DRAFT INITIAL STUDY AND MITIGATED NEGATIVE DECLARATION FOR CONWAY/DIAS PROPERTIES

MAY 2023



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Section 1

Initial Study/Negative Declaration Process

County of Tulare
5961 S. Mooney Boulevard
Visalia, CA 93277

SECTION 1
CEQA Review Process

Project Title: Conway/Dias Property

1.1 California Environmental Quality Act Guidelines

Section 15063 of the California Environmental Quality Act (CEQA) Guidelines requires that the Lead Agency prepare an Initial Study to determine whether a discretionary project will have a significant effect on the environment. All phases of the project planning, implementation, and operation must be considered in the Initial Study. The purposes of an Initial Study, as listed under Section 15063(c) of the CEQA Guidelines, include:

(1) Provide the lead agency with information to use as the basis for deciding whether to prepare an EIR or negative declaration;
(2) Enable an applicant or lead agency to modify a project, mitigating adverse impacts before an EIR is prepared, thereby enabling the project to qualify for a negative declaration;
(3) Assist the preparation of an EIR, if one is required, by:
  (a) Focusing the EIR on the effects determined to be significant,
  (b) Identifying the effects determined not to be significant,
  (c) Explaining the reasons for determining that potentially significant effects would not be significant, and
  (d) Identifying whether a program EIR, tiering, or another appropriate process can be used for analysis of the project's environmental effects.
(4) Facilitate environmental assessment early in the design of a project;
(5) Provide documentation of the factual basis for the finding in a negative declaration that a project will not have a significant effect on the environment
(6) Eliminate unnecessary EIRs;
(7) Determine whether a previously prepared EIR could be used with the project.

1.2 Initial Study

The Initial Study provided herein covers the potential environmental effects of the construction and operation of 303 low and medium density residential dwelling units on approximately 54.21 gross acres. The proposed project site proposed for R-1-5. The site is zoned C-2-MU by Tulare County and is designated as Single Family Residential. Tulare County will act as the Lead Agency for processing the Initial Study/Mitigated Negative Declaration pursuant to the CEQA Guidelines.

1.3 Environmental Checklist

The Lead Agency may use the CEQA Environmental Checklist Form [CEQA Guidelines, Section 15063(d)(3) and (f)] in preparation of an Initial Study to provide information for determination if there are significant

effects of the project on the environment. A copy of the completed Environmental Checklist is set forth in **Section Three**.

1.4 Notice of Intent to Adopt a Negative Declaration

The Lead Agency shall provide a Notice of Intent to Adopt a Negative Declaration (CEQA Guidelines, Section 15072) to the public, responsible agencies, trustee agencies and the County Clerk within which the project is located, sufficiently prior to adoption by the Lead Agency of the Negative Declaration to allow the public and agencies the review period. The public review period (CEQA Guidelines, Section 15105) shall not be less than 30 days when the Initial Study/Negative Declaration is submitted to the State Clearinghouse unless a shorter period, not less than 20 days, is approved by the State Clearinghouse.

Prior to approving the project, the Lead Agency shall consider the proposed Negative Declaration together with any comments received during the public review process, and shall adopt the proposed Negative Declaration only if it finds on the basis of the whole record before it, that there is no substantial evidence that the project will have a significant effect on the environment and that the Negative Declaration reflects the Lead Agency's independent judgment and analysis.

The written and oral comments received during the public review period will be considered by Tulare County prior to adopting the Negative Declaration. Regardless of the type of CEQA document that must be prepared, the overall purpose of the CEQA process is to:

1) Assure that the environment and public health and safety are protected in the face of discretionary projects initiated by public agencies or private concerns;
2) Provide for full disclosure of the project's environmental effects to the public, the agency decision-makers who will approve or deny the project, and the responsible trustee agencies charged with managing resources (e.g. wildlife, air quality) that may be affected by the project; and
3) Provide a forum for public participation in the decision-making process pertaining to potential environmental effects.

According to Section 15070(a) a public agency shall prepare or have prepared a proposed negative declaration for a project subject to CEQA when:

> ***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. Less than significant impacts with mitigation measures have been identified.***

The Environmental Checklist Discussion contained in Section Three of this document has determined that the environmental impacts of the project are less than significant with mitigation measures and that a Mitigated Negative Declaration is adequate for adoption by the Lead Agency.

1.5 Negative Declaration or Mitigated Negative Declaration

The Lead Agency shall prepare or have prepared a proposed Negative Declaration or Mitigated Negative Declaration (CEQA Guidelines Section 15070) for a project subject to CEQA when 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. The proposed Negative Declaration or Mitigated Negative Declaration circulated for public review shall include the following:

(a) A brief description of the project, including a commonly used name for the project.
(b) The location of the project, preferably shown on a map.
(c) A proposed finding that the project will not have a significant effect on the environment.
(d) An attached copy of the Initial Study documenting reasons to support the finding.
(e) Mitigation measures, if any.

1.6 Intended Uses of Initial Study/Negative Declaration documents

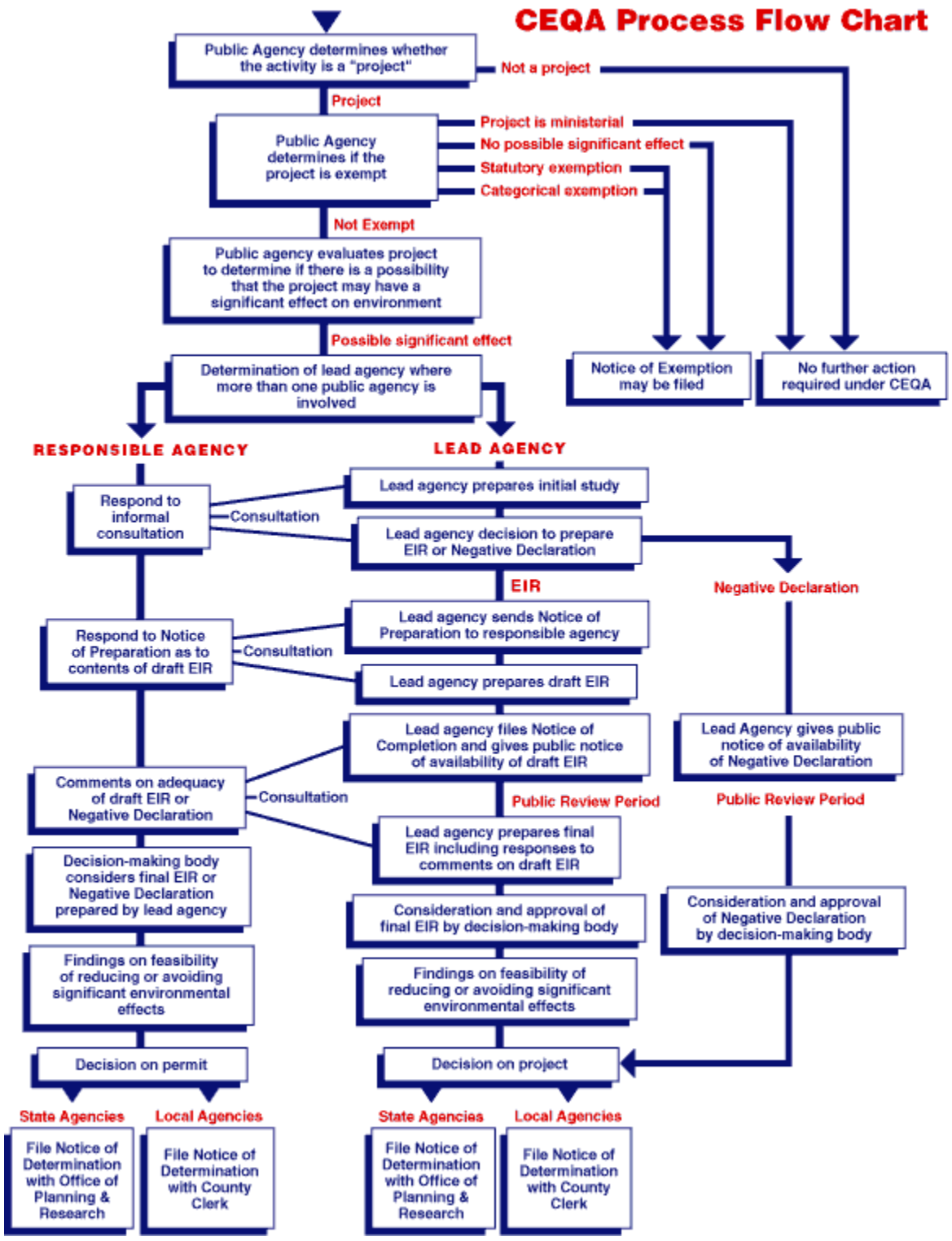
The Initial Study/Negative Declaration document is an informational document that is intended to inform decision-makers, other responsible or interested agencies, and the general public of potential environmental effects of the proposed project. The environmental review process has been established to enable the public agencies to evaluate environmental consequences and to examine and implement methods of eliminating or reducing any adverse impacts. While CEQA requires that consideration be given to avoiding environmental damage, the Lead Agency must balance any potential environmental effects against other public objectives, including economic and social goals. Tulare County, as Lead Agency, will make a determination, based on the environmental review for the Environmental Study, Initial Study and comments from the general public, if there are less than significant impacts from the proposed project and the requirements of CEQA can be met by adoption of a Mitigated Negative Declaration.

1.7 Notice of Determination (NOD)

The Lead Agency shall file a Notice of Determination within five working days after deciding to approve the project. The Notice of Determination (CEQA Guidelines, Section 15075) shall include the following:

(1) An identification of the project including the project title as identified on the proposed negative declaration, its location, and the State Clearinghouse identification number for the proposed negative declaration if the notice of determination is filed with the State Clearinghouse.
(2) A brief description of the project.
(3) The agency's name and the date on which the agency approved the project.
(4) The determination of the agency that the project will not have a significant effect on the environment.
(5) A statement that a negative declaration or a mitigated negative declaration was adopted pursuant to the provisions of CEQA.
(6) A statement indicating whether mitigation measures were made a condition of the approval of the project, and whether a mitigation monitoring plan/program was adopted.
(7) The address where a copy of the negative declaration or mitigated negative declaration may be examined.
(8) The identity of the person undertaking a project which is supported, in whole or in part, through contracts, grants, subsidies, loans, or other forms of assistance from one or more public agencies or the identity of the person receiving a lease, permit, license, certificate, or other entitlement for use from one or more public agencies.

1.8 CEQA Process Flow Chart



Section 2

Project Description

County of Tulare
5961 S. Mooney Boulevard
Visalia, CA 93277

SECTION 2
Project Description

Project Title: Conway/Dias Property

2.1 Project Description and Purpose

The Project proposes the subdivision and development of a 303-unit residential development on 54.21 gross acres within the Goshen Community in Tulare County. The Project site's existing zoning is C-2-MU (General Commercial Mixed Use), and the existing Community Plan Land Use Plan Designates the site as Single Family Residential. The proposed Project includes 133 low-density homes (averaging 6,480 square feet (sq. ft.)), 170 medium-density homes (averaging 2,880 sq. ft.), a 2-acre park, and a 1.22-acre drainage pond (basin).

The proposed Project would result in onsite and offsite infrastructure improvements including new and relocated utilities, new residential streets, and the improvement of Avenue 304 and Road 64 with the dedication of rights-of-way to add sidewalks and landscaping. The proposed Project would require the demolition of one (1) single-family home.

2.2 Project Location

The proposed Project site is within the Goshen Community Urban Development Boundary area within Tulare County, near the northwestern corner of Visalia. The proposed Project Site is located north of Avenue 304, south of Avenue 306, and west of Road 64 on vacant/agricultural land. The site is approximately 7.5 miles northwest of downtown Visalia. The proposed Project involves construction on approximately 54.21 acres on a parcel identified by APN 073-060-044 and 073-060-013. The proposed Project site is bisected by Road 64, and the area west of Road 64 will be used for this project. The site is topographically flat and is bounded by agricultural uses to the north, south, and west. Industrial uses exist to the east. The site's existing zoning is C-2-MU (General Commercial Mixed Use), and the existing Community Plan Land Use Plan Designates the site as Single Family Residential. The site currently contains one single-family residence and agriculture uses.

2.3 Other Permits and Approvals

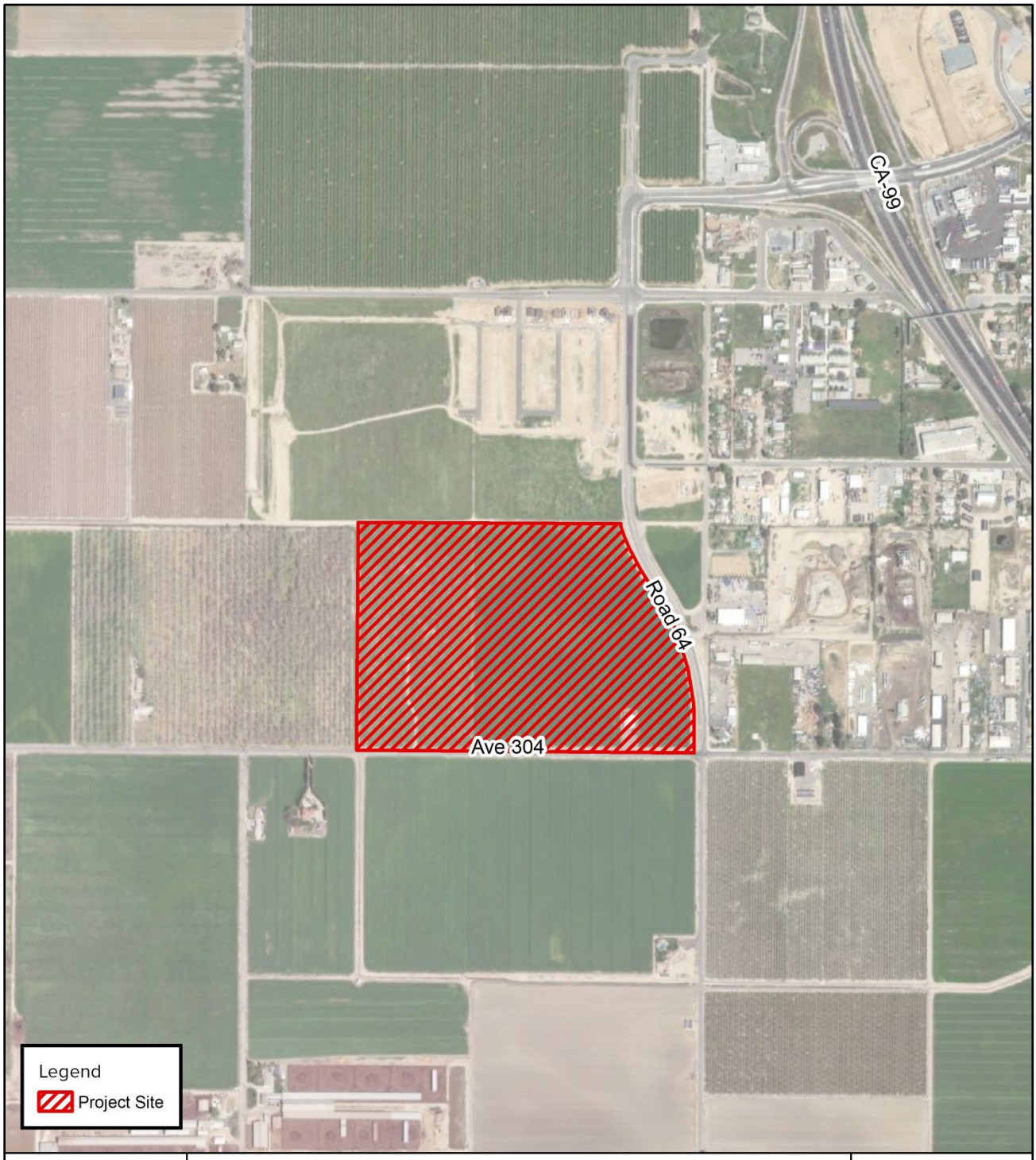
1. **Required Approvals:** The following discretionary and ministerial approvals are required from the County of Tulare for the proposed Project:
   - Tentative Subdivision Map and/or Tentative Parcel Map
   - County of Tulare Building and Encroachment Permits
   - San Joaquin Valley Air Pollution Control District (SJVAPCD or Air District). The proposed project is within the jurisdiction of the SJVAPCD and will be required to comply with Regulation VIII, Rule 3135 (Dust Control Fee), Rule 4101 (Visible Emissions), and Rule 9510 (Indirect Source Review (ISR)). Please note that this list is not all inclusive as the Air District will determine applicable rules/regulations.

- 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 proposed Project construction-related activities.

Figure 2-1. Regional Location Map



Figure 2-2. Vicinity Map



Section 3

Evaluation of Environmental Impacts

County of Tulare
5961 S. Mooney Boulevard
Visalia, CA 93277

SECTION 3
Evaluation of Environmental Impacts
Project Title: Conway/Dias Property
TSM 23-001

This document is the Initial Study/Mitigated Negative Declaration for the proposed construction and operation of 303 low- and medium-density residential units (houses) on approximately 54.21 gross acres in the Goshen Community within Tulare County. The County of Tulare will act as the Lead Agency for this project pursuant to the California Environmental Quality Act (CEQA) and the CEQA Guidelines.

3.1 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 CEQA Guidelines 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.

3.2 INITIAL STUDY/MITIGATED NEGATIVE DECLARATION

1. **Project Title:** Conway/Dias Property (TSM 23-001)

2. **Lead Agency:** County of Tulare, Resource Management Agency
   Aaron Bock, Assistant RMA Director
   5961 S. Mooney Boulevard
   Visalia, CA 93277
   Phone Number: 559-624-7050

3. **Applicant:** San Joaquin Valley Homes
   Contact Person: Jim Robinson
   5607 Avenue de las Robles
   Visalia, CA, 93291

4. **Project Location:** The proposed Project site is within the Goshen Community Urban Development Boundary area within Tulare County, near the northwestern corner of Visalia. The proposed Project Site is located north of Avenue 304, south of Avenue 306, and west of Road 64 on vacant/agricultural land. The site is approximately 7.5 miles northwest of downtown Visalia. The proposed Project involves construction on approximately 54.21 acres on a parcel identified by APN 073-060-044 and 073-060-013. The proposed Project site is bisected by Road 64, and the area west of Road 64 will be used for this project. The site is topographically flat and is bounded by agricultural uses to the north, south, and west. Industrial uses exist to the east. The site's existing zoning is C-2-MU (General Commercial Mixed Use), and the existing Community Plan Land Use Plan Designates the site as Single Family Residential. The site currently contains one single-family residence and agriculture uses.

5. **General Plan Designation:** The Goshen Community Plan designated the proposed Project Site as Highway Commercial.

6. **Zoning Designation:** The site is zoned C-2-MU (General Commercial Mixed Use) by the Goshen Community Plan.

7. **Project Description:** The Project proposes the subdivision and development of a 303-unit residential development on 54.21 gross acres within the Goshen Community in Tulare County. The Project site's existing zoning is C-2-MU (General Commercial Mixed Use), and the existing Community Plan Land Use Plan Designates the site as Single Family Residential. The proposed Project includes 133 low-density homes (averaging 6,480 square feet (sq. ft.)), 170 medium-density homes (averaging 2,880 sq. ft.), a 2-acre park, and a 1.22-acre drainage pond (basin).
   The proposed Project would result in onsite and offsite infrastructure improvements including new and relocated utilities, new residential streets, and the improvement of Avenue 304 and Road 64 with the dedication of rights-of-way to add sidewalks and landscaping. The proposed Project would require the demolition of one (1) single-family home.

8. **Surrounding Land Uses and Settings:**
   North: Highway Commercial (Goshen Community Plan), currently used for agricultural purposes.
   South: Light Industrial and Agriculture (Goshen Community Plan), currently used for agricultural purposes.
   East: Mixed Use, Light Industrial (Goshen Community Plan) currently used for industrial purposes.
   West: Highway Commercial (Goshen Community Plan). Directly to the east is the Dias Property Tentative Subdivision. Currently used for agricultural purposes.

9. **Required Approvals:** The following discretionary and ministerial approvals are required from the County of Tulare for the proposed Project:
   - Tentative Subdivision Map and/or Tentative Parcel Map
   - County of Tulare Building and Encroachment Permits
   - San Joaquin Valley Air Pollution Control District (SJVAPCD or Air District). The proposed project is within the jurisdiction of the SJVAPCD and will be required to comply with Regulation VIII, Rule 3135 (Dust Control Fee), Rule 4101 (Visible Emissions), and Rule 9510 (Indirect Source Review (ISR)). Please note that this list is not all inclusive as the Air District will determine applicable rules/regulations.
   - 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 proposed Project construction-related activities.

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. Pursuant 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 which 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)). According to the most recent census data, California is home to 109 currently recognized Native American Tribes. Tribes in California currently have nearly one hundred separate reservations (sometimes known as Rancherias). Tulare County has several Native American Tribes that were consulted for this proposed Project including: the Big Sandy Rancheria of Western Mono Indians, Santa Rosa Rancheria Tachi Yokut Tribe, Tule River Indian Tribe, and the Wuksache Indian Tribe/Eshom Valley Band.

    Conducting consultation early in the CEQA process allows tribal governments, lead agencies, and project proponents to discuss the level of environmental review, identify and address potential adverse impacts on tribal cultural resources, and reduce the potential for delay and conflict in the environmental review process. (See PRC Section 21083.3.2.) Information may also be available from the California Native American Heritage Commission's Sacred Lands File (per PRC Section 5097.96) and the California Historical Resources Information System (CHRIS) administered by the California

Office of Historic Preservation. Please also note that PRC Section 21082.3(c) contains provisions specific to confidentiality regarding disclosure of Native American resources within a project site/area and are disclosed only in a confidential manner as allowed by law.

11. **Parking and access:** Vehicular access to the proposed Project would be available via Road 64 and Avenue 304. The proposed Project includes new internal streets and courts that provide full access to the proposed Project site. The proposed Project also includes 76 guest parking spaces spread throughout the site. During construction-related activities, workers will utilize existing parking areas and/or temporary construction staging areas for parking vehicles and equipment.

12. **Landscaping and Design:** The landscape and design plans will be required during the building permit submittal and final map submittal processes for any areas to be maintained through a landscape and lighting district.

13. **Utilities and Electrical Services:** The proposed Project would result in onsite and offsite infrastructure improvements including new and relocated utilities. It is the intent of the proposed Project that water and sewer service be provided by the Goshen Community Services District (Goshen CSD). In the event that Goshen CSD is unable to provide sewer service due to treatment capacity constraints, an alternative would be that the Project proponent utilize a package plant for wastewater treatment. Also, a 1.22-acre basin will be provided in the southwest corner of the site for collection/containment of stormwater. Electricity will be provided by Southern California Edison, while Southern California Gas will provide natural gas. AT&T will provide telephone services.

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
ISMND	Initial Study Mitigated Negative Declaration
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 3-1. Vicinity Map

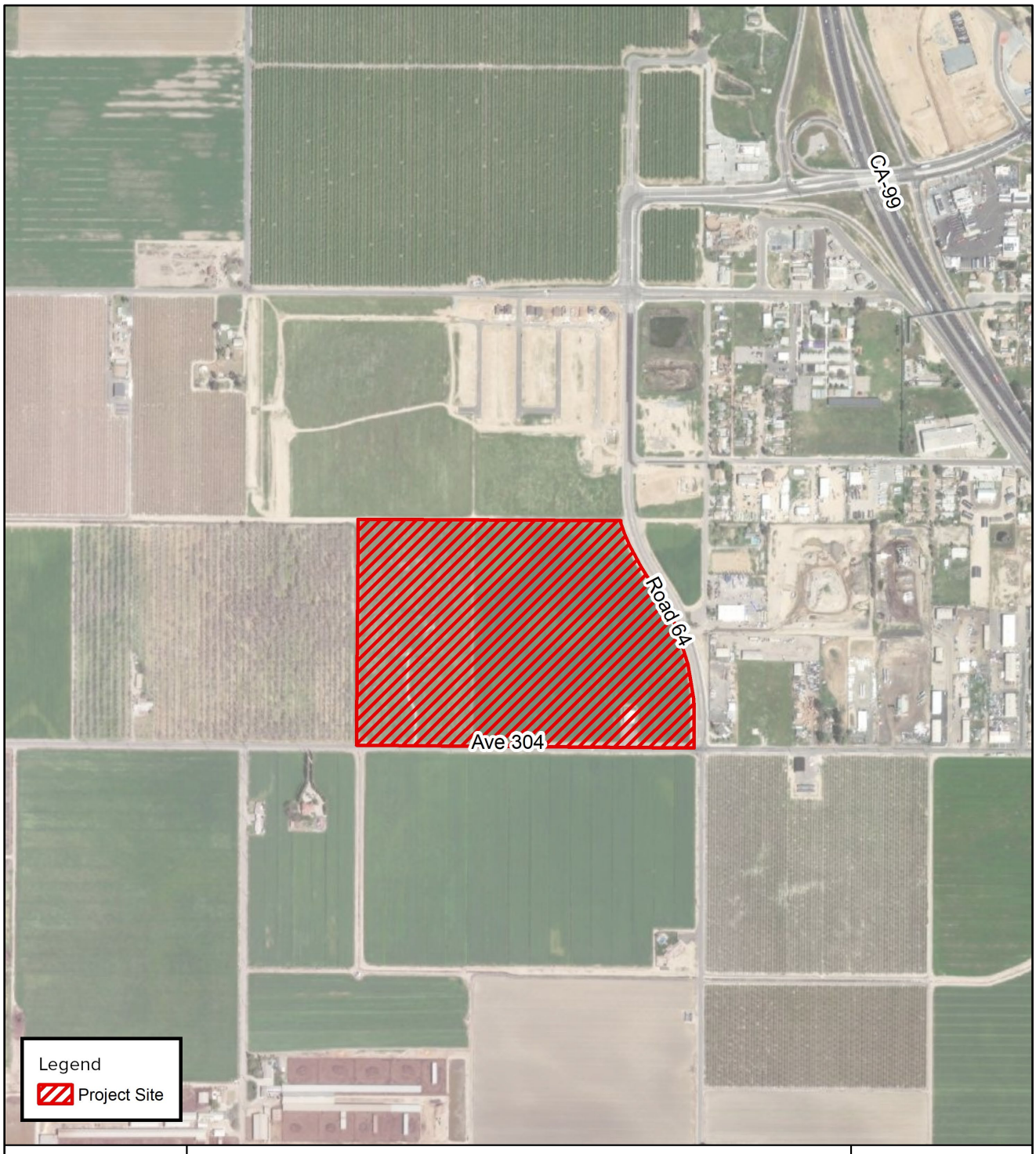
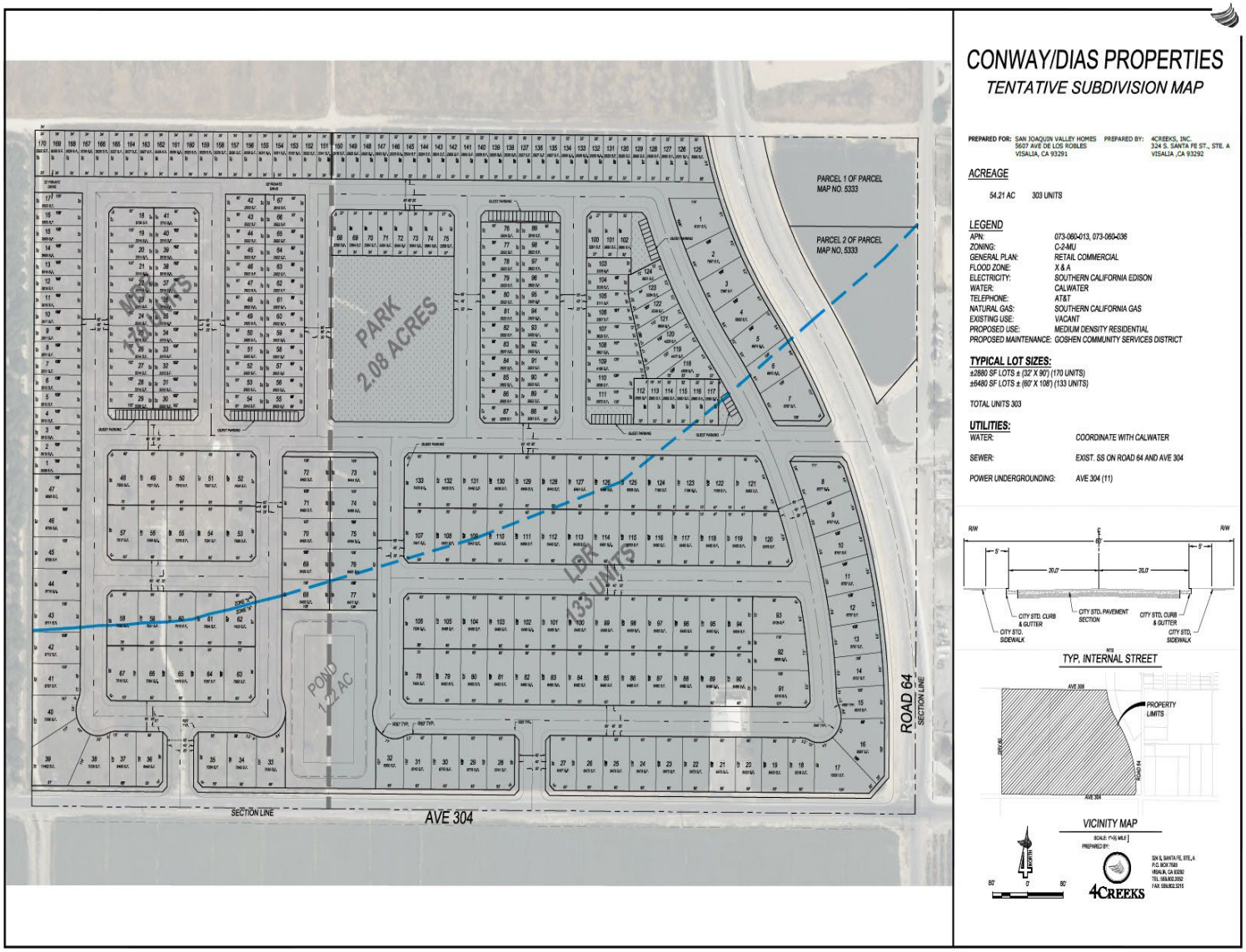


Figure 3-2. Site Plan



3.3 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 is 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.

    a) Earlier Analysis Used. Identify and state where they are available for review.
    b) 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.
    c) 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.

7. Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.

8. This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.

9. The explanation of each issue should identify: the significance criteria or threshold, if any, used to evaluate each question; and the mitigation measure identified, if any, to reduce the impact to less than significance.

It is noted that this proposed Project is consistent with the Goshen Community Plan and Adopted/Certified Environmental Impact Report (SCH No. 2014021057) approved by the Tulare County Board of Supervisors on June 5, 2018, and is herein incorporated by reference in its entirety.

3.4 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 Resources
☑ Cultural Resources	☐ Mineral Resources	☑ Utilities and Service System
☐ 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 the 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: 05/24/23

Hector Guerra — Chief Environmental Planner

Printed Name — Title

Signature: _____ Date: 05/24/23

Reed Schenke, P.E. — Environmental Assessment Officer

Printed Name — Title

3.5 ENVIRONMENTAL ANALYSIS

The following section provides an evaluation of the impact categories and questions contained in the checklist and identifies 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 highways?	☐	☐	☐	☑
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?	☐	☐	☑	☐

The discussions regarding Environmental Setting, CEQA requirements, Regulatory Setting, Chapter 3.1 Aesthetics, Chapters 4 through 9, Appendices "A" through "I", etc., contained in the Goshen Community Plan Update and Environmental Impact Report are incorporated herein in their entirety. Where necessary and if available, additional site specific facts, data, information, etc., are included in this discussion.

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. Tulare County has a visual character of a mix of rural and built environments. Tulare County has three principal environmental landscapes: the Sierra Nevada Mountains, the Foothills, and the Valley Floor. The Valley Floor, the area surrounding Goshen, has scenic resources of croplands, vineyards, rangelands, irrigation features, railroads, and surface water. The St. John's River flows approximately four miles north of the Project Site. Most structures in Goshen are small, one-story buildings that do not block views.

Scenic Vistas

The Sierra Nevada foothills and mountains are located to the east, and agricultural lands on the valley floor are scenic vistas in Tulare County and Goshen.

Existing Visual Character

The following photos demonstrate the aesthetic character of the project area. As shown, the proposed project site area is a relatively flat area characterized by agricultural uses.

Photo 1: Southern Site Boundary (View North) Source: Google Maps 2021



Photo 2: East Site Boundary (View West) Source: Google Maps 2021



Photo 3: Southwest Site Boundary (View Northeast) Source: Google Maps 2021



Photo 4: Southeast Site Boundary (View Northwest) Source: Google Maps 2021



Regulatory Setting

Federal

Aesthetic resources are protected by several federal regulations, none of which are relevant to this Project because it will not be located on lands administered by a federal agency nor is the Project applicant requesting federal funding or any federal permits.

State

Title 24 Outdoor Lighting Standards

"The 2019 Building Energy Efficiency Standards improve upon the 2016 Energy Standards for new construction of, and additions and alterations to, residential and nonresidential buildings. Buildings whose permit applications are dated on or after January 1, 2020, must comply with the 2019 Standards.

The California Energy Commission updates the standards every three years."[1] Title 24 Outdoor Lighting Standards were adopted by the State of California Energy Commission (Commission) (Title 24, Parts 1 and 6, Building Energy Efficiency Standards (Standards) went into effect on January 1, 2020. The changes focus on "four key areas: smart residential photovoltaic systems, updated thermal envelope standards (preventing heat transfer from the interior to exterior and vice versa), residential and nonresidential ventilation requirements, and nonresidential lighting requirements."[2] "The significant changes for outdoor lighting systems in the 2019 update to the Energy Standards include:

- Changes to outdoor lighting power allowances with the allowance values based on LED lighting technologies. Revisions to the general hardscape lighting values in Tables 140.7-A and the specific lighting application values in Table 140.7-B for all Lighting Zones (LZ) – Lighting Zone 1 thru Lighting Zone 4.
- Add separate lighting power allowance values for concrete-surfaced and for asphalt-surfaced hardscape lighting application in Table 140.7-A.
- Add new lighting power allowances for narrow band spectrum light sources used in applications for minimizing outdoor lighting impacts on professional astronomy and nocturnal habitat. (Table 140.7-A)
- Revision and streamlining outdoor lighting control requirements. (§130.2(c))
- Healthcare facilities overseen by the California Office of Statewide Health Planning and Development (OSHPD) have to comply with the Energy Standards including the outdoor lighting requirements for all outdoor areas of healthcare facilities."[3]

Outdoor Lighting Zones

"The basic premise of the Energy Standards is to base allowable outdoor lighting power on the brightness of the surrounding conditions. The Energy Standards contain lighting power allowances for new lighting installations and specific alterations that are dependent on the lighting zone in which the project is located.

Five categories of outdoor lighting zones are defined, and they are LZ0, LZ1, LZ2, LZ3 and LZ4. Lighting zones with lower numbers are darker from LZ0 which is in national parks and other areas intended to be very dark at night to LZ4 for high intensity nighttime use, such as entertainment or commercial districts or areas with special security considerations requiring very high light levels. The eyes adapt to darker surrounding conditions and less light is required to properly see; when the surrounding conditions get brighter, more light is needed to see."[4]

"The least power is allowed in Lighting Zone 1 and increasingly more power is allowed in Lighting Zones 2, 3, and 4. Lighting Zone 0 is intended for undeveloped spaces in parks and wildlife preserves and is very low ambient illumination.

The following summarizes the default locations for outdoor lighting zones as specified in §10-114:

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[1] California Energy Commission (CEC). 2019 Building Energy Efficiency Standards. Accessed April 2023 at: https://www.energy.ca.gov/programs-and-topics/programs/building-energy-efficiency-standards/2019-building-energy-efficiency

[2] CEC. Energy Commission Adopts Standards Requiring Solar Systems for New Homes, First in Nation. Accessed April 2023 at: https://www.energy.ca.gov/news/2018-05/energy-commission-adopts-standards-requiring-solar-systems-new-homes-first

[3] CEC. Outdoor Lighting – Overview. 6.1. Overview. What's new for the 2019 California Energy Code. Page 6-1. Accessed April 2023 at: https://www.energy.ca.gov/sites/default/files/2020-05/06_OutdoorLighting.pdf

[4] Ibid. 6.3 Outdoor Lighting Zones. Page 6-4.

- Lighting Zone 0 areas are undeveloped areas of government designated parks, recreation areas, and wildlife preserves;
- Lighting Zone 1 areas are developed portions of government designated parks, recreation areas and wildlife preserves;
- Rural areas are Lighting Zone 2;
- Urban areas are Lighting Zone 3;
- Lighting Zone 4 is a special use district that may be created by a local government through application to the Energy Commission."[5]

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. The Tulare General Plan identified the rural character alongside State Route 99 as valuable to communities.

State Scenic Highways

According to the California Department of Transportation mapping of State Scenic Highways, the County of Tulare does not have officially designated State Scenic Highways, however, there is one eligible State Scenic Highway south of Goshen. It is a 44-mile stretch of State Route 198 from State Route 99 to Sequoia National Park. This is designated as a scenic corridor in the City's General Plan This portion of the highway is approximately 2.5 miles southeast of the proposed site.

Local

Tulare County General Plan 2030 Update

The Tulare County General Plan 2030 Update contains the following goals and policies related to aesthetic resources that may apply to the proposed Project. Policies in the Goshen Community Plan are adopted from the Tulare County General Plan:

The Tulare County General Plan 2030 Update: Chapter 7 – Scenic Landscapes, contains the following goals and policies that relate to aesthetics, preservation of scenic vistas and daytime lighting/nighttime glare and which have potential relevance to the Project's CEQA review: *SL-1.1 Natural Landscapes* which requires new development to not significantly impact or block views of Tulare County's natural landscapes*; SL-1.2 Working Landscapes* which requires that new non-agricultural structures and infrastructure located in or adjacent to croplands, orchards, vineyards, and open rangelands be sited so as to not obstruct important viewsheds and to be designed to reflect unique relationships with the landscape; and *SL-2.1 Designated Scenic Routes and Highways* which is intended to protect views of natural and working landscapes along the County's highways and roads by maintaining a designated system of County scenic routes and State scenic highways.

[5] Op. Cit.

Goshen Development Standards

The Mixed-Use Zoning District in Goshen was established to allow flexibility for different uses within Goshen. To ensure high-quality development, Goshen developed standards for the mixed-use districts. Standards related to aesthetic resources that may apply to the proposed Project are as follows:

- *LI-2.* Lights should be shielded and point down toward the ground.
- *LI-5.* Exterior architectural lighting should fully compliment a building's design and character. Light fixtures should work in conjunction (size, scale, and color) with the building's wall, roof.
- *LI-6.* Street lighting features should be "pedestrian scale" at twelve (12) to eighteen (18) feet in height above the curb.
- *A-28.* Conceal all electrical boxes and conduits from view, and position light sources to prevent glare for pedestrians and vehicles.

County of Tulare Zoning Ordinance

The Tulare County 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.).

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 Sierra Nevada foothills and mountains to the east, and agricultural lands to the west and south of the proposed Project are the primary scenic vistas within this region. A new residential subdivision is under construction to the north and existing commercial/light industrial uses are located east of the proposed Project site. The proposed Project would obstruct some views of existing agricultural uses west and south of the site. The proposed Project would be low-profile (that is, no building/structure will be greater than 35' feet in height). Zoning height limitations would restrict structures to no greater than a two-story equivalent (i.e., 2-½ stories and not to exceed 35 feet maximum). No parts of the proposed Project would obstruct local scenic views, be visually intrusive or incompatible with the surrounding area. There are no designated scenic vistas within visible distance of the proposed Project site (County of Tulare, 2010). Although the proposed Project will be visible from Avenue 304 and from Road 64, it is anticipated that design features will minimize visual impacts to those viewing the site. The proposed Project would not be expected to significantly alter views overall from the surrounding community. Therefore, there will be *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 rock outcroppings, historic buildings, or other designated scenic resources within or near the proposed Project site. There are no officially designated State Scenic Highways located in the County of Tulare or near the site. The proposed Project would not damage any scenic resources within a state scenic highway, as such, there will be *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?

No Impact: The proposed Project site is in the urban development boundary of Goshen. The proposed Project would result in the planned transition of agricultural uses to residential uses within an unincorporated area as allowed by the Goshen Community Plan Update. It is noted that the Goshen Community Plan Update states, "In terms of siting, medium to high density housing should be located along collector streets and/or arterials. Due to existing Airport safety zones, there are limitations on where higher density housing can be placed within the west side of Goshen. There are fewer restrictions on parcels located to generally to the North and the West."[6] Even though the proposed Project location is currently in a non-urbanized area, the transition to an urbanized land use would not substantially degrade the existing visual character or quality of the site and its surroundings. As such, even though the proposed Project location is currently in a non-urbanized area, the transition to an urbanized land use would not substantially degrade the existing visual character or quality of the site and its surroundings. The materials, signage, fencing, landscaping, and building materials used in the construction of the proposed Project will be selected based on their ability to minimize the impact to the overall visual character of the area. The proposed Project will comply with all applicable zoning and other regulations governing scenic quality. There will be *no 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 proposed Project site consistent with similar residential development in Goshen and Tulare County. New lighting sources would include interior lighting from residences, street lighting, and security lighting. All street and landscape lighting will be consistent with the Communities' development standards LI-2, LI-5, and LI-6, which are developed to minimize impacts related to excessive light, and standard A-28 to prevent glare to pedestrians and vehicles. Although the proposed Project will introduce new light sources to the area, all lighting will be consistent with adjacent uses and the lighting standards. The impacts will be *less than significant.*

Cumulative Impacts:

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, General Plan Background Report, Tulare County 2030 General Plan EIR, and/or Goshen Community Plan Update and EIR.

As the proposed Project will not create significant Project-specific visual impacts, as the proposed Project will result in no significant Project-specific or Cumulative Impacts related to this Checklist Item.

[6] Goshen Community Plan Update. Page 177. http://generalplan.co.tulare.ca.us/documents/GP/001Adopted%20Tulare%20County%20General%20Plan%20Materials/120Part%20III%20Community%20Plans%201%20of%207/005Goshen/GPA%2014-001%20GOSHEN%20COMMUNITY%20PLAN.

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?	☐	☐	☐	☑

The discussions regarding Environmental Setting, CEQA requirements, Regulatory Setting, Chapter 3.2 Agricultural Lands and Forestry, Chapters 4 through 9, Appendices "A" through "I", etc., contained in the Goshen Community Plan Update and Environmental Impact Report are incorporated herein in their

entirety. Where necessary and if available, additional site-specific facts, data, information, etc., are included in this discussion.

Environmental Setting

Central California is one of the world's premier growing regions. Agriculture is an important economic resource for Tulare County and the rest of the central valley. Livestock and poultry products, fruit and nut products, field crops, and nursery products are Tulare County's most valuable agricultural products. 366 acres, or 30 percent of Goshen, is farmland. However, the Goshen Community Plan anticipates this land within the Urban Development Boundary (UDB) to be converted into residential and commercial zones.

The proposed Project site is located within the Goshen UDB. Most land in the UDB, including the proposed Project site, are not under a Williamson Act contract or a Farmland Security Zone contract. The proposed site is designated as Prime Farmland and Farmland of Statewide Importance under the Important Farmland Mapping and Monitoring Program (FMMP). The land to the north and south is Prime Farmland, the land to the west is Farmland of Statewide Importance, and the land to the east is Rural Commercial and Urban Land. Regardless of Farmland designation, the land in all directions is zoned for commercial or industrial with a mixed-use overlay.

Regulatory Setting

Federal

Federal regulations for agriculture and forest resources are not relevant to this project because it is not a federal undertaking (the proposed Project site is not located on lands administered by a federal agency, and the proposed Project applicant is not requesting federal funding or any federal permits).

State

California Environmental Quality Act (CEQA) Definition of Agricultural Lands

Public Resources Code Section 21060.1 defines "agricultural land" for the purposes of assessing environmental impacts using the FMMP. The FMMP was established in 1982 to assess the location, quality, and quantity of agricultural lands and the conversion of these lands. The FMMP serves as a tool to analyze agricultural land use and land use changes throughout California. As such, this Project is being evaluated using the FMMP pursuant to CEQA.

California Land Conservation Act of 1965 (Williamson Act)

The California Land Conservation Act of 1965, commonly referred to as the Williamson Act, enables local governments to enter contracts with private landowners to restrict the activities on specific parcels of land to agricultural or open space uses. In return, landowners receive property tax assessments which are much lower than normal because they are based upon farming and open space uses as opposed to full market value. The Department of Conservation assists all levels of government, and landowners in the interpretation of the Williamson Act related government code. The Department also researches, publishes and disseminates information regarding the policies, purposes, procedures, and administration of the Williamson Act according to government code. Participating counties and cities are required to establish their own rules and regulations regarding implementation of the Act within their jurisdiction. These rules

include but are not limited to: enrollment guidelines, acreage minimums, enforcement procedures, allowable uses, and compatible uses.[7]

Right to Farm Ordinance

Tulare 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 California Department of Conservation (DOC) applies the Natural Resources Conservation Service (NRCS) soil classifications to identify agricultural lands. These agricultural designations are used in planning for the present and future of California's agricultural land resources. Pursuant to the DOC's FMMP, these designated agricultural lands are included in the Important Farmland Maps (IFM). As noted earlier, the FMMP was established in 1982 to assess the location, quality and quantity of agricultural lands, and the conversion of these lands. The FMMP serves as tool to analyze agricultural land use and land use changes throughout California. The DOC has a minimum mapping unit of 10 acres, with parcels that are smaller than 10 acres being absorbed into the surrounding classifications. The following list provides a comprehensive description of all the categories mapped by the DOC. Collectively, lands classified as Prime Farmland, Farmland of Statewide Importance, and Unique Farmland are referred to as Farmland.[8]

- ***Prime Farmland.*** Farmland that has the best combination of physical and chemical features able to sustain long-term agricultural production. This land has the soil quality, growing season, and moisture supply needed to produce sustained high yields. Land must have been used for irrigated agricultural production at some time during the four years prior to the mapping date. (Twenty-nine percent of Tulare County's farmland is designated as Prime Farmland.)
- ***Farmland of Statewide Importance.*** Farmland similar to Prime Farmland but with minor shortcomings, such as greater slopes or less ability to store soil moisture. Land must have been used for irrigated agricultural production at some time during the four years prior to the mapping date. (Twenty-five percent of Tulare County's farmland is designated as Farmland of Statewide Importance.)
- ***Unique Farmland***. Farmland of lesser quality soils used for the production of the State's leading agricultural crops. This land is usually irrigated, but may include non-irrigated groves or vineyards as found in some climatic zones in California. Land must have been cropped at some time during the four years prior to the mapping date. (One percent of Tulare County's farmland is designated as Unique Farmland.)
- ***Farmland of Local Importance.*** Land of importance to the local agricultural economy as determined by each county's board of supervisors and a local advisory committee. (Eleven percent of Tulare County's farmland is designated as Farmland of Local Importance.)
- ***Urban and Builtup Land.*** Land occupied by structures with a building density of at least 1 unit to 1.5 acres, or approximately 6 structures to a 10-acre parcel. This land is used for residential, industrial, commercial, institutional, public administrative purposes, railroad and other

[7] California Department of Conservation. Williamson Act Program. Accessed April 2023 at: https://www.conservation.ca.gov/dlrp/wa.

[8] California Department of Conservation. FMMP – Important Farmland Map Categories. Accessed April 2023 at: https://www.conservation.ca.gov/dlrp/fmmp/Pages/Important-Farmland-Categories.aspx

transportation yards, cemeteries, airports, golf courses, sanitary landfills, sewage treatment, water control structures, and other developed purposes.

- ***Other Land.*** Land not included in any other mapping category. Common examples include low density rural developments; brush, timber, wetland, and riparian areas not suitable for livestock grazing; confined livestock, poultry or aquaculture facilities; strip mines and borrow pits; and water bodies smaller than 40 acres. Vacant and nonagricultural land surrounded on all sides by urban development and greater than 40 acres is mapped as Other Land.

Forestry Resources

State regulations regarding forestry resources are not relevant to the proposed Project because no forestry resources exist at the proposed Project site.

Local

Tulare County General Plan 2030 Update

The Tulare County General Plan 2030 Update includes a comprehensive set of goals and policies related to agricultural resources that are applicable to the proposed Project. These policies aim to preserve the integrity of valuable agricultural lands, promote smart growth and healthy communities, encourage infill development, and maintain distinct urban edges. The county supports non-renewal or cancellation processes for lands within urban development boundaries (UDBs) and high-density boundaries (HDBs) in compliance with state law. The approval of preserves or Williamson Act contracts on lands within UDBs and HDBs is contingent upon demonstrating that such restrictions will not hinder community growth for the next 10 years or that the land possesses special public values. The plan encourages the principles of smart growth, including creating walkable neighborhoods, mixing land uses, directing growth towards existing communities, and preserving open space. In terms of agricultural lands, the county aims to maintain designated areas for agricultural use and directs urban development away from these lands towards areas with available infrastructure. The plan also emphasizes the reuse of existing agricultural support facilities for new businesses and discourages parcel splits in agricultural designated areas unless specific exceptions are granted. The county strives to establish transition areas between urban uses and agriculture/open space and ensures that urban development occurs within designated areas that benefit from urban services and available infrastructure. The policies recognize the unique attributes of different locations within the county and utilize community plans to guide appropriate land uses and intensities. Additionally, the county promotes the preparation, update, and maintenance of community plans to address the provision of necessary urban services. Overall, these policies seek to strike a balance between urban development, agricultural preservation, and the creation of sustainable and vibrant communities in Tulare County.

Rural Valley Land Plans

For the unincorporated valley portions of Tulare County, growth is guided by the land use policies in the Rural Valley Lands Plan (RVLP)[9] and Planning Framework Element[10] of the Tulare County General Plan 2030 Update.

[9] Tulare County General Plan 2030 Update, Part II – Area Plan Policies, Chapter 1 – Rural Valley Lands Plan

[10] Tulare County General Plan 2030 Update, Part I – Goals and Policies Report, Chapter 2 – Planning Framework

"Tulare County has identified land for urbanization according to four categories: 1) lands in and around incorporated cities, 2) lands in and around unincorporated communities, 3) lands in foothill development corridors, and 4) lands that qualify under the RVLP. The county is legally responsible for the planning and regulation of all lands that fall outside incorporated city limits, even though cities adopt their own general plans for the incorporated area and a portion of surrounding unincorporated area."[11]

"The RVLP applies to about 773,500 acres of the valley portion of the County, outside the planned Urban Development Boundaries (UDB) and generally below the 600-foot elevation contour line along the foothills of the Sierra Nevada Mountain Range. … The purpose of the RVLP is to protect and maintain the agricultural viability of rural valley areas by establishing requirements for exclusive agricultural zoning (containing minimum parcel sizes) appropriate to sustain agriculture and implementing a policy that utilizes resource information to determine the suitability of rural lands for nonagricultural uses. The goal of the RVLP is to "sustain the viability of Tulare County agriculture by restraining division and use of land which is harmful to continued agricultural use." The RVLP utilizes five exclusive agriculture (AE) zones, each requiring a different minimum parcel size (ranging from five to eighty acres). These zones are as follows: AE, AE-10, AE-20, AE-40, and AE-80. The number designation on each zone generally reflects the minimum acres of land needed to productively farm a certain crop at a commercial level."[12]

"In order to grant an exception for the use of the AE zone on properties that have minimal or no agricultural value, a point system is used to evaluate property suitability. Points are awarded for various factors such as parcel size, available public services, and surrounding land uses. Parcels determined to be more suitable for nonagricultural uses may be zoned (discretionary review required) for urban/suburban uses. Parcels that do not meet the requirements for rezoning are not allowed to rezone and must remain agriculturally zoned. The RVLP point system [is used] to determine whether a site is suitable to rezone from an agricultural zone on the Valley floor to an urban zone. The county shall not allow re-zoning of parcels that accumulate 17 or more points according to the RVLP Development Criteria. If the number of points accumulated is 11 or less, the parcel may be considered for nonagricultural zoning. A parcel receiving 12 to 16 points shall be determined to have fallen within a "gray" area in which no clear cut decision is readily apparent. In such instances, the Planning Commission and Board of Supervisors shall make a decision based on the unique circumstances pertaining to the particular parcel of land, including factors not covered by this system."[13]

Tulare County Agricultural Conservation Easement Program

The Tulare County Agricultural Conservation Easement Program (ACEP, see Appendix "A") was established to allow the use of agricultural easements to reduce or mitigate any significant impacts resulting from the conversion of certain agricultural land to non-agricultural uses. Resolution 2016-0323, adopted by the Tulare County Board of Supervisors on May 3, 2016, requires the use of farmland conservation easements or other farmland conservation mechanisms for projects requiring County discretionary land use entitlements and the conversion of five (5) or more acres of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to non-agricultural uses.

[11] Tulare County General Plan 2030 Update Background Report. Page 3-6.

[12] Ibid. 3-13.

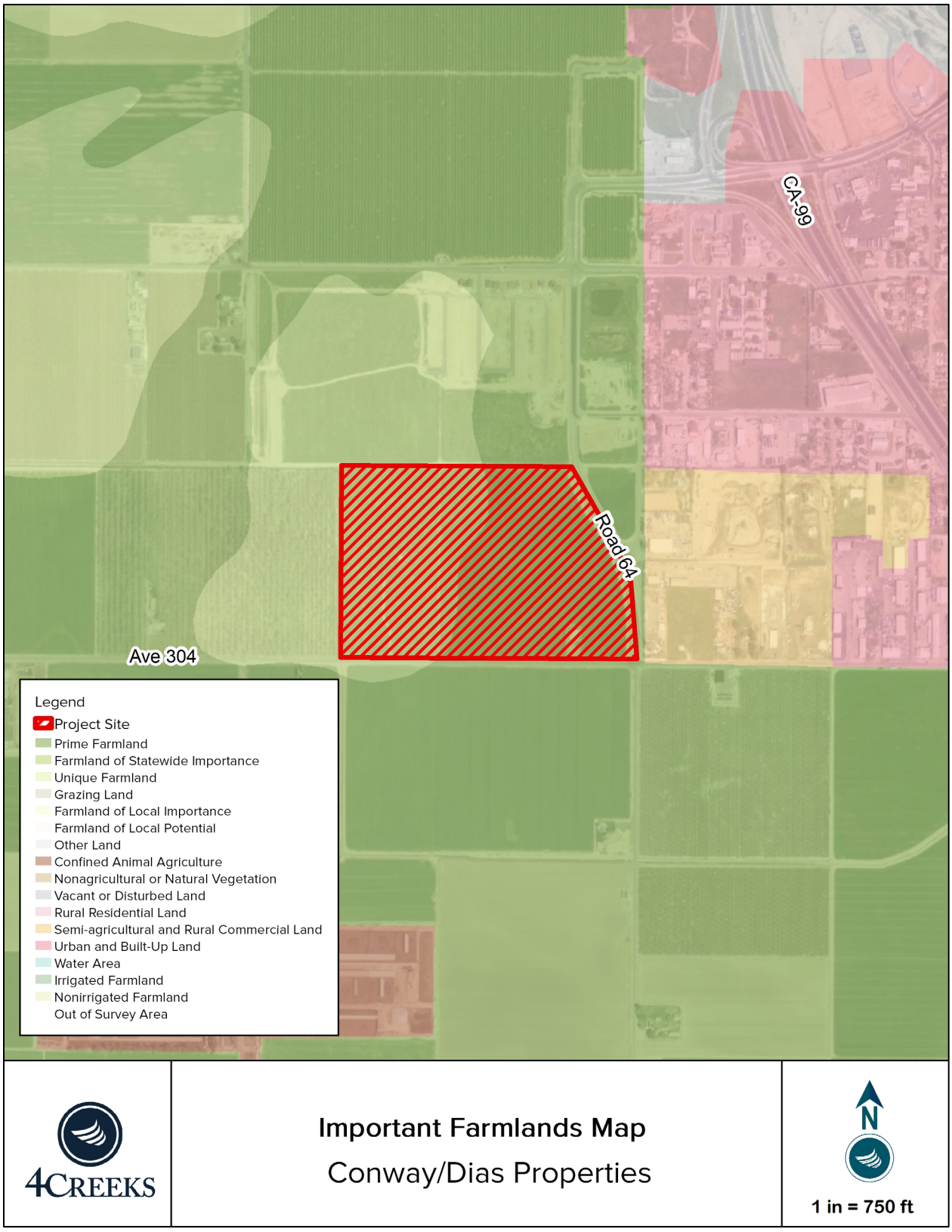
[13] Op. Cit. 3-14.

“CRITERIA FOR AN EASEMENT: A "Farmland conservation easement" means for the purposes of this ACEP, an easement over agricultural land for the purpose of restricting its use for the term set forth in this resolution for primarily agricultural and agricultural-compatible uses. Any easement offered or used under this program shall, at a minimum, meet these criteria:

A) Preferably the easement will be located in Tulare County but other suitable land may be encumbered subject to approval by the Board of Supervisors.
B) The easement will include Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency.
C) The land placed under the easement must be of substantially the same quality, have or could acquire access to water, and could otherwise be feasibly cultivated.
D) The and placed under the easement must be at a minimum of a one to one (1:1) ratio or its functional equivalent to the loss of defined agricultural lands mitigated.” [14]

[14] Tulare County Agricultural Conservation Easement Program. Pages 6 to 7.

Figure 3-3: 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: The proposed Project site is currently occupied by a single-family home surrounded by field crops. Implementation of the proposed Project would result in the permanent conversion of approximately 28 acres of Prime Farmland (PF) and 26 acres of Farmland of Statewide Importance (FSI) to non-agricultural uses.

The loss of PF and FSI on the proposed Project site would result in the decrease of Important Farmland inventory in the Goshen Community and Tulare County. The Goshen Community Plan contains 710 acres of PF and 120 acres of FSI. However, the Goshen Community Plan has zoned all farmland within the UDB for other uses. The growth, including the proposed Project Site, will be developed in a contiguous way to prevent impacts on the remaining farmland outside of the UDB. The proposed Project is consistent with the Goshen Community Plan Update wherein the proposed Project is located on land zoned as Mixed Use which allows the proposed Project to be developed. The Goshen Community Plan Update has accounted for the eventual transition of agricultural lands into urban-type uses, including residential uses. The site is ideally suited for conversion as it provides a contiguous, practical expansion of urban uses. It is also noted that the Tulare County General Plan 2030 Update Revised EIR (General Plan Revised EIR or Revised EIR) accounted for the conversion of agricultural lands, both Prime and Statewide Importance, in Goshen.[15] As noted in the General Plan Revised EIR, "A primary impact to County agricultural lands includes the loss of productive agricultural lands due to the conversion of important farmlands (i.e., Prime Farmland, Unique Farmland, and Farmland of Statewide Importance) to other uses. Future growth resulting from implementation of the proposed Project would result in both the direct and indirect conversion of additional important farmlands to urban and other non-farming uses. In keeping with the primary objectives of the General Plan 2030 Update, the majority of impacts to important farmlands will occur within the future growth areas (i.e., CACUDBs, HDBs and CACUABs) of the County (see Figure 3-10.3 [in the Revised EIR)."[16][Page 3.10-11]). Also, "County policies will (1) support continued agricultural uses, (2) seek to reduce conflicts between agricultural and urban uses ("right to farm" ordinance); and (3) coordinate regional efforts to preserve farmland within Tulare County. However, while these policies would continue to promote the continued conservation of important farmlands, it would not prevent an overall net loss of important farmlands within the County associated with future development within existing agricultural areas. Therefore, implementation of the General Plan 2030 Update including the adoption of the policies and implementation measures listed above would still result in a significant impact. No additional feasible mitigation is currently available."[17] Lastly, as noted in the Revised EIR, "Outside of the policies included in the General Plan 2030 Update (including the revised Policy AG-1.6 "Conservation Easements", the recommended new Policy AG-1.18 "Farmland Trust and Funding Sources", and the recommended new Agriculture Element Implementation Measure #15), no

[15] Tulare County General Plan 2030 Update Recirculated EIR. Table 3.10-6 Page 3.10-12. Accessed April 2023 at: http://generalplan.co.tulare.ca.us/documents.html then locate "Recirculated Draft Environmental Impact Report February 2010 Draft", select "Recirculated DEIR

[16] Ibid. 3.10-11.

[17] Op. Cit. 3.10-15.

additional feasible mitigation measures are currently available to reduce this impact to a less than significant level. Consequently, this impact is considered significant and unavoidable."[18]

At full buildout, the Tulare County General Plan 2030 Update has accounted for potential development of a total of 59,435 acres of Important Farmland. The proposed Project would account for 54.21 acres, or about 0.00091% of the total amount. The proposed Project would not significantly reduce the amount of Important Farmland in Tulare County, and the County is expecting future growth to reduce Important Farmland. The proposed Project is planned to be adjacent to urbanized areas, which is much 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 on agricultural resources.

Although the proposed Project site is located on Prime Farmland and Farmland of Statewide Importance, the proposed Project will be required to comply with the guidelines set forth in the Goshen Community Plan. Further, the proposed Project will be required to comply with applicable Tulare County General Plan 2030 Update policies to reduce potential impacts. As such, there will be a *less than significant impact.*

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

No Impact: The applicant has decided to discontinue agricultural uses on the site and to pursue an allowed use; i.e., residential development. To that end, the proposed Project would result in the conversion of Prime Farmland, and 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 a non-agricultural use. The proposed Project site is zoned C-2-MU (Community Commercial-Mixed Use) which allows residential uses (among other uses) and is incorporated into the Goshen Community Plan Update to provide an opportunity for residential development where it can be accommodated. Conversion/loss of agricultural lands has been accounted for in the Tulare County General Plan 2030 Update Revised EIR and the Goshen Community Plan Update and accompanying EIR. Therefore, there will be *no 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 proposed Project site is not zoned for forest or timberland production. 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 Public Resource Code or General Code, will occur as a result of the proposed Project and there will be *no impacts*.

[18] Op. Cit. 3.10-19.

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?

No Impact: As discussed above, the proposed Project would be within the existing Goshen Community Plan Urban Development Boundary (Goshen UDB). The proposed Project is adjacent to existing and future developments to the north and east while a areas to the south, and southeast are zoned for future light industrial uses. Areas directly adjacent to the west are zoned as C-2-MU (similar to the proposed Project's zoning); areas southwest of the proposed Project are outside of the Goshen UDB. Areas outside of the UDB would be subject to a Rural Valley Lands Plan evaluation which could conclude that areas outside of the UBD near the proposed Project would not be conducive to development within the Year 2030 Goshen Community Plan planning horizon. Therefore, no other changes to the environment area anticipated that could result in the conversion of farmland to non-farmland. As noted earlier, as the proposed Project is not located in forestland, the proposed Project does not include any features which could result in the conversion of forestland to a non-forest use. Therefore, the proposed Project will result in *no impact.*

Cumulative Impacts:

The overall cumulative impact to agricultural resources has been accounted for in the Tulare County General Plan 2030 Update Revised EIR and the Goshen Community Plan Update and accompanying EIR. As noted in the General Plan Revised EIR, "As noted previously (see Section 3.10, "Agricultural Resources" [in the Revised EIR]), growth associated with implementation of the proposed project along with development within CACUDBs would result in a loss of some existing agricultural lands within the County. While the proposed project includes policies to minimize this impact, there would still be a project level significant and unavoidable impact. The loss of agricultural land within the County as a result of urban development is part of an overall trend within the San Joaquin Valley and the County will continue to face development pressure in the foreseeable future. As more fully described in Section 3.10, "Agricultural Resources" [in the Revised EIR], the proposed project does include several policies stating that the County will work at a regional level to control the conversion of agricultural uses. However, since the County is projected to continue to urbanize, the loss of agricultural lands as a result of the proposed project would contribute considerably to a significant and unavoidable cumulative impact to agricultural resources." This Project is consistent with earlier determinations and does not compound nor contribute to exacerbation of an already determined cumulative impact. As such, the Project is consistent with the Tulare County General Plan 2030 Update EIR as it relates to the agricultural resource.

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?	☐	☐	☑	☐

The discussions regarding Environmental Setting, CEQA requirements, Regulatory Setting, Chapter 3.3 Air Quality, Chapters 4 through 9, Appendices "A" through "I", etc., contained in the Goshen Community Plan Update and Environmental Impact Report are incorporated herein in their entirety. Where necessary and if available, additional site-specific facts, data, information, etc., are included in this discussion.

Environmental Setting

Air pollution is 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. These mountain ranges restrict air movement and prevent the dispersal of pollution. As a result, the SJVAB, which contains eight counties and an area of more than 25,000 square miles, is highly susceptible to pollution accumulation over time.

Ambient Air Quality Standards

Both the federal government (through the United State Environmental Protection Agency (EPA)) and the State of California (through the California Air Resources Board (CARB or ARB)) have established health-based ambient air quality standards (AAQS) for six air pollutants, commonly referred to as "criteria pollutants." The six criteria pollutants are: carbon monoxide (CO), ozone (O3), sulfur dioxide (SO2), nitrogen dioxide (NO2), particulate matter (PM10 and PM2.5), and lead (Pb).

Criteria Air Pollutants

The following criteria air pollutants were assessed in the Technical Memo (included in Attachment "A" of this document): reactive organic gases (ROG), oxides of nitrogen (NOx), carbon monoxide (CO), sulfur dioxide (SO_2), particulate matter less than 10 microns in diameter (PM_{10}), and particulate matter less than 2.5 microns in diameter ($PM_{2.5}$). Note that the proposed Project would emit ozone precursors ROG and NOx. However, the proposed project would not directly emit ozone since it is formed in the atmosphere during the photochemical reaction of ozone

precursors. General descriptions and most relevant effects from pollutant exposure of the criteria pollutants of concern are listed in **Table 3-1**.

Table 3-1
Descriptions of Criteria Pollutants of Concern[19]

Criteria Pollutant	Physical Description and Properties	Sources	Most Relevant Effects from Pollutant Exposure
Ozone	Ozone is a photochemical pollutant as it is not emitted directly into the atmosphere, but is formed by a complex series of chemical reactions between volatile organic compounds (VOC), nitrous oxides (NO_X), and sunlight. Ozone is a regional pollutant that is generated over a large area and is transported and spread by the wind.	Ozone is a secondary pollutant; thus, it is not emitted directly into the lower level of the atmosphere. The primary sources of ozone precursors (VOC and NO_X) are mobile sources (on-road and off-road vehicle exhaust).	Irritate respiratory system; reduce lung function; breathing pattern changes; reduction of breathing capacity; inflame and damage cells that line the lungs; make lungs more susceptible to infection; aggravate asthma; aggravate other chronic lung diseases; cause permanent lung damage; some immunological changes; increased mortality risk; vegetation and property damage.
Particulate matter (PM_{10}) Particulate matter ($PM_{2.5}$)	Suspended particulate matter is a mixture of small particles that consist of dry solid fragments, droplets of water, or solid cores with liquid coatings. The particles vary in shape, size, and composition. PM_{10} refers to particulate matter that is between 2.5 and 10 microns in diameter, (one micron is one-millionth of a meter). $PM_{2.5}$ refers to particulate matter that is 2.5 microns or less in diameter, about one-thirtieth the size of the average human hair.	Stationary sources include fuel or wood combustion for electrical utilities, residential space heating, and industrial processes; construction and demolition; metals, minerals, and petrochemicals; wood products processing; mills and elevators used in agriculture; erosion from tilled lands; waste disposal, and recycling. Mobile or transportation related sources are from vehicle exhaust and road dust. Secondary particles form from reactions in the atmosphere.	• Short-term exposure (hours/days): irritation of the eyes, nose, throat; coughing; phlegm; chest tightness; shortness of breath; aggravate existing lung disease, causing asthma attacks and acute bronchitis; those with heart disease can suffer heart attacks and arrhythmias. • Long-term exposure: reduced lung function; chronic bronchitis; changes in lung morphology; death.
Nitrogen dioxide (NO_2)	During combustion of fossil fuels, oxygen reacts with nitrogen to produce nitrogen oxides— NO_X (NO, NO_2, NO_3, N_2O, N_2O_3, N_2O_4, and N_2O_5). NO_X is a precursor to ozone, PM_{10}, and $PM_{2.5}$ formation. NO_X can react with compounds to form nitric acid and related small particles and result in particulate matter (PM) related health effects.	NO_X is produced in motor vehicle internal combustion engines and fossil fuel-fired electric utility and industrial boilers. Nitrogen dioxide forms quickly from NO_X emissions. NO_2 concentrations near major roads can be 30 to 100 percent higher than those at monitoring stations.	Potential to aggravate chronic respiratory disease and respiratory symptoms in sensitive groups; risk to public health implied by pulmonary and extra-pulmonary biochemical and cellular changes and pulmonary structural changes; contributions to atmospheric discoloration; increased visits to hospital for respiratory illnesses.

[19] U.S. Environmental Protection Agency (EPA). Criteria Air Pollutants. Accessed April 2023 at: https://www.epa.gov/criteria-air-pollutants.

Carbon monoxide (CO)	CO is a colorless, odorless, toxic gas. CO is somewhat soluble in water; therefore, rainfall and fog can suppress CO conditions. CO enters the body through the lungs, dissolves in the blood, replaces oxygen as an attachment to hemoglobin, and reduces available oxygen in the blood.	CO is produced by incomplete combustion of carbon-containing fuels (e.g., gasoline, diesel fuel, and biomass). Sources include motor vehicle exhaust, industrial processes (metals processing and chemical manufacturing), residential wood burning, and natural sources.	Ranges depending on exposure: slight headaches; nausea; aggravation of angina pectoris (chest pain) and other aspects of coronary heart disease; decreased exercise tolerance in persons with peripheral vascular disease and lung disease; impairment of central nervous system functions; possible increased risk to fetuses; death.
Sulfur dioxide (SO_2)	Sulfur dioxide is a colorless, pungent gas. At levels greater than 0.5 parts per million (ppm), the gas has a strong odor, similar to rotten eggs. Sulfur oxides (SO_X) include sulfur dioxide and sulfur trioxide. Sulfuric acid is formed from sulfur dioxide, which can lead to acid deposition and can harm natural resources and materials. Although sulfur dioxide concentrations have been reduced to levels well below state and federal standards, further reductions are desirable because sulfur dioxide is a precursor to sulfate and PM_{10}.	Human caused sources include fossil-fuel combustion, mineral ore processing, and chemical manufacturing. Volcanic emissions are a natural source of sulfur dioxide. The gas can also be produced in the air by dimethyl sulfide and hydrogen sulfide. Sulfur dioxide is removed from the air by dissolution in water, chemical reactions, and transfer to soils and ice caps. The sulfur dioxide levels in the State are well below the maximum standards.	Bronchoconstriction accompanied by symptoms which may include wheezing, shortness of breath and chest tightness, during exercise or physical activity in persons with asthma. Some population-based studies indicate that the mortality and morbidity effects associated with fine particles show a similar association with ambient sulfur dioxide levels. It is not clear whether the two pollutants act synergistically or one pollutant alone is the predominant factor.

Attainment Status

Air basins are designated as attainment or nonattainment for both federal and state AAQS. Attainment is achieved when monitored ambient air quality data is in compliance with the standards for a specified pollutant. Non-compliance with an established standard will result in a nonattainment designation and an unclassified designation indicates insufficient data is available to determine compliance for that pollutant.

As shown in **Table 3-2**, the SJVAB is considered to be in attainment for federal and state air quality standards for carbon monoxide (CO), nitrogen dioxide (NO2), sulfur dioxide (SO2); attainment for federal and non-attainment for state air quality standards for respirable particulate matter (PM10); and non-attainment of state and federal air quality standards for ozone (O3) and fine particulate matter (PM2.5). The primary pollutants of concern in the San Joaquin Valley are ozone and PM10.

Table 3-2. San Joaquin Valley Attainment Status

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.

Source: SJVAPCD, Ambient Air Quality Standards & Valley Attainment Status, https://www.valleyair.org/aqinfo/attainment.htm

Toxic Air Contaminants

A TAC is defined as an air pollutant that may cause or contribute to an increase in mortality or serious illness, or that may pose a hazard to human health. TACs are usually present in minute quantities in the ambient air; however, their high toxicity or health risk may pose a threat to public health even at low concentrations.

The California Almanac of Emissions and Air Quality—2009 Edition presents the relevant concentration and cancer risk data for the ten TACs that pose the most substantial health risk in California based on available data. The ten TACs are acetaldehyde, benzene, 1.3-butadiene, carbon tetrachloride, hexavalent chromium, para-dichlorobenzene, formaldehyde, methylene chloride, perchloroethylene, and diesel particulate matter (DPM).

Some studies indicate that DPM poses the greatest health risk among the TACs listed above. A 10-year research program demonstrated that DPM from diesel-fueled engines is a human carcinogen and that chronic (long-term) inhalation exposure to DPM poses a chronic health risk. In addition to increasing the risk of lung cancer, exposure to diesel exhaust can have other health effects. Diesel exhaust can irritate

the eyes, nose, throat, and lungs, and it can cause coughs, headaches, lightheadedness, and nausea. Diesel exhaust is a major source of fine particulate pollution as well, and studies have linked elevated particle levels in the air to increased hospital admissions, emergency room visits, asthma attacks, and premature deaths among those suffering from respiratory problems.

Valley Fever

Valley Fever is an illness caused by a fungus (*Coccidioides immitis* and *C. posadasii*) that grows in soils under certain conditions. 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 Fresno, Kern, and Kings counties. 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.

Asbestos

Asbestos is the name given to a number of naturally occurring fibrous silicate minerals that have been mined for their useful properties such as thermal insulation, chemical and thermal stability, and high tensile strength. The three most common types of asbestos are chrysotile, amosite, and crocidolite. Chrysotile, also known as white asbestos, is the most common type of asbestos found in buildings.

Chrysotile makes up approximately 90 to 95 percent of all asbestos contained in buildings in the United States. Exposure to asbestos is a health threat; exposure to asbestos fibers may result in health issues such as lung cancer, mesothelioma (a rare cancer of the thin membranes lining the lungs, chest, and abdominal cavity), and asbestosis (a non-cancerous lung disease that causes scarring of the lungs). Exposure to asbestos can occur during demolition or remodeling of buildings that were constructed prior to the 1977 ban on asbestos for use in buildings. Exposure to naturally occurring asbestos can occur during soil-disturbing activities in areas with deposits present.

Regulatory Setting

Federal

Federal Clean Air Act

"The Federal Clean Air Act (CAA), adopted in 1970 and amended twice thereafter (including the 1990 amendments), establishes the framework for modern air pollution control. The act directs the Environmental Protection Agency (EPA) to establish ambient air standards, the National Ambient Air Quality Standards (NAAQS)… for six pollutants: ozone, carbon monoxide, lead, nitrogen dioxide, particulate matter (less than 10 microns in diameter [PM_{10}] and less than 2.5 microns in diameter [$PM_{2.5}$]), and sulfur dioxide. The standards are divided into primary and secondary standards; the former are set to protect human health with an adequate margin of safety and the latter to protect environmental values, such as plant and animal life.

Areas that do not meet the ambient air quality standards are called "non-attainment areas". The Federal CAA requires each state to submit a State Implementation Plan (SIP) for non-attainment areas. The SIP,

which is reviewed and approved by the EPA, must demonstrate how the federal standards will be achieved. Failing to submit a plan or secure approval could lead to the denial of federal funding and permits for such improvements as highway construction and sewage treatment plants. For cases in which the SIP is submitted by the State but fails to demonstrate achievement of the standards, the EPA is directed to prepare a federal implementation plan or EPA can "bump up" the air basin in question to a classification with a later attainment date that allows time for additional reductions needed to demonstrate attainment, as is the case for the San Joaquin Valley.

SIPs are not single documents. They are a compilation of new and previously submitted plans, programs (such as monitoring, modeling, permitting, etc.), district rules, state regulations and federal controls. The California SIP relies on the same core set of control strategies, including emission standards for cars and heavy trucks, fuel regulations and limits on emissions from consumer products. California State law makes the California Air Resources Board (CARB) the lead agency for all purposes related to the SIP. Local Air Districts and other agencies, such as the Bureau of Automotive Repair and the Department of Pesticide Regulation, prepare SIP elements and submit them to CARB for review and approval. The CARB forwards SIP revisions to the EPA for approval and publication in the Federal Register."[20]

The Federal CAA classifies nonattainment areas based on the severity of the nonattainment problem, with marginal, moderate, serious, severe, and extreme nonattainment classifications for ozone. Nonattainment classifications for PM range from marginal to serious. The Federal CAA requires areas with air quality violating the NAAQS to prepare an air quality control plan referred to as the State Implementation Plan (SIP). The SIP contains the strategies and control measures that states will use to attain the NAAQS. The Federal CAA amendments of 1990 require states containing areas that violate the NAAQS to revise their SIP to incorporate additional control measures to reduce air pollution. The SIP is periodically modified to reflect the latest emissions inventories, planning documents, rules, and regulations of Air Basins as reported by the agencies with jurisdiction over them. The EPA reviews SIPs to determine if they conform to the mandates of the Federal CAA amendments and will achieve air quality goals when implemented. If the EPA determines a SIP to be inadequate, it may prepare a Federal Implementation Plan (FIP) for the nonattainment area and impose additional control measures.

State

California Clean Air Act

"The California CAA of 1988 establishes an air quality management process that generally parallels the federal process. The California CAA, however, focuses on attainment of the State ambient air quality standards (see Table 3.3-1 [of the General Plan RDEIR]), which, for certain pollutants and averaging periods, are more stringent than the comparable federal standards. Responsibility for meeting California's standards is addressed by the CARB and local air pollution control districts (such as the eight county SJVAPCD, which administers air quality regulations for Tulare County). Compliance strategies are presented in district-level air quality attainment plans.

The California CAA requires that Air Districts prepare an air quality attainment plan if the district violates State air quality standards for criteria pollutants including carbon monoxide, sulfur dioxide, nitrogen dioxide, PM2.5, or ozone. Locally prepared attainment plans are not required for areas that violate the State PM10 standards. The California CAA requires that the State air quality standards be met as

[20] Tulare County General Plan 2030 Update REIR. Pages 3.3-1 to 3.3-2.

expeditiously as practicable but does not set precise attainment deadlines. Instead, the act established increasingly stringent requirements for areas that will require more time to achieve the standards."

"The air quality attainment plan requirements established by the California CAA are based on the severity of air pollution caused by locally generated emissions. Upwind air pollution control districts are required to establish and implement emission control programs commensurate with the extent of pollutant transport to downwind districts."

California Air Resources Board

California Air Resources Board (CARB) coordinates and oversees both state and federal air pollution control programs in California. As part of this responsibility, CARB monitors existing air quality, establishes California Ambient Air Quality Standards (CAAQS), 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 CARB is responsible for establishing and reviewing the State ambient air quality standards, compiling the California State Implementation Plan (SIP) and securing approval of that plan from the U.S. EPA. As noted previously, federal clean air laws require areas with unhealthy levels of ozone, inhalable particulate matter, carbon monoxide, nitrogen dioxide, and sulfur dioxide to develop SIPs. SIPs are comprehensive plans that describe how an area will attain NAAQS. The 1990 amendments to the Federal CAA set deadlines for attainment based on the severity of an area's air pollution problem. State law makes CARB the lead agency for all purposes related to the SIP. The California SIP is periodically modified by the CARB to reflect the latest emission inventories, planning documents, and rules and regulations of various air basins. The CARB produces a major part of the SIP for pollution sources that are statewide in scope; however, it relies on the local Air Districts to provide emissions inventory data and additional strategies for sources under their jurisdiction. The SIP consists of the emission standards for vehicular sources and consumer products set by the CARB, and attainment plans adopted by the local air agencies as approved by CARB. The EPA reviews the air quality SIPs to verify conformity with CAA mandates and to ensure that they will achieve air quality goals when implemented. If EPA determines that a SIP is inadequate, it may prepare a Federal Implementation Plan for the nonattainment area, and may impose additional control measures.

In addition to preparation of the SIP, the CARB also regulates mobile emission sources in California, such as construction equipment, trucks, automobiles, and oversees the activities of air quality management districts and air pollution control districts, which are organized at the county or regional level. The local or regional Air Districts are primarily responsible for regulating stationary emission sources at industrial and commercial facilities within their jurisdiction and for preparing the air quality plans that are required under the Federal CAA and California CAA."

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" (GAMAQI). 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.

Table 3-3. 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/m^3)	Ultraviolet Photometry	--	Same as Primary Standard	Ultraviolet 8-Hour Photometry
	8 Hour	0.070 ppm (137 µg/m^3)		0.070 ppm (137 µg/m^3)		
Respirable Particulate Matter (PM_{10})	24 Hour	50 µg/m	Gravimetric or Beta Attenuation	150 µg/m^3	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/m^3	Same as Primary Standard	Inertial Separation and Gravimetric Annual Analysis
	Annual Arithmetic Mean	12 µg/m^3		15 µg/m^3		
Carbon Monoxide (CO)	1 Hour	20 ppm (23 mg/m^3)	Non-Dispersive Infrared Photometry (NDIR)	35 ppm (40 mg/m^3)	--	Non-Dispersive Infrared Photometry (NDIR)
	8 Hour	9 ppm (10 mg/m^3)		9 ppm (10 mg/m^3)	--	
	8 Hour (Lake Tahoe)	6 ppm (7 mg/m^3)		--	--	
Nitrogen Dioxide (NO_2) [8]	1 Hour	0.18 ppm (339 µg/m^3)	Gas Phase Chemiluminescence	100 ppb (188 µg/m^3)	--	Gas Phase Annual Chemiluminescence
	Arithmetic Mean	0.030 ppm (57 µg/m^3)		53 ppb (100 µg/m^3)	Same as Primary Standard	
Sulfur Dioxide	1 Hour	0.25 ppm (655 µg/m^3)	Ultraviolet Fluorescence	75 ppb (196 µg/m^3)	--	Ultraviolet Fluorescence; Spectrophotometry (Pararosaniline Method)
	3 Hour	--		--	0.5 ppm (1300 µg/m^3)	
	24 Hour	0.04 ppm (105 µg/m^3)		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/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	(26 µg/m^3)	Gas Chromatography			

1. California standards for ozone, carbon monoxide (except 8-hour Lake Tahoe), sulfur dioxide (1 and 24 hours), 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 is 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 torrs. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torrs; 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 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: SJVAPCD, Ambient Air Quality Standards, https://www.valleyair.org/aqinfo/attainment.htm

Regional

San Joaquin Valley Air Pollution Control District (SJVAPCD)

The proposed Project is located within the jurisdiction of the San Joaquin Valley Air Pollution Control District (SJVAPCD). The SJVAPCD is responsible for enforcing air quality standards in the project area. The SJVAPCD is the agency charged with preparing, adopting, and implementing mobile, stationary, and area air emission control measures and standards. The SJVAPCD has several rules and regulations that may apply to the proposed Project, including but not limited to the following:

- **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 applies to all sources of hazardous air pollution and requires developers to comply with federal requirements for handling and usage of hazardous air pollutants (HAPs) to protect the health and safety of the public from HAPs such as asbestos.
- **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.** This rule applies to any source of air contaminants and prohibits any activity which creates a public nuisance.
- **Rule 4601: Architectural Coatings.** This rule specifies requirements for the storage, cleanup, and labeling of architectural coatings.
- **Rule 4641: Cutback, Slow Cure and Emulsified 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 of PM10 and NOX emissions from growth on the SJVAB. This rule places application and emission reduction requirements on relevant development projects to reduce emissions through onsite mitigation, offsite SJVAPCD administered projects or a combination of the two. As the proposed Project exceeds the applicability threshold of 50 dwelling units, the applicant will submit an Air Impact Assessment (AIA) application following 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.

To meet state and federal air quality objectives (i.e., attainment with AAQS), and to assist Lead Agencies in evaluating the significance of air quality impacts pursuant to CEQA requirements, the SJVAPCD has adopted thresholds of significance for projects. The SJVAPCD's GAMAQI states, "…the District has established thresholds of significance for criteria pollutant emissions, which are based on District New Source Review (NSR) offset requirements for stationary sources. Stationary sources in the District are subject to some of the toughest regulatory requirements in the nation. Emission reductions achieved through implementation of District offset requirements are a major component of the District's air quality plans. Thus, projects with emissions below the thresholds of significance for criteria pollutants would be determined to 'Not conflict or obstruct implementation of the District's air quality plan'." The Air District's thresholds of significance are provided in **Table 3-4.**

Table 3-4. 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, SJVAPCD Thresholds of Significance for Criteria Pollutants, valleyair.org

Local

County of Tulare

"The County continues to evaluate and consider a variety of Federal, State, and SJVAPCD programs in order to respond to the non-attainment designation for Ozone that the SJVAB has received, and will continue to adopt resolutions to implement these programs. The Tulare County Board of Supervisor resolutions are described below. These resolutions were adopted in 2002 and 2004, respectively."[21]

"**Resolution 2002-0157**. Resolution 2002-0157, as adopted on March 5, 2002, requires the County to commit to implementing the Reasonably Available Control Measures included in the Resolution. The following Reasonably Available Control Measures were included in the resolution:

- Increasing transit service to the unincorporated communities of Woodville, Poplar and Cotton Center;
- Purchase of three new buses and installation of additional bicycle racks on buses;
- Public outreach to encourage the use of alternative modes of transportation;
- Providing preferential parking for carpools and vanpools;
- Removing on-street parking and providing bus pullouts in curbs to improve traffic flow;
- Supporting the purchase of hybrid vehicles for the County fleet;
- Mandating that the General Plan 2030 Update implement land use policies supporting public transit and vehicle trip reduction; and
- Programming $13,264,000 of highway widening projects."[22]

"**Resolution 2004-0067.** As part of a follow up effort to Resolution 2002-0157 and to address the federal reclassification to Extreme non-attainment for ozone, the County Board of Supervisors adopted Resolution 2004-067. The resolution contains additional Reasonably Available Control Measures as summarized below:

[21] Ibid. Tulare County General Plan 2030 Update. RDEIR. Pages 3.3-15 to 3.3-16.

[22] Ibid. 3.3-13.

- Encouraging land use patterns which support public transit and alternative modes of transportation;
- Exploring concepts of Livable Communities as they address housing incentives and transportation;
- Consideration of incentives to encourage developments in unincorporated communities that are sensitive to air quality concerns; and
- Exploring ways to enhance van/carpool incentives, alternative work schedules, and other Transportation Demand Management strategies."[23]

The County continues to evaluate and consider Federal, State, and Air District programs in order to respond to the non-attainment designation for state PM10 standards that the SJVAB has received. "On September 25, 2008, EPA redesignated the San Joaquin Valley to attainment for the PM10 NAAQS and approved the PM10 Maintenance Plan. However, prior to this redesignation, Tulare County Board of Supervisors adopted the following resolution (Resolution 2002-0812) on October 29, 2002. Although now designated in attainment of the federal PM10 standard, all requirements included in the SJVAPCD PM10 Plan are still in effect. The resolution contains the following Best Available Control Measures (BACMs) to be implemented in order to reduce PM10 emissions in the County:

- Paving or stabilizing of unpaved roads and alleys;
- Paving, vegetating, chemically stabilizing unpaved access points onto paved roads;
- Curbing, paving, or stabilizing shoulders on paved roads;
- Frequent routine sweeping or cleaning of paved roads;
- Intensive street cleaning requirements for industrial paved roads and streets providing access to industrial/ construction sites; and
- Debris removal after wind and rain runoff when blocking roadways." [24]

Tulare County General Plan 2030 Update

The Tulare County General Plan 2030 Update contains the following goals and policies related to air quality resources that may apply to the proposed Project. Policies in the Goshen Community Plan are adopted from the Tulare County General Plan:

Goal AQ-1: To improve air quality through a regional approach and interagency cooperation.

- *AQ-1.1 Cooperation with Other Agencies.* The County shall cooperate with other local, regional, Federal, and State agencies in developing and implementing air quality plans to achieve State and Federal Ambient Air Quality Standards. The County shall partner with the San Joaquin Valley Air Pollution Control District (SJVAPCD), Tulare County Association of Governments (TCAG), and the California Air Resources Board (CARB) to achieve better air quality conditions locally and regionally.
- *AQ-1.2 Cooperation with Local Jurisdictions.* The County shall participate with cities, surrounding counties, and regional agencies to address cross-jurisdictional transportation and air quality issues.

[23] Op. Cit.
[24] Op. Cit. 3.3-14

- *AQ-1.3 Cumulative Air Quality Impacts.* The County shall require development to be located, designed, and constructed in a manner that would minimize cumulative air quality impacts. Applicants shall be required to propose alternatives as part of the State CEQA process that reduce air emissions and enhance, rather than harm, the environment.
- *AQ-1.4 Air Quality Land Use Compatibility.* The County shall evaluate the compatibility of industrial or other developments which are likely to cause undesirable air pollution with regard to proximity to sensitive land uses, and wind direction and circulation in an effort to alleviate effects upon sensitive receptors.
- *AQ-1.5 California Environmental Quality Act (CEQA) Compliance.* The County shall ensure that air quality impacts identified during the CEQA review process are consistently and reasonable mitigated when feasible.

Goal AQ-2: To improve air quality by reducing air emissions related to transportation.

- *AQ-2.2 Indirect Source Review.* The County shall require major development projects, as defined by the SJVAPCD, to reasonably mitigate air quality impacts associated with the project. The County shall notify developers of SJVAPCD Rule 9510 – Indirect Source Review requirements and work with SJVAPCD to determine mitigations, as feasible, that may include, but are not limited to the following:
    1. Providing bicycle access and parking facilities
    2. Increasing density
    3. Encouraging mixed-use developments
    4. Providing walkable and pedestrian-oriented neighborhoods
    5. Providing increased access to public transportation
    6. Providing preferential parking for high-occupancy vehicles, carpools, or alternative fuels vehicles
    7. Establishing telecommuting programs or satellite work centers

Goal AQ-3: To improve air quality and minimize impacts on human health and the economy of the County through smart land use planning and design.

- *AQ-3.2 Infill Near Employment.* The County shall identify opportunities for infill development projects near employment areas within all unincorporated communities and hamlets to reduce vehicle trips.
- *AQ-3.3 Street Design.* The County shall promote street design that provides an environment which encourages transit use, biking, and pedestrian movements.
- *AQ-3.4 Landscape.* The County shall encourage the use of ecologically based landscape design principles that can improve local air quality by absorbing CO2, producing oxygen, providing shade that reduces energy required for cooling, and filtering particulates. These principles include, but are not limited to, the incorporation of parks, landscaped medians, and landscaping within development.
- *AQ-3.5 Alternative Energy.* Design The County shall encourage all new development, including rehabilitation, renovation, and redevelopment, to incorporate energy conservation and green

building practices to maximum extent feasible. Such practices include, but are not limited to: building orientation and shading, landscaping, and the use of active and passive solar heating and water systems.

Goal AQ-4: To implement the best available controls and monitoring necessary to regulate air emissions.

- *AQ-4.2 Dust Suppression Measures.* The County shall require developers to implement dust suppression measures during excavation, grading, and site preparation activities consistent with SJVAPCD Regulation VIII – Fugitive Dust Prohibitions. Techniques may include, but are not limited to, the following:
    1. Site watering or application of dust suppressants
    2. Phasing or extension of grading operations
    3. Covering of stockpiles
    4. Suspension of grading activities during high wind periods (typically winds greater than twenty-five miles per hour)
    5. Revegetation of graded areas.
- *AQ-4.3 Paving or Treatment of Roadways for Reduced Air Emissions.* The County shall require that all new roads be paved or treated to reduce dust generation where feasible as required by SJVAPCD Regulation VIII, Rule 8061- Paved and Unpaved Roads. For new projects with unpaved roads, funding for roadway maintenance shall be adequately addressed and secured.
- *AQ-4.4 Wood Burning Devices.* The County shall require the use of natural gas where service is available or the installation of low-emission, EPA-certified fireplace inserts in all open-hearth fireplaces in new homes as required under the SJVAPCD Rule 4901– Woodburning Fireplaces and Woodburning Heaters. The County shall promote the use of natural gas over wood products in space heating devices and fireplaces in all existing and new homes.

Goshen Community Plan

The Goshen Community Plan Update and Environmental Impact Report serve as a general guide for both public and private decisions affecting the Community of Goshen, and guides the location, density, and type of growth in Goshen.[25,26] The Community Plan attempts to reduce air quality impacts by promoting infill development and development next to State Route 99 and development to reduce leapfrogging development.[27] This can reduce vehicle miles traveled (VMT), which can reduce air pollution.

Discussion

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

[25] Goshen Community Plan Update. Available online at: http://generalplan.co.tulare.ca.us/documents/GP/001Adopted%20Tulare%20County%20General%20Plan%20Materials/120Part%20III%20Community%20Plans%201%20of%207/005Goshen/GPA%2014-001%20GOSHEN%20COMMUNITY%20PLAN.pdf

[26] Goshen Community Plan Update EIR and associated documents can be found online at https://tularecounty.ca.gov/rma/index.cfm/projects/planning-projects/environmental-documents/goshen-community-plan-update/.

[27] Goshen Community Plan Update. Planning Framework – Tulare County 2030 General Plan Implementation. Page 97.

No Impact: The proposed project is located within the boundaries of the San Joaquin Valley Air Pollution Control District (SJVAPCD) and would result in air pollutant emissions that are regulated by the air district during both its construction and operational phases. The SJVAPCD is responsible for bringing air quality in the Visalia Planning Area into compliance with federal and state air quality standards. The Air District has Particulate Matter (PM) plans, Ozone Plans, and Carbon Monoxide Plans that serve as the clean air plan for the basin.

Together, these plans quantify the required emission reductions to meet federal and state air quality standards and provide strategies to meet these standards. The SJVAPCD adopted the Indirect Source Review (ISR) Rule to fulfill the District's emission reduction commitments in its PM10 and Ozone (NOx) attainment plans and has since determined that implementation and compliance with ISR would reduce the cumulative PM10 and NOx impacts anticipated in the air quality plans to a less than significant level.

Construction Phase. Project construction would generate pollutant emissions from the following construction activities: demolition, site preparation, grading, building construction, application of architectural coatings, and paving. The construction-related emissions from these activities were calculated using CalEEMod. The full CalEEMod Report can be found in Appendix A. As shown in Table 3-5 below, project construction-related emissions do not exceed the thresholds established by the SJVAPCD.

Table 3-5. Projected Project Construction Emissions Compared to SJVAPCD Thresholds of Significance for Criteria Pollutants related to Construction (tons per year)

Phase	Year	ROG (tpy)	NOx (tpy)	CO (tpy)	SO2 (tpy)	PM10 Total (tpy)	PM2.5 Total (tpy)
1	2024	0.2525	2.2969	2.4928	4.8500E-03	0.2449	0.1498
	2025	1.9655	1.2293	1.6515	3.0300E-03	0.8630	0.0573
2	2025	0.2002	1.8162	2.1495	4.1000E-03	0.1937	0.1183
	2026	1.1999	0.7515	1.0193	1.7900E-03	0.0455	0.0335
3	2025	0.0758	0.7128	0.7106	1.5300E-03	0.1276	0.0698
	2026	0.1876	1.6731	2.1750	3.8800E-03	0.0092	0.0732
	2027	1.1188	0.1809	0.2760	4.6000E-04	0.0112	0.0084
4	2026	0.1389	1.2767	1.4429	2.8400E-03	0.1610	0.0945
	2027	1.2259	1.2893	1.7147	3.0300E-03	0.0770	0.0570
Totals							
Construction 2024		0.2525	2.2969	2.4928	0.0049	0.2449	0.1498
Construction 2025		2.2415	3.7583	4.5116	0.0087	1.1843	0.2454
Construction 2026		1.5264	3.7013	4.6372	0.0085	0.2157	0.2012
Construction 2027		2.3447	1.4702	1.9907	0.0035	0.0882	0.0654
Maximum Construction Emissions		***2.3447***	***3.7583***	***4.6372***	***0.0087***	***0.2449***	***0.2454***
SJVAPCD Air Quality Thresholds of Significance		10	100	27	15	15	15

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

Operational Phase. Implementation of the proposed project would result in long-term emissions associated with area sources, such as natural gas consumption, landscaping, applications of architectural coatings, and consumer products, as well as mobile emissions. Operational emissions from these factors were calculated using CalEEMod. The full CalEEMod report can be found in Appendix A. As shown in Table 3-6 below, the project's operational emissions do not exceed the thresholds established by the SJVAPCD.

Table 3-6. Projected Project Operational Emissions Compared to SJVAPCD Thresholds of Significance for Criteria Pollutants related to Operations (tons per year)

Phase	Year	ROG (tpy)	NOx (tpy)	CO (tpy)	SO2 (tpy)	PM10 Total (tpy)	PM2.5 Total (tpy)
1	2025	1.2851	0.6571	4.0742	9.4800E-03	0.9690	0.2731
2	2026	0.7717	0.3806	2.3813	5.6300E-03	0.5921	0.1667
3	2027	0.7485	0.3600	2.2497	5.4000E-03	0.5843	0.1645
4	2028	0.7369	0.3544	2.2151	5.3100E-03	0.5753	0.1619
Total Annual Operational Emissions		***3.5422***	***1.7521***	***10.9203***	***0.0258***	***2.7207***	***0.7662***
SJVAPCD Air Quality Thresholds of Significance		10	100	27	15	15	15

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

As emissions from both construction- and operation-related activities of the proposed Project would be below the thresholds of significance established by the SJVAPCD, the project would not conflict with or obstruct implementation of an applicable air quality plan; as such, there will be *no impact.*

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: The SJVAPCD is responsible for bringing air quality in Goshen into compliance with federal and state air quality standards. The significance thresholds and rules developed by the SJVAPCD are designed to prevent projects from violating air quality standards or significantly contributing to existing air quality violations. As discussed above, neither construction-related emissions nor operation-related emissions will exceed thresholds established by the SJVAPCD. The project will comply with all applicable SJVAPCD rules and regulations, which will further reduce the potential for any significant impacts related to air quality because of project implementation. Because these thresholds and regulations are designed to achieve and/or maintain federal and state air quality standards, and the project is compliant with these thresholds and regulations, the project will not violate an air quality standard or significantly contribute to an existing air quality violation. The impact will be *less than significant.*

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

Less than Significant Impact: Sensitive receptors are facilities that house or attract children, the elderly, people with illness, or others sensitive to air pollutants. The nearest sensitive receptor is the

Goshen Elementary School approximately 0.25 miles north of the proposed Project Site. To determine if the Project could create negative health effects, the project's emissions will be compared to the Air Districts' Ambient Air Quality Analysis (AAQA) screening thresholds. The AAQA's thresholds are 100 pounds per day (ppd) of any pollutant. As shown in Table 3-7, the Project's construction nor operation will not significantly impact sensitive receptors. The Project's pounds per day were converted from tons per year in Tables 3-5 and 3-6.

Table 3-7. Projected Emissions Compared to AAQA Thresholds of Significance for Criteria Pollutants Related to the Health of Surrounding Sensitive Receptors (pounds per day).

	CO (ppd)	ROG (ppd)	SOx (ppd)*	Nox (ppd)	PM10 (ppd)	PM2.5 (ppd)
Construction Emissions	**74.71**	**34.88**	**0.14**	**61.52**	**9.50**	**3.63**
Operational Emissions	**59.83**	**19.41**	**0.14**	**9.60**	**14.91**	**4.20**
AAQA Threshold	**100**	**100**	**100**	**100**	**100**	**100**
*Threshold established by SJVAPCD for SOx, however, emissions are reported as SO2 by CalEEMod.						

Source: AAQA Project Daily Emissions Assessment, CalEEMod (v. 2020.4.0) Analysis (Appendix A)

The proposed Project is within the Goshen UDB and is expected to be surrounded by similar uses in the future. However, some existing uses may impact future residents within the project boundary. Table 1-1 of the California Air Resources Board Air Quality and Land Use Handbook (2005) identifies source categories with advisory recommendations for distance from sensitive receptors. Of these sources, the ones existing in Goshen are freeways, distribution centers, rail yards, and gasoline dispensing facilities. The Project Site is 2,500 feet from SR-99, 1.8 miles from the large distribution centers, one mile from the nearest rail yard, and 2,000 feet from the nearest gasoline dispensing facility. The project is not within a radius of sources that can affect sensitive receptors. Therefore, existing uses are not expected to result in significant health effects for future residents within the project boundaries and the impact will be *less than significant.*

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

Less Than Significant Impact: The project will create temporary localized odors during project construction. The proposed project will not introduce a conflicting land use (surrounding land is zoned for mixed-use) to the area and will not have any component that would typically emit odors. Since the construction would be short-term, temporary, and in a rural area, it would not be expected to create objectionable odors affecting a substantial number of people. The operation of the Project would not create odors. Therefore, impacts will be *less than significant*.

Cumulative Impact:

The Project is consistent with the Tulare County General Plan 2030 Update. The proposed Project site is within the Goshen UDB and has a designation of C-2-MU which allows residential growth at the site. The Goshen Community Plan Update indicates that of the 1,748 acres of UDB land uses, approximately 209 acres of medium density residential are needed to accommodate Goshen's population growth over time. The proposed Project consists of approximately 55 acres of residential land use which is consistent with the objectives contained in the Goshen Community Plan. As presented in Tables 3-5, 3-6, and 3-7,

proposed Project construction and operational-related activities emissions would not exceed the annual Air District thresholds of significance for ROG, NOx, SOx, CO, PM10, and PM2.5. The proposed Project will not result in exposure of substantial pollutant concentrations or odors to sensitive receptors as the construction-related activities will occur in phases and would be intermittent, short-term, and temporary. Lastly, consultation with the Air District, and implementation of County policies and compliance with applicable Air District rules and regulations (including identification/mitigation of potential health risks where applicable) would reduce potential impacts of the proposed Project. Therefore, less than significant project-specific and cumulative impacts related to this Checklist Item will occur.

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?	☐	☐	☐	☑

The discussions regarding Environmental Setting, CEQA requirements, Regulatory Setting, Chapter 3.4 Biological Resources, Chapters 4 through 9, Appendices “A” through “I”, etc., contained in the Goshen Community Plan Update and Environmental Impact Report are incorporated herein in their entirety. Where necessary and if available, additional site specific facts, data, information, etc., are included in this discussion. Some discussion for this section has been excerpted from the Biological Resource Review (BRR) that was prepared for this proposed Project by qualified expert consultants Live Oak Associates (LOA). As part of the BRR, LOA identified biological resources present or potentially present on the proposed Project site and assessed the significance of project impacts on biological resources per provisions of the California Environmental Quality Act (CEQA), the Federal Clean Water Act (CWA), the state and federal endangered species acts (FESA and CESA; respectively), California Fish and Game Code, and California Water Code. The research Included the California Natural Diversity Database (CNDDB), the United States Fish and Wildlife Service (USFWS) Information for Planning and Consultation (iPaC), and the California

Native Plant Society (CNPS) Online Rare Plant Inventory. The full document can be found in Appendix B of this MND.

Environmental Setting

The Goshen Community Plan Update area is located in the central San Joaquin Valley north, east, and west of the community of Goshen. The valley is bordered by the Sierra Nevada to the east, the Tehachapi Mountains to the south, the California coastal ranges to the west, and the Sacramento-San Joaquin Delta to the north. "Like most of California, the central San Joaquin Valley experiences a Mediterranean climate. Warm dry summers are followed by cool moist winters. Summer temperatures commonly exceed 90 degrees Fahrenheit, and the relative humidity is generally very low. Winter temperatures rarely exceed 70 degrees Fahrenheit, with daytime highs often below 60 degrees Fahrenheit. Annual precipitation in the vicinity of the PPSA is about 11 inches, almost 90% of which falls between the months of November and April. Nearly all precipitation falls in the form of rain."[28]

Like most of California, the San Joaquin Valley has a Mediterranean climate. Warm dry summers are followed by cool moist winters. Summer temperatures commonly exceed 100 degrees Fahrenheit, and the relative humidity is generally very low. Winter temperatures rarely rise much above 70 degrees Fahrenheit, with daytime highs often below 60 degrees Fahrenheit. Annual precipitation within the project site is about 11 inches, almost 85% of which falls between the months of October and March. Nearly all precipitation falls in the form of rain. Stormwater readily infiltrates the soils of and surrounding the project site.

Native plant and animal species once abundant in the region have experienced large reductions in their populations due to conversion of upland, riparian, and aquatic habitats to agricultural and urban uses. Remaining native habitats are particularly valuable to native wildlife species including special status species that still persist in the region.

A Biological Evaluation was conducted by consultants Live Oak Associates, Inc. (LOA) during preparation of the Goshen Community Plan Update Proposed Planning Study Area (PPSA) in August 2014. The Planning Department records search of building permits and other types of entitlements within the PPSA (by RMA staff) indicates that no new projects (i.e., construction-related developments which involves new structures or any clearing or earthmoving) have occurred since the Biological Evaluation (BE) was completed by LOA. As such, the landscape remains as described in the Biological Evaluation with one exception.[29] "In May 2017, Caltrans initiated work on the new SR 99/Betty Drive interchange and overcrossing and removed a stand of eucalyptus trees northeast of SR99/Betty Drive. Although the Biological Evaluation identified this location as suitable for nesting, it does not indicate the presence of special status birds (i.e., Swainson's hawk) in this or any stand within the PPSA. If special status species were found within this particular stand; avoidance, minimization or other form of mitigation would fall under the purview of Caltrans. Regardless of any action(s) which Caltrans may have taken, the stand is no longer present and potential habitat has been permanently removed from this location within the PPSA."[30]

[28] "Goshen Community Plan Update Biological Evaluation Tulare County, California" (BE). Page 5. August 2014. Prepared by Live Oak Associates, Inc. and included in Appendix B of Goshen Community Plan Update EIR. The EIR can be accessed at: https://tularecounty.ca.gov/rma/index.cfm/projects/planning-projects/environmental-documents/goshen-community-plan-update/goshen-community-plan-update-final-eir/final-environmental-impact-report/

[29] County of Tulare. Goshen Community Plan Update. Draft Environmental Impact Report. 3.4 Biological Resources. Page 3.4-21.

[30] Ibid.

"The PPSA is situated within a matrix of agricultural lands, industrial complexes, and residential/commercial development associated with the community of Goshen."[31] "The western block of the PPSA is bordered by orchard to the north; Highway (State Route, SR) 99 and residential, commercial, and industrial areas to the east; and agricultural fields, orchard, and residential areas to the south and west."[32] "The western block of the PPSA is bounded by the Avenue 316 alignment on the north; SR 99, Road 64, and Road 68 on the east; the Avenue 300 alignment on the south; and Road 60 on the west, and comprises approximately 780 acres."[33]

"The principal drainage of the PPSA vicinity is the St. John's River, a distributary channel of the Kaweah River. The St. John's River emerges from the Kaweah River approximately 20 miles east of the PPSA, and flows from east to west approximately 3 miles north of the PPSA before merging with Cottonwood Creek to form Cross Creek. Cross Creek follows a meandering course south and is ultimately constrained to a set of engineered channels before joining the Tule River approximately 18 miles south of the PPSA. The drainages in the vicinity of the PPSA historically contained large areas of riparian, wetland, and aquatic ecosystems that supported a diversity of native plants and animals. Presently, these drainages support only a fraction of the riparian habitat they once supported and the aquatic habitat has been greatly degraded from agricultural runoff and irregular flows. In essence, the drainages have been reduced to a series of distributary channels supplying water to farmland in the region."[34]

LOA prepared the attached BRR which is more site-specific than the biological study (evaluation) prepared for the Goshen Community Plan EIR. In summary, the BRR states "Two land uses were identified on the project site during the site survey: agriculture and ruderal/developed. The site consisted of an active corn field with a private farm residence on the eastern parcel, and an inactive walnut orchard on the western parcel. The site has the potential to support one special status animal.

Proposed site development will result in impact to some biotic resources of the site. Potentially significant effects include: (1) disturbance of active raptor and other migratory bird nests; and (2) potential construction related injury or mortality to Swainson's hawks.

The project can potentially avoid all significant effects to biotic resources of the site. This can be accomplished by implementing the following measures: (1) timing the project to avoid the general avian nesting season; (2) conduct pre-construction surveys for active raptor and migratory bird nests during the nesting season (including protocol surveys for Swainson's hawk); and (3) avoid such nests during the nesting season with appropriate buffers for each species, as determined by a qualified biologist."[35]

[31] *"Goshen Community Plan Update Biological Evaluation Tulare County, California"* (BE). Page 5. August 2014. Prepared by Live Oak Associates, Inc. and included in Appendix "B" of Goshen Community Plan Update EIR.

[32] Ibid. 6.

[33] Op. Cit. 1.

[34] Op. Cit. 5.

[35] BIOLOGICAL EVALUATION CONWAY & DIAS RESIDENTIAL SUBDIVISION PROJECT GOSHEN, TULARE COUNTY, CA. January 18, 2023. Page ii. Prepared by Live Oak Associates, Inc. and included in Appendix "B" of this MND.

Regulatory Setting

Federal

Federal Endangered Species Act (FESA)

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 actually 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, 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.

State

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 pursuant to Section 2080 of CESA is required from the CDFG.

Local

County of Tulare Oak Tree Ordinance

The County of Tulare has an oak tree ordinance that protects valley oak trees with a diameter at breast height (dbh) of two inches or greater. Under this ordinance, removal, or encroachment within the dripline of or damage to valley oak trees is prohibited. Removal requires a permit from the city manager and mitigation either by replacement in-kind or payment of an in-lieu fee to be used for oak tree planting.

Tulare County General Plan 2030 Update Policies

The following Tulare County General Plan 2030 Update Environmental Resources Management Element policies for this resource may apply to the proposed Project: *ERM-1.1 Protection of Rare and Endangered Species* - wherein the County shall ensure the protection of environmentally sensitive wildlife and plant life, including those species designated as rare, threatened, and/or endangered by State and/or Federal government, through compatible land use development; *ERM-1.2 Development in Environmentally Sensitive Areas* - wherein the County shall limit or modify proposed development within areas that contain sensitive habitat for special status species and direct development into less significant habitat areas. Development in natural habitats shall be controlled so as to minimize erosion and maximize beneficial vegetative growth; *ERM-1.4 Protect Riparian Areas* - wherein the County shall protect riparian areas through habitat preservation, designation as open space or recreational land uses, bank stabilization, and development controls; *ERM-1.6 Management of Wetlands* - wherein the County shall support the preservation and management of wetland and riparian plant communities for passive recreation, groundwater recharge, and wildlife habitats; *ERM-1.7 Planting of Native Vegetation* – wherein the County shall encourage the planting of native trees, shrubs, and grasslands in order to preserve the visual integrity of the landscape, provide habitat conditions suitable for native vegetation and wildlife, and ensure that a maximum number and variety of well-adapted plants are maintained; *ERM-1.15 Minimize Lighting Impacts*; - wherein the County shall ensure that lighting associated with new development or facilities (including street lighting, recreational facilities, and parking) shall be designed to prevent artificial lighting from illuminating adjacent natural areas at a level greater than one foot candle above ambient conditions; *ERM-1.16 Cooperate with Wildlife Agencies* - wherein the County shall cooperate with State and federal wildlife agencies to address linkages between habitat areas and *ERM-2.7 Minimize Adverse Impacts* where the County will minimize the adverse effects on environmental features such as water quality and quantity, air quality, flood plains, geophysical characteristics, biotic, archaeological, and aesthetic factors.

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: As noted in the BRR, "16 special status plant species, vascular and bryophyte, are known to occur in the region. The project site is within an existing

agricultural area with a high level of historic and current human disturbance. 16 of these species are considered to be absent from the site due to the absence of any present or historically suitable habitat."[36] A listing of the special status species is included in the BRR and a conclusion by LOA that mitigation measures are not warranted at Page 34 of the BRR.

Also as noted in the BRR, "Of the 14 special status animal species known from the regional vicinity, 10 are considered absent from the project site due to the absence of suitable habitat, the site being located outside of the known geographical range of the species, or the species' having been extirpated from the region."[37]

As noted in the BRR, "One species, the burrowing owl (*Athene cunicularia*), has an unlikely potential to occur on site. While there is suitable habitat in the inactive walnut orchard in the form of California ground squirrel burrow complexes, due to the small size of the parcel and close proximity of active agricultural operations, the value of this habitat is low. It is anticipated that if an owl were present on site, it would be temporary due to the regular human disturbances from the adjacent agricultural operations. Since there is little to no likelihood that these species occur on site, they have no appreciable potential to be affected through construction-related injury or mortality or loss of habitat."[38]

Project Impacts to Swainson's Hawk

The BRR analyzed the presence of Swainson's Hawk and concluded that mitigation measures for this special status species was merited. As noted in the BRR, "While foraging and nesting habitat on site is considered to have low value for Swainson's hawk, given the number of sightings in the vicinity of the project site they could nonetheless be found on, or over, the site with some frequency. The nesting habitat on site is a singular pine tree adjacent to the existing house and a few walnut trees remaining in the orchard. If project construction takes place during the Swainson's hawk nesting season (generally March 1- September 15), hawks nesting on the site or in the near vicinity could be injured or killed by construction activities or disturbed such that they would abandon their nests. Project-related injury, mortality, or disturbance of Swainson's hawks that results in nest abandonment are potentially significant adverse environmental effects of the project.

If Swainson's hawks are foraging within the project's agricultural area during project activities, it is anticipated that the hawk will move to adjacent lands where suitable prey and matching land uses are present, resulting in a less than significant adverse environmental effect. After construction is completed, the project site is not anticipated to be used by Swainson's hawks other than as a transient or fly over. The 2 acre park that is proposed, may provide some foraging opportunity or nesting opportunity over time if trees are planted. However, given the low value of foraging habitat of the current site, the size of the project (54.21 acres), and the abundance of agricultural lands in the immediate area and wider region with similar or better quality foraging and nesting habitat, the loss of foraging and nesting habitat for this species is not considered a potentially significant adverse environmental effect of the project. To avoid and minimize the potential for construction-related mortality/disturbance of Swainson's hawks while nesting, mitigation measures BIO 1a-[1]c will be implemented. The proposed project impact on special status species would be *less than significant*

[36] Ibid. 34.

[37] Op. Cit. 35.

[38] Op. Cit.

with mitigation incorporation.[39] Based on the information and conclusions provided in the BRR, the County agrees with qualified expert consultant LOA's determination that the proposed Project will result in a less than significant impact to this resource.

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: As noted in the BRR, "Designated critical habitat and sensitive natural communities are absent from the project site. The only land uses present within the project site is agricultural and developed/ ruderal. Project development is expected to have *no impact* on sensitive natural communities or designated critical habitat."[40] Based on the information and conclusions provided in the BRR, the County agrees with qualified expert consultant LOA's determination that the proposed Project will result in no impact to this resource.

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?

No Impact: As noted in the BRR, "Wetlands and jurisdictional waters are absent from the project site. The Mill Creek Ditch is located immediately west of the project site, but is not within the project parcel boundary, project related impacts are not anticipated." [41] Based on the information and conclusions provided in the BRR, the County agrees with qualified expert consultant LOA's determination that the proposed Project will result in no impact to this resource.

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?

No Impact: As noted in the BRR, "As discussed, this project site is surrounded by expanding urban development to the north, agriculture to the west and south, and agriculture/commercial facilities to the east at the western edge of the Community of Goshen. There are no physical features (riparian corridors, valleys, etc.) at the project site or vicinity that would support regular or predicted wildlife movement."[42] Based on the information and conclusions provided in the BRR, the County agrees with qualified expert consultant LOA's determination that the proposed Project will result in *no impact* to this resource.

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

No Impact: As noted in the BRR, "The proposed project design is consistent with the goals and policies of the Tulare County General Plan and Goshen General Plan. There would be *no impact."* Based on

[39] Op. Cit.
[40] Op Cit. 35.
[41] Op Cit. 36.
[42] Op. Cit.

the information and conclusions provided in the BRR, the County agrees with qualified expert consultant LOA's determination that the proposed Project will result in no impact to this resource.

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: As noted in the BRR, "There are no known habitat conservation plans or Natural Community Conservation Plans (NCCP) in the proposed Project area. There would be *no impact."* Based on the information and conclusions provided in the BRR, the County agrees with qualified expert consultant LOA's determination that the proposed Project will result in no impact to this resource.

Mitigation Measures for Biological Resources:

Qualified expert consultant LOA recommended the following mitigation measures (4.1.1a through 4.1.1c); and 4.1.2a through 4.1.2c) and as contained in the BRR. They have been re-numerated to be consistent with the format used in this document.

Mitigation Measure BIO-1: Mitigation Measures for Swainson's Hawk (Measures 4.1.2a through 4.1.2c in the BRR)

- **Mitigation Measure BIO-1a:** Construction Timing. If feasible, project construction will occur entirely outside the Swainson's hawk nesting season, typically defined as March 1- September 15.
- **Mitigation Measure BIO-1b:** Preconstruction Surveys. If the project must be constructed during the March 1-September 15 nesting season, surveys for nesting Swainson's hawks are required. The surveys will follow the protocol established in the Swainson's Hawk Technical Advisory Committee's 2000 *Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in California's Central Valley* and will encompass all mature trees within 0.5 mile of the project site. If no nesting pairs are found during the surveys, no further mitigation is required.
- **Mitigation Measure BIO-1c:** (Establish Buffers)**.** If preconstruction surveys identify one or more active Swainson's hawk nests within 0.5 mile of the project site, suitable disturbance-free buffer will be established around the nest(s) by a qualified biologist and maintained until the end of construction or until the biologist determines that the nest is no longer active, whichever comes first.

Mitigation Measure BIO-2: Mitigation Measures for Nesting Birds (Measures 4.1.1a through 4.1.1c I in the BRR)

- **Mitigation Measure BIO-2a:** (Construction Timing). If feasible, the project will be implemented outside of the avian nesting season, typically defined as February 1 to August 31.
- **Mitigation Measure BIO-2b:** (Pre-construction Surveys). If construction is to occur between February and August 31, a qualified biologist will conduct pre-construction surveys for active bird nests within 10 days prior to the start of construction. The survey area will encompass the site and accessible surrounding lands within 250 feet for nesting migratory birds and 500 feet for raptors (i.e., birds of prey).

- **Mitigation Measure BIO-2c:** (Avoidance of Active Nests). Should any active nests be discovered in or near proposed construction zones, the biologist will identify a suitable construction-free buffer around the nest. This buffer will be identified on the ground with flagging or fencing and will be maintained until the biologist has determined that the young have fledged and are capable of foraging independently.

Cumulative Impact Analysis

The cumulative analysis conducted in this study encompasses the San Joaquin Valley as its geographic area, with a specific focus on Tulare County. It is important to note that sensitive species with similar habitat requirements may exist in other parts of the San Joaquin Valley, indicating that the cumulative impacts extend beyond the political boundaries of Tulare County. However, the proposed Project would only contribute to cumulative impacts related to this Checklist Item if there were Project-specific impacts. Given that the proposed Project does not cause significant habitat loss or direct impact to these special status species, the implementation of applicable Mitigation Measures BIO-1 and BIO-2 would result in an impact that is less than significant for this resource. Consequently, the proposed Project would not result in significant habitat loss or direct impact to these special status species, leading to a cumulative impact that is less than significant. Additionally, since the proposed Project does not encompass wetlands or sensitive riparian habitat, there would be no cumulative impacts in this regard. The Project site consists of developed and/or highly disturbed lands, both within and surrounding it, which do not serve as crucial movement corridors for native wildlife. Therefore, bird species utilizing the Pacific flyway would continue to do so even after the development of the project. As a result, the cumulative impact related to this Checklist Item would be less than significant. Furthermore, as the site is not situated within or near any approved habitat conservation plans, natural community conservation plans, or regional or state habitat conservation plans currently in effect, there will be no conflicts with local policies or ordinances safeguarding biological resources, such as tree preservation policies or ordinances. The proposed Project is also not expected to contradict the goals or policies outlined in the Tulare County General Plan, which aim to protect biological resources. Consequently, there will be no Project-specific or Cumulative Impacts on these resources.

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?	☐	☑	☐	☐

The discussions regarding Environmental Setting, CEQA requirements, Regulatory Setting, Chapter 3.5 Cultural Resources, Chapters 4 through 9, Appendices "A" through "I", etc., contained in the Goshen Community Plan Update and Environmental Impact Report are incorporated herein in their entirety. Where necessary and if available, additional site specific facts, data, information, etc., are included in this discussion. Also,, qualified expert consultants Taylored Archaeology completed the "Phase I Cultural Resource Assessment for the Conway Property Tentative Subdivision Map Project, Goshen, Tulare County, California" (CRA) for the proposed Project. Some of the information from the CRA is excerpted for the following analysis.

Environmental Setting

The proposed Project area is in the Southern Valley Yokuts ethnographic territory of the San Joaquin Valley and located between the Kings River and the north shore of Tulare Lake. The Yokuts were generally divided into three major groups, the Northern Valley Yokuts, the Southern Valley Yokuts, and the Foothill Yokuts. The Project area is likely within the Telamni and Wukchamni Yokuts territory. The closest village for this area was Waitatshulu, which was located on Packwood Creek approximately 5.5 miles south of the Project site.

The San Joaquin Valley did not experience contact with Europeans until the late 1700s. The earliest exploration of the San Joaquin Valley by Europeans was likely by the Spaniards when in the fall of 1772 a group known as the Catalonian Volunteers entered the valley through Tejon Pass in search of deserters from the Southern California Missions. However, the group only made it as far north as Buena Vista Lake in modern day Kern County before turning around due to the extensive swamps. Initial settlement within the valley by Europeans in the 1830s was largely either by trappers or horse thieves. With the end of the Mexican American War and the beginning of the gold rush in 1848, the San Joaquin Valley became more populated with ranchers and prospectors. By 1850, California became a state, Tulare County was established in 1853, and Visalia was formed in 1852. During the first few decades, Visalia was a supply center for nearby gold rushes, and had an agricultural economy based on livestock.

As noted in the CRA, "On August 3, 2022, Taylored Archaeology requested a cultural resource records search from the SSJVIC of the CHRIS at California State University in Bakersfield, California. The purpose of this request was to identify any prehistoric or historical resources on or near the Project site that had been previously recorded within the Project boundary and a 0.5-mile radius of the Project area and

identify and review prior cultural resource investigations completed in or near the Project boundary. SSJVIC staff researched historical USGS topographic maps, reports of previous cultural resource investigations, archaeological site and survey base maps, 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 (Appendix B)."[43] See Appendix C of this MND.

As noted in the CRA, "The SSJVIC provided the records search results in a letter dated August 15, 2022 (Records Search File No. 22-307; Appendix C). The results of this search indicate that there are two previous cultural resources investigation reports conducted within the Project area (Table 4-1, Appendix C), however, no cultural resources were recorded within the Project area. TU-01676 is comprised of three related cultural resources reports for a single project.

Four previous cultural resources investigation reports were conducted (Table 4-2), and one previously recorded cultural resource (P-54-004995) was recorded within a 0.5-mile radius of the Project area. P-54-004995 is a historic-era water tower and tank. Further review of P-54-004995 revealed this resource was erroneously mapped within a 0.5-mile radius of the Project area. Based on the aerial photos, this resource is located 1.4 miles east of the Project area and therefore will not be impacted by the Project."[44]

Regulatory Setting

Cultural resources within the context of this document are defined as a historical or prehistorical archaeological site, or a historical structure, object, or building. Consistent with 36 CFR 60.3, the term "historical" in this document applies to archaeological features and artifacts, and additionally to buildings, objects, or structures that are at least 50 years old. While exceptions to the 50-year criterion occur, they are relatively rare. The significance or importance of a cultural resource is dependent upon whether the resource qualifies for inclusion at the local or state in the California Register of Historical Places (CRHR). Cultural resources that are determined to be eligible for inclusion in the CRHR are called "historical resources" (CCR 15064.5[a]). Under this statue the determination of eligibility is partially based on the consideration of the criteria of significance as defined in 14 CCR 15064.5(a)(3).

Federal

National Historic Preservation Act

The National Historic Preservation Act (NHPA) 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.
"The National Historic Preservation Act (NHPA) of 1966, which has been amended several times, was passed to acknowledge the importance of protecting our nation's heritage from federal development. The NHPA sets federal historic preservation policy, establishes partnerships between the Federal government and states and the Federal government and tribes, creates the **National Register of Historic Places** and **National Historic Landmarks** programs, mandates the selection of qualified **State Historic Preservation**

[43] Phase I Cultural Resources Assessment for the Conway Property Tentative Subdivision Map Project. February 2023. Page 13. See Appendix C of this MND.
[44] Ibid. 15.

Officers, establishes the **Advisory Council on Historic Preservation**, charges Federal agencies with stewardship, and establishes the role of **Certified Local Governments** within the states.

Title I of the statute established the National Register of Historic Places to create a national listing of historic properties (districts, sites, buildings, structures, and objects) significant in American history, architecture, archeology, engineering, and culture. Title I also expanded the level of Federal concern to include the preservation of historic properties of local or State significance. It established State Historic Preservation Officers as partners in the national historic preservation program and also describes how local governments or Indian tribes may, in certain circumstances, carry out SHPO functions.

Implementation of Section 106 of Title I has been critical to archeology and archeological preservation in the United States. Section 106 requires federal agencies to take into account the effects of their actions on historic properties by identifying historic properties, assessing adverse effects, and resolving those adverse effects. The process is initiated by the federal agency, and includes comment and input from stakeholders at the local and State levels, as well as the Advisory Council on Historic Preservation. After the procedures for implementing Section 106 were established (6 CFR 800), the field of professional archeology expanded throughout governments and the private sector to meet the need for compliance.

Section 110 requires all federal agencies to establish -- in conjunction with the Secretary of the Interior -- their own historic preservation programs for the identification, evaluation, and protection of historic properties, including archeological properties. Determinations of Eligibility for the National Register are established during Phase II archeological surveys.

Title II

Title II of NHPA establishes the Advisory Council on Historic Preservation, an independent Federal agency. The Council and its staff advise Federal agencies on their roles in the national historic preservation program, especially Section 106. The ACHP also develops advice and training to support Federal agencies.

Title IV

Title IV of the statute established the National Center for Preservation Technology and Training, part of the National Park Service. NCPTT contributes research and training to archeological preservation practice.

Statute and regulation texts:

- **National Historic Preservation Act** (16 U.S. Code 470 et seq.), statute text.
- **National Register of Historic Places** (36 CFR 60), regulation text.
- **Procedures for State, Tribal, and Local Government Historic Preservation Programs** (36 CFR 61), regulation text.
- **Determinations of Eligibility for Inclusion in the National Register of Historic Places** (36 CFR 63), regulation text.
- **Protection of Historic Properties** (36 CFR 800), regulation text.[45]

There are no known resources where the NHPA would apply to the proposed Project.

[45] U.S. Department of the Interior. National Park Service. Accessed April 2023 at: National Historic Preservation Act of 1966 - Archeology (U.S. National Park Service) (nps.gov)

State

California Historic Register

The California Historic Register was developed as a program to identify, evaluate, register, and protect Historical Resources in California. Historical resources may include, but are not limited to, "any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically or archaeologically significant" (PRC §5020.1[j]). In addition, a resource included in a local register of historical resources or identified as significant in a local survey conducted in accordance with the state guidelines are also considered historic resources under California Public Resources Code (PRC) Section 5020.1.

According to CEQA guidelines §15064.5 (a)(3), criteria for listing on the California Register of Historical Resources includes the following:

- 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.

California State Office of Historic Preservation (OHP)

"The California State Office of Historic Preservation (OHP) is responsible for administering federally and state mandated historic preservation programs to further the identification, evaluation, registration and protection of California's irreplaceable archaeological and historical resources under the direction of the State Historic Preservation Officer (SHPO), a gubernatorial appointee, and the State Historical Resources Commission."[46]

"OHP's responsibilities include identifying, evaluating, and registering historic properties; ensuring compliance with federal and state regulatory obligations; encouraging the adoption of economic incentives programs designed to benefit property owners; encouraging economic revitalization by promoting a historic preservation ethic through preservation education and public awareness and, most significantly, by demonstrating leadership and stewardship for historic preservation in California."[47]

A historical resource may be eligible for inclusion in the California Register of Historical Resources (CRHR) if it:

- 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 to 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; or
- Has yielded, or may be likely to yield, information important in prehistory or history. [48]

[46] Office of Historic Preservation. Mission and Responsibilities. http://ohp.parks.ca.gov/?page_id=1066. Accessed April 2023.

[47] Ibid.

[48] Office of Historic Preservation. California Register of Historic Places. Accessed April 2023 at: http://www.ohp.parks.ca.gov/?page_id=21238.

CEQA Guidelines: Archaeological Resources

Section 15064.5(c) of CEQA Guidelines provides specific guidance on the treatment of archaeological resources as noted below.[49][50]

(1) When a Project will impact an archaeological site, a lead agency shall first determine whether the site is an historical resource, as defined in subdivision (a).

(2) If a lead agency determines that the archaeological site is an historical resource, it shall refer to the provisions of Section 21084.1 of the Public Resources Code, and this section, Section 15126.4 of the Guidelines, and the limits contained in Section 21083.2 of the Public Resources Code do not apply.

(3) If an archaeological site does not meet the criteria defined in subdivision (a), but does meet the definition of a unique archeological resource in Section 21083.2 of the Public Resources Code, the site shall be treated in accordance with the provisions of section 21083.2. The time and cost limitations described in Public Resources Code Section 21083.2 (c–f) do not apply to surveys and site evaluation activities intended to determine whether the Project location contains unique archaeological resources.

(4) If an archaeological resource is neither a unique archaeological nor an historical resource, the effects of the Project on those resources shall not be considered a significant effect on the environment. It shall be sufficient that both the resource and the effect on it are noted in the Initial Study or EIR, if one is prepared to address impacts on other resources, but they need not be considered further in the CEQA process.

CEQA Guidelines: Human Remains

Public Resources Code Sections 5097.94 and 5097.98 provide guidance on the disposition of Native American burials (human remains), and fall within the jurisdiction of the Native American Heritage Commission:[51]

(d) When an initial study identifies the existence of, or the probable likelihood, of Native American human remains within the Project, a lead agency shall work with the appropriate Native Americans as identified by the Native American Heritage Commission as provided in Public Resources Code Section 5097.98. The applicant may develop an agreement for treating or disposing of, with appropriate dignity, the human remains and any Items associated with Native American burials with the appropriate Native Americans as identified by the Native American Heritage Commission. Action implementing such an agreement is exempt from:

(1) The general prohibition on disinterring, disturbing, or removing human remains from any location other than a dedicated cemetery (Health and Safety Code Section 7050.5).

(2) The requirements of CEQA and the Coastal Act.

(e) In the event of the accidental discovery or recognition of any human remains in any location other than a dedicated cemetery, the following steps should be taken:

(1) There shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until:

(A) The coroner of the county in which the remains are discovered must be contacted to determine that no investigation of the cause of death is required, and

[49] Office of Historic Preservation. CEQA Basics. Accessed April 2023 at: https://ohp.parks.ca.gov/?page_id=21721.

[50] CEQA Guidelines, Section 15064.5 - Determining the Significance of Impacts to Archaeological and Historical Resources. Accessed April 2023 at: https://casetext.com/regulation/california-code-of-regulations/title-14-natural-resources/division-6-resources-agency/chapter-3-guidelines-for-implementation-of-the-california-environmental-quality-act/article-5-preliminary-review-of-projects-and-conduct-of-initial-study/section-150645-determining-the-significance-of-impacts-to-archaeological-and-historical-resources

[51] Op. Cit.

(B) If the coroner determines the remains to be Native American:

1. The coroner shall contact the Native American Heritage Commission within 24 hours.
2. The Native American Heritage Commission shall identify the person or persons it believes to be the most likely descended from the deceased Native American.
3. The most likely descendent may make recommendations to the landowner or the person responsible for the excavation work, for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in Public Resources Code Section 5097.98, or

(2) Where the following conditions occur, the landowner or his authorized representative shall rebury the Native American human remains and associated grave goods with appropriate dignity on the property in a location not subject to further subsurface disturbance.

(A) The Native American Heritage Commission is unable to identify a most likely descendent or the most likely descendent failed to make a recommendation within 24 hours after being notified by the commission.

(B) The descendant identified fails to make a recommendation; or

(C) The landowner or his authorized representative rejects the recommendation of the descendant, and the mediation by the Native American Heritage Commission fails to provide measures acceptable to the landowner.

(f) As part of the objectives, criteria, and procedures required by Section 21082 of the Public Resources Code, a lead agency should make provisions for historical or unique archaeological resources accidentally discovered during construction. These provisions should include an immediate evaluation of the find by a qualified archaeologist. If the find is determined to be an historical or unique archaeological resource, contingency funding and a time allotment sufficient to allow for implementation of avoidance measures or appropriate mitigation should be available. Work could continue on other parts of the building site while historical or unique archaeological resource mitigation takes place.

Local

County of Tulare General Plan

The Tulare County General Plan 2030 incorporates goals and policies concerning cultural resources, which may have implications for the proposed Project. LU-P-48 focuses on preserving established and distinctive neighborhoods by maintaining appropriate zoning and development standards, ensuring land use compatibility in terms of height, massing, and other characteristics. The policy emphasizes the importance of design guidelines for high-quality new development, supporting housing rehabilitation programs, and implementing measures to maintain the unique character of neighborhoods. OSC-P-42 aims to prevent potential impacts on sites of archaeological, paleontological, or historical significance. It mandates a records review for proposed development in sensitive areas, assessing the potential effects on these resources as required by the California Environmental Quality Act (CEQA). The policy further requires pre-construction surveys and monitoring during ground disturbance and implements measures to avoid identified impacts. These policies underscore Tulare County's commitment to preserving cultural resources, ensuring the protection of historical, archaeological, and paleontological sites, and maintaining the integrity and character of neighborhoods throughout the region.

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: "On August 3, 2022, Taylored Archaeology requested a cultural resource records search from the SSJVIC of the CHRIS at California State University in Bakersfield, California. The purpose of this request was to identify any prehistoric or historical resources on or near the Project site that had been previously recorded within the Project boundary and a 0.5-mile radius of the Project area and identify and review prior cultural resource investigations completed in or near the Project boundary. SSJVIC staff researched historical USGS topographic maps, reports of previous cultural resource investigations, archaeological site and survey base maps, 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 (Appendix B)."[52] (See Appendix C in this MND.

"The SSJVIC provided the records search results in a letter dated August 15, 2022 (Records Search File No. 22-307; Appendix B. [See Appendix C in this MND.] The results of this search indicate that there are two previous cultural resources investigation reports conducted within the Project area (Table 4-1, Appendix C), however, no cultural resources were recorded within the Project area. TU-01676 is comprised of three related cultural resources reports for a single project.

Four previous cultural resources investigation reports were conducted (Table 4-2), and one previously recorded cultural resource (P-54-004995) was recorded within a 0.5-mile radius of the Project area. P-54-004995 is a historic-era water tower and tank. Further review of P-54-004995 revealed this resource was erroneously mapped within a 0.5-mile radius of the Project area. Based on the aerial photos, this resource is located 1.4 miles east of the Project area and therefore will not be impacted by the Project."[53]

Additionally, "On January 22, 2023, Archaeologist Consuelo Sauls conducted a Phase I archaeological pedestrian survey of the 54.21-acre Project site using systematic transects spaced 10 meters apart within the Project boundary. The site was visually surveyed to identify any prehistoric deposits and potential historical features, structures, and artifacts more than 50 years old that may be present on the ground surface. The entire Project site was accessible, except the mobile house with a driveway with a graveled front yard enclosed in a metal fence. Ms. Sauls used a plan map, visible landmarks, and Gaia GPS application for navigation to locate and survey the Project area. She also photographed the survey area using an iPhone 11 Pro digital camera."[54] "No archaeological sites, isolated artifacts, or features were identified during the pedestrian survey. While past agricultural activities may have potentially destroyed or obscured ground surface evidence of archaeological resources within the Project boundary, intact archaeological resources related to prior occupation of the area may potentially exist below the ground surface."[55] Implementation of Mitigation Measures CUL-1 and CUL-2 will ensure that proposed Project impacts will be *less than significant with mitigation* incorporation.

[52] Op. Cit. 13.
[53] Op. Cit. 15.
[54] Op. Cit. 13-14.
[55] Op. Cit. 20-21.

The County of Tulare agrees with the findings, conclusions, and recommendations provided by expert consultants Taylored Archaeology in the Cultural Resources Assessment (CRA).

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 proposed Project area. Implementation of Mitigation Measures CUL-1 and CUL-2 will ensure that potential impact to unknown archeological resources will be *less than significant with mitigation* incorporation. The County of Tulare agrees with the findings, conclusions, and recommendations provided by expert consultants Taylored Archaeology in the Cultural Resources Assessment (CRA).

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 proposed Project site or vicinity. If human remains are unearthed during construction-related activities, there is a potential for a significant impact. As such, implementation of Mitigation Measure CUL-2 will ensure that impacts will *be less than significant with mitigation incorporation.* The County of Tulare agrees with the findings, conclusions, and recommendations provided by expert consultants Taylored Archaeology in the Cultural Resources Assessment (CRA).

Mitigation Measures for Impacts to Cultural Resources

Mitigation Measure CUL-1: If previously unknown resources are encountered before or during grading activities, construction shall stop in the immediate vicinity of the find and a qualified historical resources specialist shall be consulted to determine whether the resource requires further study. The qualified historical resources specialist shall make recommendations to the City on the measures that shall be implemented to protect the discovered resources, including but not limited to excavation of the finds and evaluation of the finds in accordance with Section 15064.5 of the CEQA Guidelines and the City's Historic Preservation Ordinance.

If the resources are determined to be unique historical resources as defined under Section 15064.5 of the CEQA Guidelines, measures shall be identified by the monitor and recommended to the Lead Agency. Appropriate measures for significant resources could include avoidance or capping, incorporation of the site in green space, parks, or open space, or data recovery excavations of the finds. No further grading shall occur in the area of the discovery until the Lead Agency approves the measures to protect these resources. Any historical artifacts recovered as a result of mitigation shall be provided to a City-approved institution or person who is capable of providing long-term preservation to allow future scientific study.

Mitigation Measure CUL-2: In the event that human remains are unearthed during excavation and grading activities of any future development project, all activity shall cease immediately. Pursuant to Health and Safety Code (HSC) Section 7050.5, no further disturbance shall occur until the County Coroner has made the necessary findings as to origin and disposition pursuant to PRC Section 5097.98(a). If the remains are determined to be of Native American descent, the coroner shall within 24 hours notify the Native American Heritage Commission (NAHC). The NAHC shall then contact the

most likely descendent of the deceased Native American, who shall then serve as the consultant on how to proceed with the remains. Pursuant to PRC Section 5097.98(b), upon the discovery of Native American remains, the landowner shall ensure that the immediate vicinity, according to generally accepted cultural or archaeological standards or practices, where the Native American human remains are located is not damaged or disturbed by further development activity until the landowner has discussed and conferred with the most likely descendants regarding their recommendations, if applicable, taking into account the possibility of multiple human remains. The landowner shall discuss and confer with the descendants all reasonable options regarding the descendants' preferences for treatment.

Mitigation Measure CUL-3: Native American pre-construction presentation. Prior to any ground disturbance, the 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. Tribal participation would be dependent upon the availability and interest of the Tribe.

Cumulative Impact:

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, General Plan background Report, Tulare County 2030 General Plan EIR, and/or Goshen Community Plan Update and EIR.

It is not anticipated that Native American remains or other cultural will be found at the proposed Project site. However, consistent with CEQA requirements, Mitigation Measures CUL-1 thought CUL-3 are included in the unlikely event that if Native American remains are unearthed during any ground disturbance activities, or if any cultural resources are discovered, such finds will be mitigated to less than significant Project-specific and Cumulative Impacts**.**

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?	☐	☐	☐	☑

The discussions regarding Environmental Setting, CEQA requirements, Regulatory Setting, Chapters 4 through 9, Appendices "A" through "I", etc. contained in the Goshen Community Plan Update and Environmental Impact Report are incorporated herein in their entirety. Where necessary and if available, additional site specific facts, data, information, etc., are included in this discussion.

Environmental Setting

Southern California Edison (SCE) provides electricity services to the majority of Tulare County, including Goshen. The electrical facilities network includes both overhead and underground lines, with new development required to install underground service lines. SCE serves approximately fifteen million people in a 50,000 square-mile area of Central, Coastal, and Southern California.[56] SCE supplies electricity to its customers through a variety of renewable and nonrenewable sources. Table 3-8 below shows the proportion of each energy resource sold to California consumers by SCE in 2021 as compared to the statewide average.

Table 3-8. 2021 SCE and 2021 State average power resources

Fuel Type		2021 SCE Power Mix	2021 California Power Mix
Coal		0%	3.0%
Large Hydroelectric		2.3%	9.2%
Natural Gas		22.3%	37.9%
Nuclear		9.2%	9.3%
Other (Oil/Petroleum Coke/Waste Heat)		0.2%	0.2%
Unspecified Sources of Power[1]		34.6%	6.8%
Eligible Renewables	Biomass	0.1%	2.3%
	Geothermal	5.7%	4.8%
	Small Hydro	0.5%	1.0%
	Solar	14.9%	14.2%
	Wind	10.2%	11.4%
	Total Eligible Renewable	**31.4%**	**33.6%**

1. "Unspecified sources of power" means electricity from transactions that are not traceable to specific generation sources.

Source: Southern California Edison, California Energy Commission[57]

[56] Southern California Edison. Our Service Territory. Accessed May 2023 at: https://www.sce.com/about-us/who-we-are/leadership/our-service-territory

[57] Southern California Edison (SCE). 2021. 2021 Power Content Label. Accessed May 2023 at: https://www.energy.ca.gov/filebrowser/download/4676

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.

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, and 21% is consumed by the residential sector, 25% is consumed by the industrial sector, and 9% is consumed by the commercial sector. [See above for web link location of County data]

As of December 31, 2021, Caltrans reported that there are 36,229,205 vehicles registered in California.[58] This results in an estimated 298.9 billion annual vehicle miles traveled (AVMT) within the state.[52]

Regulatory Setting

Federal

None that would apply to the proposed Project.

State

California Energy Commission

The California Energy Commission (CEC) was created in 1974 to serve as the state's primary energy policy and planning agency. The CEC is tasked with reducing energy costs and environmental impacts of energy use - such as greenhouse gas emissions - while ensuring a safe, resilient, and reliable supply of energy.

State of California Integrated Energy Policy (SB 1389)

In 2002, the Legislature passed Senate Bill 1389, which required the 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 Vehicles and their infrastructure needs, and encouragement of urban designs that reduce vehicles miles traveled and accommodate pedestrian and bicycle access. The CEC adopted the 2013 Integrated Energy Policy Report on February 20, 2014. The 2013 Integrated Energy Policy Report provides the results of the CEC's assessment of a variety of issues, including:

- Ensuring that the state has sufficient, reliable, and sage energy infrastructure to meet current and future energy demands;
- Monitoring publicly-owned utilities' progress towards achieving 10-year energy efficiency targets; defining and including zero-net-energy goals in state building standards;
- Overcoming challenges to increased use of geothermal heat pump/ground loop technologies and procurement of biomethane;

[58] California Department of Transportation. Caltrans Facts, June 2022. Accessed May 2023 at: https://dot.ca.gov/-/media/dot-media/programs/research-innovation-system-information/documents/caltrans-fact-booklets/2022-caltrans-facts-a11y.pdf

- Using demand response to meet California's energy needs and integrate renewable technologies;
- Removing barriers to bioenergy development; planning for California's electricity infrastructure needs given potential retirement of power plants and the closure of the San Onofre Nuclear Generating Station;
- Estimating new generation costs for utility-scale renewable and fossil-fueled generation;
- Planning for new or upgraded transmission infrastructure;
- Monitoring utilities' progress in implementing past recommendations related to nuclear power plants;
- Tracking natural gas market trends;
- Implementing the Alternative and Renewable Fuel and Vehicle Technology Program;
- Addressing the vulnerability of California's energy supply and demand infrastructure to the effects of climate change; and
- Planning for potential electricity system needs in 2030.

Renewable Portfolio Standard (SB 1078 and SB 107)

Established in 2002 under SB 1078, the State's Renewables Portfolio Standard (RPS) was amended under SB 107 to require accelerated energy reduction goals by requiring that by the year 2010, 20 percent of electricity sales in the state be served by renewable energy resources. In years following its adoption, Executive Order S-14-08 was signed, requiring electricity retail sellers to provide 33 percent of their service loads with renewable energy by the year 2020. In 2011, SB X1-2 was signed, aligning the RPS target with the 33 percent requirement by the year 2020. This new RPS applied to all state electricity retailers, including publicly owned utilities, investor-owned utilities, electrical service providers, and community choice aggregators. All entities included under the RPS were required to adopt the RPS 20 percent by year 2020 reduction goal by the end of 2013, adopt a reduction goal of 25 percent by the end of 2016, and meet the 33 percent reduction goal by the end of 2020. In addition, the Air Resources Board (ARB), under Executive Order S-21-09, was required to adopt regulations consistent with these 33 percent renewable energy targets.

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 Energy Code, Title 24, Part 6, Building Energy Efficiency Standards

California Code of Regulations, Title 24, Part 6 comprises the California Energy Code, which was adopted to ensure that building construction, system design and installation achieve energy efficiency. The California Energy Code was first established in 1978 by the CEC in response to a legislative mandate to reduce California's energy consumption, and apply to energy consumed for heating, cooling, ventilation, water heating, and lighting in new residential and non-residential buildings. The standards are updated periodically to increase the baseline energy efficiency requirements. The 2013 Building Energy Efficiency Standards focus on several key areas to improve the energy efficiency of newly constructed buildings and additions and alterations to existing buildings and include requirements to enable both demand reductions during critical peak periods and future solar electric and thermal system installations. Although it was not originally intended to reduce greenhouse gas (GHG) emissions, electricity production by fossil fuels results in GHG emissions and energy efficient buildings require less electricity. Therefore, increased energy efficiency results in decreased GHG emissions.. These standards regulate energy consumed for

heating, cooling, ventilation, water heating, and lighting. Title 24 requirements are enforced locally by Tulare County RMA.

California Green Building Standards Code, Title 24, Part 2 (CALGreen)

The California Building Standards Commission adopted the California Green Buildings Standards Code (CALGreen in Part 11 of the Title 24 Building Standards Code) for all new construction statewide on July 17, 2008. Originally, a volunteer measure, the code became mandatory in 2010 and the most recent update (2013) went into effect on January 1, 2014. CALGreen sets targets for energy efficiency, water consumption, dual plumbing systems for potable and recyclable water, diversion of construction waste from landfills, and use of environmentally sensitive materials in construction and design, including eco-friendly flooring, carpeting, paint, coatings, thermal insulation, and acoustical wall and ceiling panels. The CALGreen Code includes mandatory measures for non-residential development related to site development; water use; weather resistance and moisture management; construction waste reduction, disposal, and recycling; building maintenance and operation; pollutant control; indoor air quality; environmental comfort; and outdoor air quality. Mandatory measures for residential development pertain to green building; planning and design; energy efficiency; water efficiency and conservation; material conservation and resource efficiency; environmental quality; and installer and special inspector qualifications. The CalGreen 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 2030, 60% of all energy must be renewable. California is targeting this goal through solar and other renewable sources.

California Global Warming Solutions Act of 2006 (Assembly Bill 32)

Assembly Bill 32 (Health and Safety Code Sections 38500–38599; AB 32), also known as the California Global Warming Solutions Act of 2006, commits the state to achieving year 2000 GHG emission levels by 2010 and year 1990 levels by 2020. To achieve these goals, AB 32 tasked the CPUC and CEC with providing information, analysis, and recommendations to the ARB regarding ways to reduce GHG emissions in the electricity and natural gas utility sectors.

"In 2006, the Legislature passed the California Global Warming Solutions Act of 2006 [Assembly Bill 32 (AB 32)], which created a comprehensive, multi-year program to reduce greenhouse gas (GHG) emissions in California. AB 32 required the California Air Resources Board (ARB or Board) to develop a Scoping Plan that describes the approach California will take to reduce GHGs to achieve the goal of reducing emissions to 1990 levels by 2020. The Scoping Plan was first approved by the Board in 2008 and must be updated every five years. The First Update to the Climate Change Scoping Plan was approved by the Board on May 22, 2014. In 2016, the Legislature passed SB 32, which codifies a 2030 GHG emissions reduction target of 40 percent below 1990 levels. With SB 32, the Legislature passed companion legislation AB 197, which provides additional direction for developing the Scoping Plan."[59] California's 2017 Climate Change

[59] Air Resources Board. AB 32 Scoping Plan. Accessed April 2023 at: https://ww2.arb.ca.gov/our-work/programs/ab-32-climate-change-scoping-plan/about.

Scoping Plan was adopted in December 2018. The plan identifies the State's strategy for achieving the 2030 emission reduction targets.

SB 350

The Clean Energy and Pollution Reduction Act (SB 350) was passed by California Governor Brown on October 7, 2015, and establishes new clean energy, clean air, and GHG reduction goals for the year 2030 and beyond. SB 350 establishes a GHG target of 40% below 1990 levels for the State of California, further enhancing the ability for the state to meet the goal of reducing GHG levels 80% below 1990 levels by 2050.

AB 178

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

Environmental Quality Act (CEQA) Requirements

"In 1974, the Legislature adopted the Warren-Alquist State Energy Resources Conservation and Development Act. (Pub. Resources Code, § 25000 et seq.) That act created what is now known as the California Energy Commission, and enabled it to adopt building energy standards. (See, e.g., id. at § 25402.) At that time, the Legislature found the "rapid rate of growth in demand for electric energy is in part due to wasteful, uneconomic, inefficient, and unnecessary uses of power and a continuation of this trend will result in serious depletion or irreversible commitment of energy, land and water resources, and potential threats to the state's environmental quality." (Id. at § 25002; see also § 25007 ("It is further the policy of the state and the intent of the Legislature to employ a range of measures to reduce wasteful, uneconomical, and unnecessary uses of energy, thereby reducing the rate of growth of energy consumption, prudently conserve energy resources, and assure statewide environmental, public safety, and land use goals"))

The same year that the Legislature adopted Warren-Alquist, it also added section 21100(b)(3) to CEQA, requiring environmental impact reports to include "measures to reduce the wasteful, inefficient, and unnecessary consumption of energy." As explained by a court shortly after it was enacted, the "energy mitigation amendment is substantive and not procedural in nature and was enacted for the purpose of requiring the lead agencies to focus upon the energy problem in the preparation of the final EIR." (People v. County of Kern (1976) 62 Cal.App.3d 761, 774 (emphasis added)). It compels an affirmative investigation of the project's potential energy use and feasible ways to reduce that use.

Though Appendix F of the CEQA Guidelines has contained guidance on energy analysis for decades, implementation among lead agencies has not been consistent. (See, e.g., California Clean Energy Committee v. City of Woodland, supra, 225 Cal.App.4th 173, 209.) While California is a leader in energy conservation, the importance of addressing energy impacts has not diminished since 1974. On the contrary, given the need to avoid the effects of climate change, energy use is an issue that we cannot afford to ignore. As the California Energy Commission's Integrated Energy Policy Report (2016) explains:

> "Energy fuels the economy, but it is also the biggest source of greenhouse gas emissions that lead to climate change. Despite California's leadership, Californians are experiencing the impacts of climate change including higher temperatures, prolonged drought, and more wildfires. There is an urgent need to reduce greenhouse gas emissions and increase the state's resiliency to climate change. With

> transportation accounting for about 37 percent of California's greenhouse gas emissions in 2014, transforming California's transportation system away from gasoline to zero emission and near-zero-emission vehicles is a fundamental part of the state's efforts to meet its climate goals. Energy efficiency and demand response are also key components of the state's strategy to reduce greenhouse gas emissions. (Id. at pp. 5, 8, 10.) Appendix F was revised in 2009 to clarify that analysis of energy impacts is mandatory. OPR today proposes to add a subdivision in section 15126.2 on energy impacts to further elevate the issue, and remove any question about whether such an analysis is required."[60]

Further, an "Explanation of Proposed Amendments" contained in the Proposed Update (and now adopted amendments) to the CEQA Guidelines documents stated that OPR proposed to add a new subdivision (b) to section 15126.2 which discusses the required contents of an environmental impact report. The new subdivision would specifically address the analysis of a project's potential energy impacts. This addition is necessary for several reasons explained as follows. [61]

"The first sentence clarifies that an EIR must analyze whether a project will result in significant environmental effects due to "wasteful, inefficient, or unnecessary consumption of energy." This clarification is necessary to implement Public Resources Code section 21100(b)(3). Since the duty to impose mitigation measures arises when a lead agency determines that the project may have a significant effect, section 21100(b)(3) necessarily requires both analysis and a determination of significance in addition to energy efficiency measures. (Pub. Resources Code, § 21002.)

