01/24/2022 00:13
Phorate (Thimet)	ND	5.0	50	01/24/2022 00:13
Prometon	ND	5.0	50	01/24/2022 00:13
Ronnel	ND	5.0	50	01/24/2022 00:13
Simazine	ND	5.0	50	01/24/2022 00:13
Stirofos (Tetrachlorvinphos)	ND	5.0	50	01/24/2022 00:13
Terbacil	ND	5.0	50	01/24/2022 00:13
Terbufos (Terbuphos)	ND	5.0	50	01/24/2022 00:13
Thiobencarb	ND	5.0	50	01/24/2022 00:13
Tokuthion (Prothiofos)	ND	5.0	50	01/24/2022 00:13
Trichloronate (Agritox)	ND	5.0	50	01/24/2022 00:13

(Cont.)

McCampbell Analytical, Inc.
"When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701
Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269
http://www.mccampbell.com / E-mail: main@mccampbell.com

Analytical Report

Client:	Castle Analytical Laboratory	**WorkOrder:**	2201684
Date Received:	01/18/2022 9:25	**Extraction Method:**	SW3550B
Date Prepared:	01/19/2022	**Analytical Method:**	SW8270C
Project:	2201051 / 210832	**Unit:**	mg/kg

Organophosphorous Pesticides by GC-MS (EPA 8141 Basic Target List)

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
S4	2201684-003A	Soil	01/14/2022 13:40	GC25 F0123220709.D	237666

Analytes	Result	RL	DF	Date Analyzed

Surrogates	REC (%)	Qualifiers	Limits	
1-Bromo-2-Nitrobenzene	0	S	60-140	01/24/2022 00:13
Triphenyl phosphate	0	S	60-140	01/24/2022 00:13

Analyst(s): STA Analytical Comments: a1,c1

McCampbell Analytical, Inc.
"When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701
Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269
http://www.mccampbell.com / E-mail: main@mccampbell.com

Analytical Report

Client:	Castle Analytical Laboratory	**WorkOrder:**	2201684
Date Received:	01/18/2022 9:25	**Extraction Method:**	SW8151A
Date Prepared:	01/19/2022	**Analytical Method:**	SW8151A
Project:	2201051 / 210832	**Unit:**	mg/kg

Chlorinated Herbicides by GC-ECD

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
S2	2201684-001A	Soil	01/14/2022 12:40	GC15A 01192208.D	237665

Analytes	Result	RL	DF	Date Analyzed
Acifluorfen	ND	0.10	10	01/19/2022 17:09
Bentazon	ND	0.10	10	01/19/2022 17:09
Chloramben	ND	0.10	10	01/19/2022 17:09
2,4-D (Dichlorophenoxyacetic acid)	ND	0.10	10	01/19/2022 17:09
2,4-DB	ND	0.10	10	01/19/2022 17:09
Dalapon	ND	0.10	10	01/19/2022 17:09
DCPA (mono & diacid)	ND	0.10	10	01/19/2022 17:09
Dicamba	ND	0.10	10	01/19/2022 17:09
3,5-Dichlorobenzoic Acid	ND	0.10	10	01/19/2022 17:09
Dichloroprop	ND	0.10	10	01/19/2022 17:09
Dinoseb (DNBP)	ND	0.10	10	01/19/2022 17:09
MCPA	ND	10	10	01/19/2022 17:09
MCPP	ND	10	10	01/19/2022 17:09
4-Nitrophenol	ND	0.10	10	01/19/2022 17:09
Pentachlorophenol (PCP)	ND	0.10	10	01/19/2022 17:09
Picloram	ND	0.10	10	01/19/2022 17:09
2,4,5-T (Trichlorophenoxy acetic acid)	ND	0.10	10	01/19/2022 17:09
2,4,5-TP (Silvex)	ND	0.10	10	01/19/2022 17:09

Surrogates	REC (%)	Limits	
DCAA	83	60-140	01/19/2022 17:09

Analyst(s): DP Analytical Comments: a3

(Cont.)