The second sentence further clarifies that all aspects of the project must be considered in the analysis. This clarification is consistent with the rule that lead agencies must consider the "whole of the project" in considering impacts. It is also necessary to ensure that lead agencies consider issues beyond just building design. (See, e.g., California Clean Energy Com. v. City of Woodland, supra, 225 Cal.App.4th at pp. 210-212.) The analysis of vehicle miles traveled provided in proposed section 15064.3 (implementing Public Resources Code section 21099 (SB 743)) on transportation impacts may be relevant to this analysis.

The third sentence signals that the analysis of energy impacts may need to extend beyond building code compliance. (Ibid.) The requirement to determine whether a project's use of energy is "wasteful, inefficient, and unnecessary" compels consideration of the project in its context. (Pub. Resources Code, § 21100(b)(3).) While building code compliance is a relevant factor, the generalized rules in the building code will not necessarily indicate whether a particular project's energy use could be improved. (Tracy First v. City of Tracy (2009) 177 Cal.App.4th 912, 933 (after analysis, lead agency concludes that project proposed to be at least 25% more energy efficient than the building code requires would have a less than significant impact); see also CEQA Guidelines, Appendix F, § II.C.4 (describing building code compliance as one of several different considerations in determining the significance of a project's energy impacts).) That the Legislature added the energy analysis requirement in CEQA at the same time that it created an Energy Commission authorized to impose building energy standards indicates that compliance with the building code is a necessary but not exclusive means of satisfying CEQA's independent requirement to analyze energy impacts broadly.

[60] State of California. Office of Planning and Research. Proposed Update to the CEQA Guidelines. November 2017. Pages 65-66. Accessed April 2023 at: http://opr.ca.gov/docs/20171127_Comprehensive_CEQA_Guidelines_Package_Nov_2017.pdf

[61] Ibid. 66.

The new proposed [now adopted] subdivision (b) also provides a cross-reference to Appendix F. This cross-reference is necessary to direct lead agencies to the more detailed provisions contained in that appendix. Finally, new proposed subdivision (b) cautions that the analysis of energy impacts is subject to the rule of reason, and must focus on energy demand actually caused by the project. This sentence is necessary to place reasonable limits on the analysis. Specifically, it signals that a full "lifecycle" analysis that would account for energy used in building materials and consumer products will generally not be required. (See also Cal. Natural Resources Agency, Final Statement of Reasons for Regulatory Action: Amendments to the State CEQA Guidelines Addressing Analysis and Mitigation of Greenhouse Gas Emissions Pursuant to SB97 (Dec. 2009) at pp. 71-72.)"[62]

Specifically, Section 15121.6 added new sub-section (b), to wit: "(b) Energy Impacts. If the project may result in significant environmental effects due to wasteful, inefficient, or unnecessary consumption of energy, the EIR shall analyze and mitigate that energy use. This analysis should include the project's energy use for all project phases and components, including transportation-related energy, during construction and operation. In addition to building code compliance, other relevant considerations may include, among others, the project's size, location, orientation, equipment use and any renewable energy features that could be incorporated into the project. (Guidance on information that may be included in such an analysis is presented in Appendix F.) This analysis is subject to the rule of reason and shall focus on energy demand that is caused by the project. This analysis may be included in related analyses of air quality, greenhouse gas emissions or utilities in the discretion of the lead agency."[63]

CEQA Thresholds of Significance

- Result in significant environmental effects due to wasteful, inefficient, or unnecessary consumption of energy.
- The project's energy use for all project phases and components, including transportation-related energy, during construction and operation.
- The project's size, location, orientation, equipment use and any renewable energy features that could be incorporated into the project.
- Analysis is subject to the rule of reason and shall focus on energy demand that is caused by the project.

Local

Tulare County General Plan 2030 Update

The Tulare County General Plan encompasses several goals and policies aimed at promoting energy conservation, creating friendly streets, fostering healthy communities, and considering non-motorized modes of transportation. Goal ERM-4 seeks to encourage energy conservation throughout the county. Policies under this goal include promoting the use of solar energy and energy-efficient features in new construction and renovations, planting shade trees in urban development to reduce radiation heating, participating in local and state programs that reduce energy consumption, supporting the development of alternative energy resources, and encouraging energy efficiency measures that surpass state standards while providing incentives for their implementation. LU-7.3 focuses on designing streets within Urban Development Boundaries (UDBs) to accommodate pedestrians and cyclists, incorporating street trees,

[62] Op. Cit. 66-67.

[63] Op. Cit. 67-68.

minimizing curb cuts, providing sidewalks on both sides of streets, and implementing bike lanes and walking paths where feasible. LU-7.15 further emphasizes the use of solar power and energy conservation techniques in all new developments. HS-9.1 and HS-9.2 aim to create healthy communities by promoting safe development patterns, crime prevention, a high-quality physical environment, and physical activity through sidewalks, walking paths, parks, and open spaces. TC-5.2 highlights the consideration of non-motorized modes of transportation, such as bike routes, sidewalks, and trails, in transportation facilities and new development proposals. These goals and policies collectively demonstrate Tulare County's commitment to energy conservation, sustainable development, walkability, and community well-being.

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 proposed Project includes the construction and operation of single-family housing. During project construction-related activities, there would be an increase in energy consumption related to worker trips and the operation of construction-related equipment. This increase in energy use would be short-term, temporary, intermittent, and limited to the greatest extent possible through compliance with local, state, and federal regulations. Vehicle fuel consumption during project construction-related activities was estimated based on the assumed construction schedule, vehicle trip lengths, and the number of workers per construction phase as provided by CalEEMod, and Year 2024 gasoline/diesel MPG factors provided by the EMFAC 2021. To simplify the estimation process, it was assumed that all worker vehicles used gasoline as a fuel source and all vendor and hauling vehicles used diesel as a fuel source. The CalEEMod report provided in Appendix A provides gasoline and diesel fuel used by off-road construction-related equipment and on-road vehicles during each phase of project construction-related activities.

While construction-related activities of the proposed Project will result in additional energy consumption, this energy use is not unnecessary or inefficient. This energy use is justified by the energy-efficient nature of the proposed project and would be limited to the greatest extent possible through compliance with local, state, and federal regulations.

Once construction-related activities are completed, the proposed Project is anticipated to achieve net zero energy consumption. The proposed Project is subject to the California New Residential Zero Net Energy Action Plan 2015-2020. This plan establishes a goal for all residential buildings built after January 1, 2020, to be zero net energy. The California Energy Commission is responsible for the development and enforcement of specific strategies to achieve this goal. These strategies are implemented through Title 24, Part 6 of the California Building Code and CalGreen, which requires developers to include certain measures (including solar panels on all new residential buildings) to achieve required building efficiency standards.

Table 3-9. Energy Use Generated by Operational Activities. Source CalEEMod (v. 2020.4.0); EMFAC2014

Housing Units	Population[1]	Electricity Usage (MWh/yr)[1]	Electricity Usage per Capita (MWh/yr)	Natural Gas Usage (Therm/yr)[1]	Natural Gas Usage per Capita (Therm/yr)
303	**867**	**2,416**	**2.79**	**72,851**	**84.03**

1. Data provided by CalEEMod (Appendix A)

The California Energy Commission estimates Tulare County residential uses consumed approximately 1.45 million MWh of electricity and 51 million Therms of natural gas in 2021.[64] According to the U.S. Energy Information Administration, California residential uses consumed approximately 100 million MWh of electricity and approximately 4.6 billion Therms of natural gas in 2021.[65] Per capita, the Project's estimated electricity demand is higher than California's demand (2.41 MWh/yr) but lower than Tulare County's demand (3.19 MWh/yr). The Project's estimated natural gas demand is lower than both California's demand (116 Therm/yr) and Tulare County's (115 Therm/yr). The proposed Project is estimated to increase Tulare County's electricity consumption by 0.18% and natural gas consumption by 1.43%.

Operation of the proposed Project would result in the consumption of vehicle fuel from residents and visitors leaving and coming to the site. The VMT per capita of the proposed Project site is slightly higher than Tulare County's VMT (21.04, Caltrans, 2018) but slightly lower than California's VMT (23.91, Caltrans, 2018). The design of features in the proposed Project is implemented to comply with Federal, State, and County regulations to reduce VMT. The proposed Project includes sidewalks to connect with nearby existing and future uses.

Table 3-10. On-Road Mobile Fuel Use Generated by Operational Activities

Total Annual Operational VMT[1]	Daily VMT Per Capita	Annual Fuel Use (Gasoline)	Annual Fuel Use (Diesel)
7,169,577 Miles	**24.69 Miles**	**249,645 Gallons**	**36,247 Gallons**

1. Data Provided by CalEEMod

Source CalEEMod (v. 2020.4.0); EMFAC2014

During operations-related activities, the proposed Project is not anticipated to result in wasteful fuel consumption. Because construction-related energy use would be short-term, temporary, intermittent, limited to the greatest extent feasible through consistency with Federal, State, and local policies related to energy conservation, operation of the project will comply with all energy efficiency standards required under Title 24, Section 6.These standards were specifically developed to achieve net zero energy for residential projects, as such, it can reasonably be concluded that the proposed Project will achieve net zero energy. The proposed Project would not result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources. The impact will be *less than significant.*

[64] California Energy Commission. Energy Consumption by County. Accessed May 2023 at: https://ecdms.energy.ca.gov/elecbycounty.aspx and https://ecdms.energy.ca.gov/gasbycounty.aspx

[65] United States Energy Information Administration. State Enerfy Data System (SEDS): 2021. Accessed May 2023 at: https://www.eia.gov/state/seds/seds-data-fuel.php?sid=CA

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

No Impact: Energy efficiency and conservation measures would be implemented in conjunction with project design and operation, including measures resulting from federal, State, and local mandates, as well as voluntary measures included in the proposed Project by the applicant. Government-mandated measures include increasingly stringent state and federal regulatory actions addressing vehicle fuel economies and vehicle emissions standards. Compliance with the California Building Standards Code and CALGreen are considered demonstrable evidence of efficient use of energy. In addition, the progressive enhancements in building energy efficiency mandates resulting from regular updates to the California building codes will result in lower electrical and natural gas consumption from those identified in Checklist Item a) above. Energy would also be indirectly conserved through water efficient landscaping requirements consistent with the Tulare County Water Efficient Landscaping Ordinance. Stringent solid waste recycling requirements applicable to both project construction- and operation-related activities would reduce energy consumed in solid waste disposal. In summary, the proposed Project will implement all mandatory federal, State, and local conservation measures, project design features, and voluntary energy conservation measures will further reduce energy demands. Therefore, the proposed Project will not conflict with or obstruct any state or local plans for renewable energy or energy efficiency. As such, the proposed Project will result in *no impact* to this resource.

Cumulative Impact:

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, General Plan background Report, Tulare County 2030 General Plan EIR, and/or Goshen Community Plan Update and EIR.

The proposed Project would incrementally contribute to adverse impacts on energy resource demand and conservation when considering the cumulative impact of concurrently planned projects; however, like the proposed Project, discretionary actions requiring agency approval are required to comply with local, regional, state, and federal policies designed to reduce wasteful energy consumption, and improve overall energy conservation and sustainability. For instance, all local projects involving the development of new buildings must be designed to conform to CALGreen and the current California Energy Code (for this Project it will be the 2022 Code). Therefore, it is anticipated that the Project's contribution to cumulative impacts would not result in a significantly considerable wasteful use of energy resources, such that the Project, and other cumulative projects, would not have a cumulative effect on energy conservation. The proposed Project will not have a direct or cumulative impact, or create wasteful, inefficient, or unnecessary consumption of energy resources during project construction-related activities or operations, nor will it conflict with or obstruct a state or local plan for renewable energy or energy efficiency. Therefore, Project-specific and Cumulative Impacts as of a result of the Project would be less than significant.

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?	☐	☑	☐	☐

The discussions regarding Environmental Setting, CEQA requirements, Regulatory Setting, Chapter 3.6 Geology and Soils, Chapters 4 through 9, Appendices "A" through "I", etc., contained in the Goshen Community Plan Update and Environmental Impact Report are incorporated herein in their entirety. Where necessary and if available, additional site specific facts, data, information, etc., are included in this discussion.

Environmental Setting

"Tulare County is divided into two major physiographic and geologic provinces: the Sierra Nevada Mountains and the Central Valley. The Sierra Nevada Physiographic Province, in the eastern portion of the county, is underlain by metamorphic and igneous rock. It consists mainly of homogeneous granitic rocks,

with several islands of older metamorphic rock. The central and western parts of the county are part of the Central Valley Province, underlain by marine and non-marine sedimentary rocks. It is basically a flat, alluvial plain, with soil consisting of material deposited by the uplifting of the mountains. The foothill area of the county is essentially a transition zone, containing old alluvial soils that have been dissected by the west-flowing rivers and streams that carry runoff from the Sierra Nevada Mountains. This gently rolling topography is punctuated in many areas by outcropping soft bedrock. The native mountain soils are generally quite dense and compact"[66]

"The Central Valley is an asymmetrical structural trough filled with marine and continental sediments up to 15-kilometers (km) thick covering an area of more than 50,000 square kilometers (km2), bounded by the Cascade Range to the north, the Sierra Nevada ranges to the east, the Klamath Mountains and Coast Ranges to the west, and the Tehachapi Mountains to the south (fig. 1). The aquifer system in the Central Valley comprises unconfined, semi-confined, and confined aquifers, which are primarily contained within the upper 300 meters (m; though some wells exceed that depth) of alluvial sediments deposited by streams draining the surrounding Sierra Nevada and Coast Ranges (Page, 1986; California Department of Water Resources, 2003; Faunt, 2009). The [Sacramento] SAC occupies the northern third of the Central Valley and the [San Joaquin Valley] SJV occupies the southern two-thirds of the Central Valley (Fig. 1[in the Scientific Investigations Report 2019-506]). The SJV is often further divided into the San Joaquin River Basin, which occupies the northern half of the SJV, and the Tulare Basin, which occupies the southern half of SJV. The Tulare Basin is, hydrologically, a closed basin, but it receives imported water from the San Joaquin and Sacramento Rivers. These will collectively be referred to as the SJV. In much of the western side of the SJV, the aquifer system is divided into an upper and lower zone by the Corcoran Clay Member of the Tulare Formation, a regionally extensive clay layer that limits vertical movement of groundwater (Page, 1986; Williamson and others, 1989; Belitz and Heimes, 1990; Burow and others, 2004). Both zones of the aquifer in the area of the Corcoran Clay generally are tapped for groundwater withdrawals (Shelton and others, 2013; Fram, 2017)."[67]

Geologic Stability and Seismic Activity

Seismic hazards, such as earthquakes, can cause loss of human life and property damage, disrupt the local economy, and undermine the fiscal condition of a community. Secondary seismic hazards, including subsidence and liquefaction, can cause building and infrastructure damage.

- **Seismicity**

  "Seismicity varies greatly between the two major geologic provinces represented in Tulare County. The Central Valley is an area of relatively low tectonic activity bordered by mountain ranges on either side. The Sierra Nevada Mountains, partially located within Tulare County, are the result of movement of tectonic plates which resulted in the creation of the mountain range. The Coast Range on the west side of the Central Valley is also a result of these forces, and the continued uplifting of Pacific and North American tectonic plates continues to elevate these ranges. The remaining seismic hazards in Tulare County generally result from movement along faults associated with the creation of these ranges.

[66] Tulare County 2030 General Plan 2030 Update Background Report. Page 8-4 through 8-5.

[67] United States Department of the Interior United States Geologic Survey. "Delineation of Spatial Extent, Depth, Thickness, and Potential Volume of Aquifers Used for Domestic and Public Water-Supply in the Central Valley, California. Scientific Investigations Report 2019-5076 (SIR). Prepared by Page 2. Accessed April 2023 at: https://pubs.usgs.gov/sir/2019/5076/sir20195076.pdf.

Earthquakes are typically measured in terms of magnitude and intensity. The most commonly known measurement is the Richter Scale, a logarithmic scale which measures the strength of a quake. The Modified Mercalli Intensity Scale measures the intensity of an earthquake as a function of the following factors:

- Magnitude and location of the epicenter;
- Geologic characteristics;
- Groundwater characteristics;
- Duration and characteristic of the ground motion;
- Structural characteristics of a building."[68]

Tulare County has minimal seismic activity. Three faults can potentially impact Tulare County. The first is the San Andreas Fault, approximately seventy miles west of the project site. The Owens Valley Fault Group has active and potentially active faults; however, the group is located over eighty miles east of the project site on the eastern base of the Sierra Nevada Mountains. The Clovis Fault is potentially active, but there is no historical evidence of activity. It is approximately forty miles north of the project site. This fault could have the greatest impact on Goshen and Tulare county, but with no evidence that it is active, the potential impacts are unknown. The Project Site is not in an earthquake fault zone.

Faults

"Faults are the indications of past seismic activity. It is assumed that those that have been active most recently are the most likely to be active in the future. Recent seismic activity is measured in a geologic timescale. Geologically recent is defined as having occurred within the last two million years (the Quaternary Period). All faults believed to have been active during Quaternary time are considered "potentially active."[69]. "In 1973, five counties within the Southern San Joaquin Valley undertook the preparation of the Five County Seismic Safety Element to assess seismic hazards… In general, zones C1, S1, and V1 are safer than zones C2, S2, and V2. Hazards due to groundshaking are considered to be "minimal" in the S1 Zone and "minimal" to "moderate" in the S2 and S2S Zones. Development occurring within the S1 Seismic Zone must conform to the Uniform Building Code-Zone II; while development within the S2 Zone must conform to Uniform Building Code-Zone III. There are three faults within the region that have been, and will be, principal sources of potential seismic activity within Tulare County. These faults are described below:

- **San Andreas Fault** is located approximately 40 miles west of the Tulare County boundary and [approximately] 60 miles west of the project area. This fault has a long history of activity, and is thus the primary focus in determining seismic activity within the County. Seismic activity along the fault varies along its span from the Gulf of California to Cape Mendocino. Just west of Tulare County lays the "Central California Active Area," section of the San Andreas Fault where many earthquakes have originated.

[68] Tulare County General Plan 2030 Update. General Plan Background Report. Page 8-5. Accessed April 2023 at: http://generalplan.co.tulare.ca.us/documents.html, locate "Recirculated Draft Environmental Impact Report (February 2010 Draft)" then click on "Appendix B-Background Report."

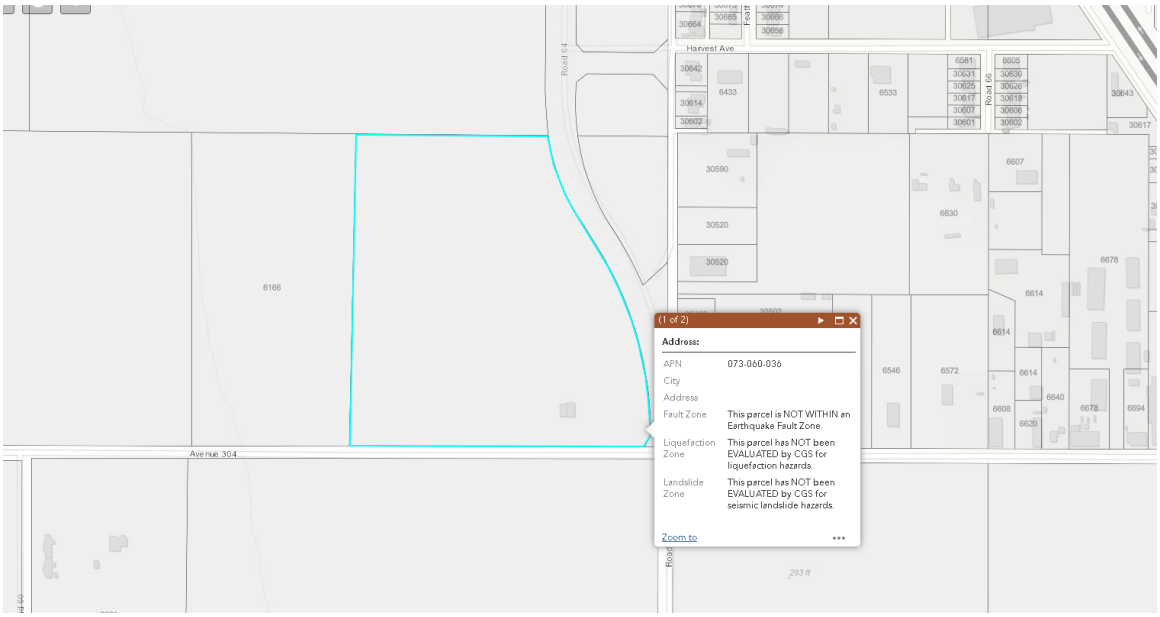
[69] Ibid.

- **Owens Valley Fault Group** is a complex system containing both active and potentially active faults, located on the eastern base of the Sierra Nevada Mountains approximately [approximately] 60 miles east of the project area. The Group is located within Tulare and Inyo Counties and has historically been the source of seismic activity within Tulare County.

- **Clovis Fault** is considered to be active within the Quaternary Period, although there is no historic evidence of its activity, and is therefore classified as "potentially active." This fault lies approximately six miles south of the Madera County boundary in Fresno County and [approximately] 70 miles north of the project area. Activity along this fault could potentially generate more seismic activity in Tulare County than the San Andreas or Owens Valley fault systems. In particular, a strong earthquake on the Fault could affect northern Tulare County. However, because of the lack of historic activity along the Clovis Fault, inadequate evidence exists for assessing maximum earthquake impacts." [70]

There are other unnamed faults north of Bakersfield and near Tulare Buttes about 30 miles north of Porterville. These faults are small and have exhibited activity in the last 1.6 million years, but not in the last 200 years. It is also possible, but unlikely, that previously unknown faults could become active in the area. [71] As shown in **Figure 3-4**, the proposed site (APN 073-060-0446 and 073-060-013 [not highlighted]) is not within an earthquake fault zone.[72]

Figure 3-4. Earthquake Fault Zone



Groundshaking

"Ground-shaking is the primary seismic hazard in Tulare County because of the county's seismic setting and its record of historical activity. Thus, emphasis focuses on the analysis of expected levels of ground-

[70] Op. Cit. 8-5 through 8-7.

[71] California Geological Survey, http://www.quake.ca.gov/gmaps/WH/regulatorymaps.htm.

[72] California Department of Conservation. EQ Zapp: California Earthquake Hazards Zone Application. Earthquake Zones of Required Investigation. Accessed April 2023 at: https://maps.conservation.ca.gov/cgs/EQZApp/app/

shaking, which is directly related to the magnitude of a quake and the distance from a quake's epicenter. Magnitude is a measure of the amount of energy released in an earthquake, with higher magnitudes causing increased ground-shaking over longer periods of time, thereby affecting a larger area. Ground-shaking intensity, which is often a more useful measure of earthquake effects than magnitude, is a qualitative measure of the effects felt by population." "The San Joaquin Valley portion of Tulare County is located on alluvial deposits, which tend to experience greater ground-shaking intensities than areas located on hard rock. Therefore, structures located in the valley will tend to suffer greater damage from ground-shaking than those located in the foothill and mountain areas. However, existing alluvium valleys and weathered or decomposed zones are scattered throughout the mountainous portions of the county which could also experience stronger intensities than the surrounding solid rock areas. The geologic characteristics of an area can therefore be a greater hazard than its distance to the epicenter of the quake." "Older buildings constructed before current building codes were in effect, and even newer buildings constructed before earthquake resistance provisions were included in the current building codes, are most likely to suffer damage in an earthquake. Most of Tulare County's buildings are no more than one or two stories in height and are of wood frame construction, which is considered the most structurally resistant to earthquake damage. Older masonry buildings (without earthquake resistance reinforcement) are the most susceptible to structural failure, which causes the greatest loss of life. The State of California has identified unreinforced masonry buildings (URMs) as a safety issue during earthquakes. In high risk areas (Bay Area), inventories and programs to mitigate this issue are required. Because Tulare County is not a high risk area, state law only recommends that programs to retrofit URMs are adopted by jurisdictions."

Liquefaction

"Liquefaction is a process whereby soil is temporarily transformed to a fluid form during intense and prolonged groundshaking. Areas most prone to liquefaction are those that are water saturated (e.g., where the water table is less than 30 feet below the surface) and consist of relatively uniform sands that are low to medium density. In addition to necessary soil conditions, the ground acceleration and duration of the earthquake must be of sufficient energy to induce liquefaction. Scientific studies have shown that the ground acceleration must approach 0.3g before liquefaction occurs in a sandy soil with relative densities typical of the San Joaquin alluvial deposits."[73]

"Liquefaction during major earthquakes has caused severe damage to structures on level ground as a result of settling, tilting, or floating. Such damage occurred in San Francisco on bay-filled areas during the 1989 Loma Prieta earthquake, even though the epicenter was several miles away. If liquefaction occurs in or under a sloping soil mass, the entire mass may flow toward a lower elevation, such as that which occurred along the coastline near Seward, Alaska during the 1964 earthquake. Also of particular concern in terms of developed and newly developing areas are fill areas that have been poorly compacted. No specific countywide assessments to identify liquefaction hazards have been performed in Tulare County. Areas where groundwater is less than 30 feet below the surface occur primarily in the valley. However, soil types in the area are not conducive to liquefaction because they are either too coarse or too high in clay content. Areas subject to 0.3g acceleration or greater are located in a small section of the Sierra Nevada Mountains along the Tulare-Inyo County boundary. However, the depth to groundwater in such areas is greater than in the valley, which would minimize liquefaction potential as well. Detailed

[73] Op. Cit. 8-8 and 8-9.

geotechnical engineering investigations would be necessary to more accurately evaluate liquefaction potential in specific areas and to identify and map the areal extent of locations subject to liquefaction."[74]

Settlement

"Settlement can occur in poorly consolidated soils during ground-shaking. During settlement, the soil materials are physically rearranged by the shaking and result in reduced stabling alignment of the individual minerals. Settlement of sufficient magnitude to cause significant structural damage is normally associated with rapidly deposited alluvial soils, or improperly founded or poorly compacted fill. These areas are known to undergo extensive settling with the addition of irrigation water, but evidence due to ground-shaking is not available. Fluctuating groundwater levels also may have changed the local soil characteristics. Sufficient subsurface data is lacking to conclude that settlement would occur during a large earthquake; however, the data is sufficient to indicate that the potential exists in Tulare County."[75]

Other Geologic Hazards

Landslides

Landslides refer to a wide variety of processes that result in the downward and outward movement of soil, rock, and vegetation under the gravitational influence. Landslides are caused by both natural and human-induced changes in slope stability and often accompany other natural hazard events, such as floods, wildfires, or earthquakes.

"Landslides are a primary geologic hazard and are influenced by four factors:

- Strength of rock and resistance to failure, which is a function of rock type (or geologic formation);
- Geologic structure or orientation of a surface along which slippage could occur;
- Water (can add weight to a potentially unstable mass or influence strength of a potential failure surface); and,
- Topography (amount of slope in combination with gravitation forces)."[76]

"As of June 2009, the California Geological Survey had not developed landslide hazard identification maps for Tulare County. However, it is reasonable to assume that certain areas in Tulare County are more prone to landslides than other areas… [As such,] There is no risk of large landslides in the valley area of the county due to its relatively flat topography."[77] Due to little elevation changes throughout Goshen, including the proposed project site, it is considered a low landslide hazard area.

Subsidence

"Subsidence occurs when a large portion of land is displaced vertically, usually due to the withdrawal of groundwater, oil, or natural gas. Soils that are particularly subject to subsidence include those with high silt or clay content. Subsidence caused by groundwater withdrawal generally presents a more serious problem, since it can affect large areas. Oil and gas withdrawal, on the other hand, tends to affect smaller,

[74] Op. Cit. 8-9.
[75] Op. Cit.
[76] Op. Cit. 8-10.
[77] Op. Cit. 8-10.

localized areas. Some areas of the Central Valley have subsided more than 20 feet during the past 50 years." [78] The Kaweah Subbasin that underlies Goshen is in an overdraft condition on an average long-term basis. According to the most recent Urban Water Management Plan (UWMP), groundwater elevations have declined up to fifty feet between 1990 and 2010. While groundwater recharge efforts are in progress, groundwater levels will continue to decline unless recharge is increased.

Seiche

"A seiche is a standing wave produced in a body of water such as a reservoir, lake, or harbor, by wind, atmospheric changes, or earthquakes. Seiches have the potential to damage shoreline structures, dams, and levees…Since this is less than wave heights that could be expected from wind induced waves, earthquake-induced seiches are not considered a risk in Tulare County. In addition, the effects from a seiche would be similar to the flood hazard for a particular area, and the risk of occurrence is perceived as considerably less than the risk of flooding."[79]

Paleontology

"Paleontological resources are any fossilized remains, traces, or imprints of organisms, preserved in or on the earth's crust, that are of paleontological interest and that provide information about the history of life on earth, with the exception of materials associated with an archaeological resource (as defined in Section 3(1) of the Archaeological Resources Protection Act of 1979 (16 U.S.C. 470bb[1]), or any cultural item as defined in Section 2 of the Native American Graves Protection and Repatriation Act (25 U.S.C. 3001)."[80] " According to the University of California Museum of Paleontology (UCMP), 12 paleontological resources have been recorded in Tulare County, generally within the valley portion of the County. These resources primarily consist of invertebrates, vertebrate, and plant fossils (UCMP, 2009)."[81] CEQA requires that a determination be made as to whether a project would directly or indirectly destroy a unique paleontological resource or site or unique geological feature (CEQA Appendix G(v)(c)). If an impact is significant, CEQA requires feasible measures to minimize the impact (CCR Title 14(3) §15126.4 (a)(1)). California Public Resources Code §5097.5 also applies to paleontological resources.

Soils within Proposed Project Site

The proposed Project involves construction on two soil types. The properties of the soil are described briefly below from the United States Department of Agriculture Official Soil Series Descriptions (OSD)[82]:

- **Akers:** The Akers series consists of very deep, well-drained soils formed in alluvium derived from granitic rock. Akers soils are on terraces. Akers soils are on slopes between 0 to 2 percent. They are well-drained, have a negligible runoff, and moderate permeability, but have moderately slow permeability in saline-sodic phases. There is available water storage of 15.5 cm.
- **Calgro:** The Calgro series consists of moderately deep to duripan, moderately well-drained soils formed in alluvium derived from granitic rock. Calgro soils are on terraces. Calgro soils are on

[78] Op. Cit. 8-10 through 8-11.

[79] Op. Cit. 8-11.

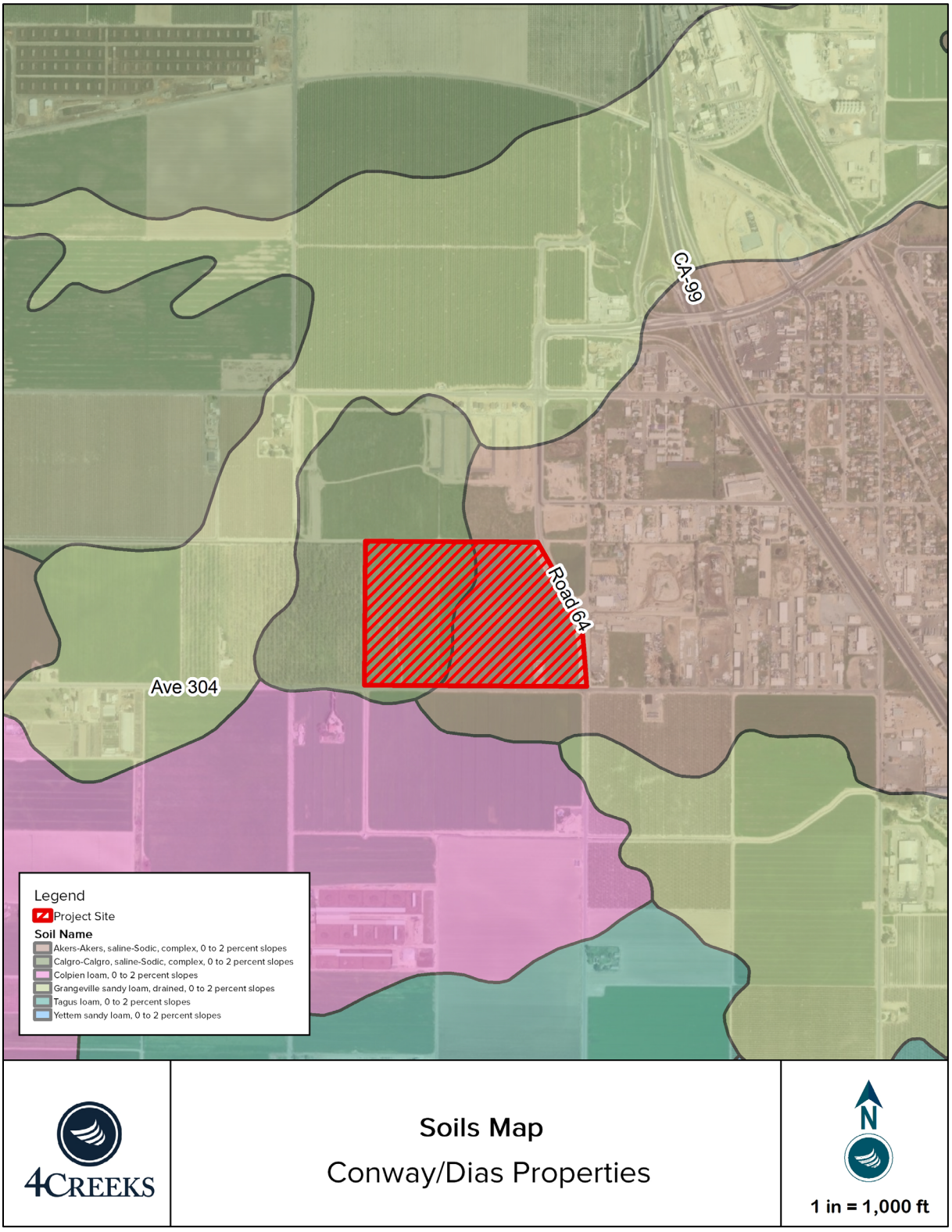
[80] Op. Cit. 9-43.

[81] Op. Cit. 9-53.

[82] United States Department of Agriculture. Natural Resources Conservation Service, Official Soil Series Descriptions (OSD). Accessed May 2023 at: https://soilseries.sc.egov.usda.gov/osdname.aspx

slopes between 0 and 2 percent. They are moderately well drained and have low to medium runoff. There is available water storage of 9.36 cm.

Figure 3-5: Soils Map



Regulatory Setting

Federal

None that apply to the proposed Project.

State

Seismic Hazards Mapping Act

"Under the Seismic Hazards Mapping Act, the State Geologist is responsible for identifying and mapping seismic hazards zones as part of the California Geologic Survey (CGS). The CGS provides zoning maps of non-surface rupture earthquake hazards (including liquefaction and seismically induced landslides) to local governments for planning purposes. These maps are intended to protect the public from the risks associated with strong ground shaking, liquefaction, landslides or other ground failure, and other hazards caused by earthquakes. For projects within seismic hazard zones, the Seismic Hazards Mapping Act requires developers to conduct geological investigations and incorporate appropriate mitigation measures into project designs before building permits are issued."[83]

California Building Code

"The California Building Code is another name for the body of regulations known as the California Code of Regulations (C.C.R.), Title 24, Part 2, which is a portion of the California Building Standards Code. Title 24 is assigned to the California Building Standards Commission, which, by law, is responsible for coordinating all building standards."[84] 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.

Alquist-Priolo Earthquake Fault Zoning Act

"The Alquist- Priolo Earthquake Fault Zoning Act (formerly the Alquist- Priolo Special Studies Zone Act), signed into law December 1972, requires the delineation of zones along active faults in California. The purpose of the Alquist-Priolo Act is to regulate development on or near active fault traces to reduce the hazards associated with fault rupture and to prohibit the location of most structures for human occupancy across these traces."[85]

State Water Resources Control Board and Regional Water Quality Control Board

National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated with Construction Activity- Water Quality Order 99-08 DWQ.

[83] Op. Cit. 3.6-9.
[84] Op. Cit.
[85] Op. Cit.

Typically, General Construction Storm Water NPDES permits are issued by the RWQCB for grading and earth-moving activities. The General Permit is required for construction activities that disturb one or more acres. The General Permit requires development and implementation of a Storm Water Pollution Prevention Plan (SWPPP), which specifies practices that include prevention of all construction pollutants from contacting stormwater with the intent of keeping all products of erosion form moving off site into receiving waters. The NPDES permits are issued for a five-year term. NPDES general permits require adherence to the Best Management Practices (BMPs) including:

- Site Planning Consideration- such as preservation of existing vegetation.
- Vegetation Stabilization- through methods such as seeding and planting.
- Physical Stabilization- through use of dust control and stabilization measures.
- Diversion of Runoff – by utilizing earth dikes and temporary drains and swales.
- Velocity Reduction – through measures such as slope roughening/terracing.
- Sediment Trapping/Filtering – through use of silt fences, straw bale and sand bag filters, and sediment traps and basins.

Local

Tulare County Code (Adoption of California Codes)[86]

Section 7-15-1000 Adoption of California Codes of the Tulare County Code incorporates and adopted the CBC, 2019 Edition, as promulgated by the California Building Standards Commission, which incorporates the adoption of the 2012 edition of the International Building Code, as amended with necessary California amendments and the 2012 International Building Code of the International Code Council.

Tulare County General Plan 2030 Update

The Tulare County General Plan 2030 Update incorporates several goals and policies concerning geology and soils that are relevant to the proposed Project. These policies emphasize the importance of adhering to building codes and standards to ensure the safety of human habitation. The county requires compliance with the latest edition of the California Building Code, California Fire Code, and other relevant standards considering factors such as seismic hazards, flooding, occupancy type, and location. To evaluate the feasibility of new development, the county conducts thorough site investigations to assess the risks associated with landslides, subsidence, settlement, contamination, and flooding. Additionally, the plan underscores the county's commitment to environmental protection by enforcing measures to control non-point source water pollution and sediment erosion from construction sites. Under the goal of reducing risks from seismic and geologic hazards, the county evaluates earthquake risks, prohibits development on unconsolidated landslide debris, and allows development on seismic-sensitive soils only after adequate site analysis and safety measures. Compliance with the Alquist-Priolo Act is also emphasized to prevent placing structures for human occupancy within designated Earthquake Fault Zones. Overall, these policies aim to safeguard life, property, and the environment while promoting responsible development in Tulare County.

Five County Seismic Safety Element (FCSSE)

[86] Tulare County Code. Part VII. Land Use Regulations and Planning. Chapter 15 Building Regulations. 7-15-1000 Adoption of California Codes. Accessed Aril 2023 at: https://www.codepublishing.com/CA/TulareCounty/#!/TulareCounty07/TulareCounty0715.html.

The FCSSE report represents a cooperative effort between the governmental entities within Fresno, Kings, Madera, Mariposa, and Tulare Counties to develop an adoptable Seismic Safety Element as required by State law. Part I, the Technical Report, is designed to be used when necessary to provide background for the Summary document. Part II, the Summary Report, establishes the framework and rationale for evaluation of seismic risks and hazards in the region. Part II of the Seismic Safety Element, the Policy Report, has been prepared as a "model" report designed to address seismic hazards as delineated in the Technical Report. The intent has been to develop a planning tool for use by county and city governments in implementing their seismic safety elements. The planning process utilized to develop the Element was developed through the efforts of Technical and Policy Committees, composed of both staff and elected representatives from Cities, Counties, and Special Districts or Areawide Planning Organizations in cooperation with the consulting firms of Envicom Corporation and Quinton-Redgate.[87]

Discussion

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

The V-1 seismic zone, which is characterized by a relatively thick section of sedimentary rock overlying a granitic basement, has "low" risks for shaking hazards, "minimal" risk for landslides, "low to moderate" risk for subsidence, "low" risks for liquefaction and "minimal" risk for seiching.[88]

The distance to area faults; i.e., the Clovis Group, Pond-Poso, and San Andreas, expected sources of significant shaking, is sufficiently great that shaking effects should be minimal.

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.

No Impact/Less Than Significant Impact: No substantial faults are known to traverse Tulare County according to the Alquist-Priolo Earthquake Fault Zoning Maps and the State of California Department of Conservation.[89] The nearest major fault line, which lies outside of Tulare County, is the San Andreas fault zones; approximately 56 miles southwest of the proposed Project site. According to the Five County Seismic Safety Element (FCSSE), Tulare County is located in the V-1 zone. This zone includes most of the eastern San Joaquin Valley, and is characterized by a relatively thin section of sedimentary rock overlying a granitic basement. Amplification of shaking that would affect low to medium-rise structures is relatively high, but the distance of the faults that are expected sources of the shaking is sufficiently great that the effects should be minimal. The requirements of Zone II of the Uniform Building Code should be adequate for normal facilities.[90]

[87] Five County Seismic Safety Element. Fresno, Kings, Madera, Mariposa, & Tulare Counties. 1974. Pages 4-7. Prepared by Envicom Corporation. Available at: https://tularecounty.ca.gov/rma/planning-building/environmental-planning/environmental-planning-resources/five-county-seismic-safety-element-1974/

[88] Ibid. Summary of Seismic Hazards & Safety Recommendations.

[89] Goshen Community Plan Draft EIR. Excerpted from Figure 3.6-.1 Page. 3.6-8.

[90] Five County Seismic Safety Element, Summary & Policy Recommendations II. 1974. Pages 3 and 15.

Although the proposed Project is located in an area of relatively low seismic activity, the proposed Project site has a low chance of being affected by ground shaking from distant faults. The potential for strong seismic ground shaking on the proposed Project site is not a significant environmental concern due to the infrequent seismic activity of the area and the distance to the faults. The proposed Project does not propose any components which could cause substantial adverse effects in the event of an earthquake. Additionally, the proposed Project has no potential to cause the rupture of an earthquake fault indirectly or directly. As noted earlier, no Alquist-Priolo Earthquake Fault Zones or known active faults are in or near the proposed Project area. As such, the risk of rupture of a known earthquake fault will be *less than significant*..

ii. Strong seismic ground shaking?

Less Than Significant Impact: As noted in the Goshen Community Plan Update Draft EIR, "Tulare County is characterized as Severity Zone "Nil" and "Low" for ground-shaking events.[91] De-aggregation of the hazard was performed by using the USGS Interactive De-aggregation website and it was found that all faults within a 20 mile radius are quaternary faults between the ages of 750,000 and 1.6 million years old. [92] Quaternary faults are defined as those faults that have been recognized at the surface and which have evidence of movement in the past 1.6 million years, which is the duration of the Quaternary Period.[93] Due to the distance and types of faults in the proposed Project vicinity, strong ground shaking is unlikely." [94] The proposed Project area is located in a seismic zone which is sufficiently far from known faults and consists primarily of a stable geological formation. As such, the impact due to ground shaking would be less than significant.

iii. Seismic-related ground failure, including liquefaction?

No Impact: As noted earlier, the proposed Project site is located in the Five County Seismic Safety Element's V-2 zone, and therefore, has a low risk of liquefaction. No subsidence-prone soils or oil or gas production occurs within the proposed Project site. The risk of liquefaction within Tulare County outside of wetland areas is low because the soil types are generally unsuitable for liquefaction. The area's low potential for seismic activity would further reduce the likelihood of liquefaction occurrence. As noted in the Goshen Community Plan Update Draft EIR, "The proposed Project area [the Goshen UDB] is not located within an area mapped to have a potential for soil liquefaction. Liquefaction in soils and sediments occurs during earthquake events, when soil material is transformed from a solid state to a liquid state, generated by an increase in pressure between pore space and soil particles. Earthquake induced liquefaction typically occurs in low-lying areas with soils or sediments composed of unconsolidated, saturated, clay-free sands and silts, but it can also occur in dry, granular soils or saturated soils with partial clay content."[95] As the proposed Project site is within an area of low seismic activity, and the soils associated with the project area are not suitable for liquefaction, there will be *no impacts.*

[91] Tulare County General Plan 2030 Update, *Part 1-Goals and Policies Report.* Page 253.

[92] Goshen Community Plan Draft EIR. Page. 3.6-11

[93] Ibid.

[94] Op Cit.

[95] Ibid. 3.6-12.

iv. Landslides?

No Impact: The proposed Project is located in the Five County Seismic Safety Element's V-2 zone and therefore will have a minimal risk of landslides. Goshen is located on the Valley floor, a flat area with minimal slopes. The Valley floor throughout Tulare County is considered at insignificant risk of small landslides. The proposed Project site is 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 no risk of landslides within or near the proposed Project area. There will be *no impact.*

The existing proposed Project area is not located within a published Earthquake Fault Zone and the potential for ground rupture is low. As earthquakes are possible throughout the State of California, the proposed Project will be required to comply with the Tulare County General Plan and Zone II of the Uniform Building Code. In addition, the existing proposed Project area is not located within an area mapped to have a potential for soil liquefaction. As the proposed Project area is relatively flat, there is no potential for landslides. Therefore, the proposed Project will result in a less than significant impact.

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

Less Than Significant Impact: As the proposed 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 associated with erosion will be temporary, short-term, intermittent, and subject to best management practices (BMPs) required by SWPPP (which are developed to prevent significant impacts related to erosion from construction-related activities). Because impacts related to erosion would be temporary, short-term, intermittent, and limited to construction; and because required best management practices would prevent significant impacts related to erosion, the impact will be *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?

No Impact: The soils associated with the proposed Project site is considered stable and have a low capacity for landslides, lateral spreading, subsidence, liquefaction, or collapse. Because the proposed Project area is stable, the proposed 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. As noted earlier, the proposed Project is located in the Five County Seismic Safety Element's V-2 zone, as such, the proposed Project site has a low to moderate risk of subsidence or liquefaction. Therefore, the proposed Project will result in *no 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?

No Impact: According to the USDA, NRCS, and the Soil Survey of Tulare County, the proposed Project Site is located on Akers and Calgro soils.[96] They are located on a site with a 0-2% slope and are

[96] United States Department of Agriculture (USDA). Natural Resources Conservation Service (NRCS). Soil Survey of Tulare County. Accessed April 2023 at: https://websoilsurvey.sc.egov.usda.gov/app/WebSoilSurvey.aspx.

moderately well drained. Generally, these soils are alluvium derived mainly from granitic rock and have a clay content. Both soils contain a clay content of 8-18%. Expansive soil contains clay contents of at least 60% to allow higher water absorption. Therefore, the native soils identified on the site do not contain the characteristics of an expansive soil. As the soils associated with the proposed Project do not exhibit shrink-swell behavior, implementation of the proposed Project will pose no risk to life or property caused by expansive soils and there will be *no 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 Project's residential development will tie into the Goshen Community Service District's existing sewer service system. Therefore, there will 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 known unique geologic features and no known paleontological resources located within the proposed Project area. Project construction-related activities are not be anticipated to disturb any paleontological resources not previously disturbed; however unlikely, is the possibility that subsurface paleontological resources may exist. As such, implementation of Mitigation Measures CUL-1 and CUL-2, as specified in item V Cultural Resources (as applicable), will ensure that any impacts resulting from implementation of the proposed Project will *be less than significant with mitigation incorporation*.

Cumulative Impacts:

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, Tulare County General Plan Background Report, Tulare County 2030 General Plan EIR, and/or Goshen Community Plan Update and EIR. The proposed Project will not increase geotechnical related impacts off-site. Therefore, no Project-specific or Cumulative Impacts related to this Checklist Item will occur.

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?	☐	☐	☐	☑

The discussions regarding Environmental Setting, CEQA requirements, Regulatory Setting, Chapter 3.7 Greenhouse Gases, Chapters 4 through 9, Appendices "A" through "I", etc., contained in the Goshen Community Plan Update and Environmental Impact Report are incorporated herein in their entirety. Where necessary and if available, additional site-specific facts, data, information, etc., are included in this discussion and Appendix A.

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 33ºC cooler.[97] 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.

The effect of greenhouse gasses on earth's temperature is equivalent to the way a greenhouse retains heat. Common GHGs include water vapor, carbon dioxide, methane, nitrous oxide, ozone, chlorofluorocarbons, hydro chlorofluorocarbons, hydrofluorocarbons, pre-fluorocarbons, sulfur, and hexafluoride. 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. 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 from AB 32 are summarized in **Table 3-11**. 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.

[97] NASA, Global Climate Change, What is the greenhouse effect? Available online at: https://climate.nasa.gov/faq/19/what-is-the-greenhouse-effect/

Table 3-11. Greenhouse Gasses; Source: EPA, Intergovernmental Panel on Climate Change

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 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., the 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 are 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 the 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 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, and at least one hydrogen atom.	14 years	140 to 11,700	Powerful greenhouse gases 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.

Greenhouse Gas	Description and Physical Properties	Lifetime	GWP	Sources
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, 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.

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 thirteen 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.

"In 2007, Tulare County generated approximately 5.2 million tonnes of Carbon Dioxide Equivalent (CO_2e). The largest portion of these emissions (63 percent) is attributed to dairies/feedlots, while the second largest portion (16 percent) is from mobile sources, the third largest portion (11%) is from electricity sources."[98] Table 6-7 [**Table 3-12** in this document] identifies Tulare County's emissions by sector in 2007."[99]

Table 3-12
GHG Emissions by Sector in 2007[100]

Sector	CO2e (tons/year)	% of Total
Electricity	542,690	11%
Natural Gas	321,020	6%
Mobile Sources	822,230	16%
Dairy/Feedlots	3,294,870	63%
Solid Waste	227,250	4%
Total	5,208,060	100%
Per Capita	*36.1*	

[98] Op. Cit. 6-36.
[99] Op. Cit. 6-38.
[100] Op. Cit.

"In 2030, Tulare County is forecast to generate approximately 6.1 million tonnes of CO2e. The largest portion of these emissions (59%) is attributed to dairies/feedlots, while the second largest portion (20%) is from mobile sources, and third largest portion (11%) is from electricity as shown on Table 6-8 [**Table 3-13** in this document]. Per capita emissions in 2030 are projected to be approximately 27 tonnes of CO2e per resident."[101]

Table 3-13
GHG Emissions by Sector in 2030[102]

Sector	CO_{2e} (tons/year)	% of Total
Electricity	660,560	11%
Natural Gas	384,410	6%
Mobile Sources	1,212,370	20%
Dairy/Feedlots	3,601,390	59%
Solid Waste	246,750	4%
Total	6,105,480	100%
Per Capita	*27.4*	

Regulatory Setting

Federal

While climate change has been a concern since at least 1988, as evidenced by the establishment of the United Nations and World Meteorological Organization's Intergovernmental Panel on Climate Change (IPCC), the efforts devoted to greenhouse gas (GHG) emissions reduction and climate change research and policy have increased dramatically in recent years.

The USEPA Mandatory Reporting Rule (40 CFR Part 98), which became effective December 29, 2009, requires that all facilities that emit more than 25,000 metric tons CO2-equivalent per year beginning in 2010, report their emissions on an annual basis. On May 13, 2010, the USEPA issued a final rule that established an approach to addressing GHG emissions from stationary sources under the CAA permitting programs. The final rule set thresholds for GHG emissions that define when permits under the New Source Review Prevention of Significant Deterioration and Title V Operating Permit programs are required for new and existing industrial facilities.

In addition, the Supreme Court decision in Massachusetts v. EPA (Supreme Court Case 05-1120) found that the USEPA has the authority to list GHGs as pollutants and to regulate emissions of GHGs under the CAA. On April 17, 2009, the USEPA found that CO2, CH4, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride may contribute to air pollution and may endanger public health and welfare. This finding may result in the USEPA regulating GHG emissions; however, to date the USEPA has not proposed regulations based on this finding.

[101] Op. Cit.
[102] Op. Cit.

State

AB 1493

In 2002, with the passage of Assembly Bill 1493 (AB 1493), California launched an innovative and pro-active approach to dealing with GHG emissions and climate change at the state level. AB 1493 requires the Air Resources Board (ARB) to develop and implement regulations to reduce automobile and light truck GHG emissions; these regulations applied to automobiles and light trucks beginning with the 2009 model year.

Executive Order S-3-05

This executive order established a target to reduce GHG emissions by 80 percent below 1990 levels by 2050. This Order sets the following goals for statewide GHG emissions:

- Reduce to 2000 levels by 2010
- Reduce to 1990 levels by 2020
- Reduce to 80 percent below 1990 levels by 2050

Additionally, it ordered the Secretary of the California Environmental Protection Agency (Cal EPA) to coordinate oversight of the efforts.

AB 32

"In 2006, the Legislature passed the California Global Warming Solutions Act of 2006 [Assembly Bill 32 (AB 32 Opens in New Window)], which created a comprehensive, multi-year program to reduce greenhouse gas (GHG) emissions in California. AB 32 required the California Air Resources Board (ARB or Board) to develop a Scoping Plan that describes the approach California will take to reduce GHGs to achieve the goal of reducing emissions to 1990 levels by 2020. The Scoping Plan was first approved by the Board in 2008 and must be updated every five years. Since 2008, there have been two updates to the Scoping Plan. Each of the Scoping Plans have included a suite of policies to help the State achieve its GHG targets, in large part leveraging existing programs whose primary goal is to reduce harmful air pollution."[103]

"The First Update to the Scoping Plan was approved by the Board on May 22, 2014, and builds upon the initial Scoping Plan with new strategies and recommendations. The First Update identifies opportunities to leverage existing and new funds to further drive GHG emission reductions through strategic planning and targeted low carbon investments. The First Update defines ARB's climate change priorities for the next five years, and also sets the groundwork to reach long-term goals set forth in Executive Orders S-3-05 and B-16-2012. The Update highlights California's progress toward meeting the "near-term" 2020 GHG emission reduction goals defined in the initial Scoping Plan. It also evaluates how to align the State's "longer-term" GHG reduction strategies with other State policy priorities for water, waste, natural resources, clean energy, transportation, and land use."[104]

[103] ARB. AB 32 Climate Change Scoping Plan. Accessed April 2023 at: https://ww2.arb.ca.gov/our-work/programs/ab-32-climate-change-scoping-plan.

[104] ARB. First Update to the AB 32 Scoping Plan. Accessed April 2023 at: https://ww2.arb.ca.gov/our-work/programs/ab-32-climate-change-scoping-plan/2013-scoping-plan-documents.

"On April 29, 2015, the Governor issued Executive Order B-30-15 establishing a mid-term GHG reduction target for California of 40 percent below 1990 levels by 2030. All state agencies with jurisdiction over sources of GHG emissions were directed to implement measures to achieve reductions of GHG emissions to meet the 2030 and 2050 targets. ARB was directed to update the AB 32 Scoping Plan to reflect the 2030 target, and therefore, is moving forward with the update process. The mid-term target is critical to help frame the suite of policy measures, regulations, planning efforts, and investments in clean technologies and infrastructure needed to continue driving down emissions."[105]

"This Scoping Plan for Achieving California's 2030 Greenhouse Gas Target (Scoping Plan or 2017 Scoping Plan) identifies how the State can reach our 2030 climate target to reduce greenhouse gas (GHG) emissions by 40 percent from 1990 levels, and substantially advance toward our 2050 climate goal to reduce GHG emissions by 80 percent below 1990 levels. By selecting and pursuing a sustainable and clean economy path for 2030, the State will continue to successfully execute existing programs, demonstrate the coupling of economic growth and environmental progress, and enhance new opportunities for engagement within the State to address and prepare for climate change."[106]

"This Scoping Plan builds on and integrates efforts already underway to reduce the State's GHG, criteria pollutant, and toxic air contaminant emissions. Successful implementation of existing programs has put California on track to achieve the 2020 target. Programs such as the Low Carbon Fuel Standard and Renewables Portfolio Standard are delivering cleaner fuels and energy, the Advanced Clean Cars Program has put more than a quarter million clean vehicles on the road, and the Sustainable Freight Action Plan will result in efficient and cleaner systems to move goods throughout the State. Enhancing and implementing these ongoing efforts puts California on the path to achieving the 2030 target. This Scoping Plan relies on these, and other, foundational programs paired with an extended, more stringent Cap-and-Trade Program, to deliver climate, air quality, and other benefits."[107]

The 2022 Scoping Plan for Achieving Carbon Neutrality (2022 Scoping Plan) lays out a path to achieve targets for carbon neutrality and reduce anthropogenic greenhouse gas (GHG) emissions by 85 percent below 1990 levels no later than 2045, as directed by Assembly Bill 1279.[108]

SB 375

SB 375 seeks to use the regional transportation process to achieve AB 32 goals, streamline residential projects that help AB 32 through CEQA, and coordinate regional housing needs with the regional planning process. Additionally, it sets emission reduction targets for passenger vehicles and light trucks from 2020 to 2035.

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.

[105] ARB. Scoping Plan Update to Reflect 2030 Target. Accessed April 2023 at: https://www.arb.ca.gov/cc/scopingplan/scopingplan.htm.

[106] ARB. California's 2017 Climate Change Scoping Plan. Page 1. Accessed April 2023 at: https://ww2.arb.ca.gov/our-work/programs/ab-32-climate-change-scoping-plan/2017-scoping-plan-documents.

[107] Ibid.

[108] California Air Resources Board. 2022 Scoping Plan Document. Available Online at: https://ww2.arb.ca.gov/our-work/programs/ab-32-climate-change-scoping-plan/2022-scoping-plan-documents.

California Environmental Quality Act (CEQA) Requirements

Section 15064.4 Determining the Significance of Impacts from Greenhouse Gas Emissions

(a) The determination of the significance of greenhouse gas emissions calls for a careful judgment by the lead agency consistent with the provisions in section 15064. A lead agency should make a good-faith effort, based to the extent possible on scientific and factual data, to describe, calculate or estimate the amount of greenhouse gas emissions resulting from a project. A lead agency shall have discretion to determine, in the context of a particular project, whether to:
    (1) Use a model or methodology to quantify greenhouse gas emissions resulting from a project, and which model or methodology to use. The lead agency has discretion to select the model or methodology it considers most appropriate provided it supports its decision with substantial evidence. The lead agency should explain the limitations of the particular model or methodology selected for use; and/or
    (2) Rely on a qualitative analysis or performance based standards.

(b) A lead agency should consider the following factors, among others, when assessing the significance of impacts from greenhouse gas emissions on the environment:
    (1) The extent to which the project may increase or reduce greenhouse gas emissions as compared to the existing environmental setting;
    (2) Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project.
    (3) The extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of greenhouse gas emissions. Such requirements must be adopted by the relevant public agency through a public review process and must reduce or mitigate the project's incremental contribution of greenhouse gas emissions. If there is substantial evidence that the possible effects of a particular project are still cumulatively considerable notwithstanding compliance with the adopted regulations or requirements, an EIR must be prepared for the project.[109]

California Air Pollution Control Officers Association (CAPCOA)

"In January 2008, the California Air Pollution Control Officers Association (CAPCOA) issued a "white paper" on evaluating GHG emissions under CEQA (CAPCOA, 2008). The CAPCOA white paper strategies are not guidelines and have not been adopted by any regulatory agency; rather, the paper is offered as a resource to assist lead agencies in considering climate change in environmental documents."[110]

The California Association of Air Pollution Control Officers (CAPCOA) represents all thirty-five local air quality agencies throughout California. CAPCOA, which has been in existence since 1975, is dedicated to protecting the public health and providing clean air for all our residents and visitors to breathe, and initiated the Greenhouse Gas Reduction Exchange.[111]

[109] California Environmental Quality Act (CEQA). Section 15064.4 Determining the Significance of Impacts from Greenhouse Gas Emissions. Accessed April 2023 at: https://www.califaep.org/statute_and_guidelines.php

[110] Op. Cit. Page 6-28. Background Report citation: CEQA and Climate Change: Evaluating and Addressing Greenhouse Gas Emissions from Projects Subject to the California Environmental Quality Act. January 2008.

[111] California Air Pollution Control Officers Association (CAPCOA). Accessed April 2023 at: http://www.capcoa.org/

"The Greenhouse Gas Reduction Exchange (GHG Rx) is a registry and information exchange for greenhouse gas emissions reduction credits designed specifically to benefit the state of California. The GHG Rx is a trusted source of locally generated credits from projects within California, and facilitates communication between those who create the credits, potential buyers, and funding organizations."[112] Four public workshops were held throughout the state including in the SJVAPCD. The mission is to provide a trusted source of high quality California-based greenhouse gas credits to keep investments, jobs, and benefits in-state, through an Exchange with integrity, transparency, low transaction costs and exceptional customer service.[113]

Regional

San Joaquin Valley Air Pollution Control District

The Air District is made up of eight counties in California's Central Valley: San Joaquin, Stanislaus, Merced, Madera, Fresno, Kings, Tulare and the San Joaquin Valley Air Basin portion of Kern. "The San Joaquin Valley Air District is a public health agency whose mission is to improve the health and quality of life for all Valley residents through efficient, effective and entrepreneurial air quality-management strategies."[114]

The Air District adopted the *Climate Change Action Plan* (CCAP) in August 2008. "The CCAP directed the District Air Pollution Control Officer to develop guidance to assist Lead Agencies, project proponents, permit applicants, and interested parties in assessing and reducing the impacts of project specific greenhouse gas (GHG) emissions on global climate change.

On December 17, 2009, the San Joaquin Valley Air Pollution Control District (District) adopted the guidance: Guidance for Valley Land-use Agencies in Addressing GHG Emission Impacts for New Projects under CEQA, and the policy: District Policy – Addressing GHG Emission Impacts for Stationary Source Projects Under CEQA When Serving as the Lead Agency. The guidance and policy rely on the use of performance based standards, otherwise known as Best Performance Standards (BPS), to assess significance of project specific greenhouse gas emissions on global climate change during the environmental review process, as required by CEQA.

Use of BPS is a method of streamlining the CEQA process of determining significance and is not a required emission reduction measure. Projects implementing BPS would be determined to have a less than cumulatively significant impact. Otherwise, demonstration of a 29 percent reduction in GHG emissions, from business-as-usual, is required to determine that a project would have a less than cumulatively significant impact. The guidance does not limit a lead agency's authority in establishing its own process and guidance for determining significance of project related impacts on global climate change."[115]

The Air District's *Guidance for Valley Land-use Agencies in Addressing GHG Emission Impacts for New Project under CEQA* document provides guidance to lead agencies for evaluating the significance of project-specific and cumulative impacts related to GHG emissions.[116] This guidance established the

[112] Ibid. See "CAPCOA GHG RX" tab

[113] CAPCOA. CAPCOA Greenhouse Gas Reduction Exchange. Accessed April 2023 at: http://www.ghgrx.org/

[114] Air District. About the District. Accessed April 2023 at: Website: https://ww2.valleyair.org/about/

[115] Air District. Climate Change Action Plan. Accessed April 2023 at: http://www.valleyair.org/Programs/CCAP/CCAP_menu.htm

[116] Air District. Guidance for Valley Land-use Agencies in Addressing GHG Emission Impacts for New Project under CEQA. Accessed April 2023 at: http://www.valleyair.org/Programs/CCAP/12-17-09/3%20CCAP%20-%20FINAL%20LU%20Guidance%20-%20Dec%2017%202009.pdf

following process for evaluating the significance of project-specific GHG emissions on global climate change:

- "Projects determined to be exempt from the requirements of CEQA would be determined to have a less than significant individual and cumulative impact for GHG emissions and would not require further environmental review, including analysis of project specific GHG emissions. Projects exempt under CEQA would be evaluated consistent with established rules and regulations governing project approval and would not be required to implement [Best Performance Practices] BPS.
- Projects complying with an approved GHG emission reduction plan or GHG mitigation program which avoids or substantially reduces GHG emissions within the geographic area in which the project is located would be determined to have a less than significant individual and cumulative impact for GHG emissions. Such plans or programs must be specified in law or approved by the lead agency with jurisdiction over the affected resource and supported by a CEQA compliant environmental review document adopted by the lead agency. Projects complying with an approved GHG emission reduction plan or GHG mitigation program would not be required to implement BPS.
- Projects implementing Best Performance Standards would not require quantification of project specific GHG emissions. Consistent with CEQA Guideline, such projects would be determined to have a less than significant individual and cumulative impact for GHG emissions.
- Projects not implementing Best Performance Standards would require quantification of project specific GHG emissions and demonstration that project specific GHG emissions would be reduced or mitigated by at least 29%, compared to Business-As-Usual (BAU), including GHG emission reductions achieved since the 2002-2004 baseline period. Projects achieving at least a 29% GHG emission reduction compared to BAU would be determined to have a less than significant individual and cumulative impact for GHG.
- Notwithstanding any of the above provisions, projects requiring preparation of an Environmental Impact Report for any other reason would require quantification of project specific GHG emissions. Projects implementing BPS or achieving at least a 29% GHG emission reduction compared to BAU would be determined to have a less than significant individual and cumulative impact for GHG."[117]

Local

County of Tulare Climate Action Plan (CAP)

The Tulare County Climate Action Plan (CAP) serves as a guiding document for County of Tulare ("County") actions to reduce greenhouse gas emissions and adapt to the potential effects of climate change. The CAP is an implementation measure of the 2030 General Plan Update. The General Plan provides the supporting framework for development in the County to produce fewer greenhouse gas emissions during Plan buildout. The CAP builds on the General Plan's framework with more specific actions that will be applied to achieve emission reduction targets consistent with California legislation.[118]

[117] Ibid. 4 and 5.

[118] Tulare County Climate Action Plan. Page 1. Accessed April 2023 at: http://generalplan.co.tulare.ca.us/documents/GeneralPlan2010/ClimateActionPlan.pdf

"The County of Tulare (County) adopted the Tulare County Climate Action Plan (CAP) in August 2012. The CAP includes provisions for an update when the State of California Air Resources Board (CARB) adopts a Scoping Plan Update that provides post-2020 targets for the State and an updated strategy for achieving a 2030 target. Governor Brown signed Senate Bill (SB) 32 on September 8, 2016, which contains the new 2030 target. The CARB 2017 Scoping Plan Update for the Senate Bill (SB) 32 2030 targets was adopted by the CARB on December 14, 2017 which provided new emission inventories and a comprehensive strategy for achieving the 2030 target (CARB 2017a). With the adoption of the 2017 Scoping Plan, the County proceeded with the 2018 CAP Update that is provided in this document.

The 2018 CAP Update incorporates new baseline and future year inventories to reflect the latest information and updates the County's strategy to address the SB 32 2030 target. The 2030 target requires the State to reduce emissions by 40 percent below 1990 levels from the 2017 Scoping Plan and County data. The CAP identifies the County's fair share of reductions required to maintain consistency with the State target."[119]

Tulare County General Plan 2030 Update

The Tulare County General Plan contains the following: Enhancement of the greenhouse effect can occur when concentrations of GHGs exceed the natural concentrations in the atmosphere. Of these gases, CO2 and methane are emitted in the greatest quantities from human activities. Emissions of CO2 are largely by-products of fossil fuel combustion, whereas methane primarily results from off-gassing associated with agricultural practices and landfills. SF6 is a GHG commonly used in the utility industry as an insulating gas in transformers and other electronic equipment. There is widespread international scientific agreement that human-caused increases in GHGs has and will continue to contribute to global warming, although there is much uncertainty concerning the magnitude and rate of the warming.[120]

The 2030 Tulare County General Plan 2030 Update contains the following goals and policies related to GHG emissions that may apply to the proposed Project. Policies in the Goshen Community Plan are adopted from the Tulare County General Plan:

- *AQ-1.7 Support Statewide Climate Change Solutions.* The County shall monitor and support the efforts of Cal/EPA, CARB, and the SJVAPCD, under AB 32 (Health and Safety Code §38501 et seq.), to develop a recommended list of emission reduction strategies. As appropriate, the County will evaluate each new project under the updated General Plan to determine its consistency with the emission reduction strategies.
- *AQ-1.8 Greenhouse Gas Emissions Reduction Plan/Climate Action Plan.* The County will develop a Greenhouse Gas Emissions Reduction Plan (Plan) that identifies greenhouse gas emissions within the County as well as ways to reduce those emissions. The Plan will incorporate the requirements adopted by the California Air Resources Board specific to this issue. In addition, the County will work with the Tulare County Association of Governments and other applicable agencies to include the following key items in the regional planning efforts:

[119] Ibid.

[120] Op. Cit. 6-31.

1. Inventory all known, or reasonably discoverable, sources of greenhouse gases in the County,
2. Inventory the greenhouse gas emissions in the most current year available, and those projected for the year 2020
3. Set a target for the reduction of emissions attributable to the County's discretionary land use decisions and its internal government operations.

- *AQ-3.2 Infill Near Employment.* The County shall identify opportunities for infill development projects near employment areas within all unincorporated communities and hamlets to reduce vehicle trips.
- *AQ-3.3 Street Design.* The County shall promote street design that provides an environment which encourages transit use, biking, and pedestrian movements.
- *AQ-3.4 Landscape.* The County shall encourage the use of ecologically based landscape design principles that can improve local air quality by absorbing CO2, producing oxygen, providing shade that reduces energy required for cooling, and filtering particulates. These principles include, but are not limited to, the incorporation of parks, landscaped medians, and landscaping within development.
- *AQ-3.5 Alternative Energy Design.* The County shall encourage all new development, including rehabilitation, renovation, and redevelopment, to incorporate energy conservation and green building practices to maximum extent feasible. Such practices include, but are not limited to: building orientation and shading, landscaping, and the use of active and passive solar heating and water systems.
- *ERM-4.1 Energy Conservation and Efficiency Measures.* The County shall encourage the use of solar energy, solar hot water panels, and other energy conservation and efficiency features in new construction and renovation of existing structures in accordance with State law.
- *ERM-4.8 Energy Efficiency Standards.* The County shall encourage renovations and new development to incorporate energy efficiency and conservation measures that exceed State Title 24 standards. When feasible, the County shall offer incentives for use of energy reduction measures such as expedited permit processing, reduced fees, and technical assistance.

Discussion

GHG's Assessed

This analysis was restricted to GHGs identified by AB 32, which include carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulfur hexafluoride (SF_6), and nitrogen trifluoride (NF_3). The proposed project would generate a variety of GHGs, including several defined by AB 32 such as CO_2, CH_4, and N_2O.

Water vapor could be emitted from evaporated water used for landscaping and other uses, but this is not a significant impact because water vapor concentrations in the upper atmosphere are primarily due to climate feedbacks rather than emissions from project-related activities.

Ozone is a GHG; however, unlike the other GHGs, ozone in the troposphere is relatively short-lived and can be reduced in the troposphere on a daily basis. Stratospheric ozone can be reduced through reactions with other pollutants.

Certain GHGs defined by AB 32 would not be emitted by the project. Perfluorocarbons and sulfur hexafluoride are typically used in industrial applications, none of which would be used by the project. Therefore, it is not anticipated that the project would emit perfluorocarbons or sulfur hexafluoride.

Certain GHGs defined by AB 32 would not be emitted by the project. HFCs, PFCs, SF_6, and NF_3 are typically used in certain industrial applications, none of which would be used for typical commercial or gas station operations. Therefore, it is not anticipated that the proposed project would emit those GHGs.

GHG emissions associated with the proposed project construction as well as future operations were estimated using CO_2 equivalent (CO_2e) emissions as a proxy for all GHG emissions. In order to obtain the CO_2e, an individual GHG is multiplied by its Global Warming Potential (GWP). The GWP designates on a pound for pound basis the potency of the GHG compared to CO_2.

Thresholds of Significance

SJVAPCD

The SJVAPCD's Guidance for Valley Land-use Agencies in Addressing GHG Emission Impacts for New Projects under CEQA presents a tiered approach to analyzing project significance with respect to GHG emissions. Project GHG emissions are considered less than significant if they can meet any of the following conditions, evaluated in the order presented:

- Project is exempt from CEQA requirements;
- Project complies with an approved GHG emission reduction plan or GHG mitigation program;
- Project implements Best Performance Standards (BPS); or
- Project demonstrates that specific GHG emissions would be reduced or mitigated by at least 29 percent compared to Business-as-Usual (BAU), including GHG emission reductions achieved since the 2002-2004 baseline period.

The SJVAPCD's Guidance for Valley Land-use Agencies in Addressing GHG Emission Impacts for New Projects under CEQA includes thresholds based on whether the project will reduce or mitigate GHG levels by 29 percent from BAU levels compared with 2005 levels by 2020. This level of GHG reduction is based on the target established by CARB's AB 32 Scoping Plan, approved in 2008. First occupancy at the project site is expected to occur in 2023. This date is past the AB 32 2020 milestone year. Given recent legislative and legal scrutiny on post-2020 compliance, additional discussion is provided to show progress towards GHG reduction goals identified in CARB's 2017 Scoping Plan for the year 2030. Additionally, although not included in a formal GHG reduction plan, Executive Order S-3-05 also includes a goal of reducing GHG emissions 80 percent below 1990 levels by 2050 and Executive Order B-55-18 set the goal to achieve carbon neutrality statewide by 2045.

Newhall Ranch

The California Supreme Court decision in the *Center for Biological Diversity et al. vs. California Department of Fish and Wildlife, the Newhall Land and Farming Company* (62 Cal.4th 204 [2015], and known as the

Newhall Ranch decision), confirmed that the use of BAU analysis (e.g., 29 percent below BAU), a performance-based approach, would be satisfactory. However, for a project-level analysis that uses CARB's statewide BAU targets, substantial evidence must be presented to support the use of those targets for a particular project at a specific location. The court noted that this may require examination of the data behind the statewide model and adjustment to the levels of reduction from BAU used for project evaluation. To date, neither CARB nor any lead agencies have provided any guidance on how to adjust AB 32's statewide BAU target for use at the project level.

The regulations in the State's 2008 Scoping Plan have been adopted and the State is on track to meet the 2020 target and achieve continued progress towards meeting the 2017 Scoping Plan target for 2030.
In the Newhall case, the Supreme Court was concerned that new development may need to reduce GHG emissions more than existing development to demonstrate it is meeting its fair share of reductions. New development does do more than its fair share through compliance with enhanced regulations, particularly with respect to motor vehicles, energy efficiency, and electricity generation. If no additional reductions are required from an individual project beyond that achieved by regulations, then the amount needed to reach the 2020 target is the amount of GHG emissions a project must reduce to comply with Statewide goals.

Project-level Thresholds

Section 15064.4(b) of the CEQA Guidelines' amendments for GHG emissions states that a lead agency may take into account the following three considerations in assessing the significance of impacts from GHG emissions.

- Consideration #1: The extent to which the project may increase or reduce GHG emissions as compared to the existing environmental setting.
- Consideration #2: Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project.
- Consideration #3: The extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions. Such regulations or requirements must be adopted by the relevant public agency through a public review process and must include specific requirements that reduce or mitigate the project's incremental contribution of GHG emissions. If there is substantial evidence that the possible effects of a particular project are still cumulatively considerable notwithstanding compliance with the adopted regulations or requirements, an Environmental Impact Report (EIR) must be prepared for the project.

In addition, Section 15064.7(c) of the CEQA Guidelines specifies that "[w]hen adopting or using thresholds of significance, a lead agency may consider thresholds of significance previously adopted or recommended by other public agencies, or recommended by experts, provided the decision of the lead agency to adopt such thresholds is supported by substantial evidence" (14 CCR 15064.7(c)). The CEQA Guidelines also clarify that the effects of GHG emissions are cumulative and should be analyzed in the context of CEQA's requirements for cumulative impact analysis (see CEQA Guidelines § 15130(f)).

Per CEQA Guidelines § 15064(h)(3), a project's incremental contribution to a cumulative impact can be found not cumulatively considerable if the project would comply with an approved plan or mitigation program that provides specific requirements that would avoid or substantially lessen the cumulative problem within the geographic area of the project. To qualify, such plans or programs must be specified

in law or adopted by the public agency with jurisdiction over the affected resources through a public review process to implement, interpret, or make specific the law enforced or administered by the public agency. Examples of such programs include a "water quality control plan, air quality attainment or maintenance plan, integrated waste management plan, habitat conservation plan, natural community conservation plans [and] plans or regulations for the reduction of greenhouse gas emissions." Put another way, CEQA Guidelines § 15064(h)(3) allows a lead agency to make a finding of less than significant for GHG emissions if a project complies with adopted programs, plans, policies and/or other regulatory strategies to reduce GHG emissions.

The significance of the project's GHG emissions is evaluated consistent with CEQA Guidelines §15064.4(b)(2) by considering whether the project complies with applicable plans, policies, regulations and requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions.

The Tulare County CAP aims to reduce GHG emissions from development projects in Tulare County. The CAP builds on state and regional policies aimed at reducing GHG emissions consistent with the SB 32 2030 GHG reduction target. The CAP relies on policies of the Tulare County General Plan to guide development projects. In addition, the CAP provides specific guidelines for determining if new development projects are consistent with the CAP. The CAP includes a progress report with metrics and benchmarks for tracking progress toward meeting the GHG reduction targets. The County's progress is on track for all metrics.

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 analysis below relies on the guidance and expertise of the Air District in addressing GHG emissions and follows the Air District's recommendation for evaluation of potential impacts on GHG emissions as provided in their guidance documents: Guidance for Assessing and Mitigating Air Quality Impacts (GAMAQI) and Guidance for Valley Land-use Agencies in Addressing GHG Emission Impacts for New Project under CEQA. As previously noted, the Air District has determined that projects complying with an approved GHG emission reduction plan or GHG mitigation program, which avoids or substantially reduces GHG emissions within the geographic area in which the project is located, would be determined to have a less than significant individual and cumulative impact for GHG emissions.

The Tulare County CAP was initially adopted in August 2012 and serves as a guiding document for County actions to reduce GHG emissions and adapt to the potential effects of climate change. The CAP is an implementation measure of the Tulare County General Plan 2030 Update (General Plan) which provides the supporting framework for development in the County. The CAP builds on the General Plan's framework with more specific actions that will be applied to achieve emission reduction targets required by State of California legislation. The General Plan fulfills many sustainability and GHG reduction objectives at the program level. The CAP identifies the policies from the various General Plan elements that promote more efficient development, and reduce travel and energy consumption. The CAP requires projects achieve reductions in excess of the reduction identified in the Scoping Plan. The CAP identifies General Plan policies in place to assist the County in reducing GHG emissions. The 2018 CAP Update incorporates new baseline and future year inventories to reflect the latest information and updates the County's strategy to address the SB 32 2030 target.

The CAP identifies the County's fair share of reductions required to maintain consistency with the State's target.

The CAP thresholds for determining consistency with the CAP are 500 dwelling units, 100,000 square feet of retail, or equivalent intensity for other uses. These thresholds are the amounts currently required from development related sources within the County to demonstrate consistency with SB 32 2030 targets. Projects exceeding the consistency thresholds must comply with the requirements of the CAP, which requires a GHG analysis report demonstrating emission reductions of at least 31% below 2015 levels by 2030 or a 9% reduction from 2030 BAU emissions. As the CAP implements the County's strategy to achieve the State's 2030 reduction targets, projects below the consistency thresholds have been determined to be consistent with the State's targets and do not require GHG emissions quantification. Projects below the consistency thresholds would not generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment.

The Project consists of the development of 303 single-family residential lots; as such, the Project does not require a consistency determination or GHG analysis report. As the Project falls below the CAP consistency thresholds, the Project would not generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment. However, the air quality emissions reports include quantification of GHG emissions. Project-related emissions were estimated using the California Emissions Estimator Model (CalEEMod), Version 2020.4.0, and are summarized and provided below for informational purposes only. Table 3-14 provides the Project's construction-related GHG emission while Table 3-15 provides the operations-related GHG emissions. The analysis assumed compliance with existing state and local regulations and implementation of project design features of Air Quality for a list of regulations and design features utilized in the model.

Table 3-14. Construction-Related GHG Emissions (metric tons per year)

Construction Phase/Year	CO_{2e} Emissions (mitigated)
Phase 1 - 2024	345.61
Phase 1 - 2025	186.77
Phase 2 - 2025	311.56
Phase 2 -2026	132.09
Phase 3 - 2025	127.16
Phase 3 - 2026	279.81
Phase 3 - 2027	36.67
Phase 4 - 2026	221.51
Phase 4 - 2027	222.14
Construction Total	*1863.32*
Amortized Annual Emissions	**37.27**
Note: Amortized emissions are based on 50-year life for residential units. *Source: See Appendix "A".*	

Table 3-15. Operation-Related GHG Emissions (metric tons per year)

Construction Phase/Year	CO2e Emissions (unmitigated)	CO2e Emissions (mitigated)	% Reduction
Phase 1 - 2024	1,524.62	1,252.24	17.87
Phase 2 - 2025	863.63	711.30	17.64
Phase 3 - 2026	835.96	686.61	17.87
Phase 4 -2027	809.77	663.26	18.09
Total Operations	*4,033.99*	*3,313.40*	*17.86*
Amortized Construction	37.27	37.27	*0.00*
Project Total Annual Emissions	**4071.26**	**3350.67**	**17.70**
Source: See Appendix "A".			

The Air District does not have a recommendation for lead agencies in assessing the significance of construction related GHG emissions. Emissions from construction would be temporary; however, to account for the construction emissions, the emissions were amortized based on the life of the development (50 years) and added to the operational emissions. As presented in Table 3-11b, the Project achieves an approximately 18% reduction in GHG emissions through compliance with existing regulation and implementation of project design features. As such, the Project is consistent with the GHG reduction requirements of the County's CAP and demonstrates continued progress towards the County achieving the 2017 Scoping Plan Update 2030 reduction requirements with an overall GHG reduction. Furthermore, the State anticipates increases in the number of zero emission vehicles operated in the State under the Advanced Clean Car Program. Compliance with SB 375 reduction targets for light duty vehicles will provide continued reductions in emissions from that source through SB 375's 2035 milestone year. Since the Project will continue to comply with existing and future regulations, and the General Plan and CAP will continue to be implemented through 2030, the Project would not generate greenhouse gas emissions, either directly or indirectly that may have a significant impact on the environment. *Impacts are 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?

No Impact: The SJVAPCD states that individual and cumulative GHG emissions are considered less than significant if a project complies with an approved GHG emission reduction plan or GHG mitigation program within the geographic area in which the project is located. The Tulare County CAP meets the requirements for a Qualified Greenhouse Gas Reduction Strategy. Therefore, the proposed project's GHG emissions would not be considered a significant impact if the proposed Project would be consistent with the City's GHG Reduction Strategy. Table 3-12, below, evaluates the proposed project's consistency with the applicable measures, both existing and proposed, in the GHG reduction plan.

Table 3-16. Project Consistency with Climate Action Plan Strategies

Climate Action Plan Measures	Required Compliance	Project Consistency with Strategy
Land Use: Project is consistent with the Tulare County General Plan policies listed in the CAP applicable to GHG emissions and sustainability.	Review development plans during project review to determine if densities are consistent with Blueprint.	**Consistent.** The proposed project will comply with all General Plan Policies.
Land Use—Residential: Subdivisions and multifamily projects propose densities consistent with County commitments for the Tulare Blueprint. Densities in subdivisions within the boundaries of Valley rural communities must be at least 5.0 units per acre. (County R-1 zoning has a 6,000 square foot minimum lot size or 7.26 units per gross acre). Overall residential density is 5.3 units per acre for the entire County including the cities. Mountain subdivisions over 50 lots require review to determine if they are consistent with the Blueprint.	Review development plans to ensure locations are appropriate for the type of project that is proposed and consistent with County plans.	**Consistent.** The proposed project will have a density of 5.6 units/acre. (303 units on 54.21 acres)
Land Use Design: Projects that require the construction of new roads or major intersection improvements provide a fair share of improvements such as sidewalks and pedestrian-friendly crossings, bike lanes/paths connecting to schools, shopping, and other uses consistent with County development standards.	Include roadway improvements as conditions of approval of the subdivision or commercial site plan	**Consistent.** The proposed project includes sidewalks, curbs, and gutters on all internal streets. Additionally, the project will improve Avenue 304 and Road 64 with sidewalks, bike lanes, and landscaping to meet the street standards. These roads will connect the site with other homes, businesses, and Goshen Elementary.
Energy Efficiency: The Project complies with the current version of Title 24.	Provide a copy of the Title 24 Report demonstrating compliance with the applicable standards with the Building Permit application.	**Consistent.** The proposed project will comply with the most recent version of Title 24 required by building permits.
Renewable Energy: The Project includes solar panels or other alternative energy sources meeting County Solar Ordinance or new Title 24 standards whichever is more stringent.	Include solar on building plans and provide Title 24 compliance reports with Building Permit applications.	**Consistent:** The project will comply with the County's Solar Ordinance.
EV Charging: The Project meets charging installation/charging ready requirements of the CalGreen Code	Include charging in building plans	**Consistent:** The Project will comply with the CalGreen Code for EV charging.

CalGreen Building Code Water: The Project complies with indoor and outdoor water conservation measures.	Provide a copy of the report showing code compliance.	**Consistent:** The Project will comply with the CalGreen Code for indoor and outdoor water conservation measures.
Water Conservation Landscaping	The Project complies with the County water conservation ordinance requirements for landscaping.	**Consistent:** The Project will comply with the County's Model Water Efficient Landscaping Ordinance (MWELO).
Solid Waste: The Project has access to recycling services for homes and businesses meeting CalRecycle requirements.	County will verify that providers comply with CalRecycle regulations regarding recycling and diversion of solid waste.	**Consistent:** Solid waste providers supplying services for the Project comply with CalRecycle regulations.

As discussed above, the proposed Project is consistent with Tulare County's CAP. The proposed project will comply with all Federal, State, and local rules about the regulation of greenhouse gas emissions and the project will implement Best Performance Standards developed by the SJVAPCD. The project will not conflict with any plan, policy, or regulation developed to reduce GHG emissions. There is *no impact.*

Cumulative Impact:

The Project is consistent with the Tulare County General Plan 2030 Update. The proposed Project site is within the Goshen UDB and has a designation of C-2-MU which allows residential growth at the site. The Goshen Community Plan Update indicates that of the 1,748 acres of UDB land uses, approximately 209 acres of medium density residential are needed to accommodate Goshen's population growth over time. The proposed Project consists of approximately 55 acres of residential land use which is consistent with the objectives contained in the Goshen Community Plan. As previously discussed, implementation of the Project is consistent with the Tulare County CAP and applicable AB 32 Scoping Plan reductions measures. The Project will implement applicable Tulare County General Plan and Tulare County CAP policies. As such, implementation of the Project will not conflict with applicable state, regional, and local plans, policies or regulation adopted for the purpose of reducing the emissions of greenhouse gases. Less Than Significant Cumulative Impacts related to this Checklist Item will occur. Therefore, less than significant project-specific and cumulative impacts related to this Checklist Item will occur.

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?	☐	☐	☐	☑

The discussions regarding Environmental Setting, CEQA requirements, Regulatory Setting, Chapter 3.8 Hazards and Hazardous Materials, Chapters 4 through 9, Appendices “A” through “I”, etc., contained in the Goshen Community Plan Update and Environmental Impact Report are incorporated herein in their entirety. Where necessary and if available, additional site specific facts, data, information, etc., are included in this discussion.

Environmental Setting

The proposed Project site is located approximately 0.2 miles southwest of the nearest school (Goshen Elementary School) and approximately 1.95 miles northwest of the nearest airport (Visalia 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 proposed Project area.[121] This research confirmed that the proposed Project would not be located on or nearby a site that is included on a list of hazardous materials sites compiled according to Government Code Section 65962.5. The nearest hazardous site is 0.5 miles away at 8127 Avenue 304. This was the site of a former battery manufacturing plant. The site was cleaned to acceptable standards in 2015.

Regulatory Setting

Federal

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.

State

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.

[121] California Dept. of Toxic and Substances Control Accessed April 2023 at: https://www.envirostor.dtsc.ca.gov/public/hwmp_profile_report?global_id=CAD047380084&starttab=.

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.

Local

Tulare County Health and Human Services Agency, Environmental Health Division (HWMP)

Tulare County prepared an HWMP following California Health and Safety Code Section 24135. The HWMP identifies hazardous waste generators in the County and identifies future locations for disposal and treatment of hazardous materials. The major goal of the HWMP is to reduce the need for new hazardous waste facilities by reducing waste at its source through recycling, reduced use of hazardous materials, and public education.

Tulare County General Plan 2030 Update:

The Tulare County General Plan 2030 Update includes goals and policies related to hazards and hazardous materials, which may be applicable to the proposed project. Goal HS-4 aims to protect residents, visitors, and property from hazardous materials by ensuring their safe use, storage, transport, and disposal. Policy HS-4.1 emphasizes the County's commitment to promoting the safe handling of hazardous materials in accordance with local, state, and federal safety standards. This includes compliance with the Hazardous Waste Management Plan, Emergency Operations Plan, and Area Plan. Policy HS-4.2 focuses on cooperation with the California Highway Patrol (CHP) to establish procedures for the movement of hazardous wastes and explosives within the County, ensuring safe transportation practices. Lastly, policy HS-4.3 aims to prevent incompatible land uses near properties that produce or store hazardous waste, reducing the risk of accidents or incidents. Policy HS-4.4 emphasizes the County’s commitment to protecting soils, air quality, surface water, and groundwater from hazardous material contamination. These goals and policies demonstrate Tulare County's commitment to safeguarding public safety and the environment by effectively managing hazardous materials and promoting responsible practices in their use, storage, transport, and disposal.

Figure 3-6: Distance to Schools and Airports



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?

Less than Significant Impact: Project construction-related activities may involve the use, storage, and transport of hazardous materials. During construction-related activities, the contractor will use fuel trucks to refuel on-site 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.

When fully built-out, it is likely that residents will store small amounts of typical hazardous materials, such as fuel (e.g., gasoline for lawn care equipment) and lubricants. The storage, transport, and use of these materials are required to comply with Local, State, and Federal regulatory requirements.

Therefore, the proposed Project will not result in a significant hazard to the public or the environment and impacts will be *less than 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: There is no reasonably foreseeable condition or incident involving the proposed Project that could result in the release of hazardous materials into the environment, other than any potential accidental releases of standard fuels, solvents, or chemicals encountered during typical construction-related activities of a residential subdivision. 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. During operation, residents may have insignificant amounts of pesticides, fertilizers, and cleaning agents required for normal maintenance of structures and landscaping. The storage, transport, and use of these materials will are required to comply with Local, State, and Federal regulatory requirements. There are no reasonably foreseeable conditions involving the release of hazardous materials from the proposed Project's operation. Therefore, potential impacts will be *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?

No Impact: The proposed Project is located approximately 0.2 miles from an existing elementary school (Goshen Elementary). Construction-related activities of the proposed Project will involve the use of fuels, paints, and solvents to a limited degree. Construction-related activities will be short-term, temporary, and intermittent and is not anticipated to result in the release of hazardous emissions. The operation of the proposed Project does not involve the use or storage of hazardous substances other than insignificant amounts of pesticides, fertilizers, and cleaning agents required for normal

maintenance of structures and landscaping. The proposed Project would not emit hazardous emissions or involve the handling of acutely hazardous materials or waste. Therefore, there will be *no impact.*

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 proposed Project site is not listed as a hazardous materials site pursuant to Government Code Section 65962.5 and is not included on a list compiled by the Department of Toxic Substances Control. [122] The nearest hazardous site is 0.5 miles away at 8127 Avenue 304. This was the site of a former battery manufacturing plant (Exide Corporation). The site was cleaned to acceptable standards in 2015. There will 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 1.95 miles from the nearest public airport (Visalia Municipal Airport). According to the Tulare County Comprehensive Airport Land Use Plan, the proposed Project site is located outside of the airport safety zone. Additionally, the plan has noise contours to show which areas can be affected by noise. The proposed Project site is located outside of all the noise contours and will not be impacted by the airport. Implementation of the proposed Project would not result in a safety hazard for people residing or working in the project area. There will be *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 proposed Project is not located in the vicinity of a principal route of assistance, as described by the Safety Element of the Tulare County General Plan. The proposed Project site does cross a publicly accessed route. The proposed Project will result in one access/egress points to Avenue 304 on the south and one access/egress point to Road 64 on the east. Road 64 can be utilized to access/egress SR 99 at Betty Drive northeast of the proposed Project site. These two roads are the most convenient and direct routes to or from the next nearest community (Visalia), SR 99 and/or SR 198, and ultimately other Tulare County communities. The County'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 County procedure to ensure consistency with emergency response and evacuation needs. Therefore, the proposed Project will have *no impact* on emergency response or evacuation plans.

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

[122] California Dept. of Toxic and Substances Control Accessed April 2023 at: https://www.envirostor.dtsc.ca.gov/public/hwmp_profile_report?global_id=CAD047380084&starttab=.

No Impact: The land surrounding the proposed Project site is developed with urban uses and agriculturally productive lands which are not considered to be wildlands. Additionally, the Tulare General Plan notes that fire hazards within the Valley floor, 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 significant risk of loss, injury or death involving wildland fires and there will be *no impact.*

Cumulative Impact:

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis based on the information provided in the Tulare County 2030 General Plan, General Plan background Report, Tulare County 2030 General Plan EIR, and/or Goshen Community Plan Update and EIR. Cumulative development throughout the Project area and its vicinity, under Year 2030 build out conditions will cumulatively increase the potential for exposure to existing hazards associated with State Route 99. However, as discussed earlier, the transportation of hazardous materials will continue to be regulated by federal, state, and regional agencies, and all new development will be subject to independent environmental review and all applicable regulations to minimize any potential health risks associated with freeways. Therefore, through appropriate regulations, potential cumulative health impacts associated with the build out of the Project area (including the proposed Project) would result in less than significant Project-specific and Cumulative Impacts related to this Checklist Item.

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?	☐	☐	☐	☑

The discussions regarding Environmental Setting, CEQA requirements, Regulatory Setting, Chapter 3.9 Hydrology and Water Quality, Chapters 4 through 9, Appendices "A" through "I", etc., contained in the Goshen Community Plan Update and Environmental Impact Report are incorporated herein in their entirety. Where necessary and if available, additional site specific facts, data, information, etc., are included in this discussion.

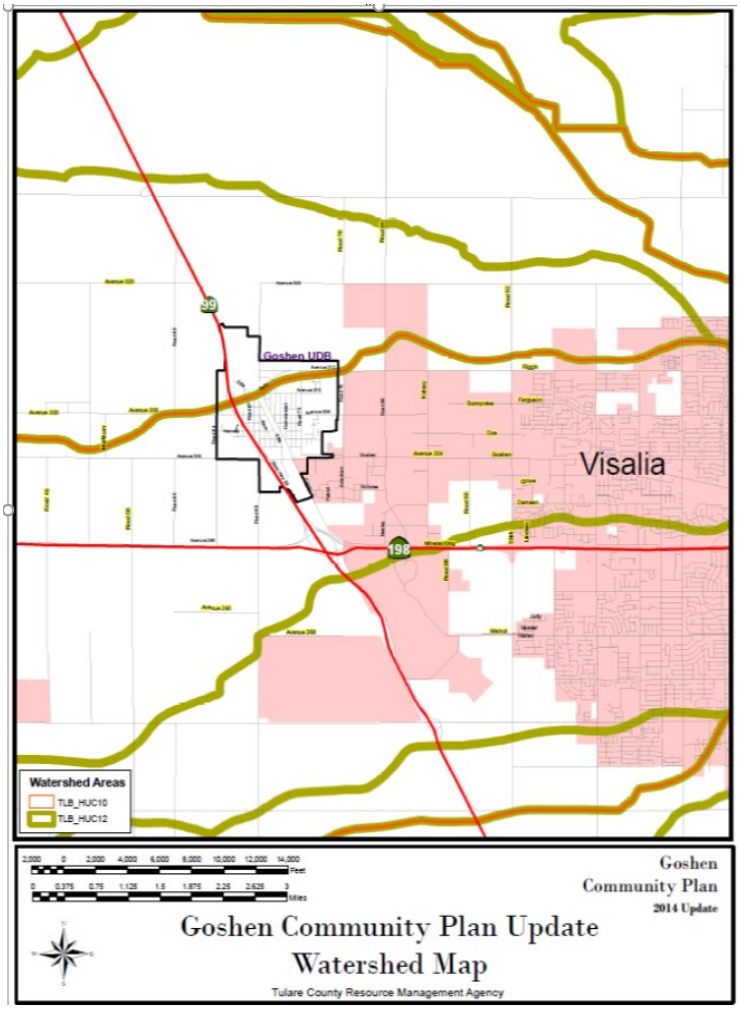
Environmental Setting

Tulare County has a dry climate with evaporation rates that exceeds rainfall. The local climate is considered warm desert with annual precipitation of approximately 7 to 9 inches, and variable rainfall rates. The majority of precipitation (roughly 84%) falls during the months of November through April.

Hydrology in the proposed Project vicinity is associated with the Tulare Lake Basin, one of three main water subareas in the county. The Tulare Lake Basin is in the northern alluvial fan and basin subarea which is characterized by southwest-to-south flowing rivers, creeks, and irrigation canal systems that convey water from the Sierra Nevada to the west toward the Tulare Lake Bed. The southern portion of the basin

is internally drained by the Kings, Kaweah, Tule, and Kern Rivers.[123] The Tulare Lake Basin comprises the drainage area of the San Joaquin Valley south of the San Joaquin River, and is essentially a closed basin because surface water drains north into the San Joaquin River only in years of extreme rainfall. Watershed (surface water), surface water quality, surface water supply, groundwater sub basin, ground water quality, ground water supply are extensive discussed in the Goshen Community Plan Update Draft EIR (see pages 3.9-2 through 3.9-16)[124]. **Figure 3-7** Shows the Goshen Community Plan Update Watershed Map.

Figure 3-7: Goshen Community Plan Update Watershed Map[125]



Surface Water

Goshen is within the Kaweah River Delta System, which forms into the St. Johns River and smaller creeks in the area. The St. Johns River is approximately four miles north of the proposed Project site. Mill Creek Ditch is approximately 0.25 miles south of the proposed Project site. There are no major surface water features within Goshen.

[123] California Department of Water Resources. California's Groundwater Bulletin 118. 2004. Tulare Lake Hydrologic Region, San Joaquin Valley Groundwater Basin. Accessed April 2023 at: http://www.water.ca.gov/pubs/groundwater/bulletin_118/basindescriptions/5-22.11.pdf.

[124] Goshen Community Plan Update. Draft Environmental Impact Report. Chapter 3.9 Hydrology and Water Quality.

[125] Ibid. Figure 3.9-2. Page 3.9-5.

Groundwater

Groundwater in Tulare County is present in valley deposits of alluvium that are several thousand feet thick and occurs in both confined and unconfined conditions. The depth to groundwater varies significantly throughout the Valley floor area of Tulare County. Groundwater levels have declined since the 1940s, from approximately thirty feet below ground surface in 1940 to 120 feet below ground surface in 2010. Water quality of the groundwater that underlies Tulare County is adequate for all uses, including domestic and agricultural uses. This is due to the abundant snowmelt that originates in the Sierra Nevada. Groundwater is the primary source of drinking water for the planning area residents.

Goshen Community Information

"The following discusses the Community of Goshen's recorded water usage, assumed current water usage, projected water usage and current water quality issues.

Information for the community of Goshen is somewhat limited because water service is provided by the PUC-regulated California Water Services Company (Cal Water), a private corporation, which has not been willing to disclose specific water use and quality information for this report. Certain water quality information is in the public domain in the form of Consumer Confidence Reports, and the company did release annual water use totals for Goshen but not for West Goshen. From that information and using information from other communities as guideline, monthly and future water use for the community has been calculated.

Cal Water states that they have 1,021 water services in Goshen, and another 80 or so residential services in West Goshen for a total of 1,101 services. Of the Goshen services, approximately 95% (or 970) are residential while the others (51) are small businesses, either commercial or industrial land uses. Applying the County's standard household formation rate of 3.1 persons per household (pph) to the 1050 residential services in both Goshen and West Goshen combined implies a population of 3,255 in the current year.

Assuming the current 3.1 pph remains constant and using the 2010 General Plan Background Report population growth rate of 1.3% annually to project to 2030, Goshen (including West Goshen) could reach 4,613 persons in Year 2030, an increase of 1,358 persons (42%) from 2013. This population would imply a need for a total of 1,318 residential services at that time.

Recorded Water Usage

Cal Water supplied P&P with total water usage data for Goshen for only the year 2013. No monthly data nor water use data for West Goshen was supplied. As a result, data from nearby Traver was used to estimate monthly demands and peak flows for Goshen. In order to estimate Goshen's current water demand and create future projections, a monthly demand curve was estimated using the shape of the demand curve observed in Traver, and overall water use was pro-rated up to include the 80 additional residences in West Goshen. Since no peaking factors for Goshen are available, peaking factors observed in the community of Traver were used to produce the following table.[126]" (See Appendix "G", Goshen Water Usage Memo of the Goshen Community Plan Update the Draft EIR).

[126] Ibid. 3.9-16 and 3.9-17.

Flooding

"Flooding is a natural occurrence in the Central Valley because it is a natural drainage basin for thousands of watershed acres of Sierra Nevada and Coast Range foothills and mountains. Two kinds of flooding can occur in the Central Valley: general rainfall floods occurring in the late fall and winter in the foothills and on the valley floor; and snowmelt floods occurring in the late spring and early summer. Most floods are produced by extended periods of precipitation during the winter months. Floods can also occur when large amounts of water (due to snowmelt) enter storage reservoirs, causing an increase in the amount of water that is released."[127]

"Official floodplain maps are maintained by the Federal Emergency Management Agency (FEMA). FEMA determines areas subject to flood hazards and designates these areas by relative risk of flooding on a map for each community, known as the Flood Insurance Rate Map (FIRM). A 100-year flood is considered for purposes of land use planning and protection of property and human safety. The boundaries of the 100-year floodplain are delineated by FEMA on the basis of hydrology, topography, and modeling of flow during predicted rainstorms."[128]

"The flood carrying capacity in rivers and streams has decreased as trees, vegetation, and structures (e.g., bridges, trestles, buildings) have increased along the Kaweah, Kings, and Tule Rivers. Unsecured and uprooted material can be carried down a river, clogging channels and piling up against trestles and bridge abutments that can, in turn, give way or collapse, increasing blockage and flooding potential. Flooding can force waters out of the river channel and above its ordinary floodplain. Confined floodplains can result in significantly higher water elevations and higher flow rates during high runoff and flood events."[129]

"Dam failure can result from numerous natural or human activities, such as earthquakes, erosion, improper siting, rapidly rising flood waters, and structural and design flaws. Flooding due to dam failure can cause loss of life, damage to property, and other ensuing hazards. Damage to electric-generating facilities and transmission lines associated with hydro-electric dams could also affect life support systems in communities outside the immediate hazard area."[130]

Stormwater Drainage

Tulare County is under the jurisdiction of the Tulare County Flood Control District to address drainage, flooding, and related issues. Localized drainage issues occur throughout the County; however, these are located near floodplains. In Goshen, most storm drainage is directed via surface flow. A large amount of stormwater drains into the "Goshen Ocean" stormwater detention basin located approximately one mile east of the project site. The area west of SR-99 has few drainage improvements. The proposed Project includes a 1.22-acre drainage basin to retain stormwater on-site.

Regulatory Setting

Federal

[127] Op. Cit. 3.9-17 and 3.9-18.
[128] Op. Cit. 3.9-18.
[129] Op. Cit.
[130] Op. Cit.

Clean Water Act

The Clean Water Act (CWA) is intended to restore and maintain the chemical, physical, and biological integrity of the nation's waters (33 CFR 1251). The regulations implementing the CWA protect waters of the U.S. including streams and wetlands (33 CFR 328.3). The CWA requires states to set standards to protect, maintain, and restore water quality by regulating point source and some non-point source discharges. Under Section 402 of the CWA, the National Pollutant Discharge Elimination System (NPDES) permit process was established to regulate these discharges.

The Clean Water Act (CWA of Act) 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.

Safe Drinking Water Act

"The Safe Drinking Water Act (SDWA) is the main federal law that ensures the quality of Americans' drinking water. Under SDWA, EPA sets standards for drinking water quality and oversees the states, localities, and water suppliers who implement those standards… SDWA was originally passed by Congress in 1974 to protect public health by regulating the nation's public drinking water supply. The law was amended in 1986 and 1996 and requires many actions to protect drinking water and its sources: rivers, lakes, reservoirs, springs, and groundwater wells. (SDWA does not regulate private wells which serve fewer than twenty-five individuals.)"[131]

National Flood Insurance Act

The National Flood Insurance Act (1968) makes available federally subsidized flood insurance to owners of flood-prone properties. To facilitate identifying areas with flood potential, Federal Emergency Management Agency (FEMA) has developed Flood Insurance Rate Maps (FIRM) that can be used for planning purposes. 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.

Environmental Protection Agency

The mission of EPA is to protect human health and the environment. EPA works to ensure that:

- all Americans are protected from significant risks to human health and the environment where they live, learn and work;
- national efforts to reduce environmental risk are based on the best available scientific information;
- federal laws protecting human health and the environment are enforced fairly and effectively;
- environmental protection is an integral consideration in U.S. policies concerning natural resources, human health, economic growth, energy, transportation, agriculture, industry, and international trade, and these factors are similarly considered in establishing environmental policy;

[131] Op. Cit.

- all parts of society – communities, individuals, businesses, and state, local and tribal governments – have access to accurate information sufficient to effectively participate in managing human health and environmental risks;
- environmental protection contributes to making our communities and ecosystems diverse, sustainable and economically productive; and
- the United States plays a leadership role in working with other nations to protect the global environment."[132]

United States Army Corps of Engineers

"The Department of the Army Regulatory Program is one of the oldest in the Federal Government. Initially it served a fairly simple, straightforward purpose: to protect and maintain the navigable capacity of the nation's waters. Time, changing public needs, evolving policy, case law, and new statutory mandates have changed the complexion of the program, adding to its breadth, complexity, and authority.

The Regulatory Program is committed to protecting the Nation's aquatic resources, while allowing reasonable development through fair, flexible and balanced permit decisions. The Corps evaluates permit applications for essentially all construction activities that occur in the Nation's waters, including wetlands."[133]

State

California Water Quality Porter-Cologne Act

"The Porter-Cologne Act is the principal law governing water quality regulation in California. It establishes a comprehensive program to protect water quality and the beneficial uses of water. The Porter-Cologne Act applies to surface waters, wetlands, and ground water and to both point and nonpoint sources of pollution."[134] This Act is California's primary statute for both water quality and water pollution concerns. This includes both surface water and groundwater. 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.

Regional Water Quality Control Board/Central Valley RWQCB

The proposed project site is within the jurisdiction of the Central Valley Regional Water Quality Control Board (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 total land area. Because the proposed Project is greater than one acre, an NPDES Permit and SWPPP will be required. Construction-related activities on one acre or more are subject to the permitting requirements of the NPDES General Permit for Discharges of Storm Water Runoff Associated with Construction Activity (General Construction Permit). The General Construction Permit requires preparation and implementation of a Storm Water Pollution Prevention Plan (SWPPP). The proposed

[132] US EPA. Our Mission and What We Do. Accessed April 2023 at: https://www.epa.gov/aboutepa/our-mission-and-what-we-do

[133] Army Corps of Engineers. Accessed April 2023 at: http://www.usace.army.mil/Missions/CivilWorks/RegulatoryProgramandPermits.aspx.

[134] California Water Boards. State Water Resources Control Board. Porter-Cologne Water Quality Control Act. Accessed April 2023 at: https://www.waterboards.ca.gov/water_issues/programs/nps/encyclopedia/0a_laws_policy.html

Project will include specifications for Best Management Practices (BMPs) that will be implemented during proposed Project construction-related activities to control degradation of surface water by preventing the potential erosion of sediments or discharge of pollutants from the construction area. The General Construction Permit program was established by the RWQCB for the specific purpose of reducing impacts to surface waters that may occur due to construction activities. BMPs have been established by the RWQCB in the California Storm Water Best Management Practice Handbook (2003) and are recognized as effectively reducing degradation of surface waters to an acceptable level. Additionally, the SWPPP will describe measures to prevent or control runoff degradation after construction is complete and identify a plan to inspect and maintain these facilities or project elements.

Local

Tulare County Environmental Health Services

The Environmental Health Services Division regulates retail food sales and hazardous waste storage and disposal; inspects contaminated sites and monitors public water systems, which protects and reduces the degradation of groundwater. The Division regulates the production and shipping of milk for Tulare and Kings Counties and also serves as staff to the Tulare County Water Commission appointed by the Board of Supervisors. The goal of HHSA's Environmental Health division is to protect Tulare County's residents and visitors by ensuring that our environment is kept clean and healthy. This division requires water quality testing of public water systems.

Any project that involves septic tanks and water wells within Tulare County is subject to approval by this agency. All recommendations provided by this division will be added as mitigation measures to ensure reduction of environmental impacts.

Tulare County Land Development Regulations

The Tulare County Resource Management Agency (RMA) is responsible for review, approval, and enforcement of planning and land development throughout the unincorporated portions of Tulare County. County of Tulare regulations that direct planning and land development (and related water and wastewater utilities) include the Tulare County General Plan, Zoning Ordinance, Subdivision Ordinance, and CEQA procedures. These responsibilities are divided between Planning Branch, Public Works Branch, and other divisions or departments of RMA, and in coordination with the Environmental Health Division of the Tulare County Health and Human Services Agency, and the Tulare County Fire Department.

The County's flood damage prevention code is intended to promote public health, safety, and general welfare in addition to minimizing public and private losses due to flood conditions. The County code provisions to protect against flooding include requiring uses vulnerable to floods be protected against flood damage at the time of initial construction; controlling the alteration of natural flood plains; and preventing or regulating the construction of flood barriers which will unnaturally divert flood waters or which may increase flood hazards in other areas. The County flood damage prevention code, most recently amended by Ord. No. 3212 and effective October 29, 1998, is modeled based upon FEMA guidance.

Tulare County General Plan 2030 Update

The Tulare County General Plan 2030 Update encompasses goals and policies concerning hydrology and water quality that could be relevant to the proposed project. Goal WR-1 aims to meet the current and long-term water needs of the county while safeguarding the quality and quantity of surface and groundwater resources. Policy WR-1.1 emphasizes the County's collaboration with water and management agencies to ensure a secure and sustainable groundwater supply during land development processes. Policy WR-1.5 focuses on expanding the use of reclaimed wastewater to replenish groundwater and conserve potable water. Similarly, policy WR-1.6 encourages the use of tertiary treated wastewater and household gray water for irrigation purposes to reduce reliance on groundwater resources. Goal WR-2 emphasizes the protection of surface water and groundwater quality. Policies under this goal, such as WR-2.1, WR-2.2, WR-2.3, and WR-2.4, highlight the County's commitment to preventing water contamination and enforcing regulations to control non-point source water pollution, erosion, and sedimentation. The General Plan also includes policies addressing drainage management, point source control, and ensuring water availability and efficiency (WR-2.5, WR-2.8, WR-3.3, WR-3.5, and WR-3.6). Finally, WR-3.10 emphasizes the importance of preventing the diversion of surface water or runoff that could reduce water available for groundwater recharge. Additional policies in the plan focus on compatible project design, contamination prevention, and compliance with floodplain regulations (PF-4.14, HS-4.4, and HS-5.1). These goals and policies collectively demonstrate Tulare County's commitment to sustainable water resource management, water quality protection, and the integration of water conservation practices in land development processes.

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 proposed 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 earthwork tasks across most of the 54.21-acre project sites. During storm events, exposed construction areas across the proposed Project site may cause runoff to carry pollutants, such as chemicals, oils, sediment, and debris. Implementation of a Stormwater Pollution Prevention Plan (SWPPP) will be required for the proposed Project. An 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. These BMPs can include dewatering procedures, stormwater runoff quality control measures, concrete waste management, watering for dust control, and construction of perimeter silt fences, as needed. As such, implementation of Mitigation Measures HYD- 1 and HYD-2 will ensure 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: Water services will be provided by the California Water Systems, Visalia District upon development. This district serves the City of Visalia and some unincorporated segments of Tulare County, including Goshen. The District currently produces about 27 million gallons of local groundwater per day from 59 active wells and delivers it to customers through more than 600 miles of pipeline. The District delivers water to residential, commercial, industrial, and governmental

customers. Residential customers account for most of the District's service connections and 69 percent of its water uses. Non-residential water uses account for 28 percent of total demand, while distribution system losses account for 3 percent. The system produced 30,152 acre-feet (AF) of groundwater in 2020. The available water supply is expected to supply the projected population. The system can pump 100,829 acre-feet per year (AFY), all from groundwater.[135]

Using average per-person water use in the district (183 gallons per day; 2020 Urban Water Management Plan)[135] and the average household size in Goshen (3.9 persons; US Census Bureau)[136], water demand for the proposed 303-unit residential development is estimated to be approximately 215,696 gallons of water daily (or about 242-acre feet per year). With an expected increase of 5,124 AF from 2020 to 2030 in the Visalia District,[135] the proposed Project would use approximately 4.72 percent of the anticipated increase. As such, there will be sufficient water supply to meet the needs of the proposed Project.

The Goshen Community Plan projected the population, and therefore the water usage, within the community to increase by 1.3% every year. In 2013, Goshen consumed 253.2 million gallons or 283,620 AF. Growing at 1.3% annually, Goshen is projected to use 1,159 AFY in 2030 (5,653 estimated population in 2030, 183 gpd usage). This is an increase of 382 AFY from current usage. The Goshen CSD is planning for an increase of 382 AFY by 2030, and the proposed Project is expected to account for a portion (137 AFY) of this.

The proposed Project's density is consistent with the Goshen Community Plan's land use designation. As such, the proposed Project would not impact groundwater supplies beyond what has already been analyzed in the most current Community Plan EIR or Urban Water Management Plan.

The proposed Project would result in most of the site being developed, which would convert approximately 54.21 acres from pervious surfaces to impervious surfaces. However, this would not significantly interfere with groundwater recharge because all stormwaters would be collected and diverted to a new stormwater basin located in the southwest quadrant of the proposed Project site for groundwater recharge. Because the addition of impervious surfaces would not interfere substantially with groundwater recharge and the proposed Project would not utilize groundwater resources beyond what has been previously analyzed in the Tulare County General Plan EIR or the Urban Water Management Plan, the impact will be *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 54.21-acre proposed Project site which could have the potential to result in erosion or siltation on- or off-site. The disturbance of soils during construction-related could cause erosion, resulting in temporary construction impacts. The proposed

[135] California Water Service. 2020 Urban Water Management Plan Visalia District. June 2021. Accessed May 2023 at: https://www.calwater.com/docs/uwmp2020/VIS_2020_UWMP_FINAL.pdf

[136] Census Reporter. Goshen, CA. Accessed May 2023 at: https://censusreporter.org/profiles/16000US0630476-goshen-ca/.

Project Site is currently flat and will remain flat following construction. However, this impact would be effectively mitigated through the implementation of a Stormwater Pollution Prevention Plan (SWPPP, which includes mandated erosion control measures), that are developed to prevent significant impacts related to erosion caused by runoff during construction (Mitigation Measure HYD-1). The proposed Project proponent will also be required to prepare drainage plans (see Mitigation Measure HYD-2) and a Development Maintenance Manual (see Mitigation Measure HYD-3) to ensure that existing drainage patterns are maintained during project operations and that the proposed Project would not result in substantial erosion or siltation on- or off-site. The impact will be *less than significant with the implementation of mitigation,*

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 site will not result in waters capable of flooding either on- or off-site. The site is not subject to flooding and lies within Flood Zone X (area of minimal flooding) per the Federal Emergency Management Agency FIRM map.[137] The proposed Project would result in the addition of impervious surfaces on the 54.21-acre project site which would have the potential to increase surface runoff resulting in flooding on- or off-site. This impact would be mitigated through the implementation of Mitigation Measure HYD-2, which requires the proposed Project proponent to submit drainage plans to, and receive approval by, the County before the issuance of grading permits. The drainage plans will include BMPs to ensure runoff from the proposed Project will not result in flooding on- or off-site. All stormwater runoffs will be directed to the drainage basin onsite. Therefore, impacts will be *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 54.21-acre project site which would have the potential to provide additional sources of polluted runoff. The proposed Project would contain a storm drainage basin to collect all runoff from the site. The disturbance of soils during construction could cause erosion, resulting in temporary construction impacts. However, this impact would be mitigated through the implementation of a Stormwater Pollution Prevention Plan (SWPPP, which includes mandated erosion control measures), that are developed to prevent significant impacts related to erosion caused by runoff during construction (Mitigation Measure HYD-1). During the proposed Project's operations, impervious surfaces (including roads, building pads, and parking areas), would collect vehicle-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 proposed Project's proponent will be required to prepare drainage plans (see Mitigation Measure HYD-2) and a Development Maintenance Manual (see 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. The impact will be *less than significant with the implementation of mitigation measures.*

[137] Federal Emergency Management Agency FIRM Panel 06107CL300E June 16, 2009. Accessed April 2023 at: maphttps://hazards-fema.maps.arcgis.com/apps/webappviewer/index.html?id=8b0adb51996444d4879338b5529aa9cd&extent=-119.24027126756349,36.137670866489145,-119.15718716111826,36.17232174266695

iv. Impede or redirect flood flows?

Less than Significant with Mitigation: The proposed 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. According to National Flood Hazard mapping by the Federal Emergency Management Agency, the proposed Project Site is split nearly halfway between flood zones "X" and "A". The northern half of the site is in flood zone "X", with minimal flood risk. The southern half of the site is flood zone "A", meaning it has a 1% chance of flooding every year.

The proposed Project would result in the addition of impervious surfaces on the 54.21-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 applicant (or agent) to submit drainage plans to the Resource Management Agency before the issuance of grading permits. The drainage plans will include BMPs to ensure the proposed Project would not impede or redirect flood flows. Therefore, impacts will be *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 proposed Project is in an area that is not susceptible to inundation, the proposed Project would not risk the release of pollutants due to project inundation. As such, there will be *no impact.*

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

No Impact: The proposed Project would not conflict with or obstruct the implementation of a water quality control plan or sustainable groundwater management plan. The proposed Project is consistent with the Central Valley RWQCB. The proposed Project will comply with all applicable rules and regulations regarding water quality and groundwater management and there will be *no impact.*

Cumulative Impact:

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the requirements of the Central Valley Regional Water Quality Control Board, California Water Service Company, Goshen Community Service District, and Tulare County Environmental Health Division. As such, the proposed Project will result in less than significant Project-specific and Cumulative Impacts related to this Checklist Item with implementation of Mitigation Measures HYD-1 through HYD-3 as project design features.

Mitigation Measures for Hydrology and Water Quality

Mitigation Measure HYD-1: Before 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 proposed Project site to the California SWRCB Storm Water Permit Unit.

- Before issuance of grading permits for Phase 1 the Applicant shall submit a copy of the NOI to the County.
- The County shall review noticing documentation before approval of the grading permit. County 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 before the start of work for approval. The contractor is responsible for understanding the State General Permit and instituting the SWPPP during construction. An SWPPP for site construction shall be developed prior to the initiation of grading and implementation 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 I proposed Project's plan of development in total disturbs one or more acres. The SWPPP shall identify potential pollutant sources that may affect the quality of discharges to stormwater 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 the success of all onsite activities to control fugitive dust;
- A routine monitoring plan will be implemented to ensure the success of all onsite erosion and sedimentation control measures;
- Provisional detention basins, straw bales, erosion control blankets, mulching, silt fencing, sandbagging, and soil stabilizers will be used;
- Soil stockpiles and graded slopes will be covered after two weeks of inactivity and 24 hours before 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 following the manufacturer's maintenance conditions. The manual shall require that devices be cleaned before 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 are 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; and,
- Impervious berms, trench catch basins, 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?	☐	☐	☐	☑

The discussions regarding Environmental Setting, CEQA requirements, Regulatory Setting, Chapter 3.10 Land Use and Planning, Chapters 4 through 9, Appendices "A" through "I", etc., contained in the Goshen Community Plan Update and Environmental Impact Report are incorporated herein in their entirety. Where necessary and if available, additional site specific facts, data, information, etc., are included in this discussion.

Environmental Setting

The proposed Project site is in the Goshen Community, on the western edge of Tulare County. Goshen is near Visalia, the County seat of Tulare County. The site is approximately 7.5 miles west of central Visalia. The Goshen Community Plan Update designates the land use of the proposed Project Site as Single-Family Residential and is zoned C-2-MU. It is also approximately two (2) miles north of the Visalia Municipal Airport, with portions of the community situated within the airport's approach and departure areas. The proposed Project site is located west of SR 99, northwest of the intersection of Avenue 308 and Road 64. The C-2-MU zone establishes areas appropriate for the planned integration of some combination of retail; office; single and multi-family residential; hotel; recreation; limited industrial; and public facilities or other compatible use.

The proposed Project site has historically been used for row crops. The site currently contains one single-family residence and agriculture uses. The site is topographically flat and is bounded by agricultural uses to the north, south, and west. Light industrial uses currently exist to the east. The agricultural properties adjacent to the site are also zoned as C-2-MU.

Regulatory Setting

Federal

Federal regulations for land use are not relevant to the proposed Project because it is not a federal undertaking (the Project site is not located on lands administered by a federal agency, and the project applicant is not requesting federal funding or a federal permit).

State

The proposed Project is being evaluated pursuant to CEQA; however, there are no state regulations, plans, programs, or guidelines associated with land use and planning that are applicable to the proposed Project.

Local

Tulare County Association of Governments (TCAG)

"The Tulare County Association of Governments (TCAG) is responsible for overseeing and planning projects with the county and each of its cities, helping to bring tax money back home to fund bus service, road improvements, projects that will improve our air quality, and more. TCAG's 2009 Regional Blueprint includes a goal for a 25% increase in land use densities, facilitated urban growth, and expansion of transportation facilities."[138]

Regional Housing Needs Assessment (RHNA) – "State housing element law assigns the responsibility for preparing the Regional Housing Needs Assessment (RHNA) for the Tulare County region to the Tulare County Association of Governments (TCAG). The RHNA is updated prior to each housing element cycle. The current RHNA, adopted on June 30, 2014, is for the fifth housing element cycle and covers a 9.75-year projection period (January 1, 2014 – September 30, 2023). [TCAG is currently preparing the sixth housing element cycle that will cover a planning period from June 30, 2023, through December 31, 2031.]

The growth projections applied in the Tulare County Housing Element Update are based upon growth projections developed by the State of California. A "Regional Housing Needs Assessment Plan" provides a general measure of each local jurisdiction's responsibility in the provision of housing to meet those needs. The TCAG was responsible for allocating the State's projections to each local jurisdiction within Tulare County including the County unincorporated area, which is reflected in the Housing Element."[139]

"The Tulare County RHNA Plan recommends that the County provide land use and zoning for approximately 7,081 units in the unincorporated portions of the County. The County administratively agreed to a housing share of 7,081 units (726 units per year over the 9.75-year RHNA planning period). The RTP allocates 30% of population to the County. The RHNA bases the housing needs assessment on this percentage."[140]

Existing County Land Uses

"The proposed Project site is located in the northwestern portion of Tulare County. Tulare County is 4,863 square miles in area and is located in the San Joaquin Valley portion of California's Great Central Valley. It lies south of the Sacramento-San Joaquin Delta and is bordered by Fresno County to the north, Kings County to the west, Kern County to the south, and Inyo County to the east. The valley land portion is approximately 3,930 square miles or approximately 81 percent of Tulare County. Open space, which includes wilderness, national forests, monuments and parks, and county parks, encompass approximately 1,230 square miles, or approximately 25 percent of the County. Agricultural uses total approximately 2,150 square miles or approximately 44 percent of the entire County. Incorporated cities in the Tulare County account for less than three percent of the entire County area.

[138] Goshen Community Plan Update. Draft Environmental Impact Report. Chapter 3.10 Land Use and Planning. Pages 3.10-11 and -12.

[139] TCAG, Final Regional Housing Needs Plan for Tulare County 2014-2023, Page 5. Accessed May 2023 at:, https://tularecog.org/tcag/studies/regional-housing-needs-assessment-rhna/.

[140] Ibid.

Tulare County's first zoning ordinance was adopted in 1947 as Ordinance 352. The current Tulare County Zoning Ordinance and related State and Local Land Use Regulations was revised in September 2005 and covers the entire unincorporated county. The Zoning Ordinance has been amended many times since 2005, but has not undergone a comprehensive update. The zoning regulations regulate the extent and type of development that can occur in the unincorporated areas, therefore the outdated ordinance is limiting the County's holding capacity and build out potential. A major difference between the general plan and zoning is that the General Plan provides guidance on the location, type, density, and timing of new growth and development over the long-term, while zoning determines what development can occur on a site specific basis. The land general plan use designations, and the zoning classifications and development standards of the zoning ordinance, determine the County's holding capacity and buildout potential.

The Zoning Ordinance establishes three residential zones, four commercial zones, three industrial zones, and seven other zones related to agriculture, timber, and resource-related uses. The purpose of the zones is to translate the broad land use categories established by the Tulare County General Plan into detailed land use classifications that are applied to properties with much greater precision than the General Plan. The zoning classifications follow specific property lines and road alignments and correspond to the applicable General Plan categories. Working with the zoning classifications, the text of the Zoning Ordinance provides detailed regulations for the development and use of land."[141]

Tulare County General Plan 2030 Update

The Tulare County General Plan 2030 Update includes several goals and policies related to land use and planning that may be applicable to the proposed project. Goal PF-1 aims to establish a planning framework that supports the viability of communities while preserving the agricultural, open space, scenic, cultural, historic, and natural resources of the county. Policies such as PF-1.1 emphasize the importance of maintaining distinct urban edges and creating a transition between urban areas and agricultural or open space lands. The location of urban development is specified in policy PF-1.2, which outlines areas where urban development is permitted, including incorporated cities, designated community areas, foothill development corridors, and other non-agricultural development areas. The County encourages the development of urban land uses that benefit from urban services within urban development boundaries (UDBs) and hamlet development boundaries (HDBs) while discouraging permanent uses that do not benefit from such services. Policy PF-2.1 limits urban development to the designated UDB for each community, and PF-2.4 requires the preparation and maintenance of community plans within these boundaries. Development within UDBs is subject to improvement standards (PF-2.7), and permanent uses not benefiting from urban services are discouraged (PF-2.8).

Goal LU-1 focuses on promoting the overall economic and social growth of the county while maintaining quality-of-life standards and efficient land use. Policies under this goal, such as LU-1.1, advocate for smart growth principles, including walkable neighborhoods, a mix of residential densities, strong sense of place, mixed land uses, directing growth towards existing communities, compact development, discouraging sprawl, encouraging infill, preserving open space, and providing a range of housing opportunities. LU-1.2 emphasizes the promotion of flexibility and innovation through various planning and development techniques.

[141] Goshen Community Plan Update. Draft Environmental Impact Report. Chapter 3.10 Land Use and Planning. Pages 3.10-11 and -12.

Other policies within the General Plan address specific aspects of land use and planning. For instance, policy LU-2.3 ensures that new developments are designed to maintain the scenic open space character and minimize visual disruptions. LU-3.1 encourages residential developments to locate near existing infrastructure, while LU-3.2 promotes cluster development and access to public roads. LU-3.3 encourages high-density residential development in strategic locations. LU-6.2 emphasizes the separation and buffering of non-compatible land uses from major public facilities. LU-7.2 highlights the integration of natural features in new development and redevelopment plans.

Additionally, the General Plan includes Goal HS-3, which aims to minimize the possibility of loss of life, injury, or property damage resulting from airport hazards. Policy HS-3.1 requires development around airports to comply with safety policies and land use compatibility guidelines outlined in the Tulare County Comprehensive Airport Land Use Plan (CALUP).

Overall, these goals and policies provide a comprehensive framework for land use and planning in Tulare County, ensuring the preservation of valuable resources, promoting sustainable growth, and enhancing community safety.

Goshen Community Plan

The proposed Project is consistent with the Goshen Community Plan Update's Mixed Use designation, to wit:

"Mixed Use (MU)

This designation establishes areas appropriate for the planned integration of some combination of retail; office; single and multi-family residential; hotel; recreation; limited industrial; public facilities or other compatible use. Mixed Use areas allow for higher density and intensity development, redevelopment, or a broad spectrum of compatible land uses ranging from a single use on one parcel to a cluster of uses. These areas are intended to provide flexibility in design and use for contiguous parcels having multiple owners, to protect and enhance the character of the area. The consideration of development proposals in Mixed Use areas should focus on compatibility between land uses, and the development potential of a given area compared to the existing and proposed mix of land uses and their development impacts. Density bonuses for residential units of 25 % to 35% may be granted, according to the Density Bonus Ordinance or State law, to Mixed Use areas to encourage the development of affordable housing units, compact development in the implementation of development strategies that support the use of mass transit, reduction of air impacts, and implementation of measures that contribute to the reduction of global warming. Specific plans may be required to assist in the consideration of Mixed Use development proposals. This designation is found within UDBs, HDBs, PCAs, and MSCs and pursuant to regional growth corridor plans and policies.

Maximum Density: 1-30.0 Dwelling Units/Acre
Maximum Intensity: 0.5 FAR [Floor-to-Area Ratio]"[142]

[142] Goshen Community Plan Update Page 116. https://tularecounty.ca.gov/rma/index.cfm/planning-building/general-plan/ then click on "Goshen".

The Goshen Community Plan emphasizes westward growth plan along Betty Drive and other areas west of SR 99. This Plan would minimize or entirely avoid conflicts with existing industrial uses and away from Visalia's western edge. The proposed Project site is located within the Highway Commercial land use.

The proposed Project Site is currently zoned as CU-2-MU. The purpose of this zone is to allow for mixed uses. Allowing a mix of uses promotes flexibility in the types of entitlements that can be issued, which can increase the potential for economic development. In addition, mixed-use can allow for decreased vehicle miles traveled if residential uses are mixed with uses for employment. Within the Mixed-Use Zoning District, all uses outlined in the M-1, C3, C-2, C-1, R-1, R-2, and R-3 uses are allowed. The Planning Director has the discretion to determine uses and activities that would be allowed and compatible with the previously noted specific zoning districts. In addition, uses and activities determined to be compatible by the Planning Commission and the Board of Supervisors with the above-mentioned zoning districts are also allowed. This zoning can allow for light manufacturing, service commercial, general commercial, neighborhood commercial, one-family residential, two-family residential, and multi-family residential.

Figure 3-8: General Plan Land Use Designation

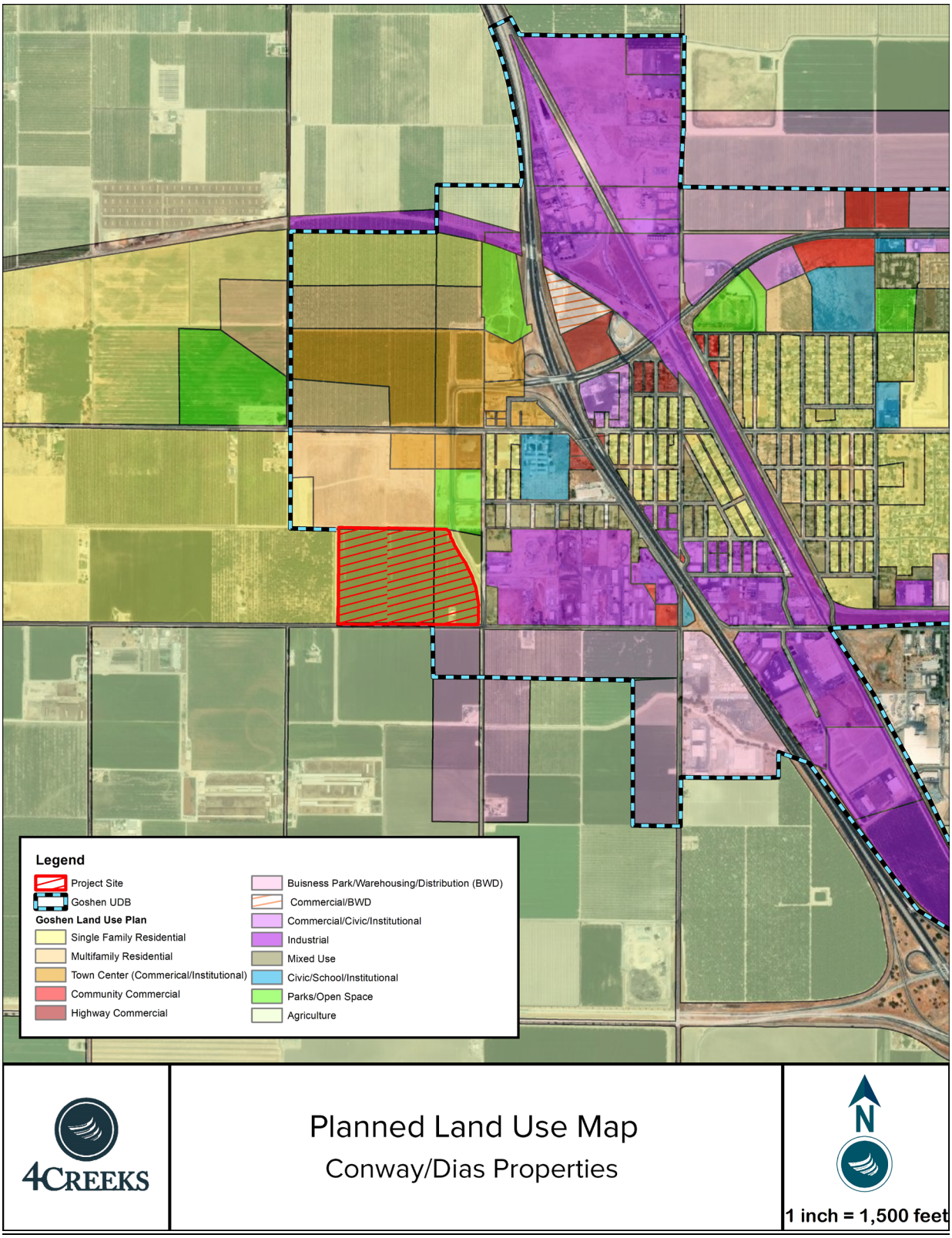
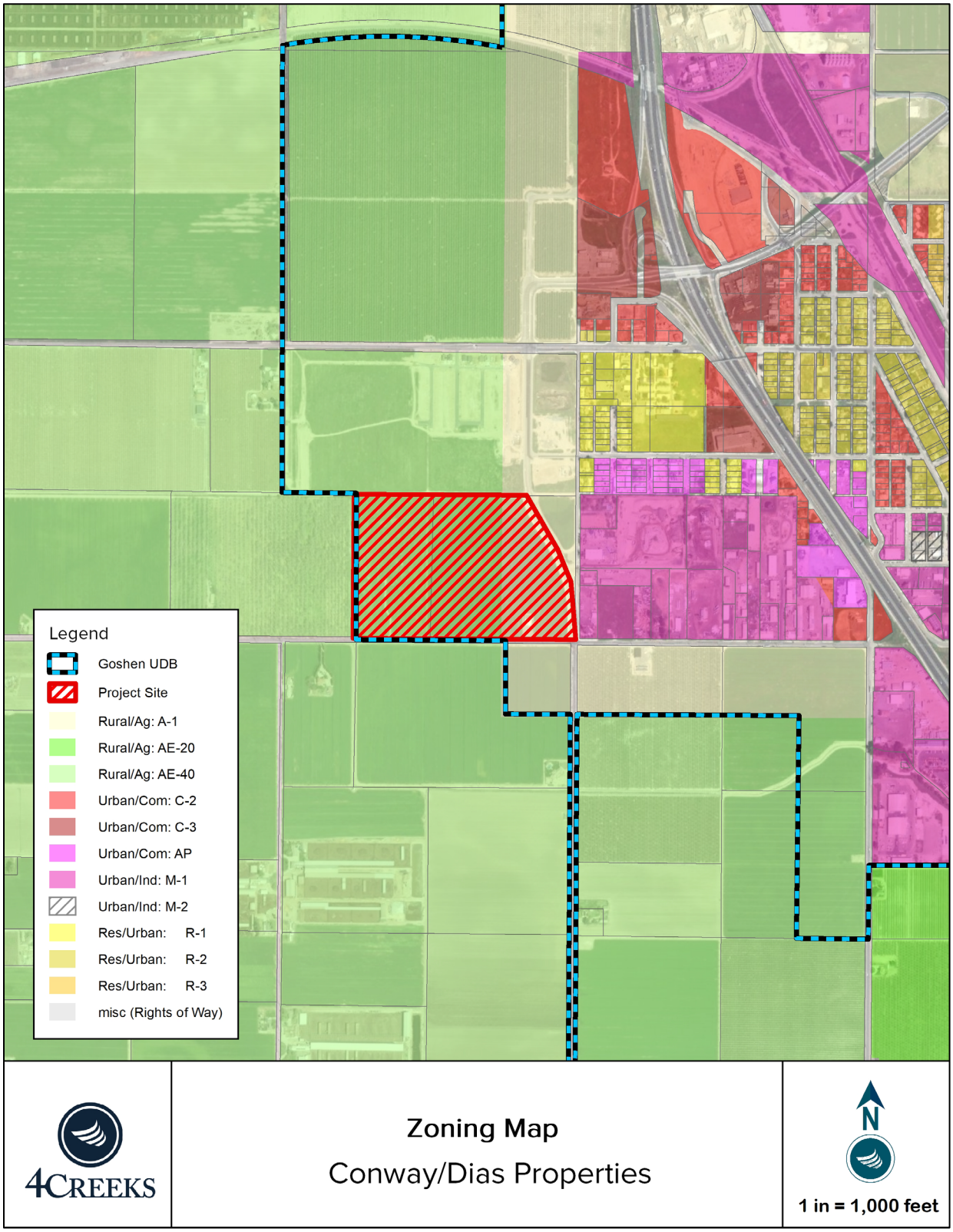


Figure 3-9: Zoning Map



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 zoned to accommodate a variety of uses, including residential. The Goshen Community Plan anticipates westerward expansion , as such, the proposed Project is consistent with the intent of the Plan. The proposed Project would continue to function as the same designation following project implementation. There will be *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?

No Impact: The proposed Project site is located on land designated to allow single-family residential uses. The proposed Project does not conflict with this land use or any other policy or regulation adopted to avoid or mitigate an environmental effect. There will be *no impact.*

Cumulative Impact:

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, General Plan background Report, Tulare County 2030 General Plan EIR, and/or Goshen Community Plan Update and EIR. As this Project is consistent with and represents implementation of the previously mentioned documents, no Project-specific or Cumulative Impacts would occur to this resource.

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 local–y - important mineral resource recovery site delineated on a local general plan, specific plan, or other lands use plan?	☐	☐	☐	☑

The discussions regarding Environmental Setting, CEQA requirements, Regulatory Setting, Chapter 3.11 Mineral Resources, Chapters 4 through 9, Appendices "A" through "I", etc. contained in the Goshen Community Plan Update and Environmental Impact Report are incorporated herein in their entirety. Where necessary and if available, additional site specific facts, data, information, etc., are included in this discussion.

Environmental Setting

Per the Tulare County General Plan Background Report, Tulare County is divided into two major physiographic and geologic provinces: the Sierra Nevada Mountains and the Central Valley. The Sierra Nevada Physiographic Province, in the eastern portion of the Tulare County, is underlain by metamorphic and igneous rock. It consists mainly of homogeneous granitic rocks, with several islands of older metamorphic rock. The central and western parts of the County are part of the Central Valley Province, underlain by marine and non-marine sedimentary rocks. It is basically a flat, alluvial plain, with soil consisting of material deposited by the uplifting of the mountains.

Economically, the most important minerals that are extracted in Tulare County are sand, gravel, crushed rock, and natural gas. Other minerals that could be mined commercially include tungsten, which has been mined to some extent, and relatively small amounts of chromite, copper, gold, lead, manganese, silver, zinc, barite, feldspar, limestone, and silica. Minerals that are present but do not exist in the quantities desired for commercial mining include antimony, asbestos, graphite, iron, molybdenum, nickel, radioactive minerals, phosphate, construction rock, and sulfur.

Aggregate resources are the most valuable mineral resource in Tulare County because it is a major component of the Portland cement concrete (PCC) and asphaltic concrete (AC). PCC and AC are essential to constructing roads, buildings, and providing for other infrastructure needs. There are four streams that have provided the main source of high quality sand and gravel in Tulare County: Kaweah River, Lewis Creek, Deer Creek and the Tule River. The highest quality deposits are located at the Kaweah and Tule Rivers. Lewis Creek deposits are considerably inferior to those of the other two rivers.

As noted earlier, Tulare County contains mineral resources of sand, gravel, crushed stone, and natural gas. Most of this mining takes place along rivers and at the base of the Sierra foothills. Goshen contains no

Mineral Resource Zones (MRZ) that contain any valuable minerals. The nearest MRZ with known mineral deposits is located east of Visalia, over ten miles away from the project site.

Regulatory Setting

Federal

There are no federal or local regulations pertaining to mineral resources relevant to the proposed Project.

State

California State Surface Mining and Reclamation Act

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

Public Resources Code Section 2710 et seq., insures a continuing supply of mineral resources for the State. The act also creates surface mining and reclamation policy to assure that:

- Production and conservation of minerals is encouraged;
- Environmental effects are prevented or minimized;
- Consideration is given to recreational activities, watersheds, wildlife, range and forage, and aesthetic enjoyment;
- Mined lands are reclaimed to a useable condition once mining is completed; and
- Hazards to public safety both now and in the future are eliminated.

Areas in the State (city or county) that do not have their own regulations for mining and reclamation activities rely on the Department of Conservation, Division of Mines and Geology, Office of Mine Reclamation to enforce this law. SMARA contains provisions for the inventory of mineral lands in the State of California. The State Geologist, in accordance with the State Board's Guidelines for Classification and Designation of Mineral Lands, must classify Mineral Resource Zones (MRZ) as designated below:

- MRZ-1. Areas where available geologic information indicates that there is minimal likelihood of significant resources.
- MRZ-2. Areas underlain by mineral deposits where geologic data indicate that significant mineral deposits are located or likely to be located.
- MRZ-3. Areas where mineral deposits are found but the significance of the deposits cannot be evaluated without further exploration.
- MRZ-4. Areas where there is not enough information to assess the zone. These are areas that have unknown mineral resource significance.

SMARA only covers mining activities that impact or disturb the surface of the land. Deep mining (tunnel) or petroleum and gas production is not covered by SMARA.

Local

Tulare County General Plan 2030 Update

The Tulare County General Plan 2030 Update includes goals and policies related to mineral resources and renewable energy that may have relevance to the proposed project's California Environmental Quality Act (CEQA) review. Goal ERM-2.1 focuses on the conservation of mineral deposits, particularly highlighting the need to identify, permit, and maintain a 50-year supply of locally available PCC grade aggregate. This goal emphasizes the importance of sustainable management and utilization of mineral resources in the county. Additionally, Goal ERM-4.6 promotes the development and use of alternative energy resources, including renewable energy such as wind, solar, biofuels, and co-generation. This policy supports efforts to advance renewable energy projects in appropriate locations. While the proposed project site may not directly involve mineral resources, these goals and policies demonstrate the county's commitment to responsible resource conservation and the promotion of sustainable energy options. They provide a broader context for environmental considerations and may inform the CEQA review process for the project.

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: Mineral resources located within Tulare County are predominately sand and gravel resources primarily provided by four streams: Kaweah River, Lewis Creek, Deer Creek, and the Tule River. The Kaweah River is the nearest of these four streams to the proposed Project site and is located approximately 20 miles to the east. Due to the distance from these streams, the proposed Project will not result in the loss of an available known mineral resource. The Tulare County General Plan Update (see Figure 8.1 Mineral Resource Zone in the General Plan) indicates the locations of State-designated Mineral Resource Zones. According to the map, the proposed Project site is not located in or within 10 miles of a Mineral Resource Zone. The California Department of Conservation indicates that the nearest active mining operation (Kaweah River Rock), mining sand and gravel) is located approximately 21 miles east of the proposed Project site.[143] The proposed Project site has no known mineral resources that would be of value to the region and the residents of the state, therefore the proposed Project would not result in the loss or impede the mining of regionally or locally important mineral resources. There will be *no impact.*

b) Would the project result in the loss of availability of a local–y - 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 proposed Project site is not designated under the City's or County's General Plan as an important mineral resource recovery site. Therefore, the proposed Project would not result in the loss of availability of known regionally or locally important mineral resources. There will be *no impact.*

Cumulative Impact:

[143] State of California Department Of Conservation Division of Mine Reclamation, Maps: Mines and Mineral Resources accessed May 2023 at: https://maps.conservation.ca.gov/mol/index.html.

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, General Plan background Report, Tulare County 2030 General Plan EIR, and/or Goshen Community Plan Update and EIR. As this Project would not occur on lands containing mineral resources, no Project-specific or Cumulative Impacts would occur to the Mineral resource.

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?	☐	☐	☐	☑

The discussions regarding Environmental Setting, CEQA requirements, Regulatory Setting, Chapter 3.12 Noise, Chapters 4 through 9, Appendices "A" through "I", etc. contained in the Goshen Community Plan Update and Environmental Impact Report are incorporated herein in their entirety. Where necessary and if available, additional site specific facts, data, information, etc., are included in this discussion.

Environmental Setting

The proposed Project site is designated as Highway Commercial in the Goshen Community Plan Land Use Map and C-2-MU in the Goshen Community Plan Zoning Map; and has historically been used for agricultural uses. The proposed Project site is currently (and has historically been) used for rotating row crops (e.g., wheat, alfalfa and barley). The site is surrounded by, predominantly agricultural land to the west and south, a new 405-unit residential subdivision to the north, and commercial/light industrial uses to the east. Typically, sensitive receptors on noise-sensitive lands include residences, hospitals, places of worship, libraries and schools, nature and wildlife preserves, and parks. Noise sensitive land uses located in the proposed Project vicinity are single-family residences that are located within 100-feet of the proposed Project site. Goshen Elementary School (within 0.25 of the proposed Project site) will be shielded from direct noise impacts by the residences immediately east/northeast of the proposed Project site (i.e., west/southwest of the school).

Within the Tulare County General Plan Background Report, existing noise levels were recorded within unincorporated areas of County. Noise level data collected during continuous monitoring included the hourly Leq and Lmax and the statistical distribution of noise levels over each hour of the sample period. The community noise survey results indicate that typical noise levels in noise-sensitive areas of the unincorporated areas of Tulare County are in the range of 29-65 dB Ldn. As would be anticipated, the

quietest areas are those that are removed from major transportation-related noise sources and industrial or stationary noise sources.[144]

Noise levels around the proposed Project site are associated with farm equipment and associated agricultural activities, typical noise that emanates from residential uses, and pass-by vehicular noise. Maximum noise levels generated by farm-related tractors typically range from 77 to 85 dB at a distance of 50 feet from the tractor, depending on the horsepower of the tractor and the operating conditions. Due to the seasonal nature of the agricultural industry, there are often extended periods of time when no noise is generated at the proposed Project site, followed by short-term periods of intensive mechanical equipment usage and corresponding noise generation. During periods without noise generated by agricultural production, noise levels would be typical of other noise-sensitive areas in unincorporated Tulare County, as discussed above.

The Tulare County General Plan Background Report Safety section and the Tulare County General Plan 2030 Update serve as the primary policy statement by the County for implementing policies to maintain and improve the noise environment in Tulare County. The General Plan presents Goals and Objectives relative to planning for the noise environment within the County. Future noise/land use incompatibilities can be avoided or reduced with implementation of the Tulare County noise criteria and standards. Tulare County realizes that it may not always be possible to avoid constructing noise sensitive developments in existing noisy areas and therefore provides noise reduction strategies to be implemented in situations with potential noise/land use conflicts.[145]

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 twenty 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). Decibel (dB) is a unit of measurement that describes the amplitude of sound, equal to 20 times the logarithm to the base 10 of the ratio of the pressure of the sound measured to the reference pressure. Ambient noise is the "background" noise of an environment. Ambient noise levels on the proposed project site 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.

Existing noise around the proposed Project Site is from farm equipment, other agricultural activities, typical noise from low-intensity industrial uses, and vehicles.

Sensitive Receptors

Noise level allowances for several 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 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 residence and potential sensitive receptor is a single residence located at the northwest corner of Road 64 and Avenue 304, approximately 150 feet from the proposed Project site. The next closest sensitive receptor are the

[144] County of Tulare General Plan 2030 Background Report. Page 8-77.
[145] Ibid.

single-family residences west of Goshen Elementary School, with the nearest residence approximately 550 feet east of the proposed Project site.

Regulatory Setting

Federal

Federal Vibration Policies

The Federal Railway Administration (FRA) and the Federal Transit Administration (FTA) have published guidance relative to vibration impacts.[146] According to the FRA, fragile buildings can be exposed to ground-borne vibration levels of 0.5 PPV without experiencing structural damage.[116] The FTA has identified the human annoyance response to vibration levels as 80 RMS (Root Mean Square = The square root of the arithmetic average of the squared amplitude of the signal).

State

The California Noise Control Act was enacted in 1973 (Health and Safety Code § 46010 et seq.), and states that the Office of Noise Control (ONC) should provide assistance to local communities in developing local noise control programs. It also indicates that ONC staff will work with the OPR to provide guidance for the preparation of the required noise elements in city and county General Plans, pursuant to Government Code § 65302(f). California Government Code § 65302(f) requires city and county general plans to include a noise element. The purpose of a noise element is to guide future development to enhance future land use compatibility.

Local

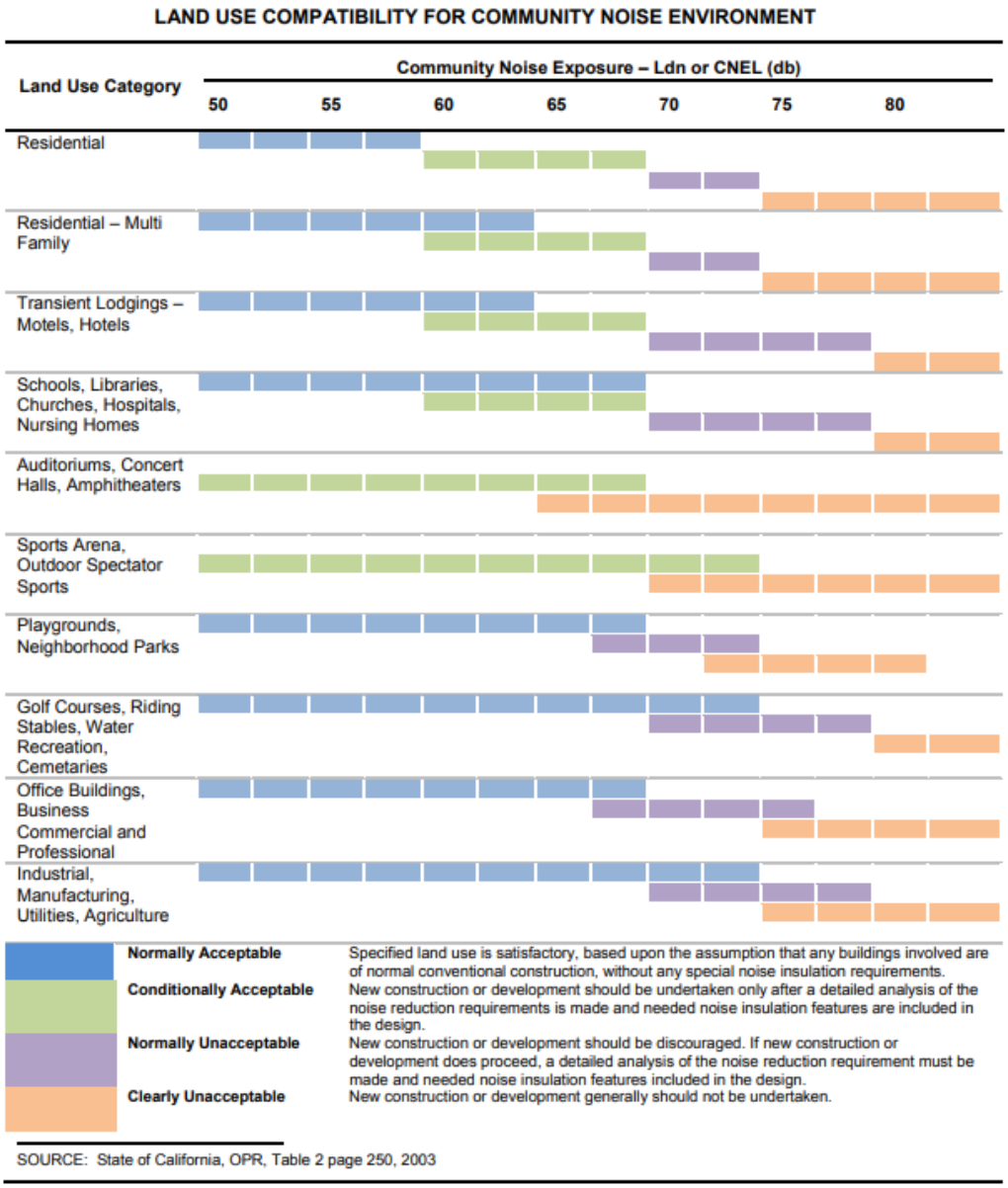
Tulare County General Plan 2030 Update

Goal HS-8 of the Tulare County General Plan focuses on protecting county residents and visitors from excessive noise while promoting the economic base of the county. Several policies are outlined to address noise-related concerns. Policy HS-8.3 states that new noise-sensitive uses should not be approved unless effective mitigation measures are incorporated into their design to reduce noise levels within outdoor activity areas and interior living spaces. The County also ensures that new noise-sensitive land uses are located outside the 60 CNEL (Community Noise Equivalent Level) contour of public use airports, as stated in policy HS-8.4. Policy HS-8.5 highlights the enforcement of state noise insulation standards, requiring that interior noise levels within new developments of certain types of dwellings do not exceed specific limits. The County sets restrictions on noise-generating activities during non-business hours, as stated in policy HS-8.11, and requires detailed noise impact analysis for areas where noise levels have the potential to exceed adopted policies, as mentioned in policy HS-8.13. The County also emphasizes the implementation of sound attenuation features and guidelines for construction noise control, as outlined in policies HS-8.14, HS-8.18, and HS-8.19. These policies collectively demonstrate the County's commitment to mitigating noise impacts and ensuring a suitable environment for residents and visitors while considering the economic development of the area.