McCampbell Analytical, Inc.
"When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701
Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269
http://www.mccampbell.com / E-mail: main@mccampbell.com

Analytical Report

Client:	Castle Analytical Laboratory	**WorkOrder:**	2201684
Date Received:	01/18/2022 9:25	**Extraction Method:**	SW8151A
Date Prepared:	01/19/2022	**Analytical Method:**	SW8151A
Project:	2201051 / 210832	**Unit:**	mg/kg

Chlorinated Herbicides by GC-ECD

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
S3	2201684-002A	Soil	01/14/2022 13:10	GC15A 01192209.D	237665

Analytes	Result	RL	DF	Date Analyzed
Acifluorfen	ND	0.10	10	01/19/2022 17:34
Bentazon	ND	0.10	10	01/19/2022 17:34
Chloramben	ND	0.10	10	01/19/2022 17:34
2,4-D (Dichlorophenoxyacetic acid)	ND	0.10	10	01/19/2022 17:34
2,4-DB	ND	0.10	10	01/19/2022 17:34
Dalapon	ND	0.10	10	01/19/2022 17:34
DCPA (mono & diacid)	ND	0.10	10	01/19/2022 17:34
Dicamba	ND	0.10	10	01/19/2022 17:34
3,5-Dichlorobenzoic Acid	ND	0.10	10	01/19/2022 17:34
Dichloroprop	ND	0.10	10	01/19/2022 17:34
Dinoseb (DNBP)	ND	0.10	10	01/19/2022 17:34
MCPA	ND	10	10	01/19/2022 17:34
MCPP	ND	10	10	01/19/2022 17:34
4-Nitrophenol	ND	0.10	10	01/19/2022 17:34
Pentachlorophenol (PCP)	ND	0.10	10	01/19/2022 17:34
Picloram	ND	0.10	10	01/19/2022 17:34
2,4,5-T (Trichlorophenoxy acetic acid)	ND	0.10	10	01/19/2022 17:34
2,4,5-TP (Silvex)	ND	0.10	10	01/19/2022 17:34

Surrogates	REC (%)	Limits	
DCAA	79	60-140	01/19/2022 17:34

Analyst(s): DP Analytical Comments: a3

(Cont.)

McCampbell Analytical, Inc.
"When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701
Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269
http://www.mccampbell.com / E-mail: main@mccampbell.com

Analytical Report

Client:	Castle Analytical Laboratory	**WorkOrder:**	2201684
Date Received:	01/18/2022 9:25	**Extraction Method:**	SW8151A
Date Prepared:	01/19/2022	**Analytical Method:**	SW8151A
Project:	2201051 / 210832	**Unit:**	mg/kg

Chlorinated Herbicides by GC-ECD

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
S4	2201684-003A	Soil	01/14/2022 13:40	GC15A 01192210.D	237665

Analytes	Result	RL	DF	Date Analyzed
Acifluorfen	ND	0.10	10	01/19/2022 17:59
Bentazon	ND	0.10	10	01/19/2022 17:59
Chloramben	ND	0.10	10	01/19/2022 17:59
2,4-D (Dichlorophenoxyacetic acid)	ND	0.10	10	01/19/2022 17:59
2,4-DB	ND	0.10	10	01/19/2022 17:59
Dalapon	ND	0.10	10	01/19/2022 17:59
DCPA (mono & diacid)	ND	0.10	10	01/19/2022 17:59
Dicamba	ND	0.10	10	01/19/2022 17:59
3,5-Dichlorobenzoic Acid	ND	0.10	10	01/19/2022 17:59
Dichloroprop	ND	0.10	10	01/19/2022 17:59
Dinoseb (DNBP)	ND	0.10	10	01/19/2022 17:59
MCPA	ND	10	10	01/19/2022 17:59
MCPP	ND	10	10	01/19/2022 17:59
4-Nitrophenol	ND	0.10	10	01/19/2022 17:59
Pentachlorophenol (PCP)	ND	0.10	10	01/19/2022 17:59
Picloram	ND	0.10	10	01/19/2022 17:59
2,4,5-T (Trichlorophenoxy acetic acid)	ND	0.10	10	01/19/2022 17:59
2,4,5-TP (Silvex)	ND	0.10	10	01/19/2022 17:59

Surrogates	REC (%)	Limits	
DCAA	78	60-140	01/19/2022 17:59

Analyst(s): DP Analytical Comments: a3

McCampbell Analytical, Inc.
"When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701
Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269
http://www.mccampbell.com / E-mail: main@mccampbell.com

Quality Control Report

Client:	Castle Analytical Laboratory	**WorkOrder:**	2201684
Date Prepared:	01/18/2022	**BatchID:**	237567
Date Analyzed:	01/19/2022	**Extraction Method:**	SW3550B
Instrument:	GC23	**Analytical Method:**	SW8081A
Matrix:	Soil	**Unit:**	mg/kg
Project:	2201051 / 210832	**Sample ID:**	MB/LCS/LCSD-237567