[146] Federal Transit Administration (FRA). 2018 Transit Noise and Vibration Impact Assessment Manual. Page. 186. Accessed May 2023 at: https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research-innovation/118131/transit-noise-and-vibration-impact-assessment-manual-fta-report-no-0123_0.pdf

The County of Tulare provides noise level standards for land use compatibility. Exterior and interior noise levels may not exceed any of the categorical noise level standards shown in Table 3-13. The standards are shown in Day-Night Average Sound Level (Ldn). Ldn is the average sound exposure over 24 hours. Ldn values are calculated from hourly Leq values, with the Leq values for the nighttime period (10:00 p.m. to 7:00 a.m.) increased by 10 dB to reflect the greater disturbance potential from nighttime noises. For Single Family Residential, the exterior noise is to ideally be below 60 Ldn, but conditionally acceptable to 70 Ldn.

Figure 3-10: County of Tulare Noise Standards.



Source: County of Tulare General Plan

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: According to the Tulare General Plan, noise levels in noise-sensitive areas of the unincorporated areas range from 29-65 dB Ldn. The proposed Project will increase ambient noise levels, temporarily, intermittently, and in the short-term during construction-related activities; however, the increase in noise levels will not be permanent. Tulare County does not have thresholds for short-term, temporary, intermittent noise. Project construction-related activities are anticipated to last approximately 72 months and will involve temporary, short-term, and intermittent noise sources in the vicinity of the proposed Project. The average noise levels generated by construction-related equipment that will likely be used in the proposed Project are provided in Table 3-18.

The nearest residence and sensitive receptor is one single-family residence located near the northwest intersection of Road 64 and Avenue 304, approximately 150 feet from the proposed Project site. The next closest sensitive receptors are the residences near Goshen Elementary School, with the nearest home approximately 550 feet from the proposed Project site. Figure 3-11 shows the dB Lmax by distance from the construction equipment. dB Lmax is the maximum noise level at any given point, while Ldn is the average over a day. It shows that a residence must be at least 850 feet from construction-related activities to be under 60 dB Lmax. The residence across the street would have a Lmax of 75 dB.

With the proposed Project across the street from an existing residence, a noise disturbance is unavoidable. However, the construction would comply with HS-8.18 from the Tulare General Plan to limit construction from 7 A.M. to 7 P.M. to ensure that the construction noise impacts would be less than significant. Additional measures following *HS-8.19* to reduce construction noise will include maintaining minimum setback distances between construction equipment and receptors, only having construction during weekday daytime hours, and noise barriers to avoid significant construction noise impacts. Because noise generated during project construction would be intermittent, short-term, and temporary, and proper measures will be used to reduce noise, noise resulting from construction will be *less than significant.*

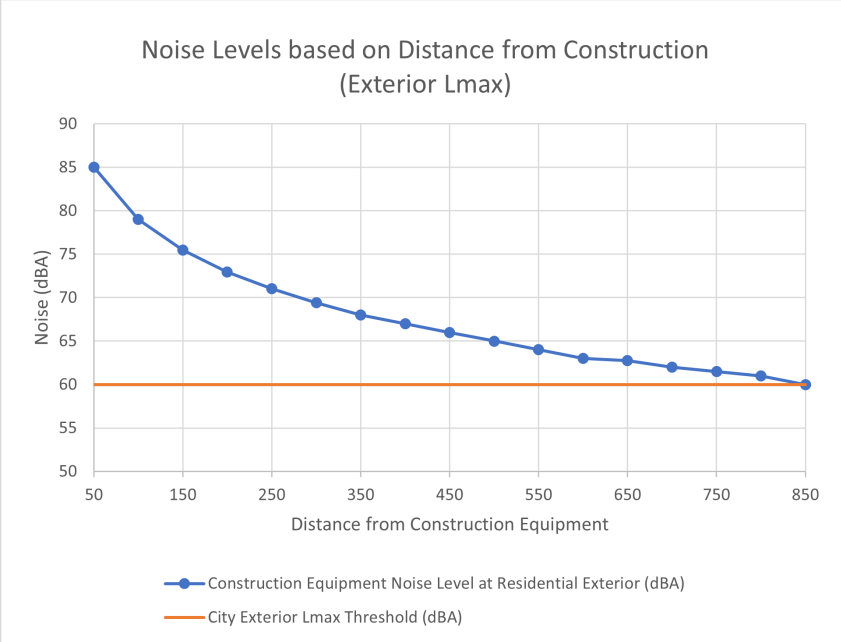
The County has an established standard of under 60 dB Ldn for residential uses, and under 75 dB Ldn for industrial uses. Long-term operational noise levels resulting from the proposed Project would be generated by single-family residential homes and neighborhood commercial, which are not typically known to generate high operational noise levels. Typical noise sources will be from vehicles entering and exiting the development, yard equipment (e.g., mowers, edgers, weed trimmers, etc.), and people active outdoors. These noises are less impactful than agricultural noises. The proposed Project would not exceed the operational thresholds established by Tulare County for sensitive receptors, and the proposed Project does not include any uses that would typically generate high noise levels; as such, the impact will be *less than significant*.

Table 3-17. Noise levels of noise-generating construction equipment at various distances.

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). Noise levels beyond 50 feet were estimated using the inverse square law based on given values for dBA at 50 feet.

Figure 3-11: Construction Related Noise Levels Based on Distance from Construction Equipment.



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

Less than Significant Impact: Although proposed Project operations would not include uses or activities that typically generate excessive groundborne vibration or groundborne noise levels,

proposed Project construction-related activities could introduce temporary, short-term, and intermittent groundborne vibration to the proposed Project site and the surrounding area. Sources that may produce perceptible vibrations are provided in Table 3-15.

Table 3-18. 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 proposed Project construction-related activities 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. The evaluation of potential impacts related to construction-related 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 0.12 inch/second. Because vibrations generated by project construction-related activities would not exceed 0.12 inches/second, the impact will be *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 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 approximately 1.95 miles from the Visalia Municipal Airport. According to the Tulare County Comprehensive Airport Land Use Plan[147], the proposed Project site is located outside of the airport safety zone. Additionally, the plan has noise contours to show which areas can be affected by noise. The proposed Project site is located outside of all the noise contours and will not be impacted by the airport. There will be *no impact*.

Cumulative Impact:

[147] Tulare County Comprehensive Airport Land Use Plan. Dec 2012. Accessed May 2023 at: https://tularecounty.ca.gov/rma/rma-documents/planning-documents/tulare-county-comprehensive-airport-land-use-plan/

The cumulative analysis in this study pertains to Tulare County as its geographic area. It relies on information derived from the Tulare County 2030 General Plan, General Plan Background Report, Tulare County 2030 General Plan EIR, and/or Goshen Community Plan Update and EIR. The normal operations of the proposed Project will have a minimal effect on the overall ambient noise levels in the area. However, based on Table 3.12-1 of the Goshen Community Plan Update Draft EIR, Receptor sites 1 (neighborhood park south of Betty Drive, east of SR 99) and 4 (single-family residential area east of the current Road 64 alignment) exceed Tulare County's noise thresholds for Land Use Compatibility for Community Noise Environments by 0.2 and 4.2 units, respectively. Although the Project will contribute to the cumulative impacts on the noise resource, its individual impact will be minimal. Nonetheless, specific design features of the project will be required to minimize noise levels, such as sound barrier walls, soundproofing insulation, or the use of heavy or double layers of sheetrock. These measures will effectively reduce noise to a maximum interior level of 45 dB Ldn (or CNEL) or less within interior living spaces for all new residences adjacent to Road 64 along the project's length. By complying with HS-8.18 and HS-8.19 from the Tulare General Plan, the Project will ensure that construction noise impacts remain less than significant. Regarding vibration impacts, both during construction and project operation, they will not result in excessive groundborne vibration or noise, thus leading to a less than significant impact. Furthermore, as the Project is situated outside the 55 dB CNEL noise contour of the Visalia Municipal Airport, people residing or working in the Project area will not be exposed to excessive noise levels, resulting in no impact to this resource. Consequently, with the implementation of mitigation measures and project design features, the Project-specific and Cumulative Impacts will be less than significant.

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?	☐	☐	☐	☑

The discussions regarding Environmental Setting, CEQA requirements, Regulatory Setting, Chapter 3.13 Population and Housing, Chapters 4 through 9, Appendices "A" through "I", etc. contained in the Goshen Community Plan Update and Environmental Impact Report are incorporated herein in their entirety. Where necessary and if available, additional site specific facts, data, information, etc., are included in this discussion.

Environmental Setting

The United States Census Bureau reported the population in the Community of Goshen as 4,968 as of 2020.[148] This is an increase of 1,962 (or approximately 65.3 percent) from 2010 when the population was 3,006. The total population of all Tulare County was reported as 473,117 in 2020. This is an increase of 30,938 persons (or approximately 7 percent) from the 2010 census (which reported the population of Tulare County as 442,179). Factors that influence population growth in Goshen include job availability, housing availability, the capacity of proposed and existing infrastructure, and the proximity to Visalia and other larger cities.

Regulatory Setting

Federal

U.S. Department of Housing and Urban Development (HUD)

"HUD's mission is to create strong, sustainable, inclusive communities and quality affordable homes for all." [149]

"In carrying out its work on each of its strategic goals, HUD is committed to the following core values:

Accountability: HUD individually and collectively takes responsibility for its performance and conduct.

[148] U.S. Census Bureau. Tulare County, California QuickFacts. Accessed May 2023 at: https://www.census.gov/quickfacts/tularecountycalifornia

[149] U.S. Department of Housing and Urban Development (HUD). 2022-2026 HUD Strategic Plan. Accessed April 2023 at: https://www.hud.gov/HUD-FY22-26-Strategic-Plan-Focus-Areas.

Efficiency and Effectiveness: HUD will maximize its resources and efforts to continually improve the efficiency and effectiveness of its individual and collective performance. The Department strives for simplicity in its lines of authority and clarity in its lines of communication and strives to eliminate the red tape of bureaucracy. HUD supports a productive work environment that balances high performance with the need for healthy personal and community life.

Fairness and Respect: HUD values others, demonstrates compassion for those it serves, and treats others the way it would like to be treated. In respecting others, the Department conducts its work and administers its programs with fairness and justice and with a commitment to civil rights, inclusion, and diversity.

Integrity: HUD approaches others, its stakeholders, and its work with honesty and the highest ethical standards."[150]

State

California Relocation Assistance Act

The State of California adopted the California Relocation Assistance Act (*California Government Code* §7260 et seq.) in 1970. This State law, which follows the federal Uniform Relocation Assistance and Real Property Acquisition Act, requires public agencies to provide procedural protections and benefits when they displace businesses, homeowners, and tenants in the process of implementing public programs and Projects. This State law calls for fair, uniform, and equitable treatment of all affected persons through the provision of relocation benefits and assistance to minimize the hardship of displacement on the affected persons.

Local

Tulare County Regional Housing Needs Assessment Plan 2014-2023

State Housing Element law assigns the responsibility for preparing the Regional Housing Needs Assessment (RHNA) for the Tulare County region to the Tulare County Association of Governments (TCAG). The RHNA is updated before each Housing Element cycle. The Tulare County RHNA Plan recommends that the County provide land use and zoning for approximately 7,081 units in the unincorporated portions of the County (726 units per year over the 9.75-year RHNA planning period).

Tulare County Regional Blueprint 2009

This Blueprint includes the following preferred growth scenario principals:

- Increase densities county-wide by 25% over the status quo densities;
- Establish light rail between cities;
- Extend Highway 65 north to Fresno County;
- Expand transit throughout the county;
- Maintain urban separators around cities; and

[150] Ibid.

- Growth will be directed toward incorporated cities and communities where urban development exists and where comprehensive services and infrastructure are or will be provided.

Tulare County Housing Authority

"The Housing Authority of the County of Tulare (HATC) has been officially designated as the local public housing agency for the County of Tulare by the Board of Supervisors and was created pursuant to federal and state laws. Per their website (www.hatc.net), HATC is a unique hybrid: a public sector agency with private sector business practices. Their major source of income is the rents from residents. The HATC mission is "to provide affordable, well-maintained rental housing to qualified low- and very low-income families. Priority shall be given to working families, seniors and the disabled. Tenant selfsufficiency and responsibility shall be encouraged. Programs shall be self-supporting to the maximum extent feasible.

HATC provides rental assistance to very low and moderate-income families, seniors and the handicapped throughout the county. HATC offers many different programs, including the conventional public housing program, the housing choice voucher program (Section 8), the farm labor program for families with farm labor income, senior housing programs, and other programs. They also own or manage some individual subsidized rental complexes that do not fall under the previous categories, and can provide information about other affordable housing that is available in Tulare County. All programs are handicap accessible. Almost all of the complexes have 55-year recorded affordability covenants. Table 5-4 provides the number of units and locations managed by the HATC."[151]

County of Tulare General Plan Housing Element

The Tulare County General Plan 2030 Update prioritizes population and housing needs, aiming to ensure an adequate supply of healthy, safe, and affordable housing for the residents of the unincorporated areas. The plan recognizes the challenges faced by specific segments of the population, such as the elderly, disabled individuals, single-parent households, farmworkers, ethnic minorities, and the homeless, in finding suitable housing. The goals, principles, and policies outlined in the plan guide future development projects and preservation programs to provide a wide range of housing types that cater to the diverse needs of residents. The overall housing goals include achieving a variety of housing types to meet economic and social needs, attaining necessary infrastructure, creating livable communities with access to amenities and employment opportunities, promoting environmentally sustainable strategies, and maintaining the existing housing stock to ensure healthy and safe housing opportunities for the population. These goals underscore Tulare County's commitment to equitable and inclusive housing for all its residents, regardless of their background or circumstances.

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)?

[151] 2015 Housing Element. Tulare County Housing Element. Chapter 5. Progress, Review & Revision. Page 5-12. Tulare County Housing Element. Chapter 6. Housing Program. Housing Goals, Guiding Principles, and Policies. Page 6-2. Accessed April 2023 at: http://generalplan.co.tulare.ca.us/documents/GP/001Adopted%20Tulare%20County%20General%20Plan%20Materials/110Part%20I%20Voluntary%20Elements%20Chapters%206,%2012%20and%2015/001CHP%206%20Tulare%20County%20Housing%20Element%20Update%202015/CHP%206%20Tulare%20County%20Housing%20Element%20Update%202015.pdf

No Impact: The United States Census Bureau stated the population in the Community of Goshen is 4,968 as of 2020. The project proposes to construct 303 single-family homes. The US Census Bureau states that the Community's average household size is 3.89 persons. Based on this average household size, the estimated population increase resulting from the proposed Project would be 1,179 persons. Construction of housing at this location would not be unplanned as the Community Plan designated the proposed Project site for mixed-use (which includes residential uses). In general, the Community Plan that indicates that Goshen needs, and could accommodate, additional housing to the Year 2030 planning horizon. Additionally, the Community Plan is also intended to attract more businesses, services, and infrastructure to accommodate the new population. This proposed Project would account for 4.3% of the 7,081 units the RHNA states are needed. Overall, the proposed Project will not result in unplanned increase in growth and population. There will be *no impact.*

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

No Impact: There proposed Project would not displace a substantial number of existing people or housing. to accommodate the design of the new subdivision's homes, one existing house on the site will be removed. Overall, the proposed Project will increase the amount of available housing in the community. There will be *No Impact*.

Cumulative Impact:

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, General Plan background Report, Tulare County 2030 General Plan EIR, and/or Goshen Community Plan and EIR. As there will be no Project-specific impact, there will be no cumulative impact.

XV. PUBLIC SERVICES

Would the Project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
1) 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?	☐	☐	☑	☐

The discussions regarding Environmental Setting, CEQA requirements, Regulatory Setting, Chapter 3.14 Public Services, Chapters 4 through 9, Appendices "A" through "I", etc. contained in the Goshen Community Plan Update and Environmental Impact Report are incorporated herein in their entirety. Where necessary and if available, additional site specific facts, data, information, etc., are included in this discussion.

Environmental Setting

Fire

Goshen (including the proposed Project Site) is served by the Tulare County Fire Department (TCFD), which operates twenty-eight fire stations within the County of Tulare. The TCFD will continue to provide fire protection services to the proposed Project site following project implementation. TCFD Fire Station No.7 is in Goshen (east of SR 99), is the nearest fire station to the site(located at 30901 Road 67), and is approximately 0.4 miles to the northeast.

Police

Law enforcement services are provided to the proposed Project site by the Tulare County Sheriff's Office(TCSO). TCSO will continue to provide police protection services to the proposed Project site following project implementation. TCSO's Headquarters are located approximately 4.5 miles southeast of the proposed Project site at 833 Akers Street (in Visalia). The Headquarters is the closest station to the proposed Project site.

Schools

The proposed Project site is located within the Visalia Unified School District (VUSD) from Kindergarten through 12th Grade. VUSD includes twenty-five elementary schools, four middle schools, four traditional high schools, and alternative education programs. The nearest school (Goshen Elementary School) is located approximately 0.25 miles northeast. The nearest high school (El Diamante High School) is approximately 5.25 miles southeast of the proposed Project site in the City of Visalia.

Parks

Peter Mulloch Park (an approximately 9-acre site which also serves as a storm water detention facility) is the nearest County owned/operated park and is located approximately 1.5 miles east of the proposed Project site at the southeast intersection of Avenue 310 and Road 72. Goshen Community Park (an 11.0-acre park/sports field) is located southwest of the intersection of Robinson Road and Betty Drive within a stormwater detention basin approximately 0.75 miles from the proposed Project site. The recently approved subdivision (Goshen Village East) includes a future 0.56-acre park. The next nearest County park is Mooney Grove approximately 7.75 miles southeast of the proposed Project site; it is a 143-acre day use park; reservations for picnic areas are available and there is no entrance fee.

Regulatory Setting

Federal

None that are applicable to this Project.

State

California Fire Code and Building Code

The purpose of the California Fire Code (Title 24, Part 9 of the California Code of Regulations) is to establish the minimum requirements consistent with nationally recognized good practices to safeguard the public health, safety and general welfare from the hazards of fire, explosion or dangerous conditions in new and existing buildings, structures and premises, and to provide safety and assistance to fire fighters and emergency responders during emergency operations.[152] 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.

Tulare County General Plan 2030 Update

The Tulare County General Plan 2030 Update incorporates goals and policies related to public services, with a focus on ensuring the safety of County residents and the protection of County property. Goal PFS-

[152] 2022 California Fire Code (Title 24, Part 9 of the California Code of Regulations). Accessed April 2023 at: https://tularecounty.ca.gov/rma/planning-building/building-department/

7 emphasizes the provision of adequate fire and law enforcement facilities and services. The plan includes policies such as enforcing fire protection standards for new developments, striving to maintain fire department staffing and response time goals, providing necessary station facilities and equipment for sheriff and fire services, and cooperating with mutual aid providers for comprehensive coverage. The County also emphasizes cost sharing, requiring new development to contribute to public facility fees and potentially join special assessment districts or funding mechanisms to support the operation of sheriff and fire stations. Additionally, the plan aims to achieve and maintain appropriate staffing ratios and response times for law enforcement, as well as promoting building and site design features that enhance crime prevention and reduction efforts. These goals and policies demonstrate Tulare County's commitment to ensuring the safety and well-being of its residents through efficient and effective public service provision.

Discussion

1) 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:

The proposed Project will rely on existing public services, and/or pay its fair share for additional or alteration of any public services. The subject site is within the Goshen Community Plan Update Urban Development boundary and will utilize existing services provided by the County of Tulare, California Water Service Company (water), and Goshen Community Service District (sewer). There will be a less than significant impact.

a. Fire protection?

Less than Significant Impact: The TCFD will provide fire protection services to the proposed development. The closest fire station is Station No.7, located approximately 0.4 miles northeast of the proposed Project site (at 30901 Road 67). This station includes two fire engines, one full-time fireman, and ten volunteers. The TCFD uses the National Fire Protection Association (NFPA) standard for fire protection services, which strives for one responder per 1,000 residents. However, there are no specific Federal or State regulations on fire or ambulance protection that would reduce the environmental impacts associated with the proposed Project. Currently, there is one full-time responder for 4,968 residents in Goshen. The addition of 303 residential units will increase the demand for fire protection services. The existing fire stations are placed to provide optimum service. The TCFD will determine the need for additional fire protection services (e.g., fire station, equipment, personnel, fees, etc.) that may be required as a result of the proposed Project.

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 of these facilities would be subject to their own separate CEQA review to identify and mitigate any potential environmental impacts. Therefore, the impact will be *less than significant.*

b. Police protection?

Less than Significant Impact: The TCSO will provide services to the proposed development. As noted earlier, TCSO Headquarters are located approximately 4.5 miles southeast of the proposed Project site in Visalia. The Headquarters is the closest station to the proposed Project Site. The development would increase the demand for police service with the addition of 303 residential units. The TCSO strives for a standard of three sworn officers per 1,000 residents. The general plan states there are 448 sworn officers for an unincorporated population of 145,128. The proposed Project is estimated to increase the population by 1,179. Using this ratio, it is estimated that an additional four sworn officers to maintain the ratio. However, the final determination for additional officers (or other needs such as equipment, vehicles, etc.) will be determined by the TCSO. In the event that the TCSO determines that there is a demand for additional officers and equipment, fees or other compensation would be determined by the TCSO.

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. Therefore, the impact will be *less than significant*.

c. Schools?

Less than Significant Impact: The proposed Project is within the VUSD from Kindergarten through 12th Grade. The District includes twenty-five elementary schools, four middle schools, four traditional high schools, and alternative education programs. The addition of 303 new homes will increase the number of students in the schools. In addition to meeting the goals and policies of the County's General Plan, future development is required to pay development impact fees to the school districts at the time of building permit issuance. Currently, the Visalia School District charges $4.79 per square foot of residential development. The final amount of each individual residential unit's school impact fee will be determined based upon information provided to VUSD. Therefore, the impact will be *less than significant.*

d. Parks?

Less than Significant Impact: The addition of 303 new residential units could result in more usage of existing parks. The nearest park is Peter Malloch Park, located approximately 1.2 miles northeast. The proposed Project's site plan includes 2.08 acres of parkland. The proposed Project (and its subsequent population) would not lower the existing level of services for parks; however, the Tulare County General Services Agency (Division of Parks and Recreation) would make the final determination on potential park facilities for the proposed Project As such, the impact will be *less than significant.*

e. Other public facilities?

Less than Significant Impact: The proposed Project involves proposed development of a 303-lot residential subdivision that would contribute to the need for gas, electricity, and telephone

services. Also, see discussion at Item 6 Energy. All future residential (and non-residential) development within the proposed Project area would be subject to the latest adopted edition of the Title 24 energy efficiency standards, which are among the most stringent in the U.S. As such, the proposed Project would not result in the unnecessary, wasteful, or inefficient use of energy. Therefore, the impact will be *less than significant*.

Cumulative Impact:

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, General Plan background Report, Tulare County 2030 General Plan EIR, and/or Goshen Community Plan Update and EIR.

The proposed Project will not significantly impact the fire or police response times, schools, parks, or other facilities. Therefore, less than significant Project-specific or Cumulative Impacts related to this Checklist Item will occur.

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?	☐	☐	☐	☑

The discussions regarding Environmental Setting, CEQA requirements, Regulatory Setting, Chapter 3.15 Recreation, Chapters 4 through 9, Appendices "A" through "I", etc. contained in the Goshen Community Plan Update and Environmental Impact Report are incorporated herein in their entirety. Where necessary and if available, additional site specific facts, data, information, etc., are included in this discussion.

Environmental Setting

There are fifteen park facilities totaling 693 acres owned and operated by the County of Tulare. Two are located within Goshen: Peter Mulloch Park, and Goshen Community Park. Aside from County parks, there are many open space areas, State, Federal, and City parks in Tulare County. Tulare County provides several types of parks and open space facilities to meet the park and open space recreation needs of the community. Parks in Visalia are accessible to residents of Goshen, with the nearest being Plaza Park (a City of Visalia park) approximately 2.5 miles southeast of the proposed Project site. The Tulare County General Plan states a total parkland standard of five acres of parkland per 1,000 residents.

Regulatory Setting

Federal

None that apply to this proposed Project.

State

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).

Tulare County General Plan 2030 Update

The Tulare County General Plan 2030 Update incorporates goals and policies related to parks and recreation, with a focus on serving the recreational needs of County residents and visitors. Goal ERM-5 highlights the importance of providing a comprehensive parks, recreation, and open space system, with a special emphasis on activities related to Environmental Resources Management. The plan includes policies such as providing a wide range of active and passive recreational opportunities within community parks, requiring the dedication of land or payment of fees for the acquisition and development of public recreation facilities, and encouraging the development of parks near public facilities and open space areas through joint-use agreements. The plan also defines different park types based on size and amenities, including neighborhood play lots, neighborhood parks, community parks, and regional parks, each designed to serve specific areas and cater to different recreational needs. Guidelines are established for park creation and location, aiming for an overall standard of improved parkland per population, encouraging neighborhood play lots in new subdivisions, and setting specific acreage requirements for different park types based on population and proximity to schools. These goals and policies demonstrate Tulare County's commitment to providing accessible, diverse, and well-maintained parks and recreation facilities for the enjoyment and benefit of its residents and visitors.

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: Goshen has a population of 4,968, according to the 2020 U.S. Census. At 5 acres of park space per 1,000 residents, Goshen would require 24.84 acres of parkland. Goshen currently has 20.56 existing acres of parkland. The proposed Project is anticipated to increase the Goshen population by an estimated 1,179 residents. Based on the desired parkland ratio of five acres per one thousand residents identified by Tulare County, the proposed Project would require 6.15 acres of parkland and open space. The proposed Project will provide approximately two acres on site and may be required, as determined by the Tulare County General Services Agency (Parks and Recreation Department), to pay in-lieu fees to offset the costs of parks and recreational facilities outside of the site. The impact will be a *less than significant.*

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?

No Impact: The proposed Project does not include any recreational facilities or require the construction or expansion of any recreational facilities that would have an adverse physical effect on the environment. There will be *no impact.*

Cumulative Impact

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, General Plan background Report, the Tulare County 2030 General Plan EIR, and/or the Goshen Community Plan Update and EIR. As such, a less than significant Cumulative Impact related to this Checklist Item will occur.

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?	☐	☐	☐	☑

The discussions regarding Environmental Setting, CEQA requirements, Regulatory Setting, Chapter 3.16 Transportation, Chapters 4 through 9, Appendices "A" through "I", etc. contained in the Goshen Community Plan Update and Environmental Impact Report are incorporated herein in their entirety. Where necessary and if available, additional site specific facts, data, information, etc., are included in this discussion.

Some discussion for this section has been excerpted from the Transportation Impact Assessment that was prepared for this proposed Project by qualified expert consultants LSA. The TIA has been prepared to assess the potential circulation impacts associated with the proposed Goshen Residential Project (project) in Goshen, Tulare County, based on the County of Tulare (County) SB 743 Guidelines (Guidelines), dated June 8, 2020. Based on the requirements outlined in the County guidelines, a Vehicle Miles Traveled (VMT) analysis has been conducted for the disclosure of potential impacts and mitigation measures pursuant to the California Environmental Quality Act (CEQA). Additionally, as recommended in the County Guidelines, a Local Transportation Analysis (LTA) have been conducted for the project. The scope of work for this TIA, including trip generation, trip distribution, study area, and analysis methodologies for the LTA and CEQA VMT analysis, has been approved by County staff via the Scoping Agreement process. The full document can be found in Appendix D of this IS/MND.

Environmental Setting

"Tulare County has two major regional highways, State Highway 99 and 198. State Highway 99 connects Tulare County to Fresno and Sacramento to the north and Bakersfield to the south. SR 198 connects from U.S. Highway 101 on the west and continues eastward to Tulare County, passing through the City of Visalia and into Sequoia National Park. The highway system in the County also includes State highways, County-maintained roads, and local streets within each of the eight cities."[153] "Travel within Tulare County is a function of the size and spatial distribution of its population, economic activity, and the relationship to other major activity centers within the Central Valley (such as Fresno and Bakersfield) as well as more distant urban centers such as Los Angeles, Sacramento, and the Bay Area. In addition, there is considerable

[153] Goshen Community Plan Update Draft EIR. Pages 3.16-2 and -3.

travel between the northwest portions of Tulare County and southern Fresno County and travel to/from Kings County to the west. Due to the interrelationship between urban and rural activities (employment, housing, services, etc.) and the low average density/ intensity of land uses, the private automobile is the dominant mode of travel for residents in Tulare County."[154] " While the private automobile is the dominant mode of travel within Goshen, as it is throughout Tulare County, other modes of transportation are important. The latest available Census survey data for Goshen indicates that about two-third of commuters drive alone to work, while one-third use other means: 14 percent carpool or vanpool, 9 percent walked, 6 percent used public transportation and 5 percent worked at home. The Census bureau does not collect data on non-work trips, which represent a greater share of travel than work trips, but tend to be less concentrated"[155]

The Project site is located in central-western Tulare County, California, northwest of Avenue 304 and Road 64. As classified in the Goshen Community Plan Update Circulation Map), Avenue 304 is an east-west minor collector street (and is known as Goshen Avenue east of SR 99); Road 64 is a two-lane major collector street that provides direct access between Goshen and SR 198[156].

The Goshen Community Plan Update EIR includes lengthy discussions on Uninterrupted and Interrupted Traffic Flow Facilities Levels of Service (LOS), existing circulation and traffic conditions, roadway classifications, etc. that are incorporated herein by reference (see pages 13.16-4 to 3.16-8. As indicated in the Goshen Community Plan Update EIR, "To project future traffic roadway conditions to the horizon year of the plan (2032), a variety of sources were used. In the Betty Drive/Riggin Avenue Corridor, Caltrans traffic forecasts for the new Betty Drive/SR 99 interchange (as well as TCAG model forecasts) were used to develop an annual traffic increase factor that was then applied to study intersections and roadway segments. Additionally, the County reviewed Visalia's Traffic Studies for their General Plan EIR and the Traffic Studies for the CMI Inc. (formerly Papich Construction) project at Road 68 and State Route 198 and Road 68/Avenue 308. These forecasts were adjusted as appropriate for new and realigned roadways, and to reflect potential industrial development along Robinson Road north of Betty Drive and for a specific development proposal in the southwest quadrant of Riggin Avenue and Road 76. In addition to roadway changes in conjunction with the Betty Drive Interchange reconstruction, Road 76 is assumed to be extended from Avenue 308 north to Riggin Avenue. For the remainder of the study area, an overall rate of traffic growth of one percent per year was determined to be a reasonable forecast assumption. This rate of growth was applied outside of the Betty Drive/Riggin Avenue corridor to existing traffic count data to create future year (2032) traffic levels. This annual rate results in an overall growth in peak hour traffic of approximately 20% for the period 2014-2032."[157]

"Public transportation provides an economical and efficient alternative for getting people to work, school and other chosen destinations. In Tulare County, buses are the primary mode of public transportation. Public transportation also takes the form of shared ride taxi, automobile and vanpools; dial-a-ride, and specialized handicapped accessible services. In Tulare County, social service transportation is provided by the following: local transit agencies, demand responsive operators and city/county special programs for senior citizens, mental health organizations and disabled citizens programs. These programs are funded and subsidized through State and federal grants, Local Transportation Funds (LTF), State Transit Assistance Funds (STAF), and local transportation sales tax revenues.

[154] Ibid. 3.16-3.

[155] Ibid. 3.16-3.

[156] Goshen Community Plan Update. Page 226.

[157] Goshen Community Plan Update EIR. Pages 3.16-7 and -8.

Within Goshen, Visalia Transit (VT) provides a supplemental service to Fixed-Route service called Dial a Ride; a curb-to-curb para-transit service on a shared-ride / demand-response basis to locations within the city limits of Visalia, Goshen, Farmersville and to/from Exeter. Visalia Transit's Dial-A-Ride service designed to provide paratransit service for ADA (Americans with Disabilities Act) certified individuals with disabilities that prevent them from riding the VT fixed-route buses. In addition the Dial-A-Ride provides same day service to the general public (i.e., non-ADA-certified) passengers based on space availability. Services are operated on weekdays from 6:00 a.m. - 9:30 p.m. and on weekends from 8:00 a.m. 6:30 p.m."[158]

Airports

"There are nine public use airports in Tulare County (see Figure 3.16-2 [in the EIR]). These include six publicly owned and operated facilities (Porterville Municipal, Sequoia Field, Tulare Municipal [Mefford Field], Visalia Municipal, Woodlake, and Harmon Field [currently closed])…Badger Field is under consideration for Federal Aviation Administration (FAA) recertification as a restricted private airfield (as of August 2006). Fresno Yosemite International Airport (FAT), 37 miles northwest of Goshen, is the principal passenger airfreight airport in the central San Joaquin Valley. Visalia Municipal Airport, [approximately] 3 miles southeast, offers passenger service to Los Angeles."[159]

Transit

"TCAT has been providing rural route service between various cities and towns in Tulare County since 1981. TCAT retains MV Transportation to provide all of its transit services, which includes fixed route and demand responsive services for inter-city and intra-city service in many small communities throughout the County. TCAT is the most extensive transit system in Tulare County and connects with Dinuba Area Regional Transit (DART), Visalia City Coach (VCC), Tulare InterModal Express (TIME), Porterville City Operated Local Transit (COLT), Kings Area Rural Transit (KART), Kern Regional Transit, Orange Belt and Greyhound bus."[160] Visalia Transit Route 6 operates between Goshen Elementary School and the Visalia Transit Center in downtown Visalia. Route 6 provides 20 roundtrips to the Visalia Transit Center on weekdays and 14 roundtrips on Saturdays, all at 45-minute intervals. Transfers can be made to connect to the remainder of Visalia, as well as the City of Tulare, and the smaller cities and communities in the County served by the TCaT fixed route transit system. Visalia transit vehicles are wheelchair accessible and all full size buses include bike racks. Paratransit services are transportation services such as carpooling, vanpooling, taxi service, and dial-a-ride programs. The County supports reliable and efficient paratransit service by encouraging development of service systems that satisfy the transit needs of the elderly and physically handicapped. Within Goshen, Visalia Transit (VT) provides a supplemental service to Fixed-Route service called Dial-A-Ride; a curb-to-curb para-transit service on a shared-ride / demand-response basis to locations within the city limits of Visalia, Goshen, Farmersville and to/from Exeter. Visalia Transit's Dial-A-Ride service designed to provide paratransit service for ADA (Americans with Disabilities Act) certified individuals with disabilities that prevent them from riding the VT fixed route buses. In addition, the Dial-A-Ride provides same day service to the general public (i.e., non-ADA-certified) passengers based on space availability. Services are operated on weekdays from 6:00 am - 9:30 pm and on weekends from 8:00 a.m. - 6:30 p.m. Goshen is also served by Greyhound intercity bus lines. Three

[158] Ibid. 3.16-8

[159] Op. Cit. 3.16-8 and -9.

[160] Op. Cit. 3.16-9.

northbound buses and three southbound buses serving destinations along SR 99 stop at the Goshen Arco Travel Center on the westside SR 99 frontage road, just north of Avenue 308. Orange Belt Stages also serves this location with one daily service eastbound to Las Vegas, and one westbound service to Hanford where connections can be made to San Luis Obispo."[161]

Bicycle and Pedestrian Facilities

"Investment in bikeways provides an inexpensive environment-friendly transportation opportunity. Bicycling is considered an effective alternative mode of transportation that can help to improve air quality and reduce the number of vehicles traveling along existing highways, especially within the cities and unincorporated communities. While the numbers of cyclists are small in comparison to the amount of auto traffic, the size of the community of Goshen means that most trips within the community can be as fast by bicycle as by car. Pedestrian facilities include sidewalks, walkways, crosswalks, signals, lighting, and benches, among other items. Where such facilities exist, people will be much more likely to make shorter trips by walking rather than by vehicle. Pedestrian facilities serving the school and recreational facilities enhance the safety of those who choose to walk to and from these destinations. [162]"

Designated Truck Routes

Designated truck routes are specifically designated for long-distance truck movements. However, for local deliveries within a community, trucks may utilize the most direct route to reach their specific delivery location, even if it involves local streets. The purpose of designated truck routes is to accommodate heavy commercial and industrial traffic. In accordance with the Goshen Complete Streets Program and Circulation Element, the initial designated truck routes include:

- Betty Avenue
- Riggin Avenue
- West Goshen Avenue
- Camp Drive

When Road 76 is complete, this also will become a designated truck route.

AMTRAK

"The Hanford AMTRAK station, located 15 miles west in Kings County, is the closest station to Goshen providing passenger rail service; the Fresno Amtrak station is 37 miles to the northwest. The San Joaquin Joint Powers Authority (SJJPA) is comprised of ten agencies including TCAG. They currently oversee the operation of six trains daily serving each of these stations. Service is provided to points north including San Francisco and Sacramento and to points south including Bakersfield and Los Angeles."[163]

High Speed Rail

[161] Op. Cit. 3.16-12.

[162] Op. Cit.

[163] Goshen Community Plan Update Traffic Impact Study. Page 33. February 2018. Prepared by VRPA Technologies, Inc. and included in Appendix "f" of the Goshen Community Plan Update Draft EIR.

"The California High-Speed Rail Authority (HSRA) has determined that high-speed rail is technically, environmentally and economically feasible once constructed, and would be operationally self-sufficient. The Authority's purpose is to fund and construct the high-speed rail system throughout California. The proposed service would serve new stations in Kings County near the Tulare line and in Fresno."[164]

Regulatory Setting

Federal

"Federal Aviation Regulations

Sec. 77.17 — Form and time of notice

(a) Each person who is required to notify the Administrator under §77.13(a) shall send one executed form set (four copies) of FAA Form 7460–1, Notice of Proposed Construction or Alteration, to the Manager, Air Traffic Division, FAA Regional Office having jurisdiction over the area within which the construction or alteration will be located. Copies of FAA Form 7460–1 may be obtained from the headquarters of the Federal Aviation Administration and the regional offices.

(b) The notice required under §77.13(a) (1) through (4) must be submitted at least 30 days before the earlier of the following dates:
   (1) The date the proposed construction or alteration is to begin.
   (2) The date an application for a construction permit is to be filed.
   However, a notice relating to proposed construction or alteration that is subject to the licensing requirements of the Federal Communications Act may be sent to FAA at the same time the application for construction is filed with the Federal Communications Commission, or at any time before that filing.

(c) A proposed structure or an alteration to an existing structure that exceeds 2,000 feet in height above the ground will be presumed to be a hazard to air navigation and to result in an inefficient utilization of airspace and the applicant has the burden of overcoming that presumption. Each notice submitted under the pertinent provisions of this part 77 proposing a structure in excess of 2,000 feet above ground, or an alteration that will make an existing structure exceed that height, must contain a detailed showing, directed to meeting this burden. Only in exceptional cases, where the FAA concludes that a clear and compelling showing has been made that it would not result in an inefficient utilization of the airspace and would not result in a hazard to air navigation, will a determination of no hazard be issued.

(d) In the case of an emergency involving essential public services, public health, or public safety that requires immediate construction or alteration, the 30-day requirement in paragraph (b) of this section does not apply and the notice may be sent by telephone, telegraph, or other expeditious means, with an executed FAA Form 7460–1 submitted within 5 days thereafter. Outside normal business hours, emergency notices by telephone or telegraph may be submitted to the nearest FAA Flight Service Station.

(e) Each person who is required to notify the Administrator by paragraph (b) or (c) of §77.13, or both, shall send an executed copy of FAA Form 117–1, Notice of Progress of Construction or Alteration, to the Manager, Air Traffic Division, FAA Regional Office having jurisdiction over the area involved."[165]

State

[164] Ibid.

[165] Goshen Community Plan Update EIR. Pages 3.16-14 and -15.

"Caltrans: Transportation Concept Reports

Each District of the State of California Transportation Department (Caltrans) prepares a Transportation Concept Report (TCP) for every state highway or portion thereof in its jurisdiction. The TCR usually represents the first step in Caltrans' long-range corridor planning process. The purpose of the TCR is to determine how a highway will be developed and managed so that it delivers the targeted LOS and quality of operations that are feasible to attain over a 20-year period, otherwise known as the "route concept" or beyond 20 years, for what is known as the "ultimate concept". However, the Project site is not adjacent to or near any Concept Report facilities. The nearest facility is SR 137 approximately 4.5 south of the proposed Project.

Caltrans Guide for the Preparation of Traffic Impact Studies

"The California Department of Transportation (Caltrans) has developed this "Guide for the Preparation of Traffic Impact Studies" in response to a survey of cities and counties in California. The purpose of that survey was to improve the Caltrans local development review process (also known as the Intergovernmental Review/California Environmental Quality Act or IGR/CEQA process). The survey indicated that approximately 30 percent of the respondents were not aware of what Caltrans required in a traffic impact study (TIS)."[166]

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

[166] Ibid. 3.16-15.

document prepared for the project. The standard of adequacy in Section 15151 shall apply to the analysis described in this section.

Local

"Transportation Control Measures (TCM) are designed to reduce vehicle miles traveled, vehicle idling, and/or traffic congestion in order to reduce vehicle emissions. Currently, Tulare County is a nonattainment region under the Federal Clean Air Act (CAA) and the California Clean Air Act (CCAA). Both of these acts require implementation of TCMs. These TCMs for Tulare County are as follows:

- Rideshare Programs;
- Park and Ride Lots;
- Alternate Work Schedules;
- Bicycle Facilities;
- Public Transit;
- Traffic Flow Improvement; and
- Passenger Rail and Support Facilities.

Tulare County Association of Governments (TCAG)

… [W]ith the passage of Assembly Bill (AB) 69 State law has required the preparation of Regional Transportation Plans (RTPs) to address transportation issues and assist local and state decision makers in shaping California's transportation infrastructure. The Tulare County Association of Government has prepared the 2011 Regional Transportation Plan. Specific policies that apply to the proposed Project are listed as follows:

TRANSPORTATION SYSTEM MANAGEMENT (TSM) Policy 5

Support installation of adequate left and right turning pockets to allow increased storage, as necessary.

TRANSPORTATION SYSTEM MANAGEMENT (TSM) Policy 6

Encourage improvements in design of signalized intersections to improve turning for large vehicles and circulation flow."[167]

"Tulare County Comprehensive Airport Land Use Plan

The Tulare County Comprehensive Airport Land Use Plan (CALUP) has a number of policies that apply to projects within the County. The Visalia Municipal Airport is located approximately 1.5 miles southeast of the project site. The applicable CALUP policies specific to safety, noise, and airspace protection surfaces are listed below.

5.2.2.1 Safety Compatibility Zones

[167] Op. Cit. 3.16-15 and -16.

The proposed safety compatibility zones are illustrated on Figure 3.16-4 and are based upon existing Runway 12-30 being lengthened from 6,559 feet to 8,000 feet, as noted in the previous section. The safety compatibility zone dimensions are based on those for a long general aviation runway length of over 6,000 feet shown on Figure 3A of the 2011 Caltrans *Handbook*. The additional runway length will elongate the 1995 ALUC safety zones, airspace protection surfaces and aircraft overflight policies into agricultural areas further southeast of the Airport. The fee title and aviation easement land acquisitions recommended in the Airport Master Plan support the runway extension, but are not sufficient to protect public health and safety throughout the Airport Influence Area.

5.2.2.2 Noise Compatibility

Aircraft operations at the Airport, estimated to total 26,000 annual aircraft operations in 2001, are forecast to increase to 33,000 annual aircraft operations by 2019. Almost 80 percent of these aircraft operations are estimated to be itinerant operations and the mix of aircraft types forecast suggests an increasing percentage of small business jet and turboprop aircraft. In combination with the runway length extension additional aircraft operations will extend the influence of aircraft noise further from the Airport. The 55, 60, and 65 CNEL aircraft noise exposure contours for 2019 for Visalia Municipal Airport are illustrated on Figure 3.16-5 [in the EIR] and are based upon extending Runway 12-30 as noted above. The forecast 65 dB CNEL aircraft noise exposure contour extends beyond the northwestern boundary of the Airport over the State Highway [SR] 99/State Highway [SR] 198 interchange. The forecast 65 dB CNEL aircraft noise exposure contour extends over adjacent City Park property to the east and agricultural land to the south. No sensitive noise receptors (e.g., residences, schools, hospitals) are located within the 65 dB CNEL aircraft noise exposure contour. The forecast 60 dB CNEL aircraft noise exposure contour also does not extend over any sensitive noise receptors.

5.2.2.3 Airspace Protection Surfaces

The Airport Master Plan identifies a 50 to 1 approach surface to the end of Runway 30 for existing precision instrument approach procedures (ILS RWY 30) and a 34 to 1 approach surface to the end of Runway 12 for existing non-precision instrument approach procedures (RNAV GPS RWY 12). The FAR Part 77 imaginary surfaces at the Visalia Municipal Airport, based on the Airport Master Plan, are illustrated on Figure 3.16-6. Both the conical surface and the horizontal surface will extend further to the south than in the previous CALUP due to the proposed runway extension. The FAR Part 77 conical surface, which the Tulare County ALUC uses to define the Airport Influence Area, extends out 14,000 feet from the primary surface. The horizontal surface extends out 10,000 feet from the primary surface."[168]

County of Tulare Standard Specifications

The Improvement Standards of County of Tulare states "Required improvement work shall be done in accordance with the applicable sections of these Improvement Standards including the California Standard Specifications...; sections 7000 – 7126 of the Tulare County Ordinance Code; as such other special provisions prepared by the developer's engineer and approved by the County Public Works Director that are necessary for the successful completion of the required work."[169]

[168] Op. Cit. 3.16-16 through -19.

[169] Tulare County. Improvement Standards of County of Tulare. Page 1. Accessed May 2023 at: https://tularecounty.ca.gov/rma/rma-documents/public-works-documents/tulare-county-improvement-standards-06-16-2017/

County of Tulare General Plan:

The Tulare County General Plan 2030 incorporates goals and policies related to transportation, aimed at developing and managing the roadway system to ensure efficient and safe travel. Policy TC-1.16 establishes the County's commitment to strive for a Level of Service (LOS) of "D" or better for both roadway segments and intersections, following the definitions set by the Highway Capacity Manual. This policy emphasizes the importance of maintaining acceptable traffic flow and minimizing congestion to enhance the overall transportation experience within the County. Additionally, policy HS-1.9 addresses emergency access and emphasizes the need for road networks, both public and private, to facilitate safe and readily accessible routes for emergency equipment. It also emphasizes the importance of establishing alternate evacuation routes whenever feasible, enhancing preparedness and ensuring the safety and well-being of County residents during emergency situations. These policies highlight Tulare County's dedication to efficient transportation management and ensuring the safety and accessibility of its roadways.

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 proposed project would include 303 single-family detached residential units. The project site is currently zoned within the Light Agricultural (A-1) and Exclusive Agricultural (AE-40) districts but the zoning for the project site is proposed to be amended to General Commercial – Mixed Use (C-2- MU). C-2-MU districts are intended for residential use as well as retail stores and businesses that do not involve the manufacturing, assembling, packaging, treatment or processing of articles of merchandise for distribution and retail sale. The project site is designated as Highway Commercial in the Community Plan.

As previously noted, A TIA was prepared by LSA to assess the potential circulation impacts associated with the proposed Goshen Residential Project (project) in Goshen, Tulare County, based on the County of Tulare (County) SB 743 Guidelines (Guidelines), dated June 8, 2020. Based on the requirements outlined in the County guidelines, a Vehicle Miles Traveled (VMT) analysis has been conducted for the disclosure of potential impacts and mitigation measures pursuant to the California Environmental Quality Act (CEQA). Additionally, as recommended in the County Guidelines, a Local Transportation Analysis (LTA) have been conducted for the project. The scope of work for this TIA, including trip generation, trip distribution, study area, and analysis methodologies for the LTA and CEQA VMT analysis, has been approved by County staff via the Scoping Agreement process. The full document can be found in Appendix D of this IS/MND.

LTA Study Area

The Local Transportation Analysis (LTA) has been prepared in accordance with the County Guidelines. The primary objective of the analysis will be to study and determine potential traffic operations issues at the project driveways and nearby intersections because of the proposed project. Based on the County Guidelines, an LTA is required if a project is expected to generate 100 or more peak hour trips. The detailed project trip generation is summarized in Table 5-A of Appendix D and discussed further in the Section 5.1 of Appendix D. As shown in Table 5-A of Appendix D, the project is anticipated to generate more than 100 peak hour trips, and therefore, an LTA has been prepared for the project.

Study Intersections: Based on the County Guidelines, the study area shall generally include, at a minimum, any intersection where the proposed project will add 50 or more peak hour trips. Based on this criterion, the intersections analyzed in this study are as follows:

1. Project Driveway 1/Avenue 304 (Tulare County);
2. Project Driveway 2/Avenue 304 (Tulare County);
3. Road 63/Betty Drive (Tulare County);
4. Road 63/Avenue 308 (Tulare County);
5. Road 63/Project Driveway 3 – Kenyon Plastering Driveway (Tulare County);
6. Road 64/Avenue 304 (Tulare County);
7. Road 64/State Route 198 (SR-198) (Caltrans);
8. State Route 99 (SR-99) Southbound Ramps/Betty Drive (Caltrans); and
9. SR-99 Northbound Ramps/Betty Drive (Caltrans).

Roadway Segments: A roadway segment analysis was conducted based on daily traffic volumes within the study area and any segments that the County requires to be included in the analysis. Per the Scoping Agreement (Appendix A), roadway segments analyzed in this study are as follows:

1. Avenue 304
    - West of Project Driveway 1 (Tulare County);
    - Between Project Driveway 1 and Project Driveway 2 (Tulare County);
    - Between Project Driveway 2 and Road 64 (Tulare County);
2. Road 63
    - Between Betty Drive and Avenue 308 (Tulare County);
    - Between Avenue 308 and Avenue 304 (Tulare County);
3. Road 64
    - Between Avenue 304 and SR-198 (Tulare County); and
    - Betty Drive
    - Between Road 63 and SR-99 Southbound Ramps (Tulare County).

For each roadway segment, the highest volume on any part of the segment will be considered as the analysis volume for the entire segment. The study intersections and roadway segments included in this analysis were approved by the County during the scoping agreement process.

Traffic Volumes for No Project Scenarios

Existing Traffic Volumes: Traffic volumes for existing conditions were developed using existing count data collected by Counts Unlimited at study intersections and roadway segments. Daily traffic counts were collected for roadway segments while a.m. and p.m. peak hour turning movement counts were collected at study intersections.

It should be noted that some of the intersections and roadway segment counts were collected in September 2022, including traffic count for the intersection of Road 63/Betty Drive. However, traffic counts for the intersections of Road 63/Betty Drive, SR-99 Southbound Ramps/Betty Drive and SR- 99

Northbound Ramps/Betty Drive were collected in March 2023. To account for the difference in traffic volumes between year 2022 and 2023, the traffic growth rate during this interval was calculated for the intersection of Road 63/Betty Drive, and applied to the traffic counts collected in September 2022 to account for the time difference between September 2022 and March 2023.

Vehicle classification counts were collected at select study area intersections. Truck percentages for every approach at these intersections were obtained from the classification counts. For the remaining study intersections that do not include classification counts or future intersections, truck percentages for the various approaches were determined based on the truck percentages at the adjacent intersections.

Figure 4-1 of Appendix D illustrates peak hour traffic volumes at study intersections under existing conditions. Table 4-A of Appendix D shows daily traffic volumes at roadway segments under existing conditions. Detailed count sheets are included in Appendix B of Appendix D.

Near-Term (Approved and Pending) Traffic Volumes: 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 were obtained from County staff and from the adjacent jurisdiction of City of Visalia. Figure 4-2 of Appendix D 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-B of Appendix D summarizes the cumulative project trip generation. As shown in Table 4-B of Appendix D, the cumulative projects are estimated to generate 4,414 a.m. peak hour trips, 5,668 p.m. peak hour trips, and 65,523 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 circulation network. Figure 4-3 of Appendix D illustrates the peak hour cumulative project trip assignment at study intersections. Figure 4-4 of Appendix D illustrates the peak hour traffic volumes at study intersections under near-term conditions. Table 4-C shows the daily traffic volumes at roadway segments under near-term conditions.

Horizon Year Traffic Volumes: Traffic volumes for horizon year conditions were developed using the Tulare County Association of Governments (TCAG) travel demand model. The methodology used to develop horizon year traffic volumes at all study intersections is consistent with the National Cooperative Highway Research Program (NCHRP) and TCAG's procedures for post-processing of modeled traffic volumes. Figure 4-5 of Appendix D illustrates the peak hour traffic volumes at study intersections under horizon year conditions. Table 4-D of Appendix D shows the daily traffic volumes at roadway segments under horizon year conditions. Detailed volume development worksheets are included in Appendix C.

Project Traffic

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". Table 5-A of Appendix D summarizes the project trip generation. As shown in Table 5-A of Appendix D, the proposed project is anticipated to generate 2,857 daily trips, with 213 trips occurring during the a.m. peak hour and 285 trips occurring during the p.m. peak hour.

Project Trip Distribution and Assignment: The project trip distribution was developed using the select zone model run obtained from the TCAG Travel Demand Model (Model). The select zone distribution plot is included in Appendix A of Appendix D. Figure 5-1 of Appendix D illustrates the project trip distribution. The trip distribution was further refined in consideration of the regional roadway network and the location of residential, educational, employment, recreational and commercial centers in the project vicinity. The project trip assignment at the study intersections is the product of the project trip generation and the corresponding trip distribution percentages. Figure 5-2 of Appendix XXDX illustrates the project trip assignment.

Traffic Volumes for Plus Project Scenarios

Existing, near-term, and cumulative year plus project traffic volumes were developed by adding project traffic to the traffic for the corresponding no 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 horizon year conditions, respectively. Previously referenced Tables 4-A, 4-C, and 4-D summarize the daily with project traffic volumes at study roadway segments for Existing, near-term, and cumulative year plus project scenarios, respectively. Detailed volume development worksheets are included in Appendix C of Appendix D.

Intersection Levels of Service

Existing Levels of Service

An intersection LOS analysis was conducted for existing conditions using the methodologies previously discussed. Table 7-A of Appendix D summarizes the results of this analysis and shows that the Road 64/SR-198 (a.m. and p.m. peak hours) intersection is forecast to operate at a deficient LOS under existing conditions. All other study intersections currently operate at a satisfactory LOS under existing conditions.

A roadway segment LOS analysis was conducted for existing conditions using the methodologies previously discussed. Table 7-B of Appendix D summarizes the results of this analysis and shows that all roadway segments currently operate at a satisfactory LOS under existing conditions.

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 of Appendix D illustrates the study intersection geometrics and traffic control under existing plus project conditions.

An intersection LOS analysis was conducted for existing plus project conditions using the methodologies previously discussed. Table 7-A of Appendix D summarizes the results of this analysis and shows that the Road 64/SR-198 (a.m. and p.m. peak hours) intersection is forecast to operate at a deficient LOS under existing plus project conditions. This intersection is currently operating at a deficient LOS. As such, the project is forecast to add to the existing deficiency at this location. All other study intersections are forecast to operate at a satisfactory LOS under existing plus project conditions.

A roadway segment LOS analysis was conducted for existing plus project conditions using the methodologies previously discussed. Table 7-B of Appendix D summarizes the results of this analysis and shows that all roadway segments are forecast to operate at a satisfactory LOS under existing plus project conditions.

Near-Term (Approved and Pending) Levels of Service

An intersection LOS analysis was conducted for near-term (approved and pending) conditions using the methodologies previously discussed. Table 7-C of Appendix D summarizes the results of this analysis and shows that the Road 64/SR-198 (a.m. and p.m. peak hours) intersection is forecast to operate at a deficient LOS under near-term (approved and pending) conditions. All other study intersections are forecast to operate at a satisfactory LOS under near-term (approved and pending) conditions.

A roadway segment LOS analysis was conducted for near-term (approved and pending) conditions using the methodologies previously discussed. Table 7-D of Appendix D summarizes the results of this analysis and shows that all roadway segments are forecast to operate at a satisfactory LOS under near-term (approved and pending) conditions.

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-C of Appendix D summarizes the results of this analysis and shows that the Road 64/SR-198 (a.m. and p.m. peak hours) intersection is forecast to operate at a deficient LOS under near-term plus project conditions. This intersection is currently operating at a deficient LOS and is forecast to operate at a deficient LOS under near-term (approved and pending) conditions. As such, the project is forecast to add to the forecasted deficiency at this location. All other study intersections are forecast to operate at a satisfactory LOS under near-term plus project conditions.

A roadway segment LOS analysis was conducted for near-term plus project conditions using the methodologies previously discussed. Table 7-D of Appendix D summarizes the results of this analysis and shows that all roadway segments are forecast to operate at a satisfactory LOS under near-term plus project Conditions.

Horizon Year Levels of Service

An intersection LOS analysis was conducted for horizon year conditions using the methodologies previously discussed. Table 7-E of Appendix D summarizes the results of this analysis and shows that the Road 64/SR-198 (a.m. and p.m. peak hours) intersection is forecast to operate at a deficient LOS under horizon year conditions. All other study intersections are forecast to operate at a satisfactory LOS under horizon year Conditions.

A roadway segment LOS analysis was conducted for horizon year conditions using the methodologies previously discussed. Table 7-F of Appendix D summarizes the results of this analysis and shows that all roadway segments are forecast to operate at a satisfactory LOS under horizon year Conditions.

Horizon Year Plus Project Levels of Service

An intersection LOS analysis was conducted for horizon year plus project conditions using the methodologies previously discussed. Table 7-E of Appendix D summarizes the results of this analysis and shows that the Road 64/Avenue 304 (p.m. peak hour only) and Road 64/SR-198 (a.m. and p.m. peak hours) intersections are forecast to operate at a deficient LOS under horizon year plus project conditions. The intersection of Road 64/SR-198 is forecast to operate at a deficient LOS under horizon year conditions. As such, the project is forecast to add to the forecasted deficiency at this location. All other study intersections are forecast to operate at a satisfactory LOS under horizon year plus project conditions.

A roadway segment LOS analysis was conducted for horizon year plus project conditions using the methodologies previously discussed. Table 7-F of Appendix D summarizes the results of this analysis and shows that all roadway segments are forecast to operate at a satisfactory LOS under horizon year plus project conditions. Detailed intersection LOS worksheets are included in Appendix D of Appendix D.

Signal Warrant Analysis

As recommended during the scoping agreement process, 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:

ROAD 64/SR-198: Figures 8-1, 8-2, and 8-3 of Appendix D illustrate the Warrant 3 (peak hour) for this intersection under existing, near-term, and horizon year 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.

Recommended Improvements

Based on the above analysis, it can reasonably be determined that the Project will ultimately result in the need to complete various improvements to the traffic network (i.e., circulation system) to efficiently and effectively move vehicles, persons, and goods within and through the community.

As contained in the Goshen Community Plan Update EIR, Mitigation Measures 16-4 (Install four-way stop at Avenue 304/Road 64) would apply to this Project. Additionally, signalization of the Road 64/SR-198 intersection is proposed to eliminate the existing and forecasted operational deficiency. See Mitigation Measures Trans 1-3.

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

Less than Significant Impact with Mitigation: The State of California Governor's Office of Planning and Research document entitled Technical Advisory on Evaluating Transportation Impacts in CEQA dated December 2018 (OPR Guidelines) provides guidance for determining a project's transportation impacts based on vehicle miles traveled (VMT). The County of Tulare has adopted a VMT thresholds and guidelines to address the shift from delay-based LOS CEQA traffic analyses to VMT CEQA traffic analyses.

Thresholds of Significance

The County Guidelines state that for residential projects the appropriate metric to determine project's VMT impact would be VMT/capita consistent with OPR. Therefore, VMT analysis for residential projects is to be conducted by comparing a project's VMT/capita to the average VMT/capita for the traffic analysis zone (TAZ) in which the project is located. The County Guidelines state that for residential projects the appropriate metric to determine project's VMT impact would be VMT/capita consistent with OPR. Therefore, VMT analysis for residential projects is to be conducted by comparing a project's VMT/capita to the average VMT/capita for the traffic analysis zone (TAZ) in which the project is located. A significant transportation impact occurs if the project VMT per capita equals or exceeds the average VMT per capita for the TAZ where the project is located.

Project Traffic Analysis Zone Update

The first step in preparation of this analysis was to update the traffic analysis zones (TAZs) in the model that include the project area. The TCAG model includes the ability to add or split zones. In order to isolate the project VMT, a new zone was created in the model. The project households were included in the newly created zone for modeling purposes. No project-specific network modifications were required for the model run. A model run was conducted for the existing/base scenario with updated model inputs. The outputs from this updated model run were used to calculate the project VMT per capita.

Project Vehicle Miles Traveled Analysis

A model run was conducted for this updated model upon completion of the socioeconomic data update. The outputs from this updated model run were used to calculate the project VMT per Capita. Table 3-19 summarizes the regional threshold and project VMT per capita. As shown in Table 3-19, the project VMT per capita is 10.7 percent higher than the parent TAZ VMT per capita. Therefore, based on the guidelines, the project will have a significant VMT impact. Detailed VMT calculation for the project is included in Appendix E of Appendix D.

Table 3-19. Parent TAZ and Project VMT per Capita

Parent TAZ (1824)[1]	Project	Difference	Percentage Difference
11.82	**13.09**	**1.27**	**10.7%**

Source: Tulare County Association of Governments Travel Demand Model
VMT = Vehicle Miles Traveled
[1]The Parent TAZ VMT per capita was obtained from TCAG Model Base Year No Project Model Run

VMT Mitigation Measures

When a lead agency identifies a significant CEQA impact, the agency must identify feasible mitigation measures in order to avoid or substantially reduce that impact. These measures can be incorporated as a part of plans, policies, regulations, or project designs. Project design features that encourage mode shift from automobiles to transit or non-motorized modes can therefore help reduce project VMT.

As recommended in the VMT Guidelines, section 3.4, the preferred method of VMT mitigation in Tulare County is for project applicants to provide transportation improvements that facilitate travel by walking, bicycling, or transit. Additionally, as recommended in the Guidelines, payment of $20 per average daily trip generated by the project towards Active Transportation Projects or projects facilitating walking, biking, or transit in the County. Therefore, the project will be paying VMT mitigation fee towards such projects (See Mitigation Measure Trans-3).

With payment of the fees and implementation of sidewalks, bike lanes along the project frontage, the project's VMT impact would be less than significant as per the VMT Guidelines. The impact is *less than significant with mitigation.*

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)?

No Impact: The proposed Project does not propose any incompatible uses or include any design features that could increase traffic hazards. The proposed Project includes two new vehicle access points along Avenue 304 and one new vehicle access point along Road 64. A sight distance analysis was conducted at the project driveways along Avenue 304 and Road 64 to evaluate safe access in and out of the project. 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. The analysis found that all three access points provide adequate site distance for left- and right-turn maneuvers onto Avenue 304 and Road 63, respectively. The proposed Project would not substantially increase hazards in or around the proposed Project area there will be *no impact.*

d) Would the project result in inadequate emergency access?

No Impact This proposed Project would not result in inadequate emergency access. The vehicle access points along Avenue 304 and Road 64 would function as adequate emergency access. A network of

interior local roads within the proposed Project property provides full access to all structures within the development. The proposed Project will have *no impact* on emergency access.

Cumulative Impact Analysis

This cumulative analysis focuses on Tulare County as its geographic area. The analysis draws information from various sources, including the County of Tulare SB 743 Guidelines, Tulare County 2030 General Plan, Tulare County General Plan Background Report, Tulare County 2030 General Plan EIR, City of Visalia General Plan EIR, and/or Goshen Community Plan Update and EIR. The Project aligns with the Tulare County 2030 General Plan and/or Goshen Community Plan Update and EIR, ensuring there is no conflict with relevant plans, ordinances, or policies that establish performance measures for the circulation system. These measures encompass all modes of transportation, such as mass transit and non-motorized travel, as well as critical components of the circulation system, including intersections, streets, highways, freeways, pedestrian and bicycle paths, and mass transit. Moreover, the Project does not violate CEQA Guidelines Section 15064.3, Subdivision (b), which identifies Vehicle Miles Traveled (VMT) as an environmental impact under CEQA. The proposed subdivision design follows a conventional rectangular-patterned grid system, featuring two access/egress points along Avenue 304 and one access/egress point along Road 64. Consequently, it does not introduce significant hazards arising from design features like sharp curves or dangerous intersections, nor does it conflict with incompatible uses, such as farm equipment. The design also includes sufficient emergency access. Implementation of Mitigation Measures Trans-1, Trans-2 and Trans-3 would reduce the Project's impact to less than significant.

Mitigation Measures for Transportation Impacts:

Mitigation Measure TRANS-1: Convert two way stop control to all-way stop control at intersection of Road 64 & Avenue 304.

Mitigation Measure TRANS-2: Install traffic signal at intersection of Road 64 & SR-198.

Mitigation Measure TRANS-3: The project shall require payment of VMT mitigation fees as follows:

- $20 per trip X 2,857 daily trips = $57,140 VMT mitigation fee to be paid to the County.

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.	☐	☑	☐	☐

The discussions regarding Environmental Setting, CEQA requirements, Regulatory Setting, Chapter 3.5 Cultural Resources, Chapters 4 through 9, Appendices "A" through "I", etc. contained in the Goshen Community Plan Update and Environmental Impact Report are incorporated herein in their entirety. Where necessary and if available, additional site specific facts, data, information, etc., are included in this discussion. Some discussion for this section has been excerpted from the "Phase I Cultural Resource Assessment for the Conway Property Tentative Subdivision Map Project, Goshen, Tulare County, California" (CRA) that was prepared for this proposed Project by qualified expert consultants Taylored Archaeology. As part of the CRA, Taylored Archaeology conducted background research and a pedestrian survey of the proposed Project boundary to determine whether prehistoric and historic resources will be affected by the proposed Project. The investigation included: (1) a records search at the SSJVIC; (2) a request of the Native American Heritage Commission (NAHC) Sacred Lands File (SLF) including Native American representatives contact information, and nongovernmental tribal outreach; (3) archival research; and (4) an archaeological survey. significance of project impacts on cultural resources per Public Resources Code section 21074 (a)(1) and per provisions of the California Environmental Quality section 15064.5.

Environmental Setting

"The Project area is in the Southern Valley Yokuts ethnographic territory of the San Joaquin Valley. The Yokuts were generally divided into three major groups, the Northern Valley Yokuts, the Southern Valley

Yokuts, and the Foothill Yokuts. The Yokuts are a sub-group of the Penutian language that covers much of coastal and central California and Oregon (Callaghan 1958)."[170] The proposed Project area is likely within the Telamni Yokuts territory. The closest village for this area was *Waitatshulu*, which was located on Packwood Creek approximately 8 miles southeast of the Project site. "Primary Yokuts villages were typically located along lakeshores and major stream courses, with scattered secondary or temporary camps and settlements located near gathering areas in the foothills."[171] "Prior to Euro-American contact, there was abundance of natural resources within the greater Tulare Lake area. Due to these resources, Yokuts maintained some of the largest populations in North America west of the continental divide (Cook 1955a)."[172] According to the Native American Heritage Commission (NAHC), four Native American Tribes are currently associated with the proposed Project area, including, Big Sandy Rancheria of Western Mono Indians, Wukasache Indian Tribe/Eshom Valley Band, the Santa Rosa Rancheria Tachi Yokut Tribe, and the Tule River Indian Tribe. NAHC's letter and Tribal list are included in Appendix C of this MND.

Cultural Resources Record Search

On August 3, 2022, Taylored Archaeology requested an updated cultural resource records search from the SSJVIC of the CHRIS at California State University in Bakersfield, California (Appendix B of Appendix C). The CHRIS results letter included 8 enclosed reports that are confidential to the public and therefore, are not included in Appendix C. The purpose of this request was to identify any prehistoric or historical resources on or near the Project site that had been previously recorded within the Project boundary and a 0.5-mile radius of the Project area and identify and review prior cultural resource investigations completed in or near the Project boundary. SSJVIC staff researched historical USGS topographic maps, reports of previous cultural resource investigations, archaeological site and survey base maps, 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 (Appendix C).

Native American Consultation

Taylored Archaeology sent a request to the NAHC as part of this cultural resources assessment for a Sacred Lands File (SLF) search on January 18, 2023. The objective of the SLF search was to identify any known places of religious, sacred activity or traditional use or gathering areas are present in or near the Project area. The NAHC responded via email on February 8, 2023, with a letter including contact information for local Native American tribal representatives who may have knowledge or interest in sharing information of resources in the Project area and surrounding area. Each Native American representative listed was sent a nongovernmental outreach letter via certified mail (see example in Appendix C) and a map notifying them of the Project and asking if they had any knowledge of the Project area or surrounding vicinity. Follow-up communication was performed via email or phone call as appropriate. The SLF results are in Appendix C. As the Lead Agency, County of Tulare (RMA staff) mailed 15 certified letters to representatives of eight tribes (including the Big Sandy Rancheria of Western Mono Indians, Wukasache Indian Tribe/Eshom Valley Band, Santa Rosa Rancheria Tachi Yokut Tribe, and Tule River Indian Tribe) prior to receipt of the NAHC Tribal list. Only one Tribe responded; a Santa Rosa Rancheria representative

[170] "Phase I Cultural Resource Assessment for the Conway Property Tentative Subdivision Map Project, Goshen, Tulare County, California" (CRA). February 2023. Page 9. Prepared by Taylored Archaeology and included in Appendix C of this MND.

[171] Ibid. 10.

[172] Op. Cit.

requested SLF results, CHRIS results, archaeological survey results, retention of a tribal representative to provide a cultural presentation, and notification should discovery occur.

Regulatory Setting

Federal

The National Historic Preservation Act (NHPA) of 1966, which has been amended several times, was passed to acknowledge the importance of protecting our nation's heritage from federal development. The NHPA sets federal historic preservation policy, establishes partnerships between the Federal government and states and the Federal government and tribes, creates the **National Register of Historic Places** and **National Historic Landmarks** programs, mandates the selection of qualified **State Historic Preservation Officers**, establishes the **Advisory Council on Historic Preservation**, charges Federal agencies with stewardship, and establishes the role of **Certified Local Governments** within the states.

Title I of the statute established the National Register of Historic Places to create a national listing of historic properties (districts, sites, buildings, structures, and objects) significant in American history, architecture, archeology, engineering, and culture. Title I also expanded the level of Federal concern to include the preservation of historic properties of local or State significance. It established State Historic Preservation Officers as partners in the national historic preservation program and also describes how local governments or Indian tribes may, in certain circumstances, carry out SHPO functions.

Implementation of Section 106 of Title I has been critical to archeology and archeological preservation in the United States. Section 106 requires federal agencies to take into account the effects of their actions on historic properties by identifying historic properties, assessing adverse effects, and resolving those adverse effects. The process is initiated by the federal agency, and includes comment and input from stakeholders at the local and State levels, as well as the Advisory Council on Historic Preservation. After the procedures for implementing Section 106 were established (6 CFR 800), the field of professional archeology expanded throughout governments and the private sector to meet the need for compliance.

Section 110 requires all federal agencies to establish -- in conjunction with the Secretary of the Interior -- their own historic preservation programs for the identification, evaluation, and protection of historic properties, including archeological properties. Determinations of Eligibility for the National Register are established during Phase II archeological surveys.

Title II

Title II of NHPA establishes the Advisory Council on Historic Preservation, an independent Federal agency. The Council and its staff advise Federal agencies on their roles in the national historic preservation program, especially Section 106. The ACHP also develops advice and training to support Federal agencies.

Title IV

Title IV of the statute established the National Center for Preservation Technology and Training, part of the National Park Service. NCPTT contributes research and training to archeological preservation practice.

Statute and regulation texts:

- **National Historic Preservation Act** (16 U.S. Code 470 et seq.), statute text.

- **National Register of Historic Places** (36 CFR 60), regulation text.
- **Procedures for State, Tribal, and Local Government Historic Preservation Programs** (36 CFR 61), regulation text.
- **Determinations of Eligibility for Inclusion in the National Register of Historic Places** (36 CFR 63), regulation text.
- **Protection of Historic Properties** (36 CFR 800), regulation text.[173]

State

California State Office of Historic Preservation (OHP)

"The California State Office of Historic Preservation (OHP) is responsible for administering federally and state mandated historic preservation programs to further the identification, evaluation, registration and protection of California's irreplaceable archaeological and historical resources under the direction of the State Historic Preservation Officer (SHPO), a gubernatorial appointee, and the State Historical Resources Commission."[174]

"OHP's responsibilities include identifying, evaluating, and registering historic properties; ensuring compliance with federal and state regulatory obligations; encouraging the adoption of economic incentives programs designed to benefit property owners; encouraging economic revitalization by promoting a historic preservation ethic through preservation education and public awareness and, most significantly, by demonstrating leadership and stewardship for historic preservation in California."[175]

A historical resource may be eligible for inclusion in the California Register of Historical Resources (CRHR) if it:

- 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 to 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; or
- Has yielded, or may be likely to yield, information important in prehistory or history. [176]

Native American Heritage Commission

"The Native American Heritage Commission (NAHC), created in statute in 1976, is a nine-member body, appointed by the Governor, to identify and catalog cultural resources (i.e., places of special religious or social significance to Native Americans, and known graves and cemeteries of Native Americans on private lands) in California. The Commission is charged with the duty of preserving and ensuring accessibility of sacred sites and burials, the disposition of Native American human remains and burial items, maintain an inventory of Native American sacred sites located on public lands, and review current administrative and statutory protections related to these sacred sites."[177]

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[173] U.S. Department of the Interior. National Park Service. Accessed May 2023 at: National Historic Preservation Act of 1966 - Archeology (U.S. National Park Service) (nps.gov)

[174] Office of Historic Preservation. Mission and Responsibilities. http://ohp.parks.ca.gov/?page_id=1066. Accessed May 2023.

[175] Ibid.

[176] Office of Historic Preservation. California Register of Historic Places. Accessed May 2023 at: http://www.ohp.parks.ca.gov/?page_id=21238.

[177] Native American Heritage Commission. Welcome. Accessed May 2023 at: http://nahc.ca.gov/.

Tribal Consultation Requirements: AB 52 (Gatto, 2014)

The Public Resources Code has established that "[a] project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment." (Pub. Resources Code, § 21084.2.) To help determine whether a project may have such an effect, the Public Resources Code requires a lead agency to consult with any California Native American tribe that requests consultation and is traditionally and culturally affiliated with the geographic area of a proposed project. That consultation must take place prior to the release of a negative declaration, mitigated negative declaration, or environmental impact report for a project. (Pub. Resources Code, § 21080.3.1.) If a lead agency determines that a project may cause a substantial adverse change to tribal cultural resources, the lead agency must consider measures to mitigate that impact.[178]

CEQA Guidelines: Archaeological Resources

Section 15064.5(c) of CEQA Guidelines provides specific guidance on the treatment of archaeological resources as noted below.[179][180]

(1) When a Project will impact an archaeological site, a lead agency shall first determine whether the site is an historical resource, as defined in subdivision (a).
(2) If a lead agency determines that the archaeological site is an historical resource, it shall refer to the provisions of Section 21084.1 of the Public Resources Code, and this section, Section 15126.4 of the Guidelines, and the limits contained in Section 21083.2 of the Public Resources Code do not apply.
(3) If an archaeological site does not meet the criteria defined in subdivision (a), but does meet the definition of a unique archeological resource in Section 21083.2 of the Public Resources Code, the site shall be treated in accordance with the provisions of section 21083.2. The time and cost limitations described in Public Resources Code Section 21083.2 (c–f) do not apply to surveys and site evaluation activities intended to determine whether the Project location contains unique archaeological resources.
(4) If an archaeological resource is neither a unique archaeological nor an historical resource, the effects of the Project on those resources shall not be considered a significant effect on the environment. It shall be sufficient that both the resource and the effect on it are noted in the Initial Study or EIR, if one is prepared to address impacts on other resources, but they need not be considered further in the CEQA process.

CEQA Guidelines: Human Remains

Public Resources Code Sections 5097.94 and 5097.98 provide guidance on the disposition of Native American burials (human remains), and fall within the jurisdiction of the Native American Heritage Commission:[181]

[178] Office of Planning and Research. Technical Advisory: AB 52 and Tribal Cultural Resources in CEQA (June 2017). Page 3. Accessed May 2023 at: https://www.opr.ca.gov/docs/20200224-AB_52_Technical_Advisory_Feb_2020.pdf

[179] Office of Historic Preservation. CEQA Basics. Accessed May 2023 at: https://ohp.parks.ca.gov/?page_id=21721.

[180] CEQA Guidelines, Section 15064.5 - Determining the Significance of Impacts to Archaeological and Historical Resources. Accessed May 2023 at: https://casetext.com/regulation/california-code-of-regulations/title-14-natural-resources/division-6-resources-agency/chapter-3-guidelines-for-implementation-of-the-california-environmental-quality-act/article-5-preliminary-review-of-projects-and-conduct-of-initial-study/section-150645-determining-the-significance-of-impacts-to-archaeological-and-historical-resources

[181] Op. Cit.

(d) When an initial study identifies the existence of, or the probable likelihood, of Native American human remains within the Project, a lead agency shall work with the appropriate Native Americans as identified by the Native American Heritage Commission as provided in Public Resources Code Section 5097.98. The applicant may develop an agreement for treating or disposing of, with appropriate dignity, the human remains and any Items associated with Native American burials with the appropriate Native Americans as identified by the Native American Heritage Commission. Action implementing such an agreement is exempt from:
(1) The general prohibition on disinterring, disturbing, or removing human remains from any location other than a dedicated cemetery (Health and Safety Code Section 7050.5).
(2) The requirements of CEQA and the Coastal Act.

(e) In the event of the accidental discovery or recognition of any human remains in any location other than a dedicated cemetery, the following steps should be taken:
(1) There shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until:
(A) The coroner of the county in which the remains are discovered must be contacted to determine that no investigation of the cause of death is required, and
(B) If the coroner determines the remains to be Native American:
4. The coroner shall contact the Native American Heritage Commission within 24 hours.
5. The Native American Heritage Commission shall identify the person or persons it believes to be the most likely descended from the deceased Native American.
6. The most likely descendent may make recommendations to the landowner or the person responsible for the excavation work, for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in Public Resources Code Section 5097.98, or

(3) Where the following conditions occur, the landowner or his authorized representative shall rebury the Native American human remains and associated grave goods with appropriate dignity on the property in a location not subject to further subsurface disturbance.
(C) The Native American Heritage Commission is unable to identify a most likely descendent or the most likely descendent failed to make a recommendation within 24 hours after being notified by the commission.
(D) The descendant identified fails to make a recommendation; or
(C) The landowner or his authorized representative rejects the recommendation of the descendant, and the mediation by the Native American Heritage Commission fails to provide measures acceptable to the landowner.

(f) As part of the objectives, criteria, and procedures required by Section 21082 of the Public Resources Code, a lead agency should make provisions for historical or unique archaeological resources accidentally discovered during construction. These provisions should include an immediate evaluation of the find by a qualified archaeologist. If the find is determined to be an historical or unique archaeological resource, contingency funding and a time allotment sufficient to allow for implementation of avoidance measures or appropriate mitigation should be available. Work could continue on other parts of the building site while historical or unique archaeological resource mitigation takes place.

County of Tulare General Plan 2030 Update

The Tulare County General Plan 2030 Update includes goals and policies related to tribal resources, emphasizing the importance of identifying, protecting, and preserving cultural and archaeological resources within the County. Policy ERM-6.1 highlights the County's commitment to participating in and

supporting efforts to identify significant cultural and archaeological resources in accordance with State and Federal standards. Policy ERM-6.2 emphasizes the protection of sites with potential State or Federal designations, such as inclusion in the National Register of Historic Places or the California State Office of Historic Preservation's California Points of Interest and California Inventory of Historic Resources. When planning development or alterations in areas with identified cultural resources, Policy ERM-6.3 stresses the need for site-specific investigations and consideration of measures to protect these resources. If preservation is not feasible, Policy ERM-6.4 emphasizes the importance of mitigating impacts through measures such as relocation, adaptive reuse, and thorough documentation. The County also recognizes the importance of maintaining confidentiality regarding archaeological sites (ERM-6.9) to prevent vandalism and unauthorized removal of artifacts. Lastly, Policy ERM-6.10 ensures that all grading activities conform to the County's Grading Ordinance and relevant regulations to ensure the proper treatment of cultural resource sites. These policies collectively reflect the County's commitment to preserving and safeguarding tribal resources for future generations.

Discussion

The intensive agricultural use of the proposed Project site has continually been disturbed to the point that there are no evident surface Tribal cultural resources. However, as discussed below, mitigation measures are included in the unlikely event that Tribal cultural resources are encountered.

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 County of Tulare agrees with the findings, conclusions, and recommendations provided by expert consultants Taylored Archaeology in the Cultural Resources Assessment (CRA). As Such, the proposed 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 proposed Project site. Although no cultural resources were identified, the presence of remains or unanticipated subsurface cultural resources 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 County of Tulare agrees with the findings, conclusions, and recommendations provided by expert consultants Taylored Archaeology in the CRA that there no known tribal cultural resources located within the proposed Project area.

Additionally, the CRA did not find evidence of any human remains buried within the project area's vicinity. However, if resources were discovered, the Tulare County Coroner shall contact the Native American Heritage Commission within 24-hours of discovery. Implementation of Mitigation Measures CUL-1 and CUL-2 will ensure that any impacts resulting from proposed Project implementation remain *less than significant with mitigation* incorporation.

Mitigation Measures for Impacts to Cultural Resources:

Mitigation Measure CUL-1: If previously unknown resources are encountered before or during grading activities, construction shall stop in the immediate vicinity of the find and a qualified historical resources specialist shall be consulted to determine whether the resource requires further study. The qualified historical resources specialist shall make recommendations to the City on the measures that shall be implemented to protect the discovered resources, including but not limited to excavation of the finds and evaluation of the finds in accordance with Section 15064.5 of the CEQA Guidelines and the City's Historic Preservation Ordinance.

If the resources are determined to be unique historical resources as defined under Section 15064.5 of the CEQA Guidelines, measures shall be identified by the monitor and recommended to the Lead Agency. Appropriate measures for significant resources could include avoidance or capping, incorporation of the site in green space, parks, or open space, or data recovery excavations of the finds. No further grading shall occur in the area of the discovery until the Lead Agency approves the measures to protect these resources. Any historical artifacts recovered as a result of mitigation shall be provided to a City-approved institution or person who is capable of providing long-term preservation to allow future scientific study.

Mitigation Measure CUL-2: In the event that human remains are unearthed during excavation and grading activities of any future development project, all activity shall cease immediately. Pursuant to Health and Safety Code (HSC) Section 7050.5, no further disturbance shall occur until the County Coroner has made the necessary findings as to origin and disposition pursuant to PRC Section 5097.98(a). If the remains are determined to be of Native American descent, the coroner shall within 24 hours notify the Native American Heritage Commission (NAHC). The NAHC shall then contact the most likely descendent of the deceased Native American, who shall then serve as the consultant on how to proceed with the remains. Pursuant to PRC Section 5097.98(b), upon the discovery of Native American remains, the landowner shall ensure that the immediate vicinity, according to generally accepted cultural or archaeological standards or practices, where the Native American human remains are located is not damaged or disturbed by further development activity until the landowner has discussed and conferred with the most likely descendants regarding their recommendations, if applicable, taking into account the possibility of multiple human remains. The landowner shall discuss and confer with the descendants all reasonable options regarding the descendants' preferences for treatment.

Cumulative Impact

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, General Plan background Report, Tulare County 2030 General Plan EIR, and/or Goshen Community Plan Update and EIR.

It is not anticipated that Native American remains or other cultural will be found at the proposed Project site. However, consistent with CEQA requirements, Mitigation Measures CUL-1 and CUL-2 are included in

the unlikely event that if Native American remains are unearthed during any ground disturbance activities, or if any cultural resources are discovered, such finds will be mitigated to less than significant Project-specific and Cumulative Impacts.

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?	☐	☐	☑	☐

The discussions regarding Environmental Setting, CEQA requirements, Regulatory Setting, Chapter 3.17 Utilities, Chapters 4 through 9, Appendices "A" through "I", etc. contained in the Goshen Community Plan Update and Environmental Impact Report are incorporated herein in their entirety. Where necessary and if available, additional site specific facts, data, information, etc., are included in this discussion.

Environmental Setting

Wastewater

Sewer services are provided to the site by the Goshen Community Services District (CSD). The CSD's system connects to City of Visalia's (Visalia) system to treat the wastewater. Visalia owns a Water Conservation Plant (WCP) located west of State Route (SR) 99 and south of SR 198. The existing system is planned to provide full capacity for the full build-out of the Goshen UDB. The CSD's system can pump 500,000 gallons per day (gpd) into Visalia's system.[182] The current contract agreed upon between the CSD and Visalia is 335,000 gpd, but the CSD can purchase additional capacity if necessary. The CSD is divided into three district areas and operates fifteen miles of sewer pipes.[152]

[182] Tulare County LAFCO. Goshen Community Services District. Dec 2018. Accessed May 2023 at: https://lafco.co.tulare.ca.us/msr/goshen-csd-2018-msr-update/

Solid Waste

Mid Valley Disposal provides weekly solid waste collection and is deposited into the Visalia Landfill. The Tulare County Solid Waste Department estimated 140 years remaining of landfill capacity.[183]

Water

The California Water Service Company (Cal Water) distributes groundwater supply in Goshen. Cal Water's Visalia District includes Visalia, Goshen, and other private water companies in the area. The supply wells extract groundwater from the Kaweah Groundwater Subbasin. The system includes two elevated 300,000-gallon storage tanks, an ion exchange treatment plant, four granular activated carbon filter plants, and one nitrate blending facility. The wells in the Goshen area range from 400-800 gallons per minute (gpm). Cal Water has 1,101 connections in Goshen, and 970 of those connections are residential. These connections consume 253.2 million gallons of water per year or about 229,000 gallons per connection. This is about 0.70 AFY, which is modest usage in the Central Valley.[184]

Stormwater Drainage

Tulare County is under the jurisdiction of the Tulare County Flood Control District to address drainage, flooding, and related issues. Localized drainage issues occur throughout the County; however, these are located near floodplains. In Goshen, most storm drainage is directed via surface flow. A large amount of stormwater drains into the "Goshen Ocean" stormwater detention basin located approximately one mile east of the project site. The area west of SR-99 has few drainage improvements. The proposed Project includes a 1.22-acre drainage basin to retain stormwater on-site.

Electricity and Natural Gas

Southern California Edison (SCE) provides electricity services to the majority of Tulare County, including Goshen. The electrical facilities network includes both overhead and underground lines, with new development required to install underground service lines. SCE serves approximately fifteen million people in a 50,000 square-mile area of Central, Coastal, and Southern California. SCE supplies electricity to its customers through a variety of renewable and nonrenewable sources.[185]

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, and 21% is consumed by the residential sector, 25% is consumed by the industrial sector, and 9% is consumed by the commercial sector.[155]

Telecommunications

[183] Tulare County Solid Waste Department. Accessed online at: https://tularecounty.ca.gov/solidWaste/

[184] 2020 Urban Water Management Plan, Visalia District. June 2021. Accessed May 2023 at: https://www.calwater.com/docs/uwmp2020/VIS_2020_UWMP_FINAL.pdf

[185] California Energy Commission. Energy Almanac. Accessed May 2023 at: https://www.energy.ca.gov/data-reports/energy-almanac

Telecommunications facilities are available from both wire and wireless providers in the area, such as AT&T, T-Mobile, Sprint, etc., as needed.

Regulatory Setting

Federal

U.S. Environmental Protection Agency (U.S. EPA) - Federal Regulation Tile 40, Part 503

In 1993, the U.S. Environmental Protection Agency (U.S. EPA) promulgated Standards for the Use or Disposal of Sewage Sludge (Code of Federal Regulations Title 40, Part 503), which establish pollutant limitations, operational standards for pathogen and vector attraction reduction, management practices, and other provisions intended to protect public health and the environment from any reasonably anticipated adverse conditions from potential waste constituents and pathogenic organisms.

This part establishes standards, which consist of general requirements, pollutant limits, management practices, and operational standards, for the final use or disposal of sewage sludge generated during the treatment of domestic sewage in a treatment works. Standards are included in this part for sewage sludge applied to the land, placed on a surface disposal site, or fired in a sewage sludge incinerator. Also included in this part are pathogen and alternative vector attraction reduction requirements for sewage sludge applied to the land or placed on a surface disposal site.

In addition, the standards in this part include the frequency of monitoring and recordkeeping requirements when sewage sludge is applied to the land, placed on a surface disposal site, or fired in a sewage sludge incinerator. Also included in this part are reporting requirements for Class I sludge management facilities, publicly owned treatment works (POTWs) with a design flow rate equal to or greater than one million gallons per day, and POTWs that serve 10,000 people or more.[186]

Resource Conservation and Recovery Act (RCRA)[187]

Congress passed RCRA on October 21, 1976 to address the increasing problems the nation faced from our growing volume of municipal and industrial waste. RCRA, which amended the Solid Waste Disposal Act of 1965, set national goals for:

- Protecting human health and the environment from the potential hazards of waste disposal.
- Conserving energy and natural resources.
- Reducing the amount of waste generated.
- Ensuring that wastes are managed in an environmentally-sound manner
- To achieve these goals, RCRA established three distinct, yet interrelated, programs:
  - ✓ The solid waste program, under RCRA Subtitle D, encourages states to develop comprehensive plans to manage nonhazardous industrial solid waste and municipal solid waste, sets criteria for municipal solid waste landfills and other solid waste disposal facilities, and prohibits the open dumping of solid waste.

[186] Title 40: Protection of Environment Part 503: Standards for the Use of Disposal of Sewage Sludge. Accessed May 2023 at: https://www.ecfr.gov/current/title-40/chapter-I/subchapter-O/part-503/subpart-A/section-503.1

[187] United States Environmental Protection Agency. Accessed May 2023 at: See. https://www.epa.gov/laws-regulations.

- ✓ The hazardous waste program, under RCRA Subtitle C, establishes a system for controlling hazardous waste from the time it is generated until its ultimate disposal — in effect, from "cradle to grave."

The underground storage tank (UST) program, under RCRA Subtitle I, regulates underground storage tanks containing hazardous substances and petroleum products. RCRA banned all open dumping of waste, encouraged source reduction and recycling, and promoted the safe disposal of municipal waste. RCRA also mandated strict controls over the treatment, storage, and disposal of hazardous waste.

State

The Integrated Waste Management Act (Assembly Bill 939)

In 1989 the California legislature passed the Integrated Waste Management Act of 1989, known as AB 939. The bill mandates a reduction of waste being disposed: jurisdictions were required to meet diversion goals of 25% by 1995 and 50% by the year 2000. AB 939 also established an integrated framework for program implementation, solid waste planning, and solid waste facility and landfill compliance.

State Water Quality Control Board

"The State Water Resources Control Board (State Water Board) was created by the Legislature in 1967. The joint authority of water allocation and water quality protection enables the State Water Board to provide comprehensive protection for California's waters. The State Water Board consists of five full-time salaried members, each filling a different specialty position. Board members are appointed to four-year terms by the Governor and confirmed by the Senate. There are nine Regional Water Quality Control Boards (Regional Boards). The mission of the Regional Boards is to develop and enforce water quality objectives and implementation plans that will best protect the State's waters, recognizing local differences in climate, topography, geology and hydrology. Each Regional Board has seven part-time members appointed by the Governor and confirmed by the Senate. Regional Boards develop "basin plans" for their hydrologic areas, issue waste discharge requirements, take enforcement action against violators, and monitor water quality. The task of protecting and enforcing the many uses of water, including the needs of industry, agriculture, municipal districts, and the environment is an ongoing challenge for the State and Regional Water Quality Control Boards."[188]

Regional Water Quality Control Board (RWQCB)

"There are nine Regional Water Quality Control Boards (Regional Boards). The mission of the Regional Boards is to develop and enforce water quality objectives and implementation plans that will best protect the State's waters, recognizing local differences in climate, topography, geology and hydrology. Each Regional Board has seven part-time members appointed by the Governor and confirmed by the Senate. Regional Boards develop "basin plans" for their hydrologic areas, issue waste discharge requirements, take enforcement action against violators, and monitor water quality."[189]

The Regional Water Quality Control Board – Biosolids

[188] California State Water Boards Mission Statement. Accessed May 2023 at: http://www.waterboards.ca.gov/about_us/water_boards_structure/mission.html.

[189] Ibid.

In California, the beneficial reuse of treated municipal sewage sludge *(a.k.a.,* biosolids*)* generally must comply with the California Water Code in addition to meeting the requirements specified in Part 503 in Title 40 of the Code of Federal Regulations.

In July 2004, the State Water Resources Control Board adopted Water Quality Order No. 2004-12-DWQ (General Order), and certified a supporting statewide Programmatic Environmental Impact Report (PEIR)

The General Order incorporates the minimum standards established by the Part 503 Rule and expands upon them to fulfill obligations to the California Water Code. However, since California does not have delegated authority to implement the Part 503 Rule, the General Order does not replace the Part 503 Rule. The General Order also does not preempt or supersede the authority of local agencies to prohibit, restrict, or control the use of biosolids subject to their jurisdiction, as allowed by law.

Persons interested in seeking coverage under the General Order should contact the appropriate Regional Water Quality Control Board. Only applicants who submit a complete *Notice of Intent* (NOI), appropriate application fee, and are issued a Notice of Applicability by the executive officer of the appropriate Regional Water Quality Control Board are authorized to land apply biosolids at an agricultural, horticultural, silvicultural, or land reclamation site as a soil amendment under the General Order.

State Water Resources Control Board, Divisions of Drinking Water and Clean Water

Recycled water regulations are administered by both Central RWQCB and the California State Water Resources Control Board (SWRCB). The regulations governing recycled water are found in a combination of sources, including the Health and Safety Code, Water Code, and Titles 22 and 17 of the California Code of Regulations (CCR). Issues related to the treatment and distribution of recycled water are generally under the permitting authority of RWQCB and the Clean Water Division of the SWRCB. .

State Water Resources Control Board Water Onsite Wastewater Treatment Systems (OWTS) Policy

"The purpose of this Policy is to allow the continued use of OWTS, while protecting water quality and public health. This Policy recognizes that responsible local agencies can provide the most effective means to manage OWTS on a routine basis. Therefore, as an important element, it is the intent of this policy to efficiently utilize and improve upon where necessary existing local programs through coordination between the State and local agencies. To accomplish this purpose, this Policy establishes a statewide, risk-based, tiered approach for the regulation and management of OWTS installations and replacements and sets the level of performance and protection expected from OWTS. In particular, the Policy requires actions for water bodies specifically identified as part this Policy where OWTS contribute to water quality degradation that adversely affect beneficial uses."[190]

State NPDES General Construction Permit

The State NPDES General Construction Permit requires development and implementation of a Storm Water Pollution Prevention Plan (SWPPP) that uses storm water "Best Management Practices" to control

[190] California State Water Resources Control Board. OWTS Policy. Water Quality Control Policy for Siting, Design, Operation, and Maintenance of Onsite Wastewater Treatment Systems. June 19, 2012. Accessed May 2023 at: https://www.waterboards.ca.gov/water_issues/programs/owts/docs/owts_policy.pdf.

runoff, erosion and sedimentation from the site both during and after construction. The SWPPP has two major objectives: (1) to help identify the sources of sediments and other pollutants that affect the quality of storm water discharges; and (2) to describe and ensure the implementation of practices to reduce sediment and other pollutants in storm water discharges.

CalRecycle (formerly California Integrated Waste Management Board)

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. CalRecycle (formerly the California Integrated Waste Management Board) governs solid waste regulations on the state level, delegating local permitting, enforcement, and inspection responsibilities to Local Enforcement Agencies (LEA). Regulations authored by CalRecycle (Title 14) were integrated with related regulations adopted by the State Water Resources Control Board (SWRCB) pertaining to landfills (Title 23, Chapter 15) to form CCR Title 27.

California Public Utilities Commission

The California Public Utilities Commission (CPUC) regulates privately owned electric, natural gas, telecommunications, water, railroad, rail transit, and passenger transportation companies, in addition to authorizing video franchises. In 1911, the CPUC was established by Constitutional Amendment as the Railroad Commission. In 1912, the Legislature passed the Public Utilities Act, expanding the Commission's regulatory authority to include natural gas, electric, telephone, and water companies as well as railroads and marine transportation companies. In 1946, the Commission was renamed the California Public Utilities Commission. It is tasked with ensuring safe, reliable utility service is available to consumers, setting retail energy rates, and protecting against fraud.

Central Valley RWQCB

The Central Valley RWQCB requires a Stormwater Pollution Prevention Plan (SWPPP) for projects disturbing more than one acre of 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 discharge to land by establishing thresholds for discharged pollutants and implementing monitoring programs to evaluate program compliance. This program regulates approximately 1,400 dischargers in the region.[191]

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 discharges of pollutants to surface waters of the U.S. Under this program, an NPDES permit is required to discharge pollutants into the Waters of the U.S.

Local

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

[191] California Water Boards, Central Valley – R5. Overview of Board Programs. Accessed May 2023 at: https://www.waterboards.ca.gov/centralvalley/about_us/program_overview/#wastetoland

The UWMP describes the Visalia 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 the promotion of high-efficiency fixtures in residential settings, promotion of high-efficiency irrigation systems, public information, and education.

Tulare County General Plan 2030 Update

The Tulare County General Plan 2030 incorporates goals and policies related to Utilities and Service Systems, ensuring the provision of essential services for the County's residents. Goal PFS-2 emphasizes the need for a reliable and safe water supply, with Policy PFS-2.1 requiring agencies providing water service to demonstrate sufficient and reliable water supplies for proposed urban development. Policy PFS-2.4 mandates new developments to connect to community water systems, with exceptions granted only in extraordinary circumstances. Similarly, Goal PFS-3 focuses on wastewater management, with Policy PFS-3.2 ensuring that development proposals align with the availability of adequate wastewater treatment and disposal capacity. Policy PFS-3.3 requires new developments to connect to wastewater systems where available, except in exceptional cases. Stormwater management is addressed in Goal PFS-4, with policies emphasizing the preparation of stormwater management plans, adequate drainage systems in new developments, and the use of on-site retention facilities. Finally, Goal PFS-5 prioritizes the safe disposal and recycling of solid and hazardous waste, promoting waste reduction, recycling, and the use of recycled materials. The County ensures adequate capacity within the solid waste system and requires provisions for waste storage, handling, and collection in new development projects. Overall, these policies underscore the County's commitment to providing reliable utilities and service systems while promoting environmental sustainability.

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 District is currently working towards the adoption of a Sewer System Master Plan, which will assist in expanding its collection system in line with development trends and the needs of the community. The Sewer System Master Plan should be consistent with and coordinated with the Tulare County General Plan Update and the Goshen Community Plan update to provide for a sound connection between land zoned for development and the sanitary sewer infrastructure that will serve such development. Currently, the District has a moratorium on connections to the system. Once a connection becomes available, it can be assumed that the project will connect to the existing system. To mitigate the potential of unavailable connections, the project will include a package treatment plant that will provide connections to the Conway/Dias property in the instance that District connections are not available. The package treatment plant will be added as a condition of approval for the proposed Project. A Stormwater detention will be provided on site, as such, there is no need to construct or expand storm water drainage facilities. Electric power will be provided by Southern California Edison, natural gas by the Gas Company (Southern California Gas), and telecommunications facilities are available from both wire and wireless providers in the area (e.g., AT&T, T-Mobile, Sprint, etc.) as needed. As such, the construction or relocation of these utilities can

either be through existing facilities thereby avoiding significant environmental effects. The ability to provide a reliable water supply is documented in the Goshen Community Plan Update EIR for the entire Goshen Urban Development boundary area, which includes this Project. As such, the Project is consistent with and implements the Goshen Community Plan Update thereby resulting in a less than significant impact to this resource. There will be *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: The Goshen CSD will provide water connections to the Project Site. The wells in Goshen can produce 400-800 gallons per minute (gpm). According to the Goshen Community Plan EIR, the full buildout of the Plan would increase the water usage by 1.3% every year, resulting in total usage of 1,159 AFY (5,653 estimated population in 2030, 183 gpd usage). This is an increase of 382 AFY from current usage.

Using average per-person water use in the district (183 gpd; 2020 Urban Water Management Plan) and the average household size in Goshen (3.89 persons; US Census Bureau), water demand for the proposed 303-unit residential development is estimated to be approximately 215,696 gallons of water daily or about 242-acre feet per year. With Goshen planning for an increase of 382 AFY by 2030, there will be enough water supply for the proposed project. The project does not propose any new or expanded uses against the Goshen Community Plan. It is noted that Mitigation Measure 19-1, as specified in the Goshen Community Plan Draft EIR and incorporated herein, is required. Therefore, the impact will be *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 with Mitigation Incorporation: The District is currently working towards the adoption of a Sewer System Master Plan, which will assist in expanding its collection system in line with development trends and the needs of the community. The Sewer System Master Plan should be consistent with and coordinated with the Tulare County General Plan Update and the Goshen Community Plan update to provide for a sound connection between land zoned for development and the sanitary sewer infrastructure that will serve such development. Currently, the District has a moratorium on connections to the system. Once a connection becomes available, it can be assumed that the project will connect to the existing system. To mitigate the potential of unavailable connections, the project will include Mitigation Measure UTL-1 to include a package treatment plant that will provide connections to the Conway/Dias property in the instance that District connections are not available. The package treatment plant will be added as a condition of approval for the proposed Project. There will be a *less than significant impact with mitigation incorporation.*

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?

Less Than Significant Impact: Mid Valley Disposal provides solid waste services to the proposed Project site. The proposed Project does not propose any new or expanded uses other than the proposed 303-unit residential development on 54.21 gross acres and is therefore not anticipated to result in an increased generation of solid waste beyond those anticipated in the Community Plan.

Additionally, the disposal site (County-operated Visalia Landfill) is projected to accommodate solid waste for the next 140 years. As Visalia Landfill's existing infrastructure can accommodate the solid waste currently planned in the General Plan for the expanded population, it can be reasonable concluded that the existing solid waste infrastructure has adequate capacity to serve the proposed Project. The proposed Project would not generate solid waste over State or Local Standards, as such, there will be a *less than significant impact.*

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

Less Than Significant 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 the disposal of solid waste, including recycling. Therefore, the proposed Project would have a *less than significant impact* on solid waste regulations.

Cumulative Impact

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, General Plan Background Report, Tulare County 2030 General Plan EIR, and/or Goshen Community Plan Update and EIR. The Project would not require or result in the relocation or construction of new or expanded water facilities there are sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years.

Mitigation Measures for Utilities and Service Systems:

UTL-1: If Goshen CSD is unable to provide sewer service due to treatment capacity constraints, a package treatment plant for wastewater will be incorporated within the roject to provide connections to the Conway/Dias property.

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?	☐	☐	☐	☑

The discussions regarding Environmental Setting, CEQA requirements, Regulatory Setting, Chapters 4 through 9, Appendices "A" through "I", etc. contained in the Goshen Community Plan Update and Environmental Impact Report are incorporated herein in their entirety. Where necessary and if available, additional site specific facts, data, information, etc., are included in this discussion.

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. [192] Fire Hazard Severity Zones are geographical areas designated under 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 under California Government Code, Sections 51175 through 51189The Project's location does not lend itself to wildfire risk as it is not within a fire hazard severity zone (as identified by CalFire), lacks slope/terrain conducive to wildfire spread, lacks vegetation which would fuel wildfire (i.e., dense vegetation consisting of shrubs and bushes, dead or dying trees caused by drought or pest infestation (i.e., bark beetle), is surrounded by predominantly agriculturally productive lands, and, as noted earlier, is in the western portion of the County which has little or no threat of wildfire.

Regulatory Setting

Federal

[192] California Department of Forestry and Fire Protection. 2022. State Responsibility Area Fire Hazard Severity Zones . Accessed May 2023 at: https://osfm.fire.ca.gov/media/1zxnnbme/fhsz_county_sra_11x17_2022_tulare_ada.pdf.

None that apply to the Project.

State

Senate Bill 1241 (Kehoe, 2012)

Wildfire: Senate Bill 1241 (Kehoe, 2012) required the Office of Planning and Research, the Natural Resources Agency, and CalFire to develop amendments to the initial study checklist of the [CEQA Guidelines] for the inclusion of questions related to fire hazard impacts for projects located on lands classified as state responsibility areas, as defined in section 4102, and on lands classified as very high fire hazard severity zones, as defined in subdivision (i) of section 51177 of the Government Code.[193] The Agency added several questions addressing this issue. Notably, while SB 1241 required the questions to address specific locations, it did not necessarily limit the analysis to those locations, and so the Agency posed the questions for projects located within "or near" those zones. Lead agencies will be best placed to determine precisely where such analysis is needed outside of the specified zones

SB 1241 also added, "A safety element for the protection of the community from any unreasonable risks associated with the effects of seismically induced surface rupture, ground shaking, ground failure, tsunami, seiche, and dam failure; slope instability leading to mudslides and landslides; subsidence; liquefaction; and other seismic hazards identified pursuant to Chapter 7.8 (commencing with Section 2690) of Division 2 of the Public Resources Code, and other geologic hazards known to the legislative body; flooding; and wildland and urban fires. The safety element shall include mapping of known seismic and other geologic hazards. It shall also address evacuation routes, military installations, peakload water supply requirements, and minimum road widths and clearances around structures, as those items relate to identified fire and geologic hazards."[194]

Discussion

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

No Impact: The proposed Project would not substantially impair an adopted emergency response plan or emergency evacuation plan. The proposed Project would allow development of a 303-unit residential subdivision north of Avenue 308 and west of Road 64 within the Urban Development Boundary of Goshen. The Tulare County Fire Department will review the proposed Project to ensure it does not impair emergency response or emergency evacuation. Additionally, as noted earlier, the proposed Project site is not located within an SRA or a Very High FHSZ. There will be *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 proposed Project is located on a flat area of agricultural and urban land which is considered to be at negligible risk of fire. Additionally, the proposed Project Site is not located within an SRA or a Very High FHSZ. There will be *no impact.*

[193] California Legislative Information SB 1241 Land use: general plan: safety element: fire hazard impacts. Section 21083.01.(a). Accessed May 2023 at: https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201120120SB1241

[194] Ibid. Section 65302.(g)(1).

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: Construction of the proposed Project involves adding new local residential streets, and new and relocated utilities to accommodate the 303-unit residential subdivision. 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 County standards and Fire Chief approval. The proposed Project would not exacerbate fire risk and the impact will 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: As noted earlier, the proposed Project site is not located in an area designated as a Fire Hazard Severity Zone and the lands associated with the proposed Project site are relatively flat. Therefore, the proposed Project would not be susceptible to downslope or downstream flooding or landslides as a result of post-fire instability or drainage changes. There will be *no impact.*

Cumulative Impact

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, Tulare County General Plan Background Report, the Tulare County 2030 General Plan EIR, and/or Goshen Community Plan Update and EIR. For the reasons stated above, Items 20 a) through d) do not apply to the Project as it is not located in or near state responsibility areas or lands classified as very high fire hazard severity zones. As such, no Project specific Impact or Cumulative Impacts will occur.

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?	☐	☐	☑	☐

The discussions regarding Environmental Setting, CEQA requirements, Regulatory Setting, Chapter 3.18 Mandatory Findings, Chapters 4 through 9, Appendices "A" through "I", etc. contained in the Goshen Community Plan Update and Environmental Impact Report are incorporated herein in their entirety. Where necessary and if available, additional site specific facts, data, information, etc., are included in this discussion.

Analysis:

The analysis conducted in this Initial Study/Mitigated Negative Declaration results in a determination that the Project will have a less than significant effect on thelocal environment. As noted earlier, the proposed Project is to develop 303 single-family residences on a 54.21-acre site at the north of Avenue 304, south of Avenue 306, and west of Road 64 within the Goshen Community Plan Urban Development Boundary area.

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?

Less than Significant Impact with Mitigation: The potential for impacts to biological and cultural resources from the construction and operation of the proposed Project will be less than significant with the incorporation of the Mitigation Measures BIO-1, BIO-2, CUL-1 and CUL-2.

This initial study/mitigated negative declaration found that the project does not contain high quality habitat for special status species and would therefore not result in significant loss of habitat or direct impact to these special status species. Implementation of Mitigations Measures BIO-1 and BIO-2, as applicable, would result in a less than signifant impact to this resource. The proposed Project does not result in significant loss of habitat or direct impact to these special status species, therefore a less than significant cumulative impact will occur. Additionally, since the proposed Project does not encompass wetlands or sensitive riparian habitat, there would be no cumulative impacts in this regard. The Project site consists of developed and/or highly disturbed lands, both within and surrounding it, which do not serve as crucial movement corridors for native wildlife.

It is not anticipated that Native American remains or other cultural will be found at the proposed Project site. However, consistent with CEQA requirements, Mitigation Measures CUL-1 thought CUL-3 are included in the unlikely event that if Native American remains are unearthed during any ground disturbance activities, or if any cultural resources are discovered, such finds will be mitigated to less than significant Project-specific and Cumulative Impacts.

Accordingly, the proposed Project will involve no potential for significant impacts due to degradation of the quality of the environment, substantial reductions in the habitat of a fish or wildlife species, causing a fish or wildlife population to drop below self-sustaining levels, threatening to eliminate a plant or animal community, reduction in the number or restriction of the range of a rare or endangered plant or animal or elimination of important examples of the major periods of California history or prehistory. As such, the impact will be *less than significant with mitigation* for biological resources, cultural resources, and tribal cultural resources.

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)?

Less than Significant Impact: Projects considered in a cumulative analysis include those that would be constructed concurrently with the Project and those that would be in operation at the same time as the Project. The cumulative projects considered in this analysis are limited to projects that would result in similar impacts to the Project due to their potential to collectively contribute to significant cumulative impacts, as well as other development projects that would be located in the vicinity of the Project.

Two projects, Goshen Village (an 89 single-family and up to 140 multiple family unit project located on an approximately 29-acre site located south of Avenue 312/Riggin Avenue and future Road 76) and Cross Creek Bend Subdivision (a 405-unit single-family subdivision located on a 69-acre site at the southwest corner of Avenue 308 and Road 64) are within the vicinity of the project site. However, this Project, the Goshen Village project and the Cross Creek Bend Subdivision Project are consistent with

the Goshen community Plan Update and have been accounted for as necessary to accommodate planed growth. As such, they do not contribute to a unanticipated cumulative impact.

The majority of the potential impacts resulting from the Project will be short term, temporary, and intermittent occurring during Project construction-related activities; and with negligible impacts resulting from Project operation as discussed in the earlier environmental analysis. Because construction-related impacts are of a short duration, temporary, intermittent, and localized, they would have to occur concurrently and in proximity of other projects in order to have a cumulative impact. Construction-related impacts (which are primarily associated with air quality, biological resources, noise, and traffic) are not likely to act cumulatively with any other projects in a manner that would result in significant impacts.

Impacts to aesthetics from the proposed Project would be minimal as the project would be developed adjacent to existing single-family land use and it is consistent with well-planned urban design for an area planned for urban uses. Although the Project may contribute to visual impacts on the area due to the addition of urban-type uses adjacent to an agricultural area, the contribution of the Project would not be cumulatively considerable because the visual quality of the overall area as the area is transitioning from a rural setting to an urban setting consistent with the Goshen Community Plan Update. Thus, the proposed Project would result in less than significant cumulative impact to Aesthetics.

The overall cumulative impact to agricultural resources has been accounted for in the Tulare County General Plan 2030 Update Revised EIR and the Goshen Community Plan Update and accompanying EIR. As noted in the General Plan Revised EIR, "As noted previously (see Section 3.10, "Agricultural Resources" [in the Revised EIR]), growth associated with implementation of the proposed project along with development within CACUDBs would result in a loss of some existing agricultural lands within the County. While the proposed project includes policies to minimize this impact, there would still be a project level significant and unavoidable impact. The loss of agricultural land within the County as a result of urban development is part of an overall trend within the San Joaquin Valley and the County will continue to face development pressure in the foreseeable future. As more fully described in Section 3.10, "Agricultural Resources" [in the Revised EIR], the proposed project does include several policies stating that the County will work at a regional level to control the conversion of agricultural uses. However, since the County is projected to continue to urbanize, the loss of agricultural lands as a result of the proposed project would contribute considerably to a significant and unavoidable cumulative impact to agricultural resources." This Project is consistent with earlier determinations and does not compound nor contribute to exacerbation of an already determined cumulative impact.

This Project will have short-term impacts with regard to air quality and greenhouse gases during construction-related activities. However, as presented in Tables 3-4, 3-5, and 3-6, proposed Project construction and operational-related activities emissions would not exceed the annual Air District thresholds of significance for ROG, NOx, SOx, CO, PM10, and PM2.5. Additionally, the Project is consistent with the Tulare County CAP and applicable AB 32 Scoping Plan reductions measures. The Project will implement applicable Tulare County General Plan and Tulare County CAP policies. As such, implementation of the Project will not conflict with applicable state, regional, and local plans, policies or regulation adopted for the purpose of reducing the emissions of greenhouse gases. The proposed Project will not result in exposure of substantial pollutant concentrations or odors to sensitive receptors as the construction-related activities will occur in phases and would be intermittent, short-

term, and temporary. Lastly, consultation with the Air District, and implementation of County policies and compliance with applicable Air District rules and regulations (including identification/mitigation of potential health risks where applicable) would reduce potential impacts of the proposed Project. Therefore, less than significant project-specific and cumulative impacts related to these Checklist Items will occur.

The Project would only contribute to cumulative impacts to biological resources if there were Project-specific impacts. As discussed in Item 4 of Section 3.5 of this Initial Study, the Project site consists of disturbed, unproductive agricultural land that does not provide high quality habitat for any special status species. Given that the proposed Project does not cause significant habitat loss or direct impact to these special status species, the implementation of applicable Mitigation Measures BIO-1 and BIO-2 would result in less than significant project-specific impacts. Consequently, the proposed Project would not result in significant habitat loss or direct impact to these special status species, leading to a cumulative impact that is less than significant. Additionally, since the proposed Project does not encompass wetlands or sensitive riparian habitat, there would be no cumulative impacts in this regard. The Project site consists of developed and/or highly disturbed lands, both within and surrounding it, which do not serve as crucial movement corridors for native wildlife. Bird species utilizing the Pacific flyway would continue to do so even after the development of the project. As a result, the cumulative impacts related to biological resources would be less than significant.

As indicated in Item 5 and Item 18, the Project site does not contain any known cultural or tribal cultural resources. However, as an abundance of caution, Mitigation Measures CUL-1 through CUL-3 have been incorporated into this IS/MND. Therefore, cumulative impacts to cultural and tribal cultural resources would be less than significant with implementation of these measures.

The proposed Project would incrementally contribute to adverse impacts on energy resource demand and conservation when considering the cumulative impact of concurrently planned projects; however, like the proposed Project, discretionary actions requiring agency approval are required to comply with local, regional, state, and federal policies designed to reduce wasteful energy consumption, and improve overall energy conservation and sustainability. For instance, all local projects involving the development of new buildings must be designed to conform to CALGreen and the current California Energy Code (for this Project it will be the 2022 Code). Therefore, it is anticipated that the Project's contribution to cumulative impacts would not result in a significantly considerable wasteful use of energy resources, such that the Project, and other cumulative projects, would not have a cumulative effect on energy conservation. The proposed Project will not have a direct or cumulative impact, or create wasteful, inefficient, or unnecessary consumption of energy resources during project construction-related activities or operations, nor will it conflict with or obstruct a state or local plan for renewable energy or energy efficiency. Therefore, Project-specific and Cumulative Impacts related to energy resources as of a result of the Project would be less than significant.

The Project also will not cause cumulatively considerable geology and soils impacts, as Project-specific impacts will be less than significant and will not be anticipated to combine with impacts caused by the cumulative projects identified by the County.

The Project will not cause cumulatively considerable impacts related to hazards and hazardous materials. While small amounts of hazardous materials may be used or transported as a result of construction-related activities as the Project develops, these activities will occur in compliance with

applicable laws and regulations, and any impacts resulting from use, transport, disposal, or accident or upset conditions will be localized in nature. As a result, any Project-level impacts will not have the potential to contribute to hazards associated with other projects because these impacts would only occur intermittently, if at all. When fully buildout, it is likely that the residence will store small amounts of typical hazardous materials, such as fuel (e.g., gasoline for lawn care equipment) and lubricants. The storage, transport, and use of these materials will comply with Local, State, and Federal regulatory requirements.

The Project will not cause cumulatively considerable hydrology and water quality-related impacts. The Project applicant will be required to implement a SWPPP to reduce impacts and will not cause discharge to any surface or groundwater sources or alter the course of any stream or river. Nor will the Project change runoff patterns in the area. Also, implementation of Mitigation Measures HYD-1, HYD-2 and HYD-3 would mitigate potential impacts to the hydrology resource.

The Project will not cause cumulatively considerable land use and planning impacts. The Project is consistent with all applicable land use planning policies (that is Tulare County 2030 General Plan and Goshen Community Plan Update). As a result, the Project's impacts will not be cumulatively significant. Additionally, as the Project would not occur on lands containing mineral resources, no Project-specific or Cumulative Impacts to mineral resources would occur.

The Project also will not combine noise-related impacts with that of other projects to cause cumulatively considerable impacts. Construction-related activities will cause short-term, temporary, and intermittent increases in noise in the area, and could occur at the same time as other noise-causing events in the area. However, no other concurrent construction project are anticipated to occur adjacent to or near the Project site, and operational noise will be minimal. As a result, the Project is not anticipated to considerably contribute to cumulative noise impacts during construction or operation.

The Project is consistent with the Tulare County General Plan and Goshen Community Plan. Therefore, population growth resulting from the Project would not be cumulatively significant. Additionally, the proposed Project will not significantly impact the fire or police response times, schools, parks, or other facilities. As discussed in Item 16, the project would not necessitate new or expanded recreational facilities. Therefore, less than significant Project-specific or Cumulative Impacts related to public services or parks will occur.

As discussed in Item 17, the Project aligns with the Tulare County 2030 General Plan and/or Goshen Community Plan Update and EIR, ensuring there is no conflict with relevant plans, ordinances, or policies that establish performance measures for the circulation system. These measures encompass all modes of transportation, such as mass transit and non-motorized travel, as well as critical components of the circulation system, including intersections, streets, highways, freeways, pedestrian and bicycle paths, and mass transit. Moreover, the Project does not violate CEQA Guidelines Section 15064.3, Subdivision (b), which identifies Vehicle Miles Traveled (VMT) as an environmental impact under CEQA. The proposed subdivision design follows a conventional rectangular-patterned grid system, featuring two access/egress points along Avenue 304 and one access/egress point along Road 64. Consequently, it does not introduce significant hazards arising from design features like sharp curves or dangerous intersections, nor does it conflict with incompatible uses, such as farm equipment. The design also includes sufficient emergency access.

Implementation of Mitigation Measures Trans-1, Trans-2 and Trans-3 would reduce Project-specific and cumulative impacts to less than significant.

The Project would not require or result in the relocation or construction of new or expanded water facilities there are sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years. As discussed in Item 19, the Goshen CSD sewer system has capacity to accommodate the Project's projected demand for wastewater treatment. A Stormwater detention will be provided on site, as such, there is no need to construct or expand storm water drainage facilities. Electric power will be provided by Southern California Edison, natural gas by the Gas Company (Southern California Gas), and telecommunications facilities are available from both wire and wireless providers in the area (e.g., AT&T, T-Mobile, Sprint, etc.) as needed. Lastly, the Project would not 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 and it will comply with federal, state, and local management and reduction statutes and regulations related to solid waste. As such, cumulative impacts to utilities and service systems would be less than significant.

Impacts regarding Wildfires do not apply to the Project as it is not located in or near state responsibility areas or lands classified as very high fire hazard severity zones. As such, no Project-specific Impact or Cumulative Impacts will occur.

Each of the cumulative projects evaluated in this section must adhere to project-specific mitigation measures, design features, and conditions of approval. They are also required to comply with relevant General Plans, zoning ordinances, laws, and policies. By implementing the identified project-specific mitigation measures and ensuring compliance with applicable codes, Tulare County General Plan, Best Management Practices, ordinances, laws, and regulations, the magnitude of their contribution to cumulative impacts will be significantly reduced. Additionally, these projects are obligated to comply with the rules, regulations, standards, orders, permits, thresholds, and other requirements of other entities/agencies such as the San Joaquin Valley Air Pollution Control District and Regional Water Quality Control Board. These additional compliance measures further contribute to the minimization or complete avoidance of adverse impacts.

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

Less Than Significant Impact: The analyses of environmental issues contained in this Initial Study/Mitigated Negative Declaration indicate that the proposed Project is not anticipated to have substantial impact on human beings, either directly or indirectly. Mitigation measures have been incorporated in the proposed Project (including design features) to reduce all potentially significant impacts to less than significant, which results in a *less than significant* impact to this Checklist item.

3.6 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/Mitigated Negative Declaration (IS/MND) for the Conway/Dias Project in the County of Tulare.

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 Tulare County to ensure that the individual mitigation measures have been monitored.

Plan checking and verification of mitigation compliance shall be the responsibility of the County of Tulare.

Mitigation Measure	Responsible Party for Implementation	Implementation Timing	Responsible Party for Monitoring	Verification
Mitigation Measure CUL-1: If previously unknown resources are encountered before or during grading activities, construction shall stop in the immediate vicinity of the find and a qualified historical resources specialist shall be consulted to determine whether the resource requires further study. The qualified historical resources specialist shall make recommendations to the City on the measures that shall be implemented to protect the discovered resources, including but not limited to excavation of the finds and evaluation of the finds in accordance with Section 15064.5 of the CEQA Guidelines and the City's Historic Preservation Ordinance. If the resources are determined to be unique historical resources as defined under Section 15064.5 of the CEQA Guidelines, measures shall be identified by the monitor and recommended to the Lead Agency. Appropriate measures for significant resources could include avoidance or capping, incorporation of the site in green space, parks, or open space, or data recovery excavations of the finds. No further grading shall occur in the area of the discovery until the Lead Agency approves the measures to protect these resources. Any historical artifacts recovered as a result of mitigation shall be provided to a City-approved institution or person who is capable of providing long-term preservation to allow future scientific study.	Project Applicant	Ongoing during construction	Contractor/Lead Agency	
Mitigation Measure CUL-2: In the event that human remains are unearthed during excavation and grading activities of any future development project, all activity shall cease immediately. Pursuant to Health and Safety Code (HSC) Section 7050.5, no	Project Applicant	Ongoing during construction	Contractor/Lead Agency	

Mitigation Measure	Responsible Party for Implementation	Implementation Timing	Responsible Party for Monitoring	Verification
further disturbance shall occur until the County Coroner has made the necessary findings as to origin and disposition pursuant to PRC Section 5097.98(a). If the remains are determined to be of Native American descent, the coroner shall within 24 hours notify the Native American Heritage Commission (NAHC). The NAHC shall then contact the most likely descendent of the deceased Native American, who shall then serve as the consultant on how to proceed with the remains. Pursuant to PRC Section 5097.98(b), upon the discovery of Native American remains, the landowner shall ensure that the immediate vicinity, according to generally accepted cultural or archaeological standards or practices, where the Native American human remains are located is not damaged or disturbed by further development activity until the landowner has discussed and conferred with the most likely descendants regarding their recommendations, if applicable, taking into account the possibility of multiple human remains. The landowner shall discuss and confer with the descendants all reasonable options regarding the descendants' preferences for treatment.				
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.	Project Applicant	Prior to the Start of Construction	Contractor/Lead Agency	
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	Project Applicant	45 Days Prior to the Start of Construction	Contractor/Lead Agency	

Mitigation Measure	Responsible Party for Implementation	Implementation Timing	Responsible Party for Monitoring	Verification
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; and, • 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.	Project Applicant	Prior to the Start of Construction	Contractor/Lead Agency	
Mitigation Measure BIO-1a: Construction Timing. If feasible, project construction will occur entirely outside the Swainson's hawk nesting season, typically defined as March 1- September 15.	Project Applicant	Prior to the Start of Construction	Contractor/Lead Agency	

Mitigation Measure	Responsible Party for Implementation	Implementation Timing	Responsible Party for Monitoring	Verification
Mitigation Measure BIO-1b: Preconstruction Surveys. If the project must be constructed during the March 1-September 15 nesting season, surveys for nesting Swainson's hawks are required. The surveys will follow the protocol established in the Swainson's Hawk Technical Advisory Committee's 2000 *Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in California's Central Valley* and will encompass all mature trees within 0.5 mile of the project site. If no nesting pairs are found during the surveys, no further mitigation is required.	Project Applicant	Prior to the Start of Construction	Contractor/Lead Agency	
Mitigation Measure BIO-1c: (Establish Buffers). If preconstruction surveys identify one or more active Swainson's hawk nests within 0.5 mile of the project site, suitable disturbance-free buffer will be established around the nest(s) by a qualified biologist and maintained until the end of construction or until the biologist determines that the nest is no longer active, whichever comes first.	Project Applicant	Ongoing during construction	Contractor/Lead Agency	
Mitigation Measure BIO-2a: (Construction Timing). If feasible, the project will be implemented outside of the avian nesting season, typically defined as February 1 to August 31.	Project Applicant	Prior to the Start of Construction	Contractor/Lead Agency	
Mitigation Measure BIO-2b: (Pre-construction Surveys). If construction is to occur between February and August 31, a qualified biologist will conduct pre-construction surveys for active bird nests within 10 days prior to the start of construction. The survey area will encompass the site and accessible surrounding lands within 250 feet for nesting migratory birds and 500 feet for raptors (i.e., birds of prey).	Project Applicant	10 days prior to the Start of Construction	Contractor/Lead Agency	
Mitigation Measure BIO-2c: (Avoidance of Active Nests). Should any active nests be discovered in or near proposed construction zones, the biologist will identify a suitable construction-free buffer around the nest. This buffer will be identified on the ground with flagging or fencing and will be maintained until the biologist has determined that the young have fledged and are capable of foraging independently.	Project Applicant	Ongoing during construction	Contractor/Lead Agency	
Mitigation Measure UTL-1: If Goshen CSD is unable to provide sewer service due to treatment capacity constraints, a package treatment plant for wastewater will be incorporated within the project to provide connections to the Conway/Dias property.	Project Applicant	Ongoing During construction	Contractor/Lead Agency	

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Section 4

List of Preparers

Tulare County
5961 S. Mooney Blvd.
Visalia, CA 93277

SECTION 4
List of Preparers

Project Title: Conway/Dias Property

List of Preparers

4-Creeks Inc.

- David Duda, AICP, GISP, Director of Planning
- Steve Macias, Civil Engineer
- Ellie Krantz, Assistant Planner
- Molly Baumeister, Associate Planner

Persons and Agencies Consulted

The following individuals and agencies contributed to this Initial Study/Mitigated Negative Declaration:

Tulare County

- Hector Guerra, Chief Environmental Planner
- Aaron R Bock, Assistant RMA Director
- Jessica Willis, Planner IV

Taylored Archaeology

- Consuelo Y. Sauls

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- Ambarish Mukherjee, PE, AICP, Principal

Live Oak Associates

- Austin Pearson, Vice President
- Colleen Del Vecchio, Project Manager/Staff Ecologist and Arborist

Appendix A

CalEEMod Report

Part 1

Project Projection

Conway/Dias Properties - Phase 1 - 108 DU - Tulare County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Conway/Dias Properties - Phase 1 - 108 DU

Tulare County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Single Family Housing	108.00	Dwelling Unit	21.00	194,400.00	309

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	51
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 - 108 single family residential units on 21 acres.

Construction Phase - demolition of a 2,400 sf building

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Trips and VMT -

Grading -

Vehicle Trips - Per 11th edition ITE.

Woodstoves - Per Rule 4901

Conway/Dias Properties - Phase 1 - 108 DU - Tulare County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Construction Off-road Equipment Mitigation - dust supression per Reg VIII

Mobile Land Use Mitigation - Per project design

Area Mitigation - District statewide default

Energy Mitigation -

Fleet Mix - Per the District 2025 residential fleet mix.

Demolition -

Water Mitigation - Per CA Building Code (CalGreen)

Water And Wastewater - Project connected to Visalia WWTP

Table Name	Column Name	Default Value	New Value
tblFireplaces	NumberGas	59.40	108.00
tblFireplaces	NumberNoFireplace	48.60	108.00
tblFleetMix	HHD	0.02	0.02
tblFleetMix	LDA	0.52	0.52
tblFleetMix	LDT1	0.05	0.21
tblFleetMix	LDT2	0.17	0.17
tblFleetMix	LHD1	0.03	8.0000e-004
tblFleetMix	LHD2	7.7360e-003	9.0000e-004
tblFleetMix	MCY	0.02	2.5000e-003
tblFleetMix	MDV	0.17	0.06
tblFleetMix	MH	3.4400e-003	2.2000e-003
tblFleetMix	MHD	0.01	7.6000e-003
tblFleetMix	OBUS	6.3400e-004	0.00
tblFleetMix	SBUS	1.4300e-003	1.0000e-004
tblFleetMix	UBUS	4.7000e-004	4.3000e-003
tblLandUse	LotAcreage	35.06	21.00
tblVehicleTrips	ST_TR	9.54	9.48
tblVehicleTrips	SU_TR	8.55	8.48
tblVehicleTrips	WD_TR	9.44	9.43

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblWater	AerobicPercent	87.46	97.79
tblWater	SepticTankPercent	10.33	0.00

2.0 Emissions Summary

Conway/Dias Properties - Phase 1 - 108 DU - Tulare County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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					
2024	0.2525	2.2989	2.4928	4.8500e-003	0.3037	0.1001	0.4038	0.1263	0.0934	0.2197	0.0000	424.5102	424.5102	0.1008	4.2800e-003	428.3045
2025	1.9655	1.2293	1.6515	3.0300e-003	0.0356	0.0508	0.0863	9.6100e-003	0.0477	0.0573	0.0000	263.9678	263.9678	0.0545	3.5500e-003	266.3892
Maximum	**1.9655**	**2.2989**	**2.4928**	**4.8500e-003**	**0.3037**	**0.1001**	**0.4038**	**0.1263**	**0.0934**	**0.2197**	**0.0000**	**424.5102**	**424.5102**	**0.1008**	**4.2800e-003**	**428.3045**

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					
2024	0.2525	2.2989	2.4928	4.8500e-003	0.1448	0.1001	0.2449	0.0564	0.0934	0.1498	0.0000	424.5097	424.5097	0.1008	4.2800e-003	428.3040
2025	1.9655	1.2293	1.6515	3.0300e-003	0.0356	0.0508	0.0863	9.6100e-003	0.0477	0.0573	0.0000	263.9676	263.9676	0.0545	3.5500e-003	266.3889
Maximum	**1.9655**	**2.2989**	**2.4928**	**4.8500e-003**	**0.1448**	**0.1001**	**0.2449**	**0.0564**	**0.0934**	**0.1498**	**0.0000**	**424.5097**	**424.5097**	**0.1008**	**4.2800e-003**	**428.3040**

Conway/Dias Properties - Phase 1 - 108 DU - Tulare 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	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**46.84**	**0.00**	**32.43**	**51.45**	**0.00**	**25.24**	**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	**1-1-2024**	**3-31-2024**	1.0020	1.0020
2	**4-1-2024**	**6-30-2024**	0.5093	0.5093
3	**7-1-2024**	**9-30-2024**	0.5149	0.5149
4	**10-1-2024**	**12-31-2024**	0.5159	0.5159
5	**1-1-2025**	**3-31-2025**	0.4693	0.4693
6	**4-1-2025**	**6-30-2025**	0.4735	0.4735
7	**7-1-2025**	**9-30-2025**	0.6705	0.6705
		Highest	1.0020	1.0020

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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	1.4023	0.1461	4.7190	0.0132		0.6444	0.6444		0.6444	0.6444	84.8972	86.3761	171.2733	0.3998	1.5600e-003	181.7321
Energy	0.0140	0.1196	0.0509	7.6000e-004		9.6700e-003	9.6700e-003		9.6700e-003	9.6700e-003	0.0000	291.2632	291.2632	0.0156	4.1000e-003	292.8743
Mobile	0.3111	0.5680	3.4757	9.5800e-003	1.0508	7.2100e-003	1.0581	0.2802	6.7200e-003	0.2869	0.0000	892.1962	892.1962	0.0507	0.0446	906.7495
Waste						0.0000	0.0000		0.0000	0.0000	22.5807	0.0000	22.5807	1.3345	0.0000	55.9428
Water						0.0000	0.0000		0.0000	0.0000	2.4896	9.5060	11.9956	0.0659	5.5100e-003	15.2850
Total	**1.7274**	**0.8337**	**8.2456**	**0.0235**	**1.0508**	**0.6613**	**1.7121**	**0.2802**	**0.6608**	**0.9410**	**109.9675**	**1,279.3415**	**1,389.3089**	**1.8664**	**0.0558**	**1,452.5837**

Conway/Dias Properties - Phase 1 - 108 DU - Tulare County, Annual

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	0.9654	9.1700e-003	0.7954	4.0000e-005		4.4100e-003	4.4100e-003		4.4100e-003	4.4100e-003	0.0000	1.2981	1.2981	1.2400e-003	0.0000	1.3290
Energy	0.0140	0.1196	0.0509	7.6000e-004		9.6700e-003	9.6700e-003		9.6700e-003	9.6700e-003	0.0000	291.2632	291.2632	0.0156	4.1000e-003	292.8743
Mobile	0.3057	0.5283	3.2279	8.6800e-003	0.9484	6.5800e-003	0.9550	0.2528	6.1400e-003	0.2590	0.0000	808.0800	808.0800	0.0477	0.0413	821.5744
Waste						0.0000	0.0000		0.0000	0.0000	22.5807	0.0000	22.5807	1.3345	0.0000	55.9428
Water						0.0000	0.0000		0.0000	0.0000	1.9917	8.1555	10.1472	0.0528	4.4100e-003	12.7816
Total	**1.2851**	**0.6571**	**4.0742**	**9.4800e-003**	**0.9484**	**0.0207**	**0.9690**	**0.2528**	**0.0202**	**0.2731**	**24.5724**	**1,108.7969**	**1,133.3692**	**1.4517**	**0.0498**	**1,184.5021**

	ROG	NOx	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	**25.61**	**21.18**	**50.59**	**59.71**	**9.75**	**96.88**	**43.40**	**9.75**	**96.94**	**70.98**	**77.65**	**13.33**	**18.42**	**22.22**	**10.69**	**18.46**

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	1/1/2024	1/26/2024	5	20	
2	Site Preparation	Site Preparation	1/27/2024	2/9/2024	5	10	
3	Grading	Grading	2/10/2024	3/29/2024	5	35	

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

4	Building Construction	Building Construction	3/30/2024	8/29/2025	5	370	
5	Paving	Paving	8/30/2025	9/26/2025	5	20	
6	Architectural Coating	Architectural Coating	9/27/2025	10/24/2025	5	20	

Acres of Grading (Site Preparation Phase): 15

Acres of Grading (Grading Phase): 105

Acres of Paving: 0

Residential Indoor: 393,660; Residential Outdoor: 131,220; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
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
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40

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
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	39.00	12.00	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	8.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Demolition	6	15.00	0.00	11.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Demolition - 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					
Fugitive Dust					1.1800e-003	0.0000	1.1800e-003	1.8000e-004	0.0000	1.8000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0224	0.2088	0.1971	3.9000e-004		9.6000e-003	9.6000e-003		8.9200e-003	8.9200e-003	0.0000	33.9961	33.9961	9.5100e-003	0.0000	34.2338
Total	**0.0224**	**0.2088**	**0.1971**	**3.9000e-004**	**1.1800e-003**	**9.6000e-003**	**0.0108**	**1.8000e-004**	**8.9200e-003**	**9.1000e-003**	**0.0000**	**33.9961**	**33.9961**	**9.5100e-003**	**0.0000**	**34.2338**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Demolition - 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	1.0000e-005	7.0000e-004	1.5000e-004	0.0000	9.0000e-005	1.0000e-005	1.0000e-004	3.0000e-005	1.0000e-005	3.0000e-005	0.0000	0.3072	0.3072	0.0000	5.0000e-005	0.3216
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	4.8000e-004	3.2000e-004	3.7400e-003	1.0000e-005	1.1900e-003	1.0000e-005	1.2000e-003	3.2000e-004	1.0000e-005	3.2000e-004	0.0000	0.9165	0.9165	3.0000e-005	3.0000e-005	0.9256
Total	**4.9000e-004**	**1.0200e-003**	**3.8900e-003**	**1.0000e-005**	**1.2800e-003**	**2.0000e-005**	**1.3000e-003**	**3.5000e-004**	**2.0000e-005**	**3.5000e-004**	**0.0000**	**1.2237**	**1.2237**	**3.0000e-005**	**8.0000e-005**	**1.2472**

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					4.6000e-004	0.0000	4.6000e-004	7.0000e-005	0.0000	7.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0224	0.2088	0.1971	3.9000e-004		9.6000e-003	9.6000e-003		8.9200e-003	8.9200e-003	0.0000	33.9960	33.9960	9.5100e-003	0.0000	34.2338
Total	**0.0224**	**0.2088**	**0.1971**	**3.9000e-004**	**4.6000e-004**	**9.6000e-003**	**0.0101**	**7.0000e-005**	**8.9200e-003**	**8.9900e-003**	**0.0000**	**33.9960**	**33.9960**	**9.5100e-003**	**0.0000**	**34.2338**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Demolition - 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	1.0000e-005	7.0000e-004	1.5000e-004	0.0000	9.0000e-005	1.0000e-005	1.0000e-004	3.0000e-005	1.0000e-005	3.0000e-005	0.0000	0.3072	0.3072	0.0000	5.0000e-005	0.3216
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	4.8000e-004	3.2000e-004	3.7400e-003	1.0000e-005	1.1900e-003	1.0000e-005	1.2000e-003	3.2000e-004	1.0000e-005	3.2000e-004	0.0000	0.9165	0.9165	3.0000e-005	3.0000e-005	0.9256
Total	**4.9000e-004**	**1.0200e-003**	**3.8900e-003**	**1.0000e-005**	**1.2800e-003**	**2.0000e-005**	**1.3000e-003**	**3.5000e-004**	**2.0000e-005**	**3.5000e-004**	**0.0000**	**1.2237**	**1.2237**	**3.0000e-005**	**8.0000e-005**	**1.2472**

3.3 Site Preparation - 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					
Fugitive Dust					0.0983	0.0000	0.0983	0.0505	0.0000	0.0505	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0133	0.1359	0.0917	1.9000e-004		6.1500e-003	6.1500e-003		5.6600e-003	5.6600e-003	0.0000	16.7285	16.7285	5.4100e-003	0.0000	16.8638
Total	**0.0133**	**0.1359**	**0.0917**	**1.9000e-004**	**0.0983**	**6.1500e-003**	**0.1044**	**0.0505**	**5.6600e-003**	**0.0562**	**0.0000**	**16.7285**	**16.7285**	**5.4100e-003**	**0.0000**	**16.8638**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Site Preparation - 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	0.0000	0.0000	0.0000	0.0000	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	2.9000e-004	1.9000e-004	2.2500e-003	1.0000e-005	7.2000e-004	0.0000	7.2000e-004	1.9000e-004	0.0000	1.9000e-004	0.0000	0.5499	0.5499	2.0000e-005	2.0000e-005	0.5554
Total	**2.9000e-004**	**1.9000e-004**	**2.2500e-003**	**1.0000e-005**	**7.2000e-004**	**0.0000**	**7.2000e-004**	**1.9000e-004**	**0.0000**	**1.9000e-004**	**0.0000**	**0.5499**	**0.5499**	**2.0000e-005**	**2.0000e-005**	**0.5554**

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					0.0383	0.0000	0.0383	0.0197	0.0000	0.0197	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0133	0.1359	0.0917	1.9000e-004		6.1500e-003	6.1500e-003		5.6500e-003	5.6500e-003	0.0000	16.7285	16.7285	5.4100e-003	0.0000	16.8638
Total	**0.0133**	**0.1359**	**0.0917**	**1.9000e-004**	**0.0383**	**6.1500e-003**	**0.0445**	**0.0197**	**5.6500e-003**	**0.0254**	**0.0000**	**16.7285**	**16.7285**	**5.4100e-003**	**0.0000**	**16.8638**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Site Preparation - 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	0.0000	0.0000	0.0000	0.0000	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	2.9000e-004	1.9000e-004	2.2500e-003	1.0000e-005	7.2000e-004	0.0000	7.2000e-004	1.9000e-004	0.0000	1.9000e-004	0.0000	0.5499	0.5499	2.0000e-005	2.0000e-005	0.5554
Total	**2.9000e-004**	**1.9000e-004**	**2.2500e-003**	**1.0000e-005**	**7.2000e-004**	**0.0000**	**7.2000e-004**	**1.9000e-004**	**0.0000**	**1.9000e-004**	**0.0000**	**0.5499**	**0.5499**	**2.0000e-005**	**2.0000e-005**	**0.5554**

3.4 Grading - 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					
Fugitive Dust					0.1611	0.0000	0.1611	0.0639	0.0000	0.0639	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0563	0.5666	0.4852	1.0900e-003		0.0234	0.0234		0.0215	0.0215	0.0000	95.4092	95.4092	0.0309	0.0000	96.1806
Total	**0.0563**	**0.5666**	**0.4852**	**1.0900e-003**	**0.1611**	**0.0234**	**0.1844**	**0.0639**	**0.0215**	**0.0854**	**0.0000**	**95.4092**	**95.4092**	**0.0309**	**0.0000**	**96.1806**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Grading - 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	0.0000	0.0000	0.0000	0.0000	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	1.1200e-003	7.5000e-004	8.7400e-003	2.0000e-005	2.7900e-003	1.0000e-005	2.8000e-003	7.4000e-004	1.0000e-005	7.5000e-004	0.0000	2.1385	2.1385	7.0000e-005	7.0000e-005	2.1598
Total	**1.1200e-003**	**7.5000e-004**	**8.7400e-003**	**2.0000e-005**	**2.7900e-003**	**1.0000e-005**	**2.8000e-003**	**7.4000e-004**	**1.0000e-005**	**7.5000e-004**	**0.0000**	**2.1385**	**2.1385**	**7.0000e-005**	**7.0000e-005**	**2.1598**

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					0.0628	0.0000	0.0628	0.0249	0.0000	0.0249	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0563	0.5666	0.4852	1.0900e-003		0.0234	0.0234		0.0215	0.0215	0.0000	95.4091	95.4091	0.0309	0.0000	96.1805
Total	**0.0563**	**0.5666**	**0.4852**	**1.0900e-003**	**0.0628**	**0.0234**	**0.0862**	**0.0249**	**0.0215**	**0.0464**	**0.0000**	**95.4091**	**95.4091**	**0.0309**	**0.0000**	**96.1805**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Grading - 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	0.0000	0.0000	0.0000	0.0000	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	1.1200e-003	7.5000e-004	8.7400e-003	2.0000e-005	2.7900e-003	1.0000e-005	2.8000e-003	7.4000e-004	1.0000e-005	7.5000e-004	0.0000	2.1385	2.1385	7.0000e-005	7.0000e-005	2.1598
Total	**1.1200e-003**	**7.5000e-004**	**8.7400e-003**	**2.0000e-005**	**2.7900e-003**	**1.0000e-005**	**2.8000e-003**	**7.4000e-004**	**1.0000e-005**	**7.5000e-004**	**0.0000**	**2.1385**	**2.1385**	**7.0000e-005**	**7.0000e-005**	**2.1598**

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	0.1450	1.3242	1.5924	2.6500e-003		0.0604	0.0604		0.0568	0.0568	0.0000	228.3714	228.3714	0.0540	0.0000	229.7215
Total	**0.1450**	**1.3242**	**1.5924**	**2.6500e-003**		**0.0604**	**0.0604**		**0.0568**	**0.0568**	**0.0000**	**228.3714**	**228.3714**	**0.0540**	**0.0000**	**229.7215**

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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	1.3000e-003	0.0532	0.0157	2.4000e-004	7.8100e-003	3.4000e-004	8.1600e-003	2.2600e-003	3.3000e-004	2.5900e-003	0.0000	22.6217	22.6217	1.0000e-004	3.4000e-003	23.6370
Worker	0.0123	8.2600e-003	0.0959	2.6000e-004	0.0306	1.5000e-004	0.0308	8.1400e-003	1.4000e-004	8.2700e-003	0.0000	23.4714	23.4714	7.5000e-004	7.2000e-004	23.7054
Total	**0.0136**	**0.0615**	**0.1116**	**5.0000e-004**	**0.0384**	**4.9000e-004**	**0.0389**	**0.0104**	**4.7000e-004**	**0.0109**	**0.0000**	**46.0931**	**46.0931**	**8.5000e-004**	**4.1200e-003**	**47.3424**

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	0.1450	1.3242	1.5924	2.6500e-003		0.0604	0.0604		0.0568	0.0568	0.0000	228.3711	228.3711	0.0540	0.0000	229.7212
Total	**0.1450**	**1.3242**	**1.5924**	**2.6500e-003**		**0.0604**	**0.0604**		**0.0568**	**0.0568**	**0.0000**	**228.3711**	**228.3711**	**0.0540**	**0.0000**	**229.7212**

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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	1.3000e-003	0.0532	0.0157	2.4000e-004	7.8100e-003	3.4000e-004	8.1600e-003	2.2600e-003	3.3000e-004	2.5900e-003	0.0000	22.6217	22.6217	1.0000e-004	3.4000e-003	23.6370
Worker	0.0123	8.2600e-003	0.0959	2.6000e-004	0.0306	1.5000e-004	0.0308	8.1400e-003	1.4000e-004	8.2700e-003	0.0000	23.4714	23.4714	7.5000e-004	7.2000e-004	23.7054
Total	**0.0136**	**0.0615**	**0.1116**	**5.0000e-004**	**0.0384**	**4.9000e-004**	**0.0389**	**0.0104**	**4.7000e-004**	**0.0109**	**0.0000**	**46.0931**	**46.0931**	**8.5000e-004**	**4.1200e-003**	**47.3424**

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	0.1183	1.0786	1.3913	2.3300e-003		0.0456	0.0456		0.0429	0.0429	0.0000	200.6103	200.6103	0.0472	0.0000	201.7893
Total	**0.1183**	**1.0786**	**1.3913**	**2.3300e-003**		**0.0456**	**0.0456**		**0.0429**	**0.0429**	**0.0000**	**200.6103**	**200.6103**	**0.0472**	**0.0000**	**201.7893**

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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	1.1100e-003	0.0466	0.0135	2.0000e-004	6.8600e-003	3.0000e-004	7.1600e-003	1.9800e-003	2.9000e-004	2.2700e-003	0.0000	19.5147	19.5147	9.0000e-005	2.9300e-003	20.3893
Worker	9.9600e-003	6.4200e-003	0.0775	2.2000e-004	0.0269	1.2000e-004	0.0270	7.1400e-003	1.1000e-004	7.2600e-003	0.0000	19.9126	19.9126	5.9000e-004	5.9000e-004	20.1023
Total	**0.0111**	**0.0530**	**0.0911**	**4.2000e-004**	**0.0337**	**4.2000e-004**	**0.0342**	**9.1200e-003**	**4.0000e-004**	**9.5300e-003**	**0.0000**	**39.4274**	**39.4274**	**6.8000e-004**	**3.5200e-003**	**40.4915**

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	0.1183	1.0786	1.3913	2.3300e-003		0.0456	0.0456		0.0429	0.0429	0.0000	200.6101	200.6101	0.0472	0.0000	201.7890
Total	**0.1183**	**1.0786**	**1.3913**	**2.3300e-003**		**0.0456**	**0.0456**		**0.0429**	**0.0429**	**0.0000**	**200.6101**	**200.6101**	**0.0472**	**0.0000**	**201.7890**

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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	1.1100e-003	0.0466	0.0135	2.0000e-004	6.8600e-003	3.0000e-004	7.1600e-003	1.9800e-003	2.9000e-004	2.2700e-003	0.0000	19.5147	19.5147	9.0000e-005	2.9300e-003	20.3893
Worker	9.9600e-003	6.4200e-003	0.0775	2.2000e-004	0.0269	1.2000e-004	0.0270	7.1400e-003	1.1000e-004	7.2600e-003	0.0000	19.9126	19.9126	5.9000e-004	5.9000e-004	20.1023
Total	**0.0111**	**0.0530**	**0.0911**	**4.2000e-004**	**0.0337**	**4.2000e-004**	**0.0342**	**9.1200e-003**	**4.0000e-004**	**9.5300e-003**	**0.0000**	**39.4274**	**39.4274**	**6.8000e-004**	**3.5200e-003**	**40.4915**

3.6 Paving - 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	9.1500e-003	0.0858	0.1458	2.3000e-004		4.1900e-003	4.1900e-003		3.8500e-003	3.8500e-003	0.0000	20.0193	20.0193	6.4700e-003	0.0000	20.1811
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**9.1500e-003**	**0.0858**	**0.1458**	**2.3000e-004**		**4.1900e-003**	**4.1900e-003**		**3.8500e-003**	**3.8500e-003**	**0.0000**	**20.0193**	**20.0193**	**6.4700e-003**	**0.0000**	**20.1811**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Paving - 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	0.0000	0.0000	0.0000	0.0000	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	4.4000e-004	2.9000e-004	3.4500e-003	1.0000e-005	1.1900e-003	1.0000e-005	1.2000e-003	3.2000e-004	1.0000e-005	3.2000e-004	0.0000	0.8854	0.8854	3.0000e-005	3.0000e-005	0.8938
Total	**4.4000e-004**	**2.9000e-004**	**3.4500e-003**	**1.0000e-005**	**1.1900e-003**	**1.0000e-005**	**1.2000e-003**	**3.2000e-004**	**1.0000e-005**	**3.2000e-004**	**0.0000**	**0.8854**	**0.8854**	**3.0000e-005**	**3.0000e-005**	**0.8938**

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	9.1500e-003	0.0858	0.1458	2.3000e-004		4.1900e-003	4.1900e-003		3.8500e-003	3.8500e-003	0.0000	20.0192	20.0192	6.4700e-003	0.0000	20.1811
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**9.1500e-003**	**0.0858**	**0.1458**	**2.3000e-004**		**4.1900e-003**	**4.1900e-003**		**3.8500e-003**	**3.8500e-003**	**0.0000**	**20.0192**	**20.0192**	**6.4700e-003**	**0.0000**	**20.1811**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Paving - 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	0.0000	0.0000	0.0000	0.0000	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	4.4000e-004	2.9000e-004	3.4500e-003	1.0000e-005	1.1900e-003	1.0000e-005	1.2000e-003	3.2000e-004	1.0000e-005	3.2000e-004	0.0000	0.8854	0.8854	3.0000e-005	3.0000e-005	0.8938
Total	**4.4000e-004**	**2.9000e-004**	**3.4500e-003**	**1.0000e-005**	**1.1900e-003**	**1.0000e-005**	**1.2000e-003**	**3.2000e-004**	**1.0000e-005**	**3.2000e-004**	**0.0000**	**0.8854**	**0.8854**	**3.0000e-005**	**3.0000e-005**	**0.8938**

3.7 Architectural Coating - 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					
Archit. Coating	1.8246					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.7100e-003	0.0115	0.0181	3.0000e-005		5.2000e-004	5.2000e-004		5.2000e-004	5.2000e-004	0.0000	2.5533	2.5533	1.4000e-004	0.0000	2.5567
Total	**1.8263**	**0.0115**	**0.0181**	**3.0000e-005**		**5.2000e-004**	**5.2000e-004**		**5.2000e-004**	**5.2000e-004**	**0.0000**	**2.5533**	**2.5533**	**1.4000e-004**	**0.0000**	**2.5567**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.7 Architectural Coating - 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	0.0000	0.0000	0.0000	0.0000	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	2.4000e-004	1.5000e-004	1.8400e-003	1.0000e-005	6.4000e-004	0.0000	6.4000e-004	1.7000e-004	0.0000	1.7000e-004	0.0000	0.4722	0.4722	1.0000e-005	1.0000e-005	0.4767
Total	**2.4000e-004**	**1.5000e-004**	**1.8400e-003**	**1.0000e-005**	**6.4000e-004**	**0.0000**	**6.4000e-004**	**1.7000e-004**	**0.0000**	**1.7000e-004**	**0.0000**	**0.4722**	**0.4722**	**1.0000e-005**	**1.0000e-005**	**0.4767**

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	1.8246					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.7100e-003	0.0115	0.0181	3.0000e-005		5.2000e-004	5.2000e-004		5.2000e-004	5.2000e-004	0.0000	2.5533	2.5533	1.4000e-004	0.0000	2.5567
Total	**1.8263**	**0.0115**	**0.0181**	**3.0000e-005**		**5.2000e-004**	**5.2000e-004**		**5.2000e-004**	**5.2000e-004**	**0.0000**	**2.5533**	**2.5533**	**1.4000e-004**	**0.0000**	**2.5567**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.7 Architectural Coating - 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	0.0000	0.0000	0.0000	0.0000	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	2.4000e-004	1.5000e-004	1.8400e-003	1.0000e-005	6.4000e-004	0.0000	6.4000e-004	1.7000e-004	0.0000	1.7000e-004	0.0000	0.4722	0.4722	1.0000e-005	1.0000e-005	0.4767
Total	**2.4000e-004**	**1.5000e-004**	**1.8400e-003**	**1.0000e-005**	**6.4000e-004**	**0.0000**	**6.4000e-004**	**1.7000e-004**	**0.0000**	**1.7000e-004**	**0.0000**	**0.4722**	**0.4722**	**1.0000e-005**	**1.0000e-005**	**0.4767**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Density

Improve Walkability Design

Improve Destination Accessibility

Increase Transit Accessibility

Improve Pedestrian Network

Provide Traffic Calming Measures

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	0.3057	0.5283	3.2279	8.6800e-003	0.9484	6.5800e-003	0.9550	0.2528	6.1400e-003	0.2590	0.0000	808.0800	808.0800	0.0477	0.0413	821.5744
Unmitigated	0.3111	0.5680	3.4757	9.5800e-003	1.0508	7.2100e-003	1.0581	0.2802	6.7200e-003	0.2869	0.0000	892.1962	892.1962	0.0507	0.0446	906.7495

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Single Family Housing	1,018.44	1,023.84	915.84	2,831,571	2,555,493
Total	1,018.44	1,023.84	915.84	2,831,571	2,555,493

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
Single Family Housing	10.80	7.30	7.50	38.40	22.60	39.00	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Single Family Housing	0.524400	0.212000	0.167700	0.056300	0.000800	0.000900	0.007600	0.021200	0.000000	0.004300	0.002500	0.000100	0.002200

5.0 Energy Detail

Historical Energy Use: N

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	152.7278	152.7278	0.0129	1.5600e-003	153.5157
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	152.7278	152.7278	0.0129	1.5600e-003	153.5157
NaturalGas Mitigated	0.0140	0.1196	0.0509	7.6000e-004		9.6700e-003	9.6700e-003		9.6700e-003	9.6700e-003	0.0000	138.5354	138.5354	2.6600e-003	2.5400e-003	139.3587
NaturalGas Unmitigated	0.0140	0.1196	0.0509	7.6000e-004		9.6700e-003	9.6700e-003		9.6700e-003	9.6700e-003	0.0000	138.5354	138.5354	2.6600e-003	2.5400e-003	139.3587

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					
Single Family Housing	2.59606e+006	0.0140	0.1196	0.0509	7.6000e-004		9.6700e-003	9.6700e-003		9.6700e-003	9.6700e-003	0.0000	138.5354	138.5354	2.6600e-003	2.5400e-003	139.3587
Total		**0.0140**	**0.1196**	**0.0509**	**7.6000e-004**		**9.6700e-003**	**9.6700e-003**		**9.6700e-003**	**9.6700e-003**	**0.0000**	**138.5354**	**138.5354**	**2.6600e-003**	**2.5400e-003**	**139.3587**

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					
Single Family Housing	2.59606e+006	0.0140	0.1196	0.0509	7.6000e-004		9.6700e-003	9.6700e-003		9.6700e-003	9.6700e-003	0.0000	138.5354	138.5354	2.6600e-003	2.5400e-003	139.3587
Total		**0.0140**	**0.1196**	**0.0509**	**7.6000e-004**		**9.6700e-003**	**9.6700e-003**		**9.6700e-003**	**9.6700e-003**	**0.0000**	**138.5354**	**138.5354**	**2.6600e-003**	**2.5400e-003**	**139.3587**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Single Family Housing	861188	152.7278	0.0129	1.5600e-003	153.5157
Total		**152.7278**	**0.0129**	**1.5600e-003**	**153.5157**

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			
Single Family Housing	861188	152.7278	0.0129	1.5600e-003	153.5157
Total		**152.7278**	**0.0129**	**1.5600e-003**	**153.5157**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Electric Lawnmower

Use Electric Leafblower

Use Electric Chainsaw

No Hearths Installed

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	0.9654	9.1700e-003	0.7954	4.0000e-005		4.4100e-003	4.4100e-003		4.4100e-003	4.4100e-003	0.0000	1.2981	1.2981	1.2400e-003	0.0000	1.3290
Unmitigated	1.4023	0.1461	4.7190	0.0132		0.6444	0.6444		0.6444	0.6444	84.8972	86.3761	171.2733	0.3998	1.5600e-003	181.7321

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	0.1825					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.7592					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.4366	0.1369	3.9179	0.0132		0.6400	0.6400		0.6400	0.6400	84.8972	85.0662	169.9634	0.3985	1.5600e-003	180.3908
Landscaping	0.0241	9.2300e-003	0.8012	4.0000e-005		4.4500e-003	4.4500e-003		4.4500e-003	4.4500e-003	0.0000	1.3099	1.3099	1.2500e-003	0.0000	1.3413
Total	**1.4023**	**0.1461**	**4.7190**	**0.0132**		**0.6444**	**0.6444**		**0.6444**	**0.6444**	**84.8972**	**86.3761**	**171.2733**	**0.3998**	**1.5600e-003**	**181.7321**

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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	0.1825					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.7592					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	0.0237	9.1700e-003	0.7954	4.0000e-005		4.4100e-003	4.4100e-003		4.4100e-003	4.4100e-003	0.0000	1.2981	1.2981	1.2400e-003	0.0000	1.3290
Total	**0.9654**	**9.1700e-003**	**0.7954**	**4.0000e-005**		**4.4100e-003**	**4.4100e-003**		**4.4100e-003**	**4.4100e-003**	**0.0000**	**1.2981**	**1.2981**	**1.2400e-003**	**0.0000**	**1.3290**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

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	10.1472	0.0528	4.4100e-003	12.7816
Unmitigated	11.9956	0.0659	5.5100e-003	15.2850

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Single Family Housing	7.03663 / 4.43614	11.9956	0.0659	5.5100e-003	15.2850
Total		**11.9956**	**0.0659**	**5.5100e-003**	**15.2850**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Single Family Housing	5.62931 / 4.43614	10.1472	0.0528	4.4100e-003	12.7816
Total		**10.1472**	**0.0528**	**4.4100e-003**	**12.7816**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	22.5807	1.3345	0.0000	55.9428
Unmitigated	22.5807	1.3345	0.0000	55.9428

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			
Single Family Housing	111.24	22.5807	1.3345	0.0000	55.9428
Total		**22.5807**	**1.3345**	**0.0000**	**55.9428**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Single Family Housing	111.24	22.5807	1.3345	0.0000	55.9428
Total		**22.5807**	**1.3345**	**0.0000**	**55.9428**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/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

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Conway/Dias Properties - Phase 2 - 66 DU

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1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Single Family Housing	66.00	Dwelling Unit	11.00	118,800.00	189

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	51
Climate Zone	3			**Operational Year**	2026
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 - 66 single family residential units on 11 acres.

Construction Phase -

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Trips and VMT -

Demolition -

Grading -

Vehicle Trips - Per 11th edition ITE.

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Woodstoves - Per Rule 4901

Water And Wastewater - Project connected to Visalia WWTP

Construction Off-road Equipment Mitigation - dust supression per Reg VIII

Mobile Land Use Mitigation - Per project design

Area Mitigation - District statewide default

Energy Mitigation -

Water Mitigation - Per CA Building Code (CalGreen)

Fleet Mix -
Per the District 2026 residential fleet mix.

Table Name	Column Name	Default Value	New Value
tblFireplaces	NumberGas	36.30	66.00
tblFireplaces	NumberNoFireplace	29.70	66.00
tblFleetMix	HHD	0.02	0.02
tblFleetMix	LDA	0.53	0.52
tblFleetMix	LDT1	0.05	0.21
tblFleetMix	LDT2	0.17	0.17
tblFleetMix	LHD1	0.03	8.0000e-004
tblFleetMix	LHD2	7.4800e-003	9.0000e-004
tblFleetMix	MCY	0.02	2.5000e-003
tblFleetMix	MDV	0.16	0.06
tblFleetMix	MH	3.2960e-003	2.3000e-003
tblFleetMix	MHD	0.01	7.5000e-003
tblFleetMix	OBUS	6.3000e-004	0.00
tblFleetMix	SBUS	1.3960e-003	2.0000e-004
tblFleetMix	UBUS	4.6900e-004	4.4000e-003
tblLandUse	LotAcreage	21.43	11.00
tblVehicleTrips	ST_TR	9.54	9.48
tblVehicleTrips	SU_TR	8.55	8.48
tblVehicleTrips	WD_TR	9.44	9.43

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblWater	AerobicPercent	87.46	97.79
tblWater	SepticTankPercent	10.33	0.00

2.0 Emissions Summary

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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					
2025	0.2002	1.8162	2.1495	4.1000e-003	0.2630	0.0749	0.3379	0.1125	0.0700	0.1825	0.0000	357.4485	357.4485	0.0864	2.4400e-003	360.3335
2026	1.1999	0.7515	1.0193	1.7900e-003	0.0137	0.0318	0.0455	3.7000e-003	0.0298	0.0335	0.0000	155.5646	155.5646	0.0347	1.2200e-003	156.7942
Maximum	**1.1999**	**1.8162**	**2.1495**	**4.1000e-003**	**0.2630**	**0.0749**	**0.3379**	**0.1125**	**0.0700**	**0.1825**	**0.0000**	**357.4485**	**357.4485**	**0.0864**	**2.4400e-003**	**360.3335**

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	0.2002	1.8162	2.1495	4.1000e-003	0.1188	0.0749	0.1937	0.0483	0.0700	0.1183	0.0000	357.4481	357.4481	0.0864	2.4400e-003	360.3331
2026	1.1999	0.7515	1.0193	1.7900e-003	0.0137	0.0318	0.0455	3.7000e-003	0.0298	0.0335	0.0000	155.5645	155.5645	0.0347	1.2200e-003	156.7940
Maximum	**1.1999**	**1.8162**	**2.1495**	**4.1000e-003**	**0.1188**	**0.0749**	**0.1937**	**0.0483**	**0.0700**	**0.1183**	**0.0000**	**357.4481**	**357.4481**	**0.0864**	**2.4400e-003**	**360.3331**

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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	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**52.11**	**0.00**	**37.61**	**55.28**	**0.00**	**29.74**	**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	**2-1-2025**	**4-30-2025**	0.7714	0.7714
2	**5-1-2025**	**7-31-2025**	0.4689	0.4689
3	**8-1-2025**	**10-31-2025**	0.4691	0.4691
4	**11-1-2025**	**1-31-2026**	0.4693	0.4693
5	**2-1-2026**	**4-30-2026**	0.4536	0.4536
6	**5-1-2026**	**7-31-2026**	1.3361	1.3361
		Highest	1.3361	1.3361

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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	0.8196	0.0837	2.5445	6.9500e-003		0.3385	0.3385		0.3385	0.3385	44.4700	52.7854	97.2553	0.2097	9.5000e-004	102.7806
Energy	8.5500e-003	0.0731	0.0311	4.7000e-004		5.9100e-003	5.9100e-003		5.9100e-003	5.9100e-003	0.0000	177.9942	177.9942	9.5000e-003	2.5100e-003	178.9788
Mobile	0.1761	0.3245	2.0062	5.6600e-003	0.6422	4.2000e-003	0.6464	0.1712	3.9200e-003	0.1752	0.0000	527.5344	527.5344	0.0298	0.0258	535.9642
Waste						0.0000	0.0000		0.0000	0.0000	13.8115	0.0000	13.8115	0.8162	0.0000	34.2174
Water						0.0000	0.0000		0.0000	0.0000	1.5214	5.8092	7.3306	0.0403	3.3700e-003	9.3409
Total	**1.0043**	**0.4813**	**4.5818**	**0.0131**	**0.6422**	**0.3486**	**0.9908**	**0.1712**	**0.3483**	**0.5195**	**59.8029**	**764.1232**	**823.9261**	**1.1054**	**0.0326**	**861.2818**

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	0.5900	5.6000e-003	0.4861	3.0000e-005		2.7000e-003	2.7000e-003		2.7000e-003	2.7000e-003	0.0000	0.7933	0.7933	7.6000e-004	0.0000	0.8122
Energy	8.5500e-003	0.0731	0.0311	4.7000e-004		5.9100e-003	5.9100e-003		5.9100e-003	5.9100e-003	0.0000	177.9942	177.9942	9.5000e-003	2.5100e-003	178.9788
Mobile	0.1731	0.3019	1.8641	5.1300e-003	0.5796	3.8300e-003	0.5835	0.1545	3.5700e-003	0.1581	0.0000	477.7844	477.7844	0.0280	0.0239	485.6014
Waste						0.0000	0.0000		0.0000	0.0000	13.8115	0.0000	13.8115	0.8162	0.0000	34.2174
Water						0.0000	0.0000		0.0000	0.0000	1.2171	4.9839	6.2011	0.0322	2.7000e-003	7.8110
Total	**0.7717**	**0.3806**	**2.3813**	**5.6300e-003**	**0.5796**	**0.0124**	**0.5921**	**0.1545**	**0.0122**	**0.1667**	**15.0286**	**661.5558**	**676.5844**	**0.8867**	**0.0291**	**707.4208**

	ROG	NOx	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	**23.16**	**20.92**	**48.03**	**56.96**	**9.75**	**96.43**	**40.24**	**9.75**	**96.50**	**67.91**	**74.87**	**13.42**	**17.88**	**19.79**	**10.79**	**17.86**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	2/1/2025	2/14/2025	5	10	
2	Grading	Grading	2/15/2025	3/28/2025	5	30	
3	Building Construction	Building Construction	3/29/2025	5/22/2026	5	300	

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

4	Paving	Paving	5/23/2026	6/19/2026	5	20	
5	Architectural Coating	Architectural Coating	6/20/2026	7/17/2026	5	20	

Acres of Grading (Site Preparation Phase): 15

Acres of Grading (Grading Phase): 90

Acres of Paving: 0

Residential Indoor: 240,570; Residential Outdoor: 80,190; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
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
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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
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	24.00	7.00	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	5.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 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					0.0983	0.0000	0.0983	0.0505	0.0000	0.0505	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0124	0.1262	0.0896	1.9000e-004		5.4300e-003	5.4300e-003		5.0000e-003	5.0000e-003	0.0000	16.7335	16.7335	5.4100e-003	0.0000	16.8688
Total	**0.0124**	**0.1262**	**0.0896**	**1.9000e-004**	**0.0983**	**5.4300e-003**	**0.1037**	**0.0505**	**5.0000e-003**	**0.0555**	**0.0000**	**16.7335**	**16.7335**	**5.4100e-003**	**0.0000**	**16.8688**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Site Preparation - 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	0.0000	0.0000	0.0000	0.0000	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	2.7000e-004	1.7000e-004	2.0700e-003	1.0000e-005	7.2000e-004	0.0000	7.2000e-004	1.9000e-004	0.0000	1.9000e-004	0.0000	0.5312	0.5312	2.0000e-005	2.0000e-005	0.5363
Total	**2.7000e-004**	**1.7000e-004**	**2.0700e-003**	**1.0000e-005**	**7.2000e-004**	**0.0000**	**7.2000e-004**	**1.9000e-004**	**0.0000**	**1.9000e-004**	**0.0000**	**0.5312**	**0.5312**	**2.0000e-005**	**2.0000e-005**	**0.5363**

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					0.0383	0.0000	0.0383	0.0197	0.0000	0.0197	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0124	0.1262	0.0896	1.9000e-004		5.4300e-003	5.4300e-003		5.0000e-003	5.0000e-003	0.0000	16.7335	16.7335	5.4100e-003	0.0000	16.8688
Total	**0.0124**	**0.1262**	**0.0896**	**1.9000e-004**	**0.0383**	**5.4300e-003**	**0.0438**	**0.0197**	**5.0000e-003**	**0.0247**	**0.0000**	**16.7335**	**16.7335**	**5.4100e-003**	**0.0000**	**16.8688**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Site Preparation - 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	0.0000	0.0000	0.0000	0.0000	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	2.7000e-004	1.7000e-004	2.0700e-003	1.0000e-005	7.2000e-004	0.0000	7.2000e-004	1.9000e-004	0.0000	1.9000e-004	0.0000	0.5312	0.5312	2.0000e-005	2.0000e-005	0.5363
Total	**2.7000e-004**	**1.7000e-004**	**2.0700e-003**	**1.0000e-005**	**7.2000e-004**	**0.0000**	**7.2000e-004**	**1.9000e-004**	**0.0000**	**1.9000e-004**	**0.0000**	**0.5312**	**0.5312**	**2.0000e-005**	**2.0000e-005**	**0.5363**

3.3 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					0.1381	0.0000	0.1381	0.0548	0.0000	0.0548	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0435	0.4191	0.3950	9.3000e-004		0.0170	0.0170		0.0156	0.0156	0.0000	81.7593	81.7593	0.0264	0.0000	82.4204
Total	**0.0435**	**0.4191**	**0.3950**	**9.3000e-004**	**0.1381**	**0.0170**	**0.1550**	**0.0548**	**0.0156**	**0.0704**	**0.0000**	**81.7593**	**81.7593**	**0.0264**	**0.0000**	**82.4204**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Grading - 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	0.0000	0.0000	0.0000	0.0000	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	8.9000e-004	5.7000e-004	6.8900e-003	2.0000e-005	2.3900e-003	1.0000e-005	2.4000e-003	6.4000e-004	1.0000e-005	6.5000e-004	0.0000	1.7708	1.7708	5.0000e-005	5.0000e-005	1.7877
Total	**8.9000e-004**	**5.7000e-004**	**6.8900e-003**	**2.0000e-005**	**2.3900e-003**	**1.0000e-005**	**2.4000e-003**	**6.4000e-004**	**1.0000e-005**	**6.5000e-004**	**0.0000**	**1.7708**	**1.7708**	**5.0000e-005**	**5.0000e-005**	**1.7877**

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					0.0538	0.0000	0.0538	0.0214	0.0000	0.0214	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0435	0.4191	0.3950	9.3000e-004		0.0170	0.0170		0.0156	0.0156	0.0000	81.7592	81.7592	0.0264	0.0000	82.4203
Total	**0.0435**	**0.4191**	**0.3950**	**9.3000e-004**	**0.0538**	**0.0170**	**0.0708**	**0.0214**	**0.0156**	**0.0370**	**0.0000**	**81.7592**	**81.7592**	**0.0264**	**0.0000**	**82.4203**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Grading - 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	0.0000	0.0000	0.0000	0.0000	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	8.9000e-004	5.7000e-004	6.8900e-003	2.0000e-005	2.3900e-003	1.0000e-005	2.4000e-003	6.4000e-004	1.0000e-005	6.5000e-004	0.0000	1.7708	1.7708	5.0000e-005	5.0000e-005	1.7877
Total	**8.9000e-004**	**5.7000e-004**	**6.8900e-003**	**2.0000e-005**	**2.3900e-003**	**1.0000e-005**	**2.4000e-003**	**6.4000e-004**	**1.0000e-005**	**6.5000e-004**	**0.0000**	**1.7708**	**1.7708**	**5.0000e-005**	**5.0000e-005**	**1.7877**

3.4 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	0.1354	1.2345	1.5924	2.6700e-003		0.0522	0.0522		0.0491	0.0491	0.0000	229.6003	229.6003	0.0540	0.0000	230.9496
Total	**0.1354**	**1.2345**	**1.5924**	**2.6700e-003**		**0.0522**	**0.0522**		**0.0491**	**0.0491**	**0.0000**	**229.6003**	**229.6003**	**0.0540**	**0.0000**	**230.9496**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 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	7.4000e-004	0.0311	9.0300e-003	1.4000e-004	4.5800e-003	2.0000e-004	4.7800e-003	1.3200e-003	1.9000e-004	1.5200e-003	0.0000	13.0286	13.0286	6.0000e-005	1.9500e-003	13.6125
Worker	7.0200e-003	4.5200e-003	0.0546	1.5000e-004	0.0189	9.0000e-005	0.0190	5.0300e-003	8.0000e-005	5.1100e-003	0.0000	14.0247	14.0247	4.2000e-004	4.1000e-004	14.1583
Total	**7.7600e-003**	**0.0356**	**0.0636**	**2.9000e-004**	**0.0235**	**2.9000e-004**	**0.0238**	**6.3500e-003**	**2.7000e-004**	**6.6300e-003**	**0.0000**	**27.0534**	**27.0534**	**4.8000e-004**	**2.3600e-003**	**27.7708**

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	0.1354	1.2345	1.5924	2.6700e-003		0.0522	0.0522		0.0491	0.0491	0.0000	229.6000	229.6000	0.0540	0.0000	230.9493
Total	**0.1354**	**1.2345**	**1.5924**	**2.6700e-003**		**0.0522**	**0.0522**		**0.0491**	**0.0491**	**0.0000**	**229.6000**	**229.6000**	**0.0540**	**0.0000**	**230.9493**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 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	7.4000e-004	0.0311	9.0300e-003	1.4000e-004	4.5800e-003	2.0000e-004	4.7800e-003	1.3200e-003	1.9000e-004	1.5200e-003	0.0000	13.0286	13.0286	6.0000e-005	1.9500e-003	13.6125
Worker	7.0200e-003	4.5200e-003	0.0546	1.5000e-004	0.0189	9.0000e-005	0.0190	5.0300e-003	8.0000e-005	5.1100e-003	0.0000	14.0247	14.0247	4.2000e-004	4.1000e-004	14.1583
Total	**7.7600e-003**	**0.0356**	**0.0636**	**2.9000e-004**	**0.0235**	**2.9000e-004**	**0.0238**	**6.3500e-003**	**2.7000e-004**	**6.6300e-003**	**0.0000**	**27.0534**	**27.0534**	**4.8000e-004**	**2.3600e-003**	**27.7708**

3.4 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	0.0697	0.6360	0.8203	1.3800e-003		0.0269	0.0269		0.0253	0.0253	0.0000	118.2789	118.2789	0.0278	0.0000	118.9740
Total	**0.0697**	**0.6360**	**0.8203**	**1.3800e-003**		**0.0269**	**0.0269**		**0.0253**	**0.0253**	**0.0000**	**118.2789**	**118.2789**	**0.0278**	**0.0000**	**118.9740**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 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	3.7000e-004	0.0159	4.5800e-003	7.0000e-005	2.3600e-003	1.0000e-004	2.4600e-003	6.8000e-004	1.0000e-004	7.8000e-004	0.0000	6.5880	6.5880	3.0000e-005	9.9000e-004	6.8828
Worker	3.3500e-003	2.0700e-003	0.0262	8.0000e-005	9.7500e-003	4.0000e-005	9.7900e-003	2.5900e-003	4.0000e-005	2.6300e-003	0.0000	6.9840	6.9840	1.9000e-004	2.0000e-004	7.0479
Total	**3.7200e-003**	**0.0180**	**0.0308**	**1.5000e-004**	**0.0121**	**1.4000e-004**	**0.0123**	**3.2700e-003**	**1.4000e-004**	**3.4100e-003**	**0.0000**	**13.5720**	**13.5720**	**2.2000e-004**	**1.1900e-003**	**13.9307**

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	0.0697	0.6360	0.8203	1.3800e-003		0.0269	0.0269		0.0253	0.0253	0.0000	118.2788	118.2788	0.0278	0.0000	118.9739
Total	**0.0697**	**0.6360**	**0.8203**	**1.3800e-003**		**0.0269**	**0.0269**		**0.0253**	**0.0253**	**0.0000**	**118.2788**	**118.2788**	**0.0278**	**0.0000**	**118.9739**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 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	3.7000e-004	0.0159	4.5800e-003	7.0000e-005	2.3600e-003	1.0000e-004	2.4600e-003	6.8000e-004	1.0000e-004	7.8000e-004	0.0000	6.5880	6.5880	3.0000e-005	9.9000e-004	6.8828
Worker	3.3500e-003	2.0700e-003	0.0262	8.0000e-005	9.7500e-003	4.0000e-005	9.7900e-003	2.5900e-003	4.0000e-005	2.6300e-003	0.0000	6.9840	6.9840	1.9000e-004	2.0000e-004	7.0479
Total	**3.7200e-003**	**0.0180**	**0.0308**	**1.5000e-004**	**0.0121**	**1.4000e-004**	**0.0123**	**3.2700e-003**	**1.4000e-004**	**3.4100e-003**	**0.0000**	**13.5720**	**13.5720**	**2.2000e-004**	**1.1900e-003**	**13.9307**

3.5 Paving - 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	9.1500e-003	0.0858	0.1458	2.3000e-004		4.1900e-003	4.1900e-003		3.8500e-003	3.8500e-003	0.0000	20.0193	20.0193	6.4700e-003	0.0000	20.1811
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**9.1500e-003**	**0.0858**	**0.1458**	**2.3000e-004**		**4.1900e-003**	**4.1900e-003**		**3.8500e-003**	**3.8500e-003**	**0.0000**	**20.0193**	**20.0193**	**6.4700e-003**	**0.0000**	**20.1811**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Paving - 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	0.0000	0.0000	0.0000	0.0000	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	4.1000e-004	2.5000e-004	3.2100e-003	1.0000e-005	1.1900e-003	1.0000e-005	1.2000e-003	3.2000e-004	0.0000	3.2000e-004	0.0000	0.8559	0.8559	2.0000e-005	2.0000e-005	0.8637
Total	**4.1000e-004**	**2.5000e-004**	**3.2100e-003**	**1.0000e-005**	**1.1900e-003**	**1.0000e-005**	**1.2000e-003**	**3.2000e-004**	**0.0000**	**3.2000e-004**	**0.0000**	**0.8559**	**0.8559**	**2.0000e-005**	**2.0000e-005**	**0.8637**

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	9.1500e-003	0.0858	0.1458	2.3000e-004		4.1900e-003	4.1900e-003		3.8500e-003	3.8500e-003	0.0000	20.0192	20.0192	6.4700e-003	0.0000	20.1811
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**9.1500e-003**	**0.0858**	**0.1458**	**2.3000e-004**		**4.1900e-003**	**4.1900e-003**		**3.8500e-003**	**3.8500e-003**	**0.0000**	**20.0192**	**20.0192**	**6.4700e-003**	**0.0000**	**20.1811**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Paving - 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	0.0000	0.0000	0.0000	0.0000	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	4.1000e-004	2.5000e-004	3.2100e-003	1.0000e-005	1.1900e-003	1.0000e-005	1.2000e-003	3.2000e-004	0.0000	3.2000e-004	0.0000	0.8559	0.8559	2.0000e-005	2.0000e-005	0.8637
Total	**4.1000e-004**	**2.5000e-004**	**3.2100e-003**	**1.0000e-005**	**1.1900e-003**	**1.0000e-005**	**1.2000e-003**	**3.2000e-004**	**0.0000**	**3.2000e-004**	**0.0000**	**0.8559**	**0.8559**	**2.0000e-005**	**2.0000e-005**	**0.8637**

3.6 Architectural Coating - 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					
Archit. Coating	1.1150					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.7100e-003	0.0115	0.0181	3.0000e-005		5.2000e-004	5.2000e-004		5.2000e-004	5.2000e-004	0.0000	2.5533	2.5533	1.4000e-004	0.0000	2.5567
Total	**1.1168**	**0.0115**	**0.0181**	**3.0000e-005**		**5.2000e-004**	**5.2000e-004**		**5.2000e-004**	**5.2000e-004**	**0.0000**	**2.5533**	**2.5533**	**1.4000e-004**	**0.0000**	**2.5567**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Architectural Coating - 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	0.0000	0.0000	0.0000	0.0000	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	1.4000e-004	8.0000e-005	1.0700e-003	0.0000	4.0000e-004	0.0000	4.0000e-004	1.1000e-004	0.0000	1.1000e-004	0.0000	0.2853	0.2853	1.0000e-005	1.0000e-005	0.2879
Total	**1.4000e-004**	**8.0000e-005**	**1.0700e-003**	**0.0000**	**4.0000e-004**	**0.0000**	**4.0000e-004**	**1.1000e-004**	**0.0000**	**1.1000e-004**	**0.0000**	**0.2853**	**0.2853**	**1.0000e-005**	**1.0000e-005**	**0.2879**

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	1.1150					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.7100e-003	0.0115	0.0181	3.0000e-005		5.2000e-004	5.2000e-004		5.2000e-004	5.2000e-004	0.0000	2.5533	2.5533	1.4000e-004	0.0000	2.5567
Total	**1.1168**	**0.0115**	**0.0181**	**3.0000e-005**		**5.2000e-004**	**5.2000e-004**		**5.2000e-004**	**5.2000e-004**	**0.0000**	**2.5533**	**2.5533**	**1.4000e-004**	**0.0000**	**2.5567**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Architectural Coating - 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	0.0000	0.0000	0.0000	0.0000	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	1.4000e-004	8.0000e-005	1.0700e-003	0.0000	4.0000e-004	0.0000	4.0000e-004	1.1000e-004	0.0000	1.1000e-004	0.0000	0.2853	0.2853	1.0000e-005	1.0000e-005	0.2879
Total	**1.4000e-004**	**8.0000e-005**	**1.0700e-003**	**0.0000**	**4.0000e-004**	**0.0000**	**4.0000e-004**	**1.1000e-004**	**0.0000**	**1.1000e-004**	**0.0000**	**0.2853**	**0.2853**	**1.0000e-005**	**1.0000e-005**	**0.2879**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Density

Improve Walkability Design

Improve Destination Accessibility

Increase Transit Accessibility

Improve Pedestrian Network

Provide Traffic Calming Measures

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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	0.1731	0.3019	1.8641	5.1300e-003	0.5796	3.8300e-003	0.5835	0.1545	3.5700e-003	0.1581	0.0000	477.7844	477.7844	0.0280	0.0239	485.6014
Unmitigated	0.1761	0.3245	2.0062	5.6600e-003	0.6422	4.2000e-003	0.6464	0.1712	3.9200e-003	0.1752	0.0000	527.5344	527.5344	0.0298	0.0258	535.9642

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Single Family Housing	622.38	625.68	559.68	1,730,405	1,561,690
Total	622.38	625.68	559.68	1,730,405	1,561,690

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
Single Family Housing	10.80	7.30	7.50	38.40	22.60	39.00	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Single Family Housing	0.521500	0.214600	0.168100	0.056900	0.000800	0.000900	0.007500	0.020300	0.000000	0.004400	0.002500	0.000200	0.002300

5.0 Energy Detail

Historical Energy Use: N

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	93.3337	93.3337	7.8800e-003	9.5000e-004	93.8152
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	93.3337	93.3337	7.8800e-003	9.5000e-004	93.8152
NaturalGas Mitigated	8.5500e-003	0.0731	0.0311	4.7000e-004		5.9100e-003	5.9100e-003		5.9100e-003	5.9100e-003	0.0000	84.6605	84.6605	1.6200e-003	1.5500e-003	85.1636
NaturalGas Unmitigated	8.5500e-003	0.0731	0.0311	4.7000e-004		5.9100e-003	5.9100e-003		5.9100e-003	5.9100e-003	0.0000	84.6605	84.6605	1.6200e-003	1.5500e-003	85.1636

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					
Single Family Housing	1.58648e+006	8.5500e-003	0.0731	0.0311	4.7000e-004		5.9100e-003	5.9100e-003		5.9100e-003	5.9100e-003	0.0000	84.6605	84.6605	1.6200e-003	1.5500e-003	85.1636
Total		**8.5500e-003**	**0.0731**	**0.0311**	**4.7000e-004**		**5.9100e-003**	**5.9100e-003**		**5.9100e-003**	**5.9100e-003**	**0.0000**	**84.6605**	**84.6605**	**1.6200e-003**	**1.5500e-003**	**85.1636**

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					
Single Family Housing	1.58648e+006	8.5500e-003	0.0731	0.0311	4.7000e-004		5.9100e-003	5.9100e-003		5.9100e-003	5.9100e-003	0.0000	84.6605	84.6605	1.6200e-003	1.5500e-003	85.1636
Total		**8.5500e-003**	**0.0731**	**0.0311**	**4.7000e-004**		**5.9100e-003**	**5.9100e-003**		**5.9100e-003**	**5.9100e-003**	**0.0000**	**84.6605**	**84.6605**	**1.6200e-003**	**1.5500e-003**	**85.1636**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Single Family Housing	526281	93.3337	7.8800e-003	9.5000e-004	93.8152
Total		**93.3337**	**7.8800e-003**	**9.5000e-004**	**93.8152**

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			
Single Family Housing	526281	93.3337	7.8800e-003	9.5000e-004	93.8152
Total		**93.3337**	**7.8800e-003**	**9.5000e-004**	**93.8152**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Electric Lawnmower

Use Electric Leafblower

Use Electric Chainsaw

No Hearths Installed

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	0.5900	5.6000e-003	0.4861	3.0000e-005		2.7000e-003	2.7000e-003		2.7000e-003	2.7000e-003	0.0000	0.7933	0.7933	7.6000e-004	0.0000	0.8122
Unmitigated	0.8196	0.0837	2.5445	6.9500e-003		0.3385	0.3385		0.3385	0.3385	44.4700	52.7854	97.2553	0.2097	9.5000e-004	102.7806

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	0.1115					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.4640					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.2294	0.0781	2.0550	6.9300e-003		0.3357	0.3357		0.3357	0.3357	44.4700	51.9849	96.4548	0.2089	9.5000e-004	101.9610
Landscaping	0.0147	5.6400e-003	0.4896	3.0000e-005		2.7200e-003	2.7200e-003		2.7200e-003	2.7200e-003	0.0000	0.8005	0.8005	7.7000e-004	0.0000	0.8197
Total	**0.8196**	**0.0837**	**2.5445**	**6.9600e-003**		**0.3385**	**0.3385**		**0.3385**	**0.3385**	**44.4700**	**52.7854**	**97.2553**	**0.2097**	**9.5000e-004**	**102.7806**

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	0.1115					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.4640					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	0.0145	5.6000e-003	0.4861	3.0000e-005		2.7000e-003	2.7000e-003		2.7000e-003	2.7000e-003	0.0000	0.7933	0.7933	7.6000e-004	0.0000	0.8122
Total	**0.5900**	**5.6000e-003**	**0.4861**	**3.0000e-005**		**2.7000e-003**	**2.7000e-003**		**2.7000e-003**	**2.7000e-003**	**0.0000**	**0.7933**	**0.7933**	**7.6000e-004**	**0.0000**	**0.8122**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

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	6.2011	0.0322	2.7000e-003	7.8110
Unmitigated	7.3306	0.0403	3.3700e-003	9.3409

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Single Family Housing	4.30017 / 2.71097	7.3306	0.0403	3.3700e-003	9.3409
Total		**7.3306**	**0.0403**	**3.3700e-003**	**9.3409**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Single Family Housing	3.44013 / 2.71097	6.2011	0.0322	2.7000e-003	7.8110
Total		**6.2011**	**0.0322**	**2.7000e-003**	**7.8110**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	13.8115	0.8162	0.0000	34.2174
Unmitigated	13.8115	0.8162	0.0000	34.2174

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			
Single Family Housing	68.04	13.8115	0.8162	0.0000	34.2174
Total		**13.8115**	**0.8162**	**0.0000**	**34.2174**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Single Family Housing	68.04	13.8115	0.8162	0.0000	34.2174
Total		**13.8115**	**0.8162**	**0.0000**	**34.2174**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/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

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Conway/Dias Properties - Phase 3 - 65 DU

Tulare County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Single Family Housing	65.00	Dwelling Unit	11.00	117,000.00	186

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	51
Climate Zone	3			**Operational Year**	2027
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 - 65 single family residential units on 11 acres.

Construction Phase -

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Trips and VMT -

Demolition -

Grading -

Vehicle Trips - Per 11th edition ITE.

Conway/Dias Properties - Phase 3 - 65 DU - Tulare County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Woodstoves - Per Rule 4901

Water And Wastewater - Project connected to Visalia WWTP

Construction Off-road Equipment Mitigation - dust supression per Reg VIII

Mobile Land Use Mitigation - Per project design

Area Mitigation - District statewide default

Energy Mitigation -

Water Mitigation - Per CA Building Code (CalGreen)

Fleet Mix - Per the District 2027 residential fleet mix.

Table Name	Column Name	Default Value	New Value
tblFireplaces	NumberGas	35.75	65.00
tblFireplaces	NumberNoFireplace	29.25	65.00
tblFleetMix	HHD	0.02	0.02
tblFleetMix	LDA	0.53	0.52
tblFleetMix	LDT1	0.05	0.22
tblFleetMix	LDT2	0.17	0.17
tblFleetMix	LHD1	0.03	8.0000e-004
tblFleetMix	LHD2	7.2400e-003	1.0000e-003
tblFleetMix	MCY	0.02	2.5000e-003
tblFleetMix	MDV	0.16	0.06
tblFleetMix	MH	3.1610e-003	2.5000e-003
tblFleetMix	MHD	0.01	7.4000e-003
tblFleetMix	OBUS	6.2900e-004	0.00
tblFleetMix	SBUS	1.3670e-003	5.0000e-004
tblFleetMix	UBUS	4.6800e-004	4.4000e-003
tblLandUse	LotAcreage	21.10	11.00
tblVehicleTrips	ST_TR	9.54	9.48
tblWater	AerobicPercent	87.46	97.79
tblWater	SepticTankPercent	10.33	0.00

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.0 Emissions Summary

Conway/Dias Properties - Phase 3 - 65 DU - Tulare County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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					
2025	0.0758	0.7128	0.7106	1.5300e-003	0.2424	0.0293	0.2717	0.1070	0.0271	0.1341	0.0000	134.4201	134.4201	0.0391	3.8000e-004	135.5091
2026	0.1876	1.6731	2.1750	3.8800e-003	0.0300	0.0692	0.0992	8.1000e-003	0.0651	0.0732	0.0000	336.6387	336.6387	0.0717	3.0100e-003	339.3282
2027	1.1188	0.1809	0.2760	4.6000e-004	3.0800e-003	8.1500e-003	0.0112	8.3000e-004	7.6100e-003	8.4400e-003	0.0000	40.4049	40.4049	0.0102	1.8000e-004	40.7127
Maximum	**1.1188**	**1.6731**	**2.1750**	**3.8800e-003**	**0.2424**	**0.0692**	**0.2717**	**0.1070**	**0.0651**	**0.1341**	**0.0000**	**336.6387**	**336.6387**	**0.0717**	**3.0100e-003**	**339.3282**

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	0.0758	0.7128	0.7106	1.5300e-003	0.0983	0.0293	0.1276	0.0427	0.0271	0.0698	0.0000	134.4200	134.4200	0.0391	3.8000e-004	135.5089
2026	0.1876	1.6731	2.1750	3.8800e-003	0.0300	0.0692	0.0992	8.1000e-003	0.0651	0.0732	0.0000	336.6383	336.6383	0.0717	3.0100e-003	339.3279
2027	1.1188	0.1809	0.2760	4.6000e-004	3.0800e-003	8.1500e-003	0.0112	8.3000e-004	7.6100e-003	8.4400e-003	0.0000	40.4048	40.4048	0.0102	1.8000e-004	40.7126
Maximum	**1.1188**	**1.6731**	**2.1750**	**3.8800e-003**	**0.0983**	**0.0692**	**0.1276**	**0.0427**	**0.0651**	**0.0732**	**0.0000**	**336.6383**	**336.6383**	**0.0717**	**3.0100e-003**	**339.3279**

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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	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**52.34**	**0.00**	**37.73**	**55.44**	**0.00**	**29.79**	**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	**10-1-2025**	**12-31-2025**	0.7868	0.7868
2	**1-1-2026**	**3-31-2026**	0.4587	0.4587
3	**4-1-2026**	**6-30-2026**	0.4632	0.4632
4	**7-1-2026**	**9-30-2026**	0.4683	0.4683
5	**10-1-2026**	**12-31-2026**	0.4689	0.4689
6	**1-1-2027**	**3-31-2027**	1.3039	1.3039
		Highest	1.3039	1.3039

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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	0.8106	0.0830	2.5368	6.9500e-003		0.3384	0.3384		0.3384	0.3384	44.4700	51.9856	96.4556	0.2096	9.4000e-004	101.9759
Energy	8.4200e-003	0.0720	0.0306	4.6000e-004		5.8200e-003	5.8200e-003		5.8200e-003	5.8200e-003	0.0000	175.2973	175.2973	9.3600e-003	2.4700e-003	176.2670
Mobile	0.1617	0.3035	1.8719	5.4200e-003	0.6340	3.9600e-003	0.6380	0.1691	3.6900e-003	0.1728	0.0000	505.5462	505.5462	0.0281	0.0243	513.4757
Waste						0.0000	0.0000		0.0000	0.0000	13.5923	0.0000	13.5923	0.8033	0.0000	33.6743
Water						0.0000	0.0000		0.0000	0.0000	1.4984	5.7212	7.2196	0.0397	3.3200e-003	9.1993
Total	**0.9807**	**0.4585**	**4.4394**	**0.0128**	**0.6340**	**0.3481**	**0.9822**	**0.1691**	**0.3479**	**0.5170**	**59.5606**	**738.5503**	**798.1109**	**1.0900**	**0.0310**	**834.5921**

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	0.5810	5.5200e-003	0.4787	3.0000e-005		2.6600e-003	2.6600e-003		2.6600e-003	2.6600e-003	0.0000	0.7813	0.7813	7.4000e-004	0.0000	0.7999
Energy	8.4200e-003	0.0720	0.0306	4.6000e-004		5.8200e-003	5.8200e-003		5.8200e-003	5.8200e-003	0.0000	175.2973	175.2973	9.3600e-003	2.4700e-003	176.2670
Mobile	0.1590	0.2825	1.7403	4.9100e-003	0.5722	3.6100e-003	0.5758	0.1526	3.3700e-003	0.1560	0.0000	457.8551	457.8551	0.0263	0.0225	465.2085
Waste						0.0000	0.0000		0.0000	0.0000	13.5923	0.0000	13.5923	0.8033	0.0000	33.6743
Water						0.0000	0.0000		0.0000	0.0000	1.1987	4.9084	6.1071	0.0318	2.6600e-003	7.6926
Total	**0.7485**	**0.3600**	**2.2497**	**5.4000e-003**	**0.5722**	**0.0121**	**0.5843**	**0.1526**	**0.0119**	**0.1645**	**14.7910**	**638.8421**	**653.6330**	**0.8715**	**0.0276**	**683.6422**

	ROG	NOx	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	**23.68**	**21.49**	**49.33**	**57.91**	**9.75**	**96.53**	**40.51**	**9.75**	**96.59**	**68.19**	**75.17**	**13.50**	**18.10**	**20.05**	**10.91**	**18.09**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	10/1/2025	10/14/2025	5	10	
2	Grading	Grading	10/15/2025	11/25/2025	5	30	
3	Building Construction	Building Construction	11/26/2025	1/19/2027	5	300	

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

4	Paving	Paving	1/20/2027	2/16/2027	5	20	
5	Architectural Coating	Architectural Coating	2/17/2027	3/16/2027	5	20	

Acres of Grading (Site Preparation Phase): 15

Acres of Grading (Grading Phase): 90

Acres of Paving: 0

Residential Indoor: 236,925; Residential Outdoor: 78,975; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
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
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Conway/Dias Properties - Phase 3 - 65 DU - Tulare County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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
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	23.00	7.00	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	5.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 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					0.0983	0.0000	0.0983	0.0505	0.0000	0.0505	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0124	0.1262	0.0896	1.9000e-004		5.4300e-003	5.4300e-003		5.0000e-003	5.0000e-003	0.0000	16.7335	16.7335	5.4100e-003	0.0000	16.8688
Total	**0.0124**	**0.1262**	**0.0896**	**1.9000e-004**	**0.0983**	**5.4300e-003**	**0.1037**	**0.0505**	**5.0000e-003**	**0.0555**	**0.0000**	**16.7335**	**16.7335**	**5.4100e-003**	**0.0000**	**16.8688**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Site Preparation - 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	0.0000	0.0000	0.0000	0.0000	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	2.7000e-004	1.7000e-004	2.0700e-003	1.0000e-005	7.2000e-004	0.0000	7.2000e-004	1.9000e-004	0.0000	1.9000e-004	0.0000	0.5312	0.5312	2.0000e-005	2.0000e-005	0.5363
Total	**2.7000e-004**	**1.7000e-004**	**2.0700e-003**	**1.0000e-005**	**7.2000e-004**	**0.0000**	**7.2000e-004**	**1.9000e-004**	**0.0000**	**1.9000e-004**	**0.0000**	**0.5312**	**0.5312**	**2.0000e-005**	**2.0000e-005**	**0.5363**

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					0.0383	0.0000	0.0383	0.0197	0.0000	0.0197	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0124	0.1262	0.0896	1.9000e-004		5.4300e-003	5.4300e-003		5.0000e-003	5.0000e-003	0.0000	16.7335	16.7335	5.4100e-003	0.0000	16.8688
Total	**0.0124**	**0.1262**	**0.0896**	**1.9000e-004**	**0.0383**	**5.4300e-003**	**0.0438**	**0.0197**	**5.0000e-003**	**0.0247**	**0.0000**	**16.7335**	**16.7335**	**5.4100e-003**	**0.0000**	**16.8688**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Site Preparation - 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	0.0000	0.0000	0.0000	0.0000	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	2.7000e-004	1.7000e-004	2.0700e-003	1.0000e-005	7.2000e-004	0.0000	7.2000e-004	1.9000e-004	0.0000	1.9000e-004	0.0000	0.5312	0.5312	2.0000e-005	2.0000e-005	0.5363
Total	**2.7000e-004**	**1.7000e-004**	**2.0700e-003**	**1.0000e-005**	**7.2000e-004**	**0.0000**	**7.2000e-004**	**1.9000e-004**	**0.0000**	**1.9000e-004**	**0.0000**	**0.5312**	**0.5312**	**2.0000e-005**	**2.0000e-005**	**0.5363**

3.3 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					0.1381	0.0000	0.1381	0.0548	0.0000	0.0548	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0435	0.4191	0.3950	9.3000e-004		0.0170	0.0170		0.0156	0.0156	0.0000	81.7593	81.7593	0.0264	0.0000	82.4204
Total	**0.0435**	**0.4191**	**0.3950**	**9.3000e-004**	**0.1381**	**0.0170**	**0.1550**	**0.0548**	**0.0156**	**0.0704**	**0.0000**	**81.7593**	**81.7593**	**0.0264**	**0.0000**	**82.4204**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Grading - 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	0.0000	0.0000	0.0000	0.0000	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	8.9000e-004	5.7000e-004	6.8900e-003	2.0000e-005	2.3900e-003	1.0000e-005	2.4000e-003	6.4000e-004	1.0000e-005	6.5000e-004	0.0000	1.7708	1.7708	5.0000e-005	5.0000e-005	1.7877
Total	**8.9000e-004**	**5.7000e-004**	**6.8900e-003**	**2.0000e-005**	**2.3900e-003**	**1.0000e-005**	**2.4000e-003**	**6.4000e-004**	**1.0000e-005**	**6.5000e-004**	**0.0000**	**1.7708**	**1.7708**	**5.0000e-005**	**5.0000e-005**	**1.7877**

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					0.0538	0.0000	0.0538	0.0214	0.0000	0.0214	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0435	0.4191	0.3950	9.3000e-004		0.0170	0.0170		0.0156	0.0156	0.0000	81.7592	81.7592	0.0264	0.0000	82.4203
Total	**0.0435**	**0.4191**	**0.3950**	**9.3000e-004**	**0.0538**	**0.0170**	**0.0708**	**0.0214**	**0.0156**	**0.0370**	**0.0000**	**81.7592**	**81.7592**	**0.0264**	**0.0000**	**82.4203**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Grading - 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	0.0000	0.0000	0.0000	0.0000	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	8.9000e-004	5.7000e-004	6.8900e-003	2.0000e-005	2.3900e-003	1.0000e-005	2.4000e-003	6.4000e-004	1.0000e-005	6.5000e-004	0.0000	1.7708	1.7708	5.0000e-005	5.0000e-005	1.7877
Total	**8.9000e-004**	**5.7000e-004**	**6.8900e-003**	**2.0000e-005**	**2.3900e-003**	**1.0000e-005**	**2.4000e-003**	**6.4000e-004**	**1.0000e-005**	**6.5000e-004**	**0.0000**	**1.7708**	**1.7708**	**5.0000e-005**	**5.0000e-005**	**1.7877**

3.4 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	0.0178	0.1621	0.2091	3.5000e-004		6.8600e-003	6.8600e-003		6.4500e-003	6.4500e-003	0.0000	30.1495	30.1495	7.0900e-003	0.0000	30.3267
Total	**0.0178**	**0.1621**	**0.2091**	**3.5000e-004**		**6.8600e-003**	**6.8600e-003**		**6.4500e-003**	**6.4500e-003**	**0.0000**	**30.1495**	**30.1495**	**7.0900e-003**	**0.0000**	**30.3267**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 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	1.0000e-004	4.0800e-003	1.1900e-003	2.0000e-005	6.0000e-004	3.0000e-005	6.3000e-004	1.7000e-004	3.0000e-005	2.0000e-004	0.0000	1.7108	1.7108	1.0000e-005	2.6000e-004	1.7875
Worker	8.8000e-004	5.7000e-004	6.8700e-003	2.0000e-005	2.3800e-003	1.0000e-005	2.3900e-003	6.3000e-004	1.0000e-005	6.4000e-004	0.0000	1.7649	1.7649	5.0000e-005	5.0000e-005	1.7817
Total	**9.8000e-004**	**4.6500e-003**	**8.0600e-003**	**4.0000e-005**	**2.9800e-003**	**4.0000e-005**	**3.0200e-003**	**8.0000e-004**	**4.0000e-005**	**8.4000e-004**	**0.0000**	**3.4757**	**3.4757**	**6.0000e-005**	**3.1000e-004**	**3.5692**

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	0.0178	0.1621	0.2091	3.5000e-004		6.8600e-003	6.8600e-003		6.4500e-003	6.4500e-003	0.0000	30.1495	30.1495	7.0900e-003	0.0000	30.3267
Total	**0.0178**	**0.1621**	**0.2091**	**3.5000e-004**		**6.8600e-003**	**6.8600e-003**		**6.4500e-003**	**6.4500e-003**	**0.0000**	**30.1495**	**30.1495**	**7.0900e-003**	**0.0000**	**30.3267**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 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	1.0000e-004	4.0800e-003	1.1900e-003	2.0000e-005	6.0000e-004	3.0000e-005	6.3000e-004	1.7000e-004	3.0000e-005	2.0000e-004	0.0000	1.7108	1.7108	1.0000e-005	2.6000e-004	1.7875
Worker	8.8000e-004	5.7000e-004	6.8700e-003	2.0000e-005	2.3800e-003	1.0000e-005	2.3900e-003	6.3000e-004	1.0000e-005	6.4000e-004	0.0000	1.7649	1.7649	5.0000e-005	5.0000e-005	1.7817
Total	**9.8000e-004**	**4.6500e-003**	**8.0600e-003**	**4.0000e-005**	**2.9800e-003**	**4.0000e-005**	**3.0200e-003**	**8.0000e-004**	**4.0000e-005**	**8.4000e-004**	**0.0000**	**3.4757**	**3.4757**	**6.0000e-005**	**3.1000e-004**	**3.5692**

3.4 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**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 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	9.6000e-004	0.0407	0.0117	1.8000e-004	6.0400e-003	2.6000e-004	6.3000e-003	1.7500e-003	2.5000e-004	2.0000e-003	0.0000	16.8575	16.8575	7.0000e-005	2.5200e-003	17.6118
Worker	8.2100e-003	5.0800e-003	0.0643	1.9000e-004	0.0239	1.0000e-004	0.0240	6.3600e-003	1.0000e-004	6.4500e-003	0.0000	17.1263	17.1263	4.7000e-004	4.9000e-004	17.2830
Total	**9.1700e-003**	**0.0458**	**0.0760**	**3.7000e-004**	**0.0300**	**3.6000e-004**	**0.0303**	**8.1100e-003**	**3.5000e-004**	**8.4500e-003**	**0.0000**	**33.9838**	**33.9838**	**5.4000e-004**	**3.0100e-003**	**34.8947**

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

3.4 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	9.6000e-004	0.0407	0.0117	1.8000e-004	6.0400e-003	2.6000e-004	6.3000e-003	1.7500e-003	2.5000e-004	2.0000e-003	0.0000	16.8575	16.8575	7.0000e-005	2.5200e-003	17.6118
Worker	8.2100e-003	5.0800e-003	0.0643	1.9000e-004	0.0239	1.0000e-004	0.0240	6.3600e-003	1.0000e-004	6.4500e-003	0.0000	17.1263	17.1263	4.7000e-004	4.9000e-004	17.2830
Total	**9.1700e-003**	**0.0458**	**0.0760**	**3.7000e-004**	**0.0300**	**3.6000e-004**	**0.0303**	**8.1100e-003**	**3.5000e-004**	**8.4500e-003**	**0.0000**	**33.9838**	**33.9838**	**5.4000e-004**	**3.0100e-003**	**34.8947**

3.4 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	8.8900e-003	0.0811	0.1046	1.8000e-004		3.4300e-003	3.4300e-003		3.2300e-003	3.2300e-003	0.0000	15.0748	15.0748	3.5400e-003	0.0000	15.1634
Total	**8.8900e-003**	**0.0811**	**0.1046**	**1.8000e-004**		**3.4300e-003**	**3.4300e-003**		**3.2300e-003**	**3.2300e-003**	**0.0000**	**15.0748**	**15.0748**	**3.5400e-003**	**0.0000**	**15.1634**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 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	5.0000e-005	2.0100e-003	5.8000e-004	1.0000e-005	3.0000e-004	1.0000e-005	3.1000e-004	9.0000e-005	1.0000e-005	1.0000e-004	0.0000	0.8227	0.8227	0.0000	1.2000e-004	0.8595
Worker	3.8000e-004	2.3000e-004	2.9900e-003	1.0000e-005	1.1900e-003	0.0000	1.2000e-003	3.2000e-004	0.0000	3.2000e-004	0.0000	0.8277	0.8277	2.0000e-005	2.0000e-005	0.8350
Total	**4.3000e-004**	**2.2400e-003**	**3.5700e-003**	**2.0000e-005**	**1.4900e-003**	**1.0000e-005**	**1.5100e-003**	**4.1000e-004**	**1.0000e-005**	**4.2000e-004**	**0.0000**	**1.6504**	**1.6504**	**2.0000e-005**	**1.4000e-004**	**1.6944**

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	8.8900e-003	0.0811	0.1046	1.8000e-004		3.4300e-003	3.4300e-003		3.2300e-003	3.2300e-003	0.0000	15.0748	15.0748	3.5400e-003	0.0000	15.1633
Total	**8.8900e-003**	**0.0811**	**0.1046**	**1.8000e-004**		**3.4300e-003**	**3.4300e-003**		**3.2300e-003**	**3.2300e-003**	**0.0000**	**15.0748**	**15.0748**	**3.5400e-003**	**0.0000**	**15.1633**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 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	5.0000e-005	2.0100e-003	5.8000e-004	1.0000e-005	3.0000e-004	1.0000e-005	3.1000e-004	9.0000e-005	1.0000e-005	1.0000e-004	0.0000	0.8227	0.8227	0.0000	1.2000e-004	0.8595
Worker	3.8000e-004	2.3000e-004	2.9900e-003	1.0000e-005	1.1900e-003	0.0000	1.2000e-003	3.2000e-004	0.0000	3.2000e-004	0.0000	0.8277	0.8277	2.0000e-005	2.0000e-005	0.8350
Total	**4.3000e-004**	**2.2400e-003**	**3.5700e-003**	**2.0000e-005**	**1.4900e-003**	**1.0000e-005**	**1.5100e-003**	**4.1000e-004**	**1.0000e-005**	**4.2000e-004**	**0.0000**	**1.6504**	**1.6504**	**2.0000e-005**	**1.4000e-004**	**1.6944**

3.5 Paving - 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	9.1500e-003	0.0858	0.1458	2.3000e-004		4.1900e-003	4.1900e-003		3.8500e-003	3.8500e-003	0.0000	20.0193	20.0193	6.4700e-003	0.0000	20.1811
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**9.1500e-003**	**0.0858**	**0.1458**	**2.3000e-004**		**4.1900e-003**	**4.1900e-003**		**3.8500e-003**	**3.8500e-003**	**0.0000**	**20.0193**	**20.0193**	**6.4700e-003**	**0.0000**	**20.1811**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Paving - 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	0.0000	0.0000	0.0000	0.0000	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	3.8000e-004	2.3000e-004	3.0000e-003	1.0000e-005	1.1900e-003	0.0000	1.2000e-003	3.2000e-004	0.0000	3.2000e-004	0.0000	0.8304	0.8304	2.0000e-005	2.0000e-005	0.8378
Total	**3.8000e-004**	**2.3000e-004**	**3.0000e-003**	**1.0000e-005**	**1.1900e-003**	**0.0000**	**1.2000e-003**	**3.2000e-004**	**0.0000**	**3.2000e-004**	**0.0000**	**0.8304**	**0.8304**	**2.0000e-005**	**2.0000e-005**	**0.8378**

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	9.1500e-003	0.0858	0.1458	2.3000e-004		4.1900e-003	4.1900e-003		3.8500e-003	3.8500e-003	0.0000	20.0192	20.0192	6.4700e-003	0.0000	20.1811
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**9.1500e-003**	**0.0858**	**0.1458**	**2.3000e-004**		**4.1900e-003**	**4.1900e-003**		**3.8500e-003**	**3.8500e-003**	**0.0000**	**20.0192**	**20.0192**	**6.4700e-003**	**0.0000**	**20.1811**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Paving - 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	0.0000	0.0000	0.0000	0.0000	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	3.8000e-004	2.3000e-004	3.0000e-003	1.0000e-005	1.1900e-003	0.0000	1.2000e-003	3.2000e-004	0.0000	3.2000e-004	0.0000	0.8304	0.8304	2.0000e-005	2.0000e-005	0.8378
Total	**3.8000e-004**	**2.3000e-004**	**3.0000e-003**	**1.0000e-005**	**1.1900e-003**	**0.0000**	**1.2000e-003**	**3.2000e-004**	**0.0000**	**3.2000e-004**	**0.0000**	**0.8304**	**0.8304**	**2.0000e-005**	**2.0000e-005**	**0.8378**

3.6 Architectural Coating - 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					
Archit. Coating	1.0982					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.7100e-003	0.0115	0.0181	3.0000e-005		5.2000e-004	5.2000e-004		5.2000e-004	5.2000e-004	0.0000	2.5533	2.5533	1.4000e-004	0.0000	2.5567
Total	**1.0999**	**0.0115**	**0.0181**	**3.0000e-005**		**5.2000e-004**	**5.2000e-004**		**5.2000e-004**	**5.2000e-004**	**0.0000**	**2.5533**	**2.5533**	**1.4000e-004**	**0.0000**	**2.5567**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Architectural Coating - 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	0.0000	0.0000	0.0000	0.0000	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	1.3000e-004	8.0000e-005	1.0000e-003	0.0000	4.0000e-004	0.0000	4.0000e-004	1.1000e-004	0.0000	1.1000e-004	0.0000	0.2768	0.2768	1.0000e-005	1.0000e-005	0.2793
Total	**1.3000e-004**	**8.0000e-005**	**1.0000e-003**	**0.0000**	**4.0000e-004**	**0.0000**	**4.0000e-004**	**1.1000e-004**	**0.0000**	**1.1000e-004**	**0.0000**	**0.2768**	**0.2768**	**1.0000e-005**	**1.0000e-005**	**0.2793**

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	1.0982					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.7100e-003	0.0115	0.0181	3.0000e-005		5.2000e-004	5.2000e-004		5.2000e-004	5.2000e-004	0.0000	2.5533	2.5533	1.4000e-004	0.0000	2.5567
Total	**1.0999**	**0.0115**	**0.0181**	**3.0000e-005**		**5.2000e-004**	**5.2000e-004**		**5.2000e-004**	**5.2000e-004**	**0.0000**	**2.5533**	**2.5533**	**1.4000e-004**	**0.0000**	**2.5567**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Architectural Coating - 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	0.0000	0.0000	0.0000	0.0000	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	1.3000e-004	8.0000e-005	1.0000e-003	0.0000	4.0000e-004	0.0000	4.0000e-004	1.1000e-004	0.0000	1.1000e-004	0.0000	0.2768	0.2768	1.0000e-005	1.0000e-005	0.2793
Total	**1.3000e-004**	**8.0000e-005**	**1.0000e-003**	**0.0000**	**4.0000e-004**	**0.0000**	**4.0000e-004**	**1.1000e-004**	**0.0000**	**1.1000e-004**	**0.0000**	**0.2768**	**0.2768**	**1.0000e-005**	**1.0000e-005**	**0.2793**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Density

Improve Walkability Design

Improve Destination Accessibility

Increase Transit Accessibility

Improve Pedestrian Network

Provide Traffic Calming Measures

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	0.1590	0.2825	1.7403	4.9100e-003	0.5722	3.6100e-003	0.5758	0.1526	3.3700e-003	0.1560	0.0000	457.8551	457.8551	0.0263	0.0225	465.2085
Unmitigated	0.1617	0.3035	1.8719	5.4200e-003	0.6340	3.9600e-003	0.6380	0.1691	3.6900e-003	0.1728	0.0000	505.5462	505.5462	0.0281	0.0243	513.4757

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Single Family Housing	613.60	616.20	555.75	1,707,327	1,540,863
Total	613.60	616.20	555.75	1,707,327	1,540,863

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
Single Family Housing	10.80	7.30	7.50	38.40	22.60	39.00	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Single Family Housing	0.518500	0.217000	0.168400	0.057500	0.000800	0.001000	0.007400	0.019500	0.000000	0.004400	0.002500	0.000500	0.002500

5.0 Energy Detail

Historical Energy Use: N

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	91.9195	91.9195	7.7600e-003	9.4000e-004	92.3937
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	91.9195	91.9195	7.7600e-003	9.4000e-004	92.3937
NaturalGas Mitigated	8.4200e-003	0.0720	0.0306	4.6000e-004		5.8200e-003	5.8200e-003		5.8200e-003	5.8200e-003	0.0000	83.3778	83.3778	1.6000e-003	1.5300e-003	83.8733
NaturalGas Unmitigated	8.4200e-003	0.0720	0.0306	4.6000e-004		5.8200e-003	5.8200e-003		5.8200e-003	5.8200e-003	0.0000	83.3778	83.3778	1.6000e-003	1.5300e-003	83.8733

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					
Single Family Housing	1.56244e+006	8.4200e-003	0.0720	0.0306	4.6000e-004		5.8200e-003	5.8200e-003		5.8200e-003	5.8200e-003	0.0000	83.3778	83.3778	1.6000e-003	1.5300e-003	83.8733
Total		**8.4200e-003**	**0.0720**	**0.0306**	**4.6000e-004**		**5.8200e-003**	**5.8200e-003**		**5.8200e-003**	**5.8200e-003**	**0.0000**	**83.3778**	**83.3778**	**1.6000e-003**	**1.5300e-003**	**83.8733**

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					
Single Family Housing	1.56244e+006	8.4200e-003	0.0720	0.0306	4.6000e-004		5.8200e-003	5.8200e-003		5.8200e-003	5.8200e-003	0.0000	83.3778	83.3778	1.6000e-003	1.5300e-003	83.8733
Total		**8.4200e-003**	**0.0720**	**0.0306**	**4.6000e-004**		**5.8200e-003**	**5.8200e-003**		**5.8200e-003**	**5.8200e-003**	**0.0000**	**83.3778**	**83.3778**	**1.6000e-003**	**1.5300e-003**	**83.8733**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Single Family Housing	518307	91.9195	7.7600e-003	9.4000e-004	92.3937
Total		**91.9195**	**7.7600e-003**	**9.4000e-004**	**92.3937**

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			
Single Family Housing	518307	91.9195	7.7600e-003	9.4000e-004	92.3937
Total		**91.9195**	**7.7600e-003**	**9.4000e-004**	**92.3937**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Electric Lawnmower

Use Electric Leafblower

Use Electric Chainsaw

No Hearths Installed

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	0.5810	5.5200e-003	0.4787	3.0000e-005		2.6600e-003	2.6600e-003		2.6600e-003	2.6600e-003	0.0000	0.7813	0.7813	7.4000e-004	0.0000	0.7999
Unmitigated	0.8106	0.0830	2.5368	6.9500e-003		0.3384	0.3384		0.3384	0.3384	44.4700	51.9856	96.4556	0.2096	9.4000e-004	101.9759

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	0.1098					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.4569					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.2294	0.0774	2.0547	6.9200e-003		0.3357	0.3357		0.3357	0.3357	44.4700	51.1972	95.6672	0.2089	9.4000e-004	101.1686
Landscaping	0.0145	5.5500e-003	0.4822	3.0000e-005		2.6800e-003	2.6800e-003		2.6800e-003	2.6800e-003	0.0000	0.7884	0.7884	7.5000e-004	0.0000	0.8073
Total	**0.8106**	**0.0830**	**2.5368**	**6.9500e-003**		**0.3384**	**0.3384**		**0.3384**	**0.3384**	**44.4700**	**51.9856**	**96.4556**	**0.2096**	**9.4000e-004**	**101.9759**

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	0.1098					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.4569					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	0.0143	5.5200e-003	0.4787	3.0000e-005		2.6600e-003	2.6600e-003		2.6600e-003	2.6600e-003	0.0000	0.7813	0.7813	7.4000e-004	0.0000	0.7999
Total	**0.5810**	**5.5200e-003**	**0.4787**	**3.0000e-005**		**2.6600e-003**	**2.6600e-003**		**2.6600e-003**	**2.6600e-003**	**0.0000**	**0.7813**	**0.7813**	**7.4000e-004**	**0.0000**	**0.7999**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

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	6.1071	0.0318	2.6600e-003	7.6926
Unmitigated	7.2196	0.0397	3.3200e-003	9.1993

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Single Family Housing	4.23501 / 2.6699	7.2196	0.0397	3.3200e-003	9.1993
Total		**7.2196**	**0.0397**	**3.3200e-003**	**9.1993**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Single Family Housing	3.38801 / 2.6699	6.1071	0.0318	2.6600e-003	7.6926
Total		**6.1071**	**0.0318**	**2.6600e-003**	**7.6926**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	13.5923	0.8033	0.0000	33.6743
Unmitigated	13.5923	0.8033	0.0000	33.6743

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			
Single Family Housing	66.96	13.5923	0.8033	0.0000	33.6743
Total		**13.5923**	**0.8033**	**0.0000**	**33.6743**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Single Family Housing	66.96	13.5923	0.8033	0.0000	33.6743
Total		**13.5923**	**0.8033**	**0.0000**	**33.6743**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/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

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Conway/Dias Properties - Phase 4 - 64 DU

Tulare County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Single Family Housing	64.00	Dwelling Unit	11.00	115,200.00	183

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	51
Climate Zone	3			**Operational Year**	2027
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 - 64 single family residential units on 11 acres.

Construction Phase -

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Trips and VMT -

Demolition -

Grading -

Vehicle Trips - Per 11th edition ITE.

Conway/Dias Properties - Phase 4 - 64 DU - Tulare County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Woodstoves - Per Rule 4901

Water And Wastewater - Project connected to Visalia WWTP

Construction Off-road Equipment Mitigation - dust supression per Reg VIII

Mobile Land Use Mitigation - Per project design

Area Mitigation - District statewide default

Energy Mitigation -

Water Mitigation - Per CA Building Code (CalGreen)

Fleet Mix - Per the District 2027 residential fleet mix.

Table Name	Column Name	Default Value	New Value
tblFireplaces	NumberGas	35.20	64.00
tblFireplaces	NumberNoFireplace	28.80	64.00
tblFleetMix	HHD	0.02	0.02
tblFleetMix	LDA	0.53	0.52
tblFleetMix	LDT1	0.05	0.22
tblFleetMix	LDT2	0.17	0.17
tblFleetMix	LHD1	0.03	8.0000e-004
tblFleetMix	LHD2	7.2400e-003	1.0000e-003
tblFleetMix	MCY	0.02	2.5000e-003
tblFleetMix	MDV	0.16	0.06
tblFleetMix	MH	3.1610e-003	2.5000e-003
tblFleetMix	MHD	0.01	7.4000e-003
tblFleetMix	OBUS	6.2900e-004	0.00
tblFleetMix	SBUS	1.3670e-003	5.0000e-004
tblFleetMix	UBUS	4.6800e-004	4.4000e-003
tblLandUse	LotAcreage	20.78	11.00
tblVehicleTrips	ST_TR	9.54	9.48
tblWater	AerobicPercent	87.46	97.79
tblWater	SepticTankPercent	10.33	0.00

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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					
2026	0.1389	1.2767	1.4429	2.8400e-003	0.2525	0.0526	0.3052	0.1097	0.0491	0.1587	0.0000	247.7557	247.7557	0.0632	1.3800e-003	249.7472
2027	1.2259	1.2893	1.7147	3.0300e-003	0.0229	0.0540	0.0770	6.2000e-003	0.0508	0.0570	0.0000	262.9778	262.9778	0.0577	2.1200e-003	265.0510
Maximum	**1.2259**	**1.2893**	**1.7147**	**3.0300e-003**	**0.2525**	**0.0540**	**0.3052**	**0.1097**	**0.0508**	**0.1587**	**0.0000**	**262.9778**	**262.9778**	**0.0632**	**2.1200e-003**	**265.0510**

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					
2026	0.1389	1.2767	1.4429	2.8400e-003	0.1084	0.0526	0.1610	0.0454	0.0491	0.0945	0.0000	247.7554	247.7554	0.0632	1.3800e-003	249.7469
2027	1.2259	1.2893	1.7147	3.0300e-003	0.0229	0.0540	0.0770	6.2000e-003	0.0508	0.0570	0.0000	262.9775	262.9775	0.0577	2.1200e-003	265.0507
Maximum	**1.2259**	**1.2893**	**1.7147**	**3.0300e-003**	**0.1084**	**0.0540**	**0.1610**	**0.0454**	**0.0508**	**0.0945**	**0.0000**	**262.9775**	**262.9775**	**0.0632**	**2.1200e-003**	**265.0507**

Conway/Dias Properties - Phase 4 - 64 DU - Tulare 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	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**52.34**	**0.00**	**37.73**	**55.44**	**0.00**	**29.78**	**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	**6-1-2026**	**8-31-2026**	0.7766	0.7766
2	**9-1-2026**	**11-30-2026**	0.4636	0.4636
3	**12-1-2026**	**2-28-2027**	0.4585	0.4585
4	**3-1-2027**	**5-31-2027**	0.4681	0.4681
5	**6-1-2027**	**8-31-2027**	0.4679	0.4679
6	**9-1-2027**	**9-30-2027**	0.1309	0.1309
		Highest	0.7766	0.7766

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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	0.8016	0.0822	2.5291	6.9500e-003		0.3383	0.3383		0.3383	0.3383	44.4700	51.1858	95.6558	0.2096	9.2000e-004	101.1711
Energy	8.3000e-003	0.0709	0.0302	4.5000e-004		5.7300e-003	5.7300e-003		5.7300e-003	5.7300e-003	0.0000	172.6004	172.6004	9.2100e-003	2.4300e-003	173.5552
Mobile	0.1592	0.2988	1.8431	5.3400e-003	0.6243	3.9000e-003	0.6282	0.1665	3.6400e-003	0.1702	0.0000	497.7685	497.7685	0.0277	0.0239	505.5760
Waste						0.0000	0.0000		0.0000	0.0000	13.3730	0.0000	13.3730	0.7903	0.0000	33.1312
Water						0.0000	0.0000		0.0000	0.0000	1.4753	5.6332	7.1085	0.0390	3.2700e-003	9.0578
Total	**0.9691**	**0.4519**	**4.4024**	**0.0127**	**0.6243**	**0.3479**	**0.9722**	**0.1665**	**0.3476**	**0.5142**	**59.3183**	**727.1880**	**786.5063**	**1.0758**	**0.0305**	**822.4913**

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	0.5721	5.4300e-003	0.4713	2.0000e-005		2.6100e-003	2.6100e-003		2.6100e-003	2.6100e-003	0.0000	0.7693	0.7693	7.3000e-004	0.0000	0.7876
Energy	8.3000e-003	0.0709	0.0302	4.5000e-004		5.7300e-003	5.7300e-003		5.7300e-003	5.7300e-003	0.0000	172.6004	172.6004	9.2100e-003	2.4300e-003	173.5552
Mobile	0.1566	0.2781	1.7136	4.8400e-003	0.5634	3.5600e-003	0.5670	0.1503	3.3200e-003	0.1536	0.0000	450.8111	450.8111	0.0259	0.0221	458.0514
Waste						0.0000	0.0000		0.0000	0.0000	13.3730	0.0000	13.3730	0.7903	0.0000	33.1312
Water						0.0000	0.0000		0.0000	0.0000	1.1802	4.8329	6.0132	0.0313	2.6200e-003	7.5743
Total	**0.7369**	**0.3544**	**2.2151**	**5.3100e-003**	**0.5634**	**0.0119**	**0.5753**	**0.1503**	**0.0117**	**0.1619**	**14.5533**	**629.0137**	**643.5670**	**0.8575**	**0.0272**	**673.0996**

	ROG	NOx	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	**23.96**	**21.58**	**49.69**	**58.32**	**9.75**	**96.58**	**40.82**	**9.75**	**96.65**	**68.51**	**75.47**	**13.50**	**18.17**	**20.30**	**10.92**	**18.16**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	6/1/2026	6/12/2026	5	10	
2	Grading	Grading	6/13/2026	7/24/2026	5	30	
3	Building Construction	Building Construction	7/25/2026	9/17/2027	5	300	

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

4	Paving	Paving	9/18/2027	10/15/2027	5	20	
5	Architectural Coating	Architectural Coating	10/16/2027	11/12/2027	5	20	

Acres of Grading (Site Preparation Phase): 15

Acres of Grading (Grading Phase): 90

Acres of Paving: 0

Residential Indoor: 233,280; Residential Outdoor: 77,760; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
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
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Conway/Dias Properties - Phase 4 - 64 DU - Tulare County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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
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	23.00	7.00	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	5.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Site Preparation - 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					0.0983	0.0000	0.0983	0.0505	0.0000	0.0505	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0124	0.1262	0.0896	1.9000e-004		5.4300e-003	5.4300e-003		5.0000e-003	5.0000e-003	0.0000	16.7335	16.7335	5.4100e-003	0.0000	16.8688
Total	**0.0124**	**0.1262**	**0.0896**	**1.9000e-004**	**0.0983**	**5.4300e-003**	**0.1037**	**0.0505**	**5.0000e-003**	**0.0555**	**0.0000**	**16.7335**	**16.7335**	**5.4100e-003**	**0.0000**	**16.8688**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Site Preparation - 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	0.0000	0.0000	0.0000	0.0000	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	2.5000e-004	1.5000e-004	1.9300e-003	1.0000e-005	7.2000e-004	0.0000	7.2000e-004	1.9000e-004	0.0000	1.9000e-004	0.0000	0.5135	0.5135	1.0000e-005	1.0000e-005	0.5182
Total	**2.5000e-004**	**1.5000e-004**	**1.9300e-003**	**1.0000e-005**	**7.2000e-004**	**0.0000**	**7.2000e-004**	**1.9000e-004**	**0.0000**	**1.9000e-004**	**0.0000**	**0.5135**	**0.5135**	**1.0000e-005**	**1.0000e-005**	**0.5182**

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					0.0383	0.0000	0.0383	0.0197	0.0000	0.0197	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0124	0.1262	0.0896	1.9000e-004		5.4300e-003	5.4300e-003		5.0000e-003	5.0000e-003	0.0000	16.7335	16.7335	5.4100e-003	0.0000	16.8688
Total	**0.0124**	**0.1262**	**0.0896**	**1.9000e-004**	**0.0383**	**5.4300e-003**	**0.0438**	**0.0197**	**5.0000e-003**	**0.0247**	**0.0000**	**16.7335**	**16.7335**	**5.4100e-003**	**0.0000**	**16.8688**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Site Preparation - 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	0.0000	0.0000	0.0000	0.0000	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	2.5000e-004	1.5000e-004	1.9300e-003	1.0000e-005	7.2000e-004	0.0000	7.2000e-004	1.9000e-004	0.0000	1.9000e-004	0.0000	0.5135	0.5135	1.0000e-005	1.0000e-005	0.5182
Total	**2.5000e-004**	**1.5000e-004**	**1.9300e-003**	**1.0000e-005**	**7.2000e-004**	**0.0000**	**7.2000e-004**	**1.9000e-004**	**0.0000**	**1.9000e-004**	**0.0000**	**0.5135**	**0.5135**	**1.0000e-005**	**1.0000e-005**	**0.5182**

3.3 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					0.1381	0.0000	0.1381	0.0548	0.0000	0.0548	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0435	0.4191	0.3950	9.3000e-004		0.0170	0.0170		0.0156	0.0156	0.0000	81.7593	81.7593	0.0264	0.0000	82.4204
Total	**0.0435**	**0.4191**	**0.3950**	**9.3000e-004**	**0.1381**	**0.0170**	**0.1550**	**0.0548**	**0.0156**	**0.0704**	**0.0000**	**81.7593**	**81.7593**	**0.0264**	**0.0000**	**82.4204**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Grading - 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	0.0000	0.0000	0.0000	0.0000	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	8.2000e-004	5.1000e-004	6.4200e-003	2.0000e-005	2.3900e-003	1.0000e-005	2.4000e-003	6.4000e-004	1.0000e-005	6.4000e-004	0.0000	1.7118	1.7118	5.0000e-005	5.0000e-005	1.7274
Total	**8.2000e-004**	**5.1000e-004**	**6.4200e-003**	**2.0000e-005**	**2.3900e-003**	**1.0000e-005**	**2.4000e-003**	**6.4000e-004**	**1.0000e-005**	**6.4000e-004**	**0.0000**	**1.7118**	**1.7118**	**5.0000e-005**	**5.0000e-005**	**1.7274**

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					0.0538	0.0000	0.0538	0.0214	0.0000	0.0214	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0435	0.4191	0.3950	9.3000e-004		0.0170	0.0170		0.0156	0.0156	0.0000	81.7592	81.7592	0.0264	0.0000	82.4203
Total	**0.0435**	**0.4191**	**0.3950**	**9.3000e-004**	**0.0538**	**0.0170**	**0.0708**	**0.0214**	**0.0156**	**0.0370**	**0.0000**	**81.7592**	**81.7592**	**0.0264**	**0.0000**	**82.4203**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Grading - 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	0.0000	0.0000	0.0000	0.0000	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	8.2000e-004	5.1000e-004	6.4200e-003	2.0000e-005	2.3900e-003	1.0000e-005	2.4000e-003	6.4000e-004	1.0000e-005	6.4000e-004	0.0000	1.7118	1.7118	5.0000e-005	5.0000e-005	1.7274
Total	**8.2000e-004**	**5.1000e-004**	**6.4200e-003**	**2.0000e-005**	**2.3900e-003**	**1.0000e-005**	**2.4000e-003**	**6.4000e-004**	**1.0000e-005**	**6.4000e-004**	**0.0000**	**1.7118**	**1.7118**	**5.0000e-005**	**5.0000e-005**	**1.7274**

3.4 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	0.0779	0.7108	0.9168	1.5400e-003		0.0301	0.0301		0.0283	0.0283	0.0000	132.1941	132.1941	0.0311	0.0000	132.9710
Total	**0.0779**	**0.7108**	**0.9168**	**1.5400e-003**		**0.0301**	**0.0301**		**0.0283**	**0.0283**	**0.0000**	**132.1941**	**132.1941**	**0.0311**	**0.0000**	**132.9710**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 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	4.2000e-004	0.0178	5.1100e-003	8.0000e-005	2.6400e-003	1.1000e-004	2.7500e-003	7.6000e-004	1.1000e-004	8.7000e-004	0.0000	7.3631	7.3631	3.0000e-005	1.1000e-003	7.6925
Worker	3.5900e-003	2.2200e-003	0.0281	8.0000e-005	0.0104	5.0000e-005	0.0105	2.7800e-003	4.0000e-005	2.8200e-003	0.0000	7.4805	7.4805	2.1000e-004	2.1000e-004	7.5489
Total	**4.0100e-003**	**0.0200**	**0.0332**	**1.6000e-004**	**0.0131**	**1.6000e-004**	**0.0132**	**3.5400e-003**	**1.5000e-004**	**3.6900e-003**	**0.0000**	**14.8435**	**14.8435**	**2.4000e-004**	**1.3100e-003**	**15.2414**

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	0.0779	0.7108	0.9168	1.5400e-003		0.0301	0.0301		0.0283	0.0283	0.0000	132.1939	132.1939	0.0311	0.0000	132.9708
Total	**0.0779**	**0.7108**	**0.9168**	**1.5400e-003**		**0.0301**	**0.0301**		**0.0283**	**0.0283**	**0.0000**	**132.1939**	**132.1939**	**0.0311**	**0.0000**	**132.9708**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 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	4.2000e-004	0.0178	5.1100e-003	8.0000e-005	2.6400e-003	1.1000e-004	2.7500e-003	7.6000e-004	1.1000e-004	8.7000e-004	0.0000	7.3631	7.3631	3.0000e-005	1.1000e-003	7.6925
Worker	3.5900e-003	2.2200e-003	0.0281	8.0000e-005	0.0104	5.0000e-005	0.0105	2.7800e-003	4.0000e-005	2.8200e-003	0.0000	7.4805	7.4805	2.1000e-004	2.1000e-004	7.5489
Total	**4.0100e-003**	**0.0200**	**0.0332**	**1.6000e-004**	**0.0131**	**1.6000e-004**	**0.0132**	**3.5400e-003**	**1.5000e-004**	**3.6900e-003**	**0.0000**	**14.8435**	**14.8435**	**2.4000e-004**	**1.3100e-003**	**15.2414**

3.4 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	0.1272	1.1597	1.4959	2.5100e-003		0.0491	0.0491		0.0462	0.0462	0.0000	215.6851	215.6851	0.0507	0.0000	216.9526
Total	**0.1272**	**1.1597**	**1.4959**	**2.5100e-003**		**0.0491**	**0.0491**		**0.0462**	**0.0462**	**0.0000**	**215.6851**	**215.6851**	**0.0507**	**0.0000**	**216.9526**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 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	6.7000e-004	0.0288	8.2300e-003	1.2000e-004	4.3000e-003	1.9000e-004	4.4900e-003	1.2400e-003	1.8000e-004	1.4200e-003	0.0000	11.7712	11.7712	5.0000e-005	1.7600e-003	12.2971
Worker	5.4400e-003	3.2600e-003	0.0428	1.3000e-004	0.0170	7.0000e-005	0.0171	4.5300e-003	6.0000e-005	4.5900e-003	0.0000	11.8418	11.8418	3.1000e-004	3.3000e-004	11.9464
Total	**6.1100e-003**	**0.0320**	**0.0510**	**2.5000e-004**	**0.0213**	**2.6000e-004**	**0.0216**	**5.7700e-003**	**2.4000e-004**	**6.0100e-003**	**0.0000**	**23.6130**	**23.6130**	**3.6000e-004**	**2.0900e-003**	**24.2435**

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	0.1272	1.1597	1.4959	2.5100e-003		0.0491	0.0491		0.0462	0.0462	0.0000	215.6848	215.6848	0.0507	0.0000	216.9524
Total	**0.1272**	**1.1597**	**1.4959**	**2.5100e-003**		**0.0491**	**0.0491**		**0.0462**	**0.0462**	**0.0000**	**215.6848**	**215.6848**	**0.0507**	**0.0000**	**216.9524**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 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	6.7000e-004	0.0288	8.2300e-003	1.2000e-004	4.3000e-003	1.9000e-004	4.4900e-003	1.2400e-003	1.8000e-004	1.4200e-003	0.0000	11.7712	11.7712	5.0000e-005	1.7600e-003	12.2971
Worker	5.4400e-003	3.2600e-003	0.0428	1.3000e-004	0.0170	7.0000e-005	0.0171	4.5300e-003	6.0000e-005	4.5900e-003	0.0000	11.8418	11.8418	3.1000e-004	3.3000e-004	11.9464
Total	**6.1100e-003**	**0.0320**	**0.0510**	**2.5000e-004**	**0.0213**	**2.6000e-004**	**0.0216**	**5.7700e-003**	**2.4000e-004**	**6.0100e-003**	**0.0000**	**23.6130**	**23.6130**	**3.6000e-004**	**2.0900e-003**	**24.2435**

3.5 Paving - 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	9.1500e-003	0.0858	0.1458	2.3000e-004		4.1900e-003	4.1900e-003		3.8500e-003	3.8500e-003	0.0000	20.0193	20.0193	6.4700e-003	0.0000	20.1811
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**9.1500e-003**	**0.0858**	**0.1458**	**2.3000e-004**		**4.1900e-003**	**4.1900e-003**		**3.8500e-003**	**3.8500e-003**	**0.0000**	**20.0193**	**20.0193**	**6.4700e-003**	**0.0000**	**20.1811**

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3.5 Paving - 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	0.0000	0.0000	0.0000	0.0000	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	3.8000e-004	2.3000e-004	3.0000e-003	1.0000e-005	1.1900e-003	0.0000	1.2000e-003	3.2000e-004	0.0000	3.2000e-004	0.0000	0.8304	0.8304	2.0000e-005	2.0000e-005	0.8378
Total	**3.8000e-004**	**2.3000e-004**	**3.0000e-003**	**1.0000e-005**	**1.1900e-003**	**0.0000**	**1.2000e-003**	**3.2000e-004**	**0.0000**	**3.2000e-004**	**0.0000**	**0.8304**	**0.8304**	**2.0000e-005**	**2.0000e-005**	**0.8378**

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	9.1500e-003	0.0858	0.1458	2.3000e-004		4.1900e-003	4.1900e-003		3.8500e-003	3.8500e-003	0.0000	20.0192	20.0192	6.4700e-003	0.0000	20.1811
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**9.1500e-003**	**0.0858**	**0.1458**	**2.3000e-004**		**4.1900e-003**	**4.1900e-003**		**3.8500e-003**	**3.8500e-003**	**0.0000**	**20.0192**	**20.0192**	**6.4700e-003**	**0.0000**	**20.1811**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Paving - 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	0.0000	0.0000	0.0000	0.0000	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	3.8000e-004	2.3000e-004	3.0000e-003	1.0000e-005	1.1900e-003	0.0000	1.2000e-003	3.2000e-004	0.0000	3.2000e-004	0.0000	0.8304	0.8304	2.0000e-005	2.0000e-005	0.8378
Total	**3.8000e-004**	**2.3000e-004**	**3.0000e-003**	**1.0000e-005**	**1.1900e-003**	**0.0000**	**1.2000e-003**	**3.2000e-004**	**0.0000**	**3.2000e-004**	**0.0000**	**0.8304**	**0.8304**	**2.0000e-005**	**2.0000e-005**	**0.8378**

3.6 Architectural Coating - 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					
Archit. Coating	1.0813					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.7100e-003	0.0115	0.0181	3.0000e-005		5.2000e-004	5.2000e-004		5.2000e-004	5.2000e-004	0.0000	2.5533	2.5533	1.4000e-004	0.0000	2.5567
Total	**1.0830**	**0.0115**	**0.0181**	**3.0000e-005**		**5.2000e-004**	**5.2000e-004**		**5.2000e-004**	**5.2000e-004**	**0.0000**	**2.5533**	**2.5533**	**1.4000e-004**	**0.0000**	**2.5567**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Architectural Coating - 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	0.0000	0.0000	0.0000	0.0000	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	1.3000e-004	8.0000e-005	1.0000e-003	0.0000	4.0000e-004	0.0000	4.0000e-004	1.1000e-004	0.0000	1.1000e-004	0.0000	0.2768	0.2768	1.0000e-005	1.0000e-005	0.2793
Total	**1.3000e-004**	**8.0000e-005**	**1.0000e-003**	**0.0000**	**4.0000e-004**	**0.0000**	**4.0000e-004**	**1.1000e-004**	**0.0000**	**1.1000e-004**	**0.0000**	**0.2768**	**0.2768**	**1.0000e-005**	**1.0000e-005**	**0.2793**

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	1.0813					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.7100e-003	0.0115	0.0181	3.0000e-005		5.2000e-004	5.2000e-004		5.2000e-004	5.2000e-004	0.0000	2.5533	2.5533	1.4000e-004	0.0000	2.5567
Total	**1.0830**	**0.0115**	**0.0181**	**3.0000e-005**		**5.2000e-004**	**5.2000e-004**		**5.2000e-004**	**5.2000e-004**	**0.0000**	**2.5533**	**2.5533**	**1.4000e-004**	**0.0000**	**2.5567**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Architectural Coating - 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	0.0000	0.0000	0.0000	0.0000	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	1.3000e-004	8.0000e-005	1.0000e-003	0.0000	4.0000e-004	0.0000	4.0000e-004	1.1000e-004	0.0000	1.1000e-004	0.0000	0.2768	0.2768	1.0000e-005	1.0000e-005	0.2793
Total	**1.3000e-004**	**8.0000e-005**	**1.0000e-003**	**0.0000**	**4.0000e-004**	**0.0000**	**4.0000e-004**	**1.1000e-004**	**0.0000**	**1.1000e-004**	**0.0000**	**0.2768**	**0.2768**	**1.0000e-005**	**1.0000e-005**	**0.2793**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Density

Improve Walkability Design

Improve Destination Accessibility

Increase Transit Accessibility

Improve Pedestrian Network

Provide Traffic Calming Measures

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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	0.1566	0.2781	1.7136	4.8400e-003	0.5634	3.5600e-003	0.5670	0.1503	3.3200e-003	0.1536	0.0000	450.8111	450.8111	0.0259	0.0221	458.0514
Unmitigated	0.1592	0.2988	1.8431	5.3400e-003	0.6243	3.9000e-003	0.6282	0.1665	3.6400e-003	0.1702	0.0000	497.7685	497.7685	0.0277	0.0239	505.5760

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Single Family Housing	604.16	606.72	547.20	1,681,061	1,517,157
Total	604.16	606.72	547.20	1,681,061	1,517,157

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
Single Family Housing	10.80	7.30	7.50	38.40	22.60	39.00	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Single Family Housing	0.518500	0.217000	0.168400	0.057500	0.000800	0.001000	0.007400	0.019500	0.000000	0.004400	0.002500	0.000500	0.002500

5.0 Energy Detail

Historical Energy Use: N

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	90.5054	90.5054	7.6400e-003	9.3000e-004	90.9723
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	90.5054	90.5054	7.6400e-003	9.3000e-004	90.9723
NaturalGas Mitigated	8.3000e-003	0.0709	0.0302	4.5000e-004		5.7300e-003	5.7300e-003		5.7300e-003	5.7300e-003	0.0000	82.0951	82.0951	1.5700e-003	1.5100e-003	82.5829
NaturalGas Unmitigated	8.3000e-003	0.0709	0.0302	4.5000e-004		5.7300e-003	5.7300e-003		5.7300e-003	5.7300e-003	0.0000	82.0951	82.0951	1.5700e-003	1.5100e-003	82.5829

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					
Single Family Housing	1.5384e+006	8.3000e-003	0.0709	0.0302	4.5000e-004		5.7300e-003	5.7300e-003		5.7300e-003	5.7300e-003	0.0000	82.0951	82.0951	1.5700e-003	1.5100e-003	82.5829
Total		**8.3000e-003**	**0.0709**	**0.0302**	**4.5000e-004**		**5.7300e-003**	**5.7300e-003**		**5.7300e-003**	**5.7300e-003**	**0.0000**	**82.0951**	**82.0951**	**1.5700e-003**	**1.5100e-003**	**82.5829**

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					
Single Family Housing	1.5384e+006	8.3000e-003	0.0709	0.0302	4.5000e-004		5.7300e-003	5.7300e-003		5.7300e-003	5.7300e-003	0.0000	82.0951	82.0951	1.5700e-003	1.5100e-003	82.5829
Total		**8.3000e-003**	**0.0709**	**0.0302**	**4.5000e-004**		**5.7300e-003**	**5.7300e-003**		**5.7300e-003**	**5.7300e-003**	**0.0000**	**82.0951**	**82.0951**	**1.5700e-003**	**1.5100e-003**	**82.5829**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Single Family Housing	510333	90.5054	7.6400e-003	9.3000e-004	90.9723
Total		**90.5054**	**7.6400e-003**	**9.3000e-004**	**90.9723**

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			
Single Family Housing	510333	90.5054	7.6400e-003	9.3000e-004	90.9723
Total		**90.5054**	**7.6400e-003**	**9.3000e-004**	**90.9723**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Electric Lawnmower

Use Electric Leafblower

Use Electric Chainsaw

No Hearths Installed

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	0.5721	5.4300e-003	0.4713	2.0000e-005		2.6100e-003	2.6100e-003		2.6100e-003	2.6100e-003	0.0000	0.7693	0.7693	7.3000e-004	0.0000	0.7876
Unmitigated	0.8016	0.0822	2.5291	6.9500e-003		0.3383	0.3383		0.3383	0.3383	44.4700	51.1858	95.6558	0.2096	9.2000e-004	101.1711

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	0.1081					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.4499					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.2293	0.0767	2.0544	6.9200e-003		0.3356	0.3356		0.3356	0.3356	44.4700	50.4096	94.8795	0.2089	9.2000e-004	100.3763
Landscaping	0.0143	5.4700e-003	0.4748	3.0000e-005		2.6300e-003	2.6300e-003		2.6300e-003	2.6300e-003	0.0000	0.7762	0.7762	7.4000e-004	0.0000	0.7948
Total	**0.8016**	**0.0822**	**2.5291**	**6.9500e-003**		**0.3383**	**0.3383**		**0.3383**	**0.3383**	**44.4700**	**51.1858**	**95.6558**	**0.2096**	**9.2000e-004**	**101.1711**

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	0.1081					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.4499					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	0.0141	5.4300e-003	0.4713	2.0000e-005		2.6100e-003	2.6100e-003		2.6100e-003	2.6100e-003	0.0000	0.7693	0.7693	7.3000e-004	0.0000	0.7876
Total	**0.5721**	**5.4300e-003**	**0.4713**	**2.0000e-005**		**2.6100e-003**	**2.6100e-003**		**2.6100e-003**	**2.6100e-003**	**0.0000**	**0.7693**	**0.7693**	**7.3000e-004**	**0.0000**	**0.7876**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

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	6.0132	0.0313	2.6200e-003	7.5743
Unmitigated	7.1085	0.0390	3.2700e-003	9.0578

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Single Family Housing	4.16986 / 2.62882	7.1085	0.0390	3.2700e-003	9.0578
Total		**7.1085**	**0.0390**	**3.2700e-003**	**9.0578**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Single Family Housing	3.33589 / 2.62882	6.0132	0.0313	2.6200e-003	7.5743
Total		**6.0132**	**0.0313**	**2.6200e-003**	**7.5743**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	13.3730	0.7903	0.0000	33.1312
Unmitigated	13.3730	0.7903	0.0000	33.1312

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			
Single Family Housing	65.88	13.3730	0.7903	0.0000	33.1312
Total		**13.3730**	**0.7903**	**0.0000**	**33.1312**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Single Family Housing	65.88	13.3730	0.7903	0.0000	33.1312
Total		**13.3730**	**0.7903**	**0.0000**	**33.1312**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/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

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Appendix B

Biological Evaluation

LIVE OAK
ASSOCIATES, INC.

BIOLOGICAL EVALUATION
CONWAY & DIAS
RESIDENTIAL SUBDIVISION PROJECT
GOSHEN, TULARE COUNTY, CA

By:

LIVE OAK ASSOCIATES, INC.

Austin Pearson, Vice President
Colleen Del Vecchio, Project Manager/Staff Ecologist and Arborist

For:

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324 South Santa Fe Street, Suite A
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January 18, 2023 Project No. 2736-01

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EXECUTIVE SUMMARY

San Joaquin Valley Homes proposes to construct a medium density residential subdivision on an existing agricultural parcel. The project site is approximately 54.21 acres and is located in the southwest corner of the community of Goshen in Tulare County.

Live Oak Associates, Inc. conducted an investigation of the biotic resources of the project site and prepared a technical report in support of the California Environmental Quality Act. This document provides a general description of the project site's regional setting and identifies in more detail the existing conditions of the project site itself, describing its characteristics, features, and resources. Specifically, this document identifies: (1) the biotic habitats of the site, including those that may be used by special status plant and animal species; (2) known and/or possible waters of the United States that may be present; and (3) other significant biotic resources that may be affected by site development.

The project site is located in the California Central Valley. Two land uses were identified on the project site during the site survey: agriculture and ruderal/developed. The site consisted of an active corn field with a private farm residence on the eastern parcel, and an inactive walnut orchard on the western parcel. The site has the potential to support one special status animal.

Proposed site development will result in impact to some biotic resources of the site. Potentially significant effects include: (1) disturbance of active raptor and other migratory bird nests; and (2) potential construction related injury or mortality to Swainson's hawks.

The project can potentially avoid all significant effects to biotic resources of the site. This can be accomplished by implementing the following measures: (1) timing the project to avoid the general avian nesting season; (2) conduct pre-construction surveys for active raptor and migratory bird nests during the nesting season (including protocol surveys for Swainson's hawk); and (3) avoid such nests during the nesting season with appropriate buffers for each species, as determined by a qualified biologist.

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1.0 INTRODUCTION

The following technical report, prepared by Live Oak Associates, Inc. (LOA) in support of California Environmental Quality Act (CEQA) review, describes the biotic resources of 54.21-acres ("project site" or "site") that may be impacted by proposed development of tract housing ("project"), and evaluates potential impacts to those resources that could result from the project.

Accessor Parcel Numbers (APN) for this project site are 073-060-036 and 073-060-013, located northwest of the intersection of Avenue 304 and Road 64, less than one mile west of the Community of Goshen, Tulare County, California (Figure 1). The site may be found entirely on the *Goshen* U.S. Geological Survey (USGS) 7.5-minute quadrangle in Section 24, Township 18 South, Range 23 East (Figure 2).

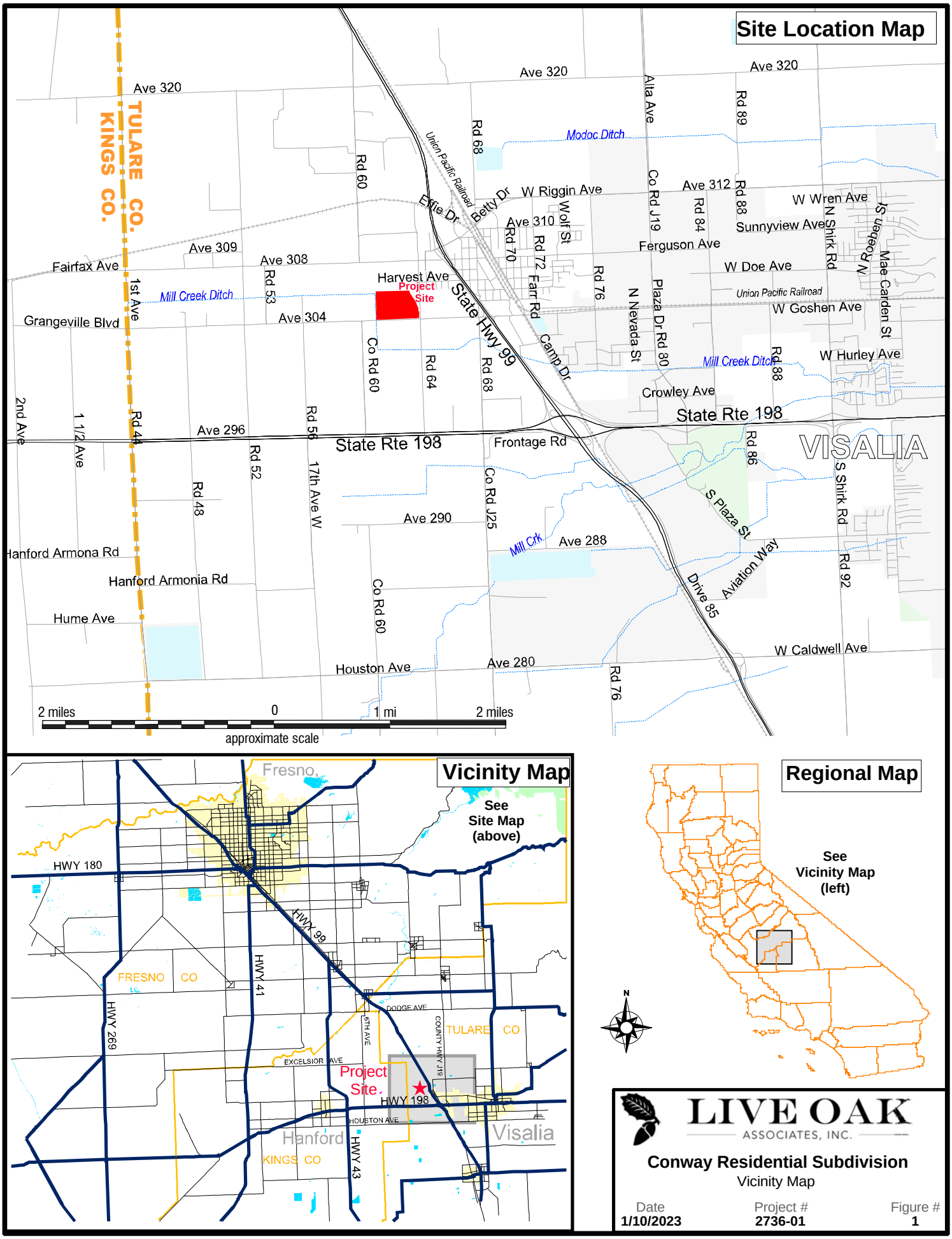
1.1 PROJECT DESCRIPTION

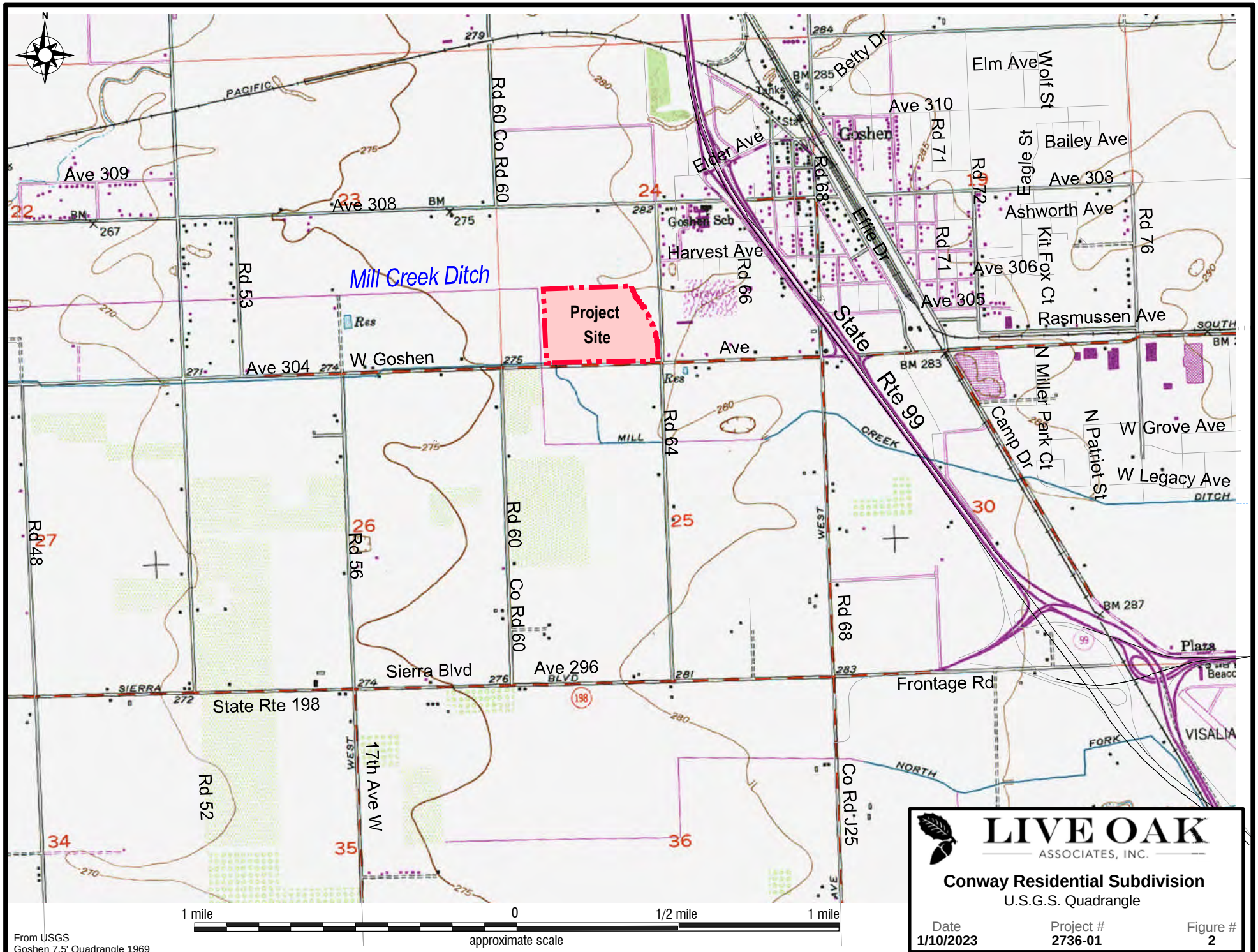
San Joaquin Valley Homes proposes to construct a tract housing development. This development includes two parcels which will be subdivided into various density housing and associated infrastructure. The eastern parcel (APN 073-060-036) will consist of 176 medium density housing units over 34.21 acres. Units will be constructed of 5 different lot sizes. The project will also include a 2 acre park, a 0.83 acre stormwater ponding basin with a depth of 8 feet, roads with sidewalks, and infrastructure associated with a housing subdivision (i.e. utilities).

The western parcel (APN 073-060-013) will consist of 130 low and medium density housing units over 20 acres. Units will be constructed of 7 different lot sizes. The project will also include a 0.47 acre stormwater ponding basin with a depth of 8 feet, roads with sidewalks, and infrastructure associated with a housing subdivision (i.e. utilities). Site plans for both parcels are included as Appendix A.

1.2 REPORT OBJECTIVES

Housing subdivision projects such as that proposed by the project partners may damage or modify biotic habitats used by sensitive plant and wildlife species. In such cases, site development may be regulated by state or federal agencies, subject to review under CEQA and/or subject to local


Site Location Map
Ave 320
TULARE CO.
KINGS CO.
Rd 60
Rd 68
Union Pacific Railroad
Modoc Ditch
Alta Ave
Rd 89
Betty Dr
W Riggin Ave
Ave 312
Rd 88
W Wren Ave
Elite Dr
Wolf St
Co Rd J19
Rd 84
Sunnyview Ave
N Shirk Rd
S Mae Carden St
Ave 310
Rd 70
Rd 72
Farr Rd
Ferguson Ave
Ave 309
Ave 308
Fairfax Ave
Rd 53
Harvest Ave
Project Site
Rd 76
W Doe Ave
N Nevada St
Plaza Dr
Rd 80
Union Pacific Railroad
1st Ave
Mill Creek Ditch
State Hwy 99
W Goshen Ave
Grangeville Blvd
Ave 304
Co Rd 60
Rd 64
Rd 68
Camp Dr
Mill Creek Ditch
Rd 88
W Hurley Ave
Crowley Ave
2nd Ave
1 1/2 Ave
Rd 44
Ave 296
State Rte 198
Rd 56
Frontage Rd
Rd 86
VISALIA
Rd 52
17th Ave W
Co Rd J25
S Plaza St
S Shirk Rd
Rd 48
Ave 290
Mill Crk
Ave 288
Hanford Armona Rd
Hanford Armonia Rd
Aviation Way
Rd 92
Drive 85
Co Rd 60
Hume Ave
W Caldwell Ave
Houston Ave
Ave 280
Rd 76
2 miles
0
1 mi
2 miles
approximate scale
Vicinity Map
Fresno
See Site Map (above)
HWY 180
HWY 99
HWY 41
FRESNO CO
HWY 269
DODGE AVE
6TH AVE
COUNTY HWY J19
TULARE CO
EXCELSIOR AVE
Project Site
HWY 198
HOUSTON AVE
Hanford
Visalia
KINGS CO
HWY 43
Regional Map
See Vicinity Map (left)
N
LIVE OAK
ASSOCIATES, INC.
Conway Residential Subdivision
Vicinity Map
Date
1/10/2023
Project #
2736-01
Figure #
1



1 mile 0 1/2 mile 1 mile

approximate scale

From USGS
Goshen 7.5' Quadrangle 1969

LIVE OAK ASSOCIATES, INC.

Conway Residential Subdivision

U.S.G.S. Quadrangle

Date	Project #	Figure #
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policies and ordinances. This report addresses issues related to: 1) sensitive biotic resources occurring within the project site; 2) the federal, state, and local laws regulating such resources; and 3) mitigation measures that may be required to reduce the magnitude of anticipated impacts and/or comply with permit requirements of state and federal resource agencies. As such, the objectives of this report are to:

- Summarize all site-specific information related to existing biological resources.
- Make reasonable inferences about the biological resources that could occur onsite based on habitat suitability and the proximity of the site to a species' known range.
- Summarize all state and federal natural resource protection laws that may be relevant to possible future site development.
- Identify and discuss project impacts to biological resources that may occur within the project site within the context of CEQA guidelines and relevant state and federal laws.
- Identify avoidance and mitigation measures that would reduce the magnitude of project impacts in a manner consistent with the requirements of CEQA and that are generally consistent with recommendations of the resource agencies regulating affected biological resources.

1.3 STUDY METHODOLOGY

Prior to any field investigations, a background review of the project site and region was conducted. Sources of information used in preparation included: (1) the *California Natural Diversity Database* (CDFW 2022), (2) the *Online Inventory of Rare and Endangered Vascular Plants of California* (CNPS 2022), and (3) manuals, reports, and references related to plants and animals of the San Joaquin Valley region.

A reconnaissance-level field survey of the project site was conducted on August 29, 2022 and January 6, 2023, by LOA ecologist, Colleen Del Vecchio. The survey was conducted at a reconnaissance level and consisted of walking through the project site while identifying its

principal land uses and the constituent plants and animals of each land use. The field survey conducted for this study was sufficient to assess the significance of possible biological impacts associated with the development plans for the project site. LOA then conducted an analysis of potential project impacts based on the known and potential biotic resources of the project site discussed in Section 2.0.

LOA's field investigation did not include an aquatic resources delineation or focused surveys for special status species. The field survey was sufficient to generally describe those features of the project site that could be subject to the jurisdiction of the U.S. Army Corps of Engineers (USACE), California Department of Fish and Wildlife (CDFW), and/or the Regional Water Quality Control Board (RWQCB), and to assess the significance of possible biological impacts associated with development of the project site.

2.0 EXISTING CONDITIONS

2.1 REGIONAL SETTING

The project site is located in the San Joaquin Valley which has, for decades, experienced intensive agricultural disturbances and more recently intensive urban development. The project site is situated in Tulare County west of the City of Visalia and is surrounded by agricultural lands to the north, west, and south. Current agricultural endeavors in the region include orchards, row crops, pasture, and dairies. To the east is Goshen, a growing mixed use (commercial and residential) community.

Like most of California, the San Joaquin Valley has a Mediterranean climate. Warm dry summers are followed by cool moist winters. Summer temperatures commonly exceed 100 degrees Fahrenheit, and the relative humidity is generally very low. Winter temperatures rarely rise much above 70 degrees Fahrenheit, with daytime highs often below 60 degrees Fahrenheit. Annual precipitation within the project site is about 11 inches, almost 85% of which falls between the months of October and March. Nearly all precipitation falls in the form of rain. Stormwater readily infiltrates the soils of and surrounding the project site.

Native plant and animal species once abundant in the region have experienced large reductions in their populations due to conversion of upland, riparian, and aquatic habitats to agricultural and urban uses. Remaining native habitats are particularly valuable to native wildlife species including special status species that still persist in the region.

2.2 PHYSICAL CONDITIONS OF PROJECT SITE

The overall topography of the project site is flat with elevations between 280 and 283 feet National Geodetic Vertical Datum (NGVD) across the site (west to east). Two soil-mapping units were identified within the site: Akers-Akers, saline-Sodic, complex, 0 to 2 percent slopes; and Calgro-Calgro, saline Sodic, complex, 0 to 2 percent slopes (NRCS 2021). Both of these soil types are classified as moderately well drained, with no hydric soil rating, meaning that they do not have the propensity to pond water in depressions and form vernal pools. Furthermore, soils within the project

site and surrounding lands have been subjected to decades of soil-disturbing activities associated with agriculture, so that their native soil characteristics may no longer be present.

2.3 LAND USES AND/OR BIOTIC HABITATS

Two land uses were identified on the project site during the site visit: agriculture and ruderal/developed (Figure 3). The land uses in the vicinity of the project site includes a walnut orchard to the west; agricultural fields with corn to the south; commercial facilities, private residences, and a small field of corn to the east; and housing development construction to the north. No native habitats were observed on the project site or vicinity. A comprehensive list of the vascular plants observed on the project site is provided in Appendix B. A list of the terrestrial vertebrates observed and those that likely use habitats on and adjacent to the project site is provided in Appendix C. Photos taken during the site visit are presented in Appendix D.

2.3.1 Agriculture

The majority of the project site falls under the land use category of agriculture. Aerial imagery dating back to 1946 shows the entire site being used for agriculture. At the time of both surveys, the eastern parcel was an active agricultural field planted with corn in August, then a tilled field (post-harvest) in January. Analysis of historic aerial imagery suggests that the eastern parcel has been planted with corn since 2004. The western parcel, at the time of both surveys, was an inactive walnut orchard. No changes to the land, trees, or their management occurred between surveys. Analysis of historic aerial imagery suggest that the western parcel was an active corn field from 2004 to 2012, then walnut trees were planted. The parcel remained a producing walnut orchard until 2021, when the majority of the trees were removed, and only a few trees were left standing.

Ruderal species were observed growing beneath the corn, walnut trees, and margins of the developed areas. Species included barnyard grass (*Echinochloa crus-galli*), Palmer's amaranth (*Amaranthus palmeri*), Canada horseweed (*Erigeron canadensis*), cheeseweed (*Malva parviflora*), red stemmed filaree (*Erodium cicutarum*), Italian rye grass (*Festuca perennis*), and common wheat (*Triticum aestivum*). In August 2022, the eastern parcel had some ponded irrigation water in the western portion of the field, with a small berm at the field edge. Access



LIVE OAK
ASSOCIATES, INC.

Conway Residential Subdivision
Land Use

Date	Project #	Figure #
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roads (dirt or paved) exist for the entire boundary of the project site. The eastern and southern boundaries, where the road is paved, has large road shoulders and electrical infrastructure.

Regular cultivation of agricultural fields limits their value to native wildlife; however, some wildlife species undoubtedly utilize the fields in periods of low disturbance. Amphibian use of this habitat is expected to be minimal due to the absence of breeding habitat on and in the vicinity of the site, but due to regular water and moisture in the field from irrigation, amphibians may use the site periodically. Amphibians that could be found in the site include American toads (*Bufo americanus*) and Pacific treefrogs (*Pseudacris sierra*). Reptiles that could occur in the field may include the San Joaquin fence Lizard (*Sceloporus occidentalis biseriatus*) (observed), Western side-blotched lizard (*Uta stansburiana elegans*), Pacific gopher snake (*Pituophis catenifer catenifer*), and California kingsnake (*Lampropeltis californiae*).

Agricultural fields also provide foraging habitat for a number of avian species. Common resident species observed foraging or perched in the agricultural field of the project site included red-winged blackbird (*Agelaius phoeniceus*), Eurasian collared-dove (*Streptopelia decaocto*), mourning doves (*Zenaida macroura*), house sparrow (*Passer domesticus*), rock pigeon (*Columba livia*), Say's phoebe (*Sayornis saya*), black phoebe (*Sayornis nigricans*), and Western meadowlark (*Sturnella neglecta*). Migrants observed in the agricultural fields of the project site included cliff swallow (*Petrochelidon pyrrhonota*), yellow-rumped warbler (*Setophaga coronata*), American pipit (*Anthus rubescens*), savannah sparrow (*Passerella sandwichensis*), and white-crowned sparrow (*Zonotrichia leucophrys*).

A few mammal species may also occur within the field. Small mammals such as deer mice (*Peromyscus maniculatus*) and California voles (*Microtus californicus*) may occur in fluctuating numbers depending on the season and crop. Small rodent tracks were observed in the corn field at the time of the survey. Additionally, burrowing mammal activity observed was sparse in the corn field, but Botta's pocket gopher (*Thomomys bottae*) and California ground squirrel (*Spermophilus beecheyi*) burrows, and ground squirrel individuals, were observed in the inactive walnut orchard. Various species of bat are also anticipated to forage over the field for flying insects.

The presence of reptiles, birds, and small mammals are likely to attract foraging raptors and mammalian predators. Raptors such as red-tailed hawks (*Buteo jamaicensis*) and American kestrels (*Falco sparverius*) were observed foraging over the site at the time of the surveys. Swainson's hawks (*Buteo swainsoni*) also have a potential to forage at the site. Additionally, a great horned owl (*Bubo virginianus*) pellet was observed at the edge of the corn field below an electrical pole. Mammalian predators occurring in the agricultural field of the project site would most likely be limited to raccoons (*Procyon lotor*) (tracks observed), striped skunks (*Mephitis mephitis*), coyotes (*Canis latrans*), domestic/feral cats (*Felis catus*) (observed), domestic/feral dogs (tracks observed), and red fox (*Vulpes vulpes*), as these species are relatively tolerant of human disturbance.

2.3.2 Developed/Ruderal

At the southern end of the eastern parcel is a residential house, carport, and driveway surrounded by a fence. The only landscaping surrounding the house was a mature ornamental pine tree (*Pinus* spp.). Some ruderal vegetation including alfalfa (*Medicago sativa*), Canada horseweed, and hairy crabgrass (*Digitaria sanguinalis*) were observed along the driveway and fence. In addition, a dirt driveway and graded pad was observed in the middle of the western parcel. Aerial imagery shows a house in this area until 2012 when it was demolished. Subsequently, aerial imagery shows this pad was used for stockpiling of materials and soil. All of the ruderal vegetation observed on this pad is the same as the adjacent inactive walnut orchard. All wildlife utilizing these developed/ruderal areas are anticipated to be the same as the adjacent agricultural fields.

2.4 SPECIAL-STATUS PLANTS AND ANIMALS

Many species of plants and animals within the state of California have low populations, limited distributions, or both. Such species may be considered "rare" and are vulnerable to extirpation as the state's human population grows and the habitats these species occupy are converted to agricultural and urban uses. As described more fully in Section 3.0, state and federal laws have provided CDFW and the U.S. Fish and Wildlife Service (USFWS) with a mechanism for conserving and protecting the diversity of plant and animal species native to the state. A sizable

number of native plants and animals have been formally designated as "threatened" or "endangered" under state and federal endangered species legislation. Others have been designated as candidates for such listing. Still others have been designated as "species of special concern" by the CDFW. The California Native Plant Society (CNPS) has developed its own set of lists (i.e., California Rare Plant Ranks, or CRPR) of native plants considered rare, threatened, or endangered (CNPS 2022). Collectively, these plants and animals are referred to as "special status species."

Special status plants and wildlife of the project vicinity and their potential for occurrence on the project site, have been identified in Table 1. The list of species for Table 1 was obtained using the *California Natural Diversity Database* (CDFW 2022) and entailed a records search for the nine 7.5-minute quadrangles containing and surrounding the project site (*Goshen, Paige, Tulare, Visalia, Monson, Traver, Burris Park, Remnoy,* and *Waukena*). Other sources of information for this table included *The California Native Plant Society's Inventory of Rare and Endangered Vascular Plants of California* (CNPS 2022), iNaturalist (iNaturalist 2022), eBird (eBird 2022), and California Herps (Nafis 2022). Note that only federally and state listed plants listed as 1A, 1B, 2A, 2B, or 3 with threat ranks 0.1, 0.2, and 0.3 by the California Rare Plant Ranking (CRPR) were included in this analysis. Other special status plants with a CRPR 4 may be considered for CEQA evaluation if they meet the criteria for rare or locally significant, addressed in the *2022 CEQA Statute & Guidelines* Section 15380 and Section 15125(c) (AEP 2022). The locations of documented special status species occurrences in the project vicinity are depicted on Figure 4.

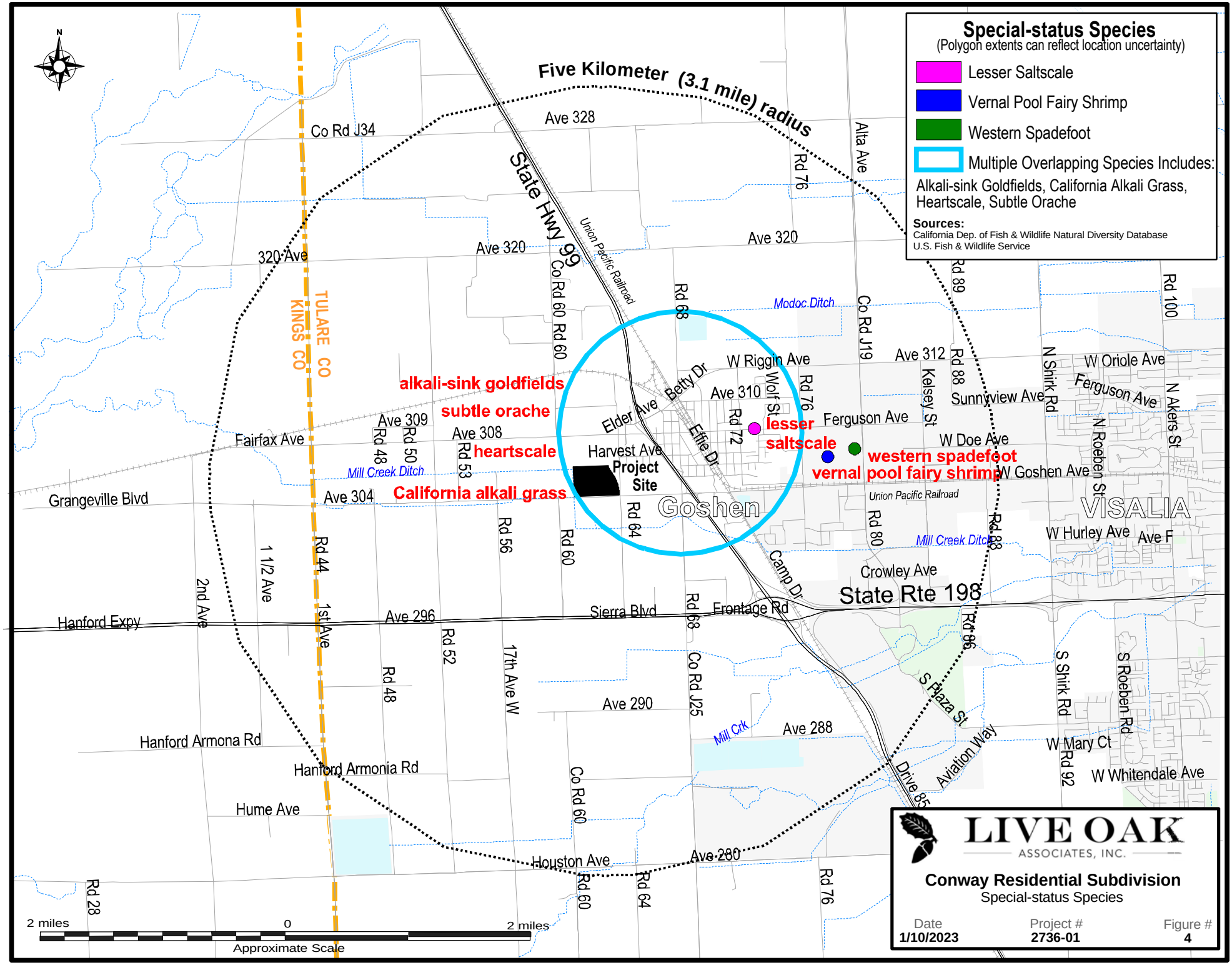

Special-status Species
(Polygon extents can reflect location uncertainty)
Lesser Saltscale
Vernal Pool Fairy Shrimp
Western Spadefoot
Multiple Overlapping Species Includes:
Alkali-sink Goldfields, California Alkali Grass, Heartscale, Subtle Orache
Sources:
California Dep. of Fish & Wildlife Natural Diversity Database
U.S. Fish & Wildlife Service
Five Kilometer (3.1 mile) radius
alkali-sink goldfields
subtle orache
heartscale
California alkali grass
lesser saltscale
western spadefoot
vernal pool fairy shrimp
Project Site
Goshen
VISALIA
State Rte 198
State Hwy 99
Union Pacific Railroad
Modoc Ditch
Mill Creek Ditch
Mill Crk
TULARE CO
KINGS CO
Co Rd J34
320 Ave
Ave 328
Ave 320
Ave 312
Ave 310
Ave 309
Ave 308
Ave 304
Ave 296
Ave 290
Ave 288
Ave 280
Fairfax Ave
Grangeville Blvd
Hanford Expy
Hanford Armona Rd
Hanford Armonia Rd
Hume Ave
Houston Ave
Harvest Ave
W Riggin Ave
Ferguson Ave
W Doe Ave
W Goshen Ave
Crowley Ave
Sierra Blvd
Frontage Rd
Sunnyview Ave
W Oriole Ave
W Hurley Ave
Ave F
Aviation Way
Drive 85
S Plaza St
W Mary Ct
W Whitendale Ave
Betty Dr
Elder Ave
Effie Dr
Wolf St
Camp Dr
Alta Ave
Kelsey St
N Shirk Rd
S Shirk Rd
N Roeben St
S Roeben Rd
N Akers St
Rd 28
Rd 44
Rd 48
Rd 50
Rd 52
Rd 53
Rd 56
Rd 60
Rd 64
Rd 68
Rd 72
Rd 76
Rd 80
Rd 86
Rd 88
Rd 89
Rd 92
Rd 100
Co Rd 60
Co Rd J19
Co Rd J25
1st Ave
2nd Ave
1 1/2 Ave
17th Ave W
2 miles
0
2 miles
Approximate Scale
LIVE OAK
ASSOCIATES, INC.
Conway Residential Subdivision
Special-status Species
Date
1/10/2023
Project #
2736-01
Figure #
4

TABLE 1. LIST OF SPECIAL STATUS SPECIES THAT COULD OCCUR IN THE PROJECT VICINITY.

PLANTS

Special Status Plant Species (CDFW 2022 and CNPS 2022)

Species	Status	Habitat	Occurrence in the Project Site*
Heartscale (*Atriplex cordulata* var. *cordulata*)	CRPR 1B.2	Occurs on saline or alkaline soils in chenopod scrub, meadows, seeps, and grasslands at elevations below 1,230 feet. Blooms April- October.	**Absent.** Suitable habitat is absent since the entire site has been used for agriculture for approximately 60 years and is highly disturbed. The nearest CNDDB record is located on, or in near proximity to, the project site, dating back to 1938. A field survey of the area in 2009 did not find this population and the investigator considered this historic record to be *A. erecticaulis*.
Earlimart orache (*Atriplex cordulata* var. *erecticaulis*)	CRPR 1B.2	Occurs in valley and foothill grasslands at elevations between 130 and 330 feet. Blooms August-September.	**Absent.** Suitable habitat is absent since the entire site has been used as agriculture for approximately 60 years and is highly disturbed.
Brittlescale (*Atriplex depressa*)	CRPR 1B.2	Occurs in chenopod scrub, valley and foothill grassland, and wetland habitats at elevations below 1,050 feet. Blooms April- October.	**Absent.** Suitable habitat is absent since the entire site has been used for agriculture for approximately 60 years and is highly disturbed.
Lesser saltscale (*Atriplex minuscula*)	CRPR 1B.1	Occurs in cismontane woodland and valley and foothill grasslands of the San Joaquin Valley; alkaline/sandy soils at elevations between 50 and 660 feet. Blooms May- October.	**Absent.** Suitable habitat is absent since the entire site has been used for agriculture for approximately 60 years and is highly disturbed.
Subtle orache (*Atriplex subtilis*)	CRPR 1B.2	Occurs in valley and foothill grasslands of the San Joaquin Valley at elevations between 130 and 330 feet. Blooms August-October.	**Absent.** Suitable habitat is absent since the entire site has been used for agriculture for approximately 60 years and is highly disturbed. The nearest CNDDB record is located on, or in near proximity to, the project site, dating back to 1905. In 2002 a field survey of the area occurred, and no individuals were observed. CDFW has listed this record as possibly extirpated.
California jewel-flower (*Caulanthus californicus*)	FE, CE, CRPR 1B.1	Occurs in chenopod scrub, pinyon and juniper woodland, and sandy valley and foothill grassland at elevations between 250 and 3,300 feet. Blooms February- May.	**Absent.** Suitable habitat is absent since the entire site has been used for agriculture for approximately 60 years and is highly disturbed.
Recurved larkspur (*Delphinium recurvatum*)	CNPS 1B.2	Occurs in cismontane woodland and valley and foothill grasslands with alkaline soils at elevations below 2,500 feet. Blooms March-June.	**Absent.** Suitable habitat is absent since the entire site has been used for agriculture for approximately 60 years and is highly disturbed.
Spiny-sepaled button celery (*Eryngium spinosepalum*)	CRPR 1B.2	Vernal pools and wetland or riparian areas, or some disturbed sites such as swales and roadside ditches, within valley and foothill grasslands, at elevations between 260 and 3,200 feet. Blooms April-July.	**Absent.** Suitable habitat is absent since the entire site has been used for agriculture for approximately 60 years and is highly disturbed.

TABLE 1. LIST OF SPECIAL STATUS SPECIES THAT COULD OCCUR IN THE PROJECT VICINITY.

PLANTS (cont'd)

Species	Status	Habitat	Occurrence in the Project Site*
Hoover's spurge (*Euphorbia hooveri*)	FT, CRPR 1B.2	Occurs in vernal pools of California's central valley at elevations between 80 and 820 feet. Blooms July- September.	**Absent.** Suitable habitat is absent since the entire site has been used for agriculture for approximately 60 years and is highly disturbed.
California satintail (*Imperata brevifolia*)	CRPR 2B.1	This perennial grass is found in scrubland and chaparral habitats where water is available at elevations between 9 and 4,904 feet. Blooms September- May.	**Absent.** Suitable habitat is absent since the entire site has been used for agriculture for approximately 60 years and is highly disturbed.
Alkali-sink goldfields (*Lasthenia chrysantha*)	CRPR 1B.1	Occurs in vernal pools or wet saline flats of valley grassland, alkali sink, or wetland-riparian habitats at elevations below 330 feet. Blooms February- April.	**Absent.** Suitable habitat is absent since the entire site has been used for agriculture for approximately 60 years and is highly disturbed. The nearest CNDDB record is located on, or in near proximity to, the project site, dating back to 1897 and 1914.
Coulter's goldfields (*Lasthenia glabrata* spp. *coulteri*)	CRPR 1B.1	Occurs in alkaline soils of playas and vernal pools at elevations below 4,000 feet. Blooms February- June.	**Absent.** Suitable habitat is absent since the entire site has been used for agriculture for approximately 60 years and is highly disturbed.
San Joaquin Valley orcutt grass (*Orcuttia inaequalis*)	FT, CE, CRPR 1B.1	Occurs in vernal pools of the Central Valley; requires deep pools with prolonged periods of inundation at elevations between 100 and 2,480 feet. Blooms April-September.	**Absent.** Suitable habitat is absent since the entire site has been used for agriculture for approximately 60 years and is highly disturbed.
San Joaquin adobe sunburst (*Pseudobahia peirsonii*)	FT, CE, CRPR 1B.1	Occurs in grasslands of the Sierra Nevada foothills in heavy clay soils of the Porterville and Centerville series at elevations between 300 and 2,625 feet. Blooms March-April.	**Absent.** Suitable habitat is absent since heavy clay soils are not present and the site appears to be below its elevational range. Furthermore, the entire site has been used for agriculture for approximately 60 years and is highly disturbed.
California alkali-grass (*Puccinellia simplex*)	CRPR 1B.2	Occurs in saline flats and mineral springs in the Central Valley, San Francisco Bay area, and westem Mojave Desert at elevations less than 2,955 feet. Blooms March-May.	**Absent.** Suitable habitat is absent since the entire site has been used for agriculture for approximately 60 years and is highly disturbed. The nearest CNDDB record is located on, or in near proximity to, the project site, dating back to 1914 and 1925. CDFW has this record listed as possibly extirpated due to the development of Goshen and agricultural conversion.
Sanford's arrowhead (*Sagittaria sanfordii*)	CRPR 1B.2	Occurs in freshwater emergent marsh habitat in drainage ditches and canals of California's central valley at elevations less than 1,985 feet. Blooms May- October.	**Absent.** Suitable freshwater emergent marsh habitat is absent from the project site. Furthermore, the entire site has been used for agriculture for approximately 60 years and is highly disturbed.

TABLE 1. LIST OF SPECIAL STATUS SPECIES THAT COULD OCCUR IN THE PROJECT VICINITY.

ANIMALS

***Special Status Animal Species* (CDFW 2022)**

Species	Status	Habitat	Occurrence in the Project Site*
Vernal pool fairy shrimp (*Branchinecta lynchi*)	FT	Occurs in vernal pools, clear to tea-colored water in grass or mud-bottomed swales, and basalt depression pools.	**Absent.** Suitable habitat is absent since the entire site has been used for agriculture for approximately 60 years and is highly disturbed.
Vernal pool tadpole shrimp (*Lepidurus packardi*)	FE	Primarily found in vernal pools but may use other seasonal wetlands in mesic valley and foothill grasslands.	**Absent.** Suitable habitat is absent from the entire project site since it has been used for agriculture for approximately 60 years and is highly disturbed.
California tiger salamander (*Ambystoma californiense*)	FT, CT	Found primarily in annual grasslands; requires vernal pools or other seasonal ponds for breeding and rodent burrows for aestivation. Although most California tiger salamanders aestivate within 0.4 mile of their breeding pond, outliers may aestivate up to 1.3 miles away (Orloff 2011).	**Absent.** Suitable habitat is absent since the entire site has been used for agriculture for approximately 60 years and is highly disturbed. No wetland or vernal pools are on site or in the vicinity of the project site.
Western spadefoot (*Spea hammondii*)	CSC	Ranges throughout the Central Valley and adjacent foothills. Occurs primarily in grassland situations. Reproduction occurs in shallow, temporary ponds.	**Absent.** Suitable habitat is absent since the entire site has been used for agriculture for approximately 60 years and is highly disturbed. One CNDDB record from 2004 is located 1.75 miles to the east in a non-native grassland habitat with vernal pools.
Northern leopard frog (*Lithobates pipiens*)	CSC	Native range is east of Sierra Nevada-Cascade Crest. Near permanent or semi-permanent water in a variety of habitats. Several transplant populations occur in the California central valley. This is a highly aquatic species and requires shoreline cover, submerged and emergent aquatic vegetation in its aquatic habitats.	**Absent.** Suitable habitat is absent since the entire site has been used for agriculture for approximately 60 years and is lacking bodies of water. Furthermore, Tulare County is outside of this species typical range. All CNDDB records in the Central Valley are for transplant populations north of the City of Visalia.
Western pond turtle (*Emys marmorata*)	CSC	Associated with permanent bodies of water. Requires partially submerged rocks or logs for basking sites. Eggs are deposited in a variety of soil types near water's edge. Seasonal hibernation/ estivation includes use of upland habitat from water sources including ground squirrel burrows and loose substrate for burying themselves.	**Absent.** Suitable habitat is absent since the entire site has been used for agriculture for approximately 60 years and is lacking bodies of water.
Northern California legless lizard (*Anniella pulchra*)	CSC	Occurs in sparsely vegetated areas of beach dunes, chaparral, pine-oak woodlands, desert scrub, sandy washes, and stream terraces with sycamores, cottonwoods, or oaks.	**Absent.** Suitable habitat is absent from the project site since the entire site has been used for agriculture for approximately 60 years and is highly disturbed.

TABLE 1. LIST OF SPECIAL STATUS SPECIES THAT COULD OCCUR IN THE PROJECT VICINITY.

ANIMALS (cont'd)

Species	Status	Habitat	Occurrence in the Project Site*
Tricolored blackbird (*Agelaius tricolor*)	CT	Breeds near fresh water, primarily emergent wetlands, with tall thickets. Forages in many open habitats.	**Absent.** Suitable breeding and foraging habitat are absent from the project site since the site is lacking water features with thickets and is in corn production.
Burrowing owl (*Athene cunicularia*)	CSC	Frequents open, dry annual or perennial grasslands, deserts, and scrublands characterized by low-growing vegetation. Dependent upon burrowing mammals, most notably the California ground squirrel, for nest burrows.	**Unlikely.** Suitable breeding and foraging habitat are present in the middle of the western parcel within the inactive walnut orchard. However, this parcel is surrounded by active agriculture operations with regular human disturbance at a distance of 340 feet. Moreover, the nearest CNDDB record is 4.25 miles northwest in open space near Cross Creek. The nearest eBird observation is near ponds and open space on Caldwell Ave. 3.6 miles southwest of the site (eBird 2022).
Swainson's hawk (*Buteo swainsonii*)	CT	Breeds in stands with few trees in juniper-sage flats, riparian areas, and in oak savannah. Requires adjacent suitable foraging areas such as grasslands or alfalfa fields supporting rodent populations.	**Likely.** Suitable breeding habitat is present in the project site. However, the breeding habitat is marginal since there is only one pine tree that is directly adjacent to a house and driveway. Swainson's hawks could forage on the site in the inactive walnut orchard, however, corn fields provide low value foraging habitat during the growing season when they would be nesting. The nearest CNDDB records are along Highway 198, 1.2 miles south of the project site from 2012. An unprocessed CNDDB nesting record from 2017 is 0.4 miles south of the project site near corn fields. See expanded discussion.
Western yellow-billed cuckoo (*Coccyzus americanus occidentalis*)	FT, CE	Occurs in valley foothill and desert riparian habitats in scattered locations in California. Requires extensive gallery riparian forests for nesting.	**Absent.** Suitable foraging and breeding habitat is absent from the project site since the site is lacking riparian habitat and vegetation.
Loggerhead shrike (*Lanius ludovicianus*)	CSC	Frequents open habitats with sparse shrubs and trees, other suitable perches, bare ground, and low herbaceous cover. Can often be found in cropland.	**Possible.** This species may occasionally forage on the site. No suitable habitat for breeding is present in the agriculture field or private residence.
San Joaquin kit fox (*Vulpes macrotis mutica*)	FE, CT	Found in desert alkali scrub and annual grasslands; may forage in adjacent agricultural habitats. Use underground dens for thermoregulation, cover, and reproduction. Dens are either self-dug or modified rodent burrows.	**Absent.** Suitable habitat is absent since the entire site has been used for agriculture for approximately 60 years and is highly disturbed. The surrounding land use has also been degraded and any historic habitat that was used is no longer present. All CNDDB records within 10 miles of the site are historic, from 1971- 1975. Since this time, many of the suitable habitat locations have been converted to agriculture or development. See expanded discussion.

TABLE 1. LIST OF SPECIAL STATUS SPECIES THAT COULD OCCUR IN THE PROJECT VICINITY.

ANIMALS (cont'd)

Species	Status	Habitat	Occurrence in the Project Site*
Western mastiff bat (*Eumops perotis californicus*)	CSC	Forages over dry washes, flood plains, chaparral, oak woodland, open ponderosa pine forest, grassland, and agricultural areas. Generally, roosts under exfoliating rock slabs, sometimes in large boulders and high buildings. Needs vertical faces to drop off to take flight.	**Possible.** Foraging habitat is present at the project site since this species is known to feed over agricultural areas and is documented within 10-miles of the project site. No roosting habitat is present due to the lack of high structures and cliffs.

OCCURRENCE TERMINOLOGY

Present: Species observed on the site at time of field surveys or during recent past.
Likely: Species not observed on the site, but it may reasonably be expected to occur there on a regular basis.
Possible: Species not observed on the site, but it could occur there from time to time.
Unlikely: Species not observed on the site, and would not be expected to occur there except, perhaps, as a transient.
Absent: Species not observed on the site and precluded from occurring there because habitat requirements not met.

STATUS CODES

FE Federally Endangered
FT Federally Threatened
CE California Endangered
CT California Threatened
CSC California Species of Special Concern

CRPR California Rare Plant Rank
1B Plants Rare, Threatened, or Endangered in California and elsewhere
2B Plants Rare, Threatened, or Endangered in California, but more common elsewhere
0.1 Seriously Threatened in California
0.2 Moderately Threatened in California

2.5 ENDANGERED, THREATENED, OR SPECIAL STATUS ANIMAL SPECIES MERITING FURTHER DISCUSSION

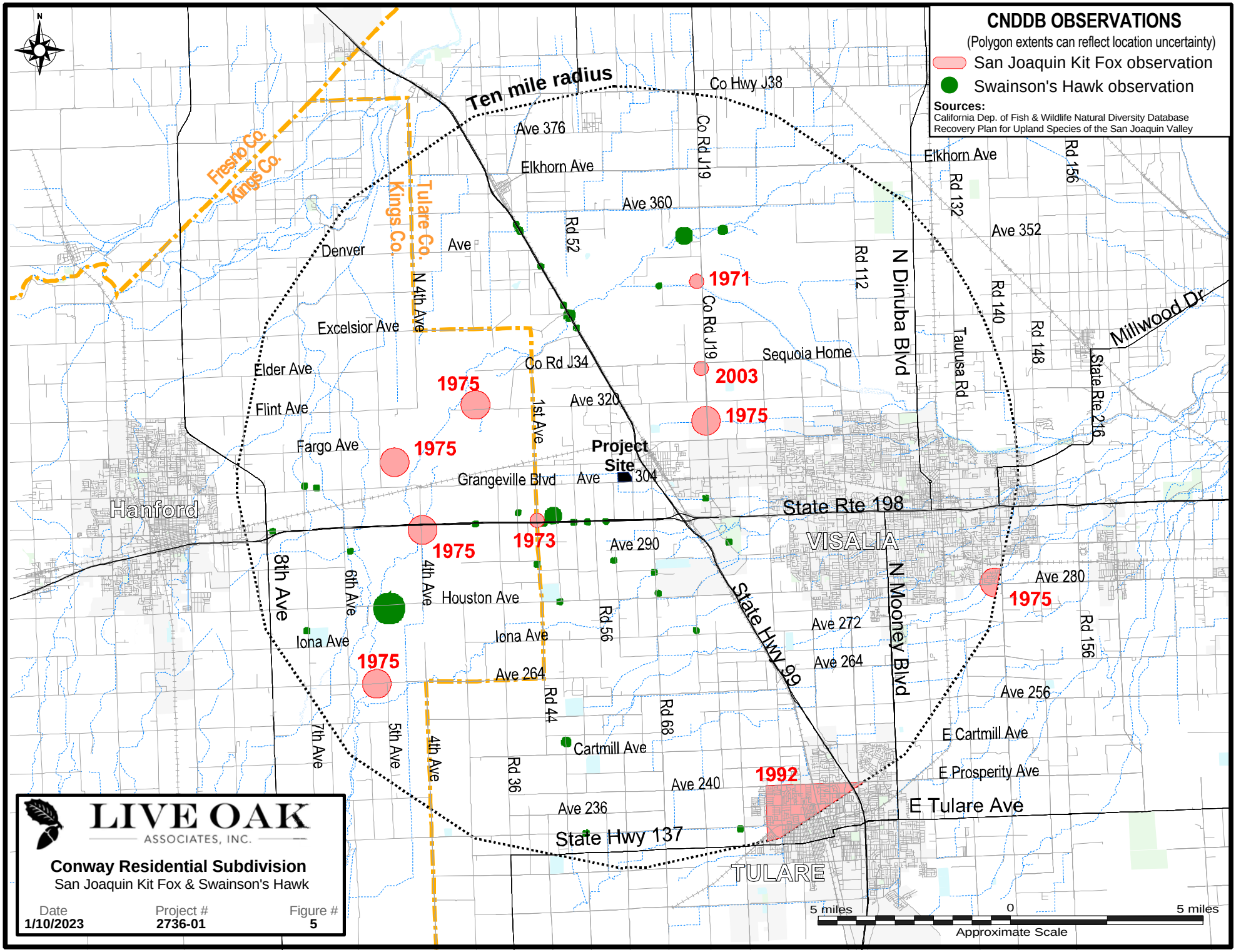
2.5.1 Expanded Discussion of Swainson's Hawk

Ecology of the Species. Swainson's hawks (*Buteo swainsoni*; California Threatened) are large, broad-winged hawks. As typical with most birds of prey, they are usually monogamous and will aggressively defend their breeding ground year after year. They are breeding season migrants to most of California, with some small non-migratory populations in the California Delta region (Bechard et al. 2020). In central California they typically arrive at their nesting sites in March, initiating their pair formation and bonding. Nest building typically begins within 7-15 days of arriving to their breeding ground and lasts about 1 week. Nest sites are selected by the male and can favor agricultural areas in central California. Swainson's hawks typically nest in a single tree, bush, grove, or row of trees at any height along a riparian corridor, isolated oak woodland, lone trees, roadside trees, or farmyard trees (Bechard et al. 2020). Eggs are typically laid in April or

May, and the young hatch in May or June. Juveniles associate with their parents for 30 days on average during the post-fledgling period, remaining in the parent's territory and being largely dependent on them for food (Bechard et al. 2020). By the end of October, adults and juveniles have separated and most birds have left for wintering grounds in South America. Some hawks will stay in California into November.

Swainson's hawks forage in large, open fields with abundant prey, including grasslands or lightly grazed pastures, irrigated alfalfa fields, and row, grain and hay crop fields, particularly before and after harvest when prey is both numerous and conspicuous (Bechard et al. 2020). In the Central Valley, California voles (*Microtus californicus*) account for about 45% of non-insect prey taken by the Swainson's hawk, followed by ground birds (32%) and pocket gophers, deer mice, and other small mammals (20%) (Estep 1989). Insects comprise a large proportion of individual prey items, but a negligible proportion of total prey biomass. The designation of the Swainson's hawk as Threatened under the California Endangered Species Act is based on population decline due in part to loss of nesting and foraging habitat to urban development, pesticides, shooting, and disturbance of nest sites (CDFG 1994).

Potential to Occur Onsite. Swainson's hawks are known to nest and breed in the project vicinity. The CNDDB lists several nesting occurrences of this species within 2 miles of the project site; the closest of these (Occurrence No. 1793) was documented in a California black walnut tree along Highway 198 surrounded by agricultural operations, approximately 1.1 mile southeast of the site, from 2012 (see Figure 5). Two additional nesting occurrences from 2012 and 2017 (Occurrence No. 1691 and 2751), are also in singular trees along Highway 198 and approximately 1.6 and 1.4 miles southeast from the project site, respectively. Additionally, a more recent nesting occurrence from 2017 is 1.9 miles southeast of the site (Occurrence No. 2733) in an oak tree adjacent to agricultural fields and a commercial facility. Lastly, two unprocessed CNDDB data points for nesting occurrences are within 1 mile of the project site. One data point is from 2017 and is for an active nest 1 mile south of the site along Highway 198, also surrounded by agriculture. The other data point is also from 2017 and is 0.4 miles south of the project site on Road 64, at a private farm residence with multiple tall trees, surrounded by agriculture.


CNDDB OBSERVATIONS
(Polygon extents can reflect location uncertainty)
San Joaquin Kit Fox observation
Swainson's Hawk observation
Sources:
California Dep. of Fish & Wildlife Natural Diversity Database
Recovery Plan for Upland Species of the San Joaquin Valley
Ten mile radius
Project Site
1971
2003
1975
1973
1992
Hanford
VISALIA
TULARE
Fresno Co.
Kings Co.
Tulare Co.
Co Hwy J38
Ave 376
Elkhorn Ave
Ave 360
Ave
Denver
Excelsior Ave
Elder Ave
Flint Ave
Fargo Ave
Co Rd J34
Ave 320
Grangeville Blvd
Ave 304
Sequoia Home
State Rte 198
Ave 290
Houston Ave
Iona Ave
Ave 264
Ave 272
Ave 280
Ave 256
Ave 240
Ave 236
Cartmill Ave
E Cartmill Ave
E Prosperity Ave
E Tulare Ave
State Hwy 137
State Hwy 99
N Dinuba Blvd
N Mooney Blvd
Millwood Dr
State Rte 216
Taurusa Rd
Rd 52
Rd 56
Rd 44
Rd 36
Rd 68
Rd 112
Rd 132
Rd 140
Rd 148
Rd 156
Co Rd J19
N 4th Ave
1st Ave
4th Ave
5th Ave
6th Ave
7th Ave
8th Ave
5 miles
0
5 miles
Approximate Scale
LIVE OAK
ASSOCIATES, INC.
Conway Residential Subdivision
San Joaquin Kit Fox & Swainson's Hawk
Date
1/10/2023
Project #
2736-01
Figure #
5

Given the number of sightings and nest sites in the vicinity of the project site, it is likely that Swainson's hawks at least pass over the site on a somewhat regular basis; however, the trees on site would provide only marginal nesting habitat, at best. Furthermore, there was no indication of a large raptor nest in the trees, indicating that it had not been used for nesting in the recent past.

Given the number of sightings and nest sites in the vicinity of the project site, it is likely for individuals to opportunistically forage on the project site and along its margins from time to time. The corn fields pre and post-harvest is likely to provide the best conditions for foraging, while the inactive walnut orchard may provide foraging opportunities at any time. It is notable, that all of the surrounding parcels at the time of the surveys would provide similar foraging opportunities.

2.5.2 Expanded Discussion of San Joaquin Kit Fox

Ecology of the species. By the time the San Joaquin kit fox (*Vulpes macrotis mutica*; SJKF) was listed as federally endangered in 1967 and California threatened in 1971, it had been extirpated from much of its historic range. The smallest North American member of the dog family (Canidae), the kit fox historically occupied the dry plains of the San Joaquin Valley, from San Joaquin County to southern Kern County (Grinnell et al. 1937). Local surveys, research projects, and incidental sightings indicate that kit fox currently occupy available habitat on the Central Valley floor and in the surrounding foothills. Core SJKF populations are located in the natural lands of western Kern County, the Carrizo Plain Natural Area in San Luis Obispo County, and the Ciervo-Panoche Natural Area in western Fresno and eastern San Benito Counties (USFWS 1998).

The SJKF prefers habitats of open or low vegetation with loose soils. In the southern and central portion of the Central Valley, kit fox is found in valley sink scrub, valley saltbrush scrub, upper Sonoran subshrub scrub, and annual grassland (USFWS 1998). Kit fox may also be found in grazed grasslands, urban settings, and in areas adjacent to tilled or fallow fields (USFWS 1998). They require underground dens to raise pups, regulate body temperature, and avoid predators and other adverse environmental conditions (Golightly and Ohmart 1984). In the central portion of their range, they usually occupy burrows excavated by small mammals such as California ground

squirrels. The SJKF is primarily carnivorous, feeding on black-tailed hares, desert cottontails, rodents, insects, reptiles, and some birds.

Potential to occur onsite. The project area consists of active agriculture (corn field) with a private residence and an inactive walnut orchard, which would be unsuitable for the San Joaquin kit fox due to high levels of anthropogenic disturbance on site, and immediately surrounding the site. Although it is possible the SJKF could find suitable prey items in the corn field, the field would not be suitable for kit fox denning due to intensive maintenance activities.

Moreover, for the SJKF to occur within the project area, it must first have some potential to occur in the project vicinity (see Figure 5). Although the SJKF has been historically documented in the vicinity, modern kit fox occurrences are scarce. The most recent CNDDB occurrence of this species within 10 miles of the project area was recorded in 2003 approximately 3.4 miles east of the site (Occurrence No. 150). This sighting was of an adult foraging in an alfalfa field; however, this entire area is surround by agriculture with small areas of natural habitat. There is no urban development in the near vicinity of this area. The next most recent CNDDB record (Occurrence No. 1120) is from 1992 and does not have an exact location. The record states a kit fox population was recorded as present in the vicinity of Tulare by CDFW, with a 2 mile radius surrounding the city. The remaining 8 CNDDB occurrences within the 10-mile vicinity were recorded from 1971 to 1975. As discussed, the proposed project site is surrounded by expanding urban development to the north; active agriculture operations to the west and south; and agriculture, private residences, and commercial facilities to the east on the western edge of the Community of Goshen. All of these anthropogenic activities diminish the value of land, making it marginal or unsuitable habitat for this species. The general low habitat value of the project area and surrounding lands, and the lack of recent detections suggests that kit fox is absent from project vicinity and within the project area itself.