QC Summary Report for SW8081A

Analyte	MB Result	MDL	RL	SPK Val	MB SS %REC	MB SS Limits
Aldrin	ND	0.000390	0.00100	-	-	-
a-BHC	ND	0.000490	0.00100	-	-	-
b-BHC	ND	0.000270	0.00100	-	-	-
d-BHC	ND	0.000330	0.00100	-	-	-
g-BHC	ND	0.000330	0.00100	-	-	-
Chlordane (Technical)	ND	0.0120	0.0250	-	-	-
a-Chlordane	ND	0.000430	0.00100	-	-	-
g-Chlordane	ND	0.000340	0.00100	-	-	-
p,p-DDD	ND	0.000410	0.00100	-	-	-
p,p-DDE	ND	0.000290	0.00100	-	-	-
p,p-DDT	ND	0.000390	0.00100	-	-	-
Dieldrin	ND	0.000380	0.00100	-	-	-
Endosulfan I	ND	0.000350	0.00100	-	-	-
Endosulfan II	ND	0.000330	0.00100	-	-	-
Endosulfan sulfate	ND	0.000400	0.00100	-	-	-
Endrin	ND	0.000380	0.00100	-	-	-
Endrin aldehyde	ND	0.000440	0.00100	-	-	-
Endrin ketone	ND	0.000290	0.00100	-	-	-
Heptachlor	ND	0.000300	0.00100	-	-	-
Heptachlor epoxide	ND	0.000300	0.00100	-	-	-
Hexachlorobenzene	ND	0.000700	0.0100	-	-	-
Hexachlorocyclopentadiene	ND	0.000520	0.0200	-	-	-
Methoxychlor	ND	0.000450	0.00100	-	-	-
Toxaphene	ND	0.0330	0.0500	-	-	-
Surrogate Recovery						
Decachlorobiphenyl	0.0645			0.05	129	70-130

(Cont.)

McCampbell Analytical, Inc.
"When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701
Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269
http://www.mccampbell.com / E-mail: main@mccampbell.com

Quality Control Report

Client:	Castle Analytical Laboratory	**WorkOrder:**	2201684
Date Prepared:	01/18/2022	**BatchID:**	237567
Date Analyzed:	01/19/2022	**Extraction Method:**	SW3550B
Instrument:	GC23	**Analytical Method:**	SW8081A
Matrix:	Soil	**Unit:**	mg/kg
Project:	2201051 / 210832	**Sample ID:**	MB/LCS/LCSD-237567

QC Summary Report for SW8081A

Analyte	LCS Result	LCSD Result	SPK Val	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Limit
Aldrin	0.0476	0.0483	0.050	95	97	70-130	1.50	20
a-BHC	0.0581	0.0588	0.050	116	118	70-130	1.29	20
b-BHC	0.0476	0.0483	0.050	95	97	70-130	1.33	20
d-BHC	0.0444	0.0446	0.050	89	89	70-130	0.391	20
g-BHC	0.0562	0.0571	0.050	112	114	70-130	1.59	20
a-Chlordane	0.0494	0.0503	0.050	99	101	70-130	1.75	20
g-Chlordane	0.0476	0.0481	0.050	95	96	70-130	1.12	20
p,p-DDD	0.0468	0.0476	0.050	94	95	70-130	1.55	20
p,p-DDE	0.0484	0.0492	0.050	97	98	70-130	1.82	20
p,p-DDT	0.0415	0.0431	0.050	83	86	70-130	3.75	20
Dieldrin	0.0516	0.0524	0.050	103	105	70-130	1.58	20
Endosulfan I	0.0548	0.0555	0.050	110	111	70-130	1.25	20
Endosulfan II	0.0448	0.0457	0.050	90	91	70-130	1.90	20
Endosulfan sulfate	0.0429	0.0440	0.050	86	88	70-130	2.53	20
Endrin	0.0521	0.0531	0.050	104	106	70-130	1.95	20
Endrin aldehyde	0.0464	0.0475	0.050	93	95	70-130	2.27	20
Endrin ketone	0.0442	0.0455	0.050	88	91	70-130	2.83	20
Heptachlor	0.0615	0.0626	0.050	123	125	70-130	1.69	20
Heptachlor epoxide	0.0492	0.0500	0.050	98	100	70-130	1.44	20
Hexachlorobenzene	0.0462	0.0469	0.050	92	94	70-130	1.55	20
Hexachlorocyclopentadiene	0.0427	0.0395	0.050	85	79	50-130	7.59	20
Methoxychlor	0.0380	0.0399	0.050	76	80	70-130	4.68	20
Surrogate Recovery								
Decachlorobiphenyl	0.0630	0.0635	0.050	126	127	70-130	0.898	20