2.6 JURISDICTIONAL WATERS

Jurisdictional waters are those rivers, creeks, drainages, lakes, ponds, reservoirs, and wetlands that are subject to the authority of the USACE, CDFW, and/or the RWQCB. In general, the USACE regulates navigable waters, tributaries to navigable waters, and wetlands adjacent to these waters,

where wetlands are defined by the presence of hydric soils, hydrophytic vegetation, and wetland hydrology. The CDFW asserts jurisdiction over waters in California that have a defined bed and bank, and the RWQCB has jurisdiction over California surface water and groundwater. The regulation of jurisdictional waters is discussed in more detail in Section 3.10.

The project site does not contain jurisdictional waters or any other type of aquatic resource. Mill Creek Ditch, a potentially jurisdictional feature, is located immediately west of the project site just outside the project boundary (see Figures 2 and 3).

2.7 DESIGNATED CRITICAL HABITAT

USFWS often designates areas of "critical habitat" when it lists species as threatened or endangered. Critical habitat is a specific geographic area(s) that contains features essential for the conservation of a threatened or endangered species and that may require special management and protection.

Designated critical habitat is absent from the project site and surrounding lands (USFWS 2022).

2.8 SENSITIVE NATURAL COMMUNITIES

Sensitive natural communities are those that are of limited distribution, distinguished by significant biological diversity, home to special status species, etc. CDFW is responsible for the classification and mapping of all natural communities in California. Natural communities are assigned state and global ranks according to their degree of imperilment. Any natural community with a state rank of 3 (S3) or lower (on a 1 to 5 scale) is considered sensitive. Natural communities with ranks of S1-S3 are considered sensitive natural communities to be addressed in the environmental review processes of CEQA and its equivalents. Examples of sensitive natural communities in the vicinity of the project area include Northern Basalt Flow Vernal Pool and various types of Central Valley Drainage Streams (Sawyer, Keeler-Wolf and Evens 2009).

The project site supports no sensitive natural communities.

2.9 WILDLIFE MOVEMENT CORRIDORS

Wildlife movement corridors are routes that animals regularly and predictably follow during seasonal migration, dispersal from native ranges, daily travel within home ranges, and inter-population movements. Movement corridors in California are typically associated with valleys, ridgelines, and rivers and creeks supporting riparian vegetation.

The project site contains no regular or predictable wildlife movement corridors.

3.0 RELEVANT GOALS, POLICIES, AND LAWS

3.1 CALIFORNIA ENVIRONMENTAL QUALITY ACT

In California, any project carried out or approved by a public agency that will result in a direct or reasonably foreseeable indirect physical change in the environment must comply with CEQA. The purpose of CEQA is to ensure that a project's potential impacts on the environment are evaluated, and methods for avoiding or reducing these impacts are considered before the project is allowed to move forward. A secondary aim of CEQA is to provide justification to the public for the approval of any projects involving significant impacts on the environment.

According to Section 15382 of the CEQA Guidelines, a significant effect on the environment means a "substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project, including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic interest." Although the lead agency may set its own CEQA significance thresholds, project impacts to biological resources are generally considered to be significant if they would meet any of the following criteria established in Appendix G of the CEQA Guidelines:

- 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 CDFW or USFWS.
- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by CDFW or USFWS.
- Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.
- 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 site.
- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.
- Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

Furthermore, CEQA Guidelines Section 15065(a) requires the lead agency to make "mandatory findings of significance" if there is substantial evidence that a project may:

- Substantially 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, or substantially reduce the number or restrict the range of an endangered, rare or threatened species.
- Achieve short-term environmental goals to the detriment of long-term environmental goals.
- Produce environmental effects that are individually limited but cumulatively considerable, meaning that the incremental effects of the project are significant when viewed in connection with the effects of past projects, other current projects, and probable future projects.

3.2 GENERAL PLAN POLICIES OF TULARE COUNTY

In compliance with CEQA, the lead agency must consider project conformance with applicable goals and policies of the General Plan of Tulare County and the Goshen Community Plan 2018 Update. The Tulare County General Plan and the Goshen Community Plan includes goals and policies designed to protect significant biotic resources and land uses of the planning area. Resource elements addressed by this plan include: (1) wetland and riparian areas, (2) fish and wildlife habitat, (3) planting native vegetation, and (4) open space for the preservation of natural resources. Tulare County General Plan and Goshen Community Plan policies related to natural resources can be found in Appendix E.

3.3 HABITAT CONSERVATION PLANS AND NATURAL COMMUNITY CONSERVATION PLANS

Section 10 of the federal Endangered Species Act establishes a process by which non-federal projects can obtain authorization to incidentally take listed species, provided take is minimized and thoroughly mitigated. A Habitat Conservation Plan (HCP) developed by the project applicant in collaboration with the USFWS and/or National Marine Fisheries Service (NMFS) ensures that such minimization and mitigation will occur and is a prerequisite to the issuance of a federal incidental take permit. Similarly, a Natural Community Conservation Plan (NCCP) developed by

the project applicant in collaboration with CDFW, provides for the conservation of biodiversity within a project area, and permits limited incidental take of state-listed species.

3.4 DESIGNATED CRITICAL HABITAT

The USFWS often designates areas of "critical habitat" when it lists species as threatened or endangered. Critical habitat is defined by section 3(5)(A) of the federal Endangered Species Act as "(i) The specific areas within the geographic area occupied by a species, at the time it is listed in accordance with the Act, on which are found those physical or biological features (I) essential to the conservation of the species and (II) that may require special management considerations or protection; and (ii) specific areas outside the geographic area occupied by a species at the time it is listed, upon a determination that such areas are essential for the conservation of the species." The Act goes on to define "conservation" as "the use of all methods and procedures that are necessary to bring an endangered or threatened species to the point at which listing under the Act is no longer necessary."

The designation of a specific area as critical habitat does not directly affect its ownership. Federal actions that result in destruction or adverse modification of critical habitat are, however, prohibited in the absence of prior consultation with the USFWS according to provisions of the act. Furthermore, recent appellate court cases require that federal actions affecting critical habitat promote the recovery of the listed species protected by the critical habitat designation.

The USFWS designates critical habitat for a species by identifying general areas likely to contain the species' "primary constituent elements," or physical or biological features of the landscape that the species needs to survive and reproduce. Although a unit of critical habitat for a particular species may be quite large, only those lands within the unit that contain the species' primary constituent elements are actually considered critical habitat by the USFWS.

3.5 THREATENED AND ENDANGERED SPECIES

In California, imperiled plants and animals may be afforded special legal protections under the California Endangered Species Act (CESA) and/or Federal Endangered Species Act (FESA). Species may be listed as "threatened" or "endangered" under one or both Acts, and/or

as “rare” under CESA. Under both Acts, “endangered” means a species is in danger of extinction throughout all or a significant portion of its range, and “threatened” means a species is likely to become endangered within the foreseeable future. Under CESA, “rare” means a species may become endangered if their present environment worsens. Both Acts prohibit “take” of listed species, defined under CESA as “to hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture or kill” (California Fish and Game Code, Section 86), and more broadly defined under FESA to include “harm” (16 USC, Section 1532(19), 50 CFR, Section 17.3).

When state and federally listed species have the potential to be impacted by a project, the USFWS and CDFW must be included in the CEQA process. These agencies review the environmental document to determine the adequacy of its treatment of endangered species issues and to make project-specific recommendations for the protection of listed species. Projects that may result in the “take” of listed species must generally enter into consultation with the USFWS and/or CDFW pursuant to FESA and CESA, respectively. In some cases, incidental take authorization(s) from these agencies may be required before the project can be implemented.

3.6 CALIFORNIA FULLY PROTECTED SPECIES

The classification of certain animal species as “fully protected” was the State of California’s initial effort in the 1960s, prior to the passage of the California Endangered Species Act, to identify and provide additional protection to those species that were rare or faced possible extinction. Following CESA enactment in 1970, many fully protected species were also listed as California threatened or endangered. The list of fully protected species are identified, and their protections stipulated, in California Fish and Game Code Sections 3511 (birds), 4700 (mammals), 5050 (reptiles and amphibians), and fish (5515). Fully protected species may not be taken or possessed at any time and no licenses or permits may be issued for their take, except in conjunction with necessary scientific research and protection of livestock.

3.7 MIGRATORY BIRDS

The Federal Migratory Bird Treaty Act (FMBTA: 16 USC 703-712) 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 actually 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.

Native birds are also protected under California state law. 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. Moreover, the California Migratory Bird Protection Act, enacted in September 2019, clarifies native bird protection, and increases protections where California law previously deferred to federal law.

3.8 BIRDS OF PREY

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.

Additionally, the Bald and Golden Eagle Protection Act (16 U.S.C., scc. 668-668c) prohibits anyone from taking (pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest or disturb) bald or golden eagles, including their parts, nests, or eggs, unless authorized under a federal permit. In addition to immediate acts of take, the act prohibits any disturbance that directly affects an eagle or an active eagle nest as well as any disturbance caused by humans around a previously used nest site during a time when eagles are not present such that it agitates or bothers an eagle to a degree that interferes with or interrupts normal breeding, feeding, or sheltering habits, and causes injury, death or nest abandonment.

3.9 NESTING BIRDS

In California, protection is afforded to the nests and eggs of all birds. California Fish and Game Code (Section 3503) states that it is "unlawful to take, possess, or needlessly destroy the nest or

eggs of any bird except as otherwise provided by this code or any regulation adopted pursuant thereto." Breeding-season disturbance that causes nest abandonment and/or loss of reproductive effort is considered a form of "take" by the CDFW.

3.10 WETLANDS AND OTHER JURISDICTIONAL WATERS

Section 404 of the federal Clean Water Act (CWA) regulates the discharge of dredged or fill material into "navigable waters" (33 U.S.C. §1344), defined in the CWA as "the waters of the United States, including the territorial seas" (33 U.S.C. §1362(7)). The CWA does not supply a definition for waters of the U.S., and that has been the subject of considerable debate since the CWA's passage in 1972. A variety of regulatory definitions have been promulgated by the two federal agencies responsible for implementing the CWA, the Environmental Protection Agency (EPA) and USACE. These definitions have been interpreted, and in some cases, invalidated, by federal courts.

Most recently, waters of the U.S. were defined by the Navigable Waters Protection Rule (NWPR). The new rule was published in the Federal Register on April 21, 2020 and took effect on June 22, 2020. However, on August 30, 2021, in the case of Pascua Yaqui Tribe v. U.S. Environmental Protection Agency, the U.S. District Court for the District of Arizona vacated and remanded the NWPR. In light of this order, the EPA and USACE have halted implementation of the NWPR and, until further notice, are interpreting "waters of the United States" consistent with the pre-2015 regulatory regime.

The interpretation of waters of the U.S. prior to 2015 generally included:

- All waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide.
- All interstate waters including interstate wetlands.
- All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation or destruction of which could affect interstate or foreign commerce.

- All impoundments of waters otherwise defined as waters of the United States under the definition.
- Tributaries of waters identified in the bulleted items above.

As determined by the United States Supreme Court in its 2001 Solid Waste Agency of Northern Cook County v. U.S. Army Corps of Engineers (SWANCC) decision, channels and wetlands isolated from other jurisdictional waters cannot be considered jurisdictional on the basis of their use, hypothetical or observed, by migratory birds. Similarly, in its 2006 consolidated Carabell/Rapanos decision, the U.S. Supreme Court ruled that a significant nexus between a wetland and other navigable waters must exist for the wetland itself to be considered a jurisdictional water.

All activities that involve the discharge of dredge or fill material into waters of the U.S. are subject to the permit requirements of the USACE. Such permits are typically issued on the condition that the applicant agrees to provide mitigation that result in no net loss of wetland functions or values. No permit can be issued until the RWQCB issues a Section 401 Water Quality Certification (or waiver of such certification) verifying that the proposed activity will meet state water quality standards.

Under the Porter-Cologne Water Quality Control Act of 1969, the State Water Resources Control Board has regulatory authority to protect the water quality of all surface water and groundwater in the State of California ("waters of the State"). Nine RWQCBs oversee water quality at the local and regional level. The RWQCB for a given region regulates discharges of fill or pollutants into waters of the State through the issuance of various permits and orders. Discharges into waters of the State that are also waters of the U.S. require a Section 401 Water Quality Certification from the RWQCB as a prerequisite to obtaining certain federal permits, such as a Section 404 Clean Water Act permit. Discharges into all waters of the State, even those that are not also waters of the U.S., require Waste Discharge Requirements (WDRs), or waivers of WDRs, from the RWQCB. The RWQCB also administers the Construction Storm Water Program and the federal National Pollution Discharge Elimination System (NPDES) program. Projects that disturb one or more acres of soil must obtain a Construction General Permit under the Construction Storm Water Program. A prerequisite for this permit is the development of a Storm Water Pollution Prevention

Plan (SWPPP) by a certified Qualified SWPPP Developer. Projects that discharge wastewater, storm water, or other pollutants into a water of the U.S. may require a NPDES permit.

CDFW has jurisdiction over the bed and bank of natural drainages and lakes according to provisions of Section 1601 and 1602 of the California Fish and Game Code. Activities that may substantially modify such waters through the diversion or obstruction of their natural flow, change or use of any material from their bed or bank, or the deposition of debris require a Notification of Lake or Streambed Alteration. If CDFW determines that the activity may adversely affect fish and wildlife resources, a Lake or Streambed Alteration Agreement will be prepared. Such an agreement typically stipulates that certain measures will be implemented to protect the habitat values of the lake or drainage in question.

4.0 IMPACTS AND MITIGATIONS

The following discussions assume all 54.21 acres of the project site will be subdivided into medium and low density housing, with associated infrastructure. Potential project impacts to biological resources and recommended mitigation measures are discussed below.

4.1 POTENTIALLY SIGNIFICANT PROJECT IMPACTS/MITIGATION

4.1.1 Disturbance to Active Raptor and Other Migratory Bird Nests from Construction Activities During Project Implementation

Potential Impacts. The project site has the potential to be used for nesting by a variety of native avian species protected by the Migratory Bird Treaty Act and related state laws. Birds can nest in onsite trees, the house and associated structures, electrical poles, or on the ground. If project construction takes place during the nesting season (generally February 1- August 31), birds nesting on the site could be injured or killed by construction activities or disturbed such that they would abandon their nests. Significant construction-related disturbance is also a possibility for birds nesting adjacent to the project site. Project-related injury, mortality, or disturbance of nesting birds that results in nest abandonment are potentially significant adverse environmental effects of the project.

Mitigation. To avoid and minimize the potential for construction-related mortality/disturbance of nesting birds, the following measures will be implemented:

> ***Measure 4.1.1a (Construction Timing).*** If feasible, the project will be implemented outside of the avian nesting season, typically defined as February 1 to August 31.
>
> ***Measure 4.1.1b (Pre-construction Surveys*).** If construction is to occur between February 1 and August 31, a qualified biologist will conduct pre-construction surveys for active bird nests within 10 days prior to the start of construction. The survey area will encompass the site and accessible surrounding lands within 250 feet for nesting migratory birds and 500 feet for raptors (i.e., birds of prey).

***Measure 4.1.1c (Avoidance of Active Nests*).** Should any active nests be discovered in or near proposed construction zones, the biologist will identify a suitable construction-free buffer around the nest. This buffer will be identified on the ground with flagging or fencing and will be maintained until the biologist has determined that the young have fledged and are capable of foraging independently.

Implementation of the above measures will reduce potential effects of future project development on nesting migratory birds to a less than significant level under CEQA and will ensure compliance with state and federal laws protecting nesting birds.

4.1.2 Project Impacts to Swainson's Hawk

Potential Impacts. While foraging and nesting habitat on site is considered to have low value for Swainson's hawk, given the number of sightings in the vicinity of the project site they could nonetheless be found on, or over, the site with some frequency. The nesting habitat on site is a singular pine tree adjacent to the existing house and a few walnut trees remaining in the orchard. If project construction takes place during the Swainson's hawk nesting season (generally March 1- September 15), hawks nesting on the site or in the near vicinity could be injured or killed by construction activities or disturbed such that they would abandon their nests. Project-related injury, mortality, or disturbance of Swainson's hawks that results in nest abandonment are potentially significant adverse environmental effects of the project.

If Swainson's hawks are foraging within the project's agricultural area during project activities, it is anticipated that the hawk will move to adjacent lands where suitable prey and matching land uses are present, resulting in a less than significant adverse environmental effect. After construction is completed, the project site is not anticipated to be used by Swainson's hawks other than as a transient or fly over. The 2 acre park that is proposed, may provide some foraging opportunity or nesting opportunity over time if trees are planted. However, given the low value of foraging habitat of the current site, the size of the project (54.21 acres), and the abundance of agricultural lands in the immediate area and wider region with similar or better quality foraging and nesting habitat, the loss of foraging and nesting habitat for this species is not considered a potentially significant adverse environmental effect of the project.

Mitigation. To avoid and minimize the potential for construction-related mortality/disturbance of Swainson's hawks while nesting, the following measures will be implemented:

> ***Measure 4.1.2a (Construction Timing).*** If feasible, the project will be implemented outside of the avian nesting season, typically defined as March 1 to September 15.
>
> ***Measure 4.1.2b (Pre-construction Surveys*).** If the project must be constructed during the March 1-September 15 nesting season, surveys for nesting Swainson's hawks are required. The surveys will follow the protocol established in the Swainson's Hawk Technical Advisory Committee's 2000 *Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in California's Central Valley* and will encompass all mature trees within 0.5 mile of the project site. If no nesting pairs are found during the surveys, no further mitigation is required.
>
> ***Measure 4.1.2c* (*Establish Buffers*).** If preconstruction surveys identify one or more active Swainson's hawk nests within 0.5 mile of the project site, suitable disturbance-free buffers will be established around the nest(s) by a qualified biologist and maintained until the end of construction or until the biologist determines that the nest is no longer active, whichever comes first.

Implementation of the above measures will reduce potential effects of the project site on Swainson's hawks to a less than significant level under CEQA and will ensure compliance with state and federal laws protecting this species.

4.2 LESS THAN SIGNIFICANT PROJECT IMPACTS

4.2.1 Special Status Animal Species that May Occur on the Project Site as Occasional or Regular Foragers but Breed Elsewhere

Potential Impacts. Two special status animals, the loggerhead shrike (*Lanius ludovicianus*) and western mastiff bat (*Eumops perotis californicus*), have the potential to forage on site from time to time but would not breed or roost on site (see Table 1). Potential foraging habitat on the project site is not uniquely important for these species and similar or higher quality foraging habitat is

relatively abundant in the region. Loggerhead shrike would not be vulnerable to construction related mortality, as they would simply move away from any construction activity on site. Also, the western mastiff bat would not be vulnerable to construction-related injury or mortality because they are nocturnal, and their active period of foraging occurs at night when construction has ceased. Like the loggerhead shrike, even if one or more individuals were to occur on the site during construction, their high level of mobility would allow them to easily evade any construction activity. For these reasons, project impacts to the special status species that may occur on the site as occasional or regular foragers are considered less than significant under CEQA.

Mitigation. Mitigation is not warranted.

4.2.2 Project Impacts to Special Status Plant Species

No Impacts. 16 special status plant species, vascular and bryophyte, are known to occur in the region (see Table 1). The project site is within an existing agricultural area with a high level of historic and current human disturbance. 16 of these species are considered to be absent from the site due to the absence of any present or historically suitable habitat. These species include heartscale (*Atriplex cordulata* var. *cordulata*), Earlimart orache (*Atriplex cordulata* var. *erecticaulis*), brittlescale (*Atriplex depressa*), lesser saltscale (*Atriplex minuscula*), subtle orache (Atriplex subtilis), California jewel-flower (*Caulanthus californicus*), recurved larkspur (Delphinium recurvatum), spiny-sepaled button celery (*Eryngium spinosepalum*), Hoover's spurge (*Euphorbia hooveri*), California satintail (*Imperata brevifolia*), alkali-sink goldfields (Lasthenia chrysantha), Coulter's goldfields (*Lasthenia glabrata* spp. *coulteri*), San Joaquin Valley orcutt grass (*Orcuttia inaequalis*), San Joaquin adobe sunburst (*Pseudobahia peirsonii*), California alkali-grass (*Puccinellia simplex*), and Sanford's arrowhead (*Sagittaria sanfordii*). The proposed project is not expected to affect these species or their habitats, and impacts would be less than significant under CEQA.

Mitigation. Mitigation measures are not warranted.

4.2.3 Project Impacts to Special Status Animal Species Absent from or Unlikely to Occur on Site

No Impact. Of the 14 special status animal species known from the regional vicinity, 10 are considered absent from the project site due to the absence of suitable habitat, the site being located outside of the known geographical range of the species, or the species' having been extirpated from the region. These species include the vernal pool fairy shrimp (*Branchinecta lynchi*), vernal pool tadpole shrimp (*Lepidurus packardi*), California tiger salamander (*Ambystoma californiense*), western spadefoot (*Spea hammondii*), northern leopard frog (*Lithobates pipiens*), western pond turtle (*Emys marmorata*), northern California legless lizard (*Anniella pulchra*), tricolored blackbird (Agelaius tricolor), western yellow-billed cuckoo (*Coccyzus americanus occidentalis*), and San Joaquin kit fox (*Vulpes macrotis mutica*) (see Table 1).

One species, the burrowing owl (*Athene cunicularia*), has an unlikely potential to occur on site (see Table 1). While there is suitable habitat in the inactive walnut orchard in the form of California ground squirrel burrow complexes, due to the small size of the parcel and close proximity of active agricultural operations, the value of this habitat is low. It is anticipated that if an owl were present on site, it would be temporary due to the regular human disturbances from the adjacent agricultural operations.

Since there is little to no likelihood that these species occur on site, they have no appreciable potential to be affected through construction-related injury or mortality or loss of habitat. Project impacts to these species are considered less than significant.

Mitigation. Mitigation measures are not warranted.

4.2.4 Project Impact to Sensitive Natural Communities and Designated Critical Habitat

No Impact. Designated critical habitat and sensitive natural communities are absent from the project site. The only land uses present within the project site is agricultural and developed/ ruderal.

Project development is expected to have no impact on sensitive natural communities or designated critical habitat.

Mitigation. No mitigation is warranted.

4.2.5 Project Impact to Wildlife Movement Corridors

No Impact. As discussed, this project site is surrounded by expanding urban development to the north, agriculture to the west and south, and agriculture/commercial facilities to the east at the western edge of the Community of Goshen. There are no physical features (riparian corridors, valleys, etc.) at the project site or vicinity that would support regular or predicted wildlife movement. Therefore, the project will result in a less than significant effect on wildlife movement corridors.

Mitigation. No mitigation is warranted.

4.2.6 Project Impacts to Waters of the U.S.

No Impact. Wetlands and jurisdictional waters are absent from the project site. The Mill Creek Ditch is located immediately west of the project site, but is not within the project parcel boundary, therefore project related impacts are not anticipated.

Mitigation. No mitigation is warranted.

4.2.7 Local Policies or Habitat Conservation Plans

No Impact. Proposed project design is consistent with the goals and policies of the Tulare County General Plan and Goshen General Plan.

Mitigation. No mitigation is required.

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APPENDIX A: SITE PLAN

DIAS PROPERTY

TENTATIVE SUBDIVISION MAP

PREPARED FOR: SAN JOAQUIN VALLEY HOMES
5607 AVE DE LOS ROBLES
VISALIA, CA 93291

PREPARED BY: 4CREEKS, INC.
324 S. SANTA FE ST., STE. A
VISALIA ,CA 93292

ACREAGE

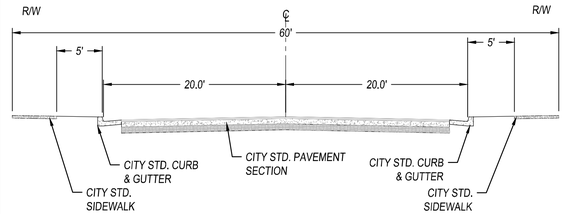
20 AC 130 UNITS

LEGEND

APN:	*073-060-013*
ZONING:	*C-2-MU*
GENERAL PLAN:	*RETAIL COMMERCIAL*
FLOOD ZONE:	*X & A*
ELECTRICITY:	*SOUTHERN CALIFORNIA EDISON*
WATER:	*GOSHEN COMMUNITY SERVICES DISTRICT*
TELEPHONE:	*AT&T*
NATURAL GAS:	*SOUTHERN CALIFORNIA GAS*
EXISTING USE:	*VACANT*
PROPOSED USE:	*LOW & MEDIUM DENSITY RESIDENTIAL*
PROPOSED MAINTENANCE:	

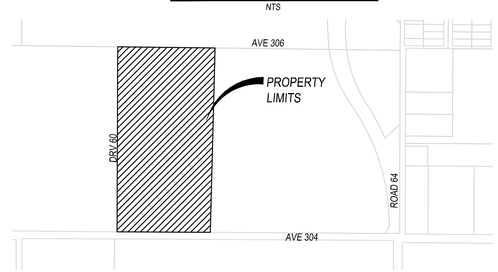
TYPICAL LOT SIZES:

2880 SF LOTS± (32' X 90') (44 UNITS)
3456 SF LOTS± (32' X 108') (19 UNITS)
3366 SF LOTS± (33' X 102') (22 UNITS)
3774 SF LOTS± (37' X 102') (2 UNITS)
6480 SF LOTS± (60' X 108') (9 UNITS)
7560 SF LOTS± (70' X 108') (20 UNITS)
MISCELLANEOUS (14 UNITS)



TYP. INTERNAL STREET

NTS



VICINITY MAP

SCALE: 1"=½ MILE

NORTH

60' 0' 60

PREPARED BY:

4CREEKS

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TEL: 559.802.3052
FAX: 559.802.3215



CONWAY PROPERTY

TENTATIVE SUBDIVISION MAP

PREPARED FOR: SAN JOAQUIN VALLEY HOMES
5607 AVE DE LOS ROBLES
VISALIA, CA 93291

PREPARED BY: 4CREEKS, INC.
324 S. SANTA FE ST., STE. A
VISALIA ,CA 93292

ACREAGE

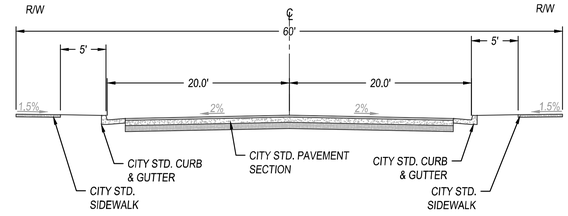
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LEGEND

APN:	073-060-036
ZONING:	C-2-MU
GENERAL PLAN:	RETAIL COMMERCIAL
FLOOD ZONE:	X & A
ELECTRICITY:	SOUTHERN CALIFORNIA EDISON
WATER:	GOSHEN COMMUNITY SERVICES DISTRICT
TELEPHONE:	AT&T
NATURAL GAS:	SOUTHERN CALIFORNIA GAS
EXISTING USE:	VACANT
PROPOSED USE:	MEDIUM DENSITY RESIDENTIAL
PROPOSED MAINTENANCE:	

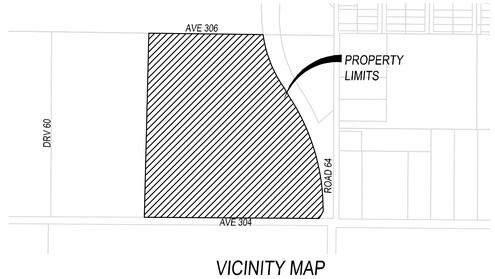
TYPICAL LOT SIZES:

2880 SF LOTS± (32' X 90') (64 UNITS)
3330 SF LOTS± (37' X 90') (5 UNITS)
6480 SF LOTS± (60' X 108') (80 UNITS)
7560 SF LOTS± (70' X 108') (3 UNITS)
MISCELLANEOUS (24 UNITS)



TYP. INTERNAL STREET

NTS



VICINITY MAP

SCALE: 1"=½ MILE

NORTH

60' 0' 60

PREPARED BY:

4CREEKS

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APPENDIX B: VASCULAR PLANTS OF THE PROJECT SITE

VASCULAR PLANTS OF THE PROJECT SITE

The plant species listed below were observed on the project site during a survey conducted by Live Oak Associates, Inc. on August 29, 2022 and January 6, 2023. The U.S. Fish and Wildlife Service wetland indicator status of each plant has been shown following its common name.

OBL - Obligate
FACW - Facultative Wetland
FAC - Facultative
FACU - Facultative Upland
UPL - Upland
+/- - Higher/lower end of category
NR - No review
NA - No agreement
NI - No investigation

AMARANTHACEAE – Amaranth Family		
Amaranthus palmeri	Palmer's amaranth	UPL
ASTERACEAE – Daisy Family		
Erigeron canadensis	Canada horseweed	FACU
FABACEAE – Legumes Family		
Medicago sativa	Alfalfa	UPL
GERANIACEAE – Geranium Family		
Erodium cicutarum	Red stemmed filaree	UPL
JUGLANDACEAE – Walnut Family		
Juglans regia	English walnut	UPL
MALVACEAE – Mallow Family		
Malva parviflora	Cheeseweed	UPL
PINACEAE – Pine Family		
Pinus sp.	Pine	
POACEAE – Grass Family		
Digitaria sanguinalis	Crabgrass	FACU
Echinochloa crus-galli	Barnyard grass	FACW
Festuca perennis	Italian rye grass	UPL
Triticum aestivum	Common wheat	UPL
Zea mays	Corn	UPL

APPENDIX C: TERRESTRIAL VERTEBRATES OF THE PROJECT SITE

TERRESTRIAL VERTEBRATES OF THE PROJECT SITE

The species listed below are those that may reasonably be expected to use the habitats of the project site routinely or from time to time. The list was not intended to include birds that are vagrants or occasional transients. Terrestrial vertebrate species observed in or adjacent to the project site during the August 29, 2022 and January 6, 2023 survey has been noted with an asterisk.

CLASS: AMPHIBIA
ORDER: ANURA (Frogs and Toads)
FAMILY: BUFONIDAE (True Toads)
Western Toad (*Bufo boreas*)
FAMILY: HYLIDAE (Treefrogs and Relatives)
Sierran Treefrog (*Pseudacris sierra*)

CLASS: REPTILIA
ORDER: SQUAMATA (Lizards and Snakes)
SUBORDER: SAURIA (Lizards)
FAMILY: PHRYNOSOMATIDAE (Spiny, Side-blotched, Horned, and relatives)
San Joaquin Fence Lizard (*Sceloporus occidentalis biseriatus*)
Western Side-blotched Lizard (*Uta stansburiana elegans*)
FAMILY: TELLIDAE (Whiptails and Racerunners)
California Whiptail (*Aspidoscelis tigris munda*)
SUBORDER: SERPENTES (Snakes)
FAMILY: COLUBRIDAE (Colubrids)
San Joaquin Coachwhip (*Coluber flagellum ruddocki*)
California Kingsnake (*Lampropeltis californiae*)
Pacific Gopher Snake (*Pituophis catenifer catenifer*)
Long-nosed Snake (*Rhinocheilus lecontei*)
Valley Gartersnake (*Thamnophis sirtalis fitchi*)
FAMILY: VIPERIDAE
Northern Pacific Rattlesnake (*Crotalus oreganus oreganus*)

CLASS: AVES
ORDER: APODIFORMES (Swifts and Hummingbirds)
FAMILY: TROCHILIDAE (Hummingbirds)
Black-chinned Hummingbird (*Archilochus alexandri*)
Anna's Hummingbird (*Calypte anna*)
Costa's Hummingbird (*Calypte costae*)
Calliope Hummingbird (*Selasphorus calliope*)
Rufous Hummingbird (*Selasphorus rufus*)
Allen's Hummingbird (*Selasphorus sasin*)
ORDER: CAPRIMULGIFORMES (Goatsuckers and Relatives)

FAMILY: CAPRIMULGIDAE (Goatsuckers)
Lesser Nighthawk (*Chordeiles acutipennis*)
Common Nighthawk (*Chordeiles minor*)

ORDER: CHARADRIIFORMES (Shorebirds and Allies)
FAMILY: CHARADRIIDAE (Plovers and relatives)
Killdeer (*Charadrius vociferus*)

ORDER: COLUMBIFORMES (Pigeons and Doves)
FAMILY: COLUMBIDAE (Pigeons and Doves)
Band-tailed Pigeon (*Columba fasciata*)
*Rock Pigeon (*Columba livia*)
Eurasian Collared-dove (*Streptopelia decaocto*)
*Mourning Dove (*Zenaida macroura*)

ORDER: FALCONIFORMES (Vultures, Hawks, and Falcons)
FAMILY: CATHARTIDAE (American Vultures)
*Turkey Vulture (*Cathartes aura*)
FAMILY: ACCIPITRIDAE (Hawks, Eagles, and Kites)
Sharp-shinned Hawk (*Accipiter striatus*)
*Red-tailed Hawk (*Buteo jamaicensis*)
Swainson's Hawk (*Buteo swansonii*)
FAMILY: FALCONIDAE (Caracaras and Falcons)
Merlin (*Falco columbarius*)
*American Kestrel (*Falco sparverius*)

ORDER: PICIFORMES (Woodpeckers and Relatives)
FAMILY: PICIDAE (Woodpeckers and Wrynecks)
Acorn Woodpecker (*Melanerpes formicivorous*)

ORDER: STRIGIFORMES (Owls)
FAMILY: TYTONIDAE (Barn Owls)
Barn Owl (*Tyto alba*)
FAMILY: STRIGIDAE (Typical Owls)
*Great Horned Owl (*Bubo virginianus*)

ORDER: PASSERIFORMES (Perching Birds)
FAMILY: ALAUDIDAE
California Horned Lark (*Eremophila alpestris actia*)
FAMILY: CORVIDAE (Jays, Magpies, and Crows)
California Scrub Jay (*Aphelocoma californica*)
*American Crow (*Corvus brachyrhynchos*)
Common Raven (*Corvus corax*)
FAMILY: FRINGILLIDAE (Finches)
House Finch (*Carpodacus mexicanus*)
Lesser Goldfinch (*Carduelis psaltria*)
American Goldfinch (*Spinus tristis*)
FAMILY: HIRUNDINIDAE (Swallows)
*Cliff Swallow (*Hirundo pyrrhonota*)
Barn Swallow (*Hirundo rustica*)

Tree Swallow (*Tachycineta bicolor*)
Violet-green Swallow (*Tachycineta thalassina*)
Northern Rough-winged Swallow (*Stelgidopteryx serripennis*)

FAMILY: ICTERIDAE (Blackbirds, Orioles and Allies)

*Red-winged Blackbird (*Agelaius phoeniceus*)
Brewer's Blackbird (*Euphagus cyanocephalus*)
Bullock's Oriole (*Icterus bullockii*)
Hooded Oriole (*Icterus cucullatus*)
Brown-headed Cowbird (*Molothrus ater*)
*Western Meadowlark (*Sturnella neglecta*)

FAMILY: MIMIDAE (Mockingbirds and Thrashers)

Northern Mockingbird (*Mimus polyglottos*)

FAMILY: MOTICILLIDAE (Pipits)

*American Pipit (*Anthus rubescens*)

FAMILY: PASSERELLIDAE (New World Sparrows)

Lincoln's Sparrow (*Melospiza lincolnii*)
Dark-eyed Junco (*Junco hyemalis*)
*House Sparrow (*Passer domesticus*)
*Savannah Sparrow (*Passerculus sandwichensis*)
*White-crowned Sparrow (*Zonotrichia leucophrys*)

FAMILY: PARULIDAE (New World Warblers)

*Yellow-rumped Warbler (*Setophaga coronata*)

FAMILY: STURNIDAE (Starlings)

European Starling (*Sturnus vulgaris*)

FAMILY: TURDIDAE (Thrush)

*American Robin (*Turdus migratorius*)

FAMILY: TYRANNIDAE (Tyrant Flycatchers)

*Black Phoebe (*Sayornis nigricans*)
*Say's Phoebe (*Sayornis saya*)
Western Kingbird (*Tyrannus verticalis*)

CLASS: MAMMALIA

ORDER: CARNIVORA (Carnivores)

FAMILY: CANIDAE (Foxes, Wolves, and Relatives)

Coyote (*Canis latrans*)
*Domestic/Feral Dog (*Canis lupus*)
Red Fox (*Vulpes vulpes*)

FAMILY: PROCYONIDAE (Raccoons and Relatives)

*Raccoon (*Procyon lotor*)

FAMILY: MUSTELIDAE (Weasels, Badgers, and Relatives)

Striped Skunk (*Mephitis mephitis*)

FAMILY: FELIDAE (Cats)

*Domestic/Feral Cat (*Felis catus*)

ORDER: CHIROPTERA (Bats)

FAMILY: MOLOSSIDAE (Free-tailed Bat)

Western mastiff bat (*Eumops perotis californicus*)
Brazilian Free-tailed Bat (*Tadarida brasiliensis*)

FAMILY: VESPERTILIONIDAE (Vespertilionid Bats)

Big Brown Bat (*Eptesicus fuscus*)
Silver-haired Bat (*Lasionycteris noctivagans*)
Yuma Myotis (*Myotis yumanensis*)
Long-eared Myotis (*Myotis evotis*)
Fringed Myotis (*Myotis thysanodes*)
Long-legged Myotis (*Myotis volans*)
California Myotis (*Myotis californicus*)
Small-footed Myotis (*Myotis leibii*)
Western Pipistrelle (*Pipistrellus hesperus*)

ORDER: INSECTIVORA (Shrews and Moles)

FAMILY: SORCIDAE (Shrews)

Ornate shrew (*Sorex ornatus*)

FAMILY: TALPIDAE (Moles)

Broad-footed Mole (*Scapanus latimanus*)

ORDER: LAGOMORPHA (Rabbits, Hares, and Pikas)

FAMILY: LEPORIDAE (Rabbits and Hares)

Audubon's Cottontail (*Sylvilagus audubonii*)

ORDER: MARSUPIALIA (Opossums, Kangaroos, and Relatives)

FAMILY: DIDELPHIDAE (Opossums)

Virginia Opossum (*Didelphis virginiana*)

ORDER: RODENTIA (Squirrels, Rats, Mice, and Relatives)

FAMILY: CRICETIDAE (Deer Mice, Voles, and Relatives)

California Vole (*Microtus californicus*)
Deer Mouse (*Peromyscus maniculatus*)
Western Harvest Mouse (*Reithrodontomys megalotis*)

FAMILY: GEOMYIDAE (Pocket Gophers)

*Botta's Pocket Gopher (*Thomomys bottae*)

FAMILY: MURIDAE (Old World Rats and Mice)

Norway Rat (*Rattus norvegicus*)
House Mouse (*Mus musculus*)

FAMILY: SCIURIDAE (Squirrels, Chipmunks, and Marmots)

*California Ground Squirrel (*Spermophilus beecheyi*)

APPENDIX D: SELECTED PHOTOGRAPHS OF THE PROJECT SITE



Photo 1. Overview of eastern parcel, an active agricultural field with corn, ponding irrigation on west side of field: August 2022.



Photo 2. Close-up of corn in agricultural field: August 2022.



Photo 3. Overview of eastern parcel post corn harvest: January 2023.



Photo 4. Developed/Ruderal area of eastern project site with residential home, carport, and driveway.



Photo 5. Overview of where eastern and western parcels meet. The corn agricultural field and inactive walnut orchard: August 2022.

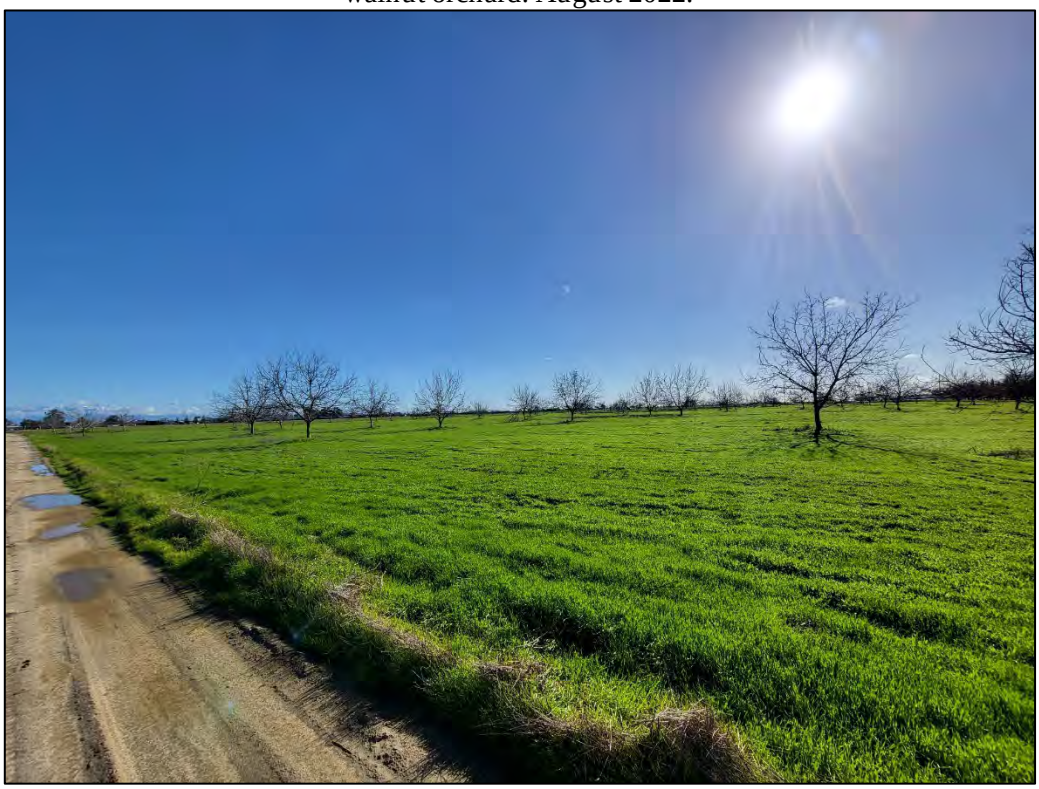


Photo 6. Overview of western parcel, or inactive walnut orchard: January 2023.



Photo 7. California ground squirrel burrow complex in the Developed/Ruderal area of the western parcel where a house previously exists and is now used for stockpiling soil: January 2023.

APPENDIX E: TULARE COUNTY AND GOSHEN COMMUNITY PLAN POLICIES

Tulare County General Plan Update

2030 Update















Tulare County

General Plan

Part I - Goals and Polices Report

Part II – Area Plans

Part III - Community, Hamlet, County Adopted City General, Valley Sub-Area, Corridor Sub-Area, Foothill Sub-Area, and Mountain Sub-Area Plans

**separate documents

**not a part of this update

August 2012

Please see the next page.

Tulare County

Revised Draft
General Plan 2030 Update

Value Statements	
	▪ **The beauty of the County and the health and safety of its residents will be protected and enhanced.**
	▪ **The County will create and facilitate opportunities to improve the lives of all County residents.**
	▪ **The County will protect its agricultural economy while diversifying employment opportunities.**
	▪ **Every community will have the opportunity to prosper from economic growth.**
	▪ **Growth will pay its own way providing sustainable, high quality infrastructure and services.**

Tulare County
Resource Management Agency
5961 South Mooney Boulevard
Visalia, California 93277
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August 2012

Please see the next page.

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*Denotes resigned, retired or transferred position.

Tulare County General Plan 2030 Update

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Part III

Community, Hamlet, County Adopted City General, Valley Sub-Area, Corridor Sub-Area, Foothill Sub-Area, and Mountain Sub-Area Plans

**Part III serves as a place holder for existing and future documents of the General Plan. See Chapter 1 - Introduction for a list of adopted plans and those to be adopted in the future.

Chapter 1 - Community Plans ..... *separate documents*
Section 1.1 Alpaugh ..... *separate documents*
Section 1.2 Cutler/Orosi Community Plan ..... *separate documents*
Section 1.3 Earlimart Community Plan ..... *separate documents*
Section 1.4 East Orosi ..... *separate documents*
Section 1.5 Goshen Community Plan ..... *separate documents*
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Section 1.16 Three Rivers Community Plan ..... *separate documents*
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the assurance of rail transport for commodities such as grain, row crops, and fruit, a number of farming colonies soon appeared throughout the region.

The colonies grew to become cities such as Tulare, Visalia, Porterville, and Hanford. Visalia, the County seat, became the service, processing, and distribution center for the growing number of farms, dairies, and cattle ranches. By 1900, Tulare County boasted a population of about 18,000. New transportation links such as SR 99 (completed during the 1950s), affordable housing, light industry, and agricultural commerce brought steady growth to the valley. The U.S. Census Bureau estimated the 2003 Tulare County population to be 390,791.

8.1 Biological Resources

ERM-1 To preserve and protect sensitive significant habitats, enhance biodiversity, and promote healthy ecosystems throughout the County. [*New Goal]*

ERM-1.1 Protection of Rare and Endangered Species

The County shall ensure the protection of environmentally sensitive wildlife and plant life, including those species designated as rare, threatened, and/or endangered by State and/or federal government, through compatible land use development. [*New Policy based on ERME IV-C; Biological Resources; Issue 12, and ERME; Pg 32*]

ERM-1.2 Development in Environmentally Sensitive Areas

The County shall limit or modify proposed development within areas that contain sensitive habitat for special status species and direct development into less significant habitat areas. Development in natural habitats shall be controlled so as to minimize erosion and maximize beneficial vegetative growth. [*New Policy based on EMRE; Water; Issue 3; Recommendation 3, ERME; Pg 28]*

ERM-1.3 Encourage Cluster Development

When reviewing development proposals, the County shall encourage cluster development in areas with moderate to high potential for sensitive habitat. [*New Policy*]

ERM-1.4 Protect Riparian Areas

The County shall protect riparian areas through habitat preservation, designation as open space or recreational land uses, bank stabilization, and development controls. [*New Policy*]

ERM-1.5 Riparian Management Plans and Mining Reclamation Plans

The County shall require mining reclamation plans and other management plans include measures to protect, maintain and restore riparian resources and habitats. [*New Policy*]

ERM-1.6 Management of Wetlands

The County shall support the preservation and management of wetland and riparian plant communities for passive recreation, groundwater recharge, and wildlife habitats. [*New Policy*]

ERM-1.7 Planting of Native Vegetation

The County shall encourage the planting of native trees, shrubs, and grasslands in order to preserve the visual integrity of the landscape, provide habitat conditions suitable for native vegetation and wildlife, and ensure that a maximum number and variety of well-adapted plants are maintained. [*New Policy*]

ERM-1.8 Open Space Buffers

The County shall require buffer areas between development projects and significant watercourses, riparian vegetation, wetlands, and other sensitive habitats and natural communities. These buffers should be sufficient to assure the continued existence of the waterways and riparian habitat in their natural state. [*New Policy based on EMRE policies*]

ERM-1.9 Coordination of Management on Adjacent Lands

The County shall work with other government land management agencies (such as the Bureau of Land Management, US Forest Service, National Park Service) to preserve and protect biological resources while maintaining the ability to utilize and enjoy the natural resources in the County. [*New Policy*]

ERM-1.10 Appropriate Access for Recreation
The County shall encourage appropriate access to resource-managed lands. [*New Policy*]

ERM-1.11 Hunting and Fishing
The County shall provide opportunities for hunting and fishing activities within the County pursuant to appropriate regulations of the California Fish & Game Code. [*New Policy*]

ERM-1.12 Management of Oak Woodland Communities
The County shall support the conservation and management of oak woodland communities and their habitats. [*New Policy*]

ERM-1.13 Pesticides
The Tulare County Agricultural Commissioner/Sealer will cooperate with State and federal agencies in evaluating the side effects of new materials and techniques in pesticide controls to limit effects on natural resources. *[ERME IV-C; Pesticides; Recommandation 1] [ERME; Pg 131, Modified*]

ERM-1.14, Mitigation and Conservation Banking Program
The County shall support the establishment and administration of a mitigation banking program, including working cooperatively with TCAG, federal, State, not-for-profit and other agencies and groups to evaluate and identify appropriate lands for protection and recovery of threatened and endangered species impacted during the land development process. [*New Policy*]

8.2 Mineral Resources - Surface Mining

ERM-2	To conserve protect and encourage the development of areas containing mineral deposits while considering values relating to water resources, air quality, agriculture, traffic, biotic, recreation, aesthetic enjoyment, and other public interest values. [*New Goal based on MRPAC June 28, 2006*]

ERM-2.1 Conserve Mineral Deposits
Emphasize the conservation of identified and/or potential mineral deposits, recognizing the need for identifying, permitting, and maintaining a 50 year supply of locally available PCC grade aggregate. [*MRPAC June 28, 2006*]

ERM-2.2 Recognize Mineral Deposits
Recognize as a part of the General Plan those areas which have identified and/or potential mineral deposits. [*MRPAC June 28, 2006*]

ERM-2.3 Future Resource Development
Provide for the conservation of identified and/or potential mineral deposits within Tulare County as areas for future resource development. Recognize that mineral deposits are significantly limited within Tulare County and that they play an important role in support of the economy of the County. [*MRPAC June 28, 2006*]

ERM-2.4 Identify New Resources
Encourage exploration, evaluation, identification, and development of previously unrecognized but potentially significant hard rock resources for production of crushed stone aggregate. [*MRPAC June 28, 2006*]

ERM-2.5 Resources Development
The County will promote the responsible development of identified and/or potential mineral deposits. [*MRPAC June 28, 2006*]

ERM-2.6 Streamline Process
Create a streamlined and timely permitting process for the mining industry, which will help encourage long-range planning and the reasonable amortization of investments. [*MRPAC June 28, 2006*]

ERM-2.8 Minimize Adverse Impacts
Minimize the adverse effects on environmental features such as water quality and quantity, air quality, flood plains, geophysical characteristics, biotic, archaeological and aesthetic factors. [*MRPAC June 28, 2006*]

Tulare County General Plan Update

Mitigation Monitoring and Reporting Program















Tulare County

General Plan

August 2012

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TULARE COUNTY GENERAL PLAN 2030 UPDATE

Mitigation Monitoring and Reporting Program

Introduction

This section provides a Mitigation Monitoring and Reporting Program (MMRP) for the Tulare County General Plan 2030 Update (proposed project) Recirculated Draft Environmental Impact Report (RDEIR) in combination with the annual reporting required by Government Code Section 65400 (CEQA Guidelines Section 15097(b)), which addresses the "self-mitigating" policies described in the RDEIR (i.e., those policies and implementation measures already incorporated into the proposed project) The "Work Plan/Implementation Measures" identified in the General Plan will be part of the annual review for the General Plan as described under Government Code Section 65400.

As also described in the Final EIR (see Chapter 4, Master Response #3 and #4, pages 4-7 through 4-13), individual projects must also be reviewed for consistency with the General Plan which will also ensure implementation of the General Plan. For example: see Gov. Code Sections 65359 and 65454 (Specific Plan consistency with the General Plan), Gov. Code Section 65860 (Zoning consistency with the General Plan), Gov. Code Sections 66473.5 and 66474 (Subdivision, Tentative Map, and Parcel Map consistency with the General Plan), and Gov. Code 65867.5 (Development Agreement consistency with the General Plan). Additionally, project level environmental review will occur under CEQA for future discretionary actions.

MMRP **Table 1**, below, includes the mitigation measures (policies and implementation measures) identified in the RDEIR that were not already included as part of the proposed project or were modified as a result of the environmental analysis provided in the RDEIR. The RDEIR refers to mitigation measures as "Required Additional Mitigating Policies and Implementation Measures". The table also includes several additional recommended mitigating policies identified through the preparation of the Final EIR. These additional policies and implementation measures are identified with the wording "**(FEIR CHANGE)**" provided at the end of the policy or implementation measure. Table 1 also identifies the following:

- the timing for implementation of the mitigation or monitoring actions;
- the agency or individual responsible for the implementation and monitoring of the measure;
- the monitoring action; and
- the monitoring frequency.

Following Table 1, a list of all "self-mitigating" policies and implementation measures (by impact) identified in the RDEIR is provided in this report.

TABLE 1
MITIGATION MONITORING AND REPORTING PROGRAM

Impact	Mitigation Measure (by Impact)	Implementation Timing	Monitoring/Reporting Responsibility	Monitoring Action	Monitoring Frequency
Biological Resources					
Impact 3.11-1: The proposed project would have a substantial adverse effect, either directly or through habitat modifications, on a variety of special status species.	The following revised existing policy (Policy ERM-1.9) along with the following new policy are required to address this impact: • **ERM-1.9 Coordination of Management on Adjacent Lands.** The County shall work with other government land management agencies (such as the Bureau of Land Management, US Forest Service, National Park Service) to preserve and protect biological resources, including those within and adjacent to designated critical habitat, reserves, preserves, and other protected lands, while maintaining the ability to utilize and enjoy the natural resources in the County • **ERM-1.15 Minimize Lighting Impacts.** The County shall ensure that lighting associated with new development or facilities (including street lighting, recreational facilities, and parking) shall be designed to prevent artificial lighting from illuminating adjacent natural areas at a level greater than one foot candle above ambient conditions.	Incorporation of the Policies into the General Plan at the time of General Plan adoption and ongoing review and application during subsequent project-level review.	Resource Management Agency	Verification of policy implementation and project specific mitigation measures or conditions of approval.	Ongoing
Impact 3.11-2: The proposed project would have a substantial adverse effect on riparian habitats or other sensitive natural communities.	Please see the policies identified above under Impact 3.11-1.				
Impact 3.11-4: The proposed project would have a substantial adverse effect on wildlife movement opportunities, migratory corridors, or native wildlife nursery sites.	The following revised existing policy (Policy ERM-1.9) along with the following new policies are required to address this impact: • **ERM-1.9 Coordination of Management on Adjacent Lands.** Please see ERM-1.9, above, under Impact 3.11-1. • **ERM-1.15 Minimize Lighting Impacts.** Please see ERM-1.9, above, under Impact 3.11-1. • **ERM-1.16 Cooperate with Wildlife Agencies.** The County shall cooperate with State and federal wildlife agencies to address linkages between habitat areas.	Incorporation of the Policies into the General Plan at the time of General Plan adoption and ongoing review and application during subsequent project-level review.	Resource Management Agency	Verification of policy implementation and project specific mitigation measures or conditions of approval.	Ongoing
Impact 3.11-6: The proposed project could conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local,	The following new policy is required to address this impact: • **ERM-1.17 Conservation Plan Coordination.** The County shall coordinate with local, State, and federal habitat conservation planning efforts (including Section 10 Habitat Conservation Plan) to protect critical habitat areas that support endangered species and other special-status species.	Incorporation of the Policy into the General Plan at the time of General Plan adoption and ongoing review and application during subsequent project-level review.	Resource Management Agency	Verification of policy implementation and project specific mitigation measures or conditions of approval.	Ongoing

TABLE 1
MITIGATION MONITORING AND REPORTING PROGRAM

Impact	Mitigation Measure (by Impact)	Implementation Timing	Monitoring/Reporting Responsibility	Monitoring Action	Monitoring Frequency
regional, or state habitat conservation plan.					
Cultural Resources					
Impact 3.12-1: The proposed project could cause a substantial adverse change to a historic resource.	The following revised existing policies and implementation measure are required to address this impact: • **ERM-6.2 Protection of Resources with Potential State or Federal Designations.** The County shall protect cultural and archaeological sites with demonstrated potential for placement on the National Register of Historic Places and/or inclusion in the California State Office of Historic Preservation's California Points of Interest and California Inventory of Historic Resources. Such sites may be of Statewide or local significance and have anthropological, cultural, military, political, architectural, economic, scientific, religious, or other values as determined by a qualified archaeological professional. • **ERM-6.3 Alteration of Sites with Identified Cultural Resources.** When planning any development or alteration of a site with identified cultural or archaeological resources, consideration should be given to ways of protecting the resources. Development can be permitted in these areas only after a site specific investigation has been conducted pursuant to CEQA to define the extent and value of resource, and mitigation measures proposed for any impacts the development may have on the resource. • **ERM-6.6 Historic Structures and Sites.** The County shall support public and private efforts to preserve, rehabilitate, and continue the use of historic structures, sites, and parks. Where applicable, preservation efforts shall conform to the current Secretary of the Interior's Standards for the Treatment of Historic Properties and Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings. • **ERM Implementation Measure #49.** The County shall incorporate provisions into development regulations that in the event archaeological and/or buried historic resources are discovered during site excavation, grading, or construction, work on the site will be suspended until the significance of the features can be determined by a qualified archaeologist. If significant resources are determined to exist, the archaeologist shall make recommendations for protection or recovery of the resource. (**FEIR CHANGE).**	Incorporation of the Policies into the General Plan at the time of General Plan adoption and ongoing review and application during subsequent project-level review.	Resource Management Agency	Verification of policy implementation and project specific mitigation measures or conditions of approval.	Ongoing
Impact 3.12-2: The proposed project could	The following revised existing policies (Policy ERM-6.2 and Policy ERM-6.3) along with the following new implementation measures	Incorporation of the Policies and	Resource Management Agency	Verification of policy implementation and	Ongoing

GOSHEN COMMUNITY PLAN 2018 UPDATE

Tulare County Resource Management Agency
Economic Development and Planning Branch

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Goshen Community Plan 2018 Update

Adopted: June 5, 2018

Tulare County Board of Supervisors
Resolution No. 2018-0392

Tulare County Planning Commission
Recommendations:
Resolution Nos.9438, 9439, 9440, 9441, and 9442

Goshen Community Plan Update: GPA 14-001
Zoning Ordinance District Map: PZC 15-008
Section 18.9 Zoning Ordinance (Mixed-Use): PZC 15-009
Section 16 Zoning Ordinance (By Right-Uses) PZC-18-002

Tulare County Resource Management Agency
Economic Development and Planning Branch
5961 S Mooney Boulevard
Visalia, CA 93277-9394
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Tulare County Board of Supervisors

Kuyler Crocker – District 1 (Vice Chairman)
Pete Vander Poel – District 2
Amy Shuklian – District 3
Steve Worthley – District 4 (Chairman)
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Tulare County Planning Commission

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Ed Dias – At Large
Gil Aguilar – District 2 (Alternate) (Chair)

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Michael C. Spata, CAO

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EXECUTIVE SUMMARY

INTRODUCTION

Goshen's current community plan was adopted in January of 1978 and amended by General Plan Amendments 87-07, 92-07, 98-02, 09-05. The plan is 40 years old as of 2018. The 1978 Goshen Community Plan is a collection of goals, objectives, and policies for the physical development of the community. The primary purpose of the plan was to outline community goals regarding physical development and to promote the general welfare of the community. The plan serves as a general guide for both public and private decisions affecting the community, and provides for the overall direction, density, and type of growth consistent with the needs of the community.

The community has undergone many changes since 1978, including the new Betty Drive Overpass, a pedestrian bridge over S.R. 99, new residential development, the addition of parks, and a medical clinic, among many other changes. With the construction of the new S.R. 99/Betty Drive Interchange the community will continue to change and grow. This Community Plan is focused on providing economic opportunities and to accommodate the desired growth for the community that has been addressed through over 36 Community Workshops from 2012 through 2014.

Goshen is generally square in shape and bisected in a northwest-southeasterly direction by SR 99 and the Union Pacific Railroad, which divides the community into approximately three similar sized areas. Goshen is an agricultural services and highway commercial community and is surrounded by agricultural production lands to the north, south, and west, and scattered residential, light industrial, agricultural, and vacant land to the east.

The central segment, between SR 99 and the railroad property, was built during various periods of growth over many years, as necessary to accommodate the needs of residents and the business community. This has resulted in a collection of small neighborhoods with a wide variety of structures, construction methods, and materials. Most of the residential blocks in this area consist of scattered vacant lots, deteriorating housing, and storage structures. Over a long period of time, the streets serving the houses were paved with a variety of materials and construction methods. Alleys between the residential streets are present in this section of Goshen as was typical in suburban neighborhoods constructed prior to 1950.

Most of the residential development east of the railroad was constructed throughout the late 60's through 1980's and used modern building techniques and codes. There are currently development projects along Riggin Avenue that have just started construction. This newer segment of Goshen has experienced the most growth in Tulare County over the last 10 years. Unlike other unincorporated communities in Tulare County, some of the streets with the Goshen community have been constructed according to urban standards, including curbs, gutters and sidewalks. And new housing developments including a newly approved (2016) 220-unit 20-acre Self Help Enterprises, Goshen Village East development project, a medical clinic, and a local community park were constructed at Avenue 312 and Road 72 to serve the needs of Goshen's current and future residents. The recent growth in this segment may serve as a catalyst for anticipated to attract further development.

Location

Goshen is located in Tulare County along State Route (SR) 99, adjacent to the western City Limits of Visalia **(see Figure 1)**. Goshen is an unincorporated community of 3,739 persons. More generally, the Community of Goshen is located approximately 31 miles south of Fresno on SR 99 on the western edge of Tulare County **(see Figure 2)**. It is located 1 ½ miles north of the Visalia Municipal Airport and portions of the community are situated within the approach and departure area of the airport. It lies one tenth of a mile north-west of the city limits of Visalia, 6 ½ miles from the downtown shopping area of Visalia, and immediately west of the Visalia industrial park area. Visalia is the County seat of Tulare County.

Sections 13, 24, & 25, Township 18 South, Range 25 East; Sections 18, 19, & 30, Township 24 South, Range 25 East; and Section 27 & 28, Township 23 South, Range 25 East MDB&M, and can be found within the Goshen Quad, United States Geological Survey 7.5-minute topographic quadrangle. Goshen is located at an elevation of 285 feet above sea level. The coordinates of Goshen are Latitude: 36° 20' 51" and Longitude: 119° 25' 12".

SR 99 and the Union Pacific Railroad parallel each other and traverse Goshen north to south. The Betty Drive interchange crosses SR 99. This roadway attracts substantial truck traffic because of the industrial uses located in this area.

Figure 1 - Vicinity Map

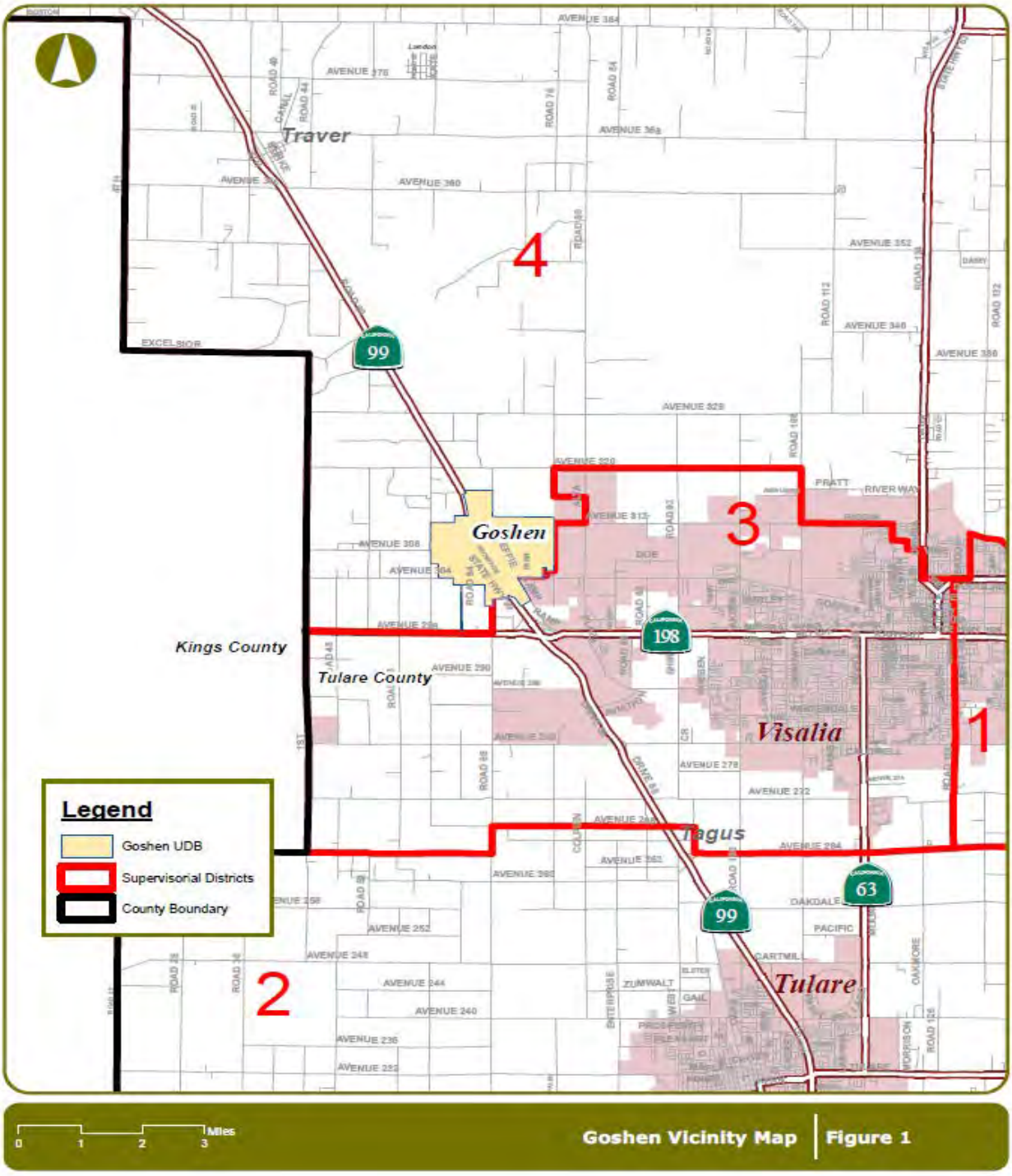
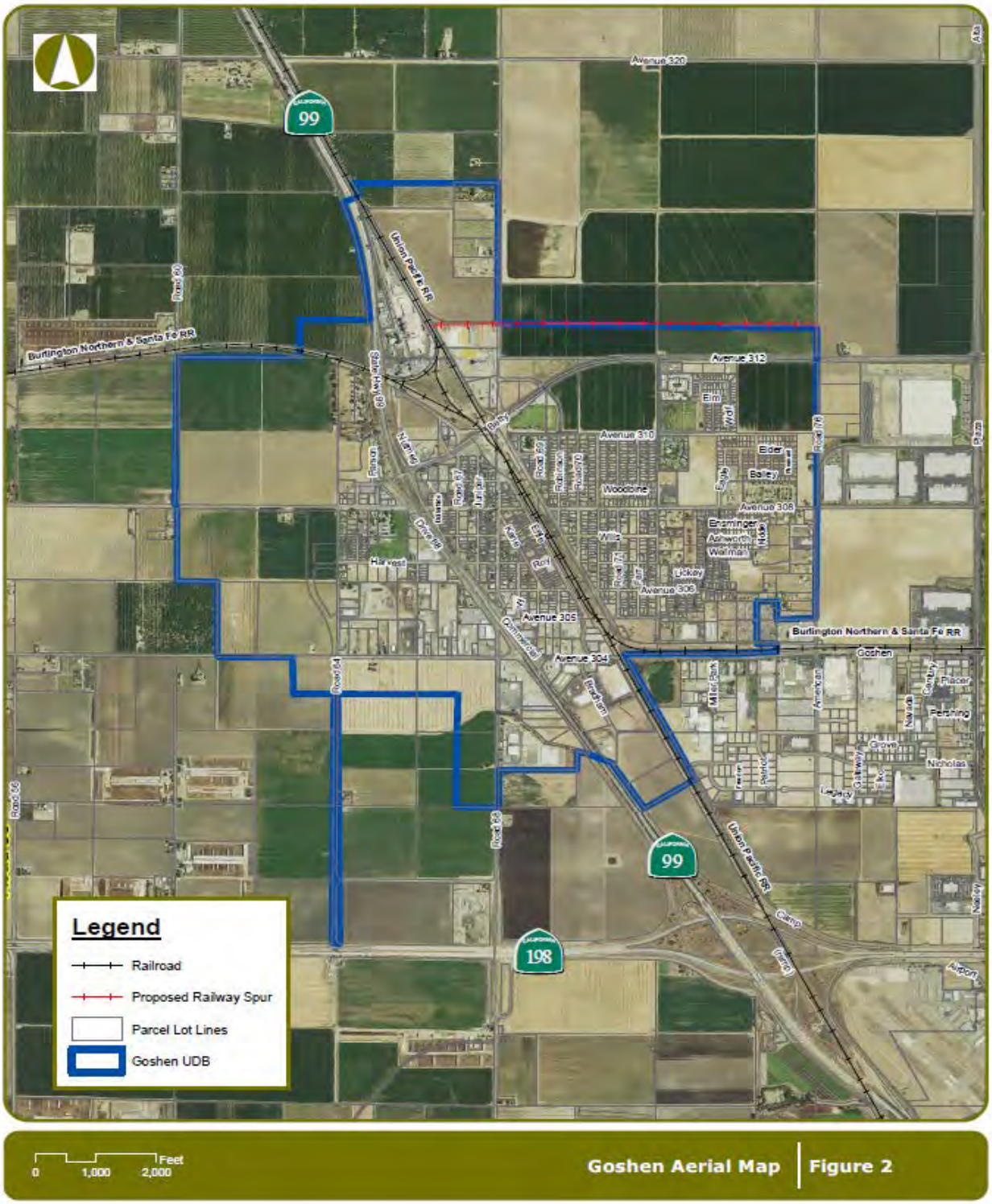


Figure 2 - Aerial Map



qualities of the air. Because Goshen is located near the southern end of the Valley with prevailing winds from the northwest, it is in a vulnerable position for the accumulation of adversely modified air, particularly when a temperature inversion occurs which holds down surface air along with its pollutants. Citizens have raised concerns about air pollution from approaching and departing jet aircraft, and local companies emitting dust and odors, and agricultural activities.

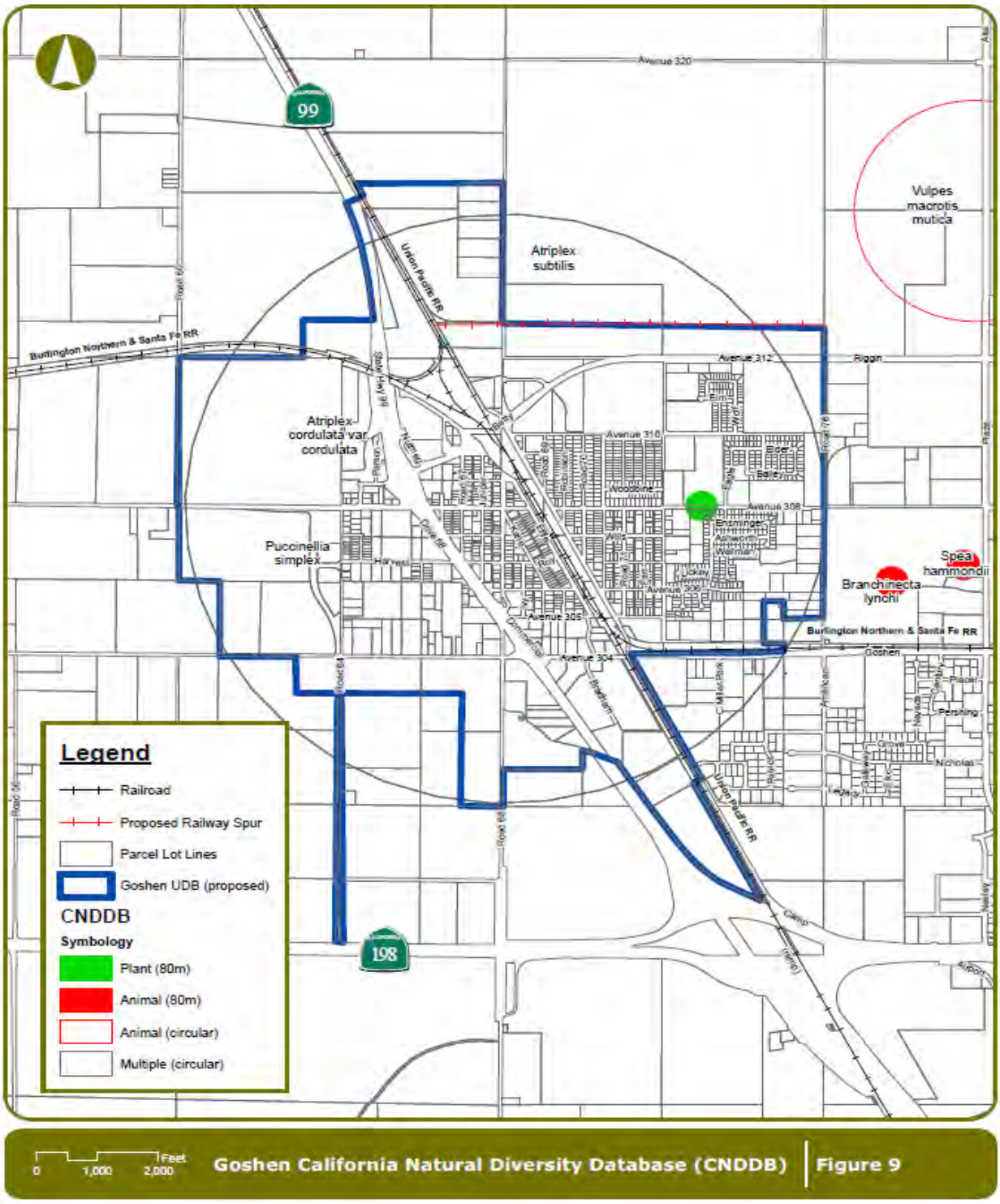
Biological Resources

Goshen is situated within a matrix of agricultural lands, industrial complexes, and residential/commercial development associated with the community of Goshen. The northern block of Goshen is bordered by agricultural fields to the north and east; agricultural fields, remnant non-native grassland, and residential areas to the south; and Highway 99 to the west. The eastern block of Goshen is bordered by ruderal grassland and residential areas to the north, ruderal grassland to the east, and residential and commercial areas to the south and west. The western block of Goshen is bordered by orchard to the north; Highway 99 and residential, commercial, and industrial areas to the east; and agricultural fields, orchard, and residential areas to the south and west.[9]

The historic range of certain endangered animals including the Swainson's hawk, San Joaquin kit fox, burrowing owl, American badger, nesting raptors and migratory birds including the white-tailed kite, loggerhead shrike, and tricolored blackbird, and colonially roosting bats found in the Goshen area. However, few if any of these species are found-in Goshen today due to the extensive, built-up character of the area, and the fact that most surrounding lands are under cultivation. According to the California National Diversity Data Base (CNDDB), 11 Special Status plant species and 18 Special Status animal species **(see Figure 9)**

[9] Goshen Community Plan Update Biological evaluation Tulare county, California prepared by Live Oak associates, Inc. August, 2014 page i

Figure 9 - Goshen CNDDB Map



Appendix C

Cultural Resource Assessment

Phase I Cultural Resource Assessment for the Conway Property Tentative Subdivision Map Project, Goshen, Tulare County, California

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February 2023

USGS Goshen 7.5' topographic quadrangle, APNs 073-060-036 and 073-060-013
69.35-acre project boundary; intensive pedestrian survey
Keywords: Negative Findings

MANAGEMENT SUMMARY

Taylored Archaeology performed a Phase I Cultural Resources Assessment for the Conway Property Tentative Subdivision Map Project (Project) under contract to 4Creeks, Inc. The proposed Project involves building a 306 single-family residential development on 54.21 acres of agricultural land in the unincorporated community Goshen, 7 miles west of the city of Visalia in Tulare County, California. The Project is subject to the California Environmental Quality Act (CEQA).

Taylored Archaeology conducted background research and a pedestrian survey of the Project boundary to determine whether prehistoric and historic resources will be affected by the Project. The investigation included: (1) a records search at the SSJVIC; (2) a request of the Native American Heritage Commission (NAHC) Sacred Lands File (SLF) including Native American representatives contact information, and nongovernmental tribal outreach; (3) archival research; and (4) an archaeological survey.

A cultural resource records search was conducted by the Southern San Joaquin Valley Information Center (SSJVIC) and reported two prior cultural resources report studies were conducted within the Project area and no cultural resources were recorded within the Project area. Taylored Archaeology reviewed the two cultural resources report studies (TU-00041 and TU-01676). TU-00041 is a literature review of the Project area. TU-01676 is an archaeological and historic properties field survey of the Project area. The SSJVIC identified four previous report studies and one historical resource previously documented within a 0.5-mile radius of the Project boundary.

The NAHC was contacted regarding the Project and an SLF search was completed. The SLF yielded negative results for Sacred Sites, and the NAHC recommended contacting Native American representatives on the contact list provided by the NAHC. All of these parties, identified by the NAHC, were contacted for further information regarding cultural resources within the Project area. No cultural resources were identified during the pedestrian survey. Two buildings, a detached garage and mobile home, were observed during the survey. Taylored Archaeology recommends the buildings to be assessed by a qualified architectural historian to determine the age and historic significance, if any.

Taylored Archaeology additionally makes the following recommendations:

In the event that previously unidentified archaeological remains are encountered during development or ground-moving activities in the Project area, all work should be halted until a qualified archaeologist can identify the discovery and assess its significance. In the event of accidental discovery of unidentified archaeological remains during development or ground-moving activities in the Project area, all work shall be halted in the immediate vicinity (within a 100-foot radius) until a qualified archaeologist can identify the discovery and assess its significance.

If human remains are uncovered during construction, the Tulare County Coroner is to be notified to investigate the remains and arrange proper treatment and disposition. If the remains are identified on the basis of archaeological context, age, cultural associations, or biological traits to be those of a Native American, California Health and Safety Code 7050.5 and PRC 5097.98 require that the coroner notify the NAHC within 24 hours of discovery. The NAHC will then identify the Most Likely Descendent who will be afforded an opportunity to make recommendations regarding the treatment and disposition of the remains.

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1
INTRODUCTION

Taylored Archaeology performed a Phase I cultural resource assessment for the Conway Property Tentative Subdivision Map Project (Project) in the community of Goshen near the city of Visalia, California in unincorporated Tulare County, California. As part of development approval process, the City of Visalia as lead agency must comply with the California Environmental Quality Act (CEQA) (Public Resources Code [PRC] 21000 [g] mandate that government agencies consider the impacts of a project on the environment, including cultural resources.

1.1 PROJECT DESCRIPTION AND LOCATION

The proposed Project involves building a single-family residential development on approximately 54.21 acres. The proposed Project consists of approximately 306 single-family residences, two stormwater retention basins (one 0.47-acre basin and one 0.83-acre basin), a two-acre park, and associated paved streets, sidewalks, streetlights, utilities, and landscaping. Local streets within the development will connect to Avenue 304 to the south and Road 64 to the east. The planned maximum excavation of the Project is 8 feet below ground surface (bgs) for the stormwater retention basins and five to 10 feet bgs for the utilities.

The current Project site consists of 54.21-acres of agricultural land within Tulare County Assessor's Parcel Number 073-060-036 and 073-060-013, bordered on the corner of Avenue 304 and Road 64. The Project area is in Goshen and unincorporated in Tulare County near the City of Visalia, California (Figure 1-1). The Project area is visible on the U.S Geological Survey (USGS) 7.5-minute Goshen, California, topographic quadrangle in Section 24 of Township 18 South, Range 23 East, Mount Diablo Base and Meridian (Figure 1-2).

1.2 REGULATORY SETTING

In this report "cultural resources" are defined as prehistoric or historical archaeological sites as well as historical objects, buildings, or structures. In accordance with 30 Code of Federal Regulations (CFR) §60.4, "historical" in this report applies to cultural resources which are at least 50 years old. The significance or importance of a cultural resource is dependent upon whether the resource qualifies for inclusion at the local or state level in the California Register of Historical Resources (CRHR), or at the federal level in the National Register of Historic Places (NRHP). Cultural resources that are determined to be eligible for inclusion in the CRHR are called "historical resources" (California Code of Regulations [CCR] 15064.5[a]). Under this statue the determination of eligibility is partially based on the consideration of the criteria of significance as defined in 14 CCR 15064.5(a)(3). Cultural resources eligible for inclusion in the NRHP are deemed "historic properties".

1.2.1 CALIFORNIA ENVIRONMENTAL QUALITY ACT

Pursuant to CEQA, a historical resource is a resource listed in, or determined to be eligible for listing in, the CRHR. Historical resources may include, but are not limited to, "any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically or archaeologically significant" (PRC §5020.1[j]). In addition, a resource included in a local register of historical resources or identified as significant in a local survey conducted in accordance with the state guidelines are also considered historic resources under California Public Resources Code (PRC) Section 5020.1.

CEQA details appropriate measures for the evaluation and protection of cultural resources in §15064.5 of the CEQA Guidelines. According to CEQA guidelines §15064.5 (a)(3), criteria for listing on the CRHR includes 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.*
> *(D) Has yielded, or may be likely to yield, information important in prehistory or history.*

According to CEQA guidelines §21074 (a)(1), criteria for tribal cultural resources includes the following:

> *(1) Sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are either of the following:*
> *(A) included or determined to be eligible for inclusion in the California Register of Historical Resources.*
> *(B) included in a local register of historical resources as defined in subdivision (k) of Section 5020.1.*

Protection of cultural resources within California is additionally regulated by PRC §5097.5, which prohibits destruction, defacing, or removal of any historic or prehistoric cultural features on land under the jurisdiction of State or local authorities.

1.3 PROFESSIONAL QUALIFICATIONS

Archaeologist Consuelo Y. Sauls (M.A.), a Registered Professional Archaeologist (RPA 41591505), managed the assessment and compiled this report for the Project. Ms. Sauls also conducted the records search, literature review, requested Sacred Lands File and performed the pedestrian field survey of the Project site. Ms. Sauls meets the Secretary of the Interior's Standards for Professional Qualifications in Archaeology. Statement of Qualifications for key personnel is provided in Appendix A.

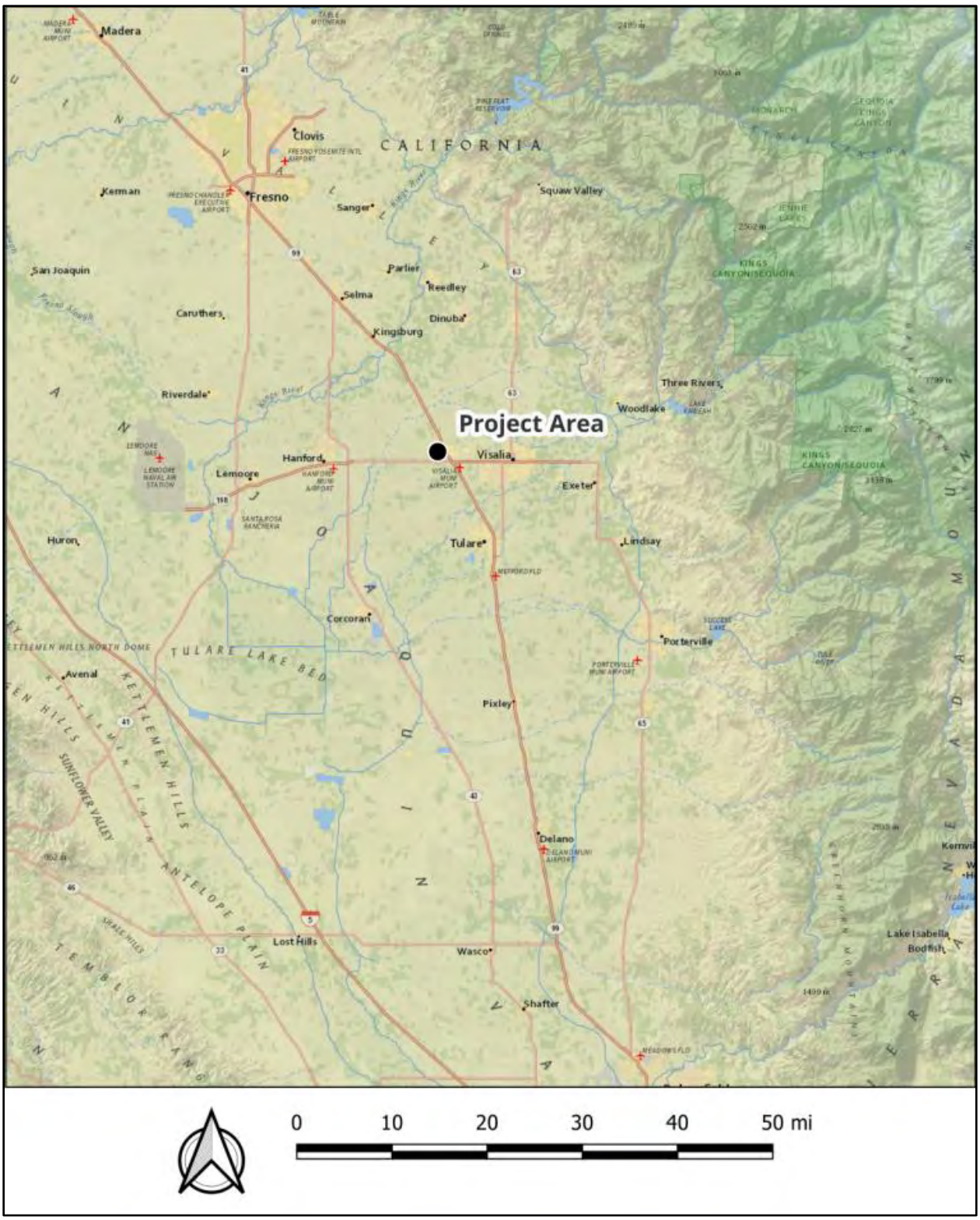


Figure 1-1 Project vicinity in Tulare County, California.

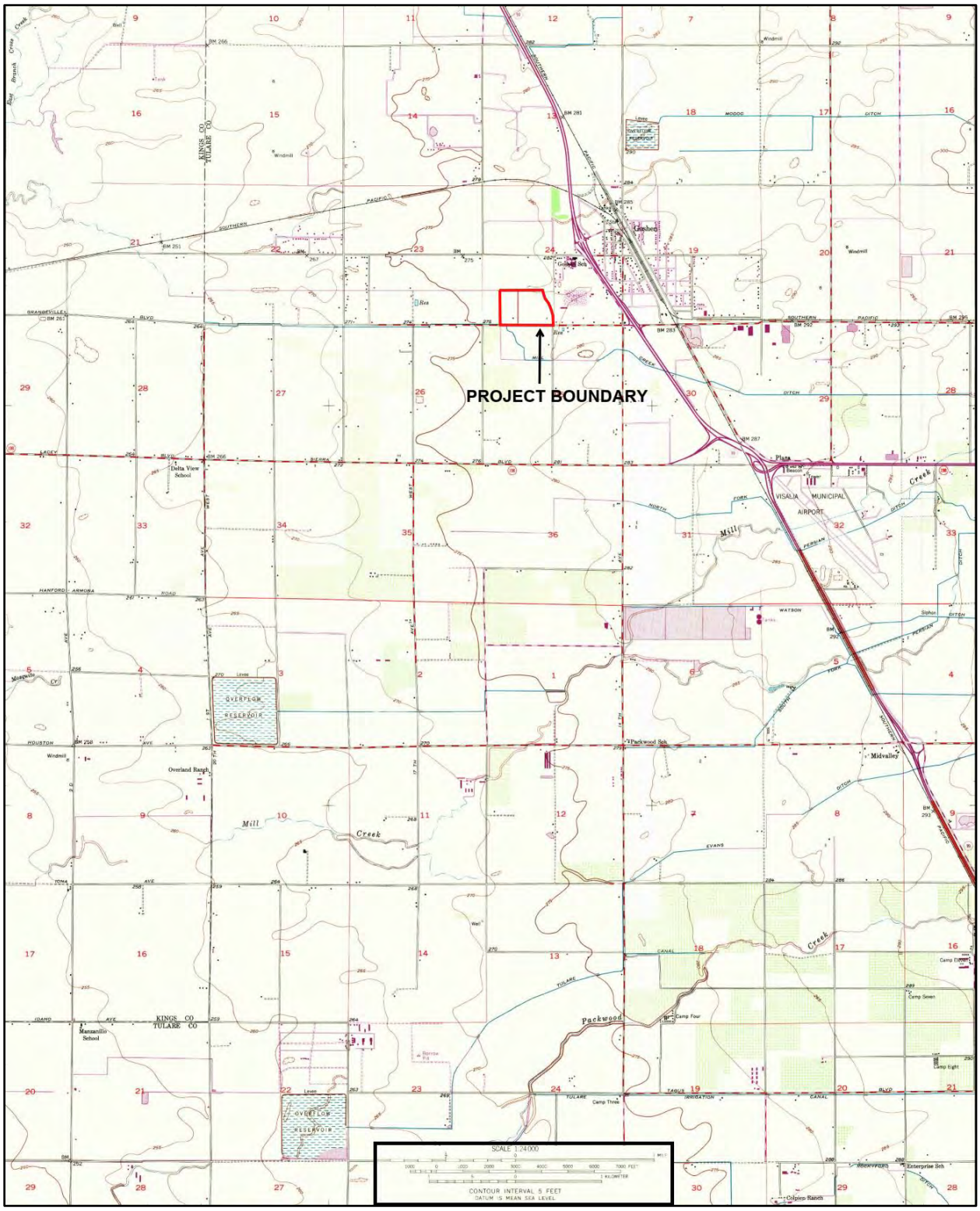


Figure 1-2 Project location on the USGS Goshen, CA 7.5-minute quadrangle.



Figure 1-3 Aerial view of the Project boundary showing survey coverage.

1.4 REPORT STRUCTURE

This report documents the results of a cultural resource assessment of the proposed Project area. In order to assess potential project impacts to archaeological and historical resources pursuant to CCR §15064.5, the following specific tasks were completed: (1) requesting a records search from the Southern San Joaquin Information Center (SSJVIC) of the California Historical Resources Information System (CHRIS), at California State University, Bakersfield; (2) requesting a Sacred Lands File Search from the Native American Heritage Commission (NAHC); (3) archival research; and (4) conducting an archaeological pedestrian survey.

Taylored Archaeology prepared this report following the California Office of Historic Preservation standards in the 1990 Archaeological Resources Management Report Recommended Contents and Format. Chapter 1 describes the introduction of the Project and its location, and identifies the key personnel involved in this report. Chapter 2 summarizes the Project setting, including the natural, prehistoric, historic, and ethnographic background for the Project area and surrounding area. Chapters 3 details the methods used for cultural records search, archival research, local Native American outreach, and archaeological pedestrian survey. Chapter 4 summarizes the results of the cultural resource investigation. Chapter 5 discusses the Project results and offers management recommendations. Chapter 6 is a bibliography of references cited within this report. The report also contains the following appendices: Qualifications of key personnel (Appendix A), the CHRIS records search results (Appendix B), and the NAHC letter of the SLF results (Appendix C).

2
PROJECT SETTING

2.1 NATURAL ENVIRONMENT

The Project site lies in the Central Valley of California, which is approximately 450 miles from north to south, and ranges in width east to west from 40 to 60 miles (Prothero 2017). The Central Valley is divided into two subunits, the Sacramento Valley in the north and the San Joaquin Valley in the south, which are each named after the primary rivers within each valley (Madden 2020). The Project is located approximately 275 feet above sea level on the open flat plains of the Southern San Joaquin Valley. Climate within the San Joaquin valley is classified as a 'hot Mediterranean climate', with hot and dry summers, and cool damp winters characterized by periods of dense fog known as 'tule fog' (Prothero 2017).

The San Joaquin Valley is a comprised of a structural trough created approximately 65 million years ago and is filled with nearly six miles of sediment (Bull 1964). The San Joaquin Valley ranges from Stockton and the San Joaquin-Sacramento River Delta in the north to Wheeler Ridge to the south, ranging nearly 60 miles wide at its widest (Zack 2017). It is split by late Pleistocene alluvial fans between the San Joaquin River hydrologic area in the north and the Tulare Lake Drainage Basin in the south (Rosenthal et al 2007). The Project site is located within the latter of the two hydrologic units. The Kaweah, Tule, Kern, and Kings rivers flowed into large inland lakes with no outflow except in high flood events, in which the lakes would flow through the Fresno Slough into the San Joaquin River. The largest of these inland lakes was the Tulare Lake, which occupied a vast area of Tulare and Kings Counties and was the largest freshwater lake west of the Mississippi. These four rivers in the Tulare Lake Drainage Basin accounted for more than 95 percent of water discharged into Tulare Lake, with the remaining five percent sourced from small drainages originating in the Coast Ranges to the west (Adams et al. 2015).

The Project is in central western Tulare County on the valley floor of the San Joaquin Valley within the greater Kaweah River Delta alluvial fan. Specifically, the Project is located along historical Mill Creek, which is a distributary of the Kaweah River (Thompson 1892). Distributaries form when debris-laden river waters meet abrupt changes in channel and slope confinement, resulting in unstable channel networks that change with time (Wagner et al. 2013). Before the appearance of agriculture in the nineteenth century, the Project location would have been comprised of prairie grasslands with scatter oak tree savannas near the foothills, and along the various streams and drainages (Preston 1981). Riparian environments would also have been present along various waterways, including drainages and marshes. Native vegetation likely would have consisted of needle grasses and other perennial bunchgrasses before the introduction of non-native species in the 1800s.

The valley floor of the region was largely dominated by marshlands, lakes, and annual grasslands. Historically, these habitats provided a lush environment for large animals, including various migratory birds and other waterfowl, grizzly bear, tule elk, pronghorn, mule deer, black bear, and mountain lion (Preston 1981). Native trees and plants observed in the Project vicinity include

various blue, live, and white oaks, cottonwood, and willow. The introduction of agriculture to the region resulted in large animals being forced out of their habitat. Common land mammals now include valley coyote, bobcat, gray fox, kit fox, and rabbits. Rivers and lakes throughout the valley provide habitat for freshwater fish, including rainbow trout, Sacramento sucker, and Sacramento perch (Preston 1981).

The Project site is presently characterized as agricultural with row crop cultivation on the eastern two-thirds of the site, and disced vacant land in the western one-third of the site with a single rural residence in the southeastern portion of the site. The site is surrounded by orchards and row crops to the south and west, former fields under active residential development construction to the north, and commercial uses to the east. The immediate region is located at the western edge of the unincorporated community of Goshen suburban footprint and is rapidly transitioning from agricultural to suburban residential use.

2.2 PREHISTORIC SETTING

Research into San Joaquin Valley prehistory began in the early 1900s with several archaeological investigations (Rosenthal et al. 2007). The Southern San Joaquin Valley is of one of the least understood areas within California due to a lack of well-grounded chronologies for large segments of the valley (Rosenthal et al. 2007). This is largely due to the valley floor being filled with thick alluvial deposits, and from human activity largely disturbing much of the valley floor due to a century and a half of agricultural use (Dillon 2002; Siefken 1999). Mound sites may have occurred as frequently as one every two or three miles along major waterways but studying such mounded occupations sites is difficult as most surface sites have been destroyed (Schenck and Dawson 1929). Much of the early to middle Holocene archaeological sites may be buried as deep as 10 meters due to millennia of erosion and alluvial deposits from the western Sierras (Moratto 1984).

Mass agricultural development has heavily disturbed and changed the landscape of the Southern San Joaquin Valley, from the draining of marshes and the vanishing of the extensive Tulare Lake, to grading nearly the entire valley for agricultural operations (Garone 2011). These activities have impacted or scattered much of the shallow surface deposits and mounds throughout the valley (Rosenthal et al 2007). Some researchers have suggested that potentially as much as 90 percent of all Central California archaeological sites have been destroyed from these activities (Riddell 2002).

The cultural traits and chronologies which are summarized below are largely based upon information discussed in multiple sources, including Bennyhoff and Fredrickson (1973, 1974), Garfinkel (2015), McGuire and Garfinkel (1980), Moratto (1984), and Rosenthal et al. (2007). The most recent comprehensive approach to compiling a chronology of the Southern San Joaquin Valley prehistory is by Garfinkel in 2015, which builds off Rosenthal's 2007 previous work. Both Garfinkel's and Rosenthal's chronologies are calculated in years B.C. In the interest of maintaining cohesiveness with modern anthropological research, the dates of these chronologies have been adapted into years before present (B.P.).

The Paleo-Indian Period (13,500-10,600 cal B.P.) was largely represented by ephemeral lake sites which were characterized by atlatl and spear projectile points. Around 14,000 years ago, California was largely a cooler and wetter place, but with the retreat of continental Pleistocene glaciers, California largely experienced a warming and drying period. Lakes filled with glacial meltwater were located in the valley floor and used by populations of now extinct large game animals. A few prehistoric sites were discovered near the southwestern shore of Tulare Lake (Garfinkel 2015). Foragers appear to have operated in small groups which migrated on a regular basis.

During the Lower Archaic Period (10,500-7450 cal B.P.), climate change created a largely different environment which led to the creation of larger alluvial fans and flood plains. Most of the archaeological records of the prior period wound up being buried by geological processes. During this time, cultural patterns appear to have emerged between the foothill and valley populations of the local people. The foothill sites were often categorized by dense flaked and ground stone assemblages, while the valley sites were instead characterized by a predominance of crescents and stemmed projectile points. Occupation within the area is represented mostly by isolated discoveries and along the former shoreline of Tulare Lake. Archaeological finds are typically characterized by chipped stone crescents, stemmed points, and other distinctive flakes stone artifacts (Rosenthal et al. 2007). Variations in consumption patterns emerged as well, with the valley sites more marked by consumption of waterfowl, mussels, and freshwater fish, while the foothills sites saw an increase in nuts, seeds, and a more narrowly focused diet than the valley sites.

The Middle Archaic (7450-2500 cal B.P.) saw an increase in semi-permanent villages along river and creek settings, with more permanent sites located along lakes with a more stable supply of water and wildlife. Due to the warmer and drier weather of this period, many lakes within the valley dramatically reduced in size, while some vanished completely (Garone 2011). Cultural patterns during this time saw an increase in stone tools, while a growth in shell beads, ornaments, and obsidian evidence an extensive and ever-growing long-distance trade network. Little is known of cultural patterns in the valley during the Upper Archaic (2500-850 B.P.), but large village structures appeared to be more common around local rivers. An overall reduction of projectile point size suggests changing bow and arrow technologies. Finally, the Emergent Period (850 cal B.P. - Historic Era) was generally marked by an ever-increasing specialization in tools, and the bow and arrow generally replaced the dominance of the dart and atlatl. Cultural traditions ancestral to those recorded during ethnographic research in the early 1900s are identifiable.

2.3 ETHNOGRAPHY

The Project area is in the Southern Valley Yokuts ethnographic territory of the San Joaquin Valley. The Yokuts were generally divided into three major groups, the Northern Valley Yokuts, the Southern Valley Yokuts, and the Foothill Yokuts. The Yokuts are a sub-group of the Penutian language that covers much of coastal and central California and Oregon (Callaghan 1958). The Yokuts language contained multiple dialects spoken throughout the region, though many of them were mutually understandable (Merriam 1904).

The Yokuts have been extensively researched and recorded by ethnographers, including Powers (1877), Kroeber (1925), Gifford and Schenck (1926, 1929), Gayton (1930, 1945), Driver (1937), Harrington (1957), Latta (1977), and Wallace (1978). Much of the research from these ethnographers focuses on the central Yokuts tribes due to the northernmost tribes being impacted by Euro-Americans during the California Gold Rush of the mid 1800s, and by the southernmost tribes often being removed and relocated by the Spanish to various Bay Area or coastal missions. The central Yokuts tribes, and especially the western Sierra Nevada foothill tribes, were the most intact at the time of ethnographic study.

The most detailed ethnographic information gathered regarding Native American group territories in Central California is located within maps prepared by Kroeber. The information presented in Kroeber's map of Southern and Central Yokuts shows the Project area within the Telamni Yokuts territory (1925: Plate 47). The main village for this area was *Waitatshulul*, which was approximately 8 miles to the southeast of the Project site along Packwood Creek (Kroeber 1925). Primary Yokuts villages were typically located along lakeshores and major stream courses, with scattered secondary or temporary camps and settlements located near gathering areas in the foothills. Yokuts were organized into local tribes, with one or more linked villages and smaller settlements within a territory (Kroeber 1925).

Each local tribe was a land-owning group that was organized around a central village and shared common territory and ancestry. Most local tribe populations ranged from 150 to 500 people (Kroeber 1925). These local tribes were often led by a chief, who was often advised by a variety of assistants including the winatum, who served as a messenger and assistant chief (Gayton 1930). Early studies by Kroeber (1925), Gifford and Schenck (1926), and Gayton (1930) concluded that social and political authority within local tribes was derived from male lineage and patriarchy. However, more recent reexaminations (Dick-Bissonnette 1998) argue that this assumption of patriarchal organization was based on male bias by early 20th century researchers, and instead Yokuts sociopolitical authority was matriarchal in nature and centered around matrilineal use-rights and women's work groups.

Prior to Euro-American contact, there was abundance of natural resources within the greater Tulare Lake area. Due to these resources, Yokuts maintained some of the largest populations in North America west of the continental divide (Cook 1955a).

2.4 HISTORIC SETTING

2.4.1 California History

European contact in modern-day California first occurred in 1542 with the arrival of a Spanish expedition lead by Juan Rodríguez Cabrillo into San Diego Bay (Engstrand 1997). Expeditions along the California coast continued throughout the sixteenth century and primarily focused on finding favorable harbors for further expansion and trade across the Pacific. However, rocky shorelines, unfavorable currents, and wind conditions made traveling north from New Spain to

the upper California coast a difficult and time-consuming journey (Eifler 2017). The topography of California, with high mountains, large deserts, and few natural harbors lead to European expansion into California only starting in the 1760s. As British and Russian expansion through fur trading encroached on California from the north, Spain established a system of presidios, pueblos, and missions along the California coast to defend its claim, starting with Mission San Diego de Alcalá in 1769 (Engstrand 1997).

2.4.2 Central California History

The San Joaquin Valley did not experience contact with Europeans until the late 1700s (Starr 2007). Life at the California missions was hard and brutal for Native Americans, with many dying of disease, poor conditions, and many fleeing to areas not under direct Spanish control (Jackson and Castillo 1995). The earliest exploration of the San Joaquin Valley by Europeans was likely by the Spaniards when in the fall of 1772 a group known as the Catalonian Volunteers entered the valley through Tejon Pass in search of deserters from the Southern California Missions (Zack 2017). However, the group only made it as far north as Buena Vista Lake in modern day Kern County before turning around due to the extensive swamps. Additional excursions to the valley were for exploration such as those led by Lieutenant Bariel Moraga in 1806, but also to find sites for suitable mission sites and to track down Native Americans fleeing the coastal missions (Cook 1958).

Subsequent expeditions were also sent to pursue outlaws from the coast who would often flee to the valley for safety. One of the subsequent explorations was an expedition in 1814 to 1815 with Sargent Juan Ortega and Father Juan Cabot, who left the Mission San Miguel with a company of approximately 30 Spanish soldiers and explored the San Joaquin Valley (Smith 2004). This expedition passed through the Kaweah Delta and modern-day Visalia and made a recommendation to establish a mission near modern-day Visalia. However, with European contact also came European disease. Malaria and other new diseases were brought by Europeans, and in 1833 an epidemic of unknown origin traveled throughout the Central Valley. Some estimates place the Native American mortality of the epidemic as high as 75 percent (Cook 1955b). Combined with the rapid expansion of Americans into California in 1848 during the Gold Rush, Native American populations within the valley never fully recovered (Eifler 2017).

Initial settlement within the valley by Europeans in the 1830s was largely either by trappers or horse thieves (Clough and Secrest 1984). In fact, horse and other livestock theft was so rampant that ranching operations on the Rancho Laguna de Tache by the Kings River and Rancho del San Joaquin Rancho along the San Joaquin River could not be properly established (Cook 1962). With the end of the Mexican American War and the beginning of the gold rush in 1848, the San Joaquin Valley became more populated with ranchers and prospectors. Most prospectors traveled by sea to San Francisco and used rivers ranging from the Sacramento River to the San Joaquin River to access the California interior (Eifler 2017). Most areas south of the San Joaquin River were less settled simply because those rivers did not connect to the San Francisco Bay area except in wet flood years. By 1850, California became a state and Tulare County was established in 1853.

2.4.3 Local History

Goshen is a small unincorporated community in Tulare County approximately 7 miles west of Visalia. The City of Visalia is one of the oldest cities within the Southern San Joaquin Valley and was founded in 1852. By the late 1850s the town of Visalia was a major station along the Butterfield Overland Mail stage route as it traveled north from Los Angeles to Stockton (Helmich 2008). During the first few decades, Visalia was a supply center for nearby gold rushes, served as the regional population center of Tulare County, and had an agricultural economy based on livestock and some agriculture (Dyett and Bhatia 2014). The Southern Pacific Railroad was extended from Fresno into Tulare County in the early 1870s but bypassed the City of Visalia as it was located six miles to the east of the rail line (Small 1926). On July 4, 1872, Goshen was announced as the name of the station that would supply Visalia along the newly extended rail line (Small 1926). By 1874, a feeder railroad connection from Goshen to Visalia was built (Mitchell 1974).

The construction of the rail line also brought an increase in agriculture and farms, which clashed with existing ranching operations in the local area. Escalating conflicts and livestock disputes between ranchers and farmers lead to the "No Fence Law" in 1874, which forced ranchers to pay for crop and property damage caused by their cattle (Ludeke 1980). With the passage of this law and the expansion of irrigation systems, predominant land use in the 1870s switched from grazing to farming (Mitchell 1974). This led to the beginning of the vast change of the San Joaquin Valley from native vegetation and grasslands to irrigated crops (Varner and Stuart 1975).

Water rights within California originally arose from the 'first come first serve' policy of the Gold Rush era. Diverting surface water to farms became big business but was a convoluted mess of customs, traditions, and conflicting claims (Zack 2017). Fed up with the situation, small farmers gathered behind Modesto lawyer C.C. Wright, who was elected to the California legislature in 1887 on the platform of taking water rights from large estates and putting it in the power of community-controlled irrigation districts (Hundley 1992). To solve this mess, the Wright Act of 1887 was passed that allowed residents to petition a local county board of supervisors to create irrigation districts that had the power to issues bonds, and tax land within the district boundaries to pay for the creation and maintenance of canals and ditches for irrigation purposes.

At the same time as the Wright Act, an important step forward was made in ditch-digging technology that allowed irrigation systems to be built at a faster pace. From the 1840s to 1890s, farm ditches and canals were largely constructed through the use of buckboards and slip-scoops, which involved the use of a board pulled by horses in an uprights position in order to level ground (Bulls 2010). Between 1883 and 1885, Scottish immigrant James Porteous had moved to Fresno and made significant improvements to the buckboard style scraper that allowed the new scraper to be pulled by two horses and scrape and move soil while dumping it at a controlled depth. This new design was patented and sold as the "Fresno Scraper", which lead to an explosion of ditch digging efforts within the San Joaquin Valley (Zack 2017).

3
METHODS

3.1 RECORDS SEARCH

On August 3, 2022, Taylored Archaeology requested a cultural resource records search from the SSJVIC of the CHRIS at California State University in Bakersfield, California. The purpose of this request was to identify any prehistoric or historical resources on or near the Project site that had been previously recorded within the Project boundary and a 0.5-mile radius of the Project area and identify and review prior cultural resource investigations completed in or near the Project boundary. SSJVIC staff researched historical USGS topographic maps, reports of previous cultural resource investigations, archaeological site and survey base maps, 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 (Appendix B).

3.2 ARCHIVAL RESEARCH

Archival research was conducted to investigate the historical background for any potential archaeological deposits, historical deposits or built environment properties that may exist in the Project boundary. Historical maps, historical aerial photographs, historical US Geological Survey (USGS) topographic maps, Google Street View photos, books, scholarly articles, and other records were used to better understand the prehistory and history of the Project area. Research data was used to identify potential areas on the Project site where archaeological deposits may exist, or historical buildings, structures or objects may exist. The results of this research are presented in Chapter 4.

3.3 NATIVE AMERICAN OUTREACH

Taylored Archaeology sent a request to the NAHC as part of this cultural resources assessment for a Sacred Lands File (SLF) search on January 18, 2023. The objective of the SLF search was to identify any known places of religious, sacred activity or traditional use or gathering areas are present in or near the Project area. The NAHC responded via email on February 8, 2023, with a letter including contact information for local Native American tribal representatives who may have knowledge or interest in sharing information of resources in the Project area and surrounding area. Each Native American representative listed was sent a nongovernmental outreach letter via certified mail and a map notifying them of the Project and asking if they had any knowledge of the Project area or surrounding vicinity. Follow-up communication was performed via email or phone call as appropriate. The SLF results are in Chapter 4.

3.4 ARCHAEOLOGICAL PEDESTRIAN SURVEY

On January 22, 2023, Archaeologist Consuelo Sauls conducted a Phase I archaeological pedestrian survey of the 54.21-acre Project site using systematic transects spaced 10 meters apart within

the Project boundary. The site was visually surveyed to identify any prehistoric deposits and potential historical features, structures, and artifacts more than 50 years old that may be present on the ground surface. The entire Project site was accessible, except the mobile house with a driveway with a graveled front yard enclosed in a metal fence. Ms. Sauls used a plan map, visible landmarks, and Gaia GPS application for navigation to locate and survey the Project area. She also photographed the survey area using an iPhone 11 Pro digital camera.

4
RESULTS

4.1 RECORDS SEARCH

The SSJVIC provided the records search results in a letter dated August 15, 2022 (Records Search File No. 22-307; Appendix B). The results of this search indicate that there are two previous cultural resources investigation reports conducted within the Project area (Table 4-1), however, no cultural resources were recorded within the Project area. TU-01676 is comprised of three related cultural resources reports for a single project.

Four previous cultural resources investigation reports were conducted (Table 4-2), and one previously recorded cultural resource (P-54-004995) was recorded within a 0.5-mile radius of the Project area. P-54-004995 is a historic-era water tower and tank. Further review of P-54-004995 revealed this resource was erroneously mapped within a 0.5-mile radius of the Project area. Based on the aerial photos, this resource is located 1.4 miles east of the Project area and therefore will not be impacted by the Project.

Table 4-1 Previous Cultural Resources Investigation Reports within the Project Area

Report Number	Author(s)	Date	Report Title	Study
TU-00041	Self, William	1995	Class I Overview Santa Fe Pacific Pipeline Partners, L.P. Proposed Concord to Colton Pipeline Project	Literature Review; No survey of Project area
TU-01676 **TU-01676A** **TU-01676B**	Wickstrom, Brian and Vallejo, Phillip	2009-2010	Historic Property Survey Report for the Betty Drive Interchange Project in Goshen, Tulare County, California Archaeological Survey Report for the Betty Drive Interchange Project in Goshen, Tulare County, California Supplemental Archaeological Survey Report for the Betty Drive Interchange Project in Goshen, Tulare County, California	Archaeological and Built Environment Field Surveys

Table 4-2 Previous Cultural Resources Investigation Reports within 0.5-mile radius of the Project Area

Report Number	Author(s)	Date	Report Title	Study
TU-00146	Cantwell, R.J.	1976	Archaeological Survey Report for Road 60 from Avenue 296 to Avenue 304	Archaeological Field Survey
TU-01008	Hovey, Kevin	1999	Negative Archaeological Survey Report to Upgrade the Bridge Rails on Seven Bridges That Span State Route 99 Throughout Tulare County, California	Archaeological Field Survey
TU-01048	Ptomey, Steven M.	2001	Negative Archaeological Survey Report for the Building of a Pedestrian Overcrossing of Route 99, Tulare County	Archaeological Field Survey
TU-01158	Thomas, Denise L.	2003	Archaeological Survey Report Goshen/Kingsburg Six-Lane Project on State Route 99, Fresno and Tulare Counties, California	Archaeological Field Survey and Excavation

4.2 ARCHIVAL RESEARCH

Historic map coverage of the Project site began in 1885. A review of an 1885 irrigation map of Fresno to Porterville shows the southwest quarter of Section 24, including the Project site, as owned by a “Featherson” (Figure 4-1), with historic Millwood Creek crossing the southwest corner of the Project site (Hammond 1885).

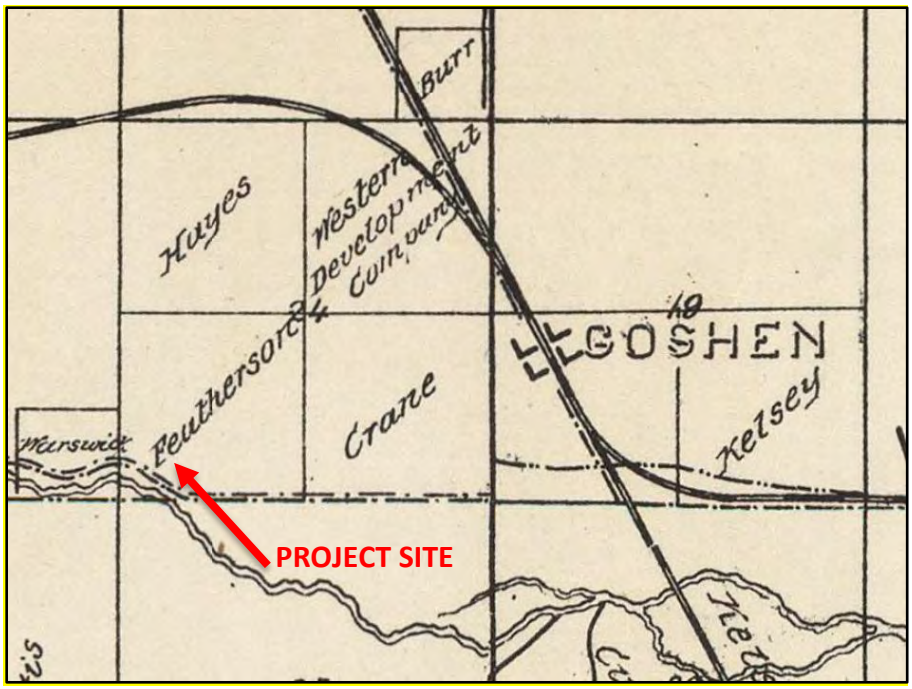


Figure 4-1 Project site with historical Mill Creek in southwest corner of Section 24 (Hammond 1885)

An 1892 survey map of Tulare County shows the southern half of the southwest quarter of Section 24, including the Project site, as owned by a "M.E. Featherstone" (Figure 4-2) with historical Mill Creek running through the southwest portion of the Project site (Thompson 1892). A single structure is depicted in the southeastern portion of the Project site. An unnamed road forms the southern border of the Project site.

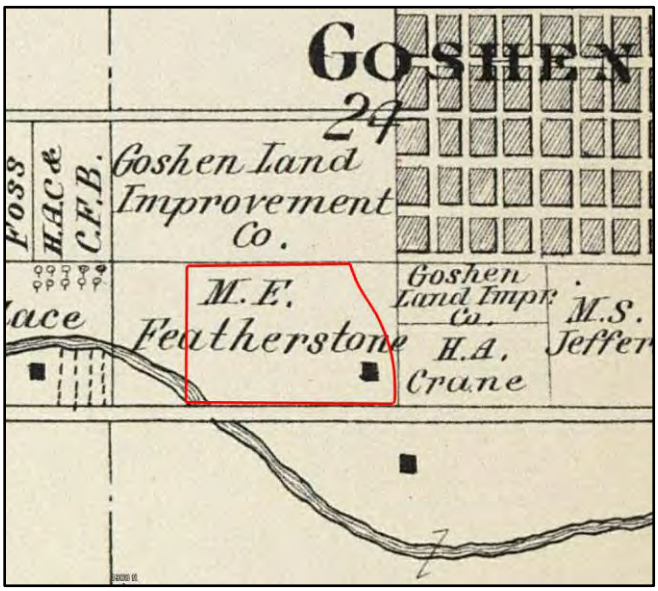


Figure 4-2 1892 Atlas, approximate Project site boundary in red with historical Mill Creek (Thompson 1892)

Available topographic map coverage of the Project site begins in 1926. The USGS topographic map of the Project site in 1926 depicts two structures on the site, one in the southeast portion of the site similar to depicted in Figure 4-2 above and an additional structure in the southwest portion of the Project site (Figure 4-3). Historical Mill Creek is no longer depicted on the 1926 topographic map, and the map shows a "Mill Creek Ditch" located approximately 1/10th mile south of the Project site. The Project site is depicted as adjacent to two unnamed roads to the south and east. No changes of note appear in the 1950 USGS map, except for the alignment of Mill Creek Ditch being brough closer towards the Project site (Figure 4-4).

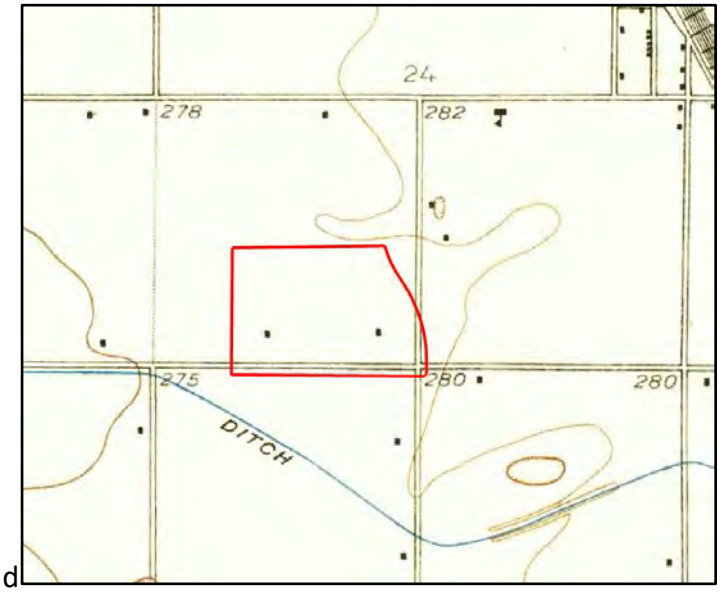


Figure 4-3 1926 topographic map, Project boundary in red (USGS 1926)

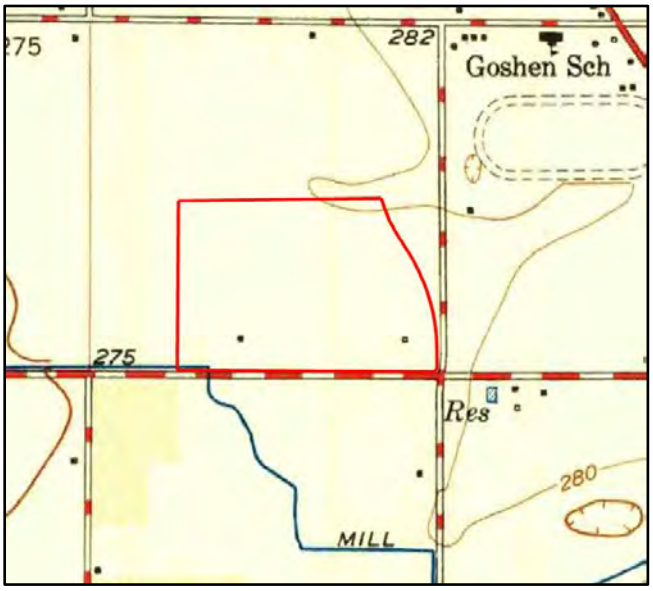


Figure 4-4 1950 topographic map, Project boundary in red (USGS 1950)

The 1949 USGS topographic map, photorevised in 1969, shows the Project site and surrounding area roughly similar to the 1950 map, except Mill Creek Ditch has been realigned again to its present day configuration, forming the western boundary of the Project site (Figure 4-5).

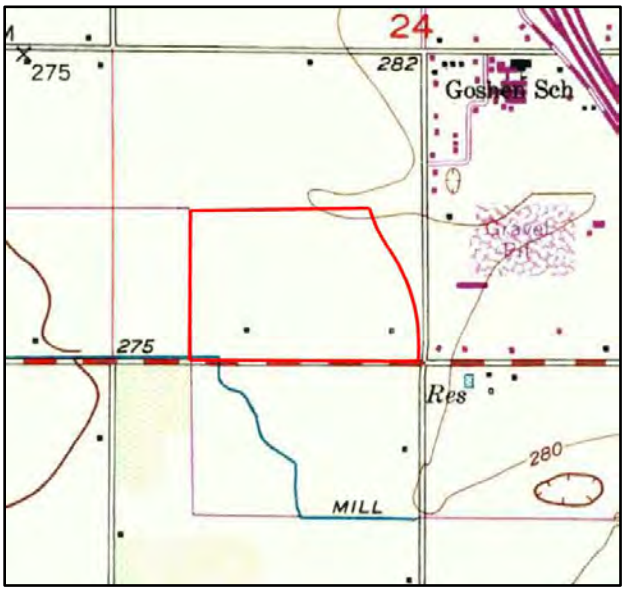


Figure 4-5 Photorevised 1969 topo map, Project boundary in red and realigned Mill Creek Ditch in purple (USGS 1969)

A review of historic aerial imagery between 1956 and present-day shows the Project site to have been used for agricultural purposes throughout its history (NETROnline 2023, Google Earth 2023). The 1956 historic aerial photograph depicts a rural residence in the southwest portion of the Project site and an unknown structure in the southeast portion of the Project site consistent with structures depicted on the 1949 topographic map. The unknown structure in the southeast portion of the site no longer appears in the 1969 aerial photo. A detached garage and mobile home first appear in the 1984 historic aerial photo in the same location as the present-day garage and mobile home on the site. Property records from Tulare County show no year built for the property. Based on a review of available archival records, the present detached garage and mobile home appear to be between 54 and 39 years old.

The rural residence on the southwestern portion of the site appears to have been demolished between 2011 and 2012. In 2012, a graded agricultural pad and dirt road leading to the pad appears in the western portion of the site that from 2012 to 2018 was utilized for various soil piles and agricultural operations.

4.3 NATIVE AMERICAN OUTREACH

The NAHC responded on February 8, 2023, via letter regarding Taylored Archaeology's request. The letter stated a search of the SLF was negative. The NAHC supplied a list of Native American representatives to contact for information or knowledge of cultural resources in the Project area (Appendix C).

The following Native American organizations/individuals were contacted from the list provided by NAHC below:

- Chairperson Elizabeth Kipp of Big Sandy Rancheria of Western Mono Indians;
- Chairperson Leo Sisco of the Santa Rosa Rancheria Tachi Yokut Tribe;
- Chairperson Neil Peyron of the Tule River Indian Tribe;
- Environmental Department Kerri Vera of the Tule River Tribe;
- Tribal Archaeologist Joey Garfield of the Tule River Indian Tribe; and
- Chairperson Kenneth Woodrow of the Wuksache Indian Tribe/Eshom Valley Band.

The nongovernmental outreach letters were sent via certified mail on February 9, 2023, to all the Native American representatives on the contact list (Appendix C). The letters included a description of the proposed Project and a location map. These letters were followed up by emails containing an attached digital copy of the letter on February 16, 2023. As of the date of this report, no responses were received by the Native American representatives, nor was any information shared regarding tribal cultural resources pertaining to the Project area.

4.4 ARCHAEOLOGICAL PEDESTRIAN SURVEY RESULTS

A pedestrian survey was conducted on January 22, 2023, by archaeologist Consuelo Sauls. The landscape on the Project site consisted of a harvested corn field on the eastern portion (Figure 4-5) and mostly a former walnut orchard on the western portion of the Project site (Figure 4-6). All portions of the Project site were surveyed that were not obstructed by buildings or structures. In addition, in the western portion of the Project site amongst the walnut trees was a dirt driveway (Figure 4-7) with a large pile of white soil, possibly gypsum (Figure 4-8). There was also an on-site brush pile.

The natural topography of the area has been altered by historical and modern agricultural practices and much of the land on the Project site had been graded, plowed, and planted and/or harvested, which has caused a substantial disturbance to the soil. At the time of the survey, ground visibility on the Project side widely varied between poor (5 precent) to excellent (100 percent). The ground visibility in the western portion with the walnut trees was poor (5 percent) due to dense annual grasses and ruderal vegetation (Figure 4-9). Ground visibility in the eastern portion (harvest corn field) of the Project site was generally good (80 percent). Ground visibility near roadways surrounding, and paths on, the Project site was excellent (100 percent).

Due to poor ground visibility in the western portion of the Project site, rodent burrows and related soil piles were closely examined for lithic scatter and soil type. The soil was medium brown sandy loam with small pebbles and gravels. No visual evidence was found of the historical Mill Creek discussed in Section 4.2, Archival Research. A mobile home and detached garage were observed in the southeastern part of the Project site (Figure 4-10).

No archaeological sites, isolated artifacts, or features were identified during the pedestrian survey. While past agricultural activities may have potentially destroyed or obscured ground

surface evidence of archaeological resources within the Project boundary, intact archaeological resources related to prior occupation of the area may potentially exist below the ground surface.



Figure 4-6 Northern portion of the Project site with good (80 percent) ground visibility, facing south.



Figure 4-7 Former Walnut Orchard with poor (5 percent) ground visibility on the Project site, facing south.



Figure 4-8 Dirt driveway leads to dirt pile on the Project site, facing north.



Figure 4-9 Dirt Pile (gypsum) on the Project site, facing west.



Figure 4-9 Fresh rodent burrow and poor ground visibility (5 percent), western part of Project site.



Figure 4-10 Mobile home and detached garage, in eastern part of Project site, facing north.

5
CONCLUSIONS AND RECOMMENDATION

Taylored Archaeology conducted a Phase I Cultural Resources Assessment for the Conway Property Tentative Subdivision Map Project. The purpose of this assessment is to identify potential cultural resources on the ground surface in the 54.21-acre Project boundary in Tulare County, California. The Project proposes to construct a 306 lot single-family residential development in the community of Goshen.

Taylored Archaeology conducted background research and a pedestrian survey of the Project boundary to determine whether prehistoric and historic resources will be affected by the Project. The investigation included: (1) a records search at the SSJVIC; (2) a request of the NAHC Sacred Lands File including Native American representatives contact information, and nongovernmental tribal outreach; (3) archival research; (4) an archaeological survey; and (5) documentation of resources identified with the Project boundary.

The SSJVIC reported two prior cultural resources report studies were conducted within the Project area and no cultural resources were recorded within the Project area. Taylored Archaeology reviewed the two cultural resources report studies (TU-00041 and TU-01676). TU-00041 is a literature review of the Project area. TU-01676 is an archaeological and historic properties field surveys of the Project area. The SSJVIC identified four previous report studies and one recorded historical resource within a 0.5-mile radius of the Project boundary: a water tower (P-54-004995).

The NAHC's Sacred Lands File search results were negative, and the NAHC recommended contacting Native American representatives on the contact list provided by the NAHC. Taylored Archaeology sent nongovernmental outreach letters to Native American representatives with follow-up emails. As of the date of this report, no responses were received from Native American representatives. The archaeological pedestrian survey resulted in negative findings of archaeological resources on the ground surface. Two buildings, a detached garage and mobile home, were observed during the survey.

Based on a review of available archival records, the detached garage and mobile home currently on the Project site appear to be between 54 and 39 years old. Taylored Archaeology recommends the buildings to be assessed by a qualified architectural historian to determine the age and historic significance. Taylored Archaeology additionally makes the following recommendations:

In the event that previously unidentified archaeological remains are encountered during development or ground-moving activities in the Project area, all work should be halted until a qualified archaeologist can identify the discovery and assess its significance. In the event of accidental discovery of unidentified archaeological remains during development or ground-moving activities in the Project area, all work shall be halted in the immediate vicinity (within a

100-foot radius) until a qualified archaeologist can identify the discovery and assess its significance.

If human remains are uncovered during construction, the Tulare County Coroner is to be notified to investigate the remains and arrange proper treatment and disposition. If the remains are identified on the basis of archaeological context, age, cultural associations, or biological traits to be those of a Native American, California Health and Safety Code 7050.5 and PRC 5097.98 require that the coroner notify the NAHC within 24 hours of discovery. The NAHC will then identify the Most Likely Descendent who will be afforded an opportunity to make recommendations regarding the treatment and disposition of the remains.

6
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Zack, Richard.

2017 *Quest for Water Tulare Irrigation District its History, People, and Progression.* PartnerPress.org, Carlsbad, California.

APPENDIX A

Personnel Qualifications

Consuelo Sauls, M.A., RPA 41591505
Archaeologist
csaulsarchaeo@gmail.com
559.797.1572

Areas of Expertise

- Cultural Resource Management
- CEQA and Federal regulations
- Prehistoric Archaeology
- Laboratory Management
- Technical Writing
- Phase I Assessments

Years of Experience

- 14

Education

- M.A., Archaeology, University of Durham, 2014
- B.A., Anthropology, California State University, Fresno, 2009

Registrations/Certifications

- Registered Professional Archaeologist 41591505

Professional Affiliations

- Coalition for Diversity in California Archaeology
- Society for American Archaeology
- Society for California Archaeology
- Society of Black Archaeologists

Professional Experience

2019 –Present Principal Investigator, Taylored Archaeology, Fresno, California

2018 – 2019 Staff Archaeologist, Applied EarthWorks, Inc., Fresno, California

2016 – 2018 Principal Investigator, Soar Environmental Consulting, Inc., Fresno, California

2015 Archivist/Database Technician, Development and Conservation Management, Inc., Laguna Beach, California

2013 Laboratory Research Assistant, Durham University Archaeology Department and Archaeology Museum, Durham, England, UK

2011 – 2012 Laboratory Technician (volunteer), University of Pennsylvania Museum of Archaeology and Anthropology, Philadelphia, Pennsylvania

2008 – 2009 Laboratory Technician (intern), California State University, Fresno

2008 Field School, California State University, Fresno

Technical Qualifications

Ms. Sauls meets the Secretary of the Interior's Professional Qualification Standards as an archaeologist. She has conducted pedestrian surveys, supervised Extended Phase I survey, authored technical reports, and completed the Section 106 process with the State Historic Preservation Officer and Tribal Historic Preservation Officer. Her experience includes data recovery excavation at Western Mono sites and processing recovered artifacts in the laboratory as well as conducting archival research about prehistory and ethnography of Central California. Ms. Sauls has authored and contributed to technical and letter reports in compliance with of the National Historical Preservation Act (NHPA) Section 106 and the California Environmental Quality Act (CEQA). She also has supported NHPA tribal consultation and responded to Assembly Bill 52 tribal comments. Ms. Sauls also has an extensive background supervising laboratory processing, cataloging, and conservation of prehistoric and historical archaeological collections. In addition, she worked with the Rock Art Heritage Group in the management, preservation, and presentation of rock art in museums throughout England, including a thorough analysis of the British Museum's rock art collections. At Durham University Archaeology Museum, Ms. Sauls processed the excavated skeletal remains of 30 individuals from the seventeenth century.

APPENDIX B

Records Search Results

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

8/15/2022

Consuelo Sauls
Taylored Archaeology
6083 N. Figarden Dr. Ste. 616
Fresno, CA 93722

Re: Conway Property Tentative Subdivision Map
Records Search File No.: 22-307

The Southern San Joaquin Valley Information Center received your record search request for the project area referenced above, located on the Goshen USGS 7.5' quad. The following reflects the results of the records search for the project area and the 0.5 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:	None
Resources within 0.5 mile radius:	P-54-004995
Reports within project area:	TU-00041, 01676
Reports within 0.5 mile radius:	TU-00146, 01008, 01048, 01158

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.

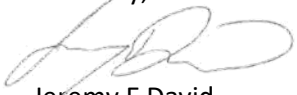
The provision of CHRIS Data via this records search response does not in any way constitute public disclosure of records otherwise exempt from disclosure under the California Public Records Act or any other law, including, but not limited to, records related to archeological site information maintained 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

APPENDIX C

Native American Outreach

NATIVE AMERICAN HERITAGE COMMISSION

CHAIRPERSON
Laura Miranda
Luiseño

VICE CHAIRPERSON
Reginald Pagaling
Chumash

SECRETARY
Sara Dutschke
Miwok

COMMISSIONER
Isaac Bojorquez
Ohlone-Costanoan

COMMISSIONER
Buffy McQuillen
Yokayo Pomo, Yuki, Nomlaki

COMMISSIONER
Wayne Nelson
Luiseño

COMMISSIONER
Stanley Rodriguez
Kumeyaay

COMMISSIONER
[Vacant]

COMMISSIONER
[Vacant]

EXECUTIVE SECRETARY
Raymond C.
Hitchcock
Miwok/Nisenan

NAHC HEADQUARTERS
1550 Harbor Boulevard
Suite 100
West Sacramento,
California 95691
(916) 373-3710
nahc@nahc.ca.gov
NAHC.ca.gov

February 8, 2023

Consuelo Sauls
Taylored Archaeology

Via Email to: csaulsarchaeo@gmail.com

Re: Conway Property Tentative Subdivision Map Project, Tulare County

Dear Mr. Sauls:

A record search of the Native American Heritage Commission (NAHC) Sacred Lands File (SLF) was completed for the information you have submitted for the above referenced project. The results were negative. However, the absence of specific site information in the SLF does not indicate the absence of cultural resources in any project area. Other sources of cultural resources should also be contacted for information regarding known and recorded sites.

Attached is a list of Native American tribes who may also have knowledge of cultural resources in the project area. This list should provide a starting place in locating areas of potential adverse impact within the proposed project area. I suggest you contact all of those indicated; if they cannot supply information, they might recommend others with specific knowledge. By contacting all those listed, your organization will be better able to respond to claims of failure to consult with the appropriate tribe. If a response has not been received within two weeks of notification, the Commission requests that you follow-up with a telephone call or email to ensure that the project information has been received.

If you receive notification of change of addresses and phone numbers from tribes, please notify me. With your assistance, we can assure that our lists contain current information.

If you have any questions or need additional information, please contact me at my email address: Cameron.vela@nahc.ca.gov.

Sincerely,

Cameron Vela

Cameron Vela
Cultural Resources Analyst

Attachment

Native American Heritage Commission
Native American Contact List
Tulare County
2/8/2023

Big Sandy Rancheria of Western Mono Indians
Elizabeth Kipp, Chairperson
P.O. Box 337 — Western Mono
Auberry, CA, 93602
Phone: (559) 374 - 0066
Fax: (559) 374-0055
lkipp@bsrnation.com

Santa Rosa Rancheria Tachi Yokut Tribe
Leo Sisco, Chairperson
P.O. Box 8 — Southern Valley
Lemoore, CA, 93245 — Yokut
Phone: (559) 924 - 1278
Fax: (559) 924-3583

Tule River Indian Tribe
Joey Garfield, Tribal Archaeologist
P. O. Box 589 — Yokut
Porterville, CA, 93258
Phone: (559) 783 - 8892
Fax: (559) 783-8932
joey.garfield@tulerivertribe-nsn.gov

Tule River Indian Tribe
Kerri Vera, Environmental Department
P. O. Box 589 — Yokut
Porterville, CA, 93258
Phone: (559) 783 - 8892
Fax: (559) 783-8932
kerri.vera@tulerivertribe-nsn.gov

Tule River Indian Tribe
Neil Peyron, Chairperson
P.O. Box 589 — Yokut
Porterville, CA, 93258
Phone: (559) 781 - 4271
Fax: (559) 781-4610
neil.peyron@tulerivertribe-nsn.gov

Wuksache Indian Tribe/Eshom Valley Band
Kenneth Woodrow, Chairperson
1179 Rock Haven Ct. — Foothill Yokut
Salinas, CA, 93906 — Mono
Phone: (831) 443 - 9702
kwood8934@aol.com

This list is current only as of the date of this document. Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resource Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resources assessment for the proposed Conway Property Tentative Subdivision Map Project, Tulare County.

Taylored Archaeology

February 9, 2023

Elizabeth Kipp, Chairperson
Big Sandy Rancheria of Western Mono Indians
P.O Box 337
Auberry, CA 93602

RE: Conway Property TSM Project, Tulare County, California

Dear Elizabeth Kipp,

I am currently under contract to 4Creeks, Inc. to provide cultural resource services for the proposed Conway Property TSM Project in Tulare County, California. The project proposes to construct a single-family residential development on a 34.21-acre lot. The project consists of Assessor's Parcel Numbers 073-060-036 and 073-060-013 in the southwest area of the community of Goshen. The project site is mostly agricultural land with one rural residence. The project site is bordered on the corner of Avenue 304 and Road 64. This project is subject to the California Environmental Quality Act (CEQA). The project boundary is in Section 24, Township 18 South, Range 23 East, Mount Diablo Meridian of the Goshen, California 7.5-minute USGS quadrangle.

A search of the Native American Heritage Commission's (NAHC) Sacred Lands File did not indicate the presence of tribal cultural resources in the immediate Project area. Taylored Archaeology also requested a records search of the project area at the California Historic Resources Information System (CHRIS), Southern San Joaquin Valley Information Center (SSJVIC) located at the California State University, Bakersfield. The records search results did not identify any prehistoric and historic cultural resources in the project area. An archaeological pedestrian survey of the project area was conducted and no cultural resources were encountered on the ground surface during the survey.

The NAHC provided your name and address as someone who might have an interest in sharing information regarding sacred sites, tribal cultural resources, or other resources of importance in the project area. Please note that all information shared with me regarding this project is considered best practices for a cultural resources investigation and is not government-to-government consultation under Assembly Bill 52. Taylored Archaeology understands and takes measures to protect the confidentiality of archaeological site locations, cemeteries, or sacred places, as required by law. Taylored Archaeology will not disclose locational information in any document available to the general public.

If you have information that you would like to share, have questions, or need more information about the project, please contact me by email at csaulsarchaeo@gmail.com, or send a letter to my attention at 6083 N. Figarden Dr., Ste. 616, Fresno, CA 93722. Any response by February 25, 2023, would be greatly appreciated.

Sincerely,

Consuelo Sauls

Consuelo Y. Sauls, M.A., RPA # 41591505
Archaeologist

6083 N Figarden Dr., Ste. 616, Fresno, CA 93722
559.797.1572 / csaulsarchaeo@gmail.com

Native American Outreach Contact/Response Log

Conway Property Tentative Subdivision Map Project, Tulare County, California

Organization/ Tribal Affiliation	Name	Position	Address	Phone Number	Email Address	Letter	E-Mail	Contact Summary
Native American Heritage Commission	Cameron Vela	Cultural Resources Analyst	1550 Harbor Boulevard Suite 100 West Sacramento, CA 95691	916-373-3710	nahc@nahc.ca.gov.		1/18/2023	NAHC responded and sent a letter dated February 8, 2023, and provided a list of local Native American representatives contacts.
Big Sandy Rancheria of Western Mono Indians	Elizabeth Kipp	Chairperson	P.O. Box 337 Auberry, CA 93602	559-374-0066	lkipp@bsrnation.com	2/9/2023	2/16/2023	No response.
Santa Rosa Rancheria Tachi Yokut Tribe	Leo Sisco	Chairperson	P.O. Box 8 Lemoore, CA 93245	559-924-1278	no email address	2/9/2023		No response.
Santa Rosa Rancheria Tachi Yokut Tribe	Samantha McCarty	Cultural Specialist	P.O. Box 8 Lemoore, CA 93245	559-924-1278	SMcCarty@tachi-yokut-nsn.gov		2/16/2023	No response.
Tule River Indian Tribe	Neil Peyron	Chairperson	P.O. Box 589 Porterville, CA 93258	559-781-4271	neil.peyron@tulrivertribe-nsn.gov	2/9/2023	2/16/2023	No response.
Tule River Indian Tribe	Kerri Vera	Environmental Department	P.O. Box 589 Porterville, CA 93258	559-783-8892	kerri.vera@tulerivertribe-nsn.gov	2/9/2023	2/16/2023	No response.
Tule River Indian Tribe	Joey Garfield	Tribal Archaeologist	P.O. Box 589 Porterville, CA 93258	559-783-8932	joey.garfield@tulerivertribe-nsn.gov	2/9/2023	2/16/2023	No response.
Wuksache Indian Tribe/Eshom Valley Band	Kenneth Woodrow	Chairperson	1179 Rock Haven Ct. Salinas, CA 93906	831-443-9702	kwood8934@aol.com	2/9/2023	2/16/2023	No response.

Appendix D

Transportation Impact Analysis

TRANSPORTATION IMPACT ANALYSIS

GOSHEN RESIDENTIAL PROJECT

GOSHEN, TULARE COUNTY, CALIFORNIA

LSA

April 2023

TRANSPORTATION IMPACT ANALYSIS

GOSHEN RESIDENTIAL PROJECT

GOSHEN, TULARE COUNTY, CALIFORNIA

Prepared for:

Aaron R. Bock, Assistant Director – Planning and Economic Development
Tulare County Resource Management Agency
5961 S. Mooney Boulevard
Visalia, California 93277

Prepared by:

LSA
1500 Iowa Avenue, Suite 200
Riverside, California 92507
951.781.9310

Project No. FOC2202

LSA

April 2023

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LIST OF ABBREVIATIONS AND ACRONYMS

ADA	Americans with Disabilities Act
AWSC	All-Way Stop Control
CA-MUTCD	California – Manual on Uniform Traffic Control Devices
Caltrans	California Department of Transportation
CEQA	California Environmental Quality Act
County	County of Tulare
CSTDM	California Statewide Travel Demand Model
HCM	*Highway Capacity Manual*
HCM 6	*Highway Capacity Manual 6th Edition*
HDM	(Caltrans) *Highway Design Manual*
ITE	Institute of Transportation Engineers
LOS	Level of Service
LTA	Local Transportation Analysis
mph	Miles Per Hour
MPO	Metropolitan Planning Area
NCHRP	National Cooperative Highway Research Program
OPR	Office of Planning and Research
SANDAG	San Diego Association of Governments
SB 743	Senate Bill 743
SR-198	(State of California) State Route 198
TAZ	Traffic Analysis Zone
TCAG	Tulare County Association of Governments
TIA	Transportation Impact Analysis
TWSC	Two-Way Stop Control
v/c	Volume to Capacity
VMT	Vehicle Miles Traveled
VT	Visalia Transit

1.0 INTRODUCTION

The Transportation Impact Analysis (TIA) has been prepared to assess the potential circulation impacts associated with the proposed Goshen Residential Project (project) in Goshen, Tulare County. The project site is located at the northwest corner of Road 64 and Avenue 304, in the community of Goshen within unincorporated Tulare County. 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.)

This report has been prepared based on the County of Tulare (County) *SB 743 Guidelines* (Guidelines), dated June 8, 2020. Based on the requirements outlined in the County guidelines, a Vehicle Miles Traveled (VMT) analysis has been conducted for the disclosure of potential impacts and mitigation measures pursuant to the California Environmental Quality Act (CEQA). Additionally, as recommended in the County Guidelines, a Local Transportation Analysis (LTA) have been conducted for the project. The scope of work for this TIA, including trip generation, trip distribution, study area, and analysis methodologies for the LTA and CEQA VMT analysis, has been approved by County staff via the Scoping Agreement process. A copy of the Scoping Agreement is included as Appendix A.

This study examines traffic operations in the vicinity of the proposed project under the following six scenarios:

- Existing conditions;
- Existing plus Project conditions;
- Near-term (approved and pending) conditions;
- Near-term plus Project conditions;
- Horizon Year conditions; and
- Horizon Year plus project conditions.

Traffic conditions at study intersections and roadway segments 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 and 9:00 a.m. The p.m. peak hour is the one hour of highest traffic volumes occurring between 4:00 and 6:00 p.m.

1.1 PROJECT DESCRIPTION

The proposed project will include 303 single-family detached residential units. Access to the project will be provided via three full-access driveways, two of which are located on Avenue 304 and the third located on Road 63 at the intersection of Road 63 and Kenyon Plastering Driveway. Figure 1-2 illustrates the conceptual site plan for the project.

The project site is currently zoned within the Light Agricultural (A-1) and Exclusive Agricultural (AE-40) districts. A-1 and AE-40 districts are intended to protect the general welfare of the agricultural community from encroachments of unrelated uses which, by their nature, would be injurious to the physical and economic well-being of the agricultural community. Furthermore, these districts function as holding zones within urban area boundaries as designated in the Goshen Community

Plan 2018 (Community Plan) whereby land may be retained in agricultural use until conditions warrant conversion of such land to urban use. However, according to the Goshen Community Plan, the current zoning for the project site is proposed to be amended to General Commercial – Mixed Use (C-2-MU). C-2-MU districts are intended for residential use as well as retail stores and businesses that do not involve the manufacturing, assembling, packaging, treatment or processing of articles of merchandise for distribution and retail sale. Therefore, the proposed project would be consistent with the allowed uses in the Goshen Community Plan after the amendment to the current zoning is implemented.

1.2 LTA STUDY AREA

The Local Transportation Analysis (LTA) has been prepared in accordance with the County Guidelines. The primary objective of the analysis will be to study and determine potential traffic operations issues at the project driveways and nearby intersections because of the proposed project. Based on the County Guidelines, an LTA is required if a project is expected to generate 100 or more peak hour trips. The detailed project trip generation is summarized in Table 5-A and discussed further in the Section 5.1. As shown in Table 5-A, the project is anticipated to generate more than 100 peak hour trips, and therefore, an LTA has been prepared for the project.

1.2.1 Study Intersections

Based on the County Guidelines, the study area shall generally include, at a minimum, any intersection where the proposed project will add 50 or more peak hour trips. Based on this criterion, the intersections analyzed in this study are as follows:

1. Project Driveway 1/Avenue 304 (Tulare County);
2. Project Driveway 2/Avenue 304 (Tulare County);
3. Road 63/Betty Drive (Tulare County);
4. Road 63/Avenue 308 (Tulare County);
5. Road 63/Project Driveway 3 – Kenyon Plastering Driveway (Tulare County);
6. Road 64/Avenue 304 (Tulare County);
7. Road 64/State Route 198 (SR-198) (Caltrans);
8. State Route 99 (SR-99) Southbound Ramps/Betty Drive (Caltrans); and
9. SR-99 Northbound Ramps/Betty Drive (Caltrans).

Figure 1-3 illustrates the study area intersections.

1.2.2 Roadway Segments

A roadway segment analysis will be conducted based on daily traffic volumes within the study area and any segments that the County requires to be included in the analysis. Per the Scoping Agreement (Appendix A), roadway segments analyzed in this study are as follows:

Avenue 304

1. West of Project Driveway 1 (Tulare County);
2. Between Project Driveway 1 and Project Driveway 2 (Tulare County);
3. Between Project Driveway 2 and Road 64 (Tulare County);

Road 63

4. Between Betty Drive and Avenue 308 (Tulare County);
5. Between Avenue 308 and Avenue 304 (Tulare County);

Road 64

6. Between Avenue 304 and SR-198 (Tulare County); and

Betty Drive

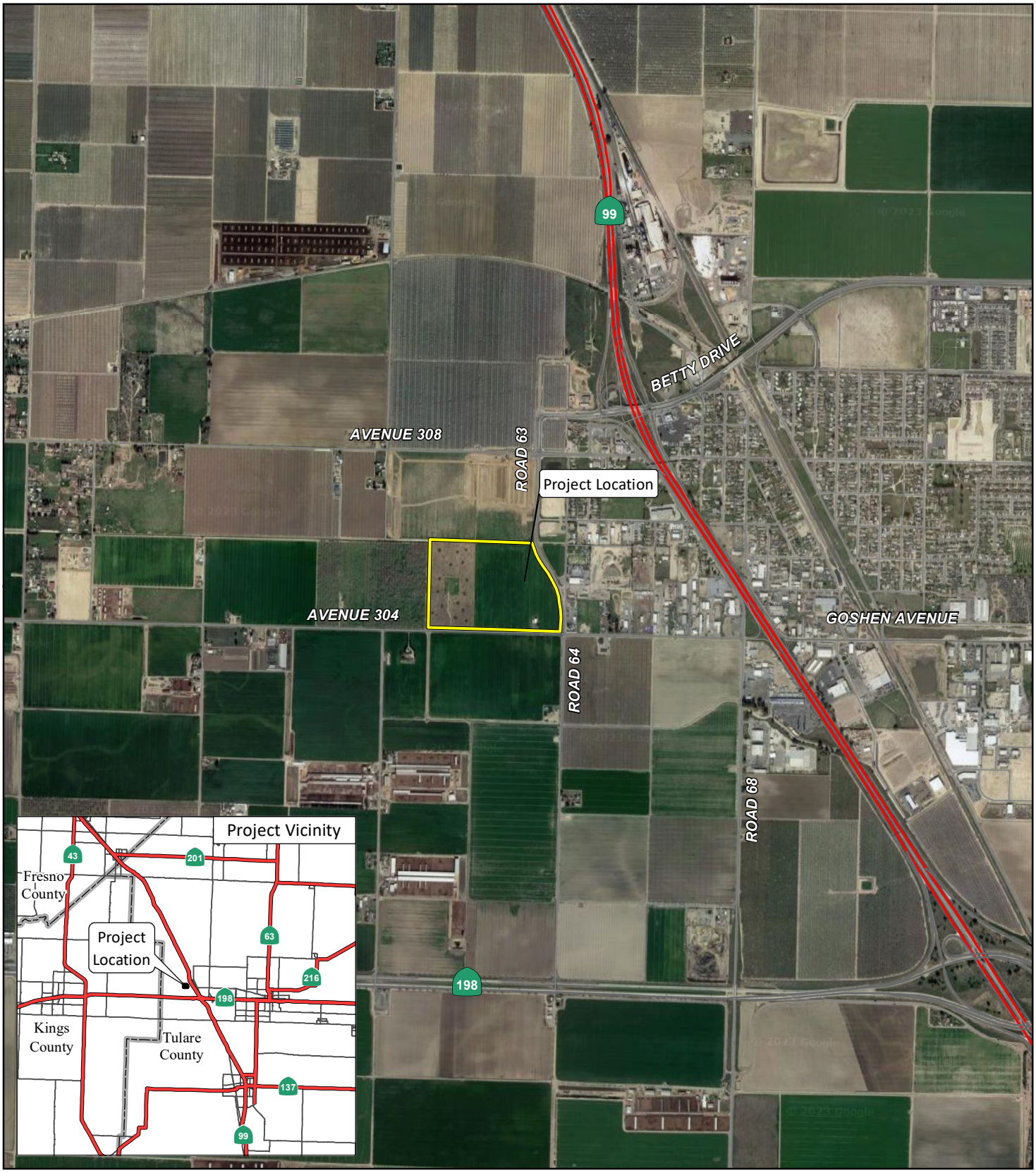
7. Between Road 63 and SR-99 Southbound Ramps (Tulare County).

For each roadway segment, the highest volume on any part of the segment will be considered as the analysis volume for the entire segment.

The study intersections and roadway segments included in this analysis were approved by the County during the scoping agreement process.

1.3 LIST OF CHAPTER 1.0 FIGURES

- Figure 1-1: Regional and Project Location
- Figure 1-2: Conceptual Site Plan
- Figure 1-3: Study Area Intersections



LSA

LEGEND

Project Site

FIGURE 1-1

N

0 1000 2000

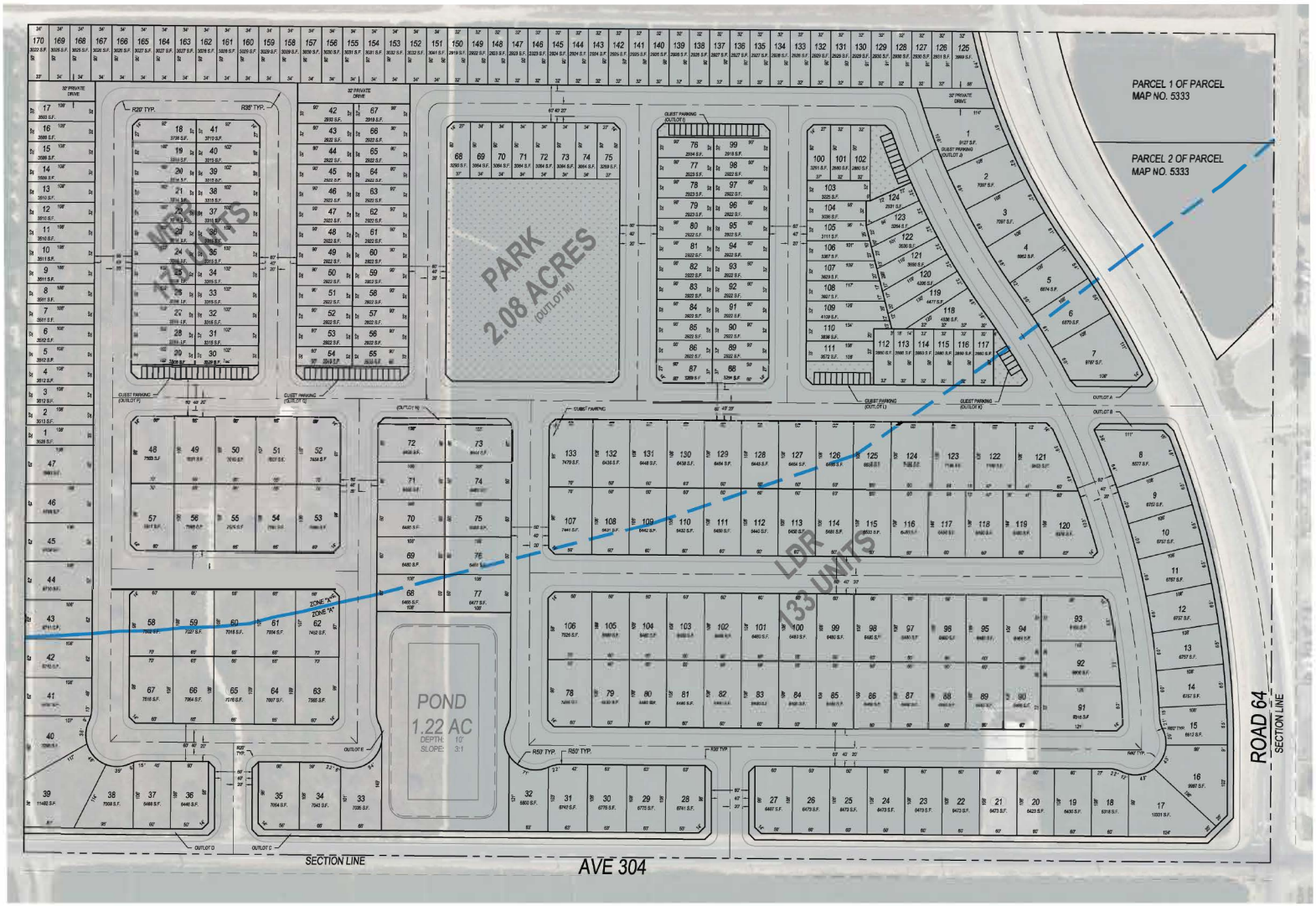
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SOURCE: ESRI Streetmap, 2021; Google Earth, 2021.

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Goshen Residential Project
Transportation Impact Analysis

Regional and Project Location



LSA

FIGURE 1-2

N

0 125 250

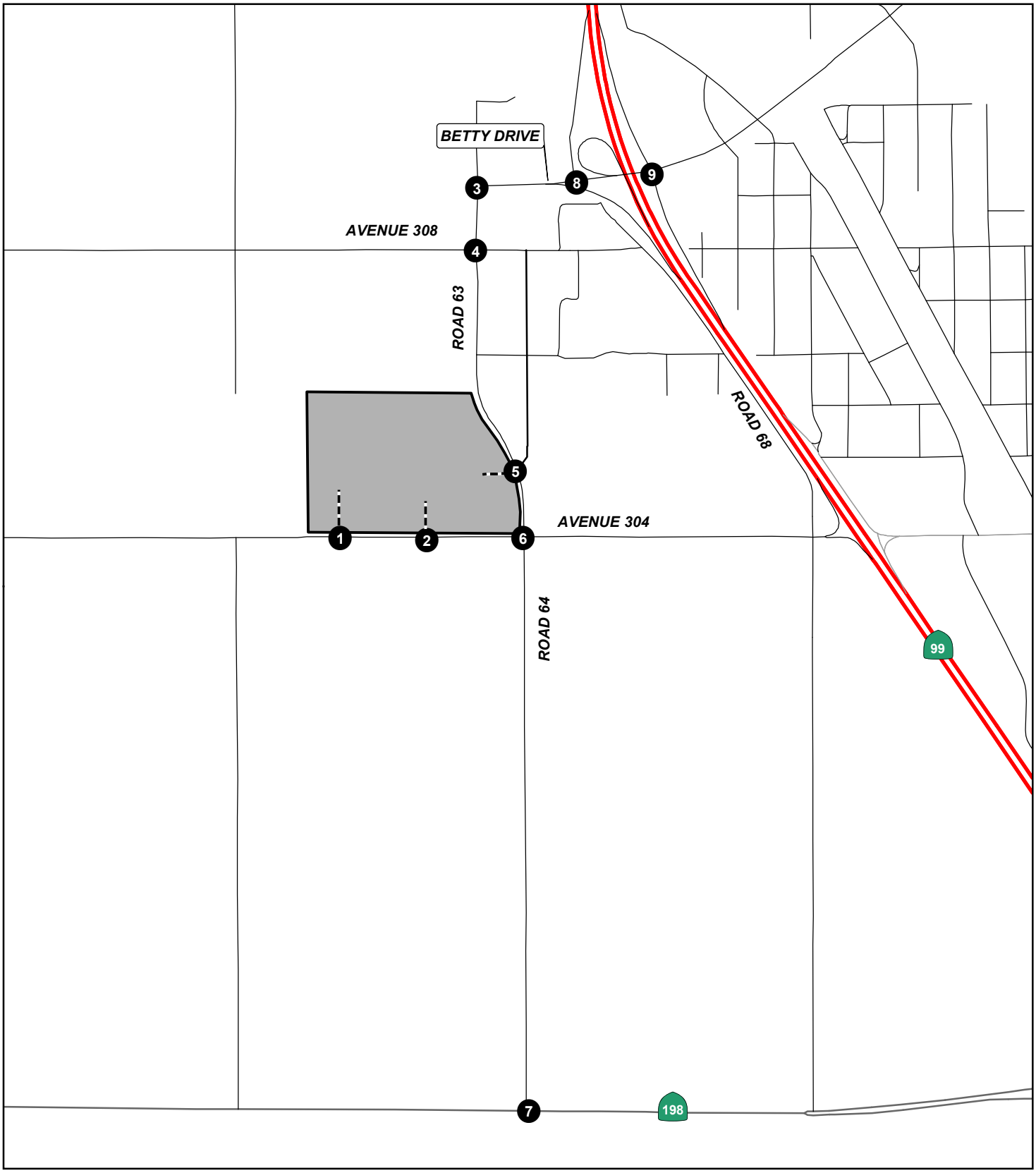
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SOURCE: 4Creeks, Inc., January 2023

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Goshen Residential Project
Transportation Impact Analysis

Conceptual Site Plan



LSA

LEGEND

Project Location

Study Area Intersections

Project Driveway

N

0 625 1250

FEET

SOURCE: ESRI Streetmap, 2021.

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FIGURE 1-3

Goshen Residential Project
Transportation Impact Analysis

Study Area Intesrections

2.0 ANALYSIS METHODOLOGY

2.1 LEVEL OF SERVICE DEFINITIONS

LOS can be characterized for the whole intersection, each intersection approach, and by each lane group. Control delay alone is used to characterize LOS for the entire intersection. Control delay quantifies the increase in travel time due to the traffic signal control and is a surrogate measure of driver discomfort and fuel consumption.

A complete description of the meaning of LOS can be found in the 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. A description of LOS for roadway segments is summarized in Table 2-B.

Table 2-C 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.

Table 2-D summarizes the LOS criteria used to evaluate roadway segments based on the daily capacity of each functional classification pursuant to the Goshen Community Plan. The daily traffic volumes represent the total vehicles (both directions) traveling on a roadway segment within a 24-hour period.

2.2 LEVEL OF SERVICE PROCEDURES AND STANDARDS

Study intersections and roadway segments analyzed in this report are completely under the jurisdiction of Tulare County. However, intersections located at freeway on-ramps and off-ramps are under the jurisdiction of Caltrans.

Per the County of Tulare *SB 743 Guidelines*, updated June 2020, LOS D is considered as the level of service standard for all intersections and roadway segments under all analysis scenarios. As such, an operational deficiency occurs when the project causes an unsatisfactory condition (deteriorate from LOS A through D to E or F) for intersections and roadways, or when the project contributes to an existing or forecasted deficiency. In such cases, the project needs to identify improvements to improve the intersection or roadway LOS to an acceptable level.

Caltrans considers an acceptable LOS to be between LOS C and D at all intersections under its jurisdiction (delay of 30 seconds at unsignalized intersections and 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 forecasted deficiency. In such cases, 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: Roadway Segment Level of Service Definitions
- Table 2-C: Level of Service Criteria for Unsignalized and Signalized Intersections
- Table 2-D: Roadway Segment Capacity and Levels of Service

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)

Table 2-B: Roadway Segment Level of Service Definitions

LOS	Description
A	Describes primarily free-flow operation. Vehicles are completely unimpeded in their ability to maneuver within the traffic stream. Control Delay at the boundary intersection is minimal. The travel speed exceeds 80% of the base free-flow speed, and the volume-to-capacity ratio is no greater than 1.0.
B	Describes reasonably unimpeded operation. The ability to maneuver within the traffic stream is only slightly restricted, and control delay at the boundary is not significant. The travel speed is between 67% and 80% of the base free-flow speed, and the volume-to-capacity ratio is no greater than 1.0.
C	Describes stable operation. The ability to maneuver and change lanes at mid-segment locations may be more restricted than at LOS B. Longer queues at the boundary intersection may contribute to lower travel speeds. The travel speed is between 50% and 67% of the base free-flow speed, and the volume-to-capacity ratio is no greater than 1.0.
D	Indicates a less stable condition in which small increases in flow may cause substantial increases in delay and decreases in travel speed. This operation may be due to adverse signal progression, high volume, or inappropriate signal timing at the boundary intersections. The travel speed is between 40% and 50% of the base free-flow speed, and the volume-to-capacity ratio is no greater than 1.0.
E	Characterized by unstable operation and significant delay. Such operations may be due to some combination of adverse progression, high volume, and inappropriate signal timing at the boundary intersections. The travel speed is between 30% and 40% of the base free-flow speed, and the volume-to-capacity ratio is no greater than 1.0.
F	Characterized by flow at extremely low speed. Congestion is likely occurring at the boundary intersections, as indicated by high delay and extensive queuing. The travel speed is between 30% or less of the base free-flow speed, and the volume-to-capacity ratio is greater than 1.0.

Source: *Highway Capacity Manual* (6th Edition)

Table 2-C: 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	≤ 10	≤ 10
B	> 10 and ≤ 15	> 10 and ≤ 20
C	> 15 and ≤ 25	> 20 and ≤ 35
D	> 25 and ≤ 35	> 35 and ≤ 55
E	> 35 and ≤ 50	> 55 and ≤ 80
F	> 50	> 80

Source: *Highway Capacity Manual* (6th Edition)

Table 2-D: Roadway Segment Capacity and Levels of Service

Level of Service					
Lanes	**Divided**	**B**	**C**	**D**	**E**
Freeways					
4	Divided	45,800	61,500	74,400	79,900
6	Divided	68,100	93,000	111,800	123,300
8	Divided	91,500	123,500	148,700	166,800
State Class I Roadways					
2	Undivided	*	16,800	17,700	**
4	Divided	*	37,900	39,800	**
6	Divided	*	58,400	59,900	**
8	Divided	*	78,800	80,100	**
Non-State Class I Roadways					
2	Undivided	*	15,120	15,930	**
2	Divided	*	15,960	16,815	**
4	Undivided	*	32,215	33,830	**
4	Divided	*	34,110	35,820	**
6	Divided	*	52,560	53,910	**
8	Divided	*	70,920	72,090	**
Non-State Class II Roadways					
2	Undivided	*	6,570	13,320	14,040
2	Divided	*	6,935	14,060	14,820
4	Undivided	*	12,325	27,540	28,730
4	Divided	*	13,050	29,160	30,420
6	Divided	*	20,970	45,000	45,810
8	Divided	*	28,800	60,570	61,290

* Cannot be achieved using table input value defaults.

** Not applicable for that level of service letter grade. For the automobile mode, volumes greater than level of service D become F because intersection capacities have been reached.

Source: *Table 1-4, Annual Average Daily Volumes*, Goshen Community Plan Appendices to the Draft Environmental Impact Report.

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 Goshen Community Plan. Figure 3-1 summarizes the classifications of major roadways within the study area. Following is a brief description of these roadways:

- **Road 63:** Within the study area, Road 63 is a local street and has no designation in the Goshen Community Plan. Between Betty Drive and Harvest Avenue, Road 63 is mostly a four-lane, divided street with a painted median. Between Harvest Avenue and Kenyon Plastering Driveway, Road 63 is a two-lane, divided street with a two-way left turn painted median. There are no bike facilities nor provision for on-street parking along either direction of the entire segment within the study area.
- **Road 64:** Within the study area, Road 64 is designated as a Local (Urban) street north of Avenue 304 and Local (Rural) south of Avenue 304 in the Goshen Community Plan. Between Kenyon Plastering Driveway and Avenue 304, Road 64 is a two-lane, divided local street with a two-way left turn painted median. Between Avenue 304 and SR-198, Road 64 is a two-lane, undivided local street. There are no bike facilities nor provision for on-street parking along either direction of the entire segment within the study area.
- **Betty Drive:** Within the study area, Betty Drive is designated as an Arterial (Major) in the Goshen Community Plan. Between Road 63 and Road 67, Betty Drive is a four-lane, divided Arterial with a raised median and a posted speed limit of 45 miles per hour (mph). There are bicycle lanes along both directions of this segment. However, there is no provision for on-street parking along either direction of this segment.
- **Avenue 308:** Within the study area, Avenue 308 is designated as a Collector (Minor) in the Goshen Community Plan. Between Ashland Road and Featherstone Road, Avenue 308 is a two-lane, undivided Collector with a posted speed limit of 40 mph. There are bicycle lanes along both directions of this segment. However, there is no provision for on-street parking along either direction of this segment.
- **Avenue 304:** Within the study area, Avenue 304 is designated as a Collector (Minor) in the Goshen Community Plan. Between Road 60 and Road 68, Avenue 304 is a two-lane, undivided Collector with a posted speed limit of 50 mph. There are no bike facilities nor provision for on-street parking along either direction of this segment.
- **State Route 198 (SR-198):** Within the study area, SR-198 is designated as an Arterial (Major) in the Goshen Community Plan. Between Road 60 and Road 68, SR-198 is a four-lane, divided Arterial with a 75-foot dirt median with a posted speed limit of 65 mph. There are no bike facilities nor provision for on-street parking along either direction of this segment.

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 BICYCLE, PEDESTRIAN, AND TRANSIT FACILITIES

3.2.1 Bicycle Network

The Community of Goshen promotes bicycling for recreation and mobility. To facilitate and encourage bicycle trips among other non-motorized modes of travel, the Community of Goshen has adopted the 2014 Regional Transportation Plan (adopted June 30, 2014), prepared by the Tulare County Association of Governments (TCAG), which provides a regional bikeway network. Bicycle travel is not yet considered as a major mode of transportation as bicycles are rarely seen outside of cities and towns in Tulare County.

According to the TCAG *2014 Regional Transportation Plan*, the bikeway network within the County is classified into three categories: Class I, Class II, and Class III. Class I bikeways are paths providing completely separated right-of-way designated for the exclusive use of bicycles and pedestrians. Class II bikeways are paths that provide designated lanes for the use of bicycles through the use of striping on the roadway and signage designations for the facility. Class III bikeways are paths that are designated only by signage and are generally shared between bicyclists and motorists.

Currently, Class II bikeways exist on both directions of Betty Drive and Avenue 308 within the study area. Although signage for bicycle facilities may not exist on all roads in the Community of Goshen, bicycle use is permitted on all County roadway facilities excluding freeways. Figure 3-4 illustrates the bike route network within the Community of Goshen.

3.2.2 Pedestrian Network

The implementation of enhanced pedestrian linkage with a comprehensive trails system links residential areas, schools, parks, and commercial centers so that residents can travel within the community without driving. Safe and attractive sidewalks and walkways improve the walkability of the County. Sidewalks are generally provided on both sides of the streets throughout the County. Additionally, standard paved trails and non-standard unpaved trails are frequently used by bicyclists and pedestrians in the County. The existence of trails and sidewalks provides accessible facilities, increases safety features, and improves walkability in the County.

Paved sidewalks are present on both directions of Betty Drive, both directions of Avenue 308 east of Road 63, intermittently on the northbound direction of Road 63 and Road 64, and intermittently on the westbound direction of Avenue 304 east of Road 64 within the study area. Additionally, the project will be constructing paved sidewalks along the project frontage on Road 63, Road 64, and Avenue 304. Figure 3-4 illustrates the existing sidewalk network within the Community of Goshen.

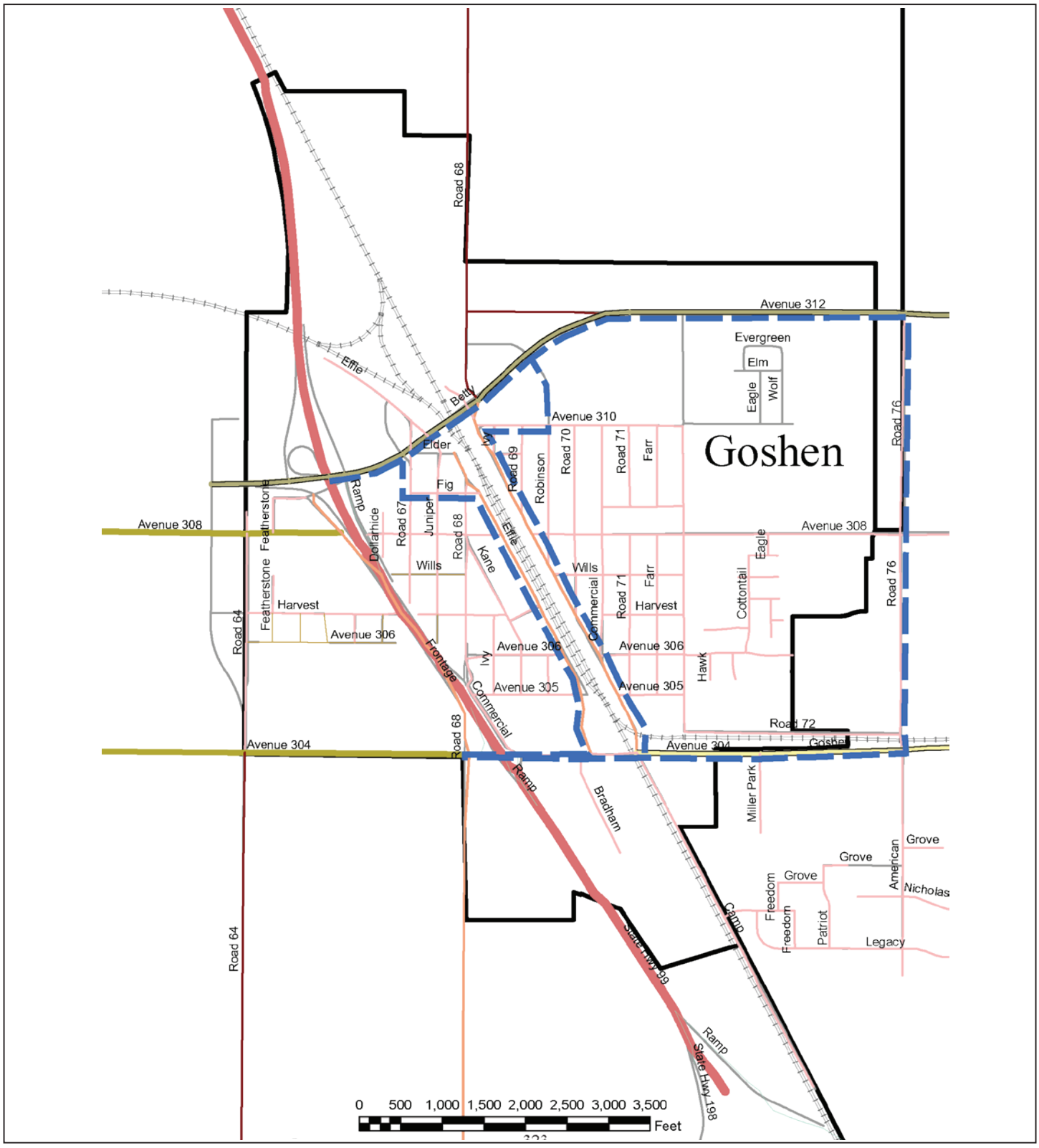
3.2.3 Transit Network

Visalia Transit (VT) is the primary transit agency within the Community of Goshen and is responsible for coordinating transit services within its service area. VT provides services to the neighboring City of Visalia via 13 fixed routes, one of which connects to the Community of Goshen. VT bus Route 15 operates within the study area. Route 15 has stops on Road 64, Betty Drive, Avenue 308, and Avenue 304 within the study area.

In addition to fixed route services, VT Dial-A-Ride is the City of Visalia paratransit service for disabled riders. VT Dial-A-Ride transit vehicles are all accessible in accordance with the Americans with Disabilities Act (ADA) standards. VT Dial-A-Ride provides services in the communities of Exeter, Goshen, and Farmersville.

3.3 LIST OF CHAPTER 3.0 FIGURES

- Figure 3-1: Community of Goshen 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: Community of Goshen Bike and Pedestrian Routes



LSA

LEGEND

- Freeway
- Freeway Ramp
- Arterial (Major)
- Arterial (Minor)
- Collector (Major)
- Collector (Minor)
- Local (Rural)
- Local (Urban)
- Local (Private)
- Local (Limited)
- trail
- Goshen Truck Route
- Urban Development Boundary

N

FIGURE 3-1

Goshen Residential Project
Transportation Impact Analysis

Community of Goshen Roadway Classification

SOURCE: Goshen Community Plan 2018

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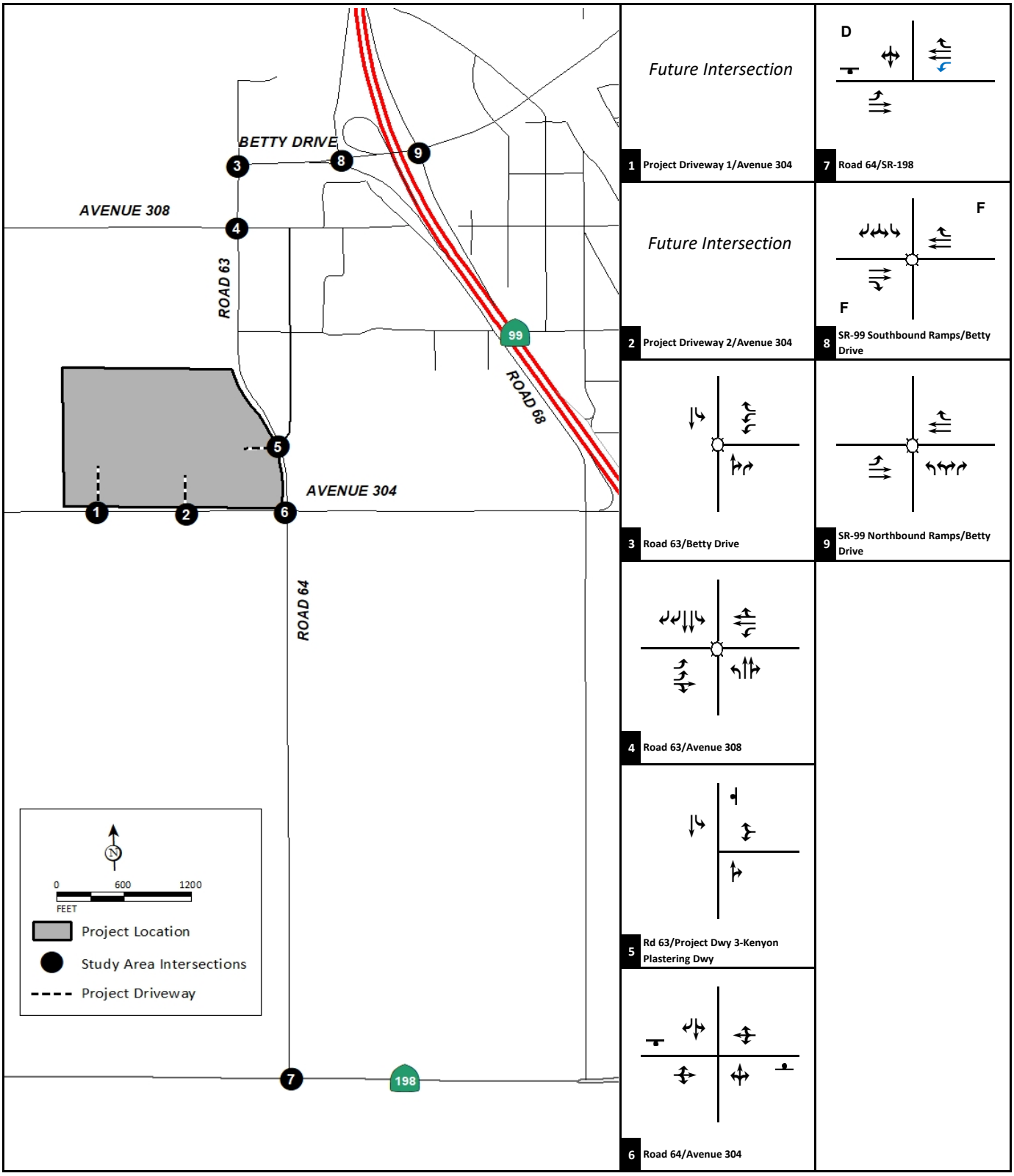


FIGURE 3-2

LSA

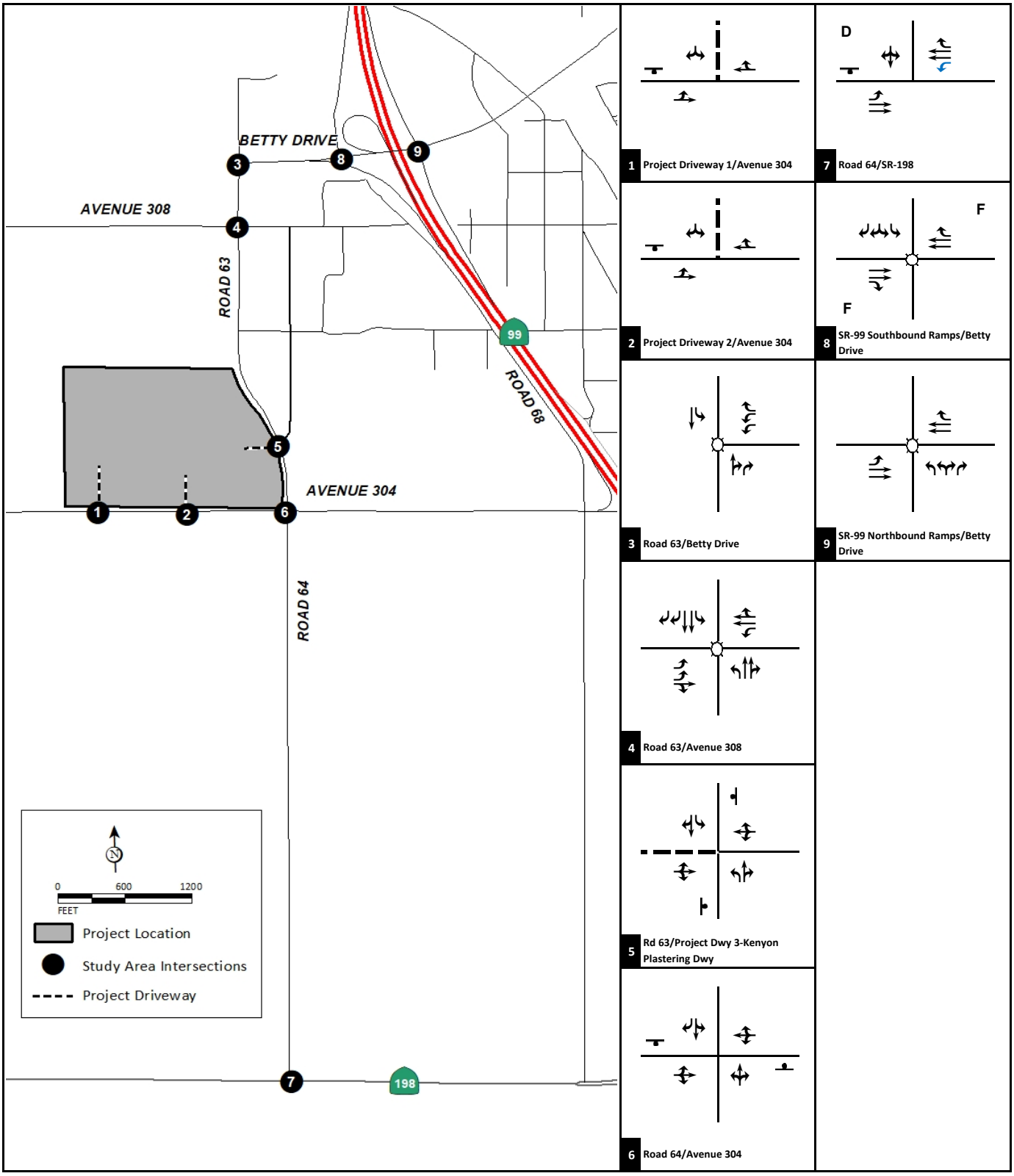
Legend

Signal
Stop Sign
D De-Facto Right Turn
F Free Right Turn
U-Turn Movement
Project Driveway

Goshen Residential Project
Transportation Impact Analysis

Existing Study Intersection Geometrics and Traffic Control

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LSA

FIGURE 3-3

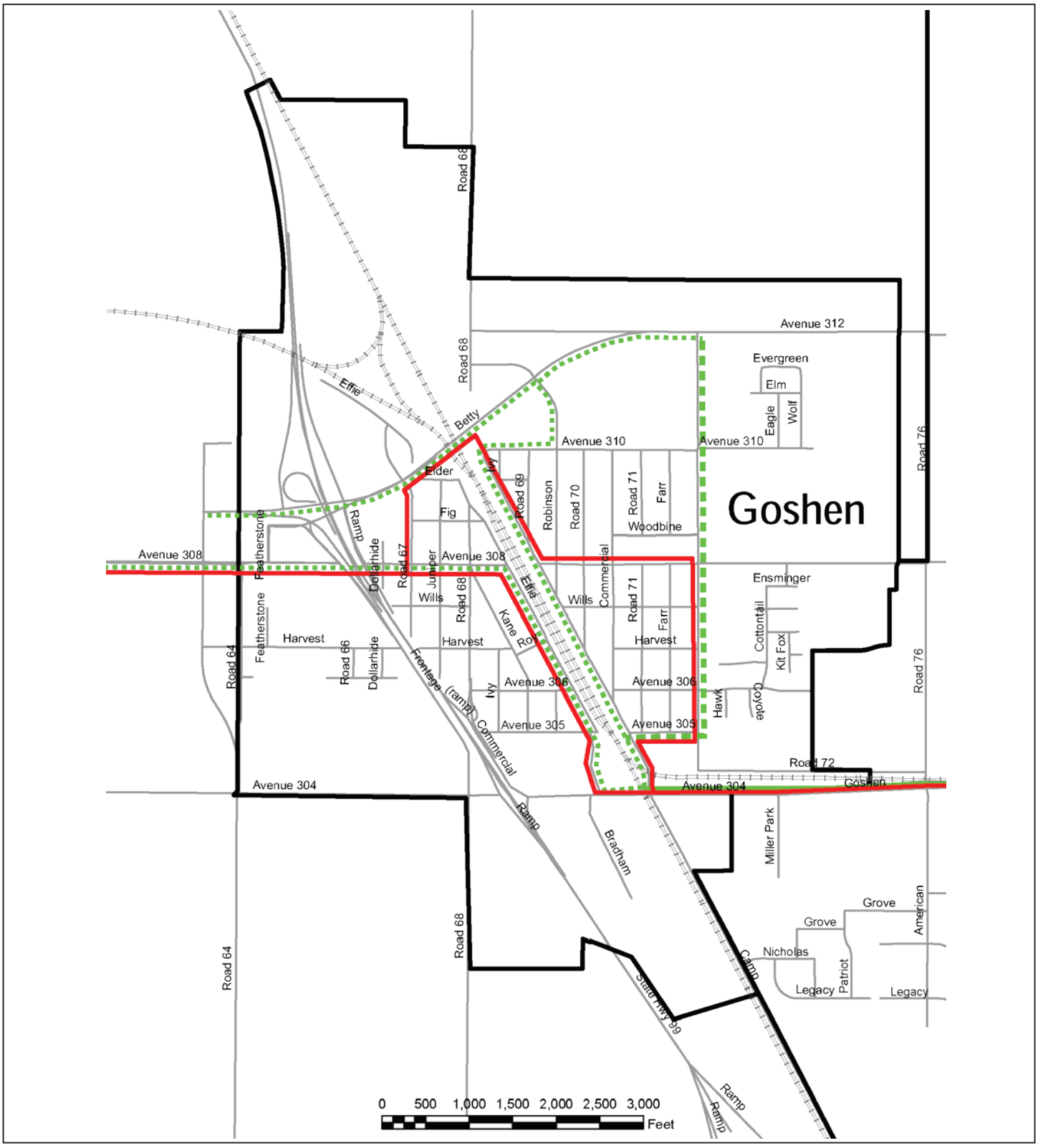
Legend

Signal
Stop Sign
D De-Facto Right Turn
F Free Right Turn
U-Turn Movement
Project Driveway

Goshen Residential Project
Transportation Impact Analysis

Study Intersection Geometrics and Traffic Control under 'Plus Project' Scenarios

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LSA

LEGEND

- Pedestrian Route
- Bike Route Class I
- Bike Route Class II
- Bike Route Class III

FIGURE 3-4

Goshen Residential Project
Transportation Impact Analysis

Community of Goshen Bike and Pedestrian Routes

SOURCE: Goshen Community Plan 2018

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4.0 TRAFFIC VOLUMES FOR NO PROJECT SCENARIOS

4.1 EXISTING TRAFFIC VOLUMES

Traffic volumes for existing conditions were developed using existing count data collected by Counts Unlimited at study intersections and roadway segments. Daily traffic counts were collected for roadway segments while a.m. and p.m. peak hour turning movement counts were collected at study intersections.

It should be noted that some of the intersections and roadway segment counts were collected in September 2022, including traffic count for the intersection of Road 63/Betty Drive. However, traffic counts for the intersections of Road 63/Betty Drive, SR-99 Southbound Ramps/Betty Drive and SR-99 Northbound Ramps/Betty Drive were collected in March 2023. To account for the difference in traffic volumes between year 2022 and 2023, the traffic growth rate during this interval was calculated for the intersection of Road 63/Betty Drive, and applied to the traffic counts collected in September 2022 to account for the time difference between September 2022 and March 2023.

Vehicle classification counts were collected at select study area intersections. Truck percentages for every approach at these intersections were obtained from the classification counts. For the remaining study intersections that do not include classification counts or future intersections, truck percentages for the various approaches were determined based on the truck percentages at the adjacent intersections.

Figure 4-1 illustrates peak hour traffic volumes at study intersections under existing conditions. Table 4-A shows daily traffic volumes at roadway segments under existing conditions.

Detailed count sheets are included in Appendix B.

4.2 NEAR-TERM (APPROVED AND PENDING) TRAFFIC VOLUMES

As approved during the 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 were obtained from County staff and from the adjacent jurisdiction of City of Visalia. 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-B summarizes the cumulative project trip generation. As shown in Table 4-B, the cumulative projects are estimated to generate 4,414 a.m. peak hour trips, 5,668 p.m. peak hour trips, and 65,523 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 circulation network. Figure 4-3 illustrates the peak hour

cumulative project trip assignment at study intersections. Figure 4-4 illustrates the peak hour traffic volumes at study intersections under near-term conditions. Table 4-C shows the daily traffic volumes at roadway segments under near-term conditions.

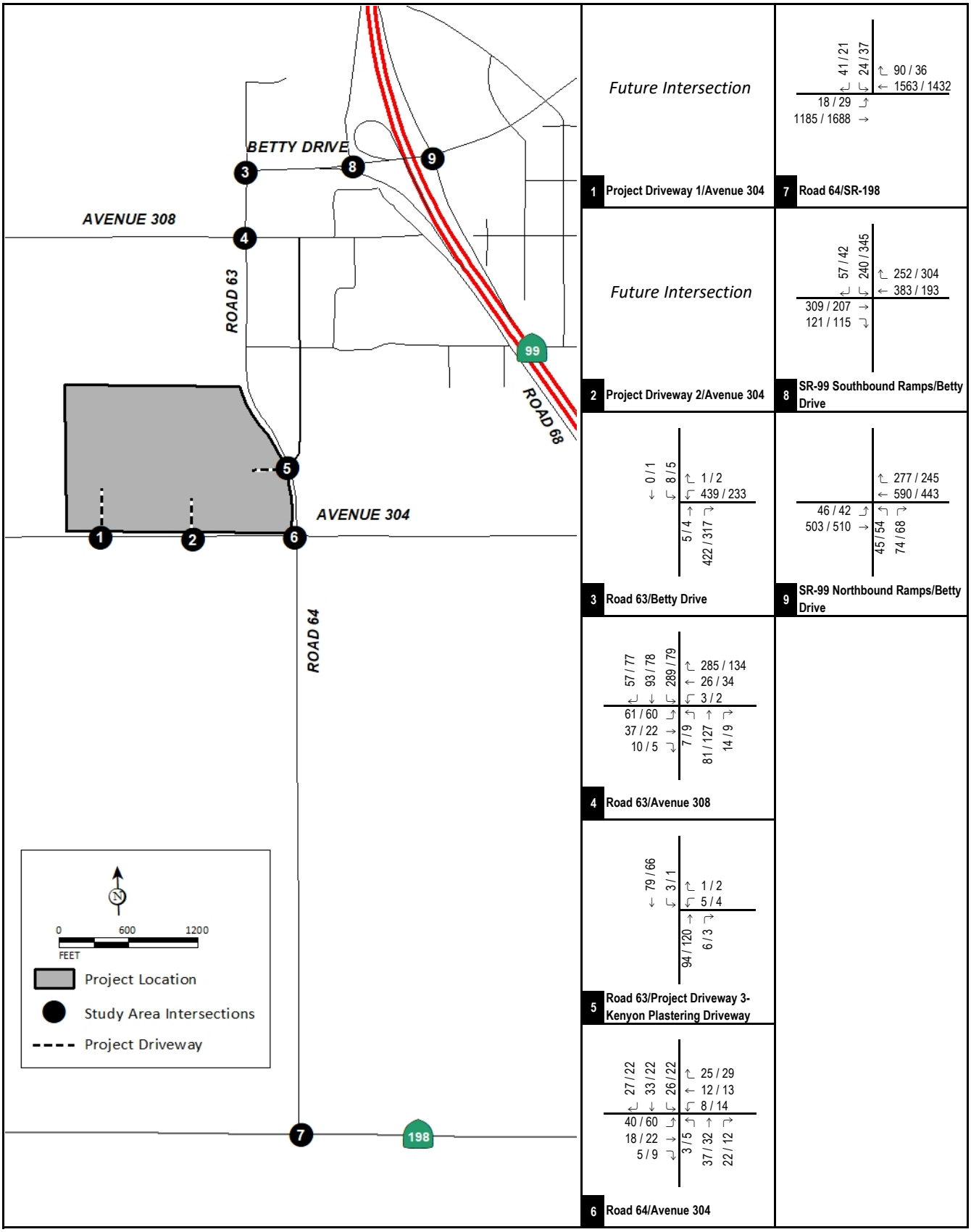
4.3 HORIZON YEAR TRAFFIC VOLUMES

Traffic volumes for horizon year conditions were developed using the Tulare County Association of Governments (TCAG) travel demand model. The methodology used to develop horizon year traffic volumes at all study intersections is consistent with the National Cooperative Highway Research Program (NCHRP) and TCAG's procedures for post-processing of modeled traffic volumes. Figure 4-5 illustrates the peak hour traffic volumes at study intersections under horizon year conditions. Table 4-D shows the daily traffic volumes at roadway segments under horizon year conditions.

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 Project Trip Assignment
- Figure 4-4: Near-term (approved and pending) Peak Hour Traffic Volumes
- Figure 4-5: Horizon Year Peak Hour Traffic Volumes
- Table 4-A: Existing Roadway Segment Daily Traffic Volumes
- Table 4-B: Cumulative Project Trip Generation
- Table 4-C: Near-term Roadway Segment Daily Traffic Volumes
- Table 4-D: Horizon Year Roadway Segment Daily Traffic Volumes



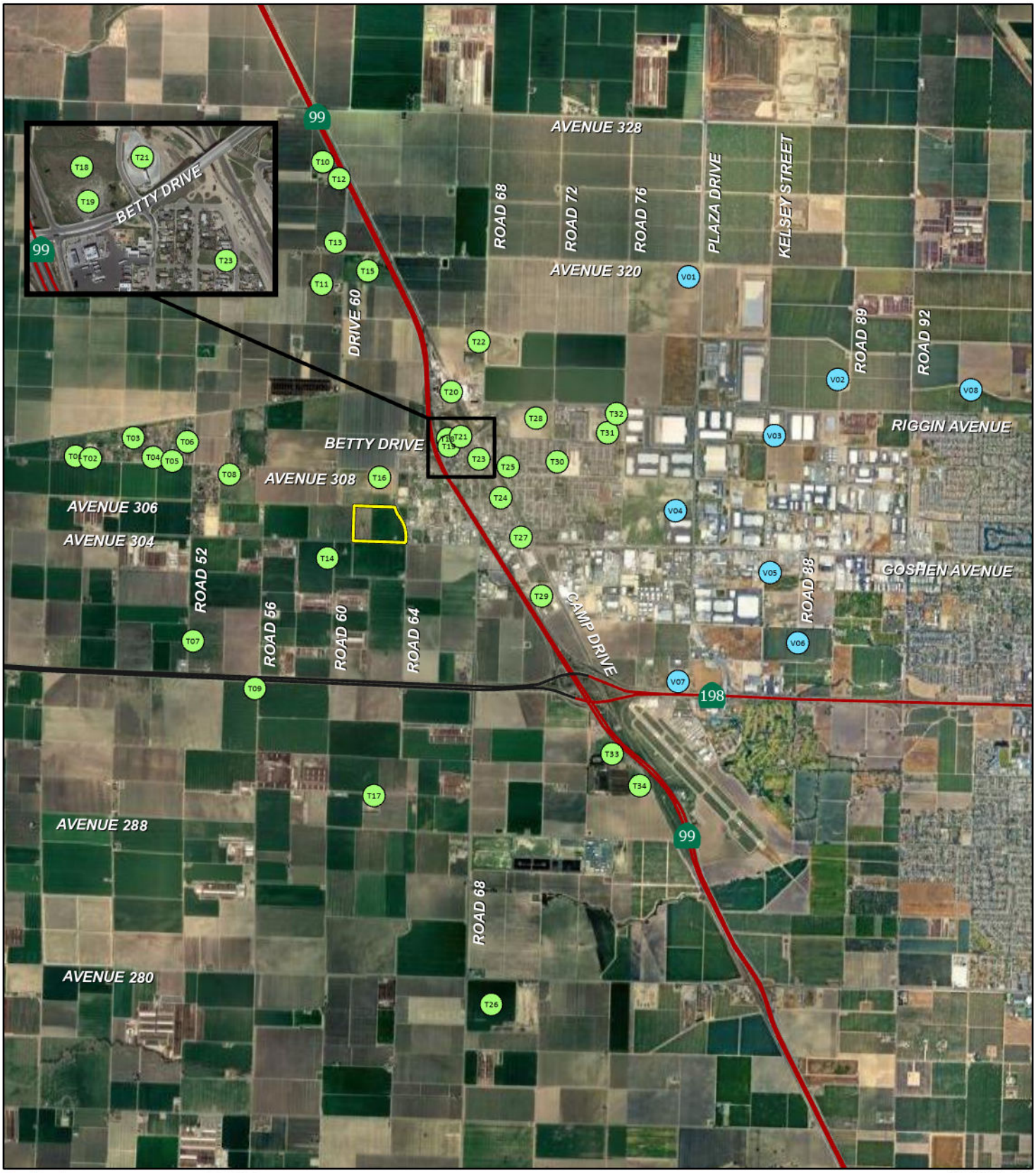
LSA

FIGURE 4-1

XXXX / YYYY
AM / PM Peak Hour Traffic Volumes

Goshen Residential Project
Transportation Impact Analysis

Existing Peak Hour Traffic Volumes



LSA

LEGEND

Project Site

Cumulative Projects

City of Visalia

Tulare County

0 2500 5000

FEET

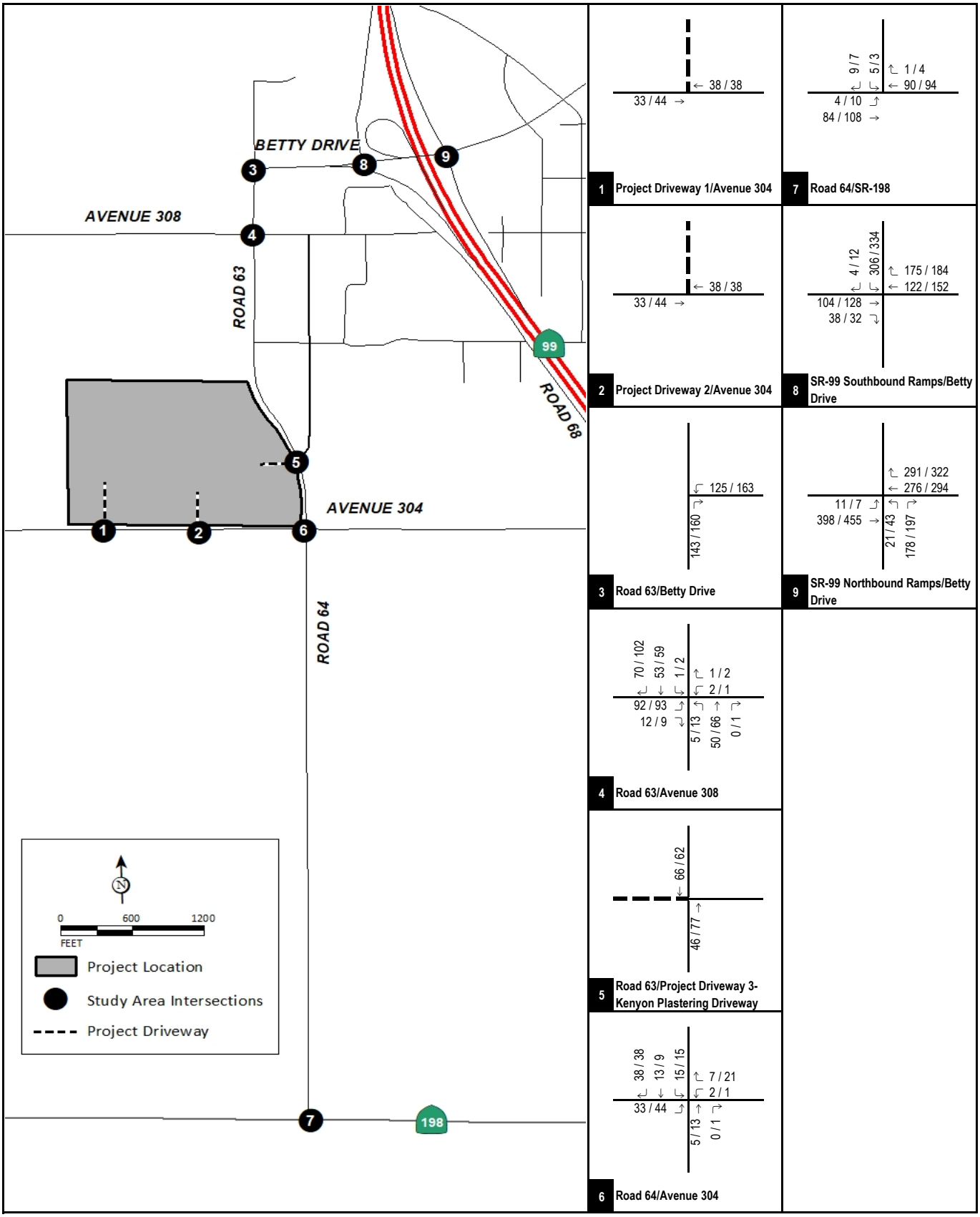
FIGURE 4-2

Goshen Residential Project
Transportation Impact Analysis

Cumulative Project Locations

SOURCE: Google Imagery, 2021; ESRI Streetmap, 2021

P:\FOC2202 Goshen Residential\Traffic\GIS\PRO\fig4-2_CumulProjLoc\fig4-2_CumulProjLoc.aprx (4/28/2023)



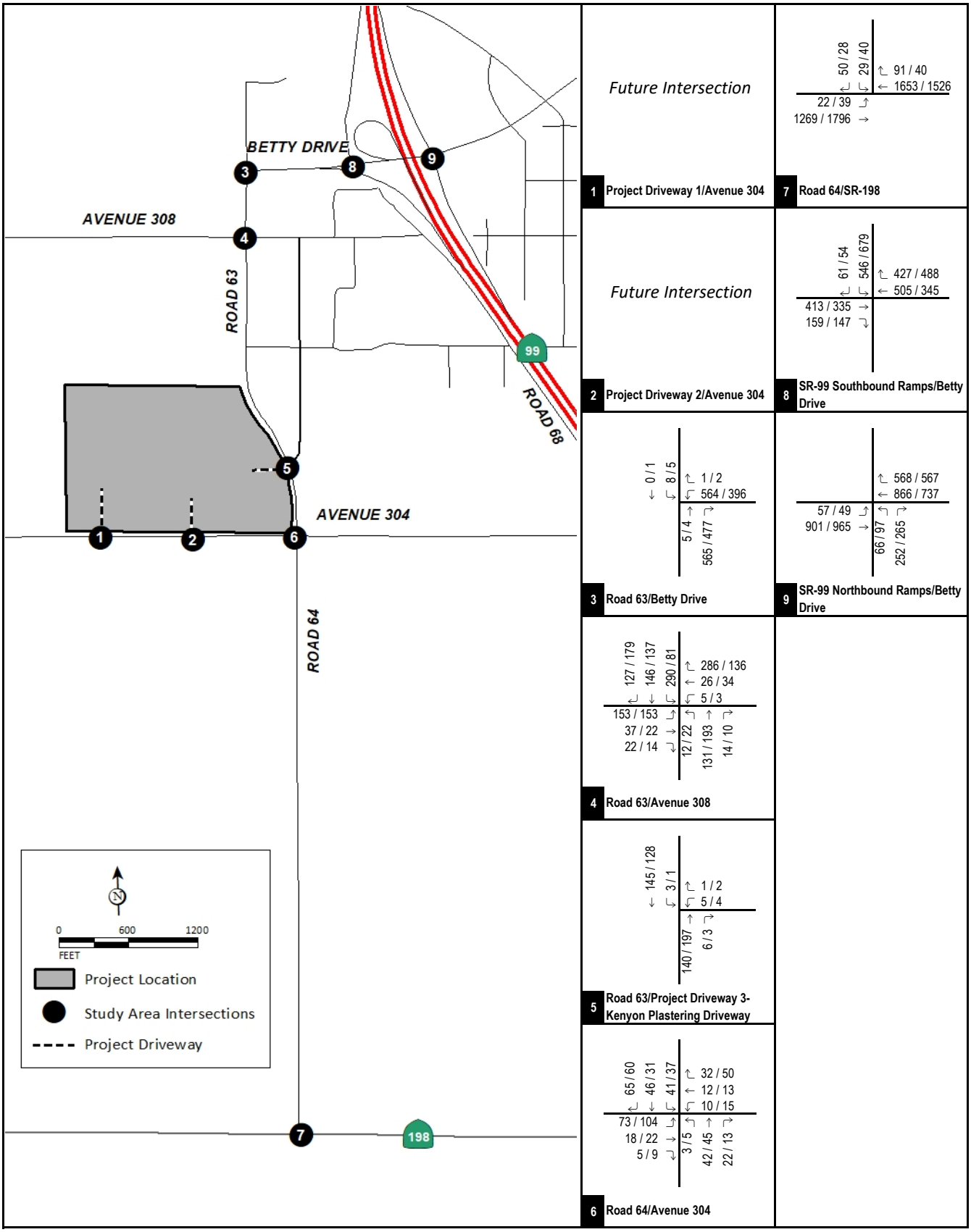
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FIGURE 4-3

XXX / YYY
AM / PM Peak Hour Trips
Project Driveway

Goshen Residential Project
Transportation Impact Analysis

Cumulative Projects Trip Assignment



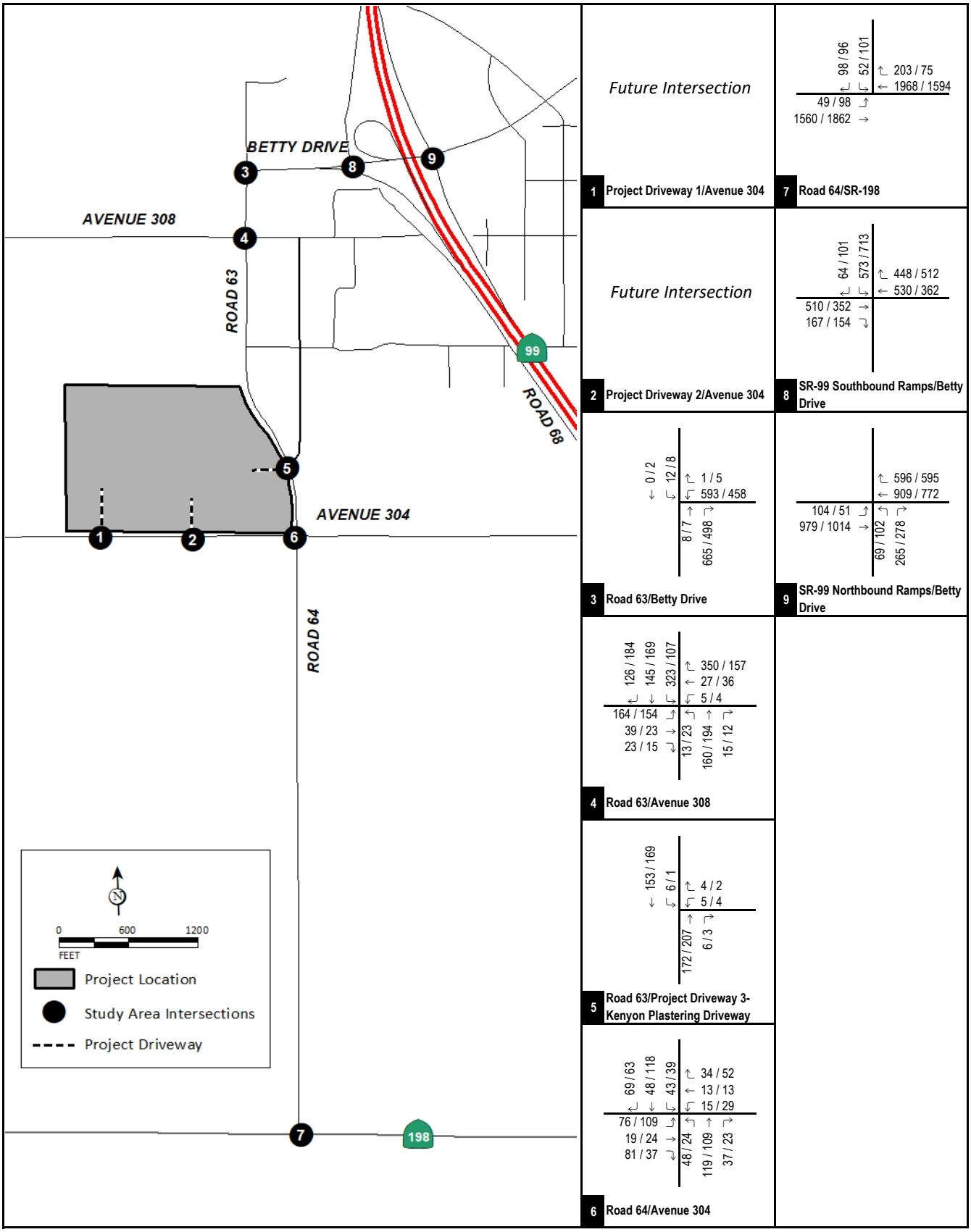
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FIGURE 4-4

XXXX / YYYY
AM / PM Peak Hour Traffic Volumes

Goshen Residential Project
Transportation Impact Analysis

Near-term (approved and pending) Peak Hour Traffic Volumes



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FIGURE 4-5

XXXX / YYYY
AM / PM Peak Hour Traffic Volumes

Goshen Residential Project
Transportation Impact Analysis

Horizon Year Peak Hour Traffic Volumes

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Table 4-A - Existing Roadway Segment Daily Traffic Volumes

Roadway	#	Segment	Existing ADT	Project Trips	Existing Plus Project ADT
Avenue 304	1	West of Project Driveway 1	1,382	28	1,410
	2	Between Project Driveway 1 and Project Driveway 2	1,382	828	2,210
	3	Between Project Driveway 2 and Road 64	1,382	1,515	2,897
Road 63	4	Between Betty Drive and Avenue 308	5,896	857	6,753
	5	Between Avenue 308 and Avenue 304	2,144	885	3,029
Road 64	6	Between Avenue 304 and SR-198	1,070	1,829	2,899
Betty Drive	7	Between Road 63 and SR-99 Southbound Ramps	7,238	857	8,095

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Table 4-B - 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
T01 .	**PSP94002**									
	4538 AVENUE 308									
	Single-Family Detached Housing[1]	2	DU							
	Trips/Unit			0.18	0.52	0.70	0.59	0.35	0.94	9.43
	Trip Generation			0	1	1	1	1	2	19
T02 .	**PSP22079**									
	4630 Avenue 308									
	Single-Family Detached Housing[1]	1	DU							
	Trips/Unit			0.18	0.52	0.70	0.59	0.35	0.94	9.43
	Trip Generation			0	1	1	1	0	1	9
T03 .	**PSP94138**									
	4856 AVENUE 309									
	General Light Industrial[2]	2.628	TSF							
	Truck Trips			0	0	0	0	0	0	2
	Auto Trips			1	1	2	0	1	1	10
	Total Trip Generation			1	1	2	0	1	1	12
T04 .	**PRC15048**									
	4974 Avenue 308									
	Single-Family Detached Housing[1]	1	DU							
	Trips/Unit			0.18	0.52	0.70	0.59	0.35	0.94	9.43
	Trip Generation			0	1	1	1	0	1	9
T05 .	**PRC17076**									
	5084 AVENUE 308									
	Single-Family Detached Housing[1]	1	DU							
	Trips/Unit			0.18	0.52	0.70	0.59	0.35	0.94	9.43
	Trip Generation			0	1	1	1	0	1	9
T06 .	**PRE09006**									
	5138 AVE 309									
	Single-Family Detached Housing[1]	11	DU							
	Trips/Unit			0.18	0.52	0.70	0.59	0.35	0.94	9.43
	Trip Generation			2	6	8	6	4	10	104
T07 .	**PSP22118**									
	29806 Road 52									
	General Light Industrial[2]	30.000	TSF							
	Truck Trips			3	2	5	2	2	4	32
	Auto Trips			15	2	17	2	13	15	115
	Total Trip Generation			18	4	22	4	15	19	147
T08 .	**PSP09042**									
	5361 AVE 308									
	Recreational Community Center[3]	1.608	TSF							
	Trips/Unit			1.26	0.65	1.91	1.18	1.32	2.50	28.82
	Trip Generation			2	1	3	2	2	4	46
T09 .	**PSP20058**									
	29585 Road 56									
	Warehousing[4]	75.000	TSF							
	Truck Trips			1	3	4	1	4	5	40
	Auto Trips			7	2	9	3	6	9	88
	Total Trip Generation			8	5	13	4	10	14	128

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Table 4-B - 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
T10 .	**PSP00088**									
	072-100-017									
	Warehousing[4]	12.720	TSF							
	Truck Trips			0	0	0	0	0	0	6
	Auto Trips			1	0	1	0	2	2	15
	Total Trip Generation			1	0	1	0	2	2	21
T11 .	**PRC14042**									
	072-070-021									
	Warehousing[4]	65.000	TSF							
	Truck Trips			1	3	4	1	3	4	35
	Auto Trips			6	2	8	2	6	8	77
	Total Trip Generation			7	5	12	3	9	12	112
T12 .	**REA22094**									
	32401 Road 60									
	Single-Family Detached Housing[1]	1	DU							
	Trips/Unit			0.18	0.52	0.70	0.59	0.35	0.94	9.43
	Trip Generation			0	1	1	1	0	1	9
T13 .	**CEQ19048**									
	32247 Road 60									
	General Light Industrial[2]	12.720	TSF							
	Truck Trips			1	1	2	0	2	2	13
	Auto Trips			7	0	7	1	5	6	49
	Total Trip Generation			8	1	9	1	7	8	62
T14 .	**PRC23011**									
	5859 Avenue 304									
	Utility[5]	2.280	TSF							
	Trips/Unit			2.03	0.30	2.33	0.39	1.77	2.16	12.29
	Trip Generation			5	1	6	1	4	5	28
T15 .	**PSP20069**									
	31932 Road 60									
	Warehousing[4]	153.582	TSF							
	Truck Trips			5	3	8	5	4	9	81
	Auto Trips			14	4	18	5	14	19	181
	Total Trip Generation			19	7	26	10	18	28	262
T16 .	**Cross Creek Bend Phase 2**									
	SW corner of Road 64 and Avenue 308									
	Single-Family Detached Housing[1]	111	DU							
	Trips/Unit			0.18	0.52	0.70	0.59	0.35	0.94	9.43
	Trip Generation			20	58	78	65	39	104	1,047
T17 .	**PSP16055**									
	6275 Avenue 290									
	Single-Family Detached Housing[1]	2	DU							
	Trips/Unit			0.18	0.52	0.70	0.59	0.35	0.94	9.43
	Trip Generation			0	1	1	1	1	2	19

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Table 4-B - 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
T18 .	**PRC18046**									
	6610 Betty Dr									
	Hotel[6]	240	RM							
	Trips/Unit			0.26	0.20	0.46	0.30	0.29	0.59	7.99
	Trip Generation			62	48	110	72	70	142	1,918
	High-Turnover (Sit-Down) Restaurant[7]	6.000	TSF							
	Trips/Unit			5.26	4.31	9.57	5.52	3.53	9.05	107.20
	Trip Generation			32	26	58	33	21	54	643
	Pass-by Trips[8]			0	0	0	(14)	(9)	(23)	(276)
	Net New Trips			32	26	58	19	12	31	367
	Fast-Food Restaurant with Drive-Through Window[9]	8.000	TSF							
	Trips/Unit			22.75	21.86	44.61	17.18	15.85	33.03	467.48
	Trip Generation			182	175	357	137	127	264	3,740
	Pass-by Trips[10]			(91)	(88)	(179)	(75)	(70)	(145)	(1,964)
	Net New Trips			91	88	179	62	57	119	1,777
	Convenience Store/Gas Station - GFA (5.5-10k)[11]	18	VFP							
	Trips/Unit			15.80	15.80	31.60	13.45	13.45	26.90	345.75
	Trip Generation			284	284	568	242	242	484	6,224
	Pass-by Trips[12]			(170)	(170)	(341)	(136)	(136)	(271)	(3,610)
	Net New Trips			114	114	227	106	106	213	2,614
		Gross Trip Generation		560	533	1,093	484	460	944	12,525
		Pass-by Trips		(261)	(258)	(519)	(225)	(214)	(439)	(5,850)
		Net Trip Generation		299	275	574	259	246	505	6,675
T19 .	**Goshen Truck Stop & Travel Center**									
	6610 Betty Dr									
	Truck Stop[13]	9	VFP							
	Trips/Unit			6.85	7.12	13.97	8.17	7.25	15.42	224.00
	Trip Generation			62	64	126	74	65	139	2,016
T20 .	**PSP94008**									
	31120 NUTMEG ROAD									
	Warehousing[4]	251.438	TSF							
	Truck Trips			7	6	13	7	6	13	133
	Auto Trips			23	6	29	9	22	31	297
	Total Trip Generation			30	12	42	16	28	44	430
T21 .	**PRC19041**									
	30981 Road 67									
	Truck Stop[13]	4	VFP							
	Trips/Unit			6.85	7.12	13.97	8.17	7.25	15.42	224.00
	Trip Generation			27	28	55	33	29	62	896
T22 .	**PRC22078**									
	31495 Road 68									
	Manufacturing[14]	3.335	TSF							
	Truck Trips			0	0	0	0	0	0	4
	Auto Trips			1	1	2	1	1	2	12
	Total Trip Generation			1	1	2	1	1	2	16
T23 .	**REA22047**									
	30883 Road 68									
	Church[15]	0.480	TSF							
	Trips/Unit			0.20	0.12	0.32	0.22	0.27	0.49	7.60
	Trip Generation			0	0	0	0	0	0	4

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Table 4-B - 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
T24 .	**PSR05015**									
	30675 EFFIE DR									
	Single-Family Detached Housing[1]	4	DU							
	Trips/Unit			0.18	0.52	0.70	0.59	0.35	0.94	9.43
	Trip Generation			1	2	3	2	1	3	38
T25 .	**PZC22006**									
	Robinson Road and Avenue 308									
	Single-Family Attached Housing[16]	11	DU							
	Trips/Unit			0.15	0.33	0.48	0.32	0.25	0.57	7.20
	Trip Generation			2	4	6	4	3	7	79
T26 .	**PSP99119**									
	6901 AVE 280									
	General Light Industrial[2]	2.500	TSF							
	Truck Trips			0	0	0	0	0	0	2
	Auto Trips			1	0	1	0	1	1	10
	Total Trip Generation			1	0	1	0	1	1	12
T27 .	**PSP12001**									
	30480 Effie DR									
	General Light Industrial[2]	9.400	TSF							
	Truck Trips			0	1	1	0	1	1	10
	Auto Trips			5	0	5	1	4	5	36
	Total Trip Generation			5	1	6	1	5	6	46
T28 .	**PRC20025**									
	SW corner of Riggin Avenue and Road 72									
	Single-Family Detached Housing[1]	208	DU							
	Trips/Unit			0.18	0.52	0.70	0.59	0.35	0.94	9.43
	Trip Generation			37	108	145	123	73	196	1,961
T29 .	**PRC21059**									
	Approx. 0.5 mile S/o Goshen Avenue, E/o Bradham Drive									
	Warehousing[4]	113.330	TSF							
	Truck Trips			4	2	6	4	2	6	60
	Auto Trips			10	3	13	4	10	14	134
	Total Trip Generation			14	5	19	8	12	20	194
T30 .	**MIM18027**									
	7210 Avenue 308									
	Church[15]	6.400	TSF							
	Trips/Unit			0.20	0.12	0.32	0.22	0.27	0.49	7.60
	Trip Generation			1	1	2	1	2	3	49
T31 .	**PSP21009**									
	SE corner of Avenue 310 and Road 76									
	Affordable Housing - Income Limits[17]	52	DU							
	Trips/Unit			0.10	0.26	0.36	0.27	0.19	0.46	4.81
	Trip Generation			5	14	19	14	10	24	250

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Table 4-B - 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
T32 .	**PRC20068**								
	NW corner of Road 76 and Florence Avenue								
	Supermarket[18]	10.500 TSF							
	Trips/Unit		1.69	1.17	2.86	4.48	4.47	8.95	93.84
	Trip Generation		18	12	30	47	47	94	985
	Pass-by Trips[19]		0	0	0	(11)	(11)	(23)	(236)
	Net New Trips		18	12	30	36	36	71	749
	Gasoline/Service Station[20]	6 VFP							
	Trips/Unit		5.14	5.14	10.28	6.96	6.95	13.91	172.01
	Trip Generation		31	31	62	42	42	84	1,032
	Pass-by Trips[21]		(20)	(20)	(39)	(24)	(24)	(48)	(619)
	Net New Trips		11	11	23	18	18	36	413
		Gross Trip Generation	49	43	92	89	89	178	2,017
		Pass-by Trips	(20)	(20)	(39)	(35)	(35)	(70)	(856)
		Net Trip Generation	29	23	53	54	54	108	1,161
T33 .	**CEQ16012**								
	Parcel 081-080-011								
	General Light Industrial[2]	3.360 TSF							
	Truck Trips		0	0	0	0	0	0	4
	Auto Trips		2	0	2	0	2	2	13
	Total Trip Generation		2	0	2	0	2	2	17
T34 .	**PRC14012**								
	Parcel 081-090-001								
	General Light Industrial[2]	3.360 TSF							
	Truck Trips		0	0	0	0	0	0	4
	Auto Trips		2	0	2	0	2	2	13
	Total Trip Generation		2	0	2	0	2	2	17

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Table 4-B - 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
V01 .	**CapRock's Phase 3**								
	SW corner of Plaza Drive and Avenue 320								
	Warehousing[4]	2728.944 TSF							
	Truck Trips		74	71	145	79	73	152	1,447
	Auto Trips		246	74	320	95	244	339	3,220
	Total Trip Generation		320	145	465	174	317	491	4,667
V02 .	**Shirk and Riggin Industrial Park**								
	Between Plaza Drive and Road 92 on Riggin Avenue								
	General Light Industrial[2]	195.480 TSF							
	Truck Trips		18	13	31	13	14	27	203
	Auto Trips		100	14	114	14	86	100	748
	Total Trip Generation		118	27	145	27	100	127	951
	High-Cube Fullfillment Center Warehouse - Non-Sort[22]	3474.650 TSF							
	Truck Trips		81	80	161	79	94	173	1,950
	Auto Trips		291	69	360	150	234	384	4,339
	Total Trip Generation		372	149	521	229	328	557	6,289
	Convenience Store[23]	6.900 TSF							
	Trips/Unit		31.27	31.27	62.54	25.05	24.06	49.11	762.28
	Trip Generation		216	216	432	173	166	339	5,260
	Net New Trips		216	216	432	173	166	339	5,260
	Fast-Food Restaurant with Drive-Through Window[9]	4.800 TSF							
	Trips/Unit		22.75	21.86	44.61	17.18	15.85	33.03	467.48
	Trip Generation		109	105	214	82	76	158	2,244
	Pass-by Trips[10]		(55)	(53)	(107)	(45)	(42)	(87)	(1,178)
	Net New Trips		55	53	107	37	34	71	1,066
	Automated Car Wash[24]	4.500 TSF							
	Trips/Unit		5.66	3.32	8.98	7.10	7.10	14.20	163.09
	Trip Generation		25	15	40	32	32	64	734
	Net New Trips		25	15	40	32	32	64	734
		Gross Trip Generation	840	512	1,352	543	702	1,245	15,478
		Pass-by Trips	(55)	(53)	(107)	(45)	(42)	(87)	(1,178)
		Net Trip Generation	786	460	1,245	498	660	1,158	14,300
V03 .	**Ritchie Spec Industrial**								
	South of Millipore Sigma								
	Warehousing[4]	100.00 TSF							
	Truck Trips		3	2	5	4	1	5	53
	Auto Trips		9	3	12	3	9	12	118
	Total Trip Generation		12	5	17	7	10	17	171
V04 .	**Visalia Plaza 39/Seefried**								
	SW corner of Plaza Drive and Ferguson Avenue								
	High-Cube Fullfillment Center Warehouse - Non-Sort[22]	535.54 TSF							
	Truck Trips		13	11	24	12	15	27	300
	Auto Trips		45	10	55	23	36	59	669
	Total Trip Generation		58	21	79	35	51	86	969
V05 .	**Duarte Industrial**								
	East of Kelsey Street and Roosevelt Avenue								
	High-Cube Fullfillment Center Warehouse - Non-Sort[22]	313.00 TSF							
	Truck Trips		7	8	15	7	8	15	176
	Auto Trips		26	6	32	13	22	35	391
	Total Trip Generation		33	14	47	20	30	50	567

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Table 4-B - 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
V06 .	**Visalia / Kelsey St. Industrial**								
	SE corner of Kelsey Street and Hurley Avenue								
	High-Cube Fullfillment Center Warehouse - Non-Sort[22]	2098.00 TSF							
	Truck Trips		49	48	97	48	56	104	1,177
	Auto Trips		176	41	217	90	142	232	2,620
	Total Trip Generation		225	89	314	138	198	336	3,797
V07 .	**CarMax Used Car Sales Facility**								
	NW corner of Neeley Street and Camp Drive								
	Automobile Sales (Used)[25]	8.526 TSF							
	Trips/Unit		1.72	0.41	2.13	1.76	1.99	3.75	27.06
	Trip Generation		15	3	18	15	17	32	231
V08 .	**Carleton Acres Specific Plan**								
	NE corner of Shirk & Riggin								
	Single-Family Detached Housing[1]	1,698 DU							
	Trips/Unit		0.18	0.52	0.70	0.59	0.35	0.94	9.43
	Trip Generation		306	883	1,189	1,002	594	1,596	16,012
	Single-Family Attached Housing[16]	758 DU							
	Trips/Unit		0.15	0.33	0.48	0.32	0.25	0.57	7.20
	Trip Generation		114	250	364	243	190	433	5,458
	Multifamily Housing (Low-Rise) Not Close to Rail Transit[26]	912 DU							
	Trips/Unit		0.10	0.30	0.40	0.32	0.19	0.51	6.74
	Trip Generation		91	274	365	292	173	465	6,147
	Shopping Plaza (40-150k) - Supermarket - No[27]	100.00 TSF							
	Trips/Unit		1.07	0.66	1.73	2.54	2.65	5.19	67.52
	Trip Generation		107	66	173	254	265	519	6,752
	Pass-by Trips[28]		0	0	0	(102)	(106)	(208)	(2,701)
	Net New Trips		107	66	173	152	159	311	4,051
	Discount Club[29]	150.79 TSF							
	Trips/Unit		0.49	0.31	0.80	2.10	2.09	4.19	42.46
	Trip Generation		74	47	121	317	315	632	6,403
	Pass-by Trips[30]		0	0	0	(108)	(107)	(215)	(2,177)
	Net New Trips		74	47	121	209	208	417	4,226
		Gross Trip Generation	692	1,520	2,212	2,108	1,537	3,645	40,772
		Pass-by Trips	0	0	0	(209)	(213)	(422)	(4,878)
		Net Trip Generation	692	1,520	2,212	1,899	1,324	3,223	35,894
		Gross Trip Generation	**2,097**	**2,982**	**5,079**	**3,576**	**2,896**	**6,472**	**76,107**
		Pass-By Trips	**(335)**	**(330)**	**(665)**	**(407)**	**(397)**	**(804)**	**(10,584)**
		Total Net Trip Generation	**1,762**	**2,652**	**4,414**	**3,169**	**2,499**	**5,668**	**65,523**

Notes:

DU = Dwelling Units; RM = Rooms; TSF = Thousand Square Feet; VFP = Vehicle Fueling Positions

[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] Rates from ITE *Trip Generation Manual* , (11th Edition), Land Use 110 - "General Light Industrial " , Setting/Location - 'General Urban/Suburban'.

[3] Rates from ITE *Trip Generation Manual* , (11th Edition), Land Use 495 - "Recreational Community Center" , Setting/Location - 'General Urban/Suburban'.

[4] Rates from ITE *Trip Generation Manual* , (11th Edition), Land Use 150 - "Warehousing" , Setting/Location - 'General Urban/Suburban'.

[5] Rates from ITE *Trip Generation Manual* , (11th Edition), Land Use 170 - "Utility" , Setting/Location - 'General Urban/Suburban'.

[6] Rates from ITE *Trip Generation Manual* , (11th Edition), Land Use 310 - "Hotel" , Setting/Location - 'General Urban/Suburban'.

[7] Rates from 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.' A pass-by rate of 43% was used for the p.m. peak hour. Since daily pass-by rates are not available for this land use in the ITE *Trip Generation Manual* , the p.m. pass-by rate was used as the daily pass-by rate.

[9] Rates from ITE *Trip Generation Manual* , (11th Edition), Land Use 934 - "Fast-Food Restaurant with Drive-Through Window" , Setting/Location - 'General Urban/Suburban'.

[10] 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% was used for the a.m. peak hour and a pass-by rate of 55% was used for the p.m. peak hour. Since daily pass-by rates are not available for this land use in the ITE *Trip Generation Manual* , the average of a.m and p.m. pass-by rate was used as the daily pass-by rate.

[11] Rates from ITE *Trip Generation Manua* l, (11th Edition), Land Use 945 - "Convenience Store/Gas Station - GFA (5.5-10k)" , Setting/Location - 'General Urban/Suburban'.

[12] Pass-by rates from the ITE *Trip Generation Manual* (11th Edition) for Land Use 945 - 'Convenience Store/Gas Station - GFA (5.5-10k).' A pass-by rate of 60% was used for the a.m. peak hour and a pass-by rate of 56% was used for the p.m. peak hour. Since daily pass-by rates are not available for this land use in the ITE *Trip Generation Manual* , the average of a.m and p.m. pass-by rate was used as the daily pass-by rate.

[13] Rates from ITE *Trip Generation Manual* , (11th Edition), Land Use 950 - "Truck Stop" , Setting/Location - 'General Urban/Suburban'.

[14] Rates from ITE *Trip Generation Manual* , (11th Edition), Land Use 140 - "Manufacturing" , Setting/Location - 'General Urban/Suburban'.

[15] Rates from ITE *Trip Generation Manual* , (11th Edition), Land Use 560 - "Church" , Setting/Location - 'General Urban/Suburban'.

[16] Rates from ITE *Trip Generation Manual* , (11th Edition), Land Use 215 - "Single-Family Attached Housing" , Setting/Location - 'General Urban/Suburban'.

[17] Rates from ITE *Trip Generation Manual* , (11th Edition), Land Use - "Affordable Housing - Income Limits" , Setting/Location - 'General Urban/Suburban'.

[18] Rates from ITE *Trip Generation Manual* , (11th Edition), Land Use 850 - "Supermarket" , Setting/Location - 'General Urban/Suburban'.

[19] Pass-by rates from the ITE *Trip Generation Manual* (11th Edition) for Land Use 850 - 'Supermarket.' A pass-by rate of 24% was used for the p.m. peak hour. Since daily pass-by rates are not available for this land use in the ITE *Trip Generation Manual* , the p.m. pass-by rate was used as the daily pass-by rate.

[20] Rates from ITE *Trip Generation Manual* , (11th Edition), Land Use 944 - "Gasoline/Service Station" , Setting/Location - 'General Urban/Suburban'.

[21] Pass-by rates from the ITE *Trip Generation Manual* (11th Edition) for Land Use 944 - 'Gasoline/Service Station.' A pass-by rate of 63% was used for the a.m. peak hour and a pass-by rate of 57% was used for the p.m. peak hour. Since daily pass-by rates are not available for this land use in the ITE *Trip Generation Manual* , the average of a.m and p.m. pass-by rate was used as the daily pass-by rate.

[22] Rates from ITE *Trip Generation Manual* , (11th Edition), Land Use 155 - "High-Cube Fullfillment Center Warehouse - Non-Sort" , Setting/Location - 'General Urban/Suburban'.

[23] Rates from ITE *Trip Generation Manual* , (11th Edition), Land Use - "Convenience Store" , Setting/Location - 'General Urban/Suburban'.

[24] Rates from ITE *Trip Generation Manual* , (11th Edition), Land Use 948 - "Automated Car Wash" , Setting/Location - 'General Urban/Suburban'.

[25] Rates from ITE *Trip Generation Manual* , (11th Edition), Land Use - "Automobile Sales (Used)" , Setting/Location - 'General Urban/Suburban'.

[26] 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'.

[27] Rates from ITE *Trip Generation Manual* , (11th Edition), Land Use 821 - "Shopping Plaza (40-150k) - Supermarket - No" , Setting/Location - 'General Urban/Suburban'.

[28] Pass-by rates from the ITE *Trip Generation Manual* (11th Edition) for Land Use 821 - 'Shopping Plaza (40-150k) - Supermarket - No.' A pass-by rate of 40% was used for the p.m. peak hour. Since daily pass-by rates are not available for this land use in the ITE *Trip Generation Manual* , the p.m. pass-by rate was used as the daily pass-by rate.

[29] Rates from ITE *Trip Generation Manual* , (11th Edition), Land Use - "Discount Club" , Setting/Location - 'General Urban/Suburban'.

[30] Pass-by rates from the ITE *Trip Generation Manual* (11th Edition) for Land Use - 'Discount Club.' A pass-by rate of 34% was used for the p.m. peak hour. Since daily pass-by rates are not available for this land use in the ITE *Trip Generation Manual* , the p.m. pass-by rate was used as the daily pass-by rate.

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Table 4-C - Near-term Roadway Segment Daily Traffic Volumes

Roadway	#	Segment	Existing ADT	Cumulative Projects Trips	Near-term ADT	Project Trips	Near-term Plus Project ADT
Avenue 304	1	West of Project Driveway 1	1,382	956	2,338	28	2,366
	2	Between Project Driveway 1 and Project Driveway 2	1,382	956	2,338	828	3,166
	3	Between Project Driveway 2 and Road 64	1,382	956	2,338	1,515	3,853
Road 63	4	Between Betty Drive and Avenue 308	5,896	3,568	9,464	857	10,321
	5	Between Avenue 308 and Avenue 304	2,144	1,702	3,846	885	4,731
Road 64	6	Between Avenue 304 and SR-198	1,070	252	1,322	1,829	3,151
Betty Drive	7	Between Road 63 and SR-99 Southbound Ramps	7,238	3,568	10,806	857	11,663

LSA

Table 4-D - Horizon Year Roadway Segment Daily Traffic Volumes

Roadway	#	Segment	Horizon Year ADT	Project Trips	Horizon Year Plus Project ADT
Avenue 304	1	West of Project Driveway 1	2,455	28	2,483
	2	Between Project Driveway 1 and Project Driveway 2	2,455	828	3,283
	3	Between Project Driveway 2 and Road 64	2,455	1,515	3,970
Road 63	4	Between Betty Drive and Avenue 308	9,937	857	10,794
	5	Between Avenue 308 and Avenue 304	4,038	885	4,923
Road 64	6	Between Avenue 304 and SR-198	3,794	1,829	5,623
Betty Drive	7	Between Road 63 and SR-99 Southbound Ramps	11,346	857	12,203

5.0 PROJECT TRAFFIC

5.1 PROJECT TRIP GENERATION

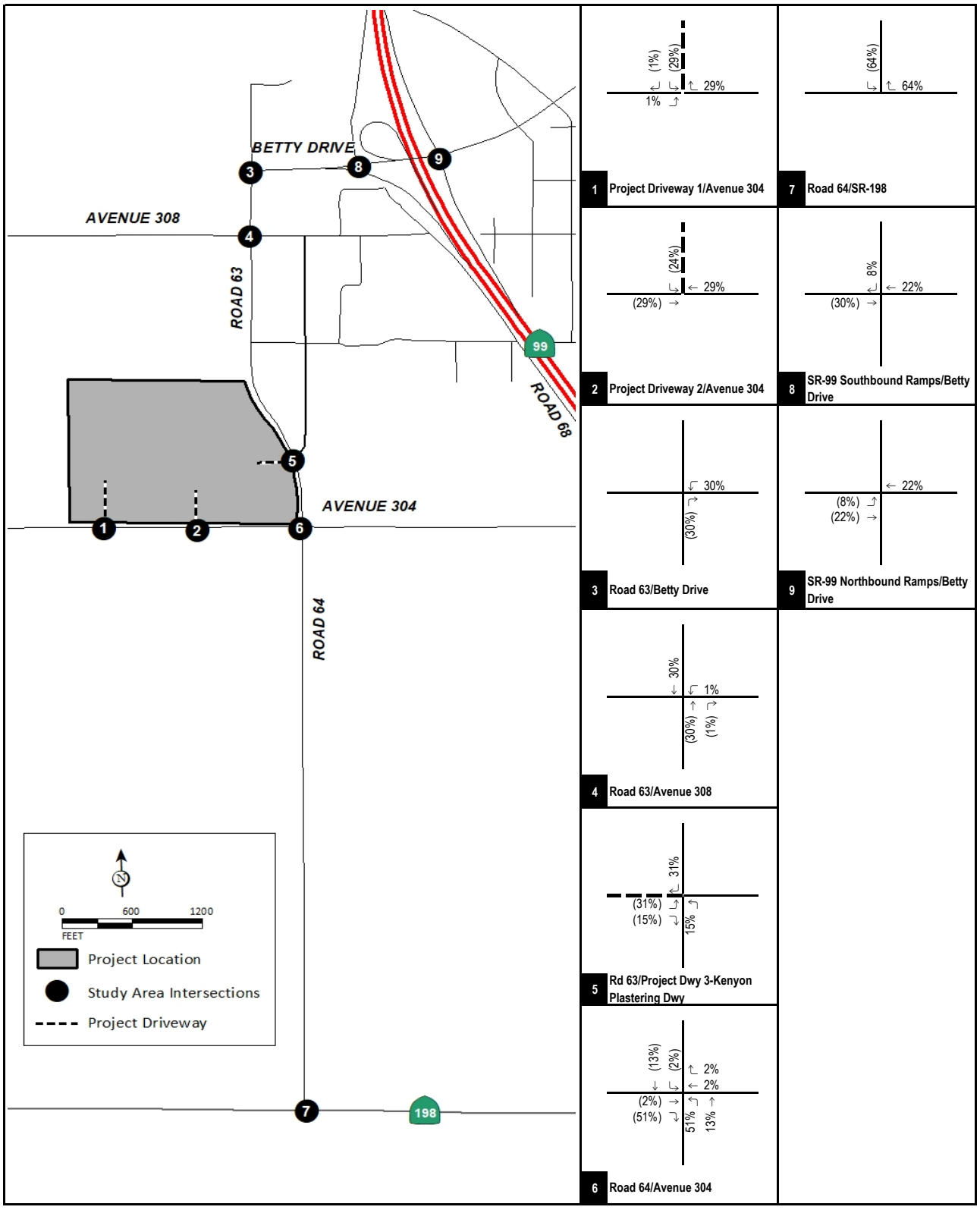
The trip generation for the proposed project was developed using rates from the ITE *Trip Generation Manual* (11th Edition) for Land Use 210 – "Single-Family Detached Housing". Table 5-A summarizes the project trip generation. As shown in Table 5-A, the proposed project is anticipated to generate 2,857 daily trips, with 213 trips occurring during the a.m. peak hour and 285 trips occurring during the p.m. peak hour.

5.2 PROJECT TRIP DISTRIBUTION AND ASSIGNMENT

The project trip distribution was developed using the select zone model run obtained from the TCAG Travel Demand Model (Model). The select zone distribution plot is included in Appendix A. Figure 5-1 illustrates the project trip distribution. The trip distribution was further refined in consideration of the regional roadway network and the location of residential, educational, employment, recreational and commercial centers in the project vicinity. The project trip assignment at the study intersections is the product of the project trip generation and the corresponding trip distribution percentages. Figure 5-2 illustrates the project trip assignment.

5.3 LIST OF CHAPTER 5.0 FIGURES AND TABLES

- Figure 5-1: Project Trip Distribution
- Figure 5-2: Project Trip Assignment
- Table 5-A: Project Trip Generation



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FIGURE 5-1

XX% (YY%)
Inbound (Outbound) Trip Distribution
Project Driveway

Goshen Residential Project
Transportation Impact Analysis

Project Trip Distribution

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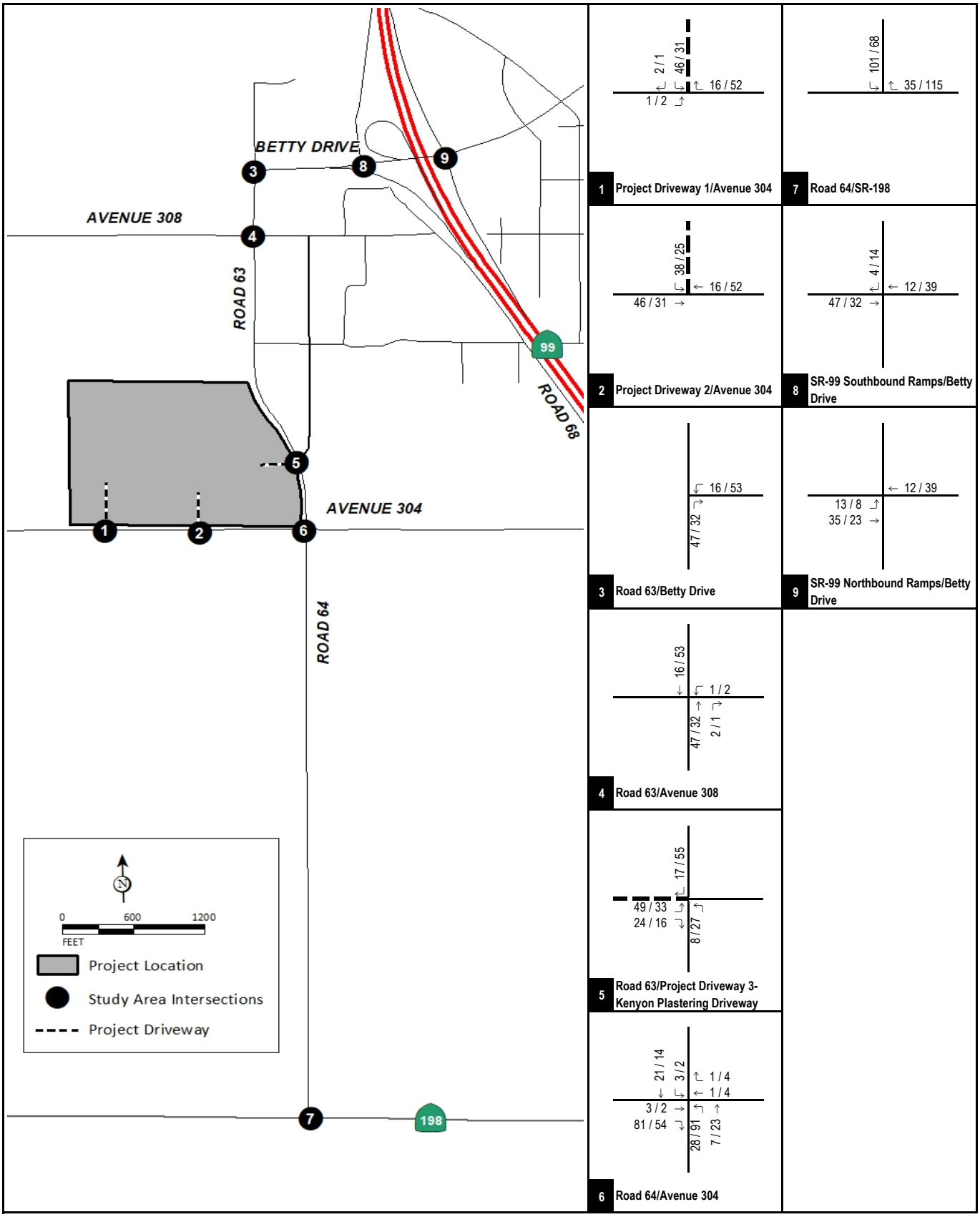


FIGURE 5-2

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XXX / YYY
AM / PM Peak Hour Trips
Project Driveway

Goshen Residential Project
Transportation Impact Analysis

Project 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	303 DU							
Trips/Unit[1]		0.18	0.52	0.70	0.59	0.35	0.94	9.43
Gross Trips		55	158	213	179	106	285	2,857
	Total Gross Trips	**55**	**158**	**213**	**179**	**106**	**285**	**2,857**

Notes:

DU = Dwelling Units

[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."

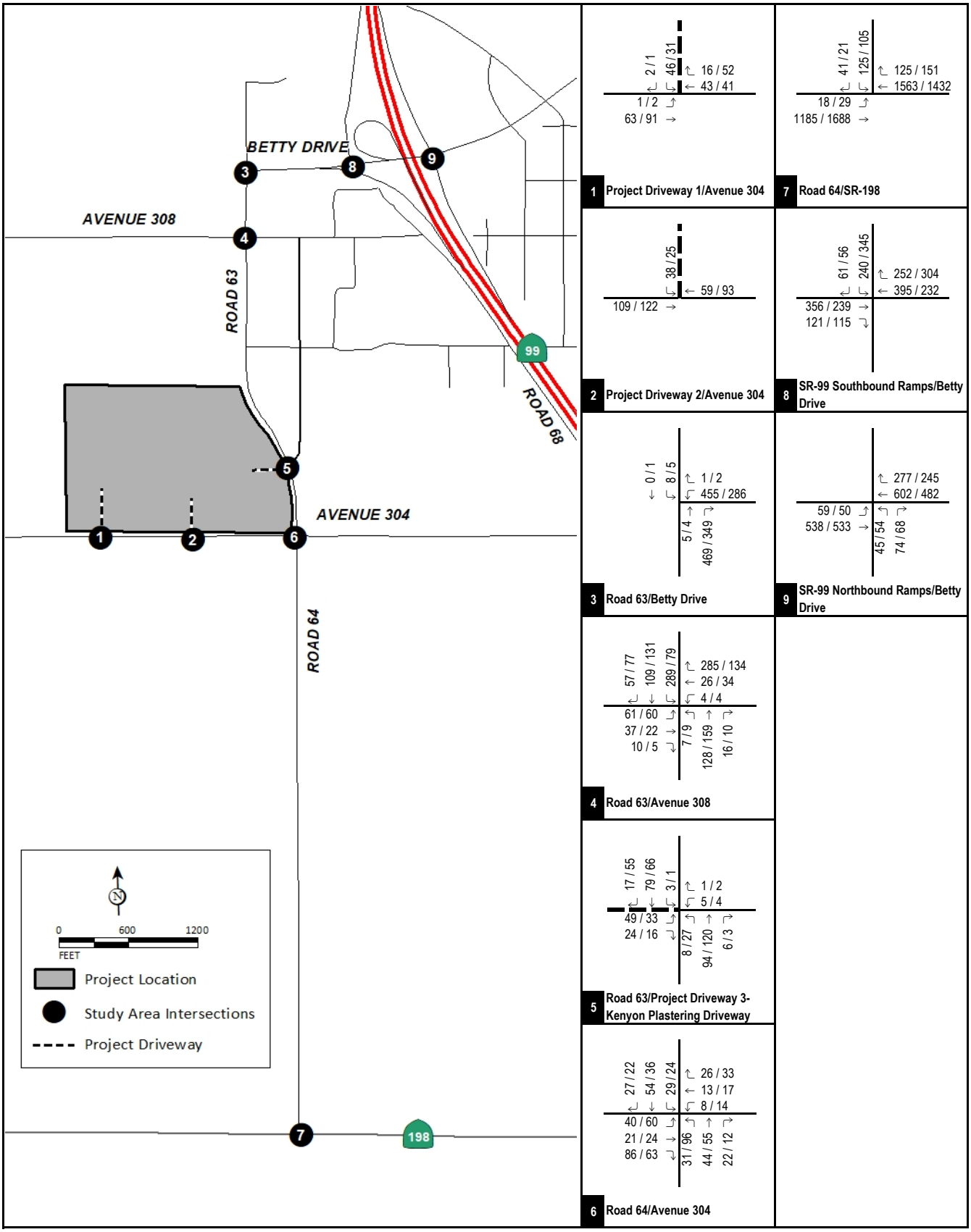
6.0 TRAFFIC VOLUMES FOR PLUS PROJECT SCENARIOS

Existing, near-term, and cumulative year plus project traffic volumes were developed by adding project traffic to the traffic for the corresponding no 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 horizon year conditions, respectively. Previously referenced Tables 4-A, 4-C, and 4-D summarize the daily with project traffic volumes at study roadway segments for Existing, near-term, and cumulative year plus project scenarios, 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: Horizon Year plus Project Peak Hour Traffic Volumes



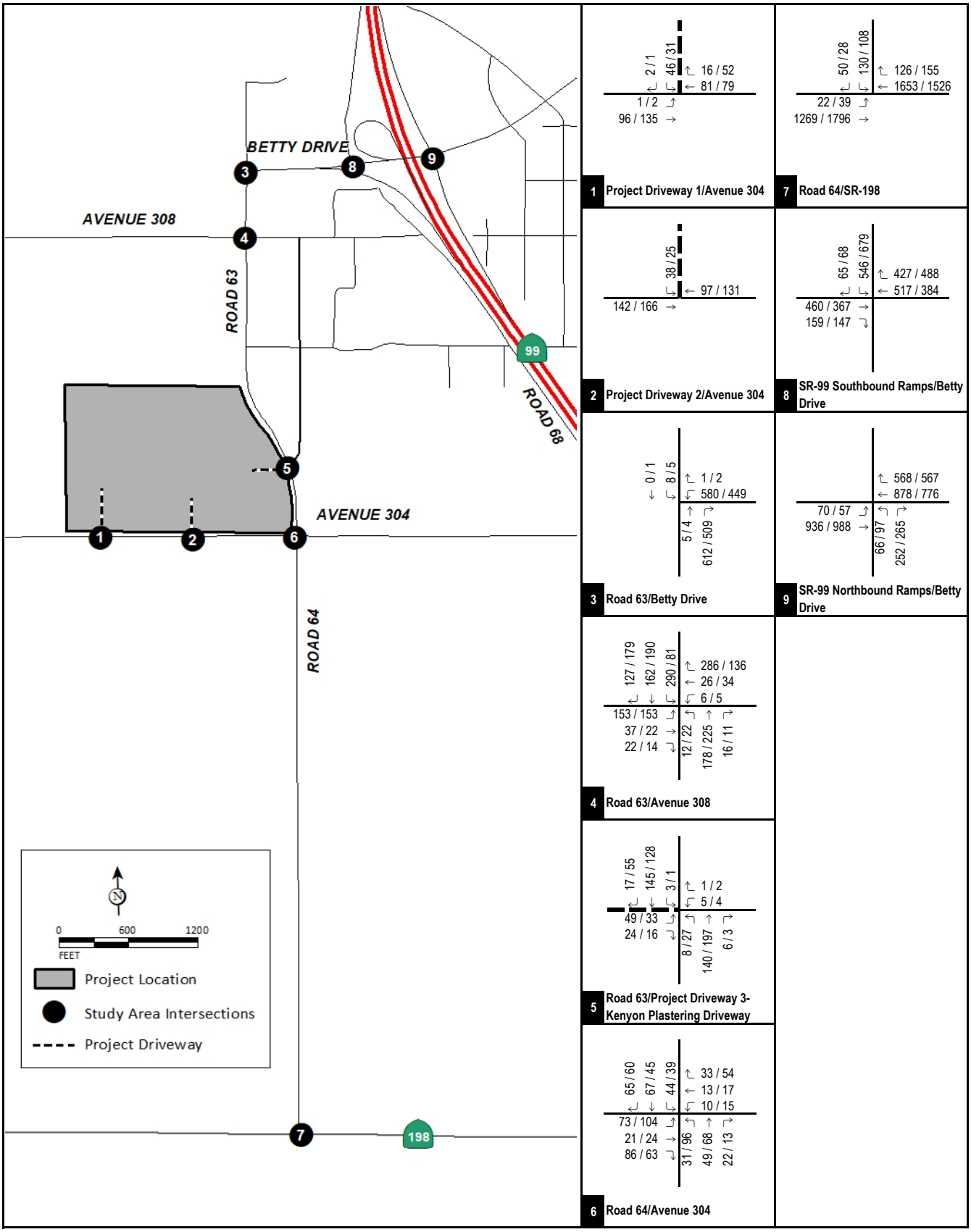
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FIGURE 6-1

XXXX / YYYY
AM / PM Peak Hour Traffic Volumes
Project Driveway

Goshen Residential Project
Transportation Impact Analysis

Existing plus Project Peak Hour Traffic Volumes



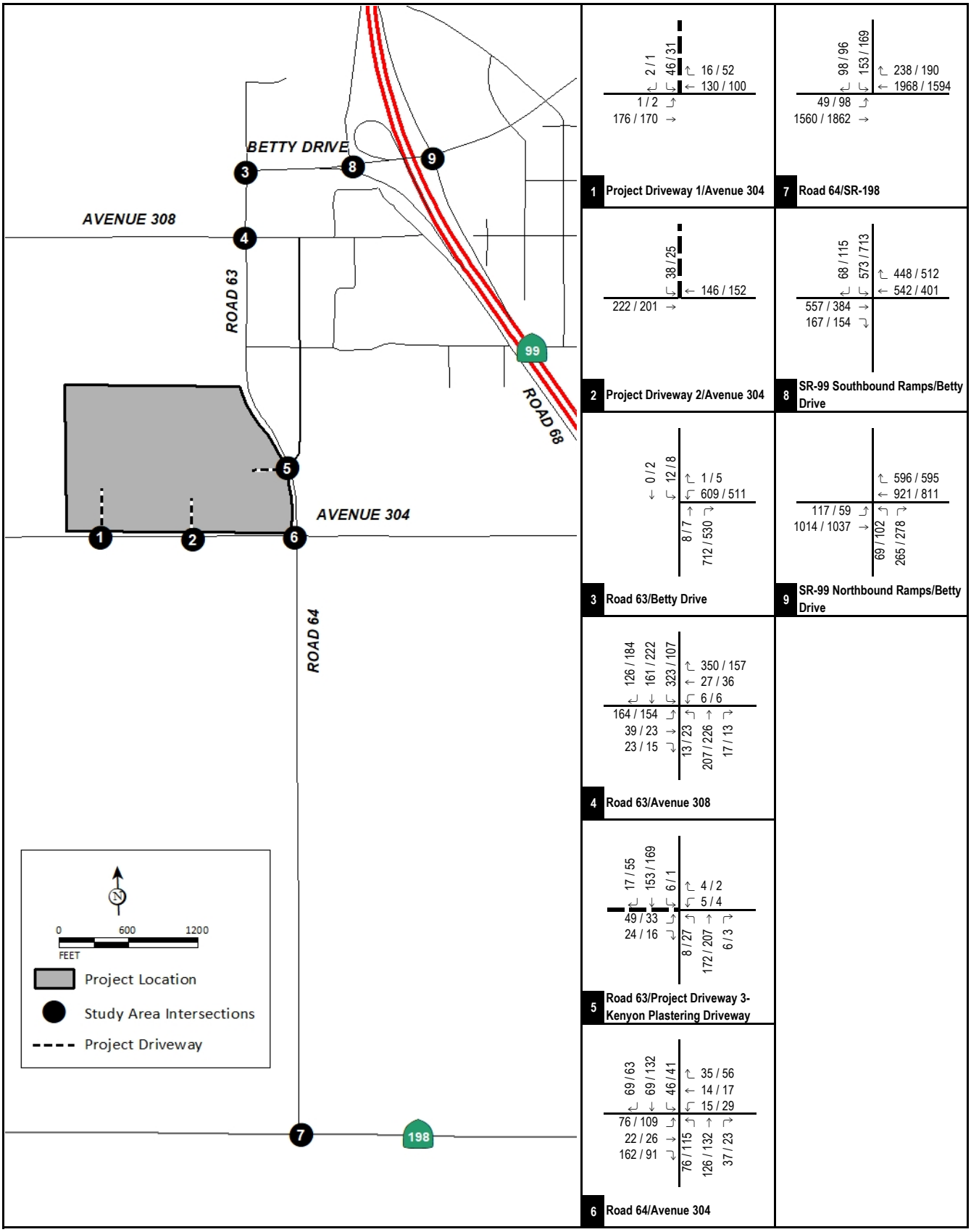
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FIGURE 6-2

XXXX / YYYY
AM / PM Peak Hour Traffic Volumes
Project Driveway

Goshen Residential Project
Transportation Impact Analysis

Near-term plus Project Peak Hour Traffic Volumes



LSA

FIGURE 6-3

XXXX / YYYY
AM / PM Peak Hour Traffic Volumes
Project Driveway

Goshen Residential Project
Transportation Impact Analysis

Horizon Year plus Project Peak Hour Traffic Volumes

P:\FOC2202 Goshen Residential\Traffic\z30_Vol_zHY WP.xlsx\Figure (4/28/2023)

7.0 INTERSECTION LEVELS OF SERVICE

7.1 EXISTING LEVELS OF SERVICE

Figure 3-2 illustrates existing study intersection geometrics and traffic control.

7.1.1 Study Intersections

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:

- Road 64/SR-198 (a.m. and p.m. peak hours).

All other study intersections currently operate at a satisfactory LOS under existing conditions.

7.1.2 Roadway Segments

A roadway segment LOS analysis was conducted for existing conditions using the methodologies previously discussed. Table 7-B summarizes the results of this analysis and shows that all roadway segments currently 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 existing plus project conditions.

7.2.1 Study Intersections

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:

- Road 64/SR-198 (a.m. and p.m. peak hours).

This intersection is currently operating at a deficient LOS. As such, the project is forecast to add to the existing deficiency at this location. All other study intersections are forecast to operate at a satisfactory LOS under existing plus project conditions.

7.2.2 Roadway Segments

A roadway segment LOS analysis was conducted for existing plus project conditions using the methodologies previously discussed. Table 7-B summarizes the results of this analysis and shows that all roadway segments are forecast to operate at a satisfactory LOS under existing plus project conditions.

7.3 NEAR-TERM (APPROVED AND PENDING) LEVELS OF SERVICE

7.3.1 Study Intersections

An intersection LOS analysis was conducted for near-term (approved and pending) conditions using the methodologies previously discussed. Table 7-C summarizes the results of this analysis and shows that the following intersection is forecast to operate at a deficient LOS under near-term (approved and pending) conditions:

- Road 64/SR-198 (a.m. and p.m. peak hours).

All other study intersections are forecast to operate at a satisfactory LOS under near-term (approved and pending) conditions.

7.3.2 Roadway Segments

A roadway segment LOS analysis was conducted for near-term (approved and pending) conditions using the methodologies previously discussed. Table 7-D summarizes the results of this analysis and shows that all roadway segments are forecast to operate at a satisfactory LOS under near-term (approved and pending) conditions.

7.4 NEAR-TERM PLUS PROJECT LEVELS OF SERVICE

7.4.1 Study Intersections

An intersection LOS analysis was conducted for near-term plus project conditions using the methodologies previously discussed. Table 7-C summarizes the results of this analysis and shows that the following intersection is forecast to operate at a deficient LOS under near-term plus project conditions:

- Road 64/SR-198 (a.m. and p.m. peak hours).

This intersection is currently operating at a deficient LOS and is forecast to operate at a deficient LOS under near-term (approved and pending) conditions. As such, the project is forecast to add to the forecasted deficiency at this location. All other study intersections are forecast to operate at a satisfactory LOS under near-term plus project conditions.

7.4.2 Roadway Segments

A roadway segment LOS analysis was conducted for near-term plus project conditions using the methodologies previously discussed. Table 7-D summarizes the results of this analysis and shows that all roadway segments are forecast to operate at a satisfactory LOS under near-term plus project conditions.

7.5 HORIZON YEAR LEVELS OF SERVICE

7.5.1 Study Intersections

An intersection LOS analysis was conducted for horizon year conditions using the methodologies previously discussed. Table 7-E summarizes the results of this analysis and shows that the following intersection is forecast to operate at a deficient LOS under horizon year conditions:

- Road 64/SR-198 (a.m. and p.m. peak hours).

All other study intersections are forecast to operate at a satisfactory LOS under horizon year conditions.

7.5.2 Roadway Segments

A roadway segment LOS analysis was conducted for horizon year conditions using the methodologies previously discussed. Table 7-F summarizes the results of this analysis and shows that all roadway segments are forecast to operate at a satisfactory LOS under horizon year conditions.

7.6 HORIZON YEAR PLUS PROJECT LEVELS OF SERVICE

7.6.1 Study Intersections

An intersection LOS analysis was conducted for horizon year plus project conditions using the methodologies previously discussed. Table 7-E summarizes the results of this analysis and shows that the following intersections are forecast to operate at a deficient LOS under horizon year plus project conditions:

- Road 64/Avenue 304 (p.m. peak hour only); and
- Road 64/SR-198 (a.m. and p.m. peak hours).

The intersection of Road 64/SR-198 is forecast to operate at a deficient LOS under horizon year conditions. As such, the project is forecast to add to the forecasted deficiency at this location. All other study intersections are forecast to operate at a satisfactory LOS under horizon year plus project conditions.

7.6.2 Roadway Segments

A roadway segment LOS analysis was conducted for horizon year plus project conditions using the methodologies previously discussed. Table 7-F summarizes the results of this analysis and shows that all roadway segments are forecast to operate at a satisfactory LOS under horizon year plus project conditions.

Detailed intersection LOS worksheets are included in Appendix D.

7.7 LIST OF CHAPTER 7.0 TABLES

- Table 7-A: Existing Intersection Levels of Service
- Table 7-B: Existing Roadway Segment Levels of Service
- Table 7-C: Near-Term Intersection Levels of Service
- Table 7-D: Near-Term Roadway Segment Levels of Service
- Table 7-E: Horizon Year Intersection Levels of Service
- Table 7-F: Horizon Year Roadway Segment Levels of Service

LSA

Table 7-A - Existing Intersection Levels of Service

Intersection	Jurisdiction	LOS Standard	No Project						Plus Project						Improvement Required?
			Control	A.M. Peak Hour			P.M. Peak Hour		Control	A.M. Peak Hour			P.M. Peak Hour		
				Delay (sec.)	LOS		Delay (sec.)	LOS		Delay (sec.)	LOS		Delay (sec.)	LOS	
1 . Project Driveway 1/Avenue 304	Tulare County	D	-	*Future Intersection*			*Future Intersection*		OWSC	9.4	A		9.6	A	No
2 . Project Driveway 2/Avenue 304	Tulare County	D	-	*Future Intersection*			*Future Intersection*		OWSC	9.7	A		9.9	A	No
3 . Road 63/Betty Drive	Tulare County	D	Signal	14.2	B		11.5	B	Signal	14.8	B		11.8	B	No
4 . Road 63/Avenue 308	Tulare County	D	Signal	36.0	D		21.3	C	Signal	36.0	D		22.1	C	No
5 . Road 63/Project Driveway 3-Kenyon Plastering Driveway	Tulare County	D	OWSC	9.5	A		9.4	A	TWSC	10.1	B		10.4	B	No
6 . Road 64/Avenue 304	Tulare County	D	TWSC	11.0	B		11.6	B	TWSC	12.3	B		14.9	B	No
7 . Road 64/SR-198	Caltrans	30 sec	OWSC	>200	**F**	*	>200	**F**	*	OWSC	>200	**F**	*	>200	**F**	*	**Yes**
8 . SR-99 Southbound Ramps/Betty Drive	Caltrans	45 sec	Signal	9.4	A		9.3	A	Signal	9.4	A		9.3	A	No
9 . SR-99 Northbound Ramps/Betty Drive	Caltrans	45 sec	Signal	12.9	B		12.3	B	Signal	13.0	B		12.3	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 - Existing Roadway Segment Levels of Service

Roadway Segment	Jurisdiction	Functional Classification[1]	Roadway Capacity[2]	No Project		Plus Project	
				Daily Volume	LOS	Daily Volume	LOS
Segments on Avenue 304							
1 . West of Project Driveway 1	Tulare County	2-Lane Undivided Collector	17,700	1,382	C	1,410	C
2 . Between Project Driveway 1 and Project Driveway 2	Tulare County	2-Lane Undivided Collector	17,700	1,382	C	2,210	C
3 . Between Project Driveway 2 and Road 64	Tulare County	2-Lane Undivided Collector	17,700	1,382	C	2,897	C
Segments on Road 63							
4 . Between Betty Drive and Avenue 308	Tulare County	4-Lane Divided Local	39,800	5,896	C	6,753	C
5 . Between Avenue 308 and Avenue 304	Tulare County	4-Lane Undivided Local[3]	35,400	2,144	C	3,029	C
Segments on Road 64							
6 . Between Avenue 304 and SR-198	Tulare County	2-Lane Undivided Local	17,700	1,070	C	2,899	C
Segments on Betty Drive							
7 . Between Road 63 and SR-99 Southbound Ramps	Tulare County	4-Lane Divided Arterial	39,800	7,238	C	8,095	C

Notes:

LOS = Level of Service.

[1] Functional classification obtained from *Figure 48 - Community of Goshen Circulation Plan* , Goshen Commnity Plan 2018.

[2] Roadway Capacity obtained from *Table 1-4 - Annual Average Daily Volumes* , Goshen Community Plan Appendices to the Draft Environmental Impact Report.

[3] This classification is not listed in *Table 1-4 - Annual Average Daily Volumes* . Roadway Capacity for this classification are interpolated from capacities of similar classifications.

* Exceeds LOS Standard

LSA

Table 7-C - Near-term Intersection Levels of Service

Intersection	Jurisdiction	LOS Standard	No 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 . Project Driveway 1/Avenue 304	Tulare County	D	-	*Future Intersection*		*Future Intersection*		OWSC	9.8	A	10.2	B	No
2 . Project Driveway 2/Avenue 304	Tulare County	D	-	*Future Intersection*		*Future Intersection*		OWSC	10.2	B	10.5	B	No
3 . Road 63/Betty Drive	Tulare County	D	Signal	17.2	B	13.4	B	Signal	18.0	B	14.1	B	No
4 . Road 63/Avenue 308	Tulare County	D	Signal	37.7	D	22.1	C	Signal	39.3	D	22.2	C	No
5 . Road 63/Project Driveway 3-Kenyon Plastering Driveway	Tulare County	D	OWSC	10.0	A	10.0	A	TWSC	11.1	B	11.7	B	No
6 . Road 64/Avenue 304	Tulare County	D	TWSC	12.7	B	14.2	B	TWSC	14.7	B	22.1	C	No
7 . Road 64/SR-198	Caltrans	30 sec	OWSC	>200	**F** *	>200	**F** *	OWSC	>200	**F** *	>200	**F** *	**Yes**
8 . SR-99 Southbound Ramps/Betty Drive	Caltrans	45 sec	Signal	11.8	B	11.1	B	Signal	11.9	B	11.4	B	No
9 . SR-99 Northbound Ramps/Betty Drive	Caltrans	45 sec	Signal	37.3	D	24.1	C	Signal	37.4	D	24.2	C	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-D - Near-term Roadway Segment Levels of Service

Roadway Segment	Jurisdiction	Functional Classification[1]	Roadway Capacity[2]	No Project		Plus Project	
				Daily Volume	LOS	Daily Volume	LOS
Segments on Avenue 304							
1 . West of Project Driveway 1	Tulare County	2-Lane Undivided Collector	17,700	2,338	C	2,366	C
2 . Between Project Driveway 1 and Project Driveway 2	Tulare County	2-Lane Undivided Collector	17,700	2,338	C	3,166	C
3 . Between Project Driveway 2 and Road 64	Tulare County	2-Lane Undivided Collector	17,700	2,338	C	3,853	C
Segments on Road 63							
4 . Between Betty Drive and Avenue 308	Tulare County	4-Lane Divided Local	39,800	9,464	C	10,321	C
5 . Between Avenue 308 and Avenue 304	Tulare County	4-Lane Undivided Local[3]	35,400	3,846	C	4,731	C
Segments on Road 64							
6 . Between Avenue 304 and SR-198	Tulare County	2-Lane Undivided Local	17,700	1,322	C	3,151	C
Segments on Betty Drive							
7 . Between Road 63 and SR-99 Southbound Ramps	Tulare County	4-Lane Divided Arterial	39,800	10,806	C	11,663	C

Notes:

LOS = Level of Service.

[1] Functional classification obtained from *Figure 48 - Community of Goshen Circulation Plan* , Goshen Commnity Plan 2018.

[2] Roadway Capacity obtained from *Table 1-4 - Annual Average Daily Volumes* , Goshen Community Plan Appendices to the Draft Environmental Impact Report.

[3] This classification is not listed in *Table 1-4 - Annual Average Daily Volumes* . Roadway Capacity for this classification are interpolated from capacities of similar classifications.

* Exceeds LOS Standard

LSA

Table 7-E - Horizon Year Intersection Levels of Service

Intersection	Jurisdiction	LOS Standard	No Project						Plus Project						Improvement Required?
				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	
1 . Project Driveway 1/Avenue 304	Tulare County	D	-	*Future Intersection*			*Future Intersection*		OWSC	10.9	B		10.6	B	No
2 . Project Driveway 2/Avenue 304	Tulare County	D	-	*Future Intersection*			*Future Intersection*		OWSC	11.3	B		11.0	B	No
3 . Road 63/Betty Drive	Tulare County	D	Signal	16.9	B		13.8	B	Signal	17.6	B		14.5	B	No
4 . Road 63/Avenue 308	Tulare County	D	Signal	40.6	D		22.8	C	Signal	42.6	D		22.9	C	No
5 . Road 63/Project Driveway 3-Kenyon Plastering Driveway	Tulare County	D	OWSC	9.9	A		10.2	B	TWSC	11.5	B		12.4	B	No
6 . Road 64/Avenue 304	Tulare County	D	TWSC	15.3	C		18.4	C	TWSC	19.6	C		45.0	**E**	* **Yes**
7 . Road 64/SR-198	Caltrans	30 sec	OWSC	>200	**F**	*	>200	**F**	* OWSC	>200	**F**	*	>200	**F**	* **Yes**
8 . SR-99 Southbound Ramps/Betty Drive	Caltrans	45 sec	Signal	12.1	B		11.4	B	Signal	12.4	B		11.7	B	No
9 . SR-99 Northbound Ramps/Betty Drive	Caltrans	45 sec	Signal	33.3	C		28.0	C	Signal	34.4	C		28.1	C	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-F - Horizon Year Roadway Segment Levels of Service

Roadway Segment	Jurisdiction	Functional Classification[1]	Roadway Capacity[2]	No Project		Plus Project	
				Daily Volume	LOS	Daily Volume	LOS
Segments on Avenue 304							
1 . West of Project Driveway 1	Tulare County	2-Lane Undivided Collector	17,700	2,455	C	2,483	C
2 . Between Project Driveway 1 and Project Driveway 2	Tulare County	2-Lane Undivided Collector	17,700	2,455	C	3,283	C
3 . Between Project Driveway 2 and Road 64	Tulare County	2-Lane Undivided Collector	17,700	2,455	C	3,970	C
Segments on Road 63							
4 . Between Betty Drive and Avenue 308	Tulare County	4-Lane Divided Local	39,800	9,937	C	10,794	C
5 . Between Avenue 308 and Avenue 304	Tulare County	4-Lane Undivided Local[3]	35,400	4,038	C	4,923	C
Segments on Road 64							
6 . Between Avenue 304 and SR-198	Tulare County	2-Lane Undivided Local	17,700	3,794	C	5,623	C
Segments on Betty Drive							
7 . Between Road 63 and SR-99 Southbound Ramps	Tulare County	4-Lane Divided Arterial	39,800	11,346	C	12,203	C

Notes:

LOS = Level of Service.

[1] Functional classification obtained from *Figure 48 - Community of Goshen Circulation Plan* , Goshen Commnity Plan 2018.

[2] Roadway Capacity obtained from *Table 1-4 - Annual Average Daily Volumes* , Goshen Community Plan Appendices to the Draft Environmental Impact Report.

[3] This classification is not listed in *Table 1-4 - Annual Average Daily Volumes* . Roadway Capacity for this classification are interpolated from capacities of similar classifications.

* Exceeds LOS Standard

8.0 SIGNAL WARRANT ANALYSIS

As recommended during the scoping agreement process, 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 ROAD 64/SR-198

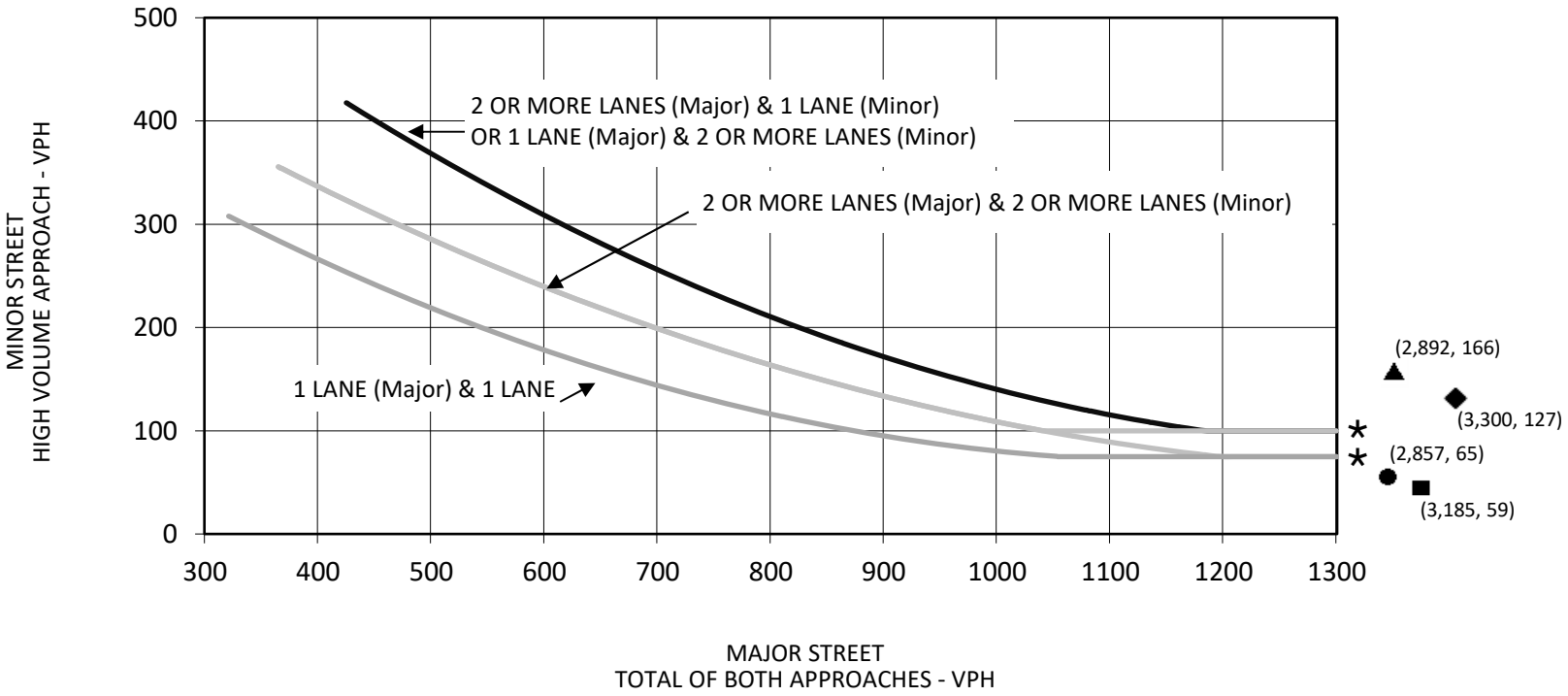
Figures 8-1, 8-2, and 8-3 illustrate the Warrant 3 (peak hour) for this intersection under existing, near-term, and horizon year conditions, respectively. As shown in these figures, this intersection meets the signal warrant under all scenarios. As such, a signal is warranted at this location and could be recommended as a potential operational improvement measure.

8.2 LIST OF CHAPTER 8.0 FIGURES

- Figure 8-1: Warrant 3: Peak Hour – Road 64/SR-198 – Existing Conditions
- Figure 8-2: Warrant 3: Peak Hour – Road 64/SR-198 – Near-term Conditions
- Figure 8-3: Warrant 3: Peak Hour – Road 64/SR-198 – Horizon Year 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

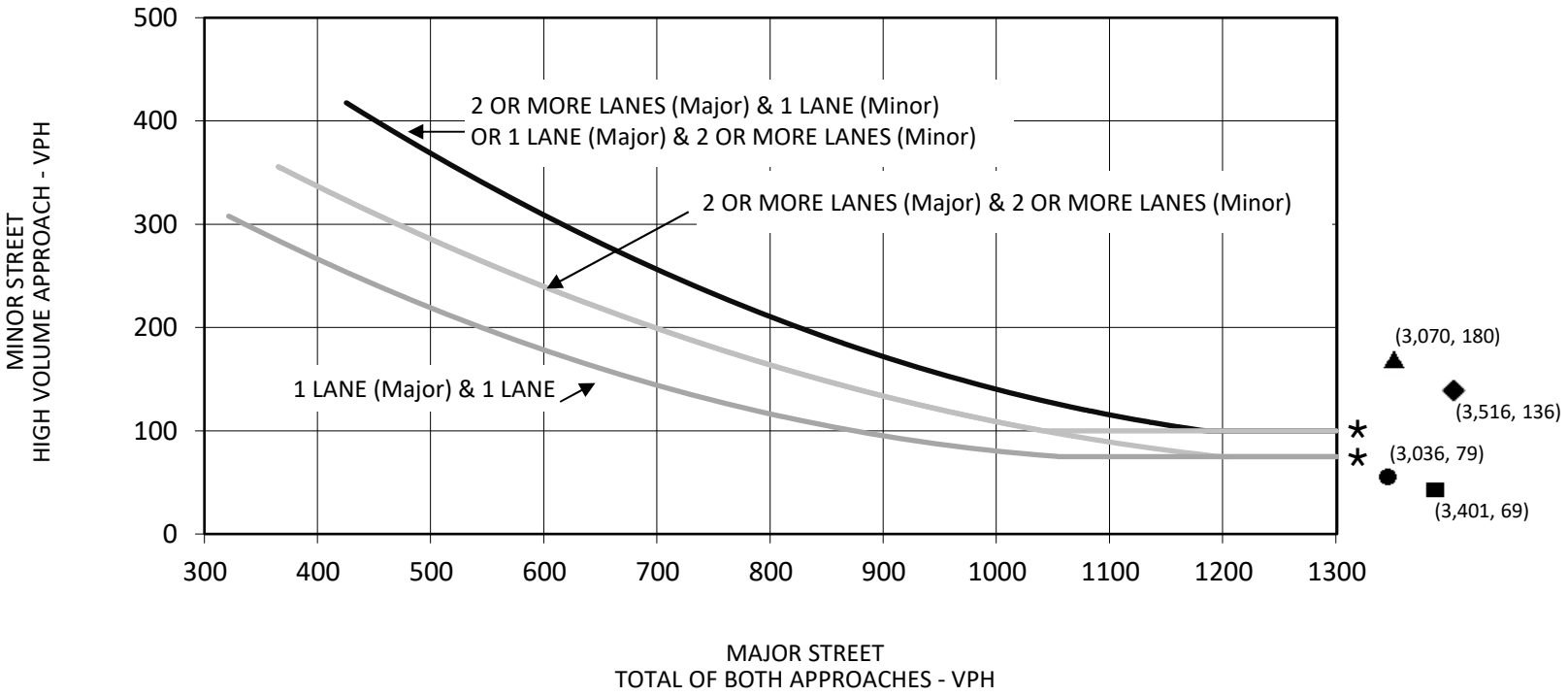
SOURCE: MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, FIGURE 4C-4

Goshen Residential Project
Transportation Impact Analysis

Warrant 3: Peak Hour - Road 64/SR-198 - 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

● Without Project AM Peak Hour ▲ Plus Project AM Peak Hour

■ Without Project PM Peak Hour ◆ Plus Project PM Peak Hour

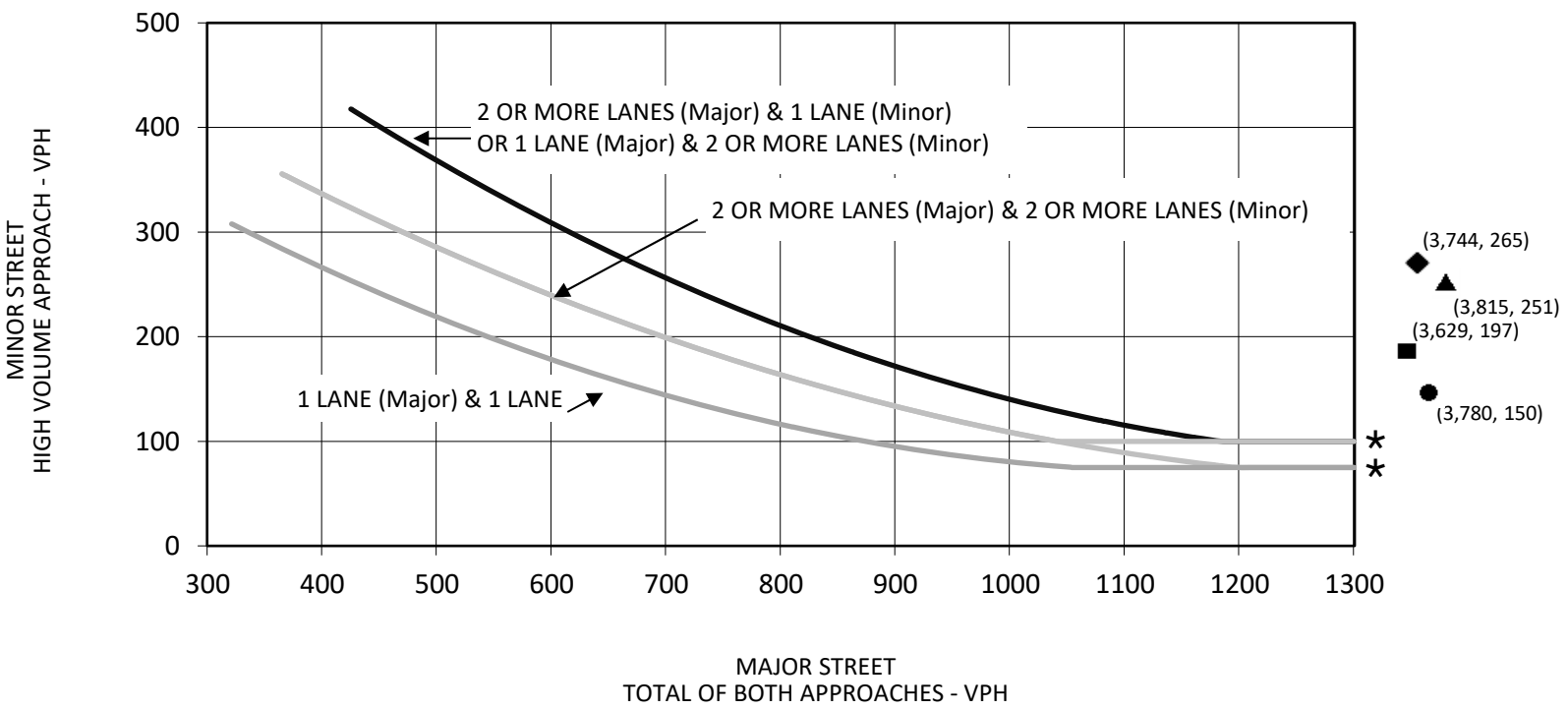
SOURCE: MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, FIGURE 4C-4

Goshen Residential Project
Transportation Impact Analysis

Warrant 3: Peak Hour - Road 64/SR-198 - Near-term 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

● 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

Goshen Residential Project
Transportation Impact Analysis

Warrant 3: Peak Hour - Road 64/SR-198 - Horizon Year 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 horizon year conditions, respectively. Detailed LOS worksheets are included in Appendix D.

For the intersection of Road 64/Avenue 304, converting the current two-way stop control (TWSC) to all-way stop control (AWSC) has been proposed to eliminate the forecasted operational deficiency.

For the intersection of Road 64/SR-198, installing a signal has been proposed to eliminate the existing and forecasted operational deficiency. As detailed in Chapter 8.0 of this report, this intersection meets a signal warrant under existing, near-term, and horizon year conditions.

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 study locations where the addition of project traffic creates an operational deficiency (plus project conditions) and there is no funding mechanism in place, the project will be responsible for the implementation of the improvement. 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. Among the improvements recommended in section 9.1, the project will be responsible for the improvements at the intersection Road 64/Avenue 304. Additionally, the project will be paying its fair-share for the recommended improvement at the intersection of Road 64/SR-198.

9.2.1 Project Fair Share

In the absence of a fee program where the project has an impact on the roadway network, the project will 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, funding mechanism, and its fair share percentage for the improvements to be covered under fair share.

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: Horizon Year plus Project with Improvements Study Intersection Geometrics and Traffic Control
- 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 (2046) Plus Project with Recommended Improvements Intersection Levels of Service
- Table 9-E: Intersection Improvement Funding Mechanism and Fair Share

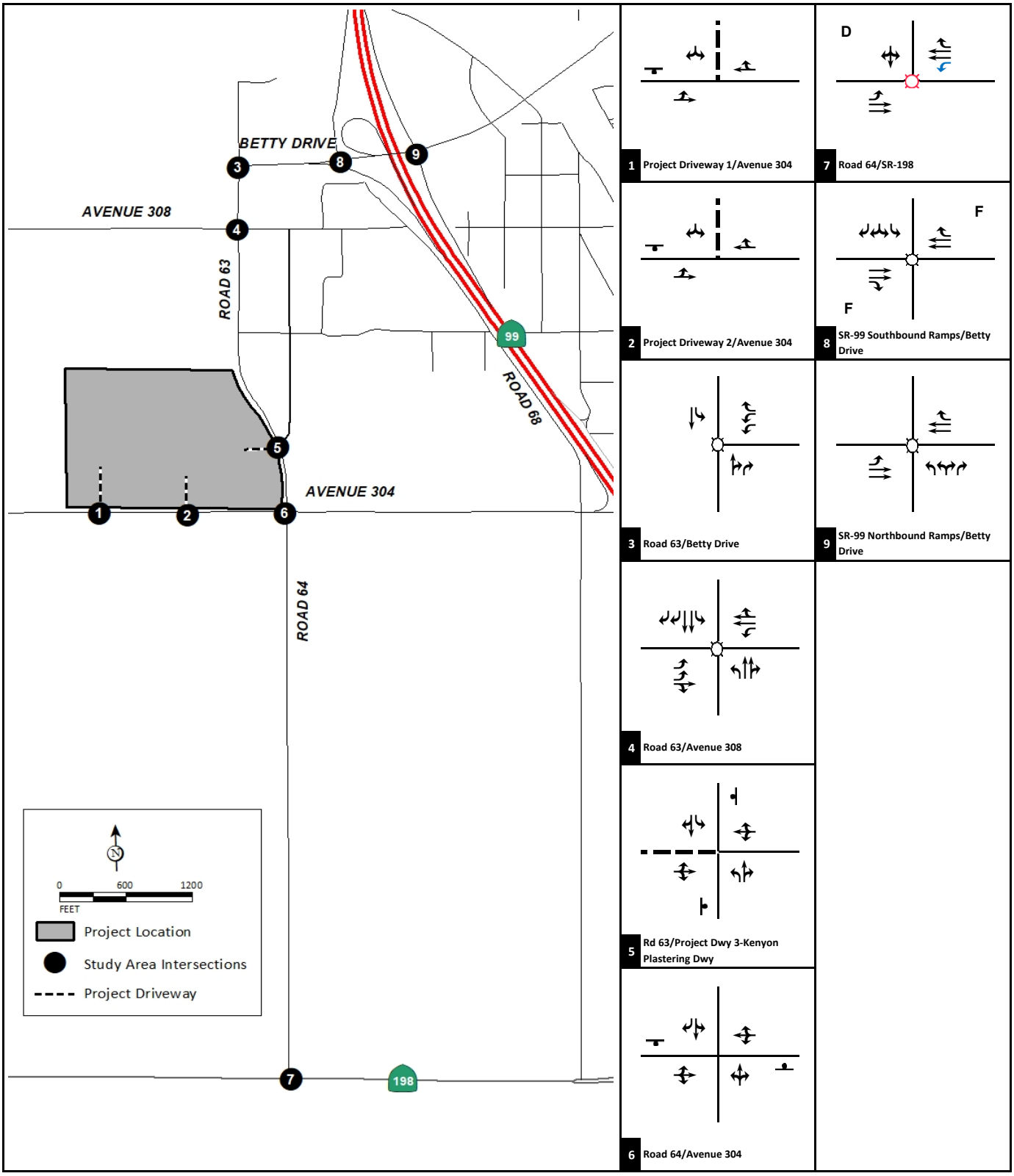


FIGURE 9-1

Legend

Signal | Stop Sign | D De-Facto Right Turn | F Free Right Turn | U-Turn Movement | Recommended Improvements | Project Driveway

Goshen Residential Project
Transportation Impact Analysis

Existing and Near-term plus Project with Improvements Study Intersection Geometrics and Traffic Control

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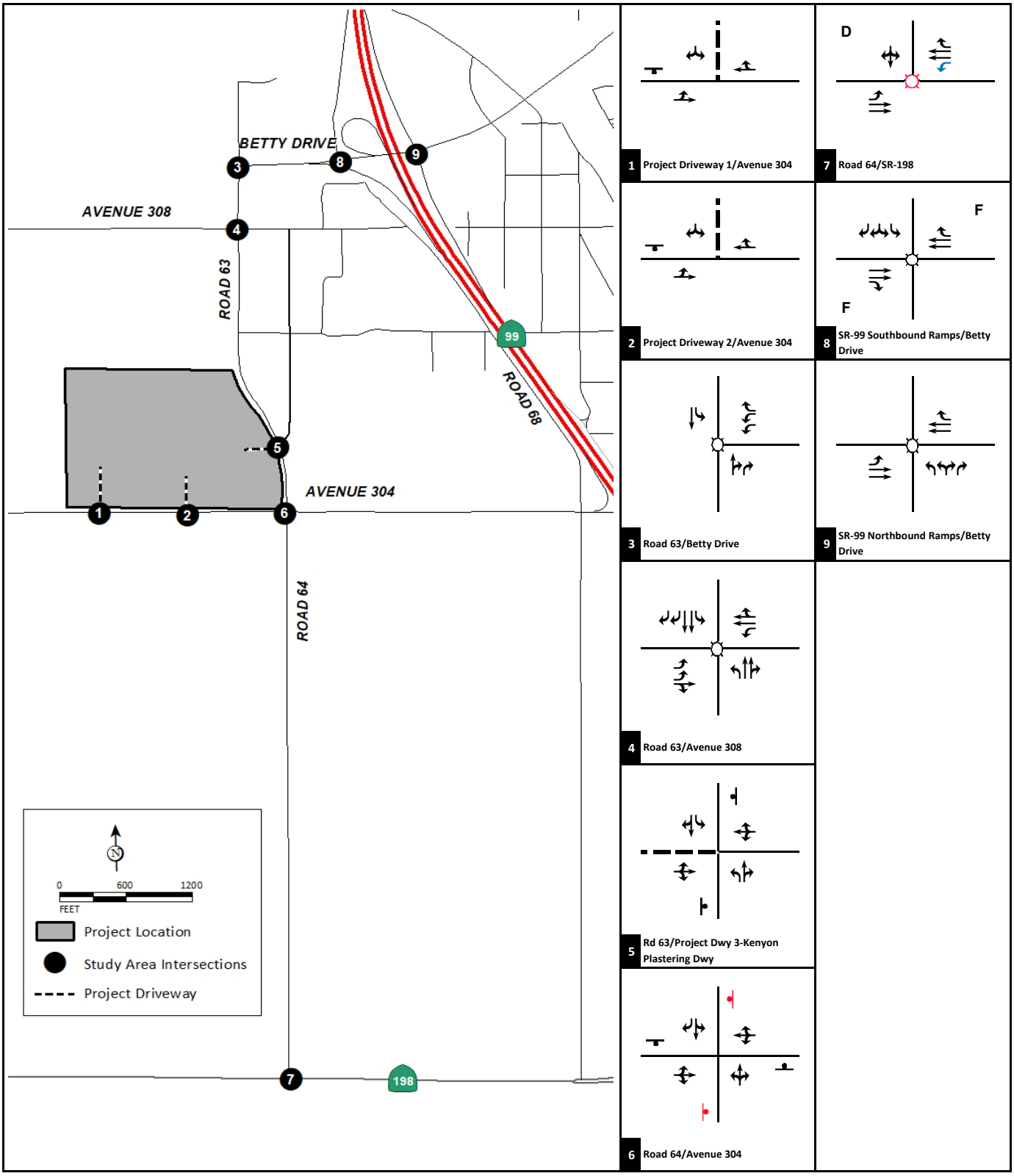


FIGURE 9-2

LSA

Legend

Signal | Stop Sign | D De-Facto Right Turn | F Free Right Turn | U-Turn Movement | Recommended Improvements | Project Driveway

Goshen Residential Project
Transportation Impact Analysis

Horizon Year plus Project with Improvements Study Intersection Geometrics and Traffic Control

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LSA

Table 9-A - Recommended Improvements for Intersections

Intersection	Jurisdiction	Existing Plus Project Improvements[1]	Near-term Plus Project Improvements	Horizon Year Plus Project Improvements
6 . Road 64/Avenue 304	Tulare County			Change TWSC to AWSC
7 . Road 64/SR-198	Caltrans	Install traffic signal	Install traffic signal	Install traffic signal

Notes:

NB = Northbound, SB = Southbound, EB = Eastbound, WB = Westbound, AWSC = All-Way Stop Control, TWSC = Two-Way Stop Control

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.)	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
7 . Road 64/SR-198	Caltrans	30 sec	OWSC	>200	F	*	>200	F *	Signal	19.3	B	7.7	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.)	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
7 . Road 64/SR-198	Caltrans	30 sec	OWSC	>200	F *	>200	F *	Signal	22.0	C	8.9	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 - Horizon Year 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.)	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
6 . Road 64/Avenue 304	Tulare County	D	TWSC	19.6	C	45.0	**E** *	AWSC	11.2	B	12.2	B
7 . Road 64/SR-198	Caltrans	30 sec	OWSC	>200	**F** *	>200	**F** *	Signal	35.2	D	12.9	B

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
6 . Road 64/Avenue 304	Tulare County	Project Responsibility	Convert TWSC to AWSC		
7 . Road 64/SR-198	Caltrans	Fair Share		Install traffic signal	23.93%

Notes:

NB = Northbound, SB = Southbound, EB = Eastbound, WB = Westbound, AWSC = All-Way Stop Control, TWSC = Two-Way Stop Control

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 SITE ACCESS ANALYSIS

As previously illustrated in Figure 1-2, access to the project would be provided via three full-access driveways, two on Avenue 304 and one on Road 63.

10.1 SIGHT DISTANCE ANALYSIS

A sight distance analysis was conducted at the project driveways along Avenue 304 and Road 63 to evaluate safe access in and out of the project. 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, both the stopping sight distance and corner sight distance have been evaluated. That is because these are the two sight distance lengths that would affect safe maneuver of ingress/egress traffic from the project driveways.

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 major arterials abutting the project (i.e. Avenue 304 and Road 63). The posted speed limit on Avenue 304 is 50 mph. There is currently no posted speed limit on Road 63. Due to the geometric similarities between Road 63 and the nearby parallel Collector of Road 68, which has a posted speed limit of 45 mph, the speed limit of Road 63 is considered to be 45 mph for the purposes of this analysis. The posted speed limits have been considered as the design speed. As stated in Table 201.1 if the HDM, the minimum stopping sight distance is 430 feet for a design speed of 50 mph and 360 feet for a design speed of 45 mph. Therefore, the minimum stopping sight distance has been considered as 430 feet for Project Driveway 1 and Project Driveway 2 (along Avenue 304), and 360 feet for Project Driveway 3 (along Road 63).

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 (Avenue 304 and Road 63). Based on the requirements established in the HDM, it was determined that a minimum corner sight distance of 555 feet would be required for left-turn maneuvers coming out of Project Driveway 1 and Project Driveway 2, and a minimum corner sight distance of 500 feet would be required for left-turn maneuvers coming out of Project Driveway 3. Furthermore, a minimum corner sight distance of 500 feet would be required for right-turn maneuvers coming out of Project Driveway 1 and Project Driveway 2, and a minimum corner sight distance of 430 feet would be required for right-turn maneuvers coming out of Project Driveway 3.

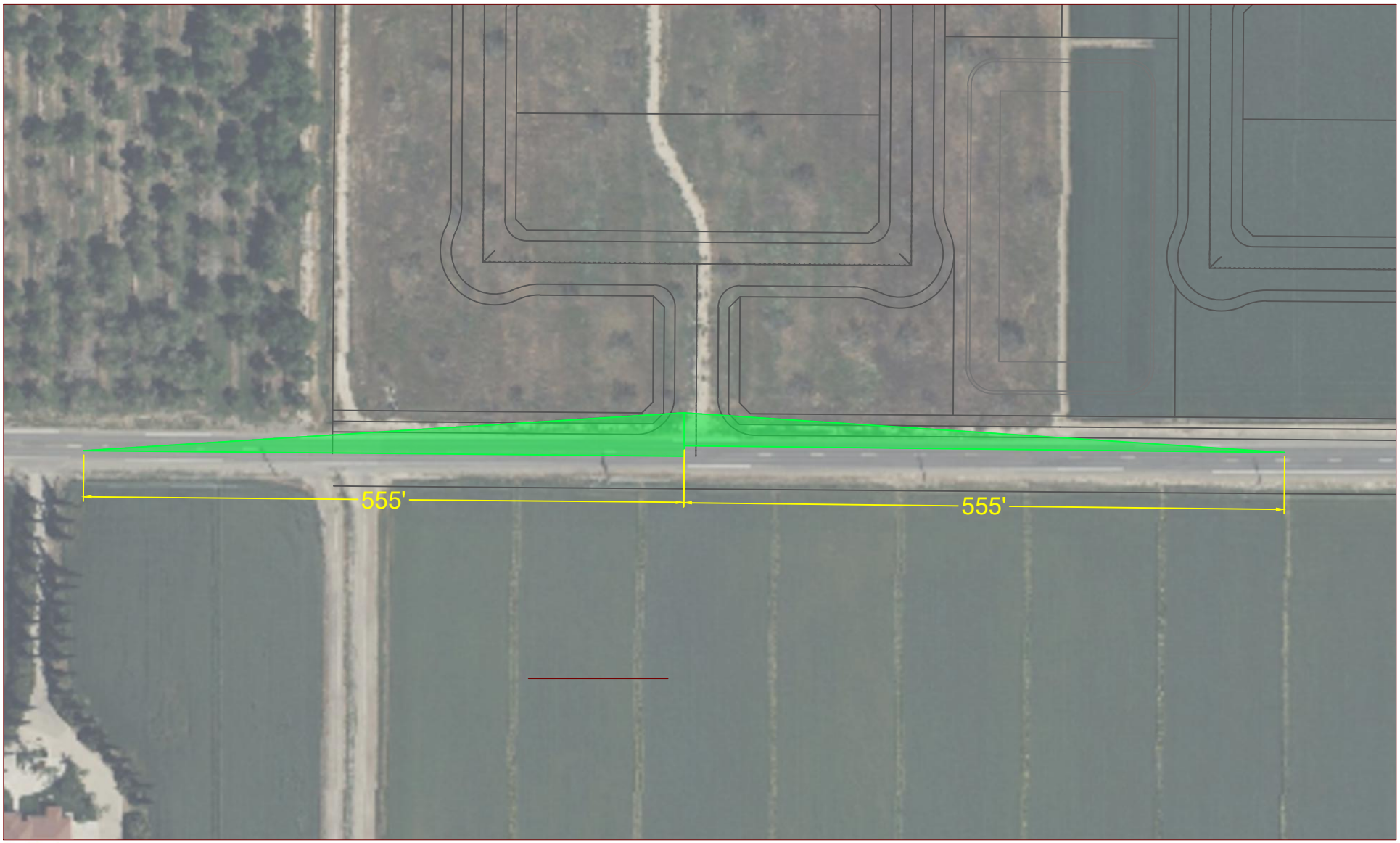
Since the corner sight distances required at the project driveways would be greater than the stopping sight distances (555 feet compared to 430 feet for Project Driveway 1 and Project Driveway 2, and 500 feet compared to 360 feet for Project Driveway 3), sight triangle figures were created using corner 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 10-1, Project Driveway 1 will provide adequate sight distance for left- and right-turn maneuvers onto Avenue 304. As illustrated in Figure 10-2, Project Driveway 2 will provide adequate sight distance for left- and right-turn maneuvers onto Avenue 304. As illustrated in Figure 10-3, Project Driveway 3 will provide adequate sight distance for left- and right-turn maneuvers onto Road 63.

10.2 DRIVEWAY SPACING

As previously illustrated in Figure 1-2, Project Driveway 1 and Project Driveway 2 are located approximately 1660 feet and 890 feet west of the intersection of Road 64/Avenue 304, respectively. Similarly, Project Driveway 3 is located approximately 680 feet north of the intersection of Road 64/Avenue 304. As such, none of the driveways are located within too close proximity of any existing and future intersections, and there would be sufficient spacing between all existing and future intersections including the project driveway intersections.

10.3 LIST OF CHAPTER 10.0 FIGURES

- Figure 10-1: Corner Sight Distance at Project Driveway 1
- Figure 10-2: Corner Sight Distance at Project Driveway 2
- Figure 10-3: Corner Sight Distance at Project Driveway 3



LSA

LEGEND

- Sight Distance Triangle

FIGURE 10-1

N

0 70 140

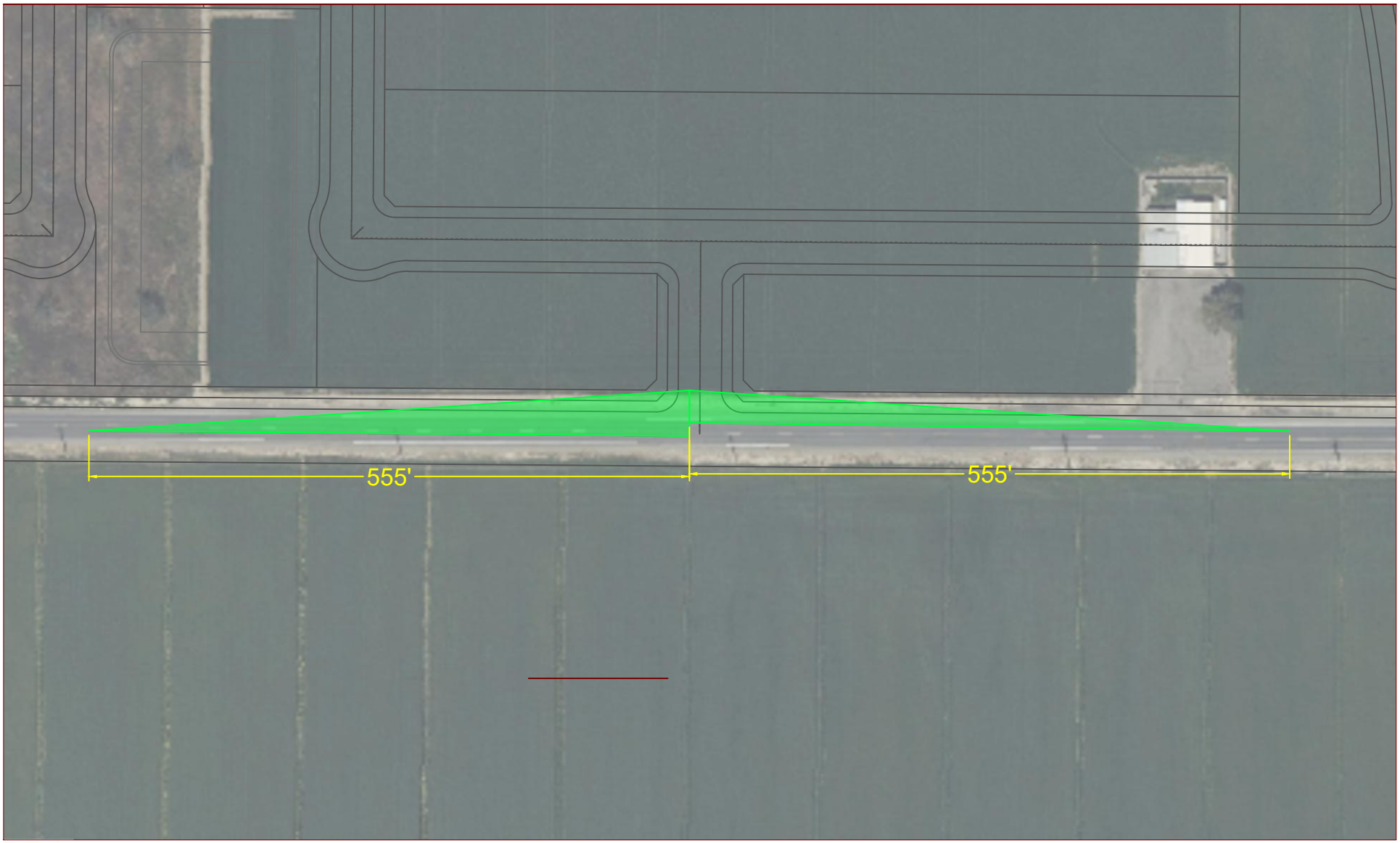
FEET

Goshen Residential Project
Transportation Impact Analysis

Corner Sight Distance at Project Driveway 1

SOURCE: 4Creeks, Inc., January 2023

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LSA

LEGEND

- Sight Distance Triangle

FIGURE 10-2

N

0 70 140

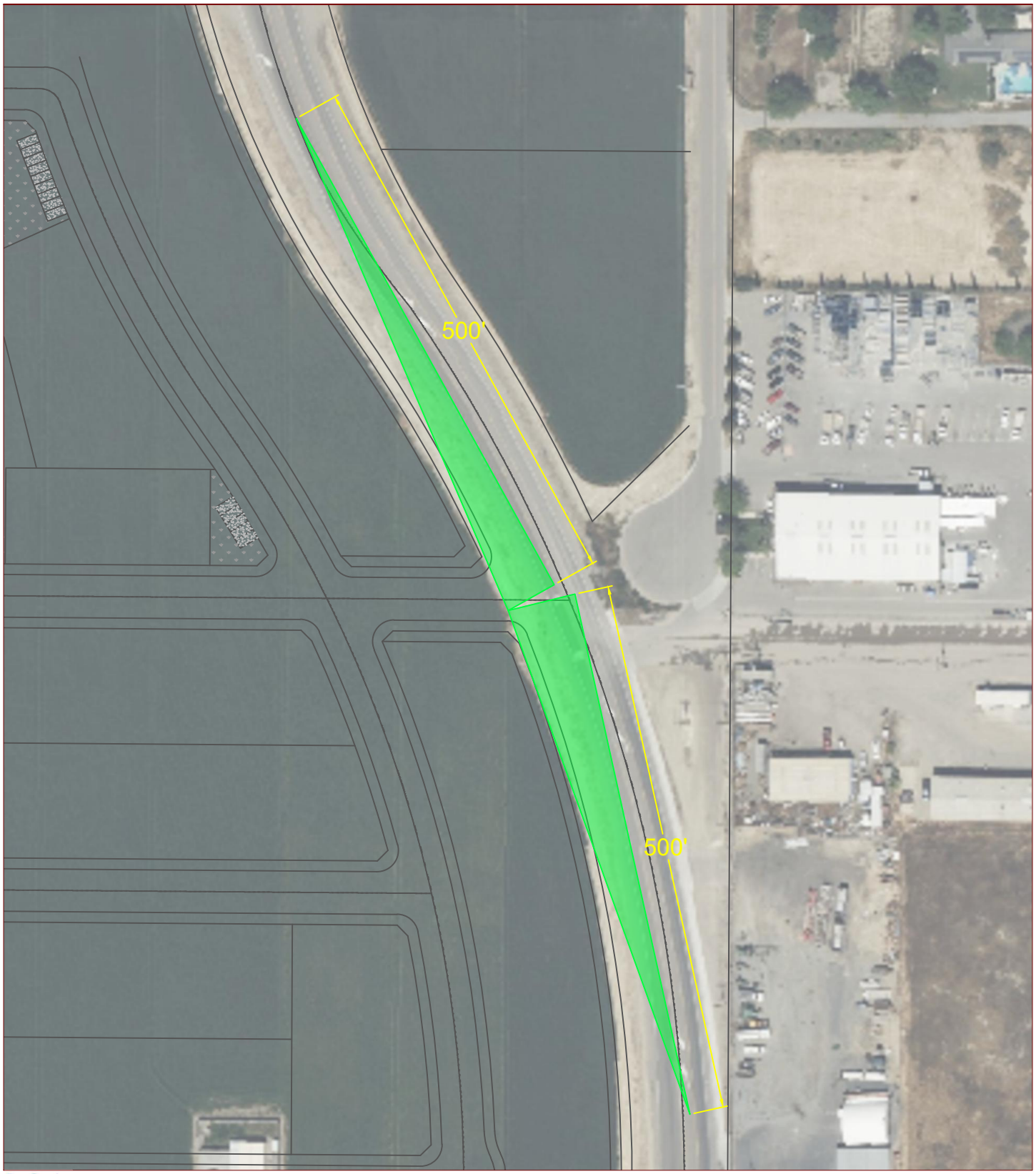
FEET

SOURCE: 4Creeks, Inc., January 2023

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Goshen Residential Project
Transportation Impact Analysis

Corner Sight Distance at Project Driveway 2



LSA

LEGEND

- Sight Distance Triangle

FIGURE 10-3

N

0 65 130

FEET

Goshen Residential Project
Transportation Impact Analysis

Corner Sight Distance at Project Driveway 3

SOURCE: 4Creeks, Inc., January 2023

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11.0 VEHICLE MILES TRAVELED ANALYSIS

Senate Bill 743 (SB 743) was passed by the legislature and signed into law in the fall of 2013. This legislation led to a change in the way that transportation impacts will be measured under CEQA. Starting on July 1, 2020, automobile delay and LOS may no longer be used as the performance measure to determine the transportation impacts of land development projects under CEQA and the new performance measure will be vehicle miles traveled (VMT).