McCampbell Analytical, Inc.
"When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701
Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269
http://www.mccampbell.com / E-mail: main@mccampbell.com

Quality Control Report

Client:	Castle Analytical Laboratory	**WorkOrder:**	2201684
Date Prepared:	01/19/2022	**BatchID:**	237666
Date Analyzed:	01/23/2022 - 01/24/2022	**Extraction Method:**	SW3550B
Instrument:	GC25	**Analytical Method:**	SW8270C
Matrix:	Soil	**Unit:**	mg/kg
Project:	2201051 / 210832	**Sample ID:**	MB/LCS/LCSD-237666

QC Summary Report for SW8270C (ON/P Pesticides)

Analyte	MB Result	MDL	RL	SPK Val	MB SS %REC	MB SS Limits
Alachlor	ND	0.0470	0.100	-	-	-
Atrazine	ND	0.0560	0.100	-	-	-
Azinphos methyl (Guthion)	ND	0.0720	0.100	-	-	-
Bolstar (Sulprofos)	ND	0.0490	0.100	-	-	-
Chlorpyrifos	ND	0.0510	0.100	-	-	-
Coumaphos	ND	0.0640	0.100	-	-	-
Demeton	ND	0.0490	0.100	-	-	-
Diazinon	ND	0.0450	0.100	-	-	-
Dichlorvos (DDVP)	ND	0.0440	0.100	-	-	-
Dimethoate	ND	0.0370	0.100	-	-	-
Disulfoton (Di-Syston)	ND	0.0460	0.100	-	-	-
EPN	ND	0.0520	0.100	-	-	-
EPTC	ND	0.0370	0.100	-	-	-
Ethion	ND	0.0490	0.100	-	-	-
Ethoprop	ND	0.0400	0.100	-	-	-
Ethyl parathion	ND	0.0470	0.100	-	-	-
Fensulfothion	ND	0.0640	0.100	-	-	-
Fenthion	ND	0.0420	0.100	-	-	-
Fonofos	ND	0.0410	0.100	-	-	-
Malathion	ND	0.0460	0.100	-	-	-
Mevinphos (Phosdrin)	ND	0.0650	0.100	-	-	-
Molinate	ND	0.0380	0.100	-	-	-
Methyl parathion	ND	0.0420	0.100	-	-	-
Phorate (Thimet)	ND	0.0430	0.100	-	-	-
Prometon	ND	0.0490	0.100	-	-	-
Ronnel	ND	0.0430	0.100	-	-	-
Simazine	ND	0.0600	0.100	-	-	-
Stirofos (Tetrachlorvinphos)	ND	0.0490	0.100	-	-	-
Terbacil	ND	0.0500	0.100	-	-	-
Terbufos (Terbuphos)	ND	0.0450	0.100	-	-	-
Thiobencarb	ND	0.0390	0.100	-	-	-
Tokuthion (Prothiofos)	ND	0.0400	0.100	-	-	-
Trichloronate (Agritox)	ND	0.0480	0.100	-	-	-
Surrogate Recovery						
1-Bromo-2-Nitrobenzene	0.212			0.2	106	60-140
Triphenyl phosphate	0.170			0.2	85	60-140

(Cont.)

McCampbell Analytical, Inc.
"When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701
Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269
http://www.mccampbell.com / E-mail: main@mccampbell.com

Quality Control Report

Client:	Castle Analytical Laboratory	**WorkOrder:**	2201684
Date Prepared:	01/19/2022	**BatchID:**	237666
Date Analyzed:	01/23/2022 - 01/24/2022	**Extraction Method:**	SW3550B
Instrument:	GC25	**Analytical Method:**	SW8270C
Matrix:	Soil	**Unit:**	mg/kg
Project:	2201051 / 210832	**Sample ID:**	MB/LCS/LCSD-237666

QC Summary Report for SW8270C (ON/P Pesticides)

Analyte	LCS Result	LCSD Result	SPK Val	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Limit
Alachlor	0.556	0.546	0.60	93	91	50-160	1.94	20
Atrazine	0.547	0.532	0.60	91	89	50-160	2.77	20
Azinphos methyl (Guthion)	0.518	0.470	0.60	86	78	60-140	9.60	20
Bolstar (Sulprofos)	0.576	0.541	0.60	96	90	60-140	6.25	20
Chlorpyrifos	0.538	0.522	0.60	90	87	60-140	2.96	20
Coumaphos	0.610	0.577	0.60	102	96	60-140	5.58	20
Demeton	0.387	0.399	0.60	64	66	60-140	3.08	20
Diazinon	0.556	0.506	0.60	93	84	60-140	9.39	20
Dichlorvos (DDVP)	0.479	0.471	0.60	80	78	60-140	1.75	20
Dimethoate	0.505	0.489	0.60	84	81	60-140	3.22	20
Disulfoton (Di-Syston)	0.556	0.514	0.60	93	86	50-160	7.92	20
EPN	0.612	0.574	0.60	102	96	60-140	6.40	20
EPTC	0.558	0.528	0.60	93	88	60-140	5.64	20
Ethion	0.565	0.543	0.60	94	90	60-140	3.91	20
Ethoprop	0.543	0.494	0.60	90	82	60-140	9.55	20
Ethyl parathion	0.586	0.564	0.60	98	94	60-140	3.78	20
Fensulfothion	0.487	0.469	0.60	81	78	60-140	3.70	20
Fenthion	0.544	0.519	0.60	91	87	50-160	4.70	20
Fonofos	0.559	0.516	0.60	93	86	60-140	8.05	20
Malathion	0.547	0.521	0.60	91	87	60-140	4.83	20
Mevinphos (Phosdrin)	0.503	0.505	0.60	84	84	60-140	0.413	20
Molinate	0.572	0.556	0.60	95	93	60-140	2.93	20
Methyl parathion	0.569	0.554	0.60	95	92	50-160	2.74	20
Phorate (Thimet)	0.546	0.529	0.60	91	88	60-140	3.30	20
Prometon	0.541	0.536	0.60	90	89	60-140	0.978	20
Ronnel	0.526	0.517	0.60	88	86	60-140	1.79	20
Simazine	0.583	0.550	0.60	97	92	60-140	5.93	20
Stirofos (Tetrachlorvinphos)	0.492	0.459	0.60	82	76	60-140	7.03	20
Terbacil	0.341	0.318	0.60	57,F2	53,F2	60-140	6.79	20
Terbufos (Terbuphos)	0.524	0.517	0.60	87	86	60-140	1.23	20
Thiobencarb	0.556	0.528	0.60	93	88	60-140	5.37	20
Tokuthion (Prothiofos)	0.537	0.531	0.60	90	88	60-140	1.24	20
Trichloronate (Agritox)	0.540	0.511	0.60	90	85	60-140	5.59	20
Surrogate Recovery								
1-Bromo-2-Nitrobenzene	0.197	0.206	0.20	99	103	60-140	4.09	20
Triphenyl phosphate	0.233	0.226	0.20	116	113	60-140	2.90	20

McCampbell Analytical, Inc.
"When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701
Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269
http://www.mccampbell.com / E-mail: main@mccampbell.com

Quality Control Report

Client:	Castle Analytical Laboratory	**WorkOrder:**	2201684
Date Prepared:	01/19/2022	**BatchID:**	237665
Date Analyzed:	01/19/2022 - 01/20/2022	**Extraction Method:**	SW8151A
Instrument:	GC15A	**Analytical Method:**	SW8151A
Matrix:	Soil	**Unit:**	mg/kg
Project:	2201051 / 210832	**Sample ID:**	MB/LCS/LCSD-237665

QC Summary Report for SW8151A

Analyte	MB Result	MDL	RL	SPK Val	MB SS %REC	MB SS Limits
Acifluorfen	ND	0.00420	0.0100	-	-	-
Bentazon	ND	0.00260	0.0100	-	-	-
Chloramben	ND	0.00530	0.0100	-	-	-
2,4-D (Dichlorophenoxyacetic acid)	ND	0.00380	0.0100	-	-	-
2,4-DB	ND	0.00460	0.0100	-	-	-
Dalapon	ND	0.00630	0.0100	-	-	-
DCPA (mono & diacid)	ND	0.00420	0.0100	-	-	-
Dicamba	ND	0.00250	0.0100	-	-	-
3,5-Dichlorobenzoic Acid	ND	0.00340	0.0100	-	-	-
Dichloroprop	ND	0.00280	0.0100	-	-	-
Dinoseb (DNBP)	ND	0.00260	0.0100	-	-	-
MCPA	ND	0.420	1.00	-	-	-
MCPP	ND	0.330	1.00	-	-	-
4-Nitrophenol	ND	0.00730	0.0100	-	-	-
Pentachlorophenol (PCP)	ND	0.00190	0.0100	-	-	-
Picloram	ND	0.00370	0.0100	-	-	-
2,4,5-T (Trichlorophenoxy acetic acid)	ND	0.00260	0.0100	-	-	-
2,4,5-TP (Silvex)	ND	0.00200	0.0100	-	-	-
Surrogate Recovery						
DCAA	0.117			0.1	117	63-129

(Cont.)