On December 28, 2018, the California Office of Administrative Law cleared the revised 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 a project's effect on VMT.

In June 2020, the County of Tulare prepared and adopted the *County of Tulare SB 743 Guidelines* for the implementation of Senate Bill 743 in the unincorporated areas of Tulare County. Although statewide guidance for the implementation of SB 743 has been written by the Governor's Office of Planning and Research (OPR), CEQA allows lead agencies (including Tulare County) the latitude to determine their own methodologies and significance thresholds for CEQA technical studies.

The County Guidelines provided in this study are based on the statewide guidance provided by OPR, but they include clarifications and details tailored for and specific to local conditions in Tulare County SB 743 applies to both land development and transportation projects. The VMT analysis methodology for land development projects was developed in order to accomplish the following:

- Meet the requirements of CEQA, including the new SB 743 regulations that were adopted into CEQA in December 2018 and go into effect on July 1, 2020.
- Provide for transportation improvements to be built that benefit Tulare County residents and facilitate travel by walking, bicycling, and transit.
- Provide for analysis and mitigation of VMT impacts in a way that is feasible within the scale of land development projects in Tulare County.

The County Guidelines state that for residential projects the appropriate metric to determine project's VMT impact would be VMT/capita consistent with OPR. Therefore, VMT analysis for residential projects is to be conducted by comparing a project's VMT/capita to the average VMT/capita for the traffic analysis zone (TAZ) in which the project is located. Projects that have a VMT/capita equal to or above the average for the TAZ are required to provide mitigation in the form of relatively low-cost improvement projects that would support travel by bicycling or walking or provide justification that improvements at the regional level are sufficient to mitigate their VMT impacts. Certain projects, such as small projects and local serving retail projects, would be presumed to have a less than significant impact and would not be required to do a VMT analysis. It is important to note that goods movement (e.g., the transport of raw or finished products from one location to another) is not subject to SB 743 and only passenger trips need to be considered in a VMT analysis. Transportation projects that are focused on improvements to travel by bicycling, walking, and transit would be presumed to have a less than significant impact (as these modes of travel eliminate or reduce miles travelled by a vehicle) and would not be required to do a VMT analysis. Certain small

roadway projects and all roadway projects that are consistent with the General Plan would be presumed to have a less than significant impact (as these projects have been anticipated to accommodate projected growth and/or are planned improvements to the roadway system for safety, to meet current roadway standards, or to improve roads that are functionally obsolete). Larger roadway projects that are inconsistent with the General Plan would need to conduct a VMT analysis and would need to consider providing mitigation if the project is forecasted to cause an increase in VMT.

Although VMT will be the performance measure for CEQA transportation studies, California jurisdictions may still require consideration of roadway operational analysis in the project approval process and may condition projects to provide roadway improvements. Guidelines are provided for the evaluation of the effect of projects on roadways, including the determination of required roadway improvements.

11.1 PROJECT VMT ANALYSIS METHODOLOGY

11.1.1 Overview

As stated previously, the VMT analysis methodology for land development projects was developed in order to accomplish the following:

- Meet the requirements of CEQA, including the new SB 743 regulations that were adopted into CEQA in December 2018 and go into effect on July 1, 2020.
- Provide for transportation improvements to be built that benefit Tulare County residents and facilitate travel by walking, bicycling, and transit.
- Provide for analysis and mitigation of VMT impacts in a way that is feasible within the scale of land development projects in Tulare County.

The starting point for the VMT analysis provided in these Guidelines was OPR's December 2018 technical advisory. OPR recommends determining the project VMT/capita and comparing it to regional and/or city-wide averages for residential projects. For urban, suburban, and rural areas within counties that are part of Metropolitan Planning Areas (MPO's), OPR recommends use of VMT/capita significance thresholds that are 15% below the relevant averages. OPR also states that for rural areas outside MPO's, significance thresholds may be best determined on a case-by-case basis.

It is important to note that VMT analysis, as described in these Guidelines only applies to passenger travel, not goods movement (as defined earlier). The following (referring to CEQA) is contained in OPR's technical advisory: "Section 15064.3, subdivision (a), states, '*For the purposes of this section, vehicle miles traveled refers to the amount and distance of automobile travel attributable to a project. Here, the term 'automobile' refers to on-road passenger vehicles, specifically cars and light trucks*." Therefore, trips related to the movement of goods for agricultural or industrial purposes would not be subject to a VMT analysis and would be considered to have a less than significant impact on the transportation system. For projects that include both auto and truck (i.e. goods movement) trips only the auto trips would be analyzed. When determining mitigation measures, only a project's auto trips would be considered.

Building on the OPR guidance, these Guidelines provide a refined VMT analysis specifically tailored to the unincorporated areas within the County of Tulare's jurisdiction. These Guidelines extend OPR's concept of determining significance thresholds for rural areas on a case-by-case basis to Tulare County based on the concept that travel behavior in the small town and rural areas of Tulare County is similar to travel behavior in the rural portions of non-MPO counties.

Project VMT/capita can be most easily determined using a travel demand model, either by running the model for each specific project VMT analysis or by creating maps and tables showing average VMT/capita values for the area of interest. Ideally, VMT analyses for projects in Tulare County should be conducted using the TCAG regional travel demand model. However, TCAG does not provide map or table based VMT/capita values. Instead VMT analysis can be conducted using the California Statewide Travel Demand Model (CSTDM), developed and maintained by Caltrans. Caltrans has provided base- year (2010) and horizon year (2040) VMT/capita for the entire state broken down by county and by geographical units known as traffic analysis zones (TAZ's) within each county. However, using the CSTDM, project specific VMT analysis could not be conducted. Therefore, for purposes of this analysis the TCAG model has been used for conducting the project's VMT analysis and comparing the project's VMT impact with the threshold as stated in the County's VMT guidelines.

As stated in the County's guidelines, thresholds of significance for VMT analysis are also based on OPR's recommendations, but some refinements have been made to reflect the predominantly rural character of Tulare County; following are refinements applicable to Tulare County:

- OPR recommends that residential projects compare project VMT/capita to regional or city-wide average. For Tulare County, due to its predominantly rural character, these comparisons are made between project VMT and the average VMT/capita in the TAZ in which the project is located. For purposes of this analysis, the TAZ's VMT per capita was calculated from the TCAG model.
- OPR recommends a significance threshold of 15% below average. For Tulare County, the significance threshold is below the TAZ average. Therefore, projects that have a VMT/capita equal to or above the average VMT/capita in the TAZ in which the project is located would be presumed to have a significant transportation impact.

While many residential projects will go through the process described above to analyze VMT, some projects will be determined to be "screened out" due to project size or project type. These projects are described in Section 3.2 of the County Guidelines. Figure 3-1 of the County Guidelines shows a flow chart that summarizes the VMT analysis process. Tulare County Traffic Zone Analysis Maps are shown in Figure 3-2 of the County Guidelines. These maps provide a general indication of the location of TAZ's within Tulare County. At the time of preparation of this report, more detailed TAZ maps were available on the website of the Northern California Section of the Institute of Transportation Engineers (www.norcalite.org). In the future these maps may be available from Tulare County staff or the Caltrans SB 743 website (https://dot.ca.gov/programs/transportationplanning/office-of-smart-mobility-climate-change/sb-

743). VMT/capita and VMT/employee values for base year conditions based on the CSTDM are shown in Table 3-1 of the guideline.

However, using CSTDM will not allow a project specific VMT analysis which could then be compared to the baseline VMT/capita of the TAZ where the project is located. This would then conflict with the County's VMT impact determination criteria. The TCAG model provides more granular and locally applicable data and allows for conducting a project specific VMT analysis to be compared to the TAZs baseline VMT as per the County's guidelines to determine project VMT impact. Therefore, for purposes of this analysis, the TCAG model was used for preparation of the VMT analysis for the project.

As stated above, the VMT Guidelines provides multiple screening criteria for land use projects. The project would be compared with the screening criteria established in the "Project Screening" section of the VMT Guidelines to check if the project can be screened out. Following is a brief description about project screening criteria:

- **Small Projects:** Some projects are small enough that they can be presumed to have a less than significant transportation impact without doing a detailed VMT analysis. For Tulare County, projects that generate less than 500 trips per day can be presumed to have a less than significant impact. Trip generation would normally be determined using the current edition of the ITE Trip Generation Manual. Other potential sources include the San Diego Association of Governments (SANDAG) trip generation guide (*Not So Brief Guide of Vehicular Traffic Generation Rates in the San Diego Region*, April 2002), articles in the ITE Journal, as well as trip generation rates obtained from other accepted sources. In some cases, project applicants may choose to conduct counts of existing similar facilities in order to determine trip generation rates.

- **Local-Serving Retail and Similar Land Uses:** Consistent with OPR's Technical Advisory, local-serving retail uses are presumed to have a less than significant impact on VMT since they tend to attract vehicle trips from adjacent areas that would have otherwise been made to more distant retail locations. This presumption also applies in Tulare County. Most retail developments in the unincorporated area of Tulare County are anticipated to be local serving. In cases where there is reasonable doubt on whether a project is local serving or regional, County staff can exercise an option of requesting, or requiring, a market study to assist in the evaluation/determination of localness or regionality. Other developments that are not technically retail may fall under this category such as medical offices, insurance agents, and other offices that are intended to serve the general public. See Appendix E for a list of projects that would fall into this category based on the County's zoning code. Project applicants are encouraged to submit a written analysis to Tulare County for a determination on whether the local serving status applies.

- **Local-Serving Public Facilities:** Similar to retail land uses, local-serving public facilities are presumed to have a less than significant impact on VMT. This would include government facilities intended to typically serve the local public, parks, and public elementary schools, public middle schools, and high schools.

- **Affordable and Farmworker Housing Projects:** OPR's Technical Advisory allows for a less than significant finding for transportation impacts of residential projects that that are 100% affordable housing located in infill areas. For Tulare County, affordable housing is defined as affordable to all persons with a household income equal to or less than 50% of the area median income (as defined by California Health and Safety Code Section 50093), housing for senior citizens, housing for transitional foster youth, disabled veterans, and homeless persons. In addition, this screening category applies to all 100% affordable housing projects that meet the detailed criteria above, regardless of whether they are located in infill areas. It also applies to all developments intended primarily for farm worker housing regardless of their status with respect to affordability.

- **Redevelopment Projects That Result in a Net Reduction of VMT:** According to CEQA, projects are considered to have a less than significant impact if they result in a net reduction in the relevant performance measure (in this case VMT). Therefore, redevelopment projects in Tulare County that generate less VMT than the existing project they are replacing would be considered to have a less than significant impact on VMT. For the purposes of VMT analysis, a redevelopment project is any project that replaces an existing development rather than being built on vacant/undeveloped land, Since VMT/capita and VMT/employee are efficiency metrics, a redevelopment project that would produce more VMT than the existing project it is replacing would need to conduct a VMT analysis assuming the proposed land use (with no credit taken for the existing land use) to determine whether the proposed project meets the applicable significance thresholds (i.e. a value below the average VMT/capita or VMT/employee of the TAZ in which the project is located).

- **Mixed-Use Projects That Result in a Net Reduction of VMT:** Mixed-use projects typically generate less VMT than the individual component land uses would generate if they were built on separate project sites because mixed-use projects allow some trips to be made by walking or by short vehicle trips which would occur within or very near the project site. Mixed-use projects that wish to demonstrate a net reduction in VMT would need to conduct an internal capture analysis using the methodology described in the current edition Institute of Transportation Engineers Trip Generation Handbook. Once a reduction in VMT is demonstrated through internal capture, the VMT reduction would be used to indicate a reduced level of VMT/capita or VMT/employee for one or more of the individual land uses. After applying this reduction, the individual land use components of the project would be analyzed separately with respect to applicable significance thresholds.

11.1.2 Threshold of Significance

The VMT Guidelines provides Significance thresholds for residential projects as listed below.

- **Residential Projects:** A significant transportation impact occurs if the project VMT per capita equals or exceeds the average VMT per capita for the TAZ where the project is located.

11.1.3 Mitigation

The preferred method of VMT mitigation in Tulare County is for project applicants to provide transportation improvements that facilitate travel by walking, bicycling, or transit. This can be accomplished as follows:

- A survey should be conducted within one half mile of the project site to determine any gaps in facilities for walking, bicycling, or transit. For example, this could include repair of damaged or construction of new sidewalks, installation of curb ramps, provision of bicycle facilities, or improvement to transit stops or access to transit routes. For bicycle facilities, the improvement could be a Class I, II, or III bicycle facility consistent with TCAG's Regional Active Transportation Plan or Tulare County Complete Streets plans and programs.

- If suitable improvements are not found within one half mile of the project site, improvements could be suggested in more remote locations as long as they support walking, bicycling, and transit in the unincorporated area of Tulare County.

- The project list in Appendix F, based on the TCAG Regional Active Transportation Plan, can be consulted for potential projects that could be used for VMT mitigation.

- In order to provide VMT mitigation for CEQA purposes, the cost of the mitigation provided should exceed either $20 per average daily trip generated by the project or 0.5% of the total construction cost of the project (not including land acquisition). The $20 value per average daily trip is based on a generally typical statewide minimum roadway mitigation value of $2,000 per single family dwelling unit and an assumption that transit, bicycling, and walking make up approximately 1% of all trips in Tulare County. The value of 0.5% of construction cost is meant to be roughly equivalent to this value but expressed in a different way.

- If a project provides mitigation that meets either or both of the VMT mitigation costs described above, it can presume a 1% reduction in VMT for reporting purposes. The goal of this mitigation is that it will be sufficient to reduce a project's VMT impacts to a level of insignificance.

- In some cases, it may be infeasible for projects to meet the requirements described earlier. In these cases, a project may submit reasonable rationale to the County and request mitigation of VMT impacts on a regional basis. The project applicant would then provide reasonable documentation (i.e., evidence) of how its implementation would provide funding toward unfunded projects. Suitable projects may be found in the TCAG Regional Active Transportation Plan, transit development plans, bicycle and pedestrians plans adopted at the local level, or as part of complete streets projects. Payment could be made through direct or indirect payment of fees or other monetary contributions that would be used to fund relevant improvements. In order for a project to demonstrate a 1% reduction in VMT for reporting purposes, a reasonable argument must be made and submitted by the project applicant to the County for review and subsequent approval.

11.1.4 Step By Step Summary of VMT Analysis for Land Development Project

Following is a step-by-step summary of the process for VMT analysis of land development projects.

- Determine whether the project is relieved of the requirements to conduct a VMT analysis using the screening criteria described in Section 11.1.1.

- If the project is not relieved, determine the TAZ where the project is located using the TCAG model.

- Determine the average VMT/capita for the TAZ in which the project is located using the TCAG model.

- Unless the project has unique characteristics that would result in less VMT generation than a typical project, assume the project VMT/capita is the same as the average for the TAZ in which the project is located. This would typically result in a significant VMT impact. However, if the project's VMT per capita is calculated to be higher than the average for the TAZ using the TCAG model, using the model to report the project's VMT impact would represent a more conservative approach.

- Provide VMT mitigation as described in Section 11.1.3.

11.1.5 Additional VMT Methodologies for Unique Situations

For some projects, it may be acceptable to conduct VMT analysis in an alternative manner than what is described above. This could apply to proposed very large projects that would require a model run rather than the methodology described above. It could also apply to projects that have unique VMT characteristics for which the average VMT/capita or VMT/employee in the TAZ where the project is located would not be applicable.

11.2 PROJECT VEHICLE MILES TRAVELED ANALYSIS

Following is a step-by-step summary of the process for the project VMT analysis based on the requirements included in the County Guidelines as described above:

11.2.1 Project Screening Evaluation

The County Guidelines provides multiple screening criteria for land use projects as previously mentioned. The project was compared with the screening criteria established in the "Project Screening" section of the VMT Guidelines to check if the project can be screened out. Following is a brief description about the project in relation with the project screening criteria:

- **Small Project:** The guidelines state that projects generating less than 500 daily trips could be screened out of a detailed VMT analysis. As discussed in Section 5.0, Project Trip Generation, the project is estimated to generate 2,857 daily trips. Therefore, the project does not satisfy this screening criteria.

- **Local-Serving Retail and Similar Land Uses:** The project consists of residential land use only; therefore, this screening criteria does not apply to the project.

- **Local-Serving Public Facilities:** The project consists of residential land use only; therefore, this screening criteria does not apply to the project.

- **Affordable and Farmworker Housing Projects:** The project proposes to develop market-rate, single-family dwelling units. Therefore, this screening criteria does not apply to the project.

- **Redevelopment Projects That Result in a Net Reduction in VMT:** The guidelines state that projects with a total VMT less than that of the existing land use could be screened out of a detailed VMT analysis. The project proposes to develop single-family dwelling units on agricultural lands. Therefore, this screening criteria does not apply to the project.

- **Mixed-Use Projects That Result in a Net Reduction in VMT:** The project proposes to develop single-family dwelling units only and not a mixed-use project. Therefore, this screening criteria does not apply to the project.

As shown above, the project could not be screened out from detailed VMT analysis. As such, pursuant to the VMT Guidelines, a detailed VMT analysis was conducted to assess the project's VMT impact.

11.2.2 Thresholds of Significance

The project consists of residential land use. The guidelines established VMT per capita as the appropriate metric to evaluate residential land use projects while defining the parent TAZ as the "region" for determining VMT thresholds. The project would have a significant VMT impact if the project VMT per capita is greater the parent TAZ VMT per capita. The project is located within the TCAG model TAZ 1824. Therefore, the average VMT per capita for this TAZ was obtained from TCAG model base year no project model run.

The Tulare County Association of Governments Model (TCAG Model) Is the regional model for the County. Therefore, the TCAG model was used for the project VMT analysis. The model inputs were updated with the project land uses to calculate project VMT. The project VMT was calculated from a TCAG model run as described in the following sections.

11.2.3 Project Traffic Analysis Zone Update

The first step in preparation of this analysis was to update the traffic analysis zones (TAZs) in the model that include the project area. The TCAG model includes the ability to add or split zones. In order to isolate the project VMT, a new zone was created in the model. The project households were included in the newly created zone for modeling purposes. No project-specific network modifications were required for the model run. A model run was conducted for the existing/base scenario with updated model inputs. The outputs from this updated model run were used to calculate the project VMT per capita.

11.2.4 Model Runs and Project Vehicle Miles Traveled Estimation

A model run was conducted for this updated model upon completion of the socioeconomic data update. The outputs from this updated model run were used to calculate the project VMT per capita.

11.3 PROJECT VEHICLE MILES TRAVELED ANALYSIS

Table 11-A summarizes the regional threshold and project VMT per capita. As shown in Table 11-A, the project VMT per capita is 10.7 percent higher than the parent TAZ VMT per capita. Therefore, based on the guidelines, the project will have a significant VMT impact.

Detailed VMT calculation for the project is included in Appendix E.

11.4 VMT MITIGATION MEASURES

When a lead agency identifies a significant CEQA impact, the agency must identify feasible mitigation measures in order to avoid or substantially reduce that impact. These measures can be incorporated as a part of plans, policies, regulations, or project designs. Project design features that encourage mode shift from automobiles to transit or non-motorized modes can therefore help reduce project VMT.

As recommended in the VMT Guidelines, section 3.4, the preferred method of VMT mitigation in Tulare County is for project applicants to provide transportation improvements that facilitate travel by walking, bicycling, or transit. Additionally, as recommended in the Guidelines, payment of $20 per average daily trip generated by the project towards Active Transportation Projects or projects facilitating walking, biking, or transit in the County. Therefore, the project will be paying the following VMT mitigation fee towards such projects:

$20 per trip X 2,857 daily trips = **$57,140** VMT mitigation fee to be paid to the County.

With payment of the fees and implementation of sidewalks, bike lanes along the project frontage, the project's VMT impact would be less than significant as per the VMT Guidelines.

11.5 LIST OF CHAPTER 11.0 TABLES

- Table 11-A: Parent TAZ and Project VMT per Capita

Table 11-A: Parent TAZ and Project VMT per Capita

Parent TAZ (1824)[1]	Project	Difference	Percentage Difference
11.82	13.09	1.27	10.7%

Source: Tulare County Association of Governments Travel Demand Model

VMT = Vehicle Miles Traveled

[1]*The Parent TAZ VMT per capita was obtained from TCAG Model Base Year No Project Model Run*

12.0 SUMMARY AND CONCLUSIONS

The proposed project would include 303 single-family detached residential units. The project site is currently zoned within the Light Agricultural (A-1) and Exclusive Agricultural (AE-40) districts but the zoning for the project site is proposed to be amended to General Commercial – Mixed Use (C-2-MU). C-2-MU districts are intended for residential use as well as retail stores and businesses that do not involve the manufacturing, assembling, packaging, treatment or processing of articles of merchandise for distribution and retail sale. The project site is designated as Highway Commercial in the Community Plan.

12.1 EXISTING CONDITIONS SUMMARY

Eight study intersections and all roadway segments operate at a satisfactory LOS under existing and existing plus project conditions. One study intersection operates at a deficient LOS under existing and existing plus project conditions.

This intersection meets signal warrant requirements under existing and existing plus project conditions.

12.2 NEAR-TERM CONDITIONS SUMMARY

Eight study intersections and all roadway segments are forecast to operate at a satisfactory LOS under near-term (approved and pending) and near-term plus project conditions. One study intersection is forecast to operate at a deficient LOS under near-term (approved and pending) and near-term plus project conditions.

This intersection meets signal warrant requirements under near-term (approved and pending) and near-term plus project conditions.

12.3 HORIZON YEAR CONDITIONS SUMMARY

Eight study intersections are forecast to operate at a satisfactory LOS under horizon year conditions while seven study intersections are forecast to operate at a satisfactory LOS under horizon plus project conditions. One study intersection is forecast to operate at a deficient LOS under horizon year conditions while two study intersections are forecast to operate at a deficient LOS under horizon plus project conditions. All roadway segments are forecast to operate at a satisfactory LOS under horizon year and horizon year plus project conditions.

One intersection meets signal warrant requirements under horizon year conditions while two intersections meet signal warrant requirements under horizon year plus project conditions.

12.4 IMPROVEMENTS SUMMARY

Based on the improvements discussed in Section 9.1 “Recommended Improvements” of this report, the recommended improvements include adjusting stop control and installing traffic signals at intersections. Most of the recommended circulation improvements are covered by the County’s fee

programs. However, the project will pay fair share percentages for intersections where improvements were not covered by a fee program.

12.5 SITE ACCESS AND CIRCULATION ANALYSIS SUMMARY

The project driveways have adequate corner sight distance and will be stop controlled. Based on the locations of the project driveways, the project is not anticipated to create deficiency in the neighborhood traffic flow pattern.

12.6 VEHICLE MILES TRAVELED SUMMARY

The project could not be screened out and a detailed VMT analysis using TCAG model was conducted for the project. The project VMT is 10.7 percent higher than the parent TAZ VMT per capita and therefore, will have a significant VMT impact. the project will be paying $57,140 VMT mitigation fee to the County.

APPENDIX A

SCOPING AGREEMENT

CARLSBAD
CLOVIS
IRVINE
LOS ANGELES
PALM SPRINGS
POINT RICHMOND
RIVERSIDE
ROSEVILLE
SAN LUIS OBISPO

January 31, 2023

Mr. Aaron R Bock
Assistant Director – Planning and Economic Development
Tulare County Resource Management Agency
5961 S. Mooney Boulevard
Visalia, California 93277

Subject: Scope of Work for the Goshen Residential Project Transportation Impact Analysis (LSA Project No. FOC2202)

Dear Mr. Bock,

LSA is preparing a Transportation Impact Analysis (TIA) for the Goshen Residential Project (project) to be located at the northwest corner of Road 64 and Avenue 304, in the community of Goshen within the unincorporated Tulare County. The proposed project includes 303 single-family detached residences. Figure 1 (all figures and tables attached) illustrates the regional and project location. The project will be accessed through two full access driveways on Road 64 and another full access driveway on Avenue 304. The project is anticipated to be completed by 2024. Figure 2 illustrates the conceptual site plan.

The TIA will be prepared in accordance with requirements outlined in the *County of Tulare SB 743 Guidelines* (County Guidelines), dated June 2020. Based on the requirements outlined in the County Guidelines, LSA anticipates that the following scope of work will be required to prepare the TIA for the proposed project.

SCOPE OF WORK: LOCAL TRANSPORTATION ANALYSIS

Study Area Intersections

The Local Transportation Analysis (LTA) will be prepared in accordance with the County Guidelines. The primary objective of the analysis will be to study and determine potential traffic operations issues at the project driveways and nearby intersections because of the proposed project. Based on the County Guidelines, an LTA is required if a project is expected to generate 100 or more peak hour trips. The detailed project trip generation is summarized in Table A and discussed further in the project trip generation section. As shown in Table A, the project is anticipated to generate more than 100 peak hour trips, and therefore, an LTA needs to be prepared for the project. Additionally, based on the County's Guidelines, the study area shall generally include, at a minimum, any intersection where the proposed project will add 50 or more peak hour trips. Based on this criterion, the following intersections were included for the analysis:

1. Project Driveway 1/Avenue 304 (Tulare County);
2. Project Driveway 2/Avenue 304 (Tulare County);
3. Road 64/Betty Drive (Tulare County);

1500 Iowa Avenue, Suite 200, Riverside, California 92507 951.781.9310 www.lsa.net

4. Road 64/Avenue 308 (Tulare County);
5. Road 64/Project Driveway 2-Kenyon Plastering Driveway (Tulare County);
6. Road 64/Avenue 304 (Tulare County);
7. Road 64/State Route 198 (SR-198) (Caltrans);
8. State Route 99 (SR-99) Southbound Ramps/Betty Drive (Caltrans), and
9. SR-99 Northbound Ramps/Betty Drive (Caltrans),

Figure 3 illustrates the proposed study area intersections.

Roadway Segment Analysis

A roadway segment analysis will be conducted based on daily traffic volumes within the study area and any segments that the County requires to be included in the analysis. The LOS analysis for roadway segments will be conducted using daily volume-to-capacity ratio using roadway capacity and classification for the County. The LTA will include the following roadway segments:

1. Avenue 304, west of Project Driveway 1 (Tulare County);
2. Avenue 304, between Project Driveway 1 and Project Driveway 1 (Tulare County);
3. Avenue 304, between Project Driveway 2 and Road 64 (Tulare County);
4. Road 64, between Betty Drive and Avenue 308 (Tulare County);
5. Road 64, between Avenue 308 and Avenue 304 (Tulare County);
6. Road 64, between Avenue 304 and SR-198 (Tulare County), and
7. Betty Drive, between Road 64 and SR-99 Southbound Ramps.

Analysis Scenarios

Based on the County Guidelines, The LTA will address existing traffic conditions, future traffic forecasts, roadway network circulation deficiencies, and recommended circulation improvements for a.m. and p.m. peak hour traffic operations at the study intersections and daily conditions for the roadway segments under the following scenarios:

- Existing conditions;
- Existing plus Project conditions;
- Near-term (approved and pending) conditions;
- Near-term plus Project conditions;
- Horizon Year conditions; and
- Horizon Year plus project conditions.

The a.m. peak hour is defined as the one hour of highest traffic volumes occurring between 7:00 and 9:00 a.m., while the p.m. peak hour is defined as the one hour of highest traffic volume occurring between 4:00 and 6:00 p.m.

Trip Generation, Trip Distribution and Trip Assignment

The trip generation for the proposed project was developed using the rates from the Institute of Transportation Engineers (ITE) *Trip Generation Manual* (11th Edition). The rates for Land Use 210 – "Single-Family Detached Housing" were used for the project. Table A summarizes the project trip generation. As shown in attached Table A, the project is anticipated to generate 2,857 daily trips with 213 trips occurring during the a.m. peak hour and 285 trips occurring during the p.m. peak hour.

Project trip distribution was developed based on the select zone model run from the Tulare County Association of Governments (TCAG) Travel Demand Model (Model). The select zone plot is included in Appendix A. The trip distribution was further refined in consideration of the regional roadway network and the location of residential, educational, employment, recreational and commercial centers in the project vicinity. Figure 4 illustrates the project trip distribution. The distribution percentages were applied to the project trip generation to determine the project trip assignment. Figure 5 illustrates the project trip assignment at the study intersections.

Volume Development and Analysis Methodology

Traffic volumes for existing year traffic conditions will be based on existing count data collected at study intersections and roadway segments. Traffic volumes for the Near-term (approved and pending) year no project traffic conditions will be developed by adding traffic volumes from approved and pending projects in the vicinity of the project to the existing traffic volumes. If data is not available for approved and pending projects in the project vicinity, traffic volumes will be developed applying a growth rate to existing traffic volumes. Traffic volumes for the horizon year traffic conditions will be developed using forecast volumes obtained from the TCAG Model and by using appropriate post-processing methodologies.

Existing, Near-term, and Horizon Year plus project traffic volumes will be developed by adding traffic from the proposed project to the corresponding without project scenario traffic volumes.

The LTA will analyze study intersections during the a.m. and p.m. peak hours. Intersection levels of service (LOS) will be calculated using the *Highway Capacity Manual 6* (HCM 6) analysis methodologies by using Synchro 11 software. Roadway segment LOS analysis will be conducted using daily roadway segment capacity thresholds and classifications from the County's General Plan or other applicable sources as recommended by the County.

Analysis of Traffic Operations and Recommended Circulation Improvements

Intersection and roadway segment LOS without the project will be compared to the intersection and roadway segment LOS with the project for each of the analysis scenarios to determine potential operational deficiencies based on the LOS standards as applicable for the County. Necessary improvement measures will be recommended to improve intersection and roadway segment performance to conform with County's LOS standards. Improvements may include intersection turn

lanes, signalization, and segment lane additions. The LOS with recommended improvements will be calculated and summarized, along with a comparison of the LOS without improvements.

Signal Warrant Analysis

If an unsignalized intersection is forecast to operate at a deficient LOS, a signal warrant analysis will be conducted to identify the feasibility of installing a signal as a potential operational improvement measure. Peak hour approach volumes for the study intersections will be examined per the criteria defined in the California supplement of the *Manual on Uniform Traffic Control Devices* (CA-MUTCD).

Fee Plans/Fair-Share Contributions

A fair share percentage will be calculated for improvements recommended in the TIA that are not included in any of the adopted fee plans or improvement plans for the County, and the project contributes a five percent or higher increase in traffic. 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 conditions.

SCOPE OF WORK: CEQA VEHICLE MILES TRAVELED (VMT) ANALYSIS

Based on the screening criteria included in the County Guidelines, the project could not be screened out and a detailed VMT analysis will be required for the project. LSA will utilize the TCAG model for the VMT calculations for the project. LSA has the model in-house and can calculate results from the model run for VMT calculations. The detailed scope of work for the project is as follows:

Project Traffic Analysis Zone Update

The first step in preparation of this analysis will be to update the traffic analysis zones (TAZs) in the model that includes the project area. LSA will convert the project land use into model socioeconomic categories using regional conversion factors. The socioeconomic data for the project TAZ in the base year model scenario will be updated.

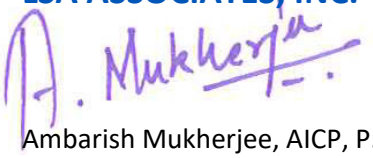
Project VMT Analysis

Upon completion of the socioeconomic data update, LSA will conduct model run for the base scenario. LSA will utilize the outputs from the model run to calculate the project VMT per capita. The project is located within TCAG model TAZ 2718. Therefore, as per the County Guidelines, if the project VMT per capita exceeds the VMT per capita rate for TAZ 2718, the project would create a significant VMT impact.

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, P.E.
Principal

Attachments:
Table A: Project Trip Generation
Figure 1: Regional and Project Location
Figure 2: Conceptual Site Plan
Figure 3: Study Area Intersections
Figure 4: Project Trip Distribution
Figure 5: Project Trip Assignment
Appendix A: TCAG Select Zone Plot

LSA

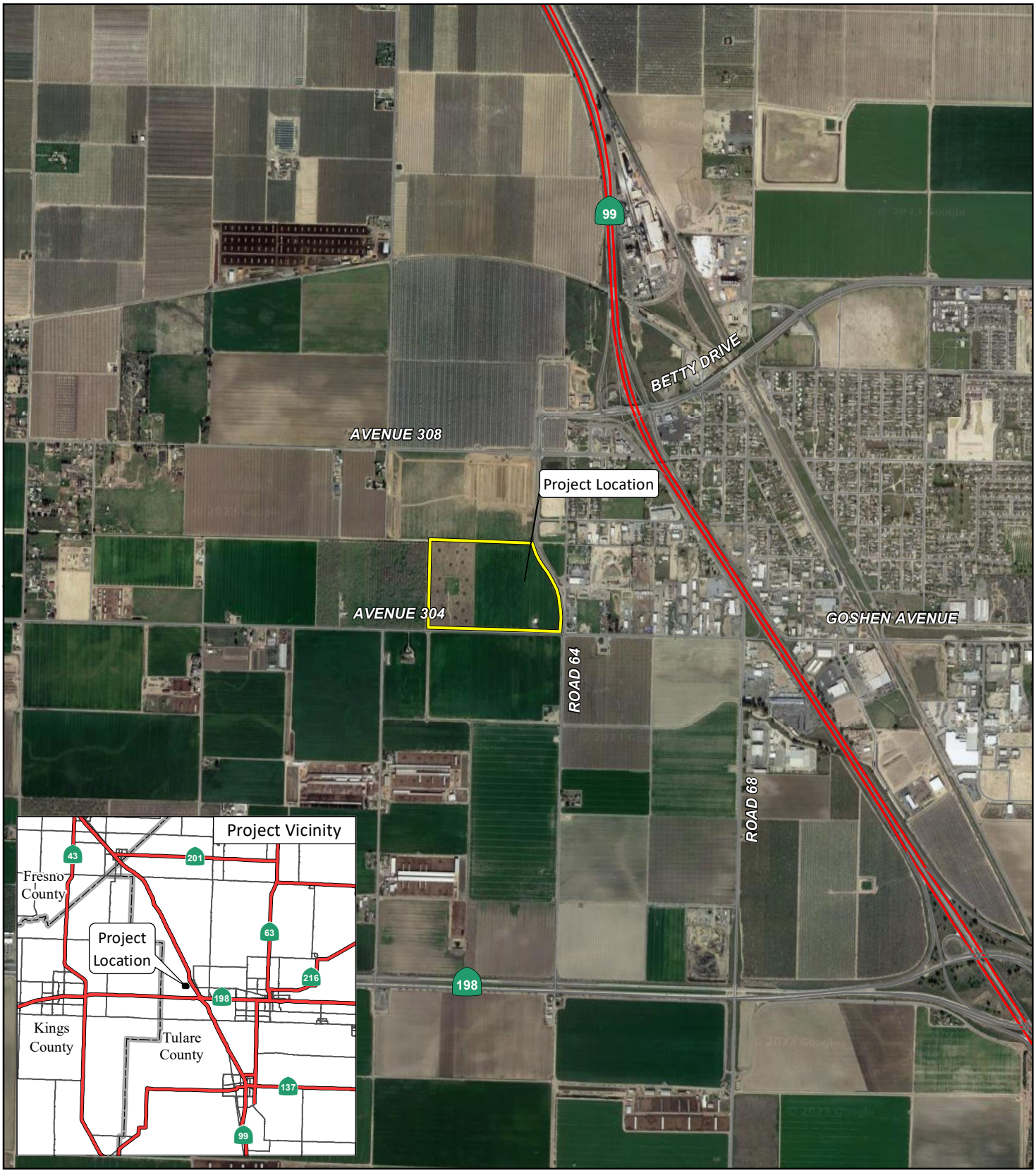
Table A - Project Trip Generation

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	303 DU							
Trips/Unit[1]		0.18	0.52	0.70	0.59	0.35	0.94	9.43
Gross Trips		55	158	213	179	106	285	2,857
	Total Gross Trips	**55**	**158**	**213**	**179**	**106**	**285**	**2,857**

Notes:

DU = Dwelling Units

[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."



LSA

LEGEND

Project Site

FIGURE 1

N

0 1000 2000

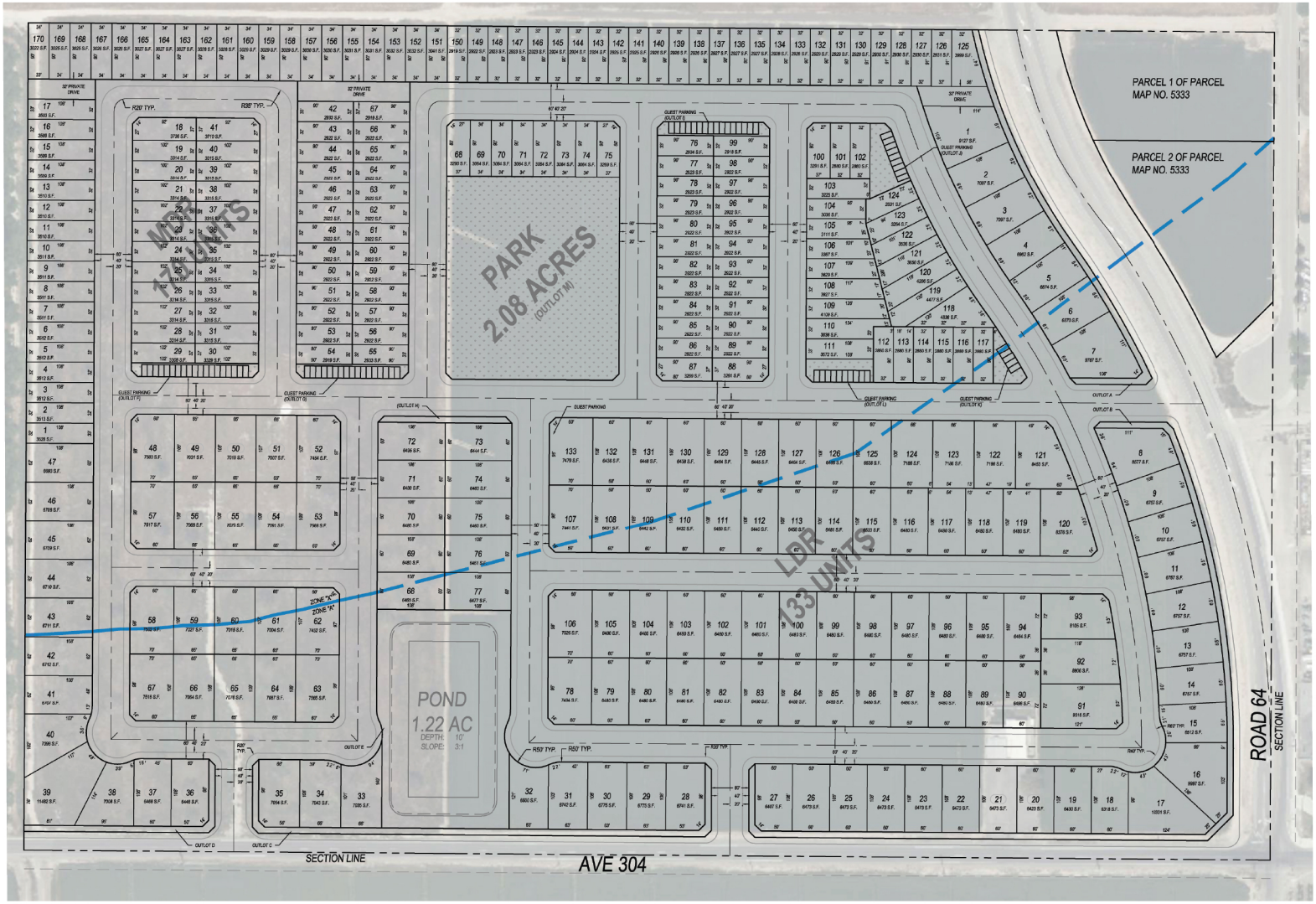
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SOURCE: ESRI Streetmap, 2021; Google Earth, 2021.

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Goshen Residential Project
Transportation Impact Analysis

Regional and Project Location



LSA

FIGURE 2

N

0 125 250

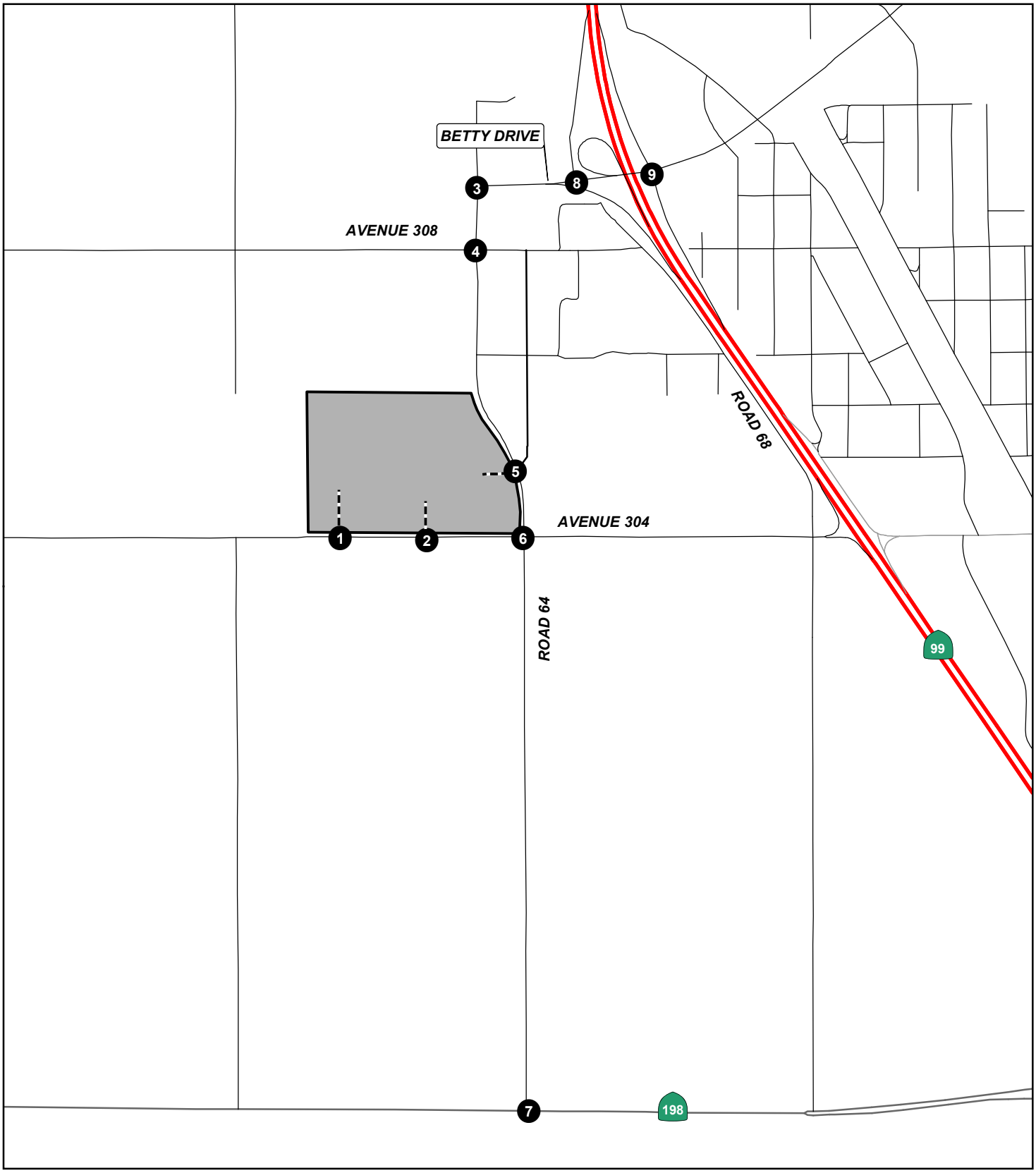
FEET

SOURCE: 4CREEKS

P:\FOC2202 Goshen Residential\Traffic\GIS\Report\fig2_Siteplan.ai (01/31/2023)

Goshen Residential Project
Transportation Impact Analysis

Conceptual Site Plan



LSA

LEGEND

Project Location

Study Area Intersections

Project Driveway

N

0 625 1250

FEET

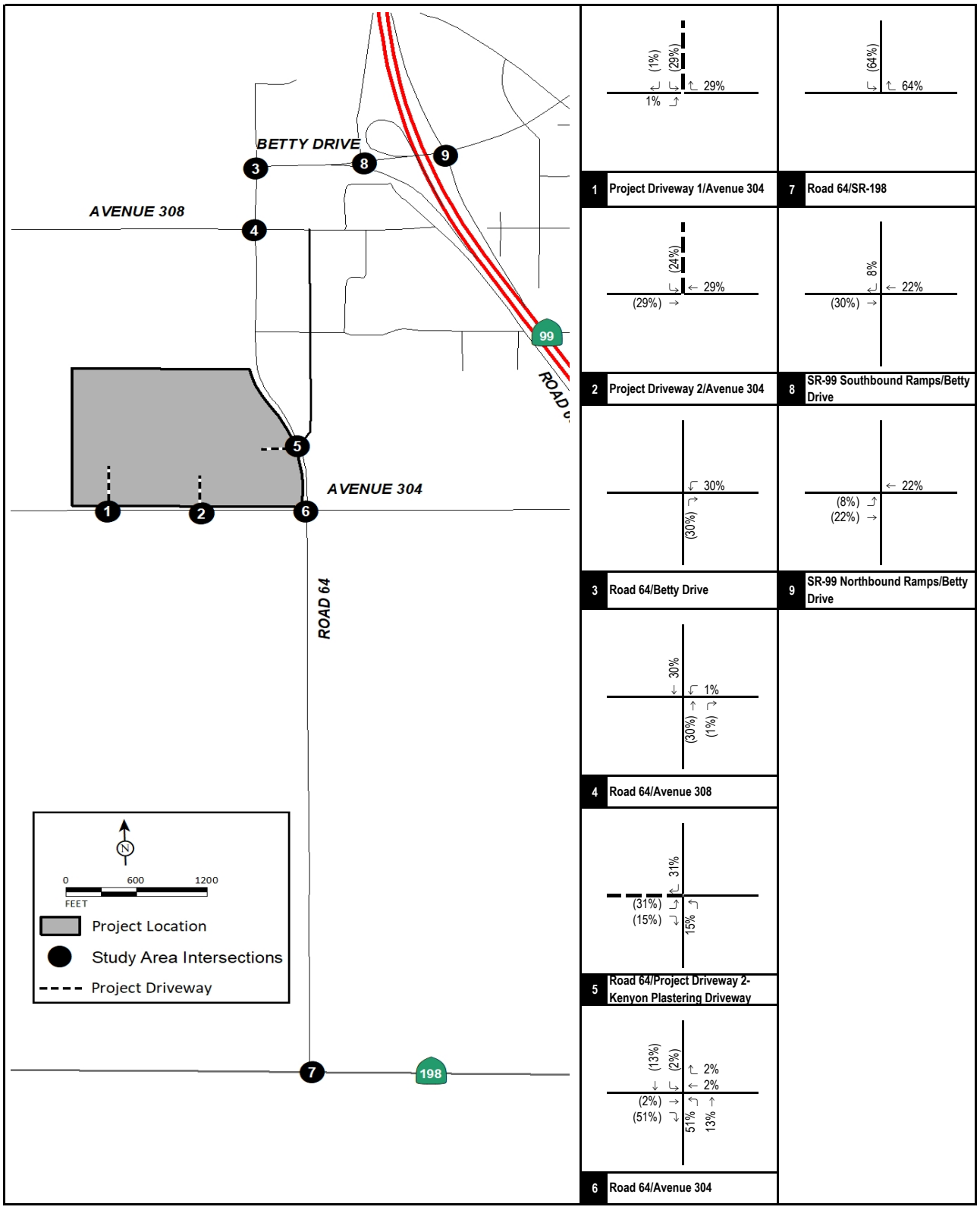
SOURCE: ESRI Streetmap, 2021.

I:\FOC2202\Reports\fig3_Intersections.mxd (1/31/2023)

FIGURE 3

Goshen Residential Project
Transportation Impact Analysis

Study Area Intesrections



LSA

FIGURE 4

XX% (YY%)
Inbound (Outbound) Trip Distribution
Project Driveway

Goshen Residential Project
Transportation Impact Analysis

Project Trip Distribution

P:\FOC2202 Goshen Residential\Traffic\z30_Dist.xlsx\Figure (1/31/2023)

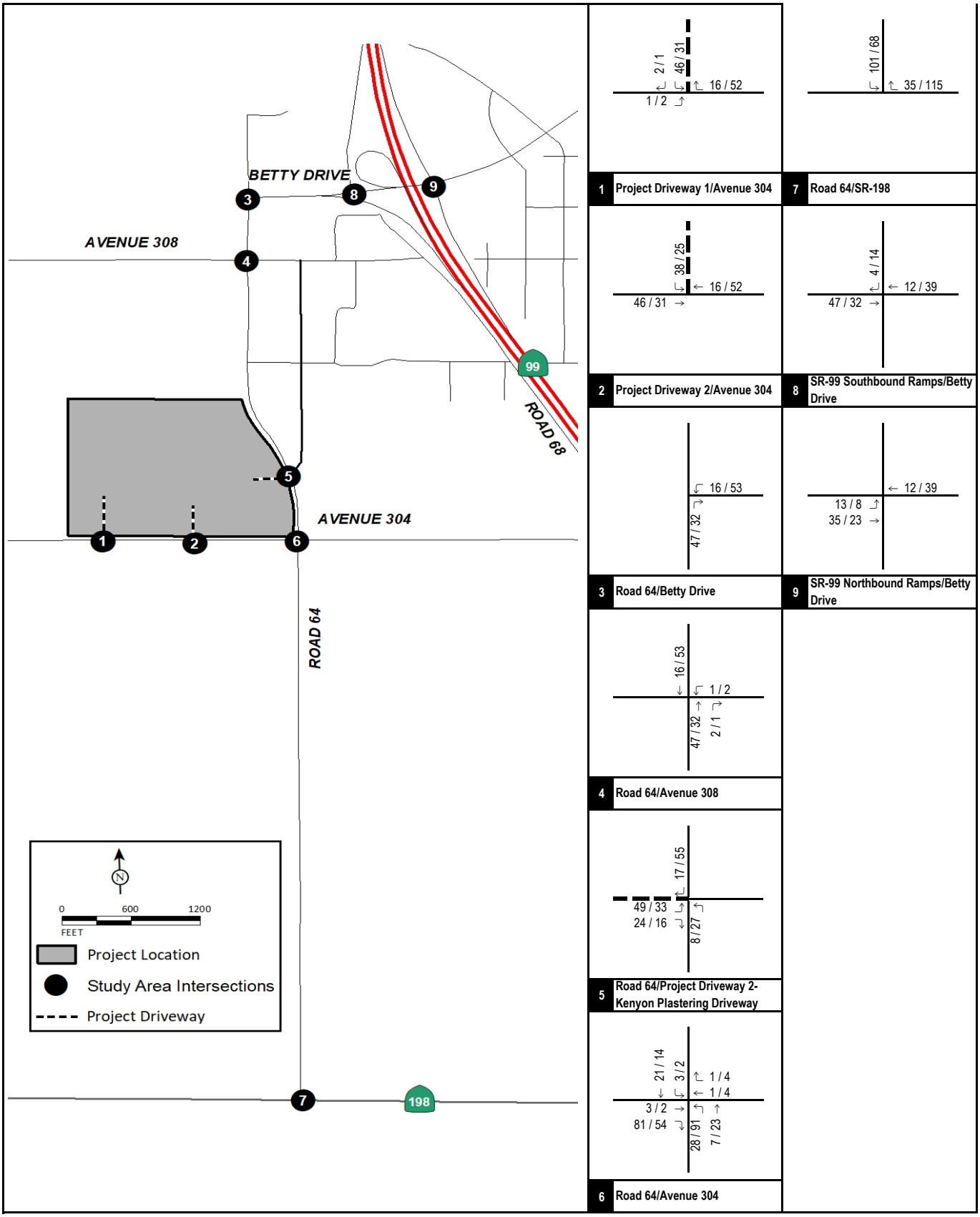


FIGURE 5

LSA

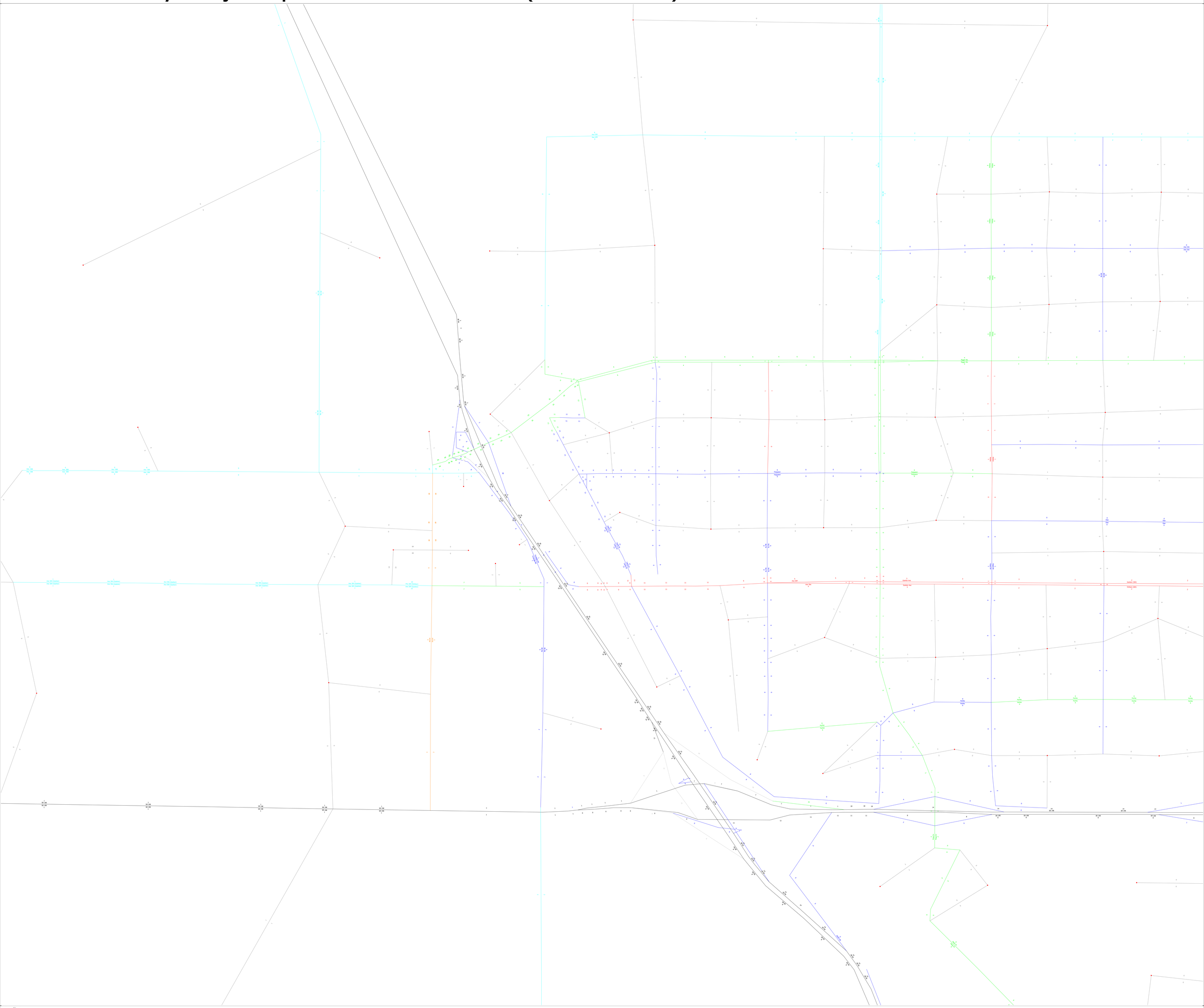
XX / YY
AM / PM Peak Hour Traffic Volumes
Project Driveway

Goshen Residential Project
Transportation Impact Analysis

Project Trip Assignment

P:\FOC2202 Goshen Residential\Traffic\z30_Assn.xlsx\Figure (1/31/2023)

TCAG Model - Horizon year Project PM peak hour select zone dsitrbution (Goshen Residential)



cube

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APPENDIX B

TRAFFIC COUNT AND SIGNAL TIMING SHEETS

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

County of Tulare
N/S: Road 64
E/W: Betty Drive
Weather: Clear

File Name : 01_CTE_Rd 64_Betty AM
Site Code : 00322799
Start Date : 9/20/2022
Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

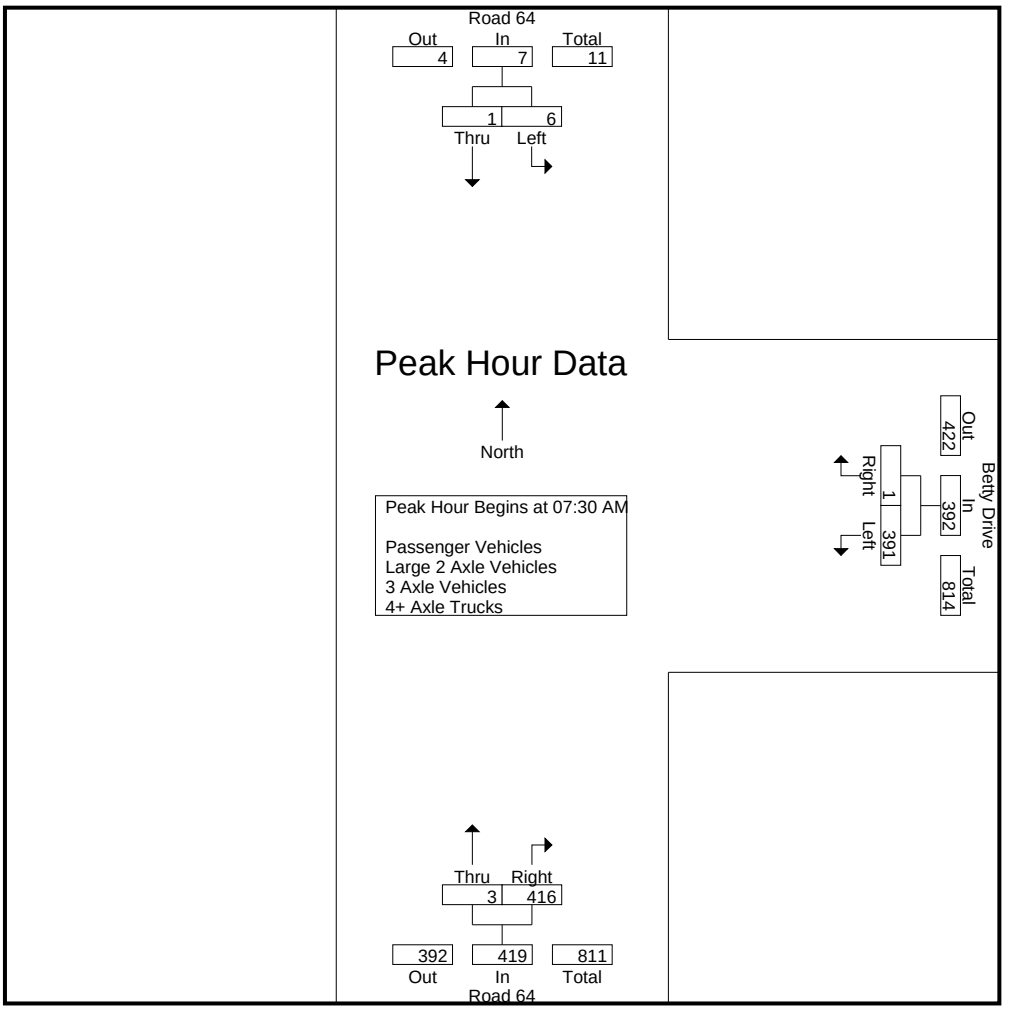
	Road 64 Southbound			Betty Drive Westbound			Road 64 Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
07:00 AM	2	0	2	29	1	30	2	43	45	77
07:15 AM	2	0	2	56	0	56	0	31	31	89
07:30 AM	2	1	3	86	0	86	0	76	76	165
07:45 AM	2	0	2	124	1	125	1	114	115	242
Total	8	1	9	295	2	297	3	264	267	573
08:00 AM	1	0	1	110	0	110	2	128	130	241
08:15 AM	1	0	1	71	0	71	0	98	98	170
08:30 AM	0	0	0	48	0	48	0	45	45	93
08:45 AM	0	0	0	39	0	39	0	40	40	79
Total	2	0	2	268	0	268	2	311	313	583
Grand Total	10	1	11	563	2	565	5	575	580	1156
Apprch %	90.9	9.1		99.6	0.4		0.9	99.1		
Total %	0.9	0.1	1	48.7	0.2	48.9	0.4	49.7	50.2	
Passenger Vehicles	2	1	3	525	2	527	5	504	509	1039
% Passenger Vehicles	20	100	27.3	93.3	100	93.3	100	87.7	87.8	89.9
Large 2 Axle Vehicles	3	0	3	14	0	14	0	24	24	41
% Large 2 Axle Vehicles	30	0	27.3	2.5	0	2.5	0	4.2	4.1	3.5
3 Axle Vehicles	2	0	2	5	0	5	0	14	14	21
% 3 Axle Vehicles	20	0	18.2	0.9	0	0.9	0	2.4	2.4	1.8
4+ Axle Trucks	3	0	3	19	0	19	0	33	33	55
% 4+ Axle Trucks	30	0	27.3	3.4	0	3.4	0	5.7	5.7	4.8

	Road 64 Southbound			Betty Drive Westbound			Road 64 Northbound			
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	**2**	**1**	**3**	86	0	86	0	76	76	165
07:45 AM	2	0	2	**124**	**1**	**125**	1	114	115	**242**
08:00 AM	1	0	1	110	0	110	**2**	**128**	**130**	241
08:15 AM	1	0	1	71	0	71	0	98	98	170
Total Volume	6	1	7	391	1	392	3	416	419	818
% App. Total	85.7	14.3		99.7	0.3		0.7	99.3		
PHF	.750	.250	.583	.788	.250	.784	.375	.813	.806	.845

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County of Tulare
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File Name : 01_CTE_Rd 64_Betty AM
Site Code : 00322799
Start Date : 9/20/2022
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			07:30 AM			07:30 AM		
+0 mins.	**2**	0	2	86	0	86	0	76	76
+15 mins.	2	0	2	**124**	**1**	**125**	1	114	115
+30 mins.	2	**1**	**3**	110	0	110	**2**	**128**	**130**
+45 mins.	2	0	2	71	0	71	0	98	98
Total Volume	8	1	9	391	1	392	3	416	419
% App. Total	88.9	11.1		99.7	0.3		0.7	99.3	
PHF	1.000	.250	.750	.788	.250	.784	.375	.813	.806

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County of Tulare
N/S: Road 64
E/W: Betty Drive
Weather: Clear

File Name : 01_CTE_Rd 64_Betty AM
Site Code : 00322799
Start Date : 9/20/2022
Page No : 1

Groups Printed- Passenger Vehicles

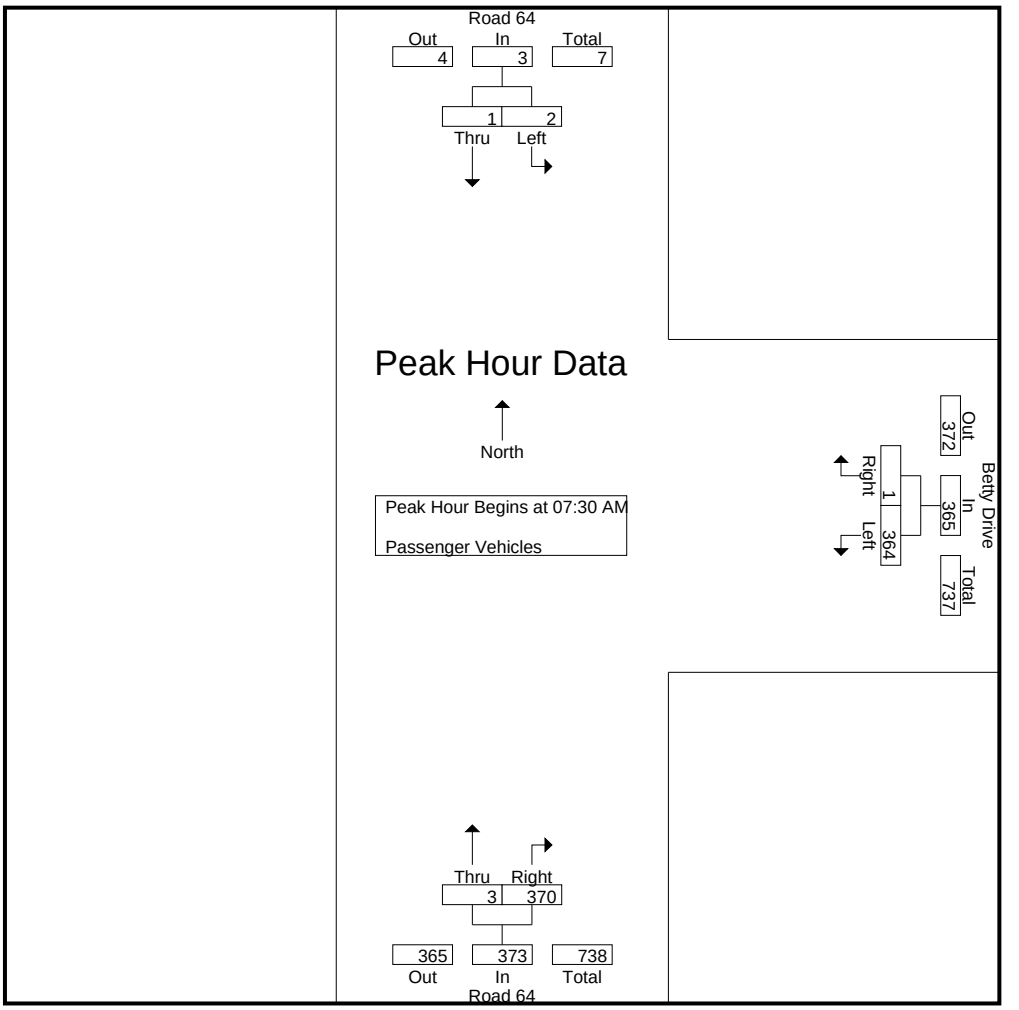
	Road 64 Southbound			Betty Drive Westbound			Road 64 Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	28	1	29	2	36	38	67
07:15 AM	0	0	0	49	0	49	0	26	26	75
07:30 AM	0	1	1	81	0	81	0	65	65	147
07:45 AM	1	0	1	120	1	121	1	105	106	228
Total	1	1	2	278	2	280	3	232	235	517
08:00 AM	1	0	1	105	0	105	2	119	121	227
08:15 AM	0	0	0	58	0	58	0	81	81	139
08:30 AM	0	0	0	45	0	45	0	38	38	83
08:45 AM	0	0	0	39	0	39	0	34	34	73
Total	1	0	1	247	0	247	2	272	274	522
Grand Total	2	1	3	525	2	527	5	504	509	1039
Apprch %	66.7	33.3		99.6	0.4		1	99		
Total %	0.2	0.1	0.3	50.5	0.2	50.7	0.5	48.5	49	

	Road 64 Southbound			Betty Drive Westbound			Road 64 Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	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**	81	0	81	0	65	65	147
07:45 AM	**1**	0	1	**120**	**1**	**121**	1	105	106	**228**
08:00 AM	1	0	1	105	0	105	**2**	**119**	**121**	227
08:15 AM	0	0	0	58	0	58	0	81	81	139
Total Volume	2	1	3	364	1	365	3	370	373	741
% App. Total	66.7	33.3		99.7	0.3		0.8	99.2		
PHF	.500	.250	.750	.758	.250	.754	.375	.777	.771	.813

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County of Tulare
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Site Code : 00322799
Start Date : 9/20/2022
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		
+0 mins.	0	**1**	**1**	81	0	81	0	65	65
+15 mins.	**1**	0	1	**120**	**1**	**121**	1	105	106
+30 mins.	1	0	1	105	0	105	**2**	**119**	**121**
+45 mins.	0	0	0	58	0	58	0	81	81
Total Volume	2	1	3	364	1	365	3	370	373
% App. Total	66.7	33.3		99.7	0.3		0.8	99.2	
PHF	.500	.250	.750	.758	.250	.754	.375	.777	.771

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County of Tulare
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E/W: Betty Drive
Weather: Clear

File Name : 01_CTE_Rd 64_Betty AM
Site Code : 00322799
Start Date : 9/20/2022
Page No : 1

Groups Printed- Large 2 Axle Vehicles

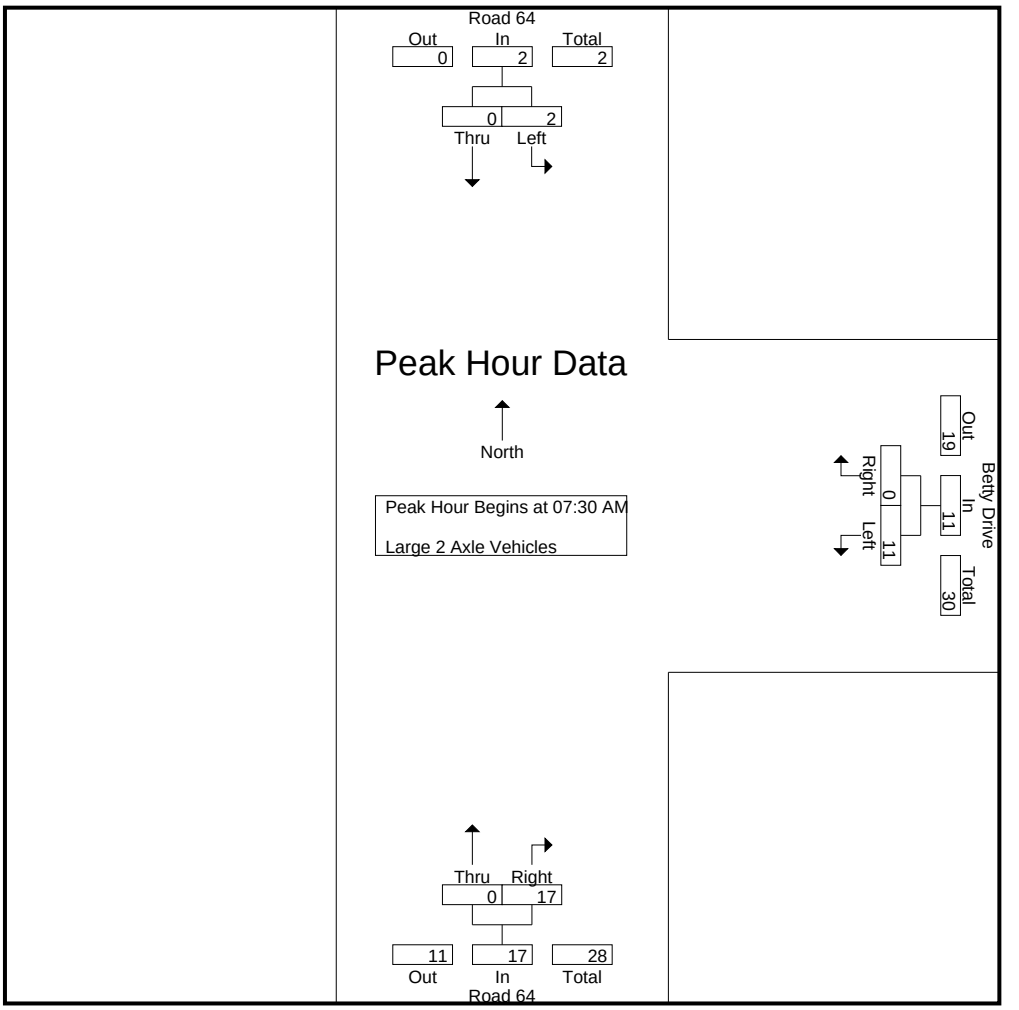
	Road 64 Southbound			Betty Drive Westbound			Road 64 Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	4	4	4
07:15 AM	1	0	1	3	0	3	0	1	1	5
07:30 AM	1	0	1	4	0	4	0	3	3	8
07:45 AM	0	0	0	1	0	1	0	3	3	4
Total	2	0	2	8	0	8	0	11	11	21
08:00 AM	0	0	0	2	0	2	0	2	2	4
08:15 AM	1	0	1	4	0	4	0	9	9	14
08:30 AM	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	2	2	2
Total	1	0	1	6	0	6	0	13	13	20
Grand Total	3	0	3	14	0	14	0	24	24	41
Apprch %	100	0		100	0		0	100		
Total %	7.3	0	7.3	34.1	0	34.1	0	58.5	58.5	

	Road 64 Southbound			Betty Drive Westbound			Road 64 Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	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**	0	**1**	**4**	0	**4**	0	3	3	8
07:45 AM	0	0	0	1	0	1	0	3	3	4
08:00 AM	0	0	0	2	0	2	0	2	2	4
08:15 AM	1	0	1	4	0	4	0	**9**	**9**	**14**
Total Volume	2	0	2	11	0	11	0	17	17	30
% App. Total	100	0		100	0		0	100		
PHF	.500	.000	.500	.688	.000	.688	.000	.472	.472	.536

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Site Code : 00322799
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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		
+0 mins.	**1**	0	**1**	**4**	0	**4**	0	3	3
+15 mins.	0	0	0	1	0	1	0	3	3
+30 mins.	0	0	0	2	0	2	0	2	2
+45 mins.	1	0	1	4	0	4	0	**9**	**9**
Total Volume	2	0	2	11	0	11	0	17	17
% App. Total	100	0		100	0		0	100	
PHF	.500	.000	.500	.688	.000	.688	.000	.472	.472

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County of Tulare
N/S: Road 64
E/W: Betty Drive
Weather: Clear

File Name : 01_CTE_Rd 64_Betty AM
Site Code : 00322799
Start Date : 9/20/2022
Page No : 1

Groups Printed- 3 Axle Vehicles

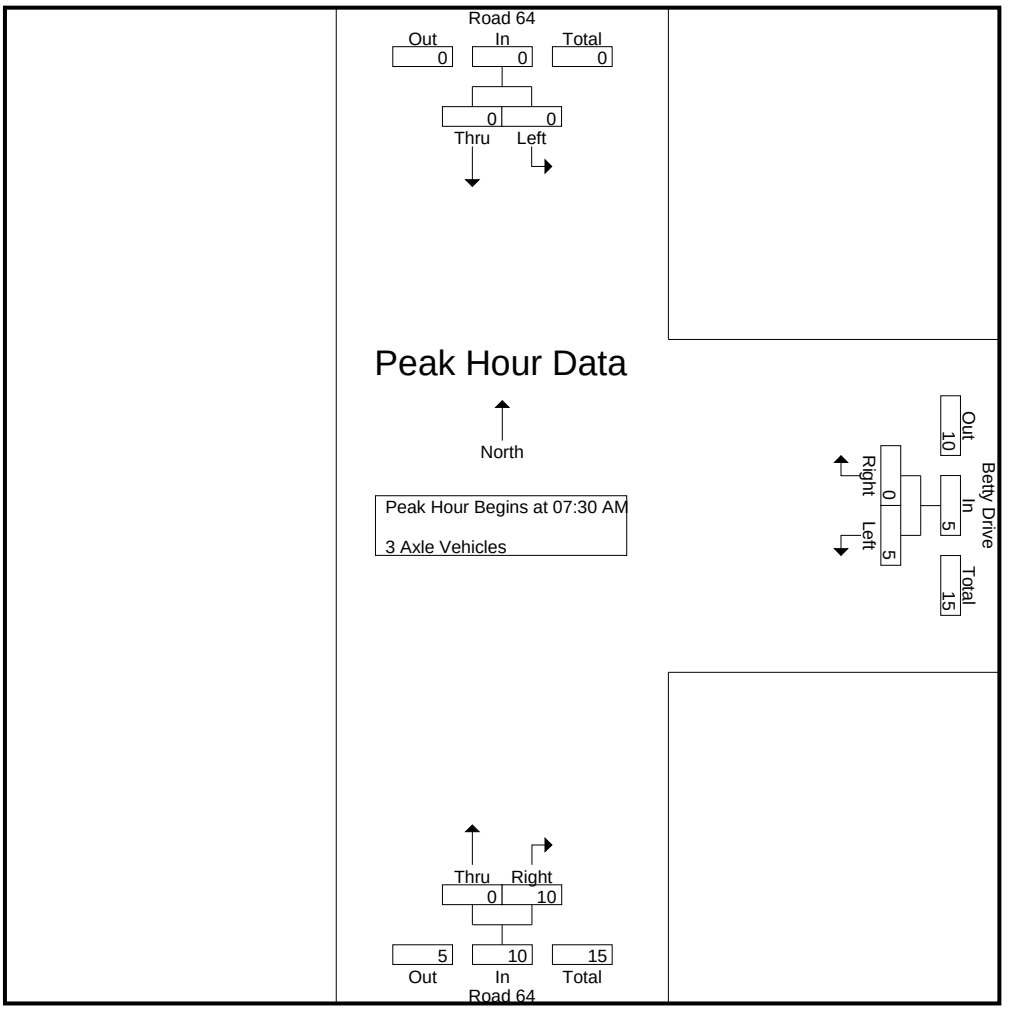
	Road 64 Southbound			Betty Drive Westbound			Road 64 Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
07:00 AM	1	0	1	0	0	0	0	1	1	2
07:15 AM	1	0	1	0	0	0	0	1	1	2
07:30 AM	0	0	0	0	0	0	0	4	4	4
07:45 AM	0	0	0	2	0	2	0	2	2	4
Total	2	0	2	2	0	2	0	8	8	12
08:00 AM	0	0	0	2	0	2	0	2	2	4
08:15 AM	0	0	0	1	0	1	0	2	2	3
08:30 AM	0	0	0	0	0	0	0	1	1	1
08:45 AM	0	0	0	0	0	0	0	1	1	1
Total	0	0	0	3	0	3	0	6	6	9
Grand Total	2	0	2	5	0	5	0	14	14	21
Apprch %	100	0		100	0		0	100		
Total %	9.5	0	9.5	23.8	0	23.8	0	66.7	66.7	

	Road 64 Southbound			Betty Drive Westbound			Road 64 Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	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	**4**	**4**	**4**
07:45 AM	0	0	0	**2**	0	**2**	0	2	2	4
08:00 AM	0	0	0	2	0	2	0	2	2	4
08:15 AM	0	0	0	1	0	1	0	2	2	3
Total Volume	0	0	0	5	0	5	0	10	10	15
% App. Total	0	0		100	0		0	100		
PHF	.000	.000	.000	.625	.000	.625	.000	.625	.625	.938

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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		
+0 mins.	0	0	0	0	0	0	0	**4**	**4**
+15 mins.	0	0	0	**2**	0	**2**	0	2	2
+30 mins.	0	0	0	2	0	2	0	2	2
+45 mins.	0	0	0	1	0	1	0	2	2
Total Volume	0	0	0	5	0	5	0	10	10
% App. Total	0	0		100	0		0	100	
PHF	.000	.000	.000	.625	.000	.625	.000	.625	.625

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Site Code : 00322799
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Groups Printed- 4+ Axle Trucks

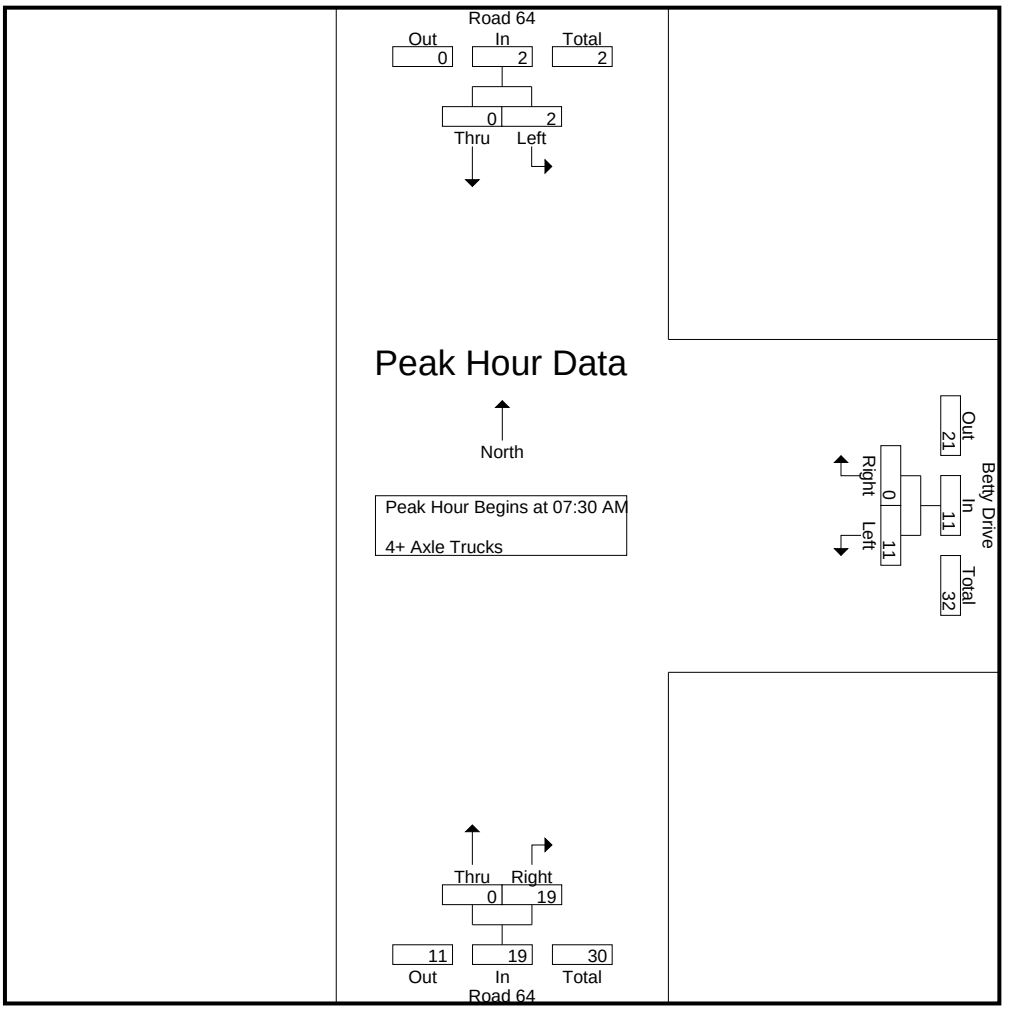
	Road 64 Southbound			Betty Drive Westbound			Road 64 Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
07:00 AM	1	0	1	1	0	1	0	2	2	4
07:15 AM	0	0	0	4	0	4	0	3	3	7
07:30 AM	1	0	1	1	0	1	0	4	4	6
07:45 AM	1	0	1	1	0	1	0	4	4	6
Total	3	0	3	7	0	7	0	13	13	23
08:00 AM	0	0	0	1	0	1	0	5	5	6
08:15 AM	0	0	0	8	0	8	0	6	6	14
08:30 AM	0	0	0	3	0	3	0	6	6	9
08:45 AM	0	0	0	0	0	0	0	3	3	3
Total	0	0	0	12	0	12	0	20	20	32
Grand Total	3	0	3	19	0	19	0	33	33	55
Apprch %	100	0		100	0		0	100		
Total %	5.5	0	5.5	34.5	0	34.5	0	60	60	

	Road 64 Southbound			Betty Drive Westbound			Road 64 Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	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**	0	**1**	1	0	1	0	4	4	6
07:45 AM	1	0	1	1	0	1	0	4	4	6
08:00 AM	0	0	0	1	0	1	0	5	5	6
08:15 AM	0	0	0	**8**	0	**8**	0	**6**	**6**	**14**
Total Volume	2	0	2	11	0	11	0	19	19	32
% App. Total	100	0		100	0		0	100		
PHF	.500	.000	.500	.344	.000	.344	.000	.792	.792	.571

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Site Code : 00322799
Start Date : 9/20/2022
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					
+0 mins.	**1**	0	**1**	1	0	1	0	4	4
+15 mins.	1	0	1	1	0	1	0	4	4
+30 mins.	0	0	0	1	0	1	0	5	5
+45 mins.	0	0	0	**8**	0	**8**	0	**6**	**6**
Total Volume	2	0	2	11	0	11	0	19	19
% App. Total	100	0		100	0		0	100	
PHF	.500	.000	.500	.344	.000	.344	.000	.792	.792

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File Name : 01_CTE_Rd 64_Betty PM
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Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

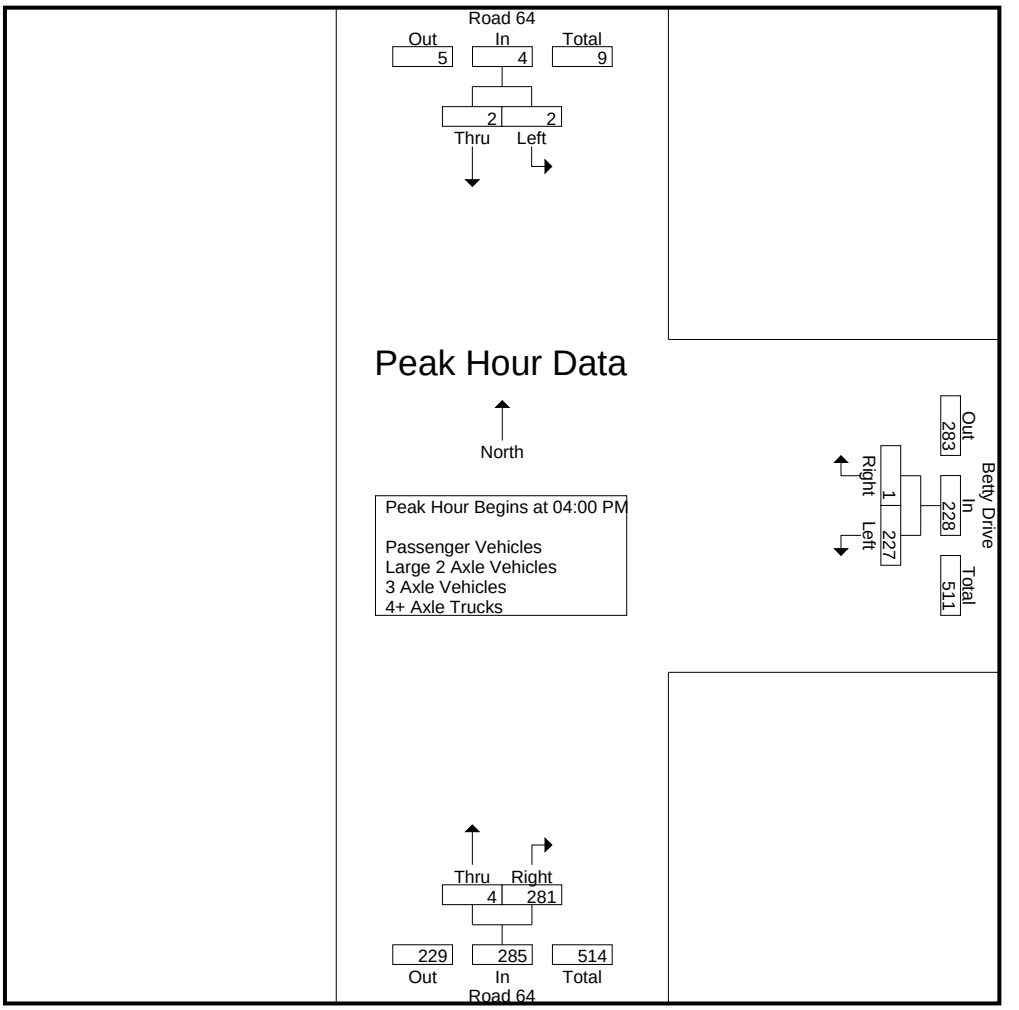
	Road 64 Southbound			Betty Drive Westbound			Road 64 Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
04:00 PM	2	1	3	51	1	52	1	68	69	124
04:15 PM	0	0	0	63	0	63	1	68	69	132
04:30 PM	0	1	1	65	0	65	1	83	84	150
04:45 PM	0	0	0	48	0	48	1	62	63	111
Total	2	2	4	227	1	228	4	281	285	517
05:00 PM	3	1	4	43	1	44	0	67	67	115
05:15 PM	1	0	1	45	0	45	0	66	66	112
05:30 PM	0	0	0	41	0	41	1	53	54	95
05:45 PM	3	0	3	32	0	32	0	46	46	81
Total	7	1	8	161	1	162	1	232	233	403
Grand Total	9	3	12	388	2	390	5	513	518	920
Apprch %	75	25		99.5	0.5		1	99		
Total %	1	0.3	1.3	42.2	0.2	42.4	0.5	55.8	56.3	
Passenger Vehicles	5	3	8	348	2	350	5	462	467	825
% Passenger Vehicles	55.6	100	66.7	89.7	100	89.7	100	90.1	90.2	89.7
Large 2 Axle Vehicles	0	0	0	15	0	15	0	39	39	54
% Large 2 Axle Vehicles	0	0	0	3.9	0	3.8	0	7.6	7.5	5.9
3 Axle Vehicles	0	0	0	13	0	13	0	4	4	17
% 3 Axle Vehicles	0	0	0	3.4	0	3.3	0	0.8	0.8	1.8
4+ Axle Trucks	4	0	4	12	0	12	0	8	8	24
% 4+ Axle Trucks	44.4	0	33.3	3.1	0	3.1	0	1.6	1.5	2.6

	Road 64 Southbound			Betty Drive Westbound			Road 64 Northbound			
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 04:00 PM										
04:00 PM	**2**	**1**	**3**	51	**1**	52	**1**	68	69	124
04:15 PM	0	0	0	63	0	63	1	68	69	132
04:30 PM	0	1	1	**65**	0	**65**	1	**83**	**84**	**150**
04:45 PM	0	0	0	48	0	48	1	62	63	111
Total Volume	2	2	4	227	1	228	4	281	285	517
% App. Total	50	50		99.6	0.4		1.4	98.6		
PHF	.250	.500	.333	.873	.250	.877	1.00	.846	.848	.862

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County of Tulare
N/S: Road 64
E/W: Betty Drive
Weather: Clear

File Name : 01_CTE_Rd 64_Betty PM
Site Code : 00322799
Start Date : 9/20/2022
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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			04:00 PM		
+0 mins.	**3**	**1**	**4**	51	**1**	52	**1**	68	69
+15 mins.	1	0	1	63	0	63	1	68	69
+30 mins.	0	0	0	**65**	0	**65**	1	**83**	**84**
+45 mins.	3	0	3	48	0	48	1	62	63
Total Volume	7	1	8	227	1	228	4	281	285
% App. Total	87.5	12.5		99.6	0.4		1.4	98.6	
PHF	.583	.250	.500	.873	.250	.877	1.000	.846	.848

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County of Tulare
N/S: Road 64
E/W: Betty Drive
Weather: Clear

File Name : 01_CTE_Rd 64_Betty PM
Site Code : 00322799
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Groups Printed- Passenger Vehicles

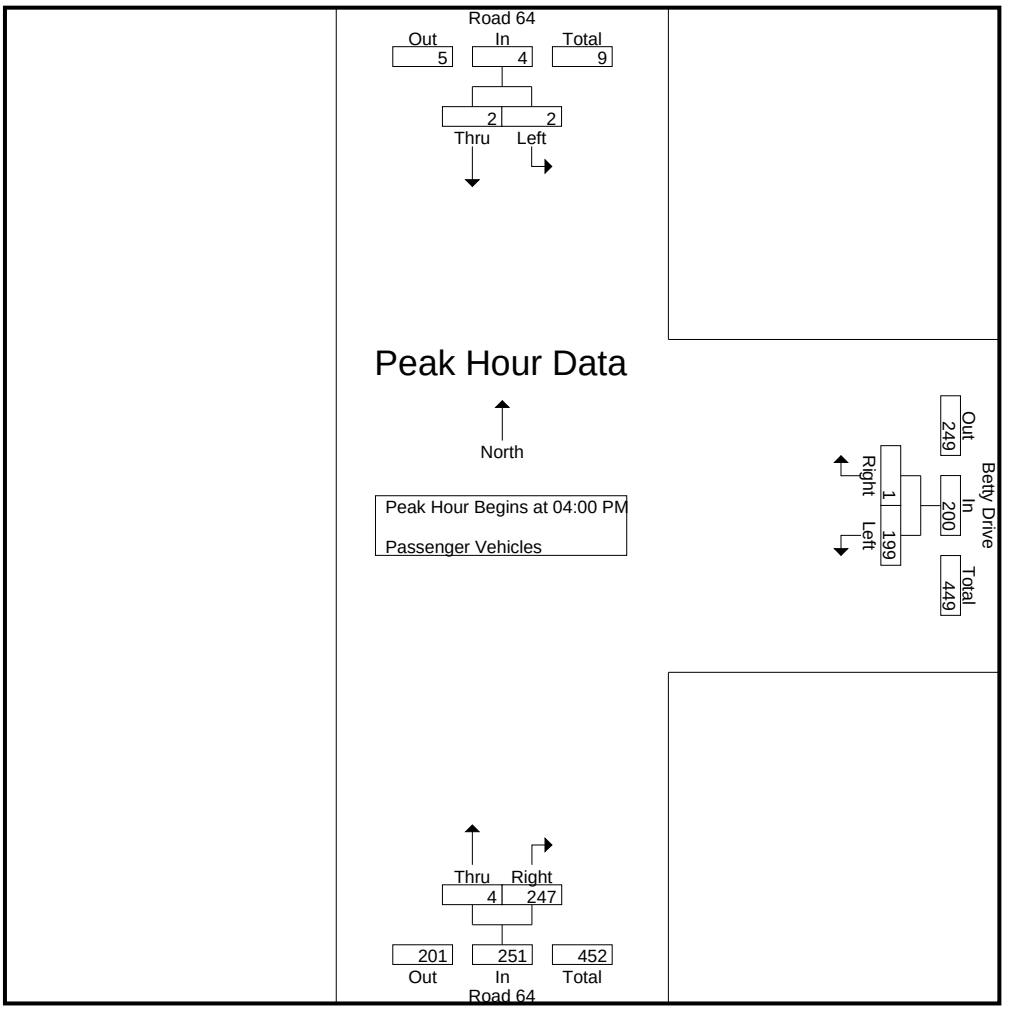
	Road 64 Southbound			Betty Drive Westbound			Road 64 Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
04:00 PM	2	1	3	45	1	46	1	62	63	112
04:15 PM	0	0	0	54	0	54	1	58	59	113
04:30 PM	0	1	1	55	0	55	1	74	75	131
04:45 PM	0	0	0	45	0	45	1	53	54	99
Total	2	2	4	199	1	200	4	247	251	455
05:00 PM	2	1	3	42	1	43	0	63	63	109
05:15 PM	0	0	0	41	0	41	0	61	61	102
05:30 PM	0	0	0	36	0	36	1	50	51	87
05:45 PM	1	0	1	30	0	30	0	41	41	72
Total	3	1	4	149	1	150	1	215	216	370
Grand Total	5	3	8	348	2	350	5	462	467	825
Apprch %	62.5	37.5		99.4	0.6		1.1	98.9		
Total %	0.6	0.4	1	42.2	0.2	42.4	0.6	56	56.6	

	Road 64 Southbound			Betty Drive Westbound			Road 64 Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	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	**2**	**1**	**3**	45	**1**	46	**1**	62	63	112
04:15 PM	0	0	0	54	0	54	1	58	59	113
04:30 PM	0	1	1	**55**	0	**55**	1	**74**	**75**	**131**
04:45 PM	0	0	0	45	0	45	1	53	54	99
Total Volume	2	2	4	199	1	200	4	247	251	455
% App. Total	50	50		99.5	0.5		1.6	98.4		
PHF	.250	.500	.333	.905	.250	.909	1.00	.834	.837	.868

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County of Tulare
N/S: Road 64
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Weather: Clear

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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		
+0 mins.	**2**	**1**	**3**	45	**1**	46	**1**	62	63
+15 mins.	0	0	0	54	0	54	1	58	59
+30 mins.	0	1	1	**55**	0	**55**	1	**74**	**75**
+45 mins.	0	0	0	45	0	45	1	53	54
Total Volume	2	2	4	199	1	200	4	247	251
% App. Total	50	50		99.5	0.5		1.6	98.4	
PHF	.250	.500	.333	.905	.250	.909	1.000	.834	.837

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County of Tulare
N/S: Road 64
E/W: Betty Drive
Weather: Clear

File Name : 01_CTE_Rd 64_Betty PM
Site Code : 00322799
Start Date : 9/20/2022
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Groups Printed- Large 2 Axle Vehicles

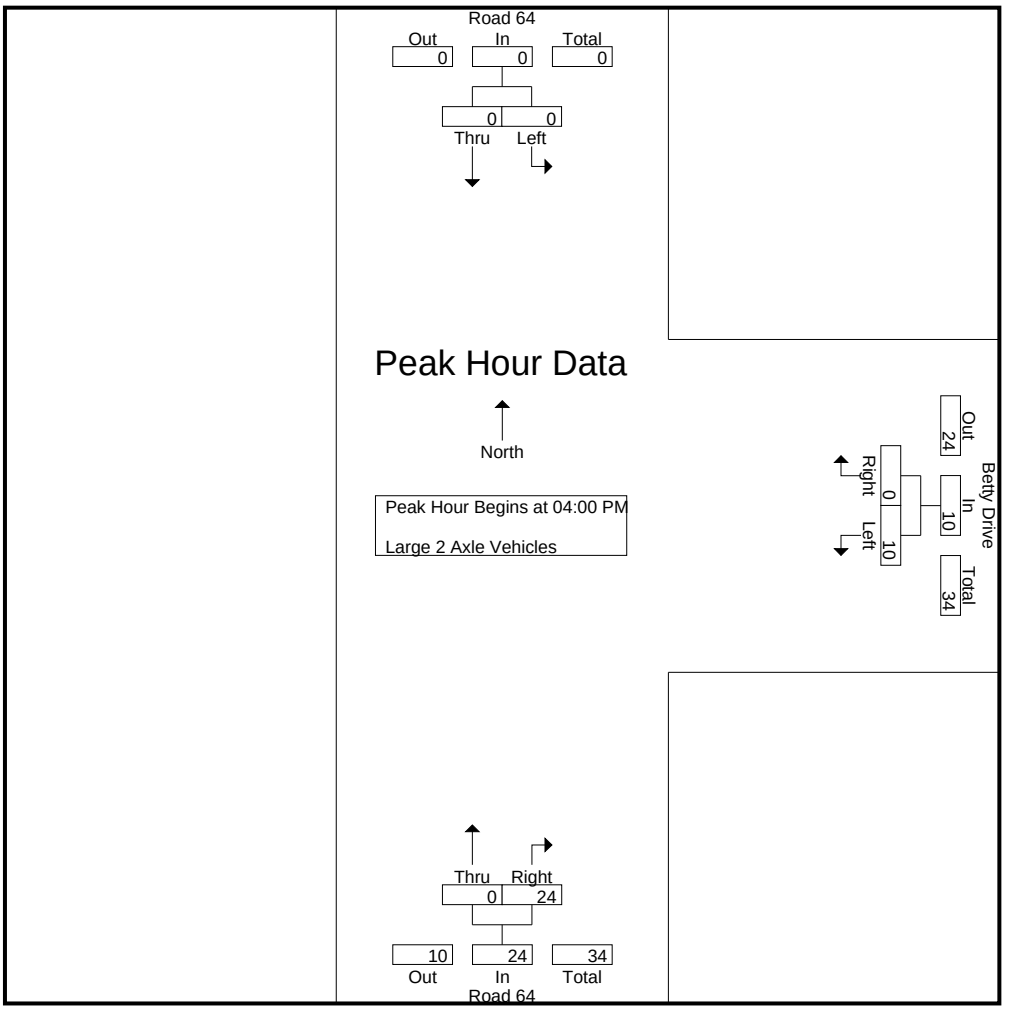
	Road 64 Southbound			Betty Drive Westbound			Road 64 Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	3	0	3	0	5	5	8
04:15 PM	0	0	0	2	0	2	0	7	7	9
04:30 PM	0	0	0	4	0	4	0	7	7	11
04:45 PM	0	0	0	1	0	1	0	5	5	6
Total	0	0	0	10	0	10	0	24	24	34
05:00 PM	0	0	0	0	0	0	0	2	2	2
05:15 PM	0	0	0	3	0	3	0	5	5	8
05:30 PM	0	0	0	2	0	2	0	3	3	5
05:45 PM	0	0	0	0	0	0	0	5	5	5
Total	0	0	0	5	0	5	0	15	15	20
Grand Total	0	0	0	15	0	15	0	39	39	54
Apprch %	0	0		100	0		0	100		
Total %	0	0	0	27.8	0	27.8	0	72.2	72.2	

	Road 64 Southbound			Betty Drive Westbound			Road 64 Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	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	3	0	3	0	5	5	8
04:15 PM	0	0	0	2	0	2	0	**7**	**7**	9
04:30 PM	0	0	0	**4**	0	**4**	0	7	7	**11**
04:45 PM	0	0	0	1	0	1	0	5	5	6
Total Volume	0	0	0	10	0	10	0	24	24	34
% App. Total	0	0		100	0		0	100		
PHF	.000	.000	.000	.625	.000	.625	.000	.857	.857	.773

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N/S: Road 64
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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		
+0 mins.	0	0	0	3	0	3	0	5	5
+15 mins.	0	0	0	2	0	2	0	**7**	**7**
+30 mins.	0	0	0	**4**	0	**4**	0	7	7
+45 mins.	0	0	0	1	0	1	0	5	5
Total Volume	0	0	0	10	0	10	0	24	24
% App. Total	0	0		100	0		0	100	
PHF	.000	.000	.000	.625	.000	.625	.000	.857	.857

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County of Tulare
N/S: Road 64
E/W: Betty Drive
Weather: Clear

File Name : 01_CTE_Rd 64_Betty PM
Site Code : 00322799
Start Date : 9/20/2022
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Groups Printed- 3 Axle Vehicles

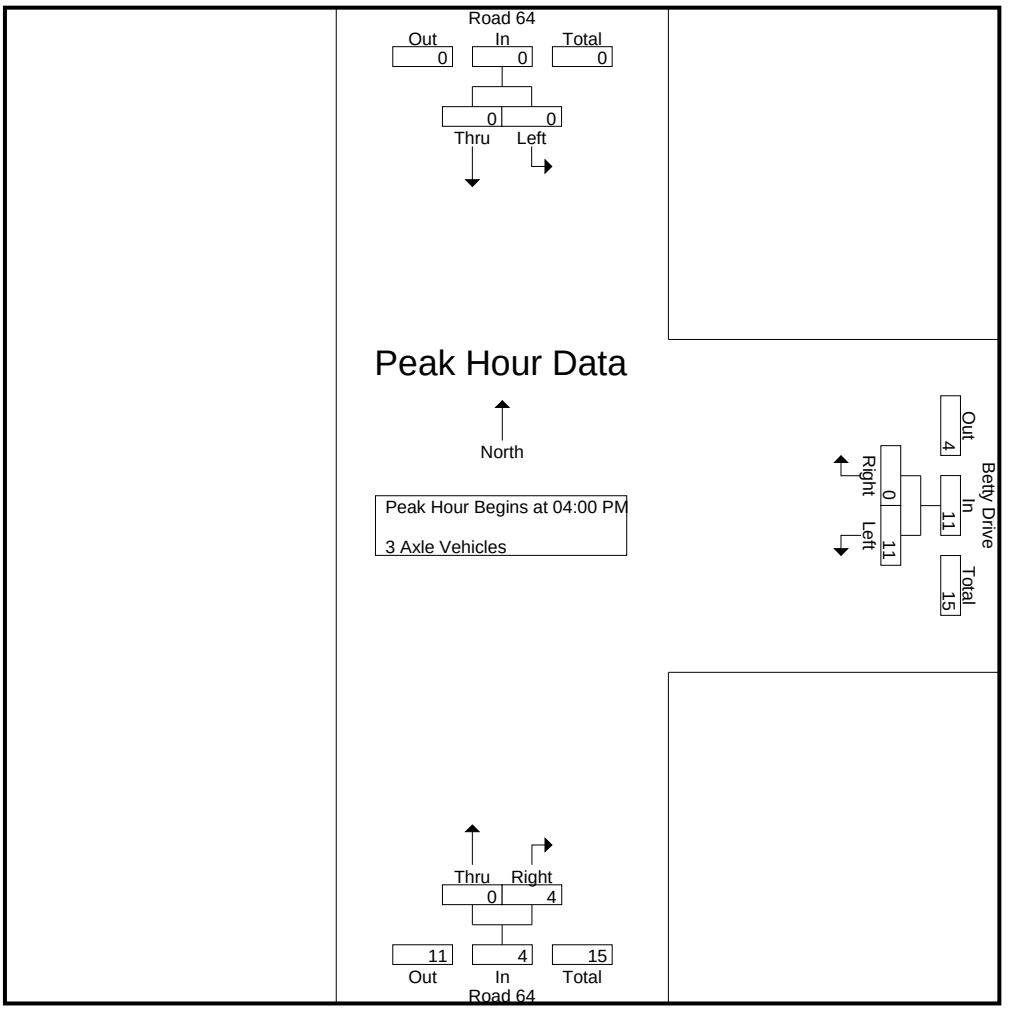
	Road 64 Southbound			Betty Drive Westbound			Road 64 Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	2	0	2	0	0	0	2
04:15 PM	0	0	0	4	0	4	0	1	1	5
04:30 PM	0	0	0	4	0	4	0	1	1	5
04:45 PM	0	0	0	1	0	1	0	2	2	3
Total	0	0	0	11	0	11	0	4	4	15
05:00 PM	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	2	0	2	0	0	0	2
05:45 PM	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	2	0	2	0	0	0	2
Grand Total	0	0	0	13	0	13	0	4	4	17
Apprch %	0	0		100	0		0	100		
Total %	0	0	0	76.5	0	76.5	0	23.5	23.5	

	Road 64 Southbound			Betty Drive Westbound			Road 64 Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	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	2	0	2	0	0	0	2
04:15 PM	0	0	0	**4**	0	**4**	0	1	1	**5**
04:30 PM	0	0	0	4	0	4	0	1	1	5
04:45 PM	0	0	0	1	0	1	0	**2**	**2**	3
Total Volume	0	0	0	11	0	11	0	4	4	15
% App. Total	0	0		100	0		0	100		
PHF	.000	.000	.000	.688	.000	.688	.000	.500	.500	.750

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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		
+0 mins.	0	0	0	2	0	2	0	0	0
+15 mins.	0	0	0	**4**	0	**4**	0	1	1
+30 mins.	0	0	0	4	0	4	0	1	1
+45 mins.	0	0	0	1	0	1	0	**2**	**2**
Total Volume	0	0	0	11	0	11	0	4	4
% App. Total	0	0		100	0		0	100	
PHF	.000	.000	.000	.688	.000	.688	.000	.500	.500

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County of Tulare
N/S: Road 64
E/W: Betty Drive
Weather: Clear

File Name : 01_CTE_Rd 64_Betty PM
Site Code : 00322799
Start Date : 9/20/2022
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Groups Printed- 4+ Axle Trucks

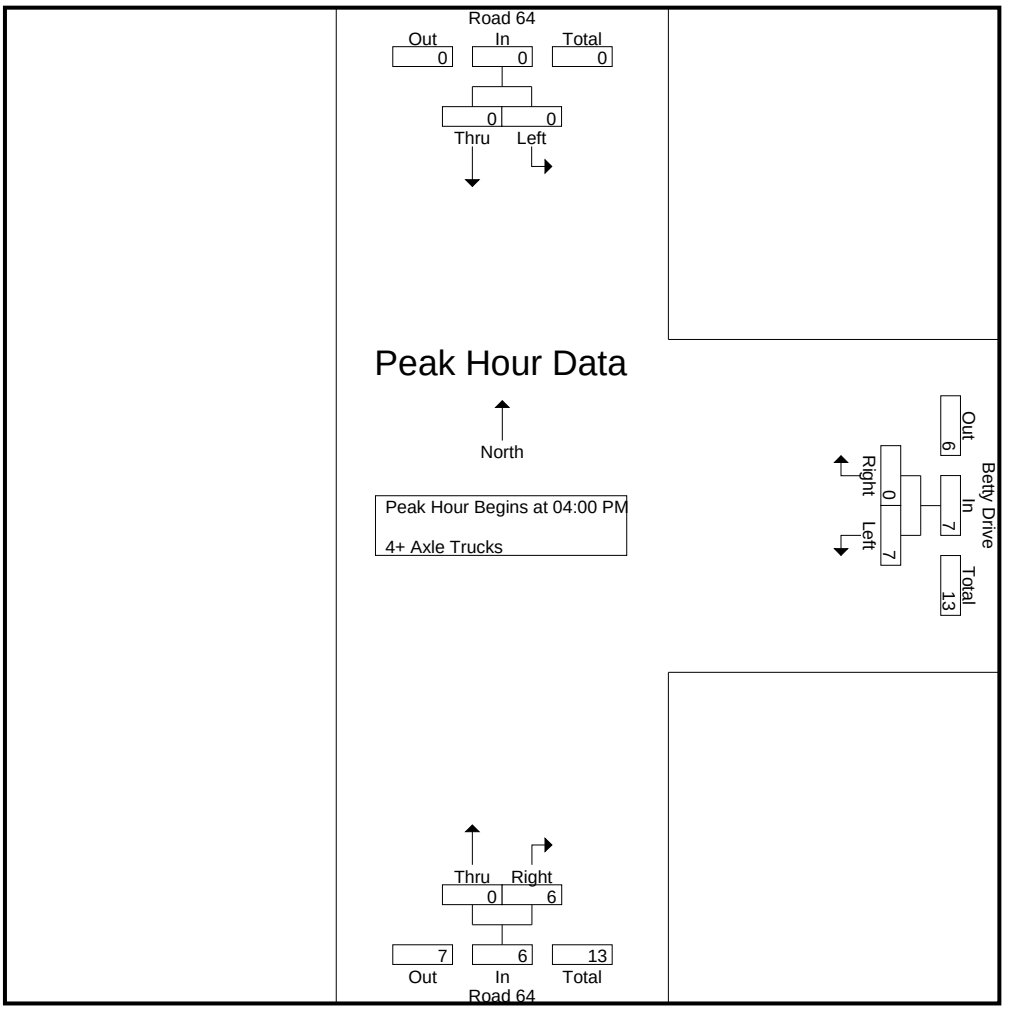
	Road 64 Southbound			Betty Drive Westbound			Road 64 Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	1	0	1	0	1	1	2
04:15 PM	0	0	0	3	0	3	0	2	2	5
04:30 PM	0	0	0	2	0	2	0	1	1	3
04:45 PM	0	0	0	1	0	1	0	2	2	3
Total	0	0	0	7	0	7	0	6	6	13
05:00 PM	1	0	1	1	0	1	0	2	2	4
05:15 PM	1	0	1	1	0	1	0	0	0	2
05:30 PM	0	0	0	1	0	1	0	0	0	1
05:45 PM	2	0	2	2	0	2	0	0	0	4
Total	4	0	4	5	0	5	0	2	2	11
Grand Total	4	0	4	12	0	12	0	8	8	24
Apprch %	100	0		100	0		0	100		
Total %	16.7	0	16.7	50	0	50	0	33.3	33.3	

	Road 64 Southbound			Betty Drive Westbound			Road 64 Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	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	1	0	1	0	1	1	2
04:15 PM	0	0	0	**3**	0	**3**	0	**2**	**2**	**5**
04:30 PM	0	0	0	2	0	2	0	1	1	3
04:45 PM	0	0	0	1	0	1	0	2	2	3
Total Volume	0	0	0	7	0	7	0	6	6	13
% App. Total	0	0		100	0		0	100		
PHF	.000	.000	.000	.583	.000	.583	.000	.750	.750	.650

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N/S: Road 64
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Weather: Clear

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Site Code : 00322799
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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		
+0 mins.	0	0	0	1	0	1	0	1	1
+15 mins.	0	0	0	**3**	0	**3**	0	**2**	**2**
+30 mins.	0	0	0	2	0	2	0	1	1
+45 mins.	0	0	0	1	0	1	0	2	2
Total Volume	0	0	0	7	0	7	0	6	6
% App. Total	0	0		100	0		0	100	
PHF	.000	.000	.000	.583	.000	.583	.000	.750	.750

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County of Tulare
N/S: Road 63
E/W: Betty Drive
Weather: Clear

File Name : 03_CTE_Rd 63_Betty AM
Site Code : 00323250
Start Date : 3/23/2023
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Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

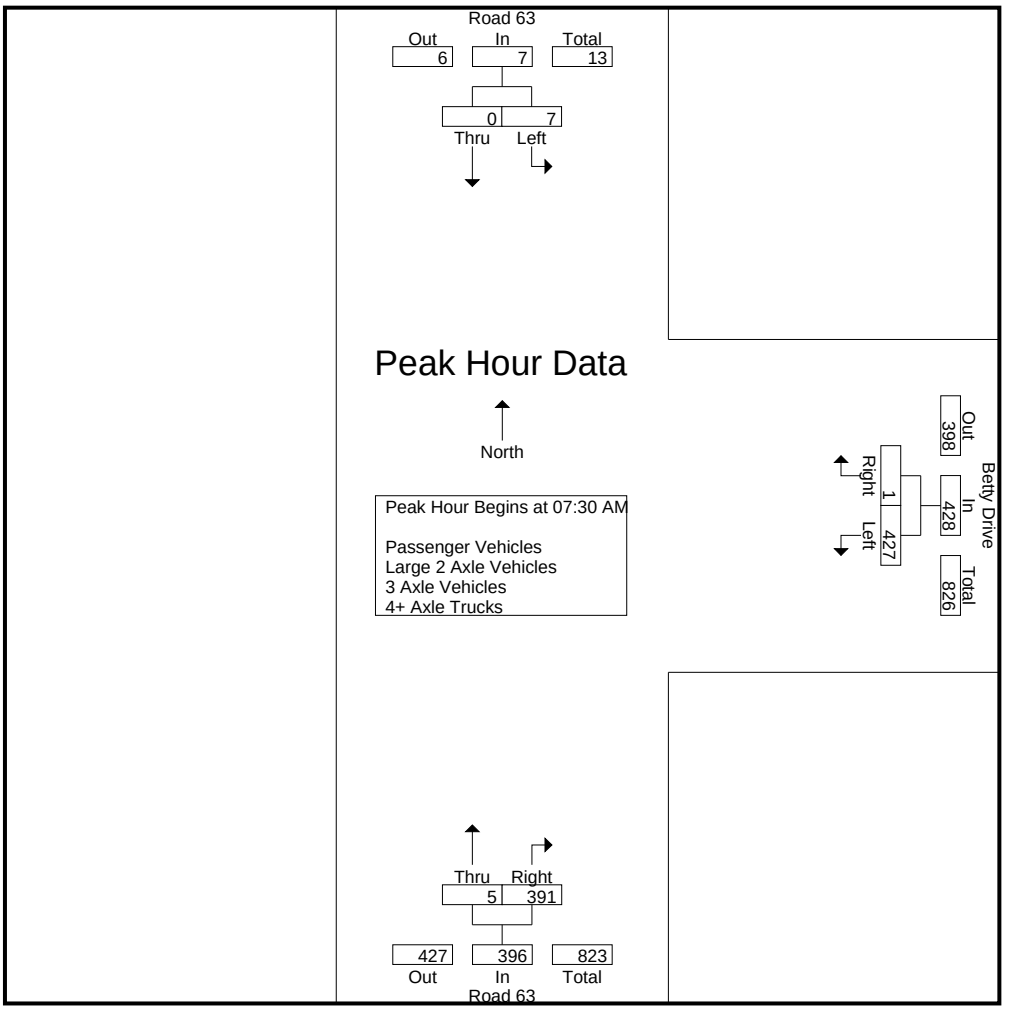
	Road 63 Southbound			Betty Drive Westbound			Road 63 Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
07:00 AM	3	0	3	41	1	42	0	39	39	84
07:15 AM	1	1	2	46	1	47	3	41	44	93
07:30 AM	3	0	3	77	0	77	1	49	50	130
07:45 AM	2	0	2	100	0	100	2	83	85	187
Total	9	1	10	264	2	266	6	212	218	494
08:00 AM	0	0	0	132	0	132	2	121	123	255
08:15 AM	2	0	2	118	1	119	0	138	138	259
08:30 AM	1	0	1	57	0	57	0	56	56	114
08:45 AM	2	1	3	40	0	40	0	42	42	85
Total	5	1	6	347	1	348	2	357	359	713
Grand Total	14	2	16	611	3	614	8	569	577	1207
Apprch %	87.5	12.5		99.5	0.5		1.4	98.6		
Total %	1.2	0.2	1.3	50.6	0.2	50.9	0.7	47.1	47.8	
Passenger Vehicles	6	2	8	566	2	568	6	509	515	1091
% Passenger Vehicles	42.9	100	50	92.6	66.7	92.5	75	89.5	89.3	90.4
Large 2 Axle Vehicles	3	0	3	26	0	26	2	29	31	60
% Large 2 Axle Vehicles	21.4	0	18.8	4.3	0	4.2	25	5.1	5.4	5
3 Axle Vehicles	1	0	1	6	0	6	0	6	6	13
% 3 Axle Vehicles	7.1	0	6.2	1	0	1	0	1.1	1	1.1
4+ Axle Trucks	4	0	4	13	1	14	0	25	25	43
% 4+ Axle Trucks	28.6	0	25	2.1	33.3	2.3	0	4.4	4.3	3.6

	Road 63 Southbound			Betty Drive Westbound			Road 63 Northbound			
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	**3**	0	**3**	77	0	77	1	49	50	130
07:45 AM	2	0	2	100	0	100	**2**	83	85	187
08:00 AM	0	0	0	**132**	0	**132**	2	121	123	255
08:15 AM	2	0	2	118	**1**	119	0	**138**	**138**	**259**
Total Volume	7	0	7	427	1	428	5	391	396	831
% App. Total	100	0		99.8	0.2		1.3	98.7		
PHF	.583	.000	.583	.809	.250	.811	.625	.708	.717	.802

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County of Tulare
N/S: Road 63
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Weather: Clear

File Name : 03_CTE_Rd 63_Betty AM
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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			07:45 AM		
+0 mins.	**3**	0	**3**	77	0	77	**2**	83	85
+15 mins.	1	**1**	2	100	0	100	2	121	123
+30 mins.	3	0	3	**132**	0	**132**	0	**138**	**138**
+45 mins.	2	0	2	118	**1**	119	0	56	56
Total Volume	9	1	10	427	1	428	4	398	402
% App. Total	90	10		99.8	0.2		1	99	
PHF	.750	.250	.833	.809	.250	.811	.500	.721	.728

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County of Tulare
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E/W: Betty Drive
Weather: Clear

File Name : 03_CTE_Rd 63_Betty AM
Site Code : 00323250
Start Date : 3/23/2023
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Groups Printed- Passenger Vehicles

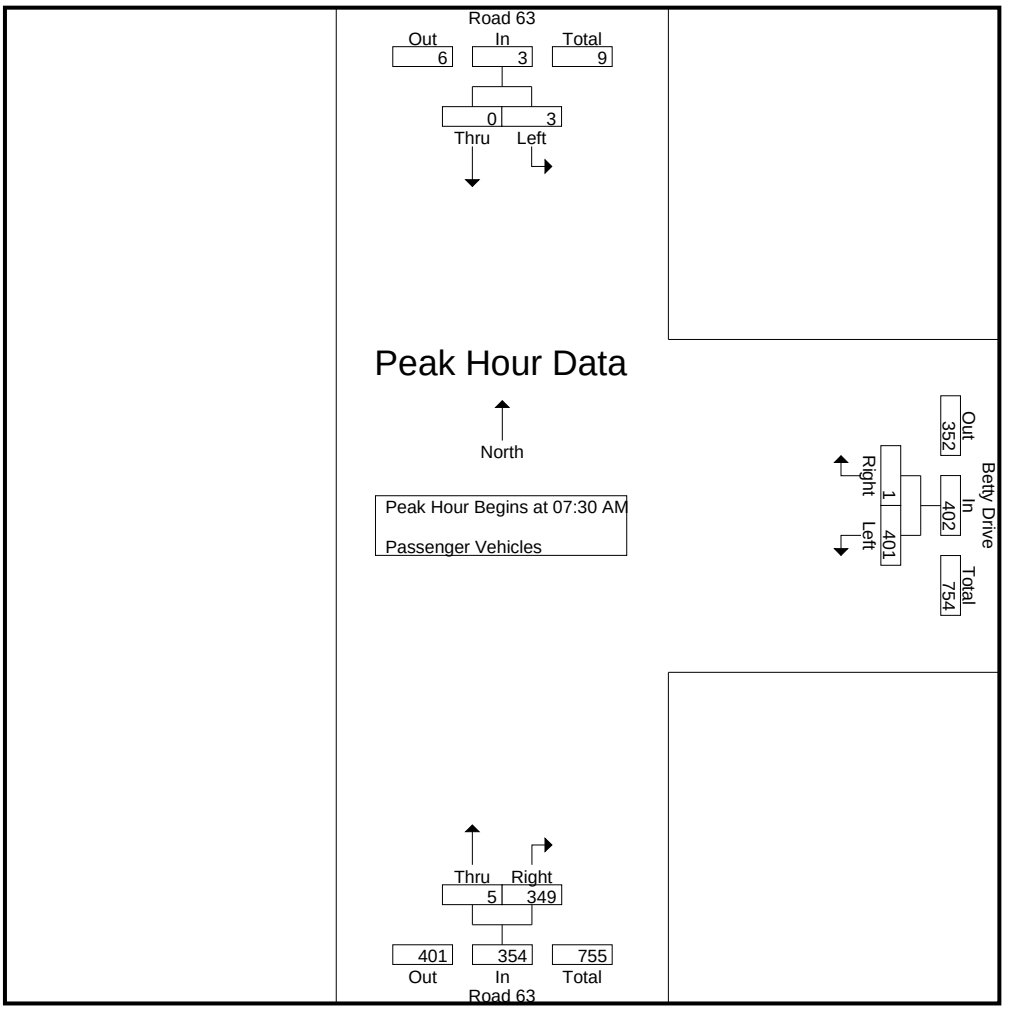
	Road 63 Southbound			Betty Drive Westbound			Road 63 Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
07:00 AM	1	0	1	37	1	38	0	36	36	75
07:15 AM	1	1	2	43	0	43	1	36	37	82
07:30 AM	1	0	1	70	0	70	1	38	39	110
07:45 AM	0	0	0	92	0	92	2	77	79	171
Total	3	1	4	242	1	243	4	187	191	438
08:00 AM	0	0	0	127	0	127	2	112	114	241
08:15 AM	2	0	2	112	1	113	0	122	122	237
08:30 AM	0	0	0	51	0	51	0	52	52	103
08:45 AM	1	1	2	34	0	34	0	36	36	72
Total	3	1	4	324	1	325	2	322	324	653
Grand Total	6	2	8	566	2	568	6	509	515	1091
Apprch %	75	25		99.6	0.4		1.2	98.8		
Total %	0.5	0.2	0.7	51.9	0.2	52.1	0.5	46.7	47.2	

	Road 63 Southbound			Betty Drive Westbound			Road 63 Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	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	0	1	70	0	70	1	38	39	110
07:45 AM	0	0	0	92	0	92	**2**	77	79	171
08:00 AM	0	0	0	**127**	0	**127**	2	112	114	**241**
08:15 AM	**2**	0	**2**	112	**1**	113	0	**122**	**122**	237
Total Volume	3	0	3	401	1	402	5	349	354	759
% App. Total	100	0		99.8	0.2		1.4	98.6		
PHF	.375	.000	.375	.789	.250	.791	.625	.715	.725	.787

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County of Tulare
N/S: Road 63
E/W: Betty Drive
Weather: Clear

File Name : 03_CTE_Rd 63_Betty AM
Site Code : 00323250
Start Date : 3/23/2023
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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		
+0 mins.	1	0	1	70	0	70	1	38	39
+15 mins.	0	0	0	92	0	92	**2**	77	79
+30 mins.	0	0	0	**127**	0	**127**	2	112	114
+45 mins.	**2**	0	**2**	112	**1**	113	0	**122**	**122**
Total Volume	3	0	3	401	1	402	5	349	354
% App. Total	100	0		99.8	0.2		1.4	98.6	
PHF	.375	.000	.375	.789	.250	.791	.625	.715	.725

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County of Tulare
N/S: Road 63
E/W: Betty Drive
Weather: Clear

File Name : 03_CTE_Rd 63_Betty AM
Site Code : 00323250
Start Date : 3/23/2023
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Groups Printed- Large 2 Axle Vehicles

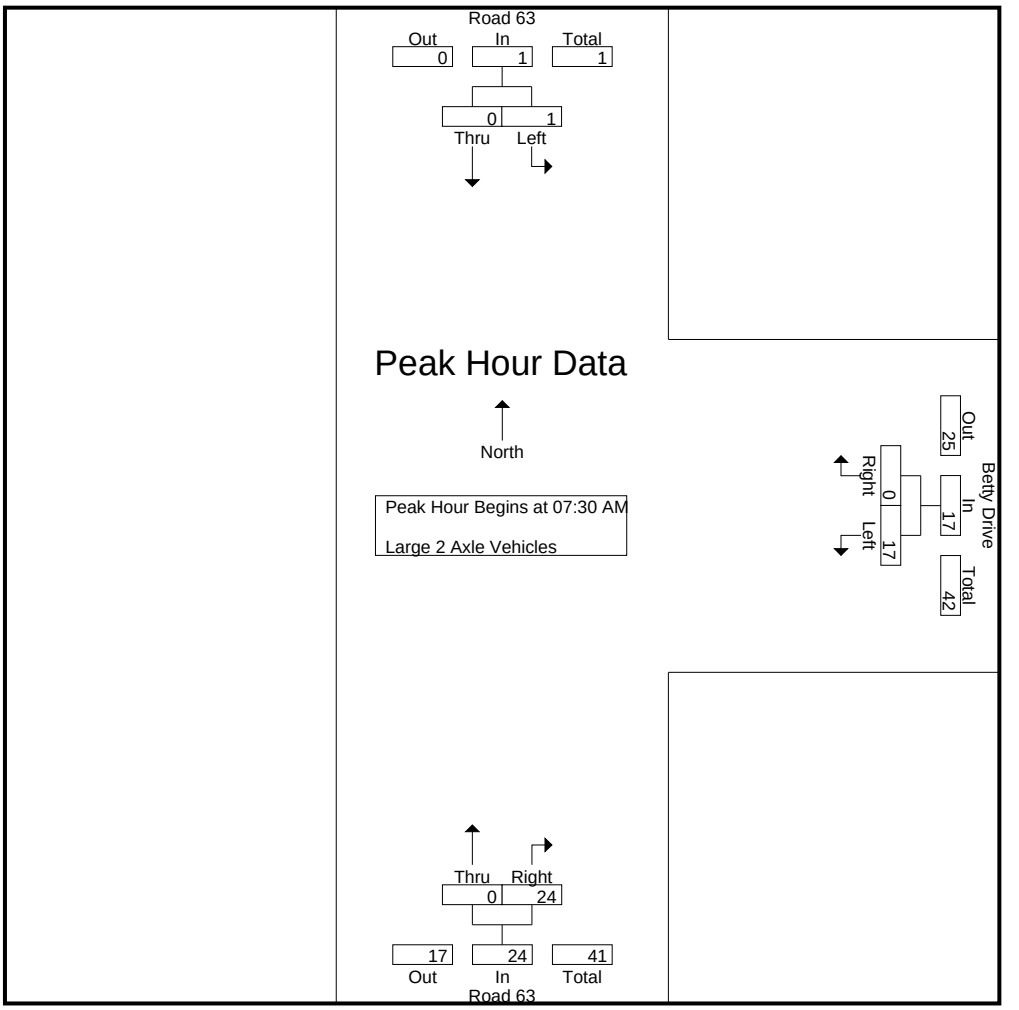
	Road 63 Southbound			Betty Drive Westbound			Road 63 Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
07:00 AM	1	0	1	1	0	1	0	1	1	3
07:15 AM	0	0	0	3	0	3	2	1	3	6
07:30 AM	1	0	1	5	0	5	0	7	7	13
07:45 AM	0	0	0	6	0	6	0	5	5	11
Total	2	0	2	15	0	15	2	14	16	33
08:00 AM	0	0	0	2	0	2	0	3	3	5
08:15 AM	0	0	0	4	0	4	0	9	9	13
08:30 AM	0	0	0	1	0	1	0	1	1	2
08:45 AM	1	0	1	4	0	4	0	2	2	7
Total	1	0	1	11	0	11	0	15	15	27
Grand Total	3	0	3	26	0	26	2	29	31	60
Apprch %	100	0		100	0		6.5	93.5		
Total %	5	0	5	43.3	0	43.3	3.3	48.3	51.7	

	Road 63 Southbound			Betty Drive Westbound			Road 63 Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	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**	0	**1**	5	0	5	0	7	7	**13**
07:45 AM	0	0	0	**6**	0	**6**	0	5	5	11
08:00 AM	0	0	0	2	0	2	0	3	3	5
08:15 AM	0	0	0	4	0	4	0	**9**	**9**	13
Total Volume	1	0	1	17	0	17	0	24	24	42
% App. Total	100	0		100	0		0	100		
PHF	.250	.000	.250	.708	.000	.708	.000	.667	.667	.808

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County of Tulare
N/S: Road 63
E/W: Betty Drive
Weather: Clear

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Site Code : 00323250
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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		
+0 mins.	**1**	0	**1**	5	0	5	0	7	7
+15 mins.	0	0	0	**6**	0	**6**	0	5	5
+30 mins.	0	0	0	2	0	2	0	3	3
+45 mins.	0	0	0	4	0	4	0	**9**	**9**
Total Volume	1	0	1	17	0	17	0	24	24
% App. Total	100	0		100	0		0	100	
PHF	.250	.000	.250	.708	.000	.708	.000	.667	.667

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County of Tulare
N/S: Road 63
E/W: Betty Drive
Weather: Clear

File Name : 03_CTE_Rd 63_Betty AM
Site Code : 00323250
Start Date : 3/23/2023
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Groups Printed- 3 Axle Vehicles

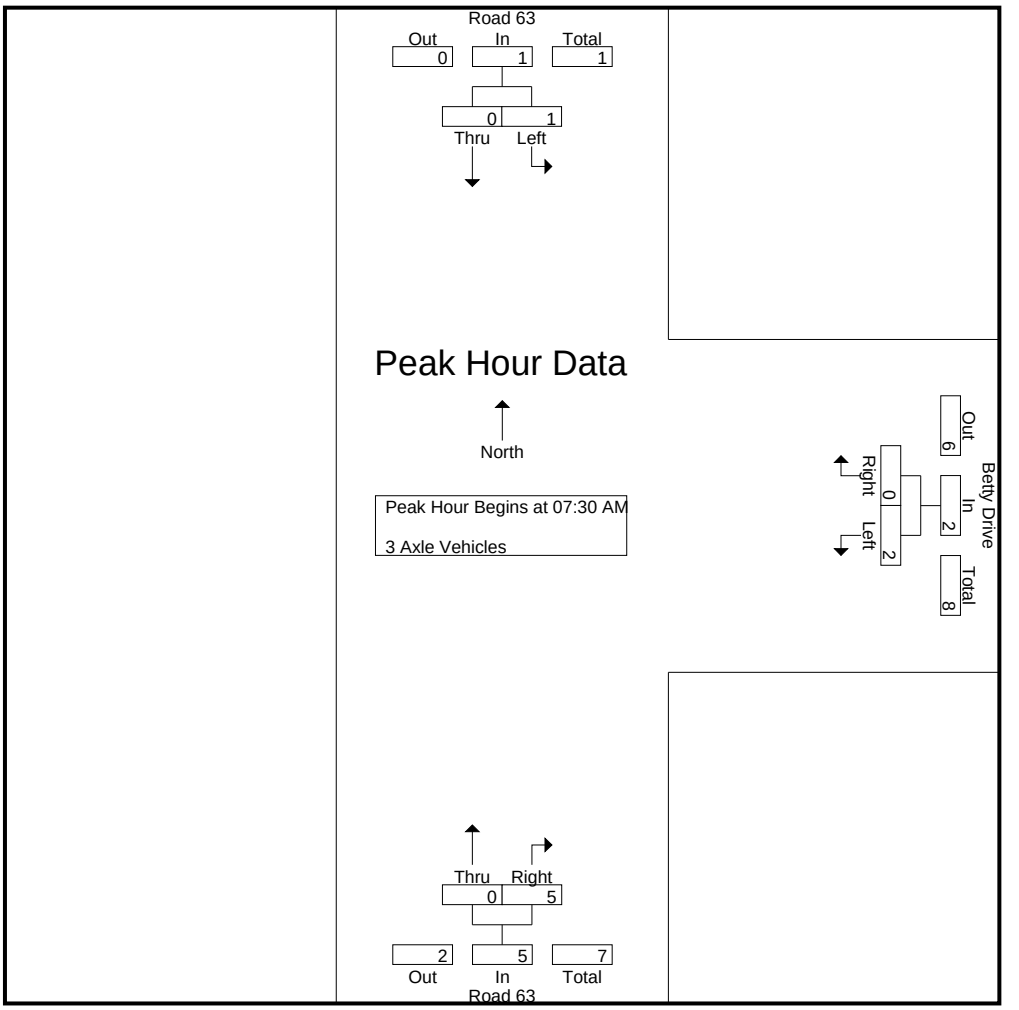
	Road 63 Southbound			Betty Drive Westbound			Road 63 Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	1	0	1	0	0	0	1
07:15 AM	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	1	0	1	0	1	1	2
07:45 AM	1	0	1	0	0	0	0	0	0	1
Total	1	0	1	2	0	2	0	1	1	4
08:00 AM	0	0	0	1	0	1	0	2	2	3
08:15 AM	0	0	0	0	0	0	0	2	2	2
08:30 AM	0	0	0	1	0	1	0	0	0	1
08:45 AM	0	0	0	2	0	2	0	1	1	3
Total	0	0	0	4	0	4	0	5	5	9
Grand Total	1	0	1	6	0	6	0	6	6	13
Apprch %	100	0		100	0		0	100		
Total %	7.7	0	7.7	46.2	0	46.2	0	46.2	46.2	

	Road 63 Southbound			Betty Drive Westbound			Road 63 Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	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	**1**	0	**1**	0	1	1	2
07:45 AM	**1**	0	**1**	0	0	0	0	0	0	1
08:00 AM	0	0	0	1	0	1	0	**2**	**2**	**3**
08:15 AM	0	0	0	0	0	0	0	2	2	2
Total Volume	1	0	1	2	0	2	0	5	5	8
% App. Total	100	0		100	0		0	100		
PHF	.250	.000	.250	.500	.000	.500	.000	.625	.625	.667

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County of Tulare
N/S: Road 63
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Weather: Clear

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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		
+0 mins.	0	0	0	**1**	0	**1**	0	1	1
+15 mins.	**1**	0	**1**	0	0	0	0	0	0
+30 mins.	0	0	0	1	0	1	0	**2**	**2**
+45 mins.	0	0	0	0	0	0	0	2	2
Total Volume	1	0	1	2	0	2	0	5	5
% App. Total	100	0		100	0		0	100	
PHF	.250	.000	.250	.500	.000	.500	.000	.625	.625

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County of Tulare
N/S: Road 63
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Weather: Clear

File Name : 03_CTE_Rd 63_Betty AM
Site Code : 00323250
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Groups Printed- 4+ Axle Trucks

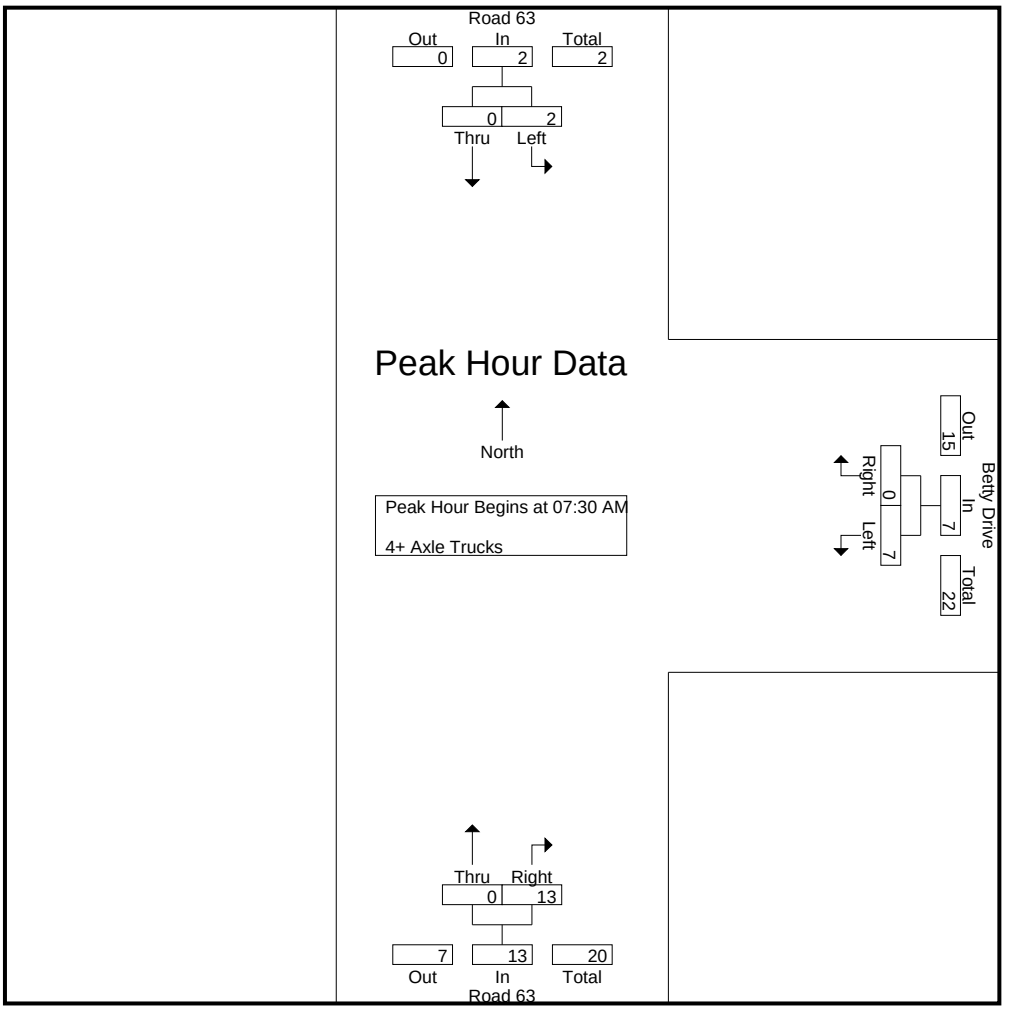
	Road 63 Southbound			Betty Drive Westbound			Road 63 Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
07:00 AM	1	0	1	2	0	2	0	2	2	5
07:15 AM	0	0	0	0	1	1	0	4	4	5
07:30 AM	1	0	1	1	0	1	0	3	3	5
07:45 AM	1	0	1	2	0	2	0	1	1	4
Total	3	0	3	5	1	6	0	10	10	19
08:00 AM	0	0	0	2	0	2	0	4	4	6
08:15 AM	0	0	0	2	0	2	0	5	5	7
08:30 AM	1	0	1	4	0	4	0	3	3	8
08:45 AM	0	0	0	0	0	0	0	3	3	3
Total	1	0	1	8	0	8	0	15	15	24
Grand Total	4	0	4	13	1	14	0	25	25	43
Apprch %	100	0		92.9	7.1		0	100		
Total %	9.3	0	9.3	30.2	2.3	32.6	0	58.1	58.1	

	Road 63 Southbound			Betty Drive Westbound			Road 63 Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	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**	0	**1**	1	0	1	0	3	3	5
07:45 AM	1	0	1	**2**	0	**2**	0	1	1	4
08:00 AM	0	0	0	2	0	2	0	4	4	6
08:15 AM	0	0	0	2	0	2	0	**5**	**5**	**7**
Total Volume	2	0	2	7	0	7	0	13	13	22
% App. Total	100	0		100	0		0	100		
PHF	.500	.000	.500	.875	.000	.875	.000	.650	.650	.786

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County of Tulare
N/S: Road 63
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Weather: Clear

File Name : 03_CTE_Rd 63_Betty AM
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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		
+0 mins.	**1**	0	**1**	1	0	1	0	3	3
+15 mins.	1	0	1	**2**	0	**2**	0	1	1
+30 mins.	0	0	0	2	0	2	0	4	4
+45 mins.	0	0	0	2	0	2	0	**5**	**5**
Total Volume	2	0	2	7	0	7	0	13	13
% App. Total	100	0		100	0		0	100	
PHF	.500	.000	.500	.875	.000	.875	.000	.650	.650

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County of Tulare
N/S: Road 63
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Weather: Clear

File Name : 03_CTE_Rd 63_Betty PM
Site Code : 00323250
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Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

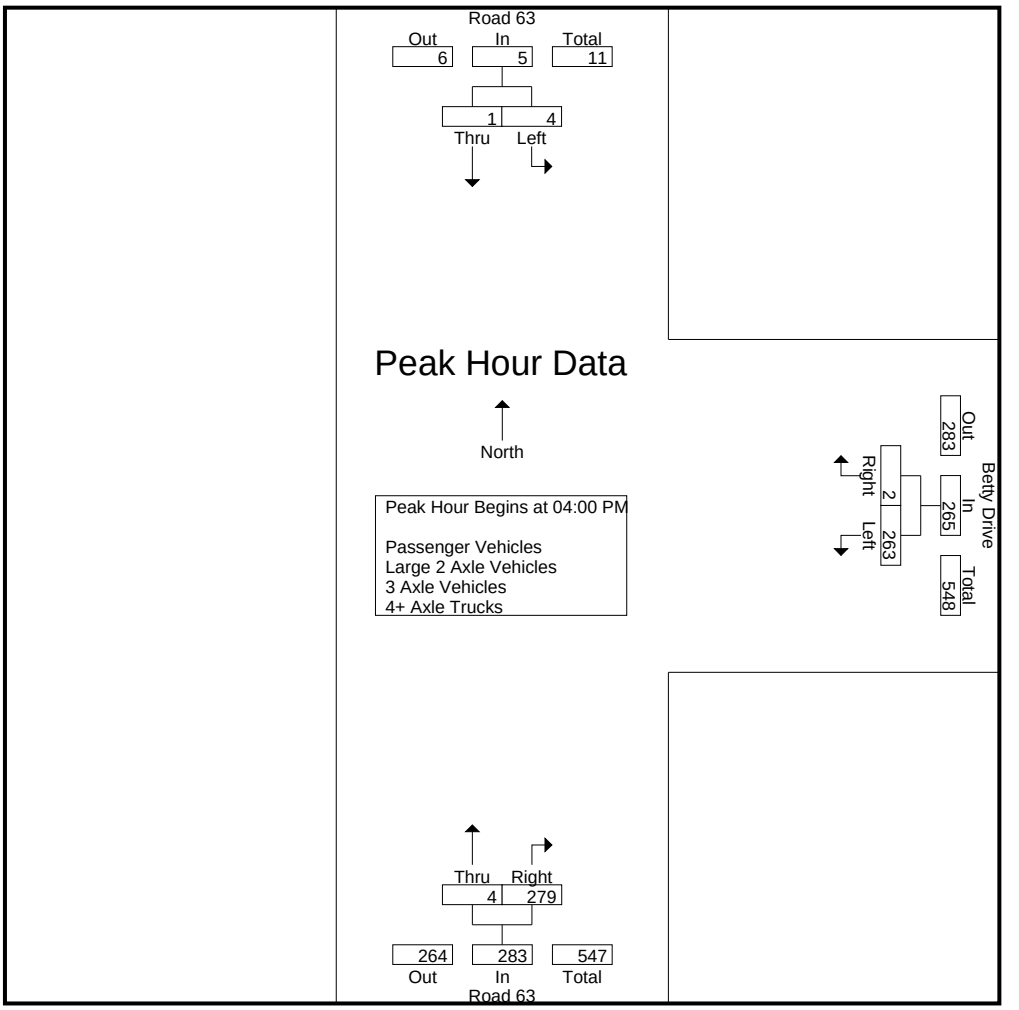
	Road 63 Southbound			Betty Drive Westbound			Road 63 Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
04:00 PM	1	1	2	71	0	71	1	85	86	159
04:15 PM	2	0	2	59	2	61	2	55	57	120
04:30 PM	0	0	0	67	0	67	1	74	75	142
04:45 PM	1	0	1	66	0	66	0	65	65	132
Total	4	1	5	263	2	265	4	279	283	553
05:00 PM	0	1	1	45	0	45	0	63	63	109
05:15 PM	1	0	1	70	0	70	0	78	78	149
05:30 PM	1	1	2	35	0	35	1	41	42	79
05:45 PM	1	0	1	53	0	53	0	46	46	100
Total	3	2	5	203	0	203	1	228	229	437
Grand Total	7	3	10	466	2	468	5	507	512	990
Apprch %	70	30		99.6	0.4		1	99		
Total %	0.7	0.3	1	47.1	0.2	47.3	0.5	51.2	51.7	
Passenger Vehicles	3	2	5	437	2	439	5	467	472	916
% Passenger Vehicles	42.9	66.7	50	93.8	100	93.8	100	92.1	92.2	92.5
Large 2 Axle Vehicles	0	0	0	15	0	15	0	25	25	40
% Large 2 Axle Vehicles	0	0	0	3.2	0	3.2	0	4.9	4.9	4
3 Axle Vehicles	1	0	1	2	0	2	0	3	3	6
% 3 Axle Vehicles	14.3	0	10	0.4	0	0.4	0	0.6	0.6	0.6
4+ Axle Trucks	3	1	4	12	0	12	0	12	12	28
% 4+ Axle Trucks	42.9	33.3	40	2.6	0	2.6	0	2.4	2.3	2.8

	Road 63 Southbound			Betty Drive Westbound			Road 63 Northbound			
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 04:00 PM										
04:00 PM	1	**1**	**2**	**71**	0	**71**	1	**85**	**86**	**159**
04:15 PM	**2**	0	2	59	**2**	61	**2**	55	57	120
04:30 PM	0	0	0	67	0	67	1	74	75	142
04:45 PM	1	0	1	66	0	66	0	65	65	132
Total Volume	4	1	5	263	2	265	4	279	283	553
% App. Total	80	20		99.2	0.8		1.4	98.6		
PHF	.500	.250	.625	.926	.250	.933	.500	.821	.823	.869

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County of Tulare
N/S: Road 63
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Site Code : 00323250
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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			04:00 PM		
+0 mins.	1	**1**	**2**	**71**	0	**71**	1	**85**	**86**
+15 mins.	**2**	0	2	59	**2**	61	**2**	55	57
+30 mins.	0	0	0	67	0	67	1	74	75
+45 mins.	1	0	1	66	0	66	0	65	65
Total Volume	4	1	5	263	2	265	4	279	283
% App. Total	80	20		99.2	0.8		1.4	98.6	
PHF	.500	.250	.625	.926	.250	.933	.500	.821	.823

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County of Tulare
N/S: Road 63
E/W: Betty Drive
Weather: Clear

File Name : 03_CTE_Rd 63_Betty PM
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Groups Printed- Passenger Vehicles

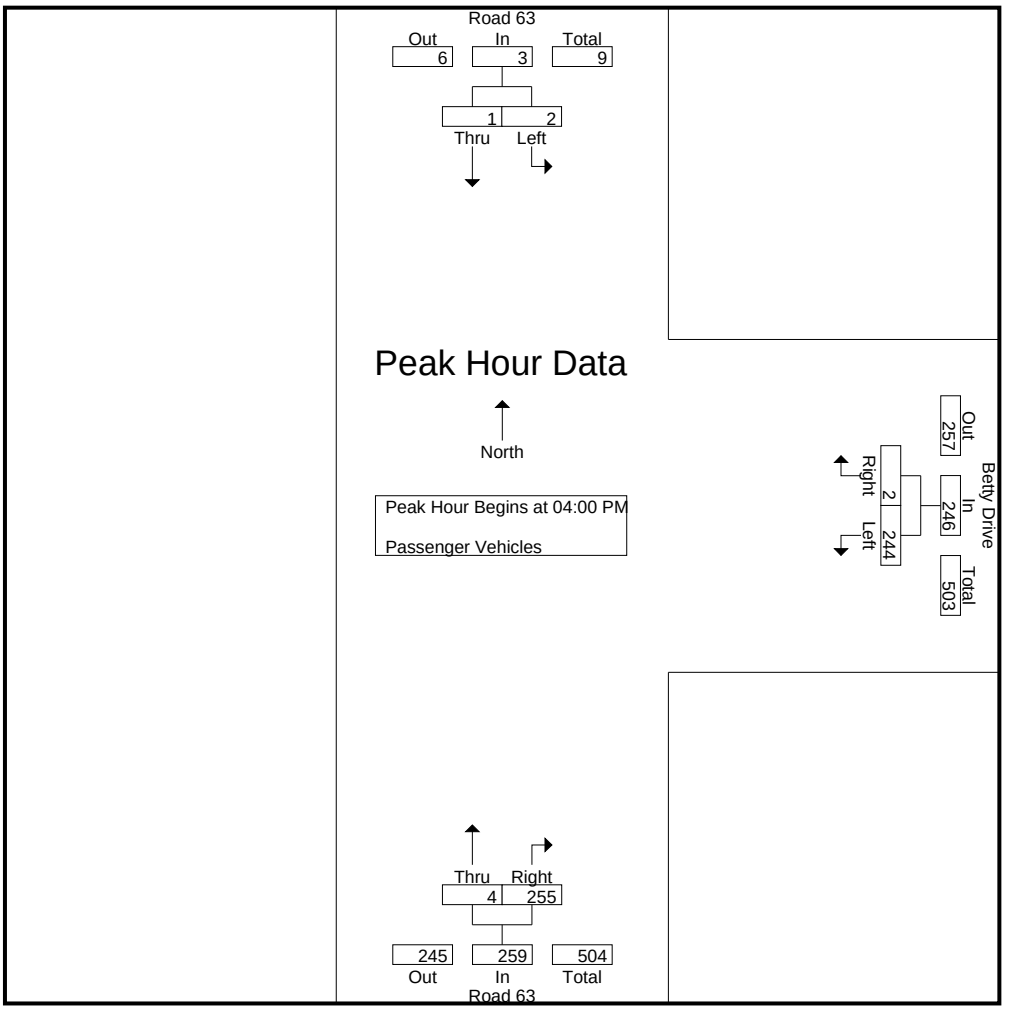
	Road 63 Southbound			Betty Drive Westbound			Road 63 Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
04:00 PM	1	1	2	68	0	68	1	73	74	144
04:15 PM	0	0	0	54	2	56	2	53	55	111
04:30 PM	0	0	0	60	0	60	1	69	70	130
04:45 PM	1	0	1	62	0	62	0	60	60	123
Total	2	1	3	244	2	246	4	255	259	508
05:00 PM	0	0	0	43	0	43	0	59	59	102
05:15 PM	0	0	0	67	0	67	0	73	73	140
05:30 PM	0	1	1	33	0	33	1	40	41	75
05:45 PM	1	0	1	50	0	50	0	40	40	91
Total	1	1	2	193	0	193	1	212	213	408
Grand Total	3	2	5	437	2	439	5	467	472	916
Apprch %	60	40		99.5	0.5		1.1	98.9		
Total %	0.3	0.2	0.5	47.7	0.2	47.9	0.5	51	51.5	