McCampbell Analytical, Inc.
"When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701
Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269
http://www.mccampbell.com / E-mail: main@mccampbell.com

Quality Control Report

Client:	Castle Analytical Laboratory	**WorkOrder:**	2201684
Date Prepared:	01/19/2022	**BatchID:**	237665
Date Analyzed:	01/19/2022 - 01/20/2022	**Extraction Method:**	SW8151A
Instrument:	GC15A	**Analytical Method:**	SW8151A
Matrix:	Soil	**Unit:**	mg/kg
Project:	2201051 / 210832	**Sample ID:**	MB/LCS/LCSD-237665

QC Summary Report for SW8151A

Analyte	LCS Result	LCSD Result	SPK Val	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Limit
Acifluorfen	0.102	0.102	0.10	102	102	60-140	0.803	30
Bentazon	0.0966	0.0976	0.10	97	98	60-140	1.02	30
Chloramben	0.115	0.117	0.10	115	117	60-140	1.26	30
2,4-D (Dichlorophenoxyacetic acid)	0.0899	0.0900	0.10	90	90	67-147	0.0993	30
2,4-DB	0.0947	0.0964	0.10	95	96	61-152	1.80	30
Dalapon	0.0912	0.0942	0.10	91	94	54-153	3.17	30
DCPA (mono & diacid)	0.0913	0.0917	0.10	91	92	60-140	0.473	30
Dicamba	0.0941	0.0943	0.10	94	94	60-146	0.197	30
3,5-Dichlorobenzoic Acid	0.0900	0.0901	0.10	90	90	60-140	0.177	30
Dichloroprop	0.0924	0.0920	0.10	92	92	60-140	0.342	30
Dinoseb (DNBP)	0.0974	0.0965	0.10	97	97	60-140	0.917	30
MCPA	8.86	8.78	10	89	88	60-140	0.905	30
MCPP	8.85	8.78	10	89	88	60-140	0.834	30
4-Nitrophenol	0.162	0.164	0.10	162,F2	164,F2	60-140	1.39	30
Pentachlorophenol (PCP)	0.0989	0.0992	0.10	99	99	60-140	0.254	30
Picloram	0.114	0.115	0.10	114	115	60-140	0.759	30
2,4,5-T (Trichlorophenoxy acetic acid)	0.0979	0.0980	0.10	98	98	60-140	0.152	30
2,4,5-TP (Silvex)	0.101	0.101	0.10	101	101	63-145	0.0334	30
Surrogate Recovery								
DCAA	0.104	0.104	0.10	105	104	63-129	0.0861	30

McCampbell Analytical, Inc.
1534 Willow Pass Rd
Pittsburg, CA 94565-1701
(925) 252-9262

CHAIN-OF-CUSTODY RECORD

WorkOrder: 2201684 **ClientCode: CALA**

☐ WaterTrax ☐ CLIP ☐ EDF ☐ EQuIS ☐ Dry-Weight ☑ Email ☐ HardCopy ☐ ThirdParty ☐ J-flag
☐ Detection Summary ☐ Excel

Report to:
Clari Cone
Castle Analytical Laboratory
2333 Shuttle Drive Bldg 908/909
Atwater, CA 95301
(209) 384-2930 FAX: (209) 384-1507

Email: clari.cone@gmail.com; main@castle-lab.co
cc/3rd Party:
PO:
Project: 2201051 / 210832

Bill to:
Accounts Payable
Castle Analytical Laboratory
2333 Shuttle Drive Bldg 908/909
Atwater, CA 95301

Requested TAT: 5 days;
Date Received: 01/18/2022
Date Logged: 01/18/2022

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below)											
					1	2	3	4	5	6	7	8	9	10	11	12
2201684-001	S2	Soil	1/14/2022 12:40	☐	A	A	A	A								
2201684-002	S3	Soil	1/14/2022 13:10	☐	A	A	A	A								
2201684-003	S4	Soil	1/14/2022 13:40	☐	A	A	A	A								

Test Legend:

1	8081_S	2	8141_S	3	8151_S	4	PRDisposal Fee
5		6		7		8	
9		10		11		12	

Prepared by: Tina Perez

Comments:

NOTE: Soil samples are discarded 60 days after receipt unless other arrangements are made (Water samples are 30 days).
Hazardous samples will be returned to client or disposed of at client expense.

McCampbell Analytical, Inc.
"When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701
Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269
http://www.mccampbell.com / E-mail: main@mccampbell.com

WORK ORDER SUMMARY

Client Name: CASTLE ANALYTICAL LABORATORY **Project:** 2201051 / 210832 **Work Order:** 2201684
Client Contact: Clari Cone **QC Level:** LEVEL 2
Contact's Email: clari.cone@gmail.com; main@castle-lab.com **Comments** **Date Logged:** 1/18/2022

☐ WaterTrax ☐ WriteOn ☐ EDF ☐ Excel ☐ EQuIS ☑ Email ☐ HardCopy ☐ ThirdParty ☐ J-flag

LabID	ClientSampID	Matrix	Test Name	Containers /Composites	Bottle & Preservative	U**	Head Space	Dry-Weight	Collection Date & Time	TAT	Test Due Date	Sediment Content	Hold	Sub Out
001A	S2	Soil	SW8151A (Chlorinated Herbicides)	1	8OZ GJ, Unpres	☐	☐	☐	1/14/2022 12:40	5 days	1/25/2022		☐	☐
			SW8270C (ON/P Pesticides - EPA 8141 target list)			☐	☐	☐		5 days	1/25/2022		☐	☐
			SW8081A (OC Pesticides)			☐	☐	☐		5 days	1/25/2022		☐	☐
002A	S3	Soil	SW8151A (Chlorinated Herbicides)	1	8OZ GJ, Unpres	☐	☐	☐	1/14/2022 13:10	5 days	1/25/2022		☐	☐
			SW8270C (ON/P Pesticides - EPA 8141 target list)			☐	☐	☐		5 days	1/25/2022		☐	☐
			SW8081A (OC Pesticides)			☐	☐	☐		5 days	1/25/2022		☐	☐
003A	S4	Soil	SW8151A (Chlorinated Herbicides)	1	8OZ GJ, Unpres	☐	☐	☐	1/14/2022 13:40	5 days	1/25/2022		☐	☐
			SW8270C (ON/P Pesticides - EPA 8141 target list)			☐	☐	☐		5 days	1/25/2022		☐	☐
			SW8081A (OC Pesticides)			☐	☐	☐		5 days	1/25/2022		☐	☐

NOTES: * STLC and TCLP extractions require 2 days to complete; therefore, all TATs begin after the extraction is completed (i.e., One-day TAT yields results in 3 days from sample submission).

- MAI assumes that all material present in the provided sampling container is considered part of the sample - MAI does not exclude any material from the sample prior to sample preparation unless requested in writing by the client.

U = An unpreserved container was received for a method that suggests a preservation in order to extend hold time for analysis.**

SUBCONTRACT ORDER

Castle Analytical Laboratory

Project ID: 2201051 / 210832

2201684

SENDING LABORATORY:

Castle Analytical Laboratory
2333 Shuttle Drive
Atwater, CA 95301
Phone: 209.384.2930
Fax: 209.500.1848
Project Manager: Clari J. Cone

RECEIVING LABORATORY:

McCampbell Analytical, Inc.
1534 Willow Pass Road
Pittsburg, CA 94565
Phone :(877) 252-9262
Fax: (925) 252-9269

Analysis		Expires	Comments
Sample ID: S2	**Soil**	**Sampled: 01/14/22 12:40**	**Lab ID: 2201051-03**
8151A		01/21/22 12:40	
8141A		01/21/22 12:40	
8081A		01/21/22 12:40	
Containers Supplied:			
8 oz. Glass Jar (A)			
Sample ID: S3	**Soil**	**Sampled: 01/14/22 13:10**	**Lab ID: 2201051-04**
8151A		01/21/22 13:10	
8141A		01/21/22 13:10	
8081A		01/21/22 13:10	
Containers Supplied:			
8 oz. Glass Jar (A)			
Sample ID: S4	**Soil**	**Sampled: 01/14/22 13:40**	**Lab ID: 2201051-05**
8151A		01/21/22 13:40	
8141A		01/21/22 13:40	
8081A		01/21/22 13:40	
Containers Supplied:			
8 oz. Glass Jar (A)			

Released By	Date	Received By	Date
[signature]	1/24/22	UPS	1/18/22 @ 0925
Released By	Date	Received By	Date
		[signature]	

1.7.6 BW

McCampbell Analytical, Inc.
"When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701
Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269
http://www.mccampbell.com / E-mail: main@mccampbell.com

Sample Receipt Checklist

Client Name:	**Castle Analytical Laboratory**	Date and Time Received:	**1/18/2022 09:25**
Project:	**2201051 / 210832**	Date Logged:	**1/18/2022**
		Received by:	Tina Perez
WorkOrder №:	**2201684** Matrix: Soil	Logged by:	Tina Perez
Carrier:	UPS		

Chain of Custody (COC) Information

Chain of custody present?	Yes	☑	No	☐		
Chain of custody signed when relinquished and received?	Yes	☑	No	☐		
Chain of custody agrees with sample labels?	Yes	☑	No	☐		
Sample IDs noted by Client on COC?	Yes	☑	No	☐		
Date and Time of collection noted by Client on COC?	Yes	☑	No	☐		
Sampler's name noted on COC?	Yes	☐	No	☑		
COC agrees with Quote?	Yes	☑	No	☐	NA	☐

Sample Receipt Information

Custody seals intact on shipping container/cooler?	Yes	☑	No	☐	NA	☐
Custody seals intact on sample bottles?	Yes	☑	No	☐	NA	☐
Shipping container/cooler in good condition?	Yes	☑	No	☐		
Samples in proper containers/bottles?	Yes	☑	No	☐		
Sample containers intact?	Yes	☑	No	☐		
Sufficient sample volume for indicated test?	Yes	☑	No	☐		

Sample Preservation and Hold Time (HT) Information

All samples received within holding time?	Yes	☑	No	☐	NA	☐
Samples Received on Ice?	Yes	☑	No	☐		
(Ice Type: BLUE ICE)						
Sample/Temp Blank temperature	Temp: 1.7°C				NA	☐
ZHS conditional analyses: VOA meets zero headspace requirement (VOCs, TPHg/BTEX, RSK)?	Yes	☐	No	☐	NA	☑
Sample labels checked for correct preservation?	Yes	☑	No	☐		
pH acceptable upon receipt (Metal: <2; Nitrate 353.2/4500NO3: <2; 522: <4; 218.7: >8)?	Yes	☐	No	☐	NA	☑
UCMR Samples:						
pH tested and acceptable upon receipt (200.7: ≤2; 533: 6 - 8; 537.1: 6 - 8)?	Yes	☐	No	☐	NA	☑
Free Chlorine tested and acceptable upon receipt (<0.1mg/L) [not applicable to 200.7]?	Yes	☐	No	☐	NA	☑

Comments:

CASTLE ANALYTICAL LABORATORY

Castle ID: 2201051

CHAIN OF CUSTODY

Location: 2333 Shuttle Drive, Bldg 908/909, Atwater, CA 95301
Mailing Address: 2333 Shuttle Drive, Atwater, CA 95301
Phone: (209) 384-2930 - Fax: (209) 500-1848

ELAP Certificate No. 2480

PAGE 1 OF 1

Customer: TECHNICON ENGINEERING SRVC
Address: 4539 N. BRAWLEY
City/State/ZIP: FRESNO, CA, 93722
Phone / Email: 559-276-9[illegible]
Project# / PO# / Global ID: 210832 PO 2684
Report Attention: STEVE CURES
Sampler Signature:
Sampler Printed: Miguel Cyr

Lab ID#	SAMPLE ID	DATE	TIME	DESCRIPTION/LOCATION	SAMPLE TYPE composite(c) discrete/grab(d)	SAMPLE MATRIX soil(s) liquid(l) vapor(v) other (o)	REQUESTED ANALYSES: BTEX/MTBE/TPH-GAS 8021/8015	TPH-DIESEL / MOTOR OIL - 8015B	TRPH 418.1M / SM5520C & F	Oxy's / EDB / DCA by 8260	8260 Volatiles- full list	PCBs - 8082	OCP	CAM	Chl H	Electronic Deliverables (EDF)	NUMBER OF CONTAINERS	OBSERVATIONS/REMARKS
	S1	1/14/22	1130		d	s		X										
	S1-A@3'		1210					X										
	S2		1240										X	X	X			
	S3		110										X	X	X			
	S4		140										X	X	X			

Method of Shipment:

Notes:

	Signature	Printed Name	Date	Time	Company Name
Relinquished by:		Miguel Cyr	1-14-22	220	TBS
Received by:		Clari Perez	1-17-22	9:25	Castle Analytical
Relinquished by:					
Received by:					
Relinquished by:					
Received by:					

Total number of containers submitted to the laboratory

Turn Around Time:
- 24 Hour ☐
- 48 Hour ☐
- 3 Day ☐
- 5 Day (Normal) ☒
- Special: _____