	Road 63 Southbound			Betty Drive Westbound			Road 63 Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	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**	**1**	**2**	**68**	0	**68**	1	**73**	**74**	**144**
04:15 PM	0	0	0	54	**2**	56	**2**	53	55	111
04:30 PM	0	0	0	60	0	60	1	69	70	130
04:45 PM	1	0	1	62	0	62	0	60	60	123
Total Volume	2	1	3	244	2	246	4	255	259	508
% App. Total	66.7	33.3		99.2	0.8		1.5	98.5		
PHF	.500	.250	.375	.897	.250	.904	.500	.873	.875	.882

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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		
+0 mins.	**1**	**1**	**2**	**68**	0	**68**	1	**73**	**74**
+15 mins.	0	0	0	54	**2**	56	**2**	53	55
+30 mins.	0	0	0	60	0	60	1	69	70
+45 mins.	1	0	1	62	0	62	0	60	60
Total Volume	2	1	3	244	2	246	4	255	259
% App. Total	66.7	33.3		99.2	0.8		1.5	98.5	
PHF	.500	.250	.375	.897	.250	.904	.500	.873	.875

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County of Tulare
N/S: Road 63
E/W: Betty Drive
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File Name : 03_CTE_Rd 63_Betty PM
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Groups Printed- Large 2 Axle Vehicles

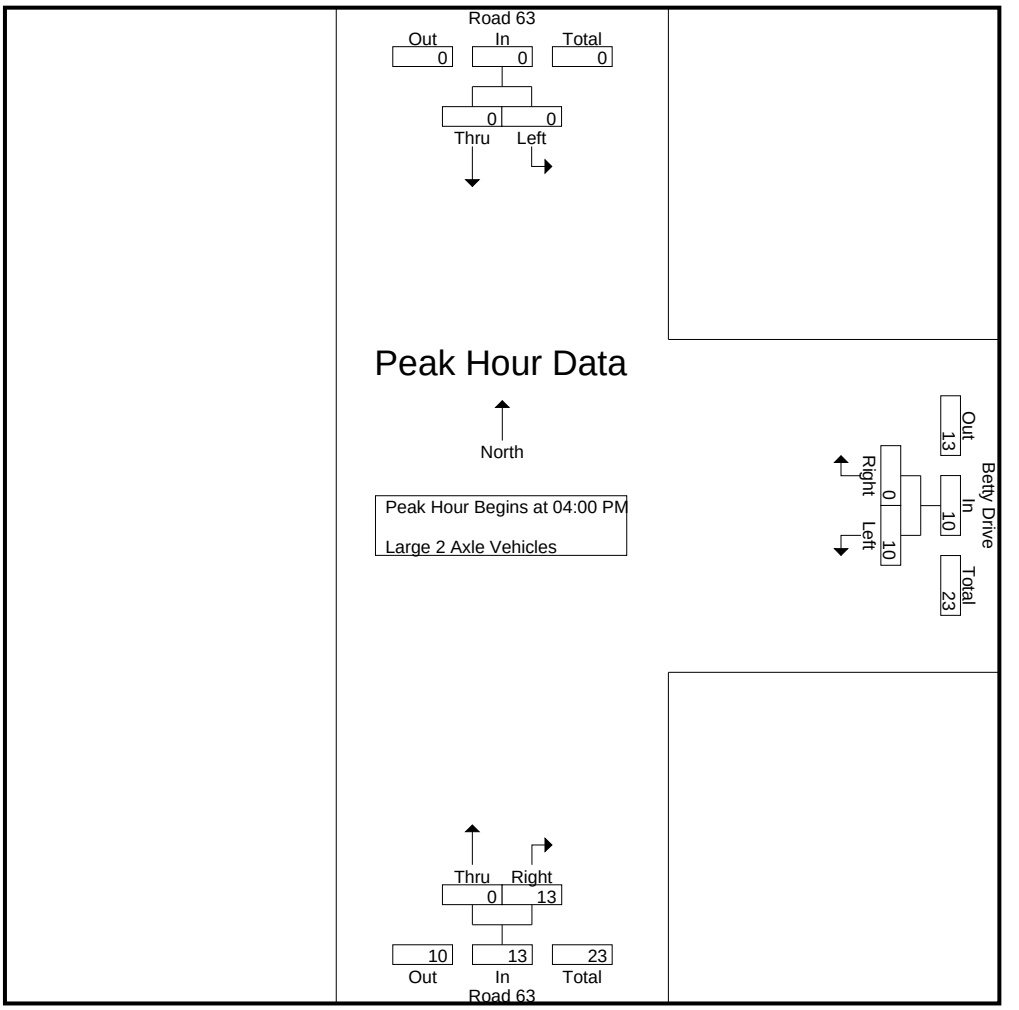
	Road 63 Southbound			Betty Drive Westbound			Road 63 Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	2	0	2	0	5	5	7
04:15 PM	0	0	0	2	0	2	0	1	1	3
04:30 PM	0	0	0	5	0	5	0	4	4	9
04:45 PM	0	0	0	1	0	1	0	3	3	4
Total	0	0	0	10	0	10	0	13	13	23
05:00 PM	0	0	0	0	0	0	0	3	3	3
05:15 PM	0	0	0	2	0	2	0	2	2	4
05:30 PM	0	0	0	1	0	1	0	1	1	2
05:45 PM	0	0	0	2	0	2	0	6	6	8
Total	0	0	0	5	0	5	0	12	12	17
Grand Total	0	0	0	15	0	15	0	25	25	40
Apprch %	0	0		100	0		0	100		
Total %	0	0	0	37.5	0	37.5	0	62.5	62.5	

	Road 63 Southbound			Betty Drive Westbound			Road 63 Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	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	2	0	2	0	**5**	**5**	7
04:15 PM	0	0	0	2	0	2	0	1	1	3
04:30 PM	0	0	0	**5**	0	**5**	0	4	4	**9**
04:45 PM	0	0	0	1	0	1	0	3	3	4
Total Volume	0	0	0	10	0	10	0	13	13	23
% App. Total	0	0		100	0		0	100		
PHF	.000	.000	.000	.500	.000	.500	.000	.650	.650	.639

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County of Tulare
N/S: Road 63
E/W: Betty Drive
Weather: Clear

File Name : 03_CTE_Rd 63_Betty PM
Site Code : 00323250
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		
+0 mins.	0	0	0	2	0	2	0	**5**	**5**
+15 mins.	0	0	0	2	0	2	0	1	1
+30 mins.	0	0	0	**5**	0	**5**	0	4	4
+45 mins.	0	0	0	1	0	1	0	3	3
Total Volume	0	0	0	10	0	10	0	13	13
% App. Total	0	0		100	0		0	100	
PHF	.000	.000	.000	.500	.000	.500	.000	.650	.650

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County of Tulare
N/S: Road 63
E/W: Betty Drive
Weather: Clear

File Name : 03_CTE_Rd 63_Betty PM
Site Code : 00323250
Start Date : 3/23/2023
Page No : 1

Groups Printed- 3 Axle Vehicles

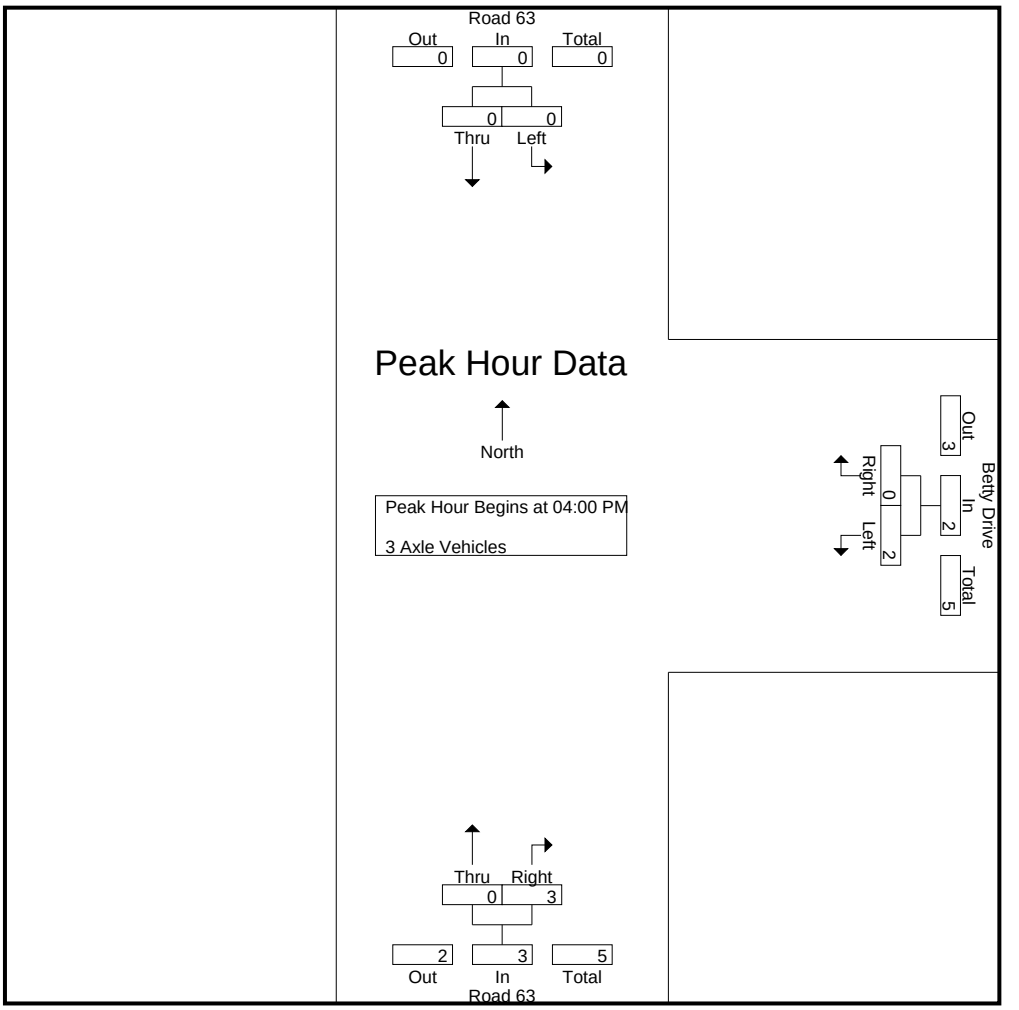
	Road 63 Southbound			Betty Drive Westbound			Road 63 Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	2	2	2
04:15 PM	0	0	0	0	0	0	0	1	1	1
04:30 PM	0	0	0	1	0	1	0	0	0	1
04:45 PM	0	0	0	1	0	1	0	0	0	1
Total	0	0	0	2	0	2	0	3	3	5
05:00 PM	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0
05:30 PM	1	0	1	0	0	0	0	0	0	1
05:45 PM	0	0	0	0	0	0	0	0	0	0
Total	1	0	1	0	0	0	0	0	0	1
Grand Total	1	0	1	2	0	2	0	3	3	6
Apprch %	100	0		100	0		0	100		
Total %	16.7	0	16.7	33.3	0	33.3	0	50	50	

	Road 63 Southbound			Betty Drive Westbound			Road 63 Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	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	**2**	**2**	**2**
04:15 PM	0	0	0	0	0	0	0	1	1	1
04:30 PM	0	0	0	**1**	0	**1**	0	0	0	1
04:45 PM	0	0	0	1	0	1	0	0	0	1
Total Volume	0	0	0	2	0	2	0	3	3	5
% App. Total	0	0		100	0		0	100		
PHF	.000	.000	.000	.500	.000	.500	.000	.375	.375	.625

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County of Tulare
N/S: Road 63
E/W: Betty Drive
Weather: Clear

File Name : 03_CTE_Rd 63_Betty PM
Site Code : 00323250
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		
+0 mins.	0	0	0	0	0	0	0	**2**	**2**
+15 mins.	0	0	0	0	0	0	0	1	1
+30 mins.	0	0	0	**1**	0	**1**	0	0	0
+45 mins.	0	0	0	1	0	1	0	0	0
Total Volume	0	0	0	2	0	2	0	3	3
% App. Total	0	0		100	0		0	100	
PHF	.000	.000	.000	.500	.000	.500	.000	.375	.375

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County of Tulare
N/S: Road 63
E/W: Betty Drive
Weather: Clear

File Name : 03_CTE_Rd 63_Betty PM
Site Code : 00323250
Start Date : 3/23/2023
Page No : 1

Groups Printed- 4+ Axle Trucks

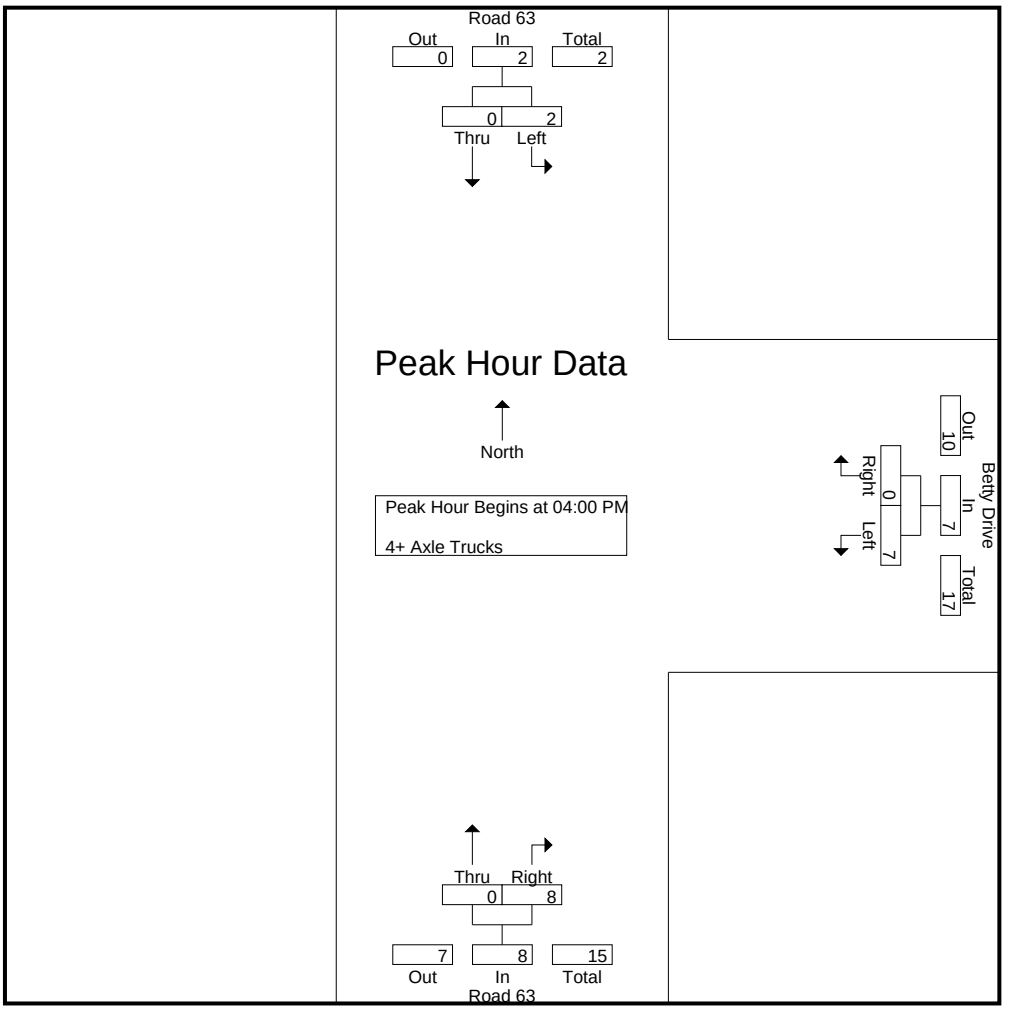
	Road 63 Southbound			Betty Drive Westbound			Road 63 Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	1	0	1	0	5	5	6
04:15 PM	2	0	2	3	0	3	0	0	0	5
04:30 PM	0	0	0	1	0	1	0	1	1	2
04:45 PM	0	0	0	2	0	2	0	2	2	4
Total	2	0	2	7	0	7	0	8	8	17
05:00 PM	0	1	1	2	0	2	0	1	1	4
05:15 PM	1	0	1	1	0	1	0	3	3	5
05:30 PM	0	0	0	1	0	1	0	0	0	1
05:45 PM	0	0	0	1	0	1	0	0	0	1
Total	1	1	2	5	0	5	0	4	4	11
Grand Total	3	1	4	12	0	12	0	12	12	28
Apprch %	75	25		100	0		0	100		
Total %	10.7	3.6	14.3	42.9	0	42.9	0	42.9	42.9	

	Road 63 Southbound			Betty Drive Westbound			Road 63 Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	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	1	0	1	0	**5**	**5**	**6**
04:15 PM	**2**	0	**2**	**3**	0	**3**	0	0	0	5
04:30 PM	0	0	0	1	0	1	0	1	1	2
04:45 PM	0	0	0	2	0	2	0	2	2	4
Total Volume	2	0	2	7	0	7	0	8	8	17
% App. Total	100	0		100	0		0	100		
PHF	.250	.000	.250	.583	.000	.583	.000	.400	.400	.708

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County of Tulare
N/S: Road 63
E/W: Betty Drive
Weather: Clear

File Name : 03_CTE_Rd 63_Betty PM
Site Code : 00323250
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		
+0 mins.	0	0	0	1	0	1	0	**5**	**5**
+15 mins.	**2**	0	**2**	**3**	0	**3**	0	0	0
+30 mins.	0	0	0	1	0	1	0	1	1
+45 mins.	0	0	0	2	0	2	0	2	2
Total Volume	2	0	2	7	0	7	0	8	8
% App. Total	100	0		100	0		0	100	
PHF	.250	.000	.250	.583	.000	.583	.000	.400	.400

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County of Tulare
N/S: Road 64
E/W: Avenue 308
Weather: Clear

File Name : 02_CTE_Rd 64_Ave 308 AM
Site Code : 00322799
Start Date : 9/20/2022
Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

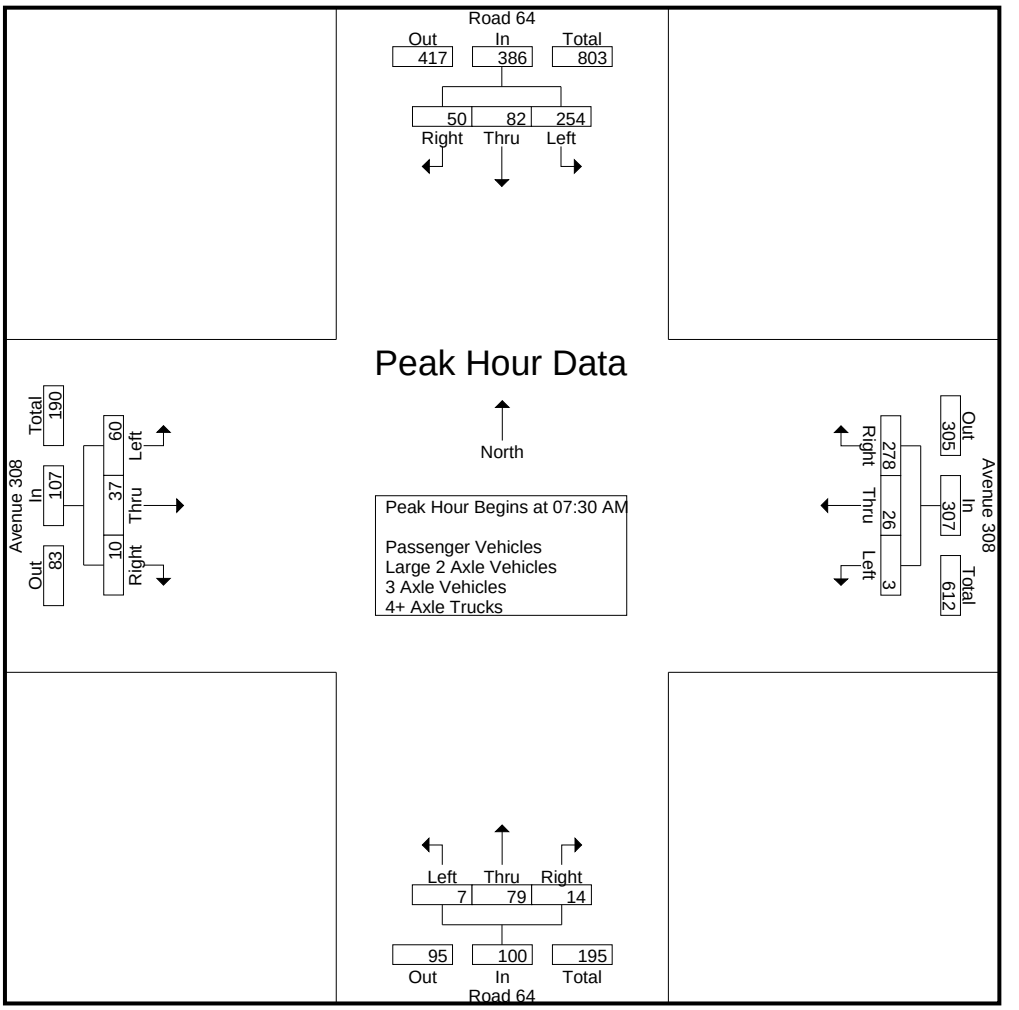
	Road 64 Southbound				Avenue 308 Westbound				Road 64 Northbound				Avenue 308 Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	13	13	6	32	0	8	11	19	1	14	1	16	9	7	1	17	84
07:15 AM	28	23	6	57	0	1	19	20	2	12	5	19	10	5	0	15	111
07:30 AM	57	14	15	86	2	3	42	47	0	20	3	23	20	9	3	32	188
07:45 AM	96	23	10	129	1	6	83	90	2	26	5	33	10	11	2	23	275
Total	194	73	37	304	3	18	155	176	5	72	14	91	49	32	6	87	658
08:00 AM	74	24	11	109	0	8	95	103	1	25	4	30	11	12	3	26	268
08:15 AM	27	21	14	62	0	9	58	67	4	8	2	14	19	5	2	26	169
08:30 AM	15	22	10	47	2	4	24	30	0	11	4	15	6	1	0	7	99
08:45 AM	12	17	8	37	1	2	21	24	3	10	0	13	9	3	0	12	86
Total	128	84	43	255	3	23	198	224	8	54	10	72	45	21	5	71	622
Grand Total	322	157	80	559	6	41	353	400	13	126	24	163	94	53	11	158	1280
Apprch %	57.6	28.1	14.3		1.5	10.2	88.2		8	77.3	14.7		59.5	33.5	7		
Total %	25.2	12.3	6.2	43.7	0.5	3.2	27.6	31.2	1	9.8	1.9	12.7	7.3	4.1	0.9	12.3	
Passenger Vehicles	299	140	76	515	5	31	323	359	11	100	24	135	90	47	11	148	1157
% Passenger Vehicles	92.9	89.2	95	92.1	83.3	75.6	91.5	89.8	84.6	79.4	100	82.8	95.7	88.7	100	93.7	90.4
Large 2 Axle Vehicles	7	9	2	18	0	1	15	16	2	9	0	11	1	5	0	6	51
% Large 2 Axle Vehicles	2.2	5.7	2.5	3.2	0	2.4	4.2	4	15.4	7.1	0	6.7	1.1	9.4	0	3.8	4
3 Axle Vehicles	5	2	0	7	0	0	5	5	0	2	0	2	2	0	0	2	16
% 3 Axle Vehicles	1.6	1.3	0	1.3	0	0	1.4	1.2	0	1.6	0	1.2	2.1	0	0	1.3	1.2
4+ Axle Trucks	11	6	2	19	1	9	10	20	0	15	0	15	1	1	0	2	56
% 4+ Axle Trucks	3.4	3.8	2.5	3.4	16.7	22	2.8	5	0	11.9	0	9.2	1.1	1.9	0	1.3	4.4

	Road 64 Southbound				Avenue 308 Westbound				Road 64 Northbound				Avenue 308 Eastbound				
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	57	14	**15**	86	**2**	3	42	47	0	20	3	23	**20**	9	**3**	**32**	188
07:45 AM	**96**	23	10	**129**	1	6	83	90	2	**26**	**5**	**33**	10	11	2	23	**275**
08:00 AM	74	**24**	11	109	0	8	**95**	**103**	1	25	4	30	11	**12**	3	26	268
08:15 AM	27	21	14	62	0	**9**	58	67	**4**	8	2	14	19	5	2	26	169
Total Volume	254	82	50	386	3	26	278	307	7	79	14	100	60	37	10	107	900
% App. Total	65.8	21.2	13		1	8.5	90.6		7	79	14		56.1	34.6	9.3		
PHF	.661	.854	.833	.748	.375	.722	.732	.745	.438	.760	.700	.758	.750	.771	.833	.836	.818

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County of Tulare
N/S: Road 64
E/W: Avenue 308
Weather: Clear

File Name : 02_CTE_Rd 64_Ave 308 AM
Site Code : 00322799
Start Date : 9/20/2022
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.	57	14	**15**	86	**2**	3	42	47	**2**	12	**5**	19	**20**	9	**3**	**32**
+15 mins.	**96**	23	10	**129**	1	6	83	90	0	20	3	23	10	11	2	23
+30 mins.	74	**24**	11	109	0	8	**95**	**103**	2	**26**	5	**33**	11	**12**	3	26
+45 mins.	27	21	14	62	0	**9**	58	67	1	25	4	30	19	5	2	26
Total Volume	254	82	50	386	3	26	278	307	5	83	17	105	60	37	10	107
% App. Total	65.8	21.2	13		1	8.5	90.6		4.8	79	16.2		56.1	34.6	9.3	
PHF	.661	.854	.833	.748	.375	.722	.732	.745	.625	.798	.850	.795	.750	.771	.833	.836

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County of Tulare
N/S: Road 64
E/W: Avenue 308
Weather: Clear

File Name : 02_CTE_Rd 64_Ave 308 AM
Site Code : 00322799
Start Date : 9/20/2022
Page No : 1

Groups Printed- Passenger Vehicles

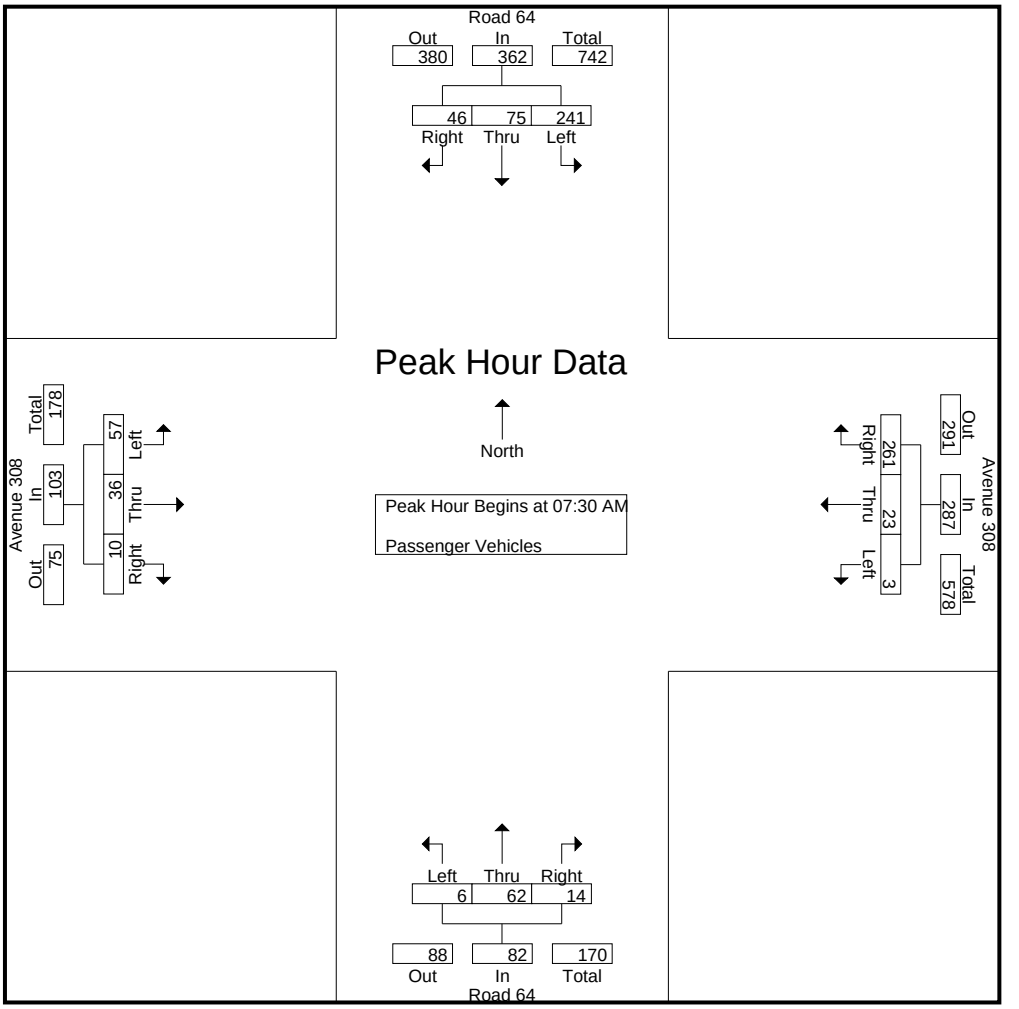
	Road 64 Southbound				Avenue 308 Westbound				Road 64 Northbound				Avenue 308 Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	10	11	6	27	0	3	10	13	1	12	1	14	9	4	1	14	68
07:15 AM	25	21	6	52	0	1	15	16	2	9	5	16	10	5	0	15	99
07:30 AM	55	14	13	82	2	2	39	43	0	17	3	20	18	8	3	29	174
07:45 AM	93	22	10	125	1	6	79	86	2	23	5	30	10	11	2	23	264
Total	183	68	35	286	3	12	143	158	5	61	14	80	47	28	6	81	605
08:00 AM	68	20	10	98	0	7	90	97	1	17	4	22	11	12	3	26	243
08:15 AM	25	19	13	57	0	8	53	61	3	5	2	10	18	5	2	25	153
08:30 AM	13	19	10	42	1	2	19	22	0	8	4	12	6	1	0	7	83
08:45 AM	10	14	8	32	1	2	18	21	2	9	0	11	8	1	0	9	73
Total	116	72	41	229	2	19	180	201	6	39	10	55	43	19	5	67	552
Grand Total	299	140	76	515	5	31	323	359	11	100	24	135	90	47	11	148	1157
Apprch %	58.1	27.2	14.8		1.4	8.6	90		8.1	74.1	17.8		60.8	31.8	7.4		
Total %	25.8	12.1	6.6	44.5	0.4	2.7	27.9	31	1	8.6	2.1	11.7	7.8	4.1	1	12.8	

	Road 64 Southbound				Avenue 308 Westbound				Road 64 Northbound				Avenue 308 Eastbound				
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	55	14	**13**	82	**2**	2	39	43	0	17	3	20	**18**	8	**3**	**29**	174
07:45 AM	**93**	**22**	10	**125**	1	6	79	86	2	**23**	**5**	**30**	10	11	2	23	**264**
08:00 AM	68	20	10	98	0	7	**90**	**97**	1	17	4	22	11	**12**	3	26	243
08:15 AM	25	19	13	57	0	**8**	53	61	**3**	5	2	10	18	5	2	25	153
Total Volume	241	75	46	362	3	23	261	287	6	62	14	82	57	36	10	103	834
% App. Total	66.6	20.7	12.7		1	8	90.9		7.3	75.6	17.1		55.3	35	9.7		
PHF	.648	.852	.885	.724	.375	.719	.725	.740	.500	.674	.700	.683	.792	.750	.833	.888	.790

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County of Tulare
N/S: Road 64
E/W: Avenue 308
Weather: Clear

File Name : 02_CTE_Rd 64_Ave 308 AM
Site Code : 00322799
Start Date : 9/20/2022
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.	55	14	**13**	82	**2**	2	39	43	0	17	3	20	**18**	8	**3**	**29**
+15 mins.	**93**	**22**	10	**125**	1	6	79	86	2	**23**	**5**	**30**	10	11	2	23
+30 mins.	68	20	10	98	0	7	**90**	**97**	1	17	4	22	11	**12**	3	26
+45 mins.	25	19	13	57	0	**8**	53	61	**3**	5	2	10	18	5	2	25
Total Volume	241	75	46	362	3	23	261	287	6	62	14	82	57	36	10	103
% App. Total	66.6	20.7	12.7		1	8	90.9		7.3	75.6	17.1		55.3	35	9.7	
PHF	.648	.852	.885	.724	.375	.719	.725	.740	.500	.674	.700	.683	.792	.750	.833	.888

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County of Tulare
N/S: Road 64
E/W: Avenue 308
Weather: Clear

File Name : 02_CTE_Rd 64_Ave 308 AM
Site Code : 00322799
Start Date : 9/20/2022
Page No : 1

Groups Printed- Large 2 Axle Vehicles

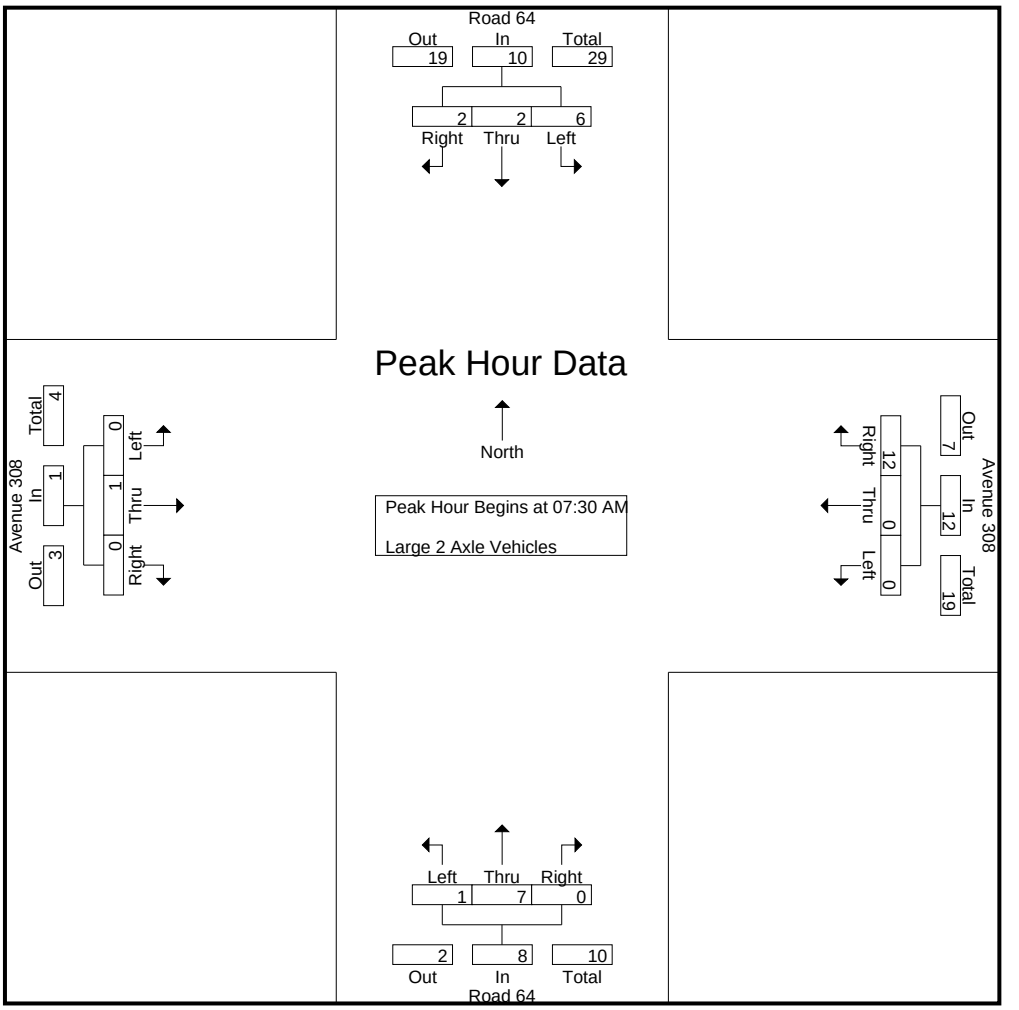
	Road 64 Southbound				Avenue 308 Westbound				Road 64 Northbound				Avenue 308 Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	1	0	1	0	1	0	1	0	1	0	1	0	3	0	3	6
07:15 AM	1	1	0	2	0	0	1	1	0	0	0	0	0	0	0	0	3
07:30 AM	2	0	2	4	0	0	3	3	0	2	0	2	0	1	0	1	10
07:45 AM	1	0	0	1	0	0	1	1	0	0	0	0	0	0	0	0	2
Total	4	2	2	8	0	1	5	6	0	3	0	3	0	4	0	4	21
08:00 AM	3	2	0	5	0	0	4	4	0	4	0	4	0	0	0	0	13
08:15 AM	0	0	0	0	0	0	4	4	1	1	0	2	0	0	0	0	6
08:30 AM	0	2	0	2	0	0	1	1	0	0	0	0	0	0	0	0	3
08:45 AM	0	3	0	3	0	0	1	1	1	1	0	2	1	1	0	2	8
Total	3	7	0	10	0	0	10	10	2	6	0	8	1	1	0	2	30
Grand Total	7	9	2	18	0	1	15	16	2	9	0	11	1	5	0	6	51
Apprch %	38.9	50	11.1		0	6.2	93.8		18.2	81.8	0		16.7	83.3	0		
Total %	13.7	17.6	3.9	35.3	0	2	29.4	31.4	3.9	17.6	0	21.6	2	9.8	0	11.8	

	Road 64 Southbound				Avenue 308 Westbound				Road 64 Northbound				Avenue 308 Eastbound				
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	0	**2**	4	0	0	3	3	0	2	0	2	0	**1**	0	**1**	10
07:45 AM	1	0	0	1	0	0	1	1	0	0	0	0	0	0	0	0	2
08:00 AM	**3**	**2**	0	**5**	0	0	**4**	**4**	0	**4**	0	**4**	0	0	0	0	**13**
08:15 AM	0	0	0	0	0	0	4	4	**1**	1	0	2	0	0	0	0	6
Total Volume	6	2	2	10	0	0	12	12	1	7	0	8	0	1	0	1	31
% App. Total	60	20	20		0	0	100		12.5	87.5	0		0	100	0		
PHF	.500	.250	.250	.500	.000	.000	.750	.750	.250	.438	.000	.500	.000	.250	.000	.250	.596

Counts Unlimited, Inc.
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County of Tulare
N/S: Road 64
E/W: Avenue 308
Weather: Clear

File Name : 02_CTE_Rd 64_Ave 308 AM
Site Code : 00322799
Start Date : 9/20/2022
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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	0	**2**	4	0	0	3	3	0	2	0	2	0	**1**	0	**1**
+15 mins.	1	0	0	1	0	0	1	1	0	0	0	0	0	0	0	0
+30 mins.	**3**	**2**	0	**5**	0	0	**4**	**4**	0	**4**	0	**4**	0	0	0	0
+45 mins.	0	0	0	0	0	0	4	4	**1**	1	0	2	0	0	0	0
Total Volume	6	2	2	10	0	0	12	12	1	7	0	8	0	1	0	1
% App. Total	60	20	20		0	0	100		12.5	87.5	0		0	100	0	
PHF	.500	.250	.250	.500	.000	.000	.750	.750	.250	.438	.000	.500	.000	.250	.000	.250

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County of Tulare
N/S: Road 64
E/W: Avenue 308
Weather: Clear

File Name : 02_CTE_Rd 64_Ave 308 AM
Site Code : 00322799
Start Date : 9/20/2022
Page No : 1

Groups Printed- 3 Axle Vehicles

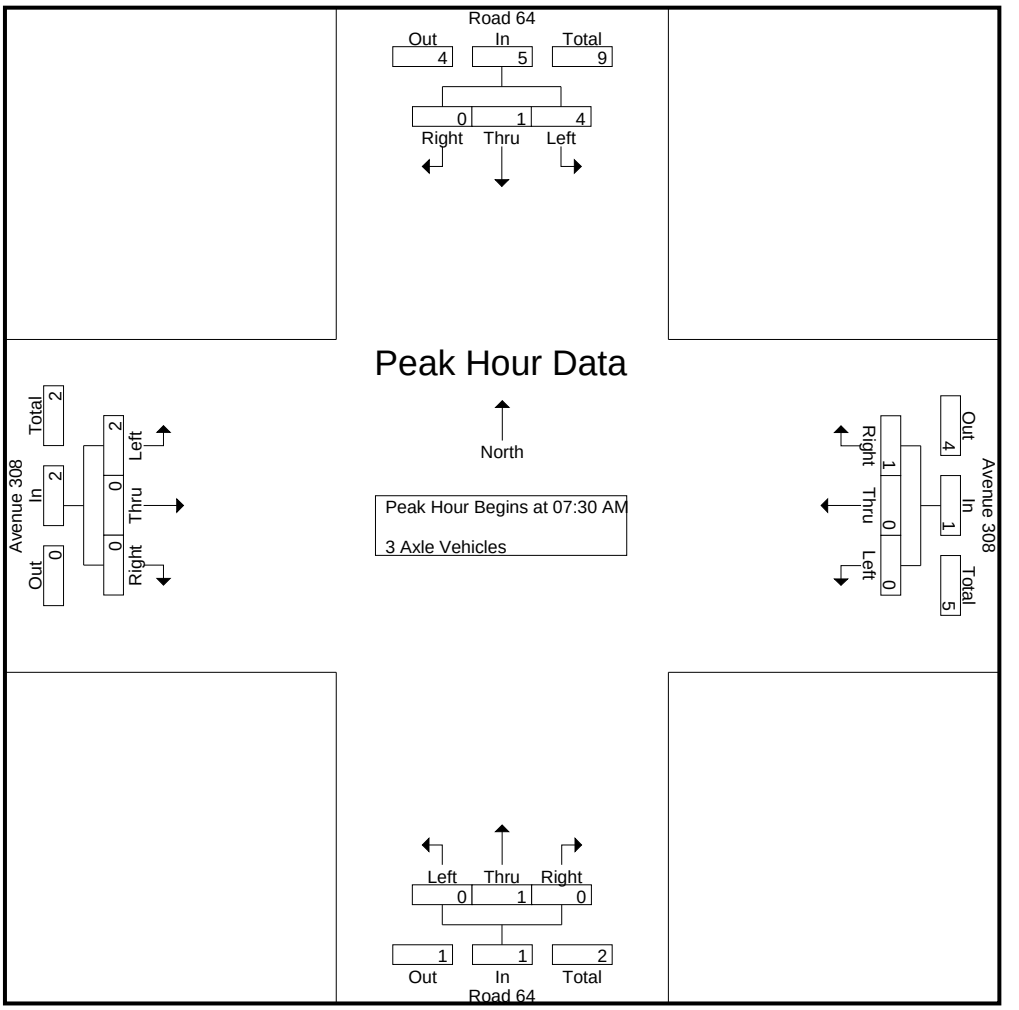
	Road 64 Southbound				Avenue 308 Westbound				Road 64 Northbound				Avenue 308 Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	1	0	1	0	0	2	2	0	0	0	0	0	0	0	0	3
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
07:45 AM	0	1	0	1	0	0	1	1	0	1	0	1	0	0	0	0	3
Total	0	2	0	2	0	0	3	3	0	1	0	1	1	0	0	1	7
08:00 AM	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
08:15 AM	2	0	0	2	0	0	0	0	0	0	0	0	1	0	0	1	3
08:30 AM	0	0	0	0	0	0	1	1	0	1	0	1	0	0	0	0	2
08:45 AM	1	0	0	1	0	0	1	1	0	0	0	0	0	0	0	0	2
Total	5	0	0	5	0	0	2	2	0	1	0	1	1	0	0	1	9
Grand Total	5	2	0	7	0	0	5	5	0	2	0	2	2	0	0	2	16
Apprch %	71.4	28.6	0		0	0	100		0	100	0		100	0	0		
Total %	31.2	12.5	0	43.8	0	0	31.2	31.2	0	12.5	0	12.5	12.5	0	0	12.5	

	Road 64 Southbound				Avenue 308 Westbound				Road 64 Northbound				Avenue 308 Eastbound				
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	**1**	0	0	**1**	1
07:45 AM	0	**1**	0	1	0	0	**1**	**1**	0	**1**	0	**1**	0	0	0	0	**3**
08:00 AM	**2**	0	0	**2**	0	0	0	0	0	0	0	0	0	0	0	0	2
08:15 AM	2	0	0	2	0	0	0	0	0	0	0	0	1	0	0	1	3
Total Volume	4	1	0	5	0	0	1	1	0	1	0	1	2	0	0	2	9
% App. Total	80	20	0		0	0	100		0	100	0		100	0	0		
PHF	.500	.250	.000	.625	.000	.000	.250	.250	.000	.250	.000	.250	.500	.000	.000	.500	.750

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County of Tulare
N/S: Road 64
E/W: Avenue 308
Weather: Clear

File Name : 02_CTE_Rd 64_Ave 308 AM
Site Code : 00322799
Start Date : 9/20/2022
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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	**1**	0	0	**1**
+15 mins.	0	**1**	0	1	0	0	**1**	**1**	0	**1**	0	**1**	0	0	0	0
+30 mins.	**2**	0	0	**2**	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	2	0	0	2	0	0	0	0	0	0	0	0	1	0	0	1
Total Volume	4	1	0	5	0	0	1	1	0	1	0	1	2	0	0	2
% App. Total	80	20	0		0	0	100		0	100	0		100	0	0	
PHF	.500	.250	.000	.625	.000	.000	.250	.250	.000	.250	.000	.250	.500	.000	.000	.500

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County of Tulare
N/S: Road 64
E/W: Avenue 308
Weather: Clear

File Name : 02_CTE_Rd 64_Ave 308 AM
Site Code : 00322799
Start Date : 9/20/2022
Page No : 1

Groups Printed- 4+ Axle Trucks

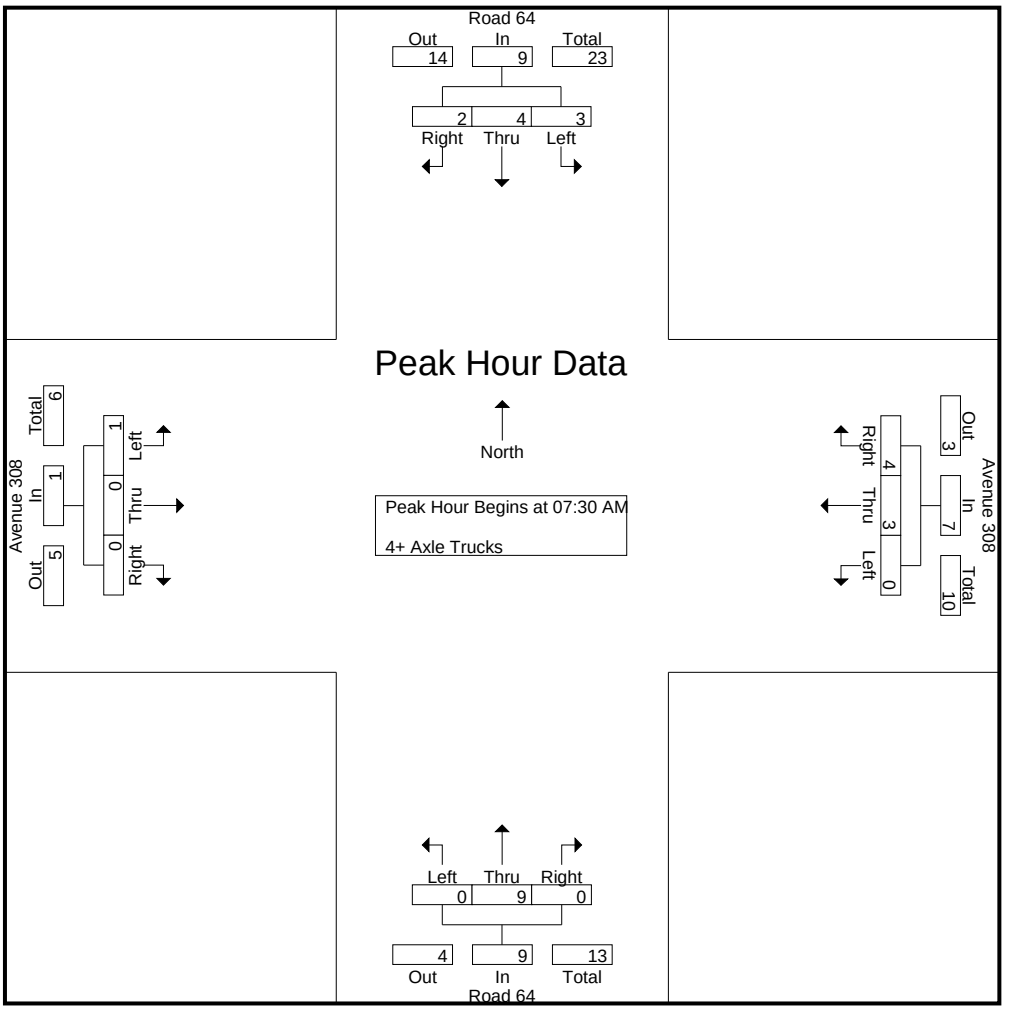
	Road 64 Southbound				Avenue 308 Westbound				Road 64 Northbound				Avenue 308 Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	3	1	0	4	0	4	1	5	0	1	0	1	0	0	0	0	10
07:15 AM	2	0	0	2	0	0	1	1	0	3	0	3	0	0	0	0	6
07:30 AM	0	0	0	0	0	1	0	1	0	1	0	1	1	0	0	1	3
07:45 AM	2	0	0	2	0	0	2	2	0	2	0	2	0	0	0	0	6
Total	7	1	0	8	0	5	4	9	0	7	0	7	1	0	0	1	25
08:00 AM	1	2	1	4	0	1	1	2	0	4	0	4	0	0	0	0	10
08:15 AM	0	2	1	3	0	1	1	2	0	2	0	2	0	0	0	0	7
08:30 AM	2	1	0	3	1	2	3	6	0	2	0	2	0	0	0	0	11
08:45 AM	1	0	0	1	0	0	1	1	0	0	0	0	0	1	0	1	3
Total	4	5	2	11	1	4	6	11	0	8	0	8	0	1	0	1	31
Grand Total	11	6	2	19	1	9	10	20	0	15	0	15	1	1	0	2	56
Apprch %	57.9	31.6	10.5		5	45	50		0	100	0		50	50	0		
Total %	19.6	10.7	3.6	33.9	1.8	16.1	17.9	35.7	0	26.8	0	26.8	1.8	1.8	0	3.6	

	Road 64 Southbound				Avenue 308 Westbound				Road 64 Northbound				Avenue 308 Eastbound				
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	**1**	0	1	0	1	0	1	**1**	0	0	**1**	3
07:45 AM	**2**	0	0	2	0	0	**2**	**2**	0	2	0	2	0	0	0	0	6
08:00 AM	1	**2**	**1**	**4**	0	1	1	2	0	**4**	0	**4**	0	0	0	0	**10**
08:15 AM	0	2	1	3	0	1	1	2	0	2	0	2	0	0	0	0	7
Total Volume	3	4	2	9	0	3	4	7	0	9	0	9	1	0	0	1	26
% App. Total	33.3	44.4	22.2		0	42.9	57.1		0	100	0		100	0	0		
PHF	.375	.500	.500	.563	.000	.750	.500	.875	.000	.563	.000	.563	.250	.000	.000	.250	.650

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County of Tulare
N/S: Road 64
E/W: Avenue 308
Weather: Clear

File Name : 02_CTE_Rd 64_Ave 308 AM
Site Code : 00322799
Start Date : 9/20/2022
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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	**1**	0	1	0	1	0	1	**1**	0	0	**1**
+15 mins.	**2**	0	0	2	0	0	**2**	**2**	0	2	0	2	0	0	0	0
+30 mins.	1	**2**	**1**	**4**	0	1	1	2	0	**4**	0	**4**	0	0	0	0
+45 mins.	0	2	1	3	0	1	1	2	0	2	0	2	0	0	0	0
Total Volume	3	4	2	9	0	3	4	7	0	9	0	9	1	0	0	1
% App. Total	33.3	44.4	22.2		0	42.9	57.1		0	100	0		100	0	0	
PHF	.375	.500	.500	.563	.000	.750	.500	.875	.000	.563	.000	.563	.250	.000	.000	.250

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County of Tulare
N/S: Road 64
E/W: Avenue 308
Weather: Clear

File Name : 02_CTE_Rd 64_Ave 308 PM
Site Code : 00322799
Start Date : 9/20/2022
Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

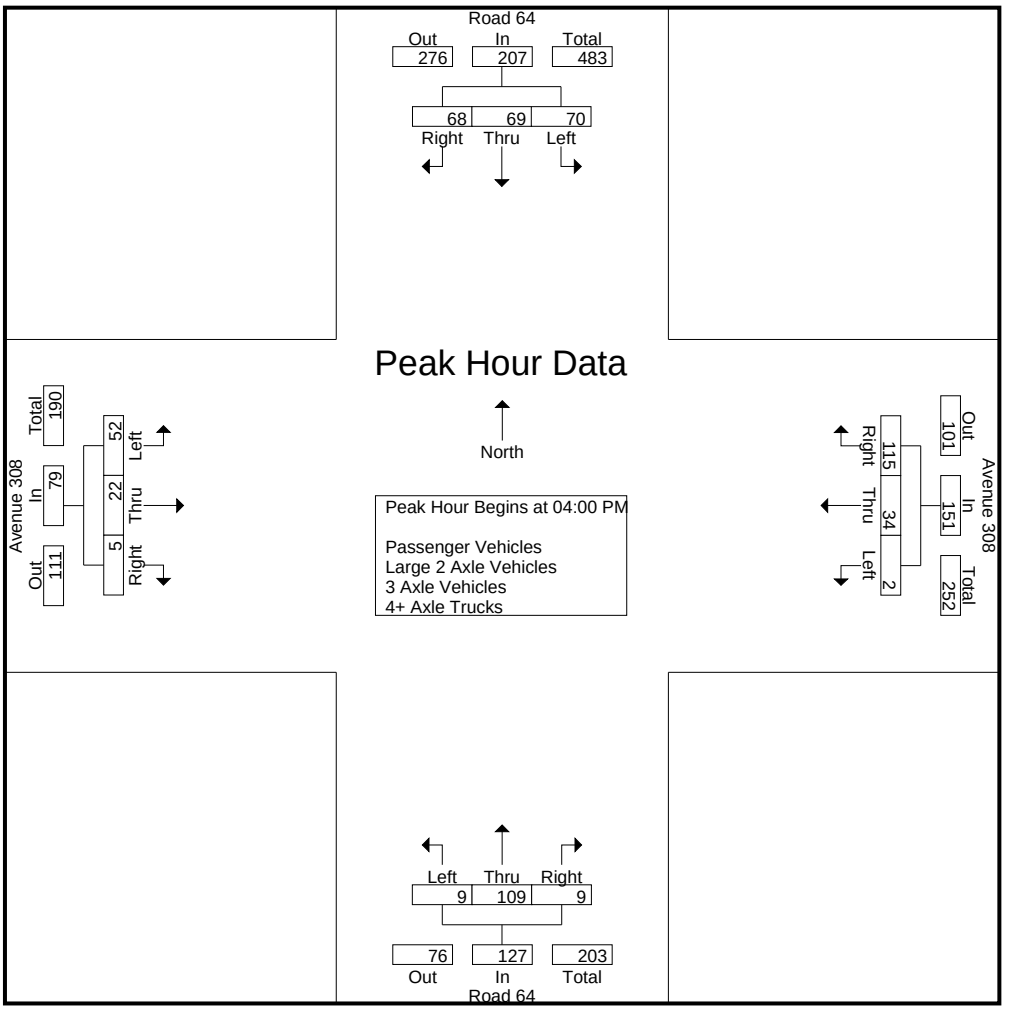
	Road 64 Southbound				Avenue 308 Westbound				Road 64 Northbound				Avenue 308 Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	16	13	19	48	1	7	25	33	3	32	4	39	12	4	1	17	137
04:15 PM	22	17	13	52	1	3	33	37	2	20	2	24	19	6	2	27	140
04:30 PM	14	22	25	61	0	11	31	42	2	29	3	34	15	5	0	20	157
04:45 PM	18	17	11	46	0	13	26	39	2	28	0	30	6	7	2	15	130
Total	70	69	68	207	2	34	115	151	9	109	9	127	52	22	5	79	564
05:00 PM	11	21	15	47	2	8	30	40	1	29	1	31	11	1	1	13	131
05:15 PM	9	14	13	36	1	3	17	21	1	32	1	34	13	4	1	18	109
05:30 PM	8	12	13	33	1	5	20	26	1	23	2	26	5	1	3	9	94
05:45 PM	6	17	11	34	1	2	11	14	1	19	1	21	17	4	0	21	90
Total	34	64	52	150	5	18	78	101	4	103	5	112	46	10	5	61	424
Grand Total	104	133	120	357	7	52	193	252	13	212	14	239	98	32	10	140	988
Apprch %	29.1	37.3	33.6		2.8	20.6	76.6		5.4	88.7	5.9		70	22.9	7.1		
Total %	10.5	13.5	12.1	36.1	0.7	5.3	19.5	25.5	1.3	21.5	1.4	24.2	9.9	3.2	1	14.2	
Passenger Vehicles	86	114	118	318	7	33	177	217	12	187	12	211	96	22	9	127	873
% Passenger Vehicles	82.7	85.7	98.3	89.1	100	63.5	91.7	86.1	92.3	88.2	85.7	88.3	98	68.8	90	90.7	88.4
Large 2 Axle Vehicles	4	10	0	14	0	3	6	9	0	22	2	24	2	3	1	6	53
% Large 2 Axle Vehicles	3.8	7.5	0	3.9	0	5.8	3.1	3.6	0	10.4	14.3	10	2	9.4	10	4.3	5.4
3 Axle Vehicles	7	4	1	12	0	0	2	2	1	0	0	1	0	0	0	0	15
% 3 Axle Vehicles	6.7	3	0.8	3.4	0	0	1	0.8	7.7	0	0	0.4	0	0	0	0	1.5
4+ Axle Trucks	7	5	1	13	0	16	8	24	0	3	0	3	0	7	0	7	47
% 4+ Axle Trucks	6.7	3.8	0.8	3.6	0	30.8	4.1	9.5	0	1.4	0	1.3	0	21.9	0	5	4.8

	Road 64 Southbound				Avenue 308 Westbound				Road 64 Northbound				Avenue 308 Eastbound				
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	16	13	19	48	**1**	7	25	33	**3**	**32**	**4**	**39**	12	4	1	17	137
04:15 PM	**22**	17	13	52	1	3	**33**	37	2	20	2	24	**19**	6	**2**	**27**	140
04:30 PM	14	**22**	**25**	**61**	0	11	31	**42**	2	29	3	34	15	5	0	20	**157**
04:45 PM	18	17	11	46	0	**13**	26	39	2	28	0	30	6	**7**	2	15	130
Total Volume	70	69	68	207	2	34	115	151	9	109	9	127	52	22	5	79	564
% App. Total	33.8	33.3	32.9		1.3	22.5	76.2		7.1	85.8	7.1		65.8	27.8	6.3		
PHF	.795	.784	.680	.848	.500	.654	.871	.899	.750	.852	.563	.814	.684	.786	.625	.731	.898

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County of Tulare
N/S: Road 64
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Weather: Clear

File Name : 02_CTE_Rd 64_Ave 308 PM
Site Code : 00322799
Start Date : 9/20/2022
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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				04:30 PM				04:00 PM			
+0 mins.	16	13	19	48	1	3	**33**	37	**2**	29	**3**	**34**	12	4	1	17
+15 mins.	**22**	17	13	52	0	11	31	**42**	2	28	0	30	**19**	6	**2**	**27**
+30 mins.	14	**22**	**25**	**61**	0	**13**	26	39	1	29	1	31	15	5	0	20
+45 mins.	18	17	11	46	**2**	8	30	40	1	**32**	1	34	6	**7**	2	15
Total Volume	70	69	68	207	3	35	120	158	6	118	5	129	52	22	5	79
% App. Total	33.8	33.3	32.9		1.9	22.2	75.9		4.7	91.5	3.9		65.8	27.8	6.3	
PHF	.795	.784	.680	.848	.375	.673	.909	.940	.750	.922	.417	.949	.684	.786	.625	.731

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County of Tulare
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Weather: Clear

File Name : 02_CTE_Rd 64_Ave 308 PM
Site Code : 00322799
Start Date : 9/20/2022
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Groups Printed- Passenger Vehicles

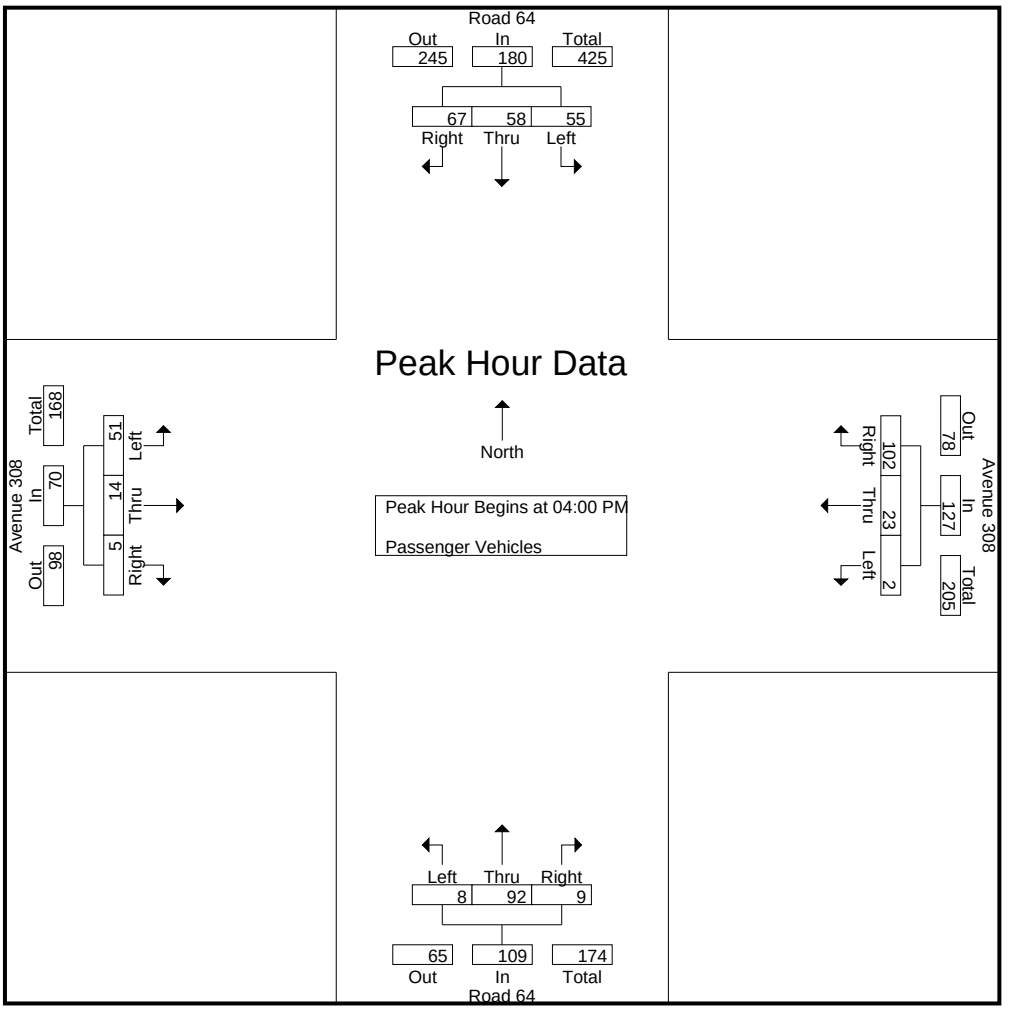
	Road 64 Southbound				Avenue 308 Westbound				Road 64 Northbound				Avenue 308 Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	9	11	18	38	1	4	24	29	3	25	4	32	12	2	1	15	114
04:15 PM	18	14	13	45	1	2	29	32	2	17	2	21	18	2	2	22	120
04:30 PM	11	18	25	54	0	8	25	33	1	26	3	30	15	4	0	19	136
04:45 PM	17	15	11	43	0	9	24	33	2	24	0	26	6	6	2	14	116
Total	55	58	67	180	2	23	102	127	8	92	9	109	51	14	5	70	486
05:00 PM	11	19	15	45	2	6	30	38	1	27	0	28	11	1	1	13	124
05:15 PM	8	13	13	34	1	1	17	19	1	29	1	31	13	4	0	17	101
05:30 PM	7	10	13	30	1	3	18	22	1	21	1	23	5	1	3	9	84
05:45 PM	5	14	10	29	1	0	10	11	1	18	1	20	16	2	0	18	78
Total	31	56	51	138	5	10	75	90	4	95	3	102	45	8	4	57	387
Grand Total	86	114	118	318	7	33	177	217	12	187	12	211	96	22	9	127	873
Apprch %	27	35.8	37.1		3.2	15.2	81.6		5.7	88.6	5.7		75.6	17.3	7.1		
Total %	9.9	13.1	13.5	36.4	0.8	3.8	20.3	24.9	1.4	21.4	1.4	24.2	11	2.5	1	14.5	

	Road 64 Southbound				Avenue 308 Westbound				Road 64 Northbound				Avenue 308 Eastbound				
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	9	11	18	38	**1**	4	24	29	**3**	25	**4**	**32**	12	2	1	15	114
04:15 PM	**18**	14	13	45	1	2	**29**	32	2	17	2	21	**18**	2	**2**	**22**	120
04:30 PM	11	**18**	**25**	**54**	0	8	25	**33**	1	**26**	3	30	15	4	0	19	**136**
04:45 PM	17	15	11	43	0	**9**	24	33	2	24	0	26	6	**6**	2	14	116
Total Volume	55	58	67	180	2	23	102	127	8	92	9	109	51	14	5	70	486
% App. Total	30.6	32.2	37.2		1.6	18.1	80.3		7.3	84.4	8.3		72.9	20	7.1		
PHF	.764	.806	.670	.833	.500	.639	.879	.962	.667	.885	.563	.852	.708	.583	.625	.795	.893

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

County of Tulare
N/S: Road 64
E/W: Avenue 308
Weather: Clear

File Name : 02_CTE_Rd 64_Ave 308 PM
Site Code : 00322799
Start Date : 9/20/2022
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.	9	11	18	38	**1**	4	24	29	**3**	25	**4**	**32**	12	2	1	15
+15 mins.	**18**	14	13	45	1	2	**29**	32	2	17	2	21	**18**	2	**2**	**22**
+30 mins.	11	**18**	**25**	**54**	0	8	25	**33**	1	**26**	3	30	15	4	0	19
+45 mins.	17	15	11	43	0	**9**	24	33	2	24	0	26	6	**6**	2	14
Total Volume	55	58	67	180	2	23	102	127	8	92	9	109	51	14	5	70
% App. Total	30.6	32.2	37.2		1.6	18.1	80.3		7.3	84.4	8.3		72.9	20	7.1	
PHF	.764	.806	.670	.833	.500	.639	.879	.962	.667	.885	.563	.852	.708	.583	.625	.795

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Corona, CA 92878
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County of Tulare
N/S: Road 64
E/W: Avenue 308
Weather: Clear

File Name : 02_CTE_Rd 64_Ave 308 PM
Site Code : 00322799
Start Date : 9/20/2022
Page No : 1

Groups Printed- Large 2 Axle Vehicles

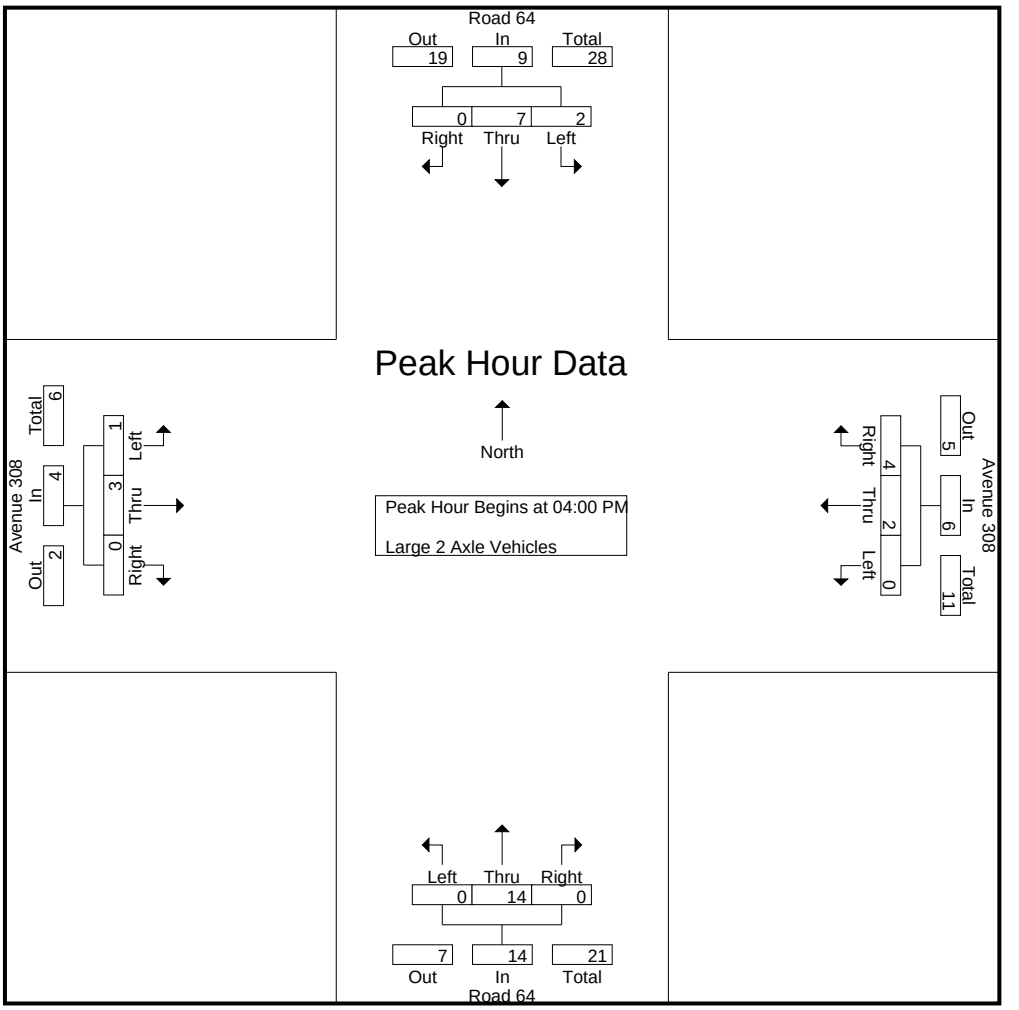
	Road 64 Southbound				Avenue 308 Westbound				Road 64 Northbound				Avenue 308 Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	2	0	0	2	0	2	0	2	0	6	0	6	0	0	0	0	10
04:15 PM	0	2	0	2	0	0	3	3	0	3	0	3	1	3	0	4	12
04:30 PM	0	4	0	4	0	0	1	1	0	3	0	3	0	0	0	0	8
04:45 PM	0	1	0	1	0	0	0	0	0	2	0	2	0	0	0	0	3
Total	2	7	0	9	0	2	4	6	0	14	0	14	1	3	0	4	33
05:00 PM	0	2	0	2	0	0	0	0	0	2	1	3	0	0	0	0	5
05:15 PM	1	0	0	1	0	0	0	0	0	3	0	3	0	0	1	1	5
05:30 PM	1	0	0	1	0	1	2	3	0	2	1	3	0	0	0	0	7
05:45 PM	0	1	0	1	0	0	0	0	0	1	0	1	1	0	0	1	3
Total	2	3	0	5	0	1	2	3	0	8	2	10	1	0	1	2	20
Grand Total	4	10	0	14	0	3	6	9	0	22	2	24	2	3	1	6	53
Apprch %	28.6	71.4	0		0	33.3	66.7		0	91.7	8.3		33.3	50	16.7		
Total %	7.5	18.9	0	26.4	0	5.7	11.3	17	0	41.5	3.8	45.3	3.8	5.7	1.9	11.3	

	Road 64 Southbound				Avenue 308 Westbound				Road 64 Northbound				Avenue 308 Eastbound				
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	**2**	0	0	2	0	**2**	0	2	0	**6**	0	**6**	0	0	0	0	10
04:15 PM	0	2	0	2	0	0	**3**	**3**	0	3	0	3	**1**	**3**	0	**4**	**12**
04:30 PM	0	**4**	0	**4**	0	0	1	1	0	3	0	3	0	0	0	0	8
04:45 PM	0	1	0	1	0	0	0	0	0	2	0	2	0	0	0	0	3
Total Volume	2	7	0	9	0	2	4	6	0	14	0	14	1	3	0	4	33
% App. Total	22.2	77.8	0		0	33.3	66.7		0	100	0		25	75	0		
PHF	.250	.438	.000	.563	.000	.250	.333	.500	.000	.583	.000	.583	.250	.250	.000	.250	.688

Counts Unlimited, Inc.
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County of Tulare
N/S: Road 64
E/W: Avenue 308
Weather: Clear

File Name : 02_CTE_Rd 64_Ave 308 PM
Site Code : 00322799
Start Date : 9/20/2022
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.	**2**	0	0	2	0	**2**	0	2	0	**6**	0	**6**	0	0	0	0
+15 mins.	0	2	0	2	0	0	**3**	**3**	0	3	0	3	**1**	**3**	0	**4**
+30 mins.	0	**4**	0	**4**	0	0	1	1	0	3	0	3	0	0	0	0
+45 mins.	0	1	0	1	0	0	0	0	0	2	0	2	0	0	0	0
Total Volume	2	7	0	9	0	2	4	6	0	14	0	14	1	3	0	4
% App. Total	22.2	77.8	0		0	33.3	66.7		0	100	0		25	75	0	
PHF	.250	.438	.000	.563	.000	.250	.333	.500	.000	.583	.000	.583	.250	.250	.000	.250

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County of Tulare
N/S: Road 64
E/W: Avenue 308
Weather: Clear

File Name : 02_CTE_Rd 64_Ave 308 PM
Site Code : 00322799
Start Date : 9/20/2022
Page No : 1

Groups Printed- 3 Axle Vehicles

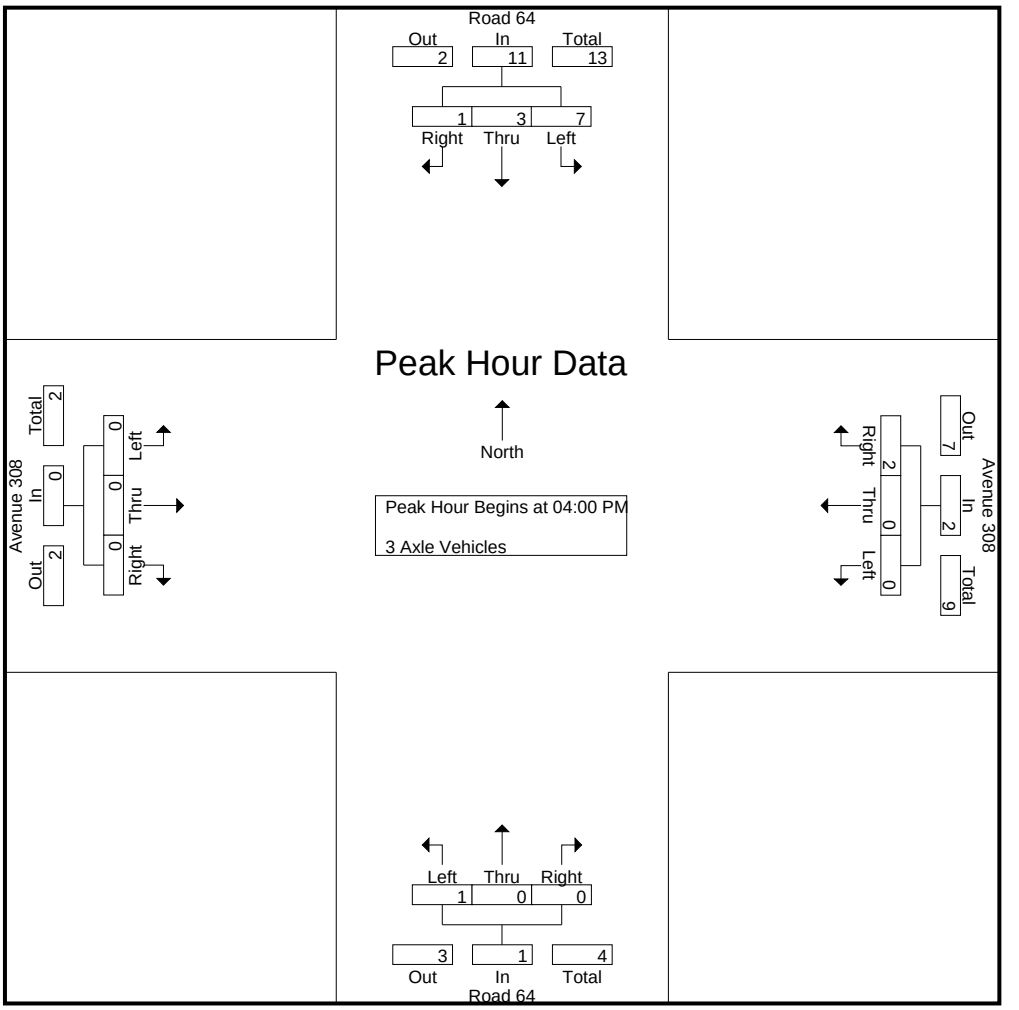
	Road 64 Southbound				Avenue 308 Westbound				Road 64 Northbound				Avenue 308 Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	2	1	1	4	0	0	0	0	0	0	0	0	0	0	0	0	4
04:15 PM	2	1	0	3	0	0	1	1	0	0	0	0	0	0	0	0	4
04:30 PM	3	0	0	3	0	0	1	1	1	0	0	1	0	0	0	0	5
04:45 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	7	3	1	11	0	0	2	2	1	0	0	1	0	0	0	0	14
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	7	4	1	12	0	0	2	2	1	0	0	1	0	0	0	0	15
Apprch %	58.3	33.3	8.3		0	0	100		100	0	0		0	0	0		
Total %	46.7	26.7	6.7	80	0	0	13.3	13.3	6.7	0	0	6.7	0	0	0	0	

	Road 64 Southbound				Avenue 308 Westbound				Road 64 Northbound				Avenue 308 Eastbound				
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	2	**1**	**1**	**4**	0	0	0	0	0	0	0	0	0	0	0	0	4
04:15 PM	2	1	0	3	0	0	**1**	**1**	0	0	0	0	0	0	0	0	4
04:30 PM	**3**	0	0	3	0	0	1	1	**1**	0	0	**1**	0	0	0	0	**5**
04:45 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Total Volume	7	3	1	11	0	0	2	2	1	0	0	1	0	0	0	0	14
% App. Total	63.6	27.3	9.1		0	0	100		100	0	0		0	0	0		
PHF	.583	.750	.250	.688	.000	.000	.500	.500	.250	.000	.000	.250	.000	.000	.000	.000	.700

Counts Unlimited, Inc.
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Corona, CA 92878
(951)268-6268

County of Tulare
N/S: Road 64
E/W: Avenue 308
Weather: Clear

File Name : 02_CTE_Rd 64_Ave 308 PM
Site Code : 00322799
Start Date : 9/20/2022
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.	2	**1**	**1**	**4**	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	2	1	0	3	0	0	**1**	**1**	0	0	0	0	0	0	0	0
+30 mins.	**3**	0	0	3	0	0	1	1	**1**	0	0	**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	7	3	1	11	0	0	2	2	1	0	0	1	0	0	0	0
% App. Total	63.6	27.3	9.1		0	0	100		100	0	0		0	0	0	
PHF	.583	.750	.250	.688	.000	.000	.500	.500	.250	.000	.000	.250	.000	.000	.000	.000

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County of Tulare
N/S: Road 64
E/W: Avenue 308
Weather: Clear

File Name : 02_CTE_Rd 64_Ave 308 PM
Site Code : 00322799
Start Date : 9/20/2022
Page No : 1

Groups Printed- 4+ Axle Trucks

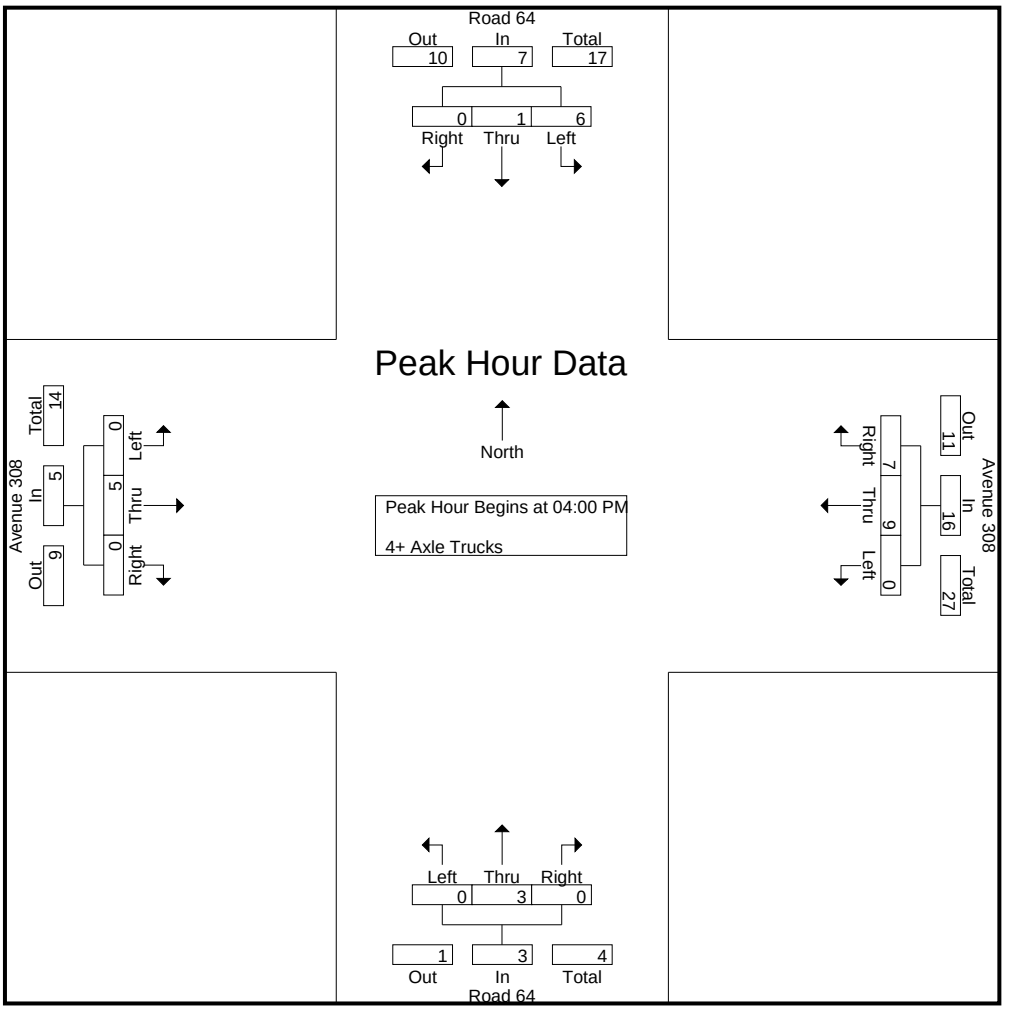
	Road 64 Southbound				Avenue 308 Westbound				Road 64 Northbound				Avenue 308 Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	3	1	0	4	0	1	1	2	0	1	0	1	0	2	0	2	9
04:15 PM	2	0	0	2	0	1	0	1	0	0	0	0	0	1	0	1	4
04:30 PM	0	0	0	0	0	3	4	7	0	0	0	0	0	1	0	1	8
04:45 PM	1	0	0	1	0	4	2	6	0	2	0	2	0	1	0	1	10
Total	6	1	0	7	0	9	7	16	0	3	0	3	0	5	0	5	31
05:00 PM	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	2
05:15 PM	0	1	0	1	0	2	0	2	0	0	0	0	0	0	0	0	3
05:30 PM	0	1	0	1	0	1	0	1	0	0	0	0	0	0	0	0	2
05:45 PM	1	2	1	4	0	2	1	3	0	0	0	0	0	2	0	2	9
Total	1	4	1	6	0	7	1	8	0	0	0	0	0	2	0	2	16
Grand Total	7	5	1	13	0	16	8	24	0	3	0	3	0	7	0	7	47
Apprch %	53.8	38.5	7.7		0	66.7	33.3		0	100	0		0	100	0		
Total %	14.9	10.6	2.1	27.7	0	34	17	51.1	0	6.4	0	6.4	0	14.9	0	14.9	

	Road 64 Southbound				Avenue 308 Westbound				Road 64 Northbound				Avenue 308 Eastbound				
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	**3**	**1**	0	**4**	0	1	1	2	0	1	0	1	0	**2**	0	**2**	9
04:15 PM	2	0	0	2	0	1	0	1	0	0	0	0	0	1	0	1	4
04:30 PM	0	0	0	0	0	3	**4**	**7**	0	0	0	0	0	1	0	1	8
04:45 PM	1	0	0	1	0	**4**	2	6	0	**2**	0	**2**	0	1	0	1	**10**
Total Volume	6	1	0	7	0	9	7	16	0	3	0	3	0	5	0	5	31
% App. Total	85.7	14.3	0		0	56.2	43.8		0	100	0		0	100	0		
PHF	.500	.250	.000	.438	.000	.563	.438	.571	.000	.375	.000	.375	.000	.625	.000	.625	.775

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County of Tulare
N/S: Road 64
E/W: Avenue 308
Weather: Clear

File Name : 02_CTE_Rd 64_Ave 308 PM
Site Code : 00322799
Start Date : 9/20/2022
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.	**3**	**1**	0	**4**	0	1	1	2	0	1	0	1	0	**2**	0	**2**
+15 mins.	2	0	0	2	0	1	0	1	0	0	0	0	0	1	0	1
+30 mins.	0	0	0	0	0	3	**4**	**7**	0	0	0	0	0	1	0	1
+45 mins.	1	0	0	1	0	**4**	2	6	0	**2**	0	**2**	0	1	0	1
Total Volume	6	1	0	7	0	9	7	16	0	3	0	3	0	5	0	5
% App. Total	85.7	14.3	0		0	56.2	43.8		0	100	0		0	100	0	
PHF	.500	.250	.000	.438	.000	.563	.438	.571	.000	.375	.000	.375	.000	.625	.000	.625

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County of Tulare
N/S: Road 64
E/W: Kenyon Plastering Driveway
Weather: Clear

File Name : 03_CTE_Rd 64_KP DW AM
Site Code : 00322799
Start Date : 9/20/2022
Page No : 1

Groups Printed- Total Volume

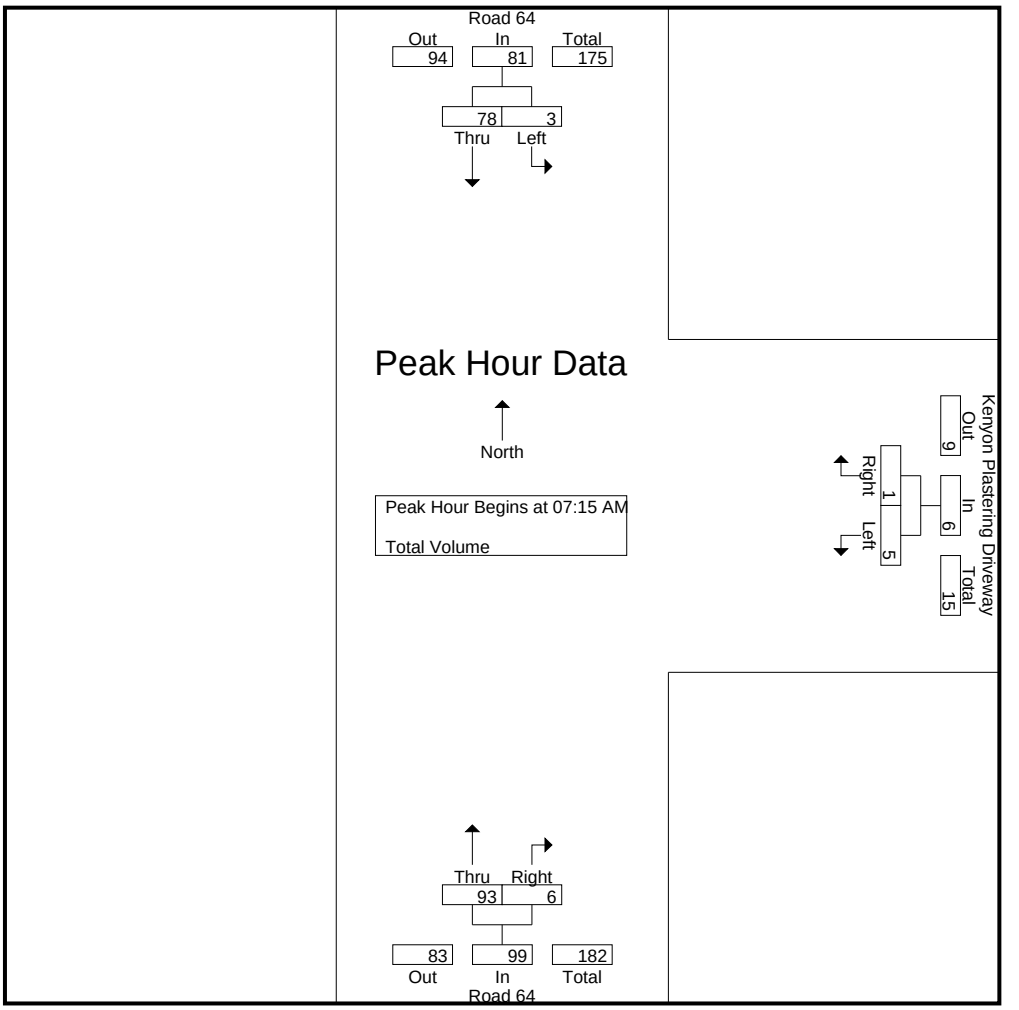
	Road 64 Southbound			Kenyon Plastering Driveway Westbound			Road 64 Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
07:00 AM	2	9	11	1	0	1	13	2	15	27
07:15 AM	1	19	20	2	0	2	19	1	20	42
07:30 AM	1	18	19	1	0	1	24	0	24	44
07:45 AM	0	21	21	1	1	2	22	4	26	49
Total	4	67	71	5	1	6	78	7	85	162
08:00 AM	1	20	21	1	0	1	28	1	29	51
08:15 AM	1	10	11	1	0	1	14	2	16	28
08:30 AM	1	18	19	0	1	1	16	1	17	37
08:45 AM	0	15	15	0	0	0	7	0	7	22
Total	3	63	66	2	1	3	65	4	69	138
Grand Total	7	130	137	7	2	9	143	11	154	300
Apprch %	5.1	94.9		77.8	22.2		92.9	7.1		
Total %	2.3	43.3	45.7	2.3	0.7	3	47.7	3.7	51.3	

	Road 64 Southbound			Kenyon Plastering Driveway Westbound			Road 64 Northbound			
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 07:15 AM										
07:15 AM	**1**	19	20	**2**	0	**2**	19	1	20	42
07:30 AM	1	18	19	1	0	1	24	0	24	44
07:45 AM	0	**21**	**21**	1	**1**	2	22	**4**	26	49
08:00 AM	1	20	21	1	0	1	**28**	1	**29**	**51**
Total Volume	3	78	81	5	1	6	93	6	99	186
% App. Total	3.7	96.3		83.3	16.7		93.9	6.1		
PHF	.750	.929	.964	.625	.250	.750	.830	.375	.853	.912

Counts Unlimited, Inc.
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County of Tulare
N/S: Road 64
E/W: Kenyon Plastering Driveway
Weather: Clear

File Name : 03_CTE_Rd 64_KP DW AM
Site Code : 00322799
Start Date : 9/20/2022
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			07:00 AM			07:15 AM		
+0 mins.	**1**	19	20	1	0	1	19	1	20
+15 mins.	1	18	19	**2**	0	**2**	24	0	24
+30 mins.	0	**21**	**21**	1	0	1	22	**4**	26
+45 mins.	1	20	21	1	**1**	2	**28**	1	**29**
Total Volume	3	78	81	5	1	6	93	6	99
% App. Total	3.7	96.3		83.3	16.7		93.9	6.1	
PHF	.750	.929	.964	.625	.250	.750	.830	.375	.853

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County of Tulare
N/S: Road 64
E/W: Kenyon Plastering Driveway
Weather: Clear

File Name : 03_CTE_Rd 64_KP DW PM
Site Code : 00322799
Start Date : 9/20/2022
Page No : 1

Groups Printed- Total Volume

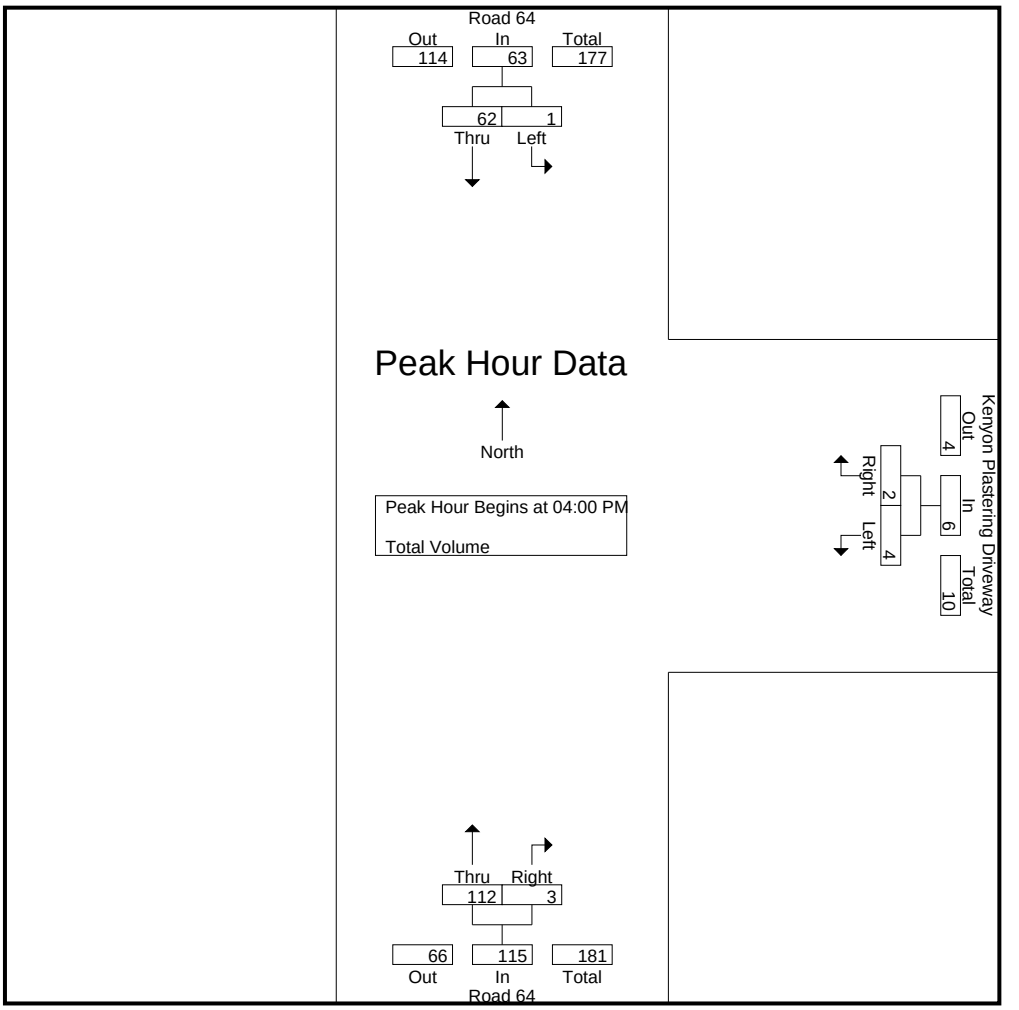
	Road 64 Southbound			Kenyon Plastering Driveway Westbound			Road 64 Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
04:00 PM	0	12	12	3	0	3	34	2	36	51
04:15 PM	1	21	22	0	1	1	21	0	21	44
04:30 PM	0	16	16	1	1	2	26	1	27	45
04:45 PM	0	13	13	0	0	0	31	0	31	44
Total	1	62	63	4	2	6	112	3	115	184
05:00 PM	0	23	23	0	0	0	22	0	22	45
05:15 PM	0	14	14	1	0	1	35	0	35	50
05:30 PM	0	14	14	2	0	2	17	0	17	33
05:45 PM	0	12	12	0	0	0	13	0	13	25
Total	0	63	63	3	0	3	87	0	87	153
Grand Total	1	125	126	7	2	9	199	3	202	337
Apprch %	0.8	99.2		77.8	22.2		98.5	1.5		
Total %	0.3	37.1	37.4	2.1	0.6	2.7	59.1	0.9	59.9	

	Road 64 Southbound			Kenyon Plastering Driveway Westbound			Road 64 Northbound			
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 04:00 PM										
04:00 PM	0	12	12	**3**	0	**3**	**34**	**2**	**36**	**51**
04:15 PM	**1**	**21**	**22**	0	**1**	1	21	0	21	44
04:30 PM	0	16	16	1	1	2	26	1	27	45
04:45 PM	0	13	13	0	0	0	31	0	31	44
Total Volume	1	62	63	4	2	6	112	3	115	184
% App. Total	1.6	98.4		66.7	33.3		97.4	2.6		
PHF	.250	.738	.716	.333	.500	.500	.824	.375	.799	.902

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County of Tulare
N/S: Road 64
E/W: Kenyon Plastering Driveway
Weather: Clear

File Name : 03_CTE_Rd 64_KP DW PM
Site Code : 00322799
Start Date : 9/20/2022
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Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:15 PM			04:00 PM			04:00 PM		
+0 mins.	**1**	21	22	**3**	0	**3**	**34**	**2**	**36**
+15 mins.	0	16	16	0	**1**	1	21	0	21
+30 mins.	0	13	13	1	1	2	26	1	27
+45 mins.	0	**23**	**23**	0	0	0	31	0	31
Total Volume	1	73	74	4	2	6	112	3	115
% App. Total	1.4	98.6		66.7	33.3		97.4	2.6	
PHF	.250	.793	.804	.333	.500	.500	.824	.375	.799

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County of Tulare
N/S: Road 64
E/W: Avenue 304
Weather: Clear

File Name : 04_CTE_Rd 64_Ave 304 AM
Site Code : 00322799
Start Date : 9/20/2022
Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

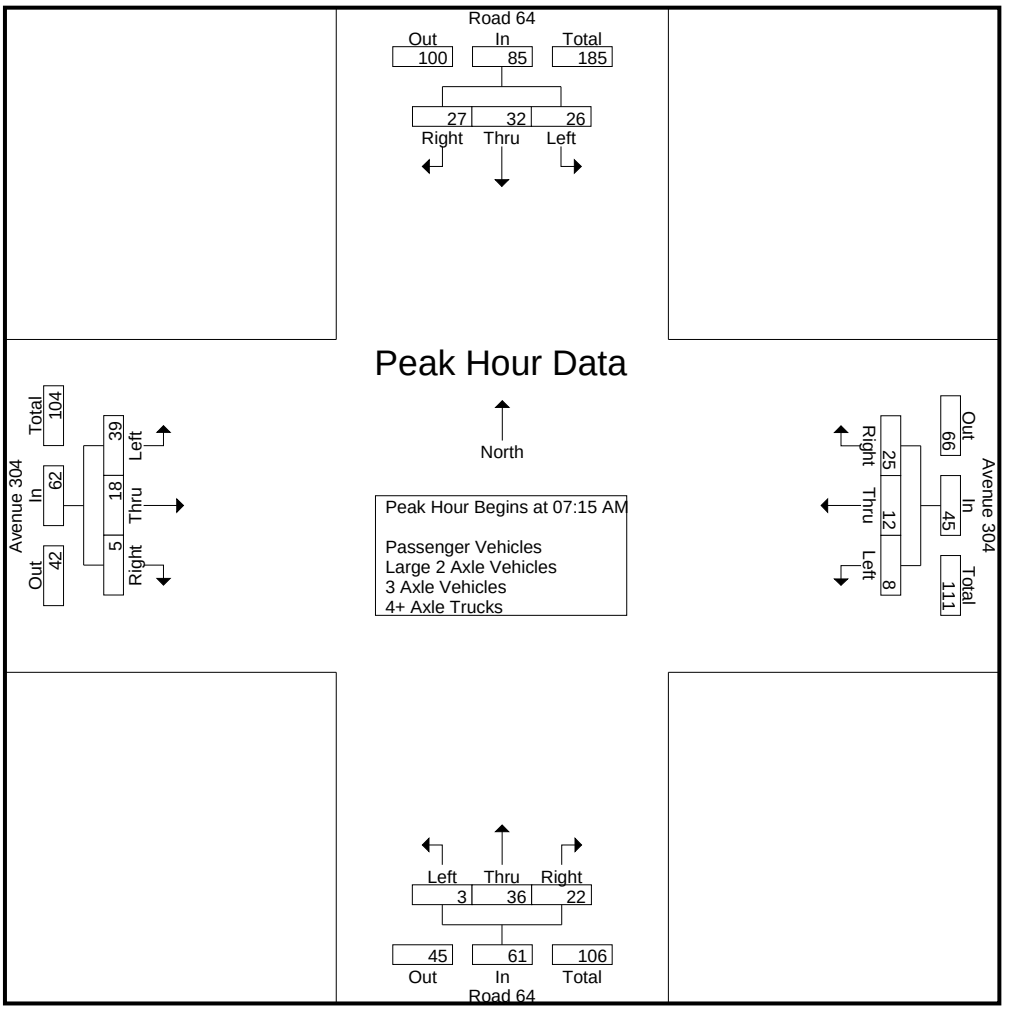
	Road 64 Southbound				Avenue 304 Westbound				Road 64 Northbound				Avenue 304 Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	1	6	4	11	0	2	2	4	1	7	4	12	8	5	0	13	40
07:15 AM	1	11	8	20	0	2	3	5	1	8	4	13	10	2	2	14	52
07:30 AM	7	6	8	21	3	3	5	11	1	11	3	15	8	5	1	14	61
07:45 AM	13	7	3	23	3	3	7	13	0	10	13	23	9	6	2	17	76
Total	22	30	23	75	6	10	17	33	3	36	24	63	35	18	5	58	229
08:00 AM	5	8	8	21	2	4	10	16	1	7	2	10	12	5	0	17	64
08:15 AM	4	3	2	9	1	3	5	9	0	6	3	9	4	3	2	9	36
08:30 AM	3	3	11	17	1	1	6	8	0	6	5	11	6	2	1	9	45
08:45 AM	7	1	10	18	0	1	3	4	0	1	2	3	3	6	1	10	35
Total	19	15	31	65	4	9	24	37	1	20	12	33	25	16	4	45	180
Grand Total	41	45	54	140	10	19	41	70	4	56	36	96	60	34	9	103	409
Apprch %	29.3	32.1	38.6		14.3	27.1	58.6		4.2	58.3	37.5		58.3	33	8.7		
Total %	10	11	13.2	34.2	2.4	4.6	10	17.1	1	13.7	8.8	23.5	14.7	8.3	2.2	25.2	
Passenger Vehicles	36	44	49	129	10	16	32	58	3	53	36	92	53	28	6	87	366
% Passenger Vehicles	87.8	97.8	90.7	92.1	100	84.2	78	82.9	75	94.6	100	95.8	88.3	82.4	66.7	84.5	89.5
Large 2 Axle Vehicles	3	1	1	5	0	0	5	5	0	2	0	2	1	4	0	5	17
% Large 2 Axle Vehicles	7.3	2.2	1.9	3.6	0	0	12.2	7.1	0	3.6	0	2.1	1.7	11.8	0	4.9	4.2
3 Axle Vehicles	1	0	0	1	0	0	0	0	0	0	0	0	1	0	1	2	3
% 3 Axle Vehicles	2.4	0	0	0.7	0	0	0	0	0	0	0	0	1.7	0	11.1	1.9	0.7
4+ Axle Trucks	1	0	4	5	0	3	4	7	1	1	0	2	5	2	2	9	23
% 4+ Axle Trucks	2.4	0	7.4	3.6	0	15.8	9.8	10	25	1.8	0	2.1	8.3	5.9	22.2	8.7	5.6

	Road 64 Southbound				Avenue 304 Westbound				Road 64 Northbound				Avenue 304 Eastbound				
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	1	**11**	**8**	20	0	2	3	5	**1**	8	4	13	10	2	**2**	14	52
07:30 AM	7	6	8	21	**3**	3	5	11	1	**11**	3	15	8	5	1	14	61
07:45 AM	**13**	7	3	**23**	3	3	7	13	0	10	**13**	**23**	9	**6**	2	**17**	**76**
08:00 AM	5	8	8	21	2	**4**	**10**	**16**	1	7	2	10	**12**	5	0	17	64
Total Volume	26	32	27	85	8	12	25	45	3	36	22	61	39	18	5	62	253
% App. Total	30.6	37.6	31.8		17.8	26.7	55.6		4.9	59	36.1		62.9	29	8.1		
PHF	.500	.727	.844	.924	.667	.750	.625	.703	.750	.818	.423	.663	.813	.750	.625	.912	.832

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County of Tulare
N/S: Road 64
E/W: Avenue 304
Weather: Clear

File Name : 04_CTE_Rd 64_Ave 304 AM
Site Code : 00322799
Start Date : 9/20/2022
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.	1	**11**	**8**	20	**3**	3	5	11	**1**	7	4	12	10	2	**2**	14
+15 mins.	7	6	8	21	3	3	7	13	1	8	4	13	8	5	1	14
+30 mins.	**13**	7	3	**23**	2	**4**	**10**	**16**	1	**11**	3	15	9	**6**	2	**17**
+45 mins.	5	8	8	21	1	3	5	9	0	10	**13**	**23**	**12**	5	0	17
Total Volume	26	32	27	85	9	13	27	49	3	36	24	63	39	18	5	62
% App. Total	30.6	37.6	31.8		18.4	26.5	55.1		4.8	57.1	38.1		62.9	29	8.1	
PHF	.500	.727	.844	.924	.750	.813	.675	.766	.750	.818	.462	.685	.813	.750	.625	.912

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County of Tulare
N/S: Road 64
E/W: Avenue 304
Weather: Clear

File Name : 04_CTE_Rd 64_Ave 304 AM
Site Code : 00322799
Start Date : 9/20/2022
Page No : 1

Groups Printed- Passenger Vehicles

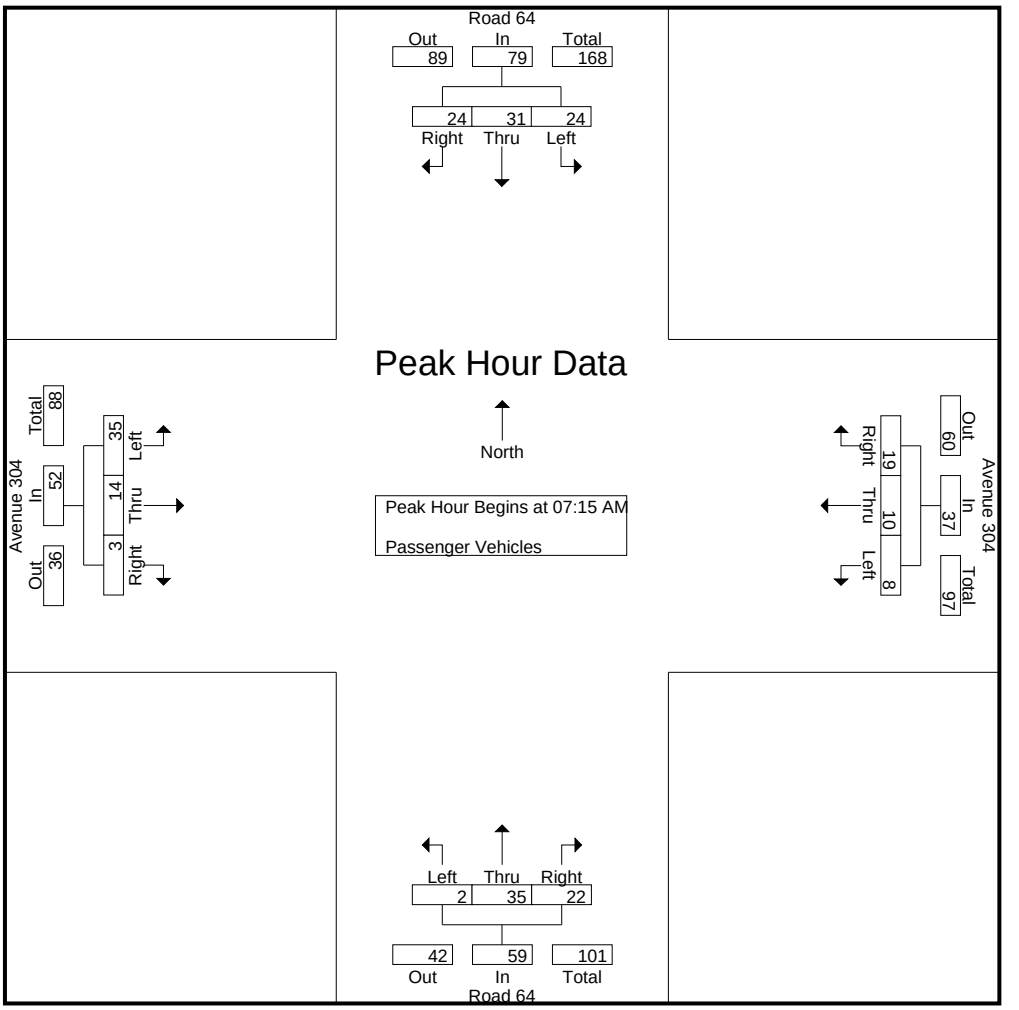
	Road 64 Southbound				Avenue 304 Westbound				Road 64 Northbound				Avenue 304 Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	1	6	4	11	0	2	2	4	1	7	4	12	8	5	0	13	40
07:15 AM	0	10	8	18	0	2	2	4	0	8	4	12	8	2	2	12	46
07:30 AM	7	6	8	21	3	3	4	10	1	11	3	15	7	3	1	11	57
07:45 AM	13	7	3	23	3	2	7	12	0	9	13	22	9	4	0	13	70
Total	21	29	23	73	6	9	15	30	2	35	24	61	32	14	3	49	213
08:00 AM	4	8	5	17	2	3	6	11	1	7	2	10	11	5	0	16	54
08:15 AM	3	3	1	7	1	2	4	7	0	6	3	9	3	3	2	8	31
08:30 AM	3	3	10	16	1	1	5	7	0	5	5	10	5	2	0	7	40
08:45 AM	5	1	10	16	0	1	2	3	0	0	2	2	2	4	1	7	28
Total	15	15	26	56	4	7	17	28	1	18	12	31	21	14	3	38	153
Grand Total	36	44	49	129	10	16	32	58	3	53	36	92	53	28	6	87	366
Apprch %	27.9	34.1	38		17.2	27.6	55.2		3.3	57.6	39.1		60.9	32.2	6.9		
Total %	9.8	12	13.4	35.2	2.7	4.4	8.7	15.8	0.8	14.5	9.8	25.1	14.5	7.7	1.6	23.8	

	Road 64 Southbound				Avenue 304 Westbound				Road 64 Northbound				Avenue 304 Eastbound				
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	**10**	**8**	18	0	2	2	4	0	8	4	12	8	2	**2**	12	46
07:30 AM	7	6	8	21	**3**	**3**	4	10	**1**	**11**	3	15	7	3	1	11	57
07:45 AM	**13**	7	3	**23**	3	2	**7**	**12**	0	9	**13**	**22**	9	4	0	13	**70**
08:00 AM	4	8	5	17	2	3	6	11	1	7	2	10	**11**	**5**	0	**16**	54
Total Volume	24	31	24	79	8	10	19	37	2	35	22	59	35	14	3	52	227
% App. Total	30.4	39.2	30.4		21.6	27	51.4		3.4	59.3	37.3		67.3	26.9	5.8		
PHF	.462	.775	.750	.859	.667	.833	.679	.771	.500	.795	.423	.670	.795	.700	.375	.813	.811

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County of Tulare
N/S: Road 64
E/W: Avenue 304
Weather: Clear

File Name : 04_CTE_Rd 64_Ave 304 AM
Site Code : 00322799
Start Date : 9/20/2022
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	**10**	**8**	18	0	2	2	4	0	8	4	12	8	2	**2**	12
+15 mins.	7	6	8	21	**3**	**3**	4	10	**1**	**11**	3	15	7	3	1	11
+30 mins.	**13**	7	3	**23**	3	2	**7**	**12**	0	9	**13**	**22**	9	4	0	13
+45 mins.	4	8	5	17	2	3	6	11	1	7	2	10	**11**	**5**	0	**16**
Total Volume	24	31	24	79	8	10	19	37	2	35	22	59	35	14	3	52
% App. Total	30.4	39.2	30.4		21.6	27	51.4		3.4	59.3	37.3		67.3	26.9	5.8	
PHF	.462	.775	.750	.859	.667	.833	.679	.771	.500	.795	.423	.670	.795	.700	.375	.813

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County of Tulare
N/S: Road 64
E/W: Avenue 304
Weather: Clear

File Name : 04_CTE_Rd 64_Ave 304 AM
Site Code : 00322799
Start Date : 9/20/2022
Page No : 1

Groups Printed- Large 2 Axle Vehicles

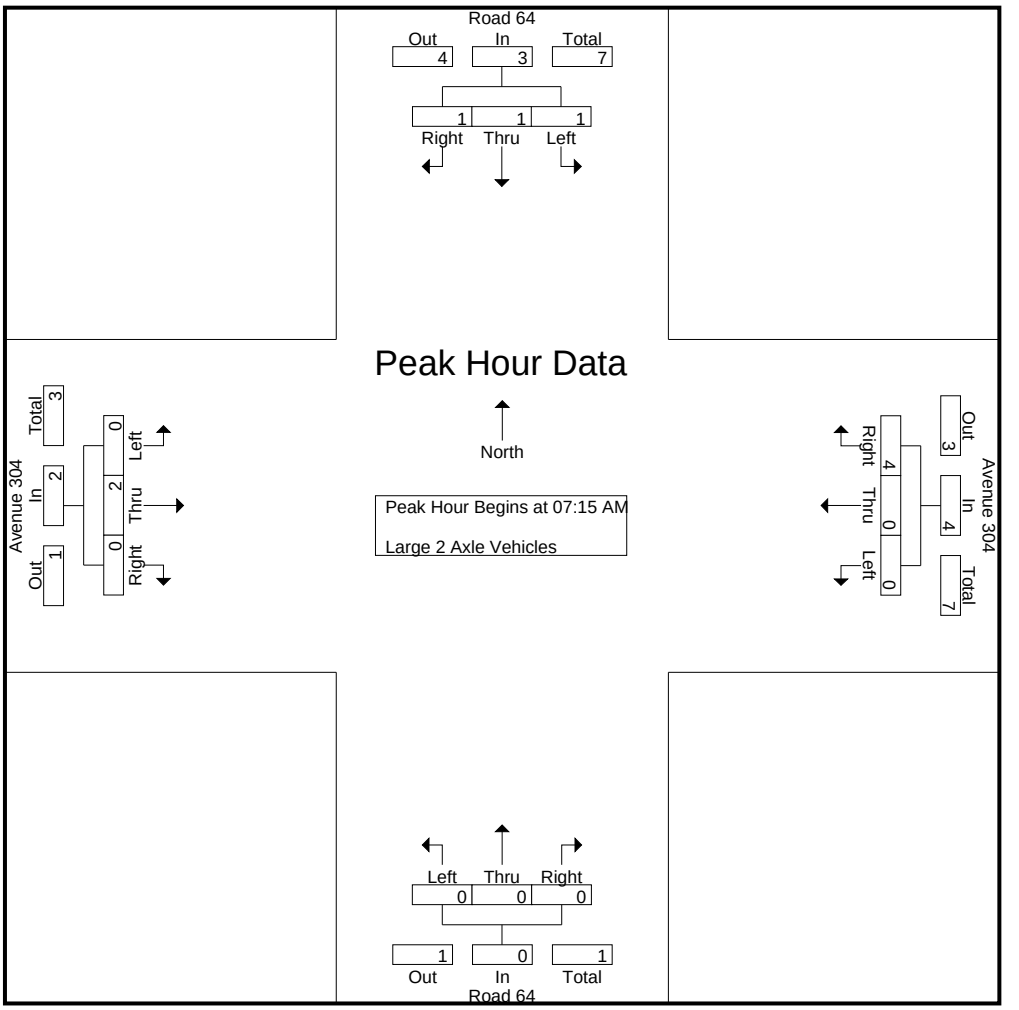
	Road 64 Southbound				Avenue 304 Westbound				Road 64 Northbound				Avenue 304 Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
07:30 AM	0	0	0	0	0	0	1	1	0	0	0	0	0	1	0	1	2
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
Total	0	1	0	1	0	0	1	1	0	0	0	0	0	2	0	2	4
08:00 AM	1	0	1	2	0	0	3	3	0	0	0	0	0	0	0	0	5
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	2	0	0	2	0	0	1	1	0	1	0	1	1	2	0	3	7
Total	3	0	1	4	0	0	4	4	0	2	0	2	1	2	0	3	13
Grand Total	3	1	1	5	0	0	5	5	0	2	0	2	1	4	0	5	17
Apprch %	60	20	20		0	0	100		0	100	0		20	80	0		
Total %	17.6	5.9	5.9	29.4	0	0	29.4	29.4	0	11.8	0	11.8	5.9	23.5	0	29.4	

	Road 64 Southbound				Avenue 304 Westbound				Road 64 Northbound				Avenue 304 Eastbound				
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	0	0	0	0	0	0	0	1
07:30 AM	0	0	0	0	0	0	1	1	0	0	0	0	0	**1**	0	**1**	2
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
08:00 AM	**1**	0	**1**	**2**	0	0	**3**	**3**	0	0	0	0	0	0	0	0	**5**
Total Volume	1	1	1	3	0	0	4	4	0	0	0	0	0	2	0	2	9
% App. Total	33.3	33.3	33.3		0	0	100		0	0	0		0	100	0		
PHF	.250	.250	.250	.375	.000	.000	.333	.333	.000	.000	.000	.000	.000	.500	.000	.500	.450

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County of Tulare
N/S: Road 64
E/W: Avenue 304
Weather: Clear

File Name : 04_CTE_Rd 64_Ave 304 AM
Site Code : 00322799
Start Date : 9/20/2022
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	**1**	0	1	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	1	1	0	0	0	0	0	**1**	0	**1**
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
+45 mins.	**1**	0	**1**	**2**	0	0	**3**	**3**	0	0	0	0	0	0	0	0
Total Volume	1	1	1	3	0	0	4	4	0	0	0	0	0	2	0	2
% App. Total	33.3	33.3	33.3		0	0	100		0	0	0		0	100	0	
PHF	.250	.250	.250	.375	.000	.000	.333	.333	.000	.000	.000	.000	.000	.500	.000	.500

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County of Tulare
N/S: Road 64
E/W: Avenue 304
Weather: Clear

File Name : 04_CTE_Rd 64_Ave 304 AM
Site Code : 00322799
Start Date : 9/20/2022
Page No : 1

Groups Printed- 3 Axle Vehicles

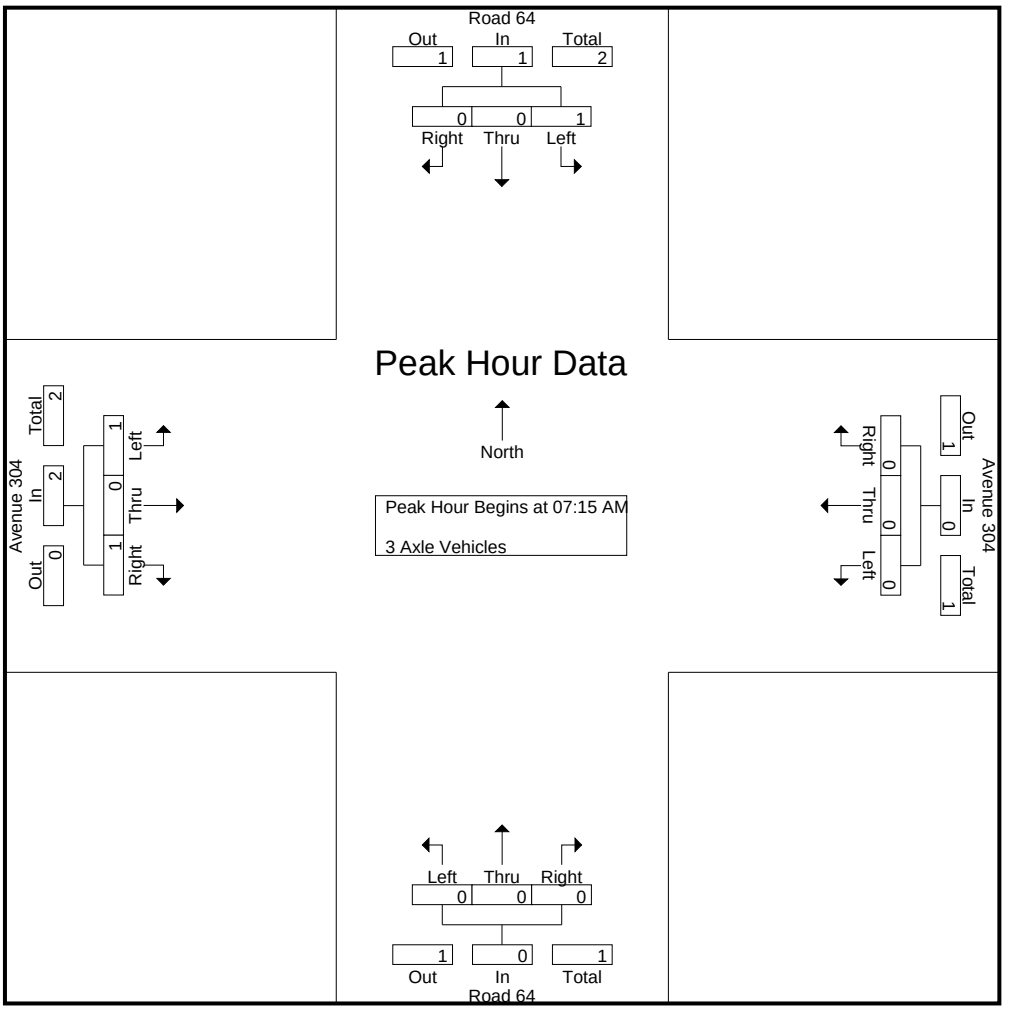
	Road 64 Southbound				Avenue 304 Westbound				Road 64 Northbound				Avenue 304 Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
Total	1	0	0	1	0	0	0	0	0	0	0	0	1	0	1	2	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	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	1	0	0	1	0	0	0	0	0	0	0	0	1	0	1	2	3
Apprch %	100	0	0		0	0	0		0	0	0		50	0	50		
Total %	33.3	0	0	33.3	0	0	0	0	0	0	0	0	33.3	0	33.3	66.7	

	Road 64 Southbound				Avenue 304 Westbound				Road 64 Northbound				Avenue 304 Eastbound				
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**	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	**1**	0	0	**1**	1
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**	1	1
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	0	0	0	0	0	0	0	0	1	0	1	2	3
% App. Total	100	0	0		0	0	0		0	0	0		50	0	50		
PHF	.250	.000	.000	.250	.000	.000	.000	.000	.000	.000	.000	.000	.250	.000	.250	.500	.750

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County of Tulare
N/S: Road 64
E/W: Avenue 304
Weather: Clear

File Name : 04_CTE_Rd 64_Ave 304 AM
Site Code : 00322799
Start Date : 9/20/2022
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.	**1**	0	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	**1**	0	0	**1**
+30 mins.	0	0	0	0	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	1	0	0	1	0	0	0	0	0	0	0	0	1	0	1	2
% App. Total	100	0	0		0	0	0		0	0	0		50	0	50	
PHF	.250	.000	.000	.250	.000	.000	.000	.000	.000	.000	.000	.000	.250	.000	.250	.500

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County of Tulare
N/S: Road 64
E/W: Avenue 304
Weather: Clear

File Name : 04_CTE_Rd 64_Ave 304 AM
Site Code : 00322799
Start Date : 9/20/2022
Page No : 1

Groups Printed- 4+ Axle Trucks

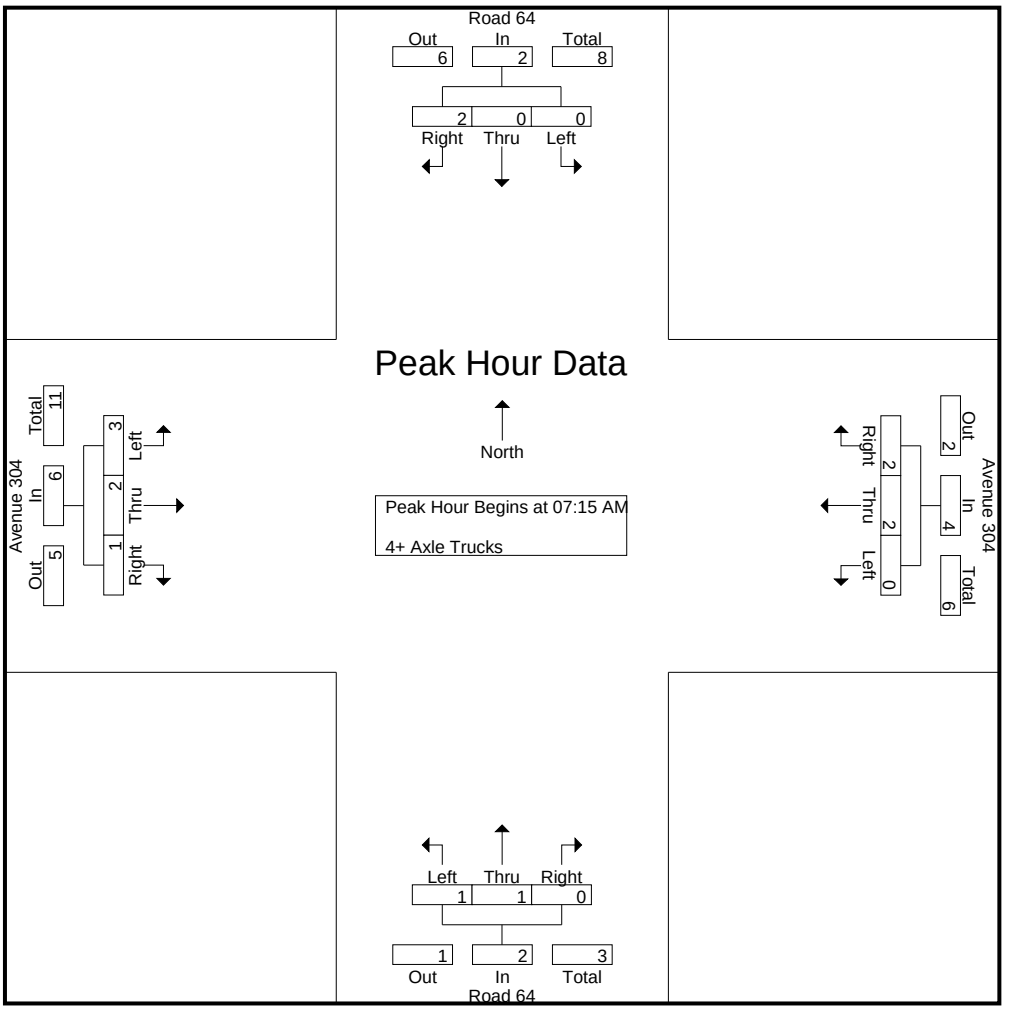
	Road 64 Southbound				Avenue 304 Westbound				Road 64 Northbound				Avenue 304 Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	1	1	1	0	0	1	2	0	0	2	4
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
07:45 AM	0	0	0	0	0	1	0	1	0	1	0	1	0	1	1	2	4
Total	0	0	0	0	0	1	1	2	1	1	0	2	2	2	1	5	9
08:00 AM	0	0	2	2	0	1	1	2	0	0	0	0	1	0	0	1	5
08:15 AM	1	0	1	2	0	1	1	2	0	0	0	0	1	0	0	1	5
08:30 AM	0	0	1	1	0	0	1	1	0	0	0	0	1	0	1	2	4
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	1	0	4	5	0	2	3	5	0	0	0	0	3	0	1	4	14
Grand Total	1	0	4	5	0	3	4	7	1	1	0	2	5	2	2	9	23
Apprch %	20	0	80		0	42.9	57.1		50	50	0		55.6	22.2	22.2		
Total %	4.3	0	17.4	21.7	0	13	17.4	30.4	4.3	4.3	0	8.7	21.7	8.7	8.7	39.1	

	Road 64 Southbound				Avenue 304 Westbound				Road 64 Northbound				Avenue 304 Eastbound				
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	**1**	1	**1**	0	0	**1**	**2**	0	0	**2**	4
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**	0	1	1
07:45 AM	0	0	0	0	0	**1**	0	1	0	**1**	0	1	0	1	**1**	2	4
08:00 AM	0	0	**2**	**2**	0	1	1	**2**	0	0	0	0	1	0	0	1	**5**
Total Volume	0	0	2	2	0	2	2	4	1	1	0	2	3	2	1	6	14
% App. Total	0	0	100		0	50	50		50	50	0		50	33.3	16.7		
PHF	.000	.000	.250	.250	.000	.500	.500	.500	.250	.250	.000	.500	.375	.500	.250	.750	.700

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County of Tulare
N/S: Road 64
E/W: Avenue 304
Weather: Clear

File Name : 04_CTE_Rd 64_Ave 304 AM
Site Code : 00322799
Start Date : 9/20/2022
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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	**1**	1	**1**	0	0	**1**	**2**	0	0	**2**
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**	0	1
+30 mins.	0	0	0	0	0	**1**	0	1	0	**1**	0	1	0	1	**1**	2
+45 mins.	0	0	**2**	**2**	0	1	1	**2**	0	0	0	0	1	0	0	1
Total Volume	0	0	2	2	0	2	2	4	1	1	0	2	3	2	1	6
% App. Total	0	0	100		0	50	50		50	50	0		50	33.3	16.7	
PHF	.000	.000	.250	.250	.000	.500	.500	.500	.250	.250	.000	.500	.375	.500	.250	.750

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County of Tulare
N/S: Road 64
E/W: Avenue 304
Weather: Clear

File Name : 04_CTE_Rd 64_Ave 304 PM
Site Code : 00322799
Start Date : 9/20/2022
Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

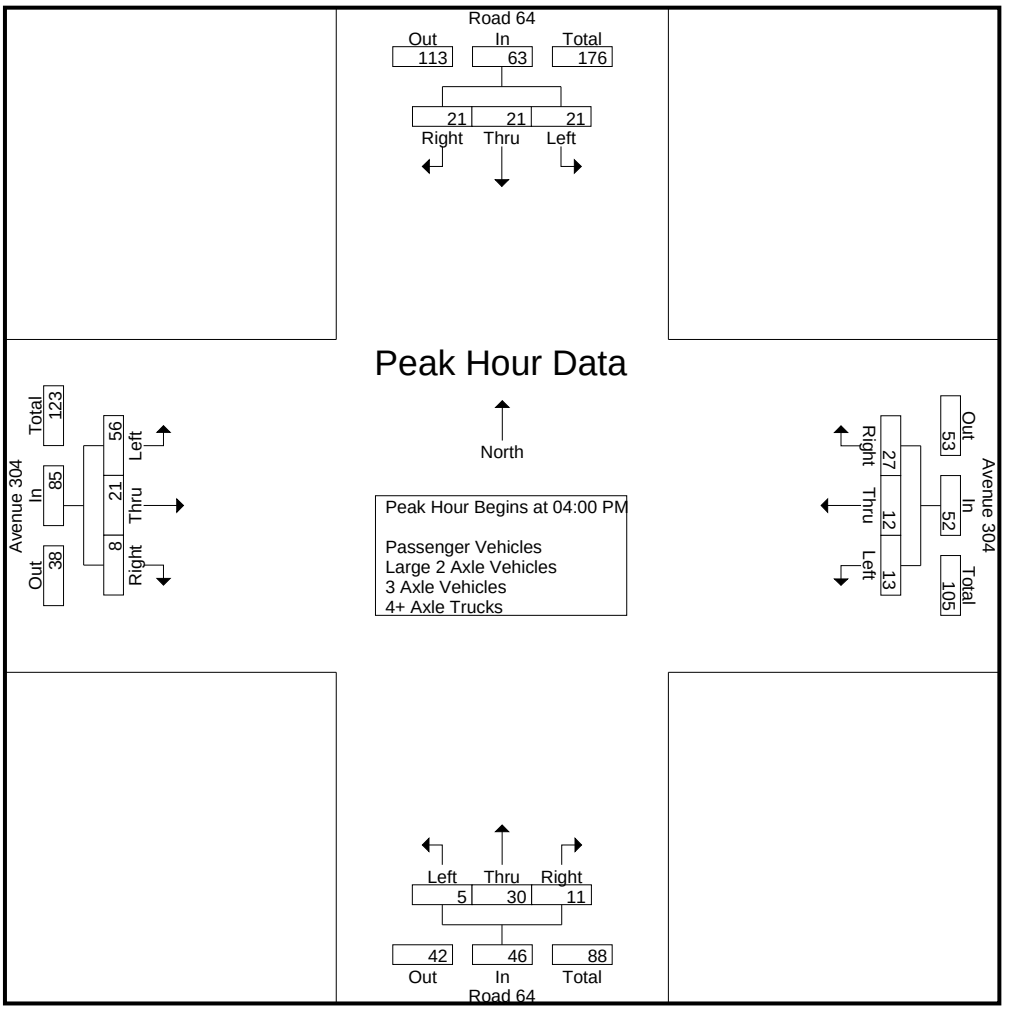
	Road 64 Southbound				Avenue 304 Westbound				Road 64 Northbound				Avenue 304 Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	1	6	6	13	3	7	6	16	2	6	2	10	24	10	1	35	74
04:15 PM	12	3	4	19	1	0	6	7	1	5	3	9	12	4	2	18	53
04:30 PM	5	7	6	18	5	3	11	19	1	8	2	11	9	5	4	18	66
04:45 PM	3	5	5	13	4	2	4	10	1	11	4	16	11	2	1	14	53
Total	21	21	21	63	13	12	27	52	5	30	11	46	56	21	8	85	246
05:00 PM	4	8	10	22	4	5	5	14	1	8	0	9	13	4	2	19	64
05:15 PM	3	7	9	19	0	2	9	11	0	13	2	15	12	2	0	14	59
05:30 PM	4	3	7	14	1	4	2	7	0	2	0	2	14	2	0	16	39
05:45 PM	5	5	4	14	3	3	3	9	0	6	2	8	6	2	0	8	39
Total	16	23	30	69	8	14	19	41	1	29	4	34	45	10	2	57	201
Grand Total	37	44	51	132	21	26	46	93	6	59	15	80	101	31	10	142	447
Apprch %	28	33.3	38.6		22.6	28	49.5		7.5	73.8	18.8		71.1	21.8	7		
Total %	8.3	9.8	11.4	29.5	4.7	5.8	10.3	20.8	1.3	13.2	3.4	17.9	22.6	6.9	2.2	31.8	
Passenger Vehicles	31	42	47	120	21	25	37	83	6	50	15	71	91	27	10	128	402
% Passenger Vehicles	83.8	95.5	92.2	90.9	100	96.2	80.4	89.2	100	84.7	100	88.8	90.1	87.1	100	90.1	89.9
Large 2 Axle Vehicles	4	2	1	7	0	0	8	8	0	7	0	7	8	2	0	10	32
% Large 2 Axle Vehicles	10.8	4.5	2	5.3	0	0	17.4	8.6	0	11.9	0	8.8	7.9	6.5	0	7	7.2
3 Axle Vehicles	1	0	1	2	0	0	1	1	0	0	0	0	0	1	0	1	4
% 3 Axle Vehicles	2.7	0	2	1.5	0	0	2.2	1.1	0	0	0	0	0	3.2	0	0.7	0.9
4+ Axle Trucks	1	0	2	3	0	1	0	1	0	2	0	2	2	1	0	3	9
% 4+ Axle Trucks	2.7	0	3.9	2.3	0	3.8	0	1.1	0	3.4	0	2.5	2	3.2	0	2.1	2

	Road 64 Southbound				Avenue 304 Westbound				Road 64 Northbound				Avenue 304 Eastbound				
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	6	**6**	13	3	**7**	6	16	**2**	6	2	10	**24**	**10**	1	**35**	**74**
04:15 PM	**12**	3	4	**19**	1	0	6	7	1	5	3	9	12	4	2	18	53
04:30 PM	5	**7**	6	18	**5**	3	**11**	**19**	1	8	2	11	9	5	**4**	18	66
04:45 PM	3	5	5	13	4	2	4	10	1	**11**	**4**	**16**	11	2	1	14	53
Total Volume	21	21	21	63	13	12	27	52	5	30	11	46	56	21	8	85	246
% App. Total	33.3	33.3	33.3		25	23.1	51.9		10.9	65.2	23.9		65.9	24.7	9.4		
PHF	.438	.750	.875	.829	.650	.429	.614	.684	.625	.682	.688	.719	.583	.525	.500	.607	.831

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County of Tulare
N/S: Road 64
E/W: Avenue 304
Weather: Clear

File Name : 04_CTE_Rd 64_Ave 304 PM
Site Code : 00322799
Start Date : 9/20/2022
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:

	04:15 PM				04:30 PM				04:30 PM				04:00 PM			
+0 mins.	**12**	3	4	19	**5**	3	**11**	**19**	**1**	8	2	11	**24**	**10**	1	**35**
+15 mins.	5	7	6	18	4	2	4	10	1	11	**4**	**16**	12	4	2	18
+30 mins.	3	5	5	13	4	**5**	5	14	1	8	0	9	9	5	**4**	18
+45 mins.	4	**8**	**10**	**22**	0	2	9	11	0	**13**	2	15	11	2	1	14
Total Volume	24	23	25	72	13	12	29	54	3	40	8	51	56	21	8	85
% App. Total	33.3	31.9	34.7		24.1	22.2	53.7		5.9	78.4	15.7		65.9	24.7	9.4	
PHF	.500	.719	.625	.818	.650	.600	.659	.711	.750	.769	.500	.797	.583	.525	.500	.607

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County of Tulare
N/S: Road 64
E/W: Avenue 304
Weather: Clear

File Name : 04_CTE_Rd 64_Ave 304 PM
Site Code : 00322799
Start Date : 9/20/2022
Page No : 1

Groups Printed- Passenger Vehicles

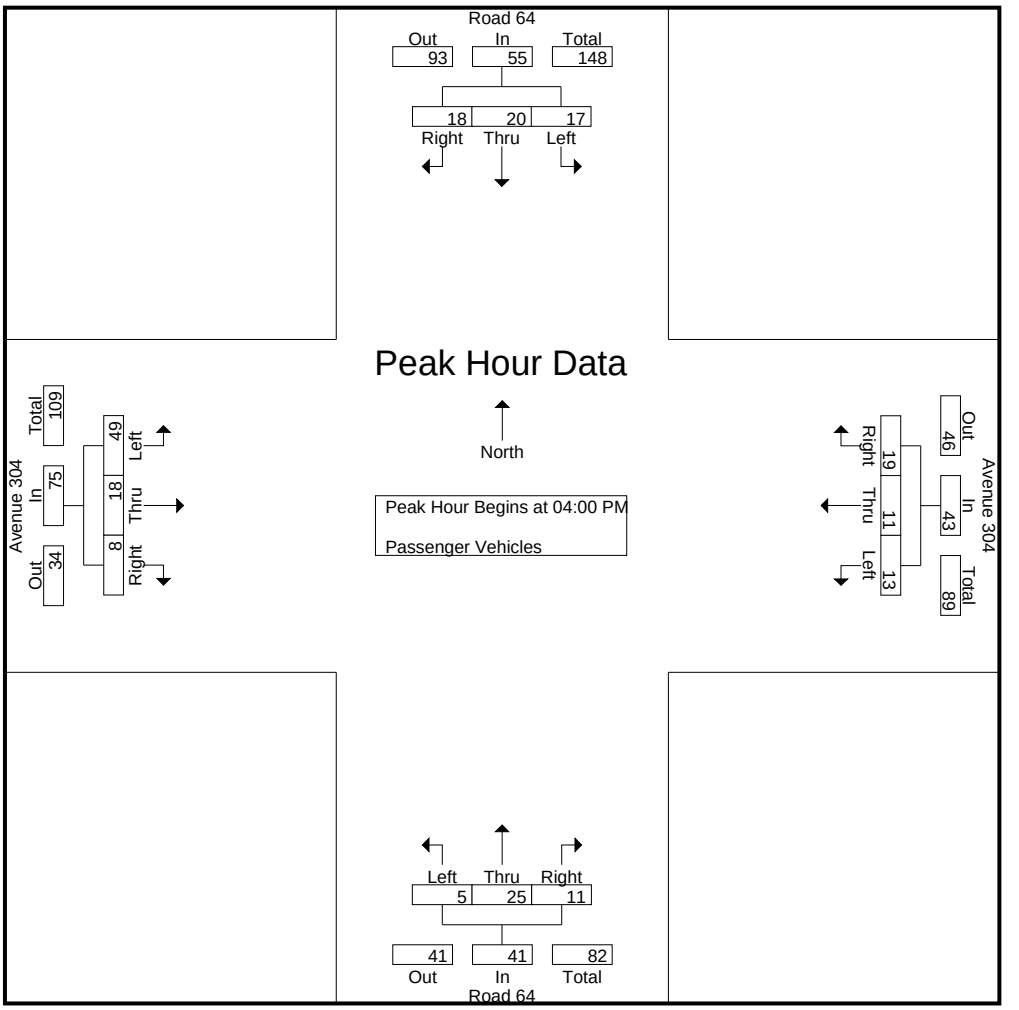
	Road 64 Southbound				Avenue 304 Westbound				Road 64 Northbound				Avenue 304 Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	6	5	11	3	7	4	14	2	4	2	8	20	9	1	30	63
04:15 PM	10	3	3	16	1	0	4	5	1	5	3	9	11	3	2	16	46
04:30 PM	5	6	5	16	5	3	8	16	1	7	2	10	9	5	4	18	60
04:45 PM	2	5	5	12	4	1	3	8	1	9	4	14	9	1	1	11	45
Total	17	20	18	55	13	11	19	43	5	25	11	41	49	18	8	75	214
05:00 PM	4	8	10	22	4	5	5	14	1	7	0	8	13	3	2	18	62
05:15 PM	1	6	9	16	0	2	8	10	0	12	2	14	11	2	0	13	53
05:30 PM	4	3	6	13	1	4	2	7	0	1	0	1	12	2	0	14	35
05:45 PM	5	5	4	14	3	3	3	9	0	5	2	7	6	2	0	8	38
Total	14	22	29	65	8	14	18	40	1	25	4	30	42	9	2	53	188
Grand Total	31	42	47	120	21	25	37	83	6	50	15	71	91	27	10	128	402
Apprch %	25.8	35	39.2		25.3	30.1	44.6		8.5	70.4	21.1		71.1	21.1	7.8		
Total %	7.7	10.4	11.7	29.9	5.2	6.2	9.2	20.6	1.5	12.4	3.7	17.7	22.6	6.7	2.5	31.8	

	Road 64 Southbound				Avenue 304 Westbound				Road 64 Northbound				Avenue 304 Eastbound				
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	**6**	**5**	11	3	**7**	4	14	**2**	4	2	8	**20**	**9**	1	**30**	**63**
04:15 PM	**10**	3	3	**16**	1	0	4	5	1	5	3	9	11	3	2	16	46
04:30 PM	5	6	5	16	**5**	3	**8**	**16**	1	7	2	10	9	5	**4**	18	60
04:45 PM	2	5	5	12	4	1	3	8	1	**9**	**4**	**14**	9	1	1	11	45
Total Volume	17	20	18	55	13	11	19	43	5	25	11	41	49	18	8	75	214
% App. Total	30.9	36.4	32.7		30.2	25.6	44.2		12.2	61	26.8		65.3	24	10.7		
PHF	.425	.833	.900	.859	.650	.393	.594	.672	.625	.694	.688	.732	.613	.500	.500	.625	.849

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County of Tulare
N/S: Road 64
E/W: Avenue 304
Weather: Clear

File Name : 04_CTE_Rd 64_Ave 304 PM
Site Code : 00322799
Start Date : 9/20/2022
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	**6**	**5**	11	3	**7**	4	14	**2**	4	2	8	**20**	**9**	1	**30**
+15 mins.	**10**	3	3	**16**	1	0	4	5	1	5	3	9	11	3	2	16
+30 mins.	5	6	5	16	**5**	3	**8**	**16**	1	7	2	10	9	5	**4**	18
+45 mins.	2	5	5	12	4	1	3	8	1	**9**	**4**	**14**	9	1	1	11
Total Volume	17	20	18	55	13	11	19	43	5	25	11	41	49	18	8	75
% App. Total	30.9	36.4	32.7		30.2	25.6	44.2		12.2	61	26.8		65.3	24	10.7	
PHF	.425	.833	.900	.859	.650	.393	.594	.672	.625	.694	.688	.732	.613	.500	.500	.625

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County of Tulare
N/S: Road 64
E/W: Avenue 304
Weather: Clear

File Name : 04_CTE_Rd 64_Ave 304 PM
Site Code : 00322799
Start Date : 9/20/2022
Page No : 1

Groups Printed- Large 2 Axle Vehicles

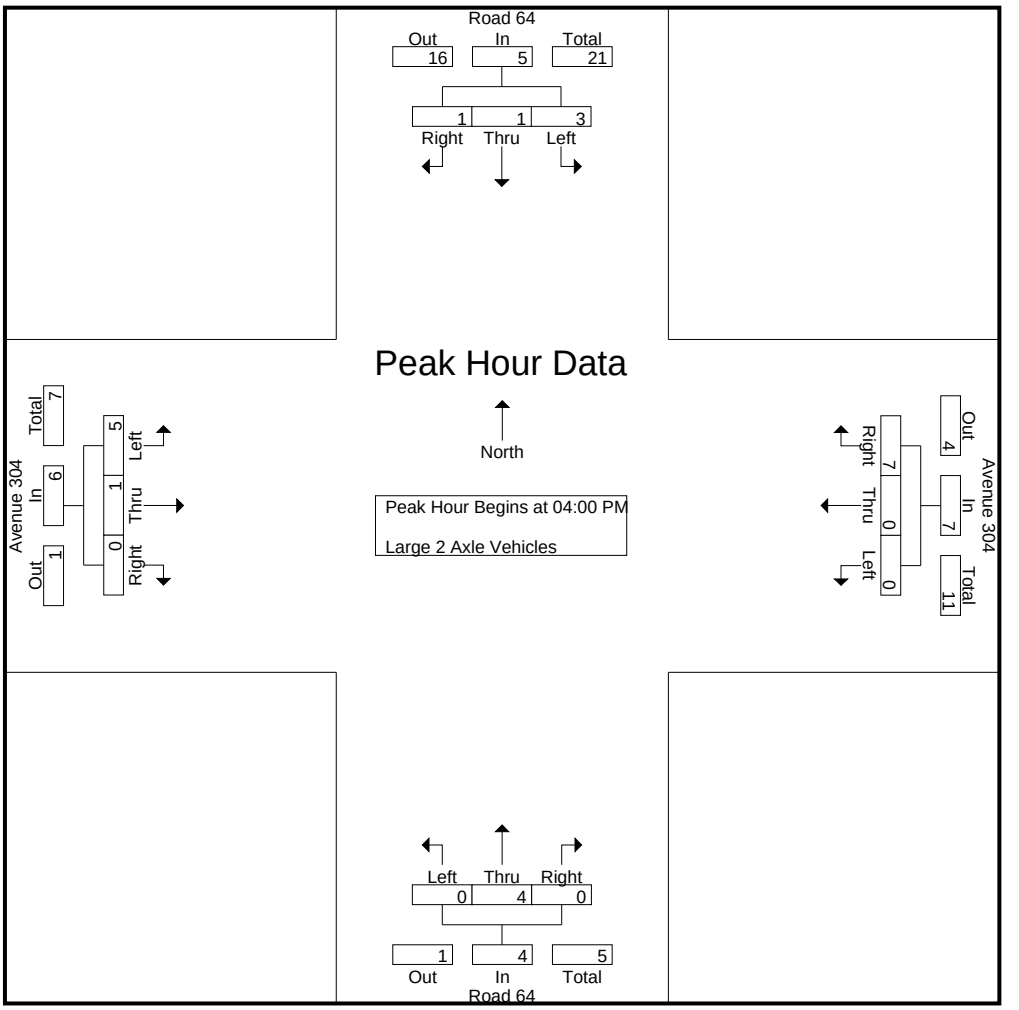
	Road 64 Southbound				Avenue 304 Westbound				Road 64 Northbound				Avenue 304 Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	2	2	0	2	0	2	3	1	0	4	8
04:15 PM	2	0	0	2	0	0	2	2	0	0	0	0	1	0	0	1	5
04:30 PM	0	1	1	2	0	0	2	2	0	1	0	1	0	0	0	0	5
04:45 PM	1	0	0	1	0	0	1	1	0	1	0	1	1	0	0	1	4
Total	3	1	1	5	0	0	7	7	0	4	0	4	5	1	0	6	22
05:00 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	1	0	1	2
05:15 PM	1	1	0	2	0	0	1	1	0	1	0	1	1	0	0	1	5
05:30 PM	0	0	0	0	0	0	0	0	0	1	0	1	2	0	0	2	3
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	1	1	0	3	0	3	3	1	0	4	10
Grand Total	4	2	1	7	0	0	8	8	0	7	0	7	8	2	0	10	32
Apprch %	57.1	28.6	14.3		0	0	100		0	100	0		80	20	0		
Total %	12.5	6.2	3.1	21.9	0	0	25	25	0	21.9	0	21.9	25	6.2	0	31.2	

	Road 64 Southbound				Avenue 304 Westbound				Road 64 Northbound				Avenue 304 Eastbound				
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	**2**	**2**	0	**2**	0	**2**	**3**	**1**	0	**4**	**8**
04:15 PM	**2**	0	0	**2**	0	0	2	2	0	0	0	0	1	0	0	1	5
04:30 PM	0	**1**	**1**	2	0	0	2	2	0	1	0	1	0	0	0	0	5
04:45 PM	1	0	0	1	0	0	1	1	0	1	0	1	1	0	0	1	4
Total Volume	3	1	1	5	0	0	7	7	0	4	0	4	5	1	0	6	22
% App. Total	60	20	20		0	0	100		0	100	0		83.3	16.7	0		
PHF	.375	.250	.250	.625	.000	.000	.875	.875	.000	.500	.000	.500	.417	.250	.000	.375	.688

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County of Tulare
N/S: Road 64
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File Name : 04_CTE_Rd 64_Ave 304 PM
Site Code : 00322799
Start Date : 9/20/2022
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	**2**	**2**	0	**2**	0	**2**	**3**	**1**	0	**4**
+15 mins.	**2**	0	0	**2**	0	0	2	2	0	0	0	0	1	0	0	1
+30 mins.	0	**1**	**1**	2	0	0	2	2	0	1	0	1	0	0	0	0
+45 mins.	1	0	0	1	0	0	1	1	0	1	0	1	1	0	0	1
Total Volume	3	1	1	5	0	0	7	7	0	4	0	4	5	1	0	6
% App. Total	60	20	20		0	0	100		0	100	0		83.3	16.7	0	
PHF	.375	.250	.250	.625	.000	.000	.875	.875	.000	.500	.000	.500	.417	.250	.000	.375

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County of Tulare
N/S: Road 64
E/W: Avenue 304
Weather: Clear

File Name : 04_CTE_Rd 64_Ave 304 PM
Site Code : 00322799
Start Date : 9/20/2022
Page No : 1

Groups Printed- 3 Axle Vehicles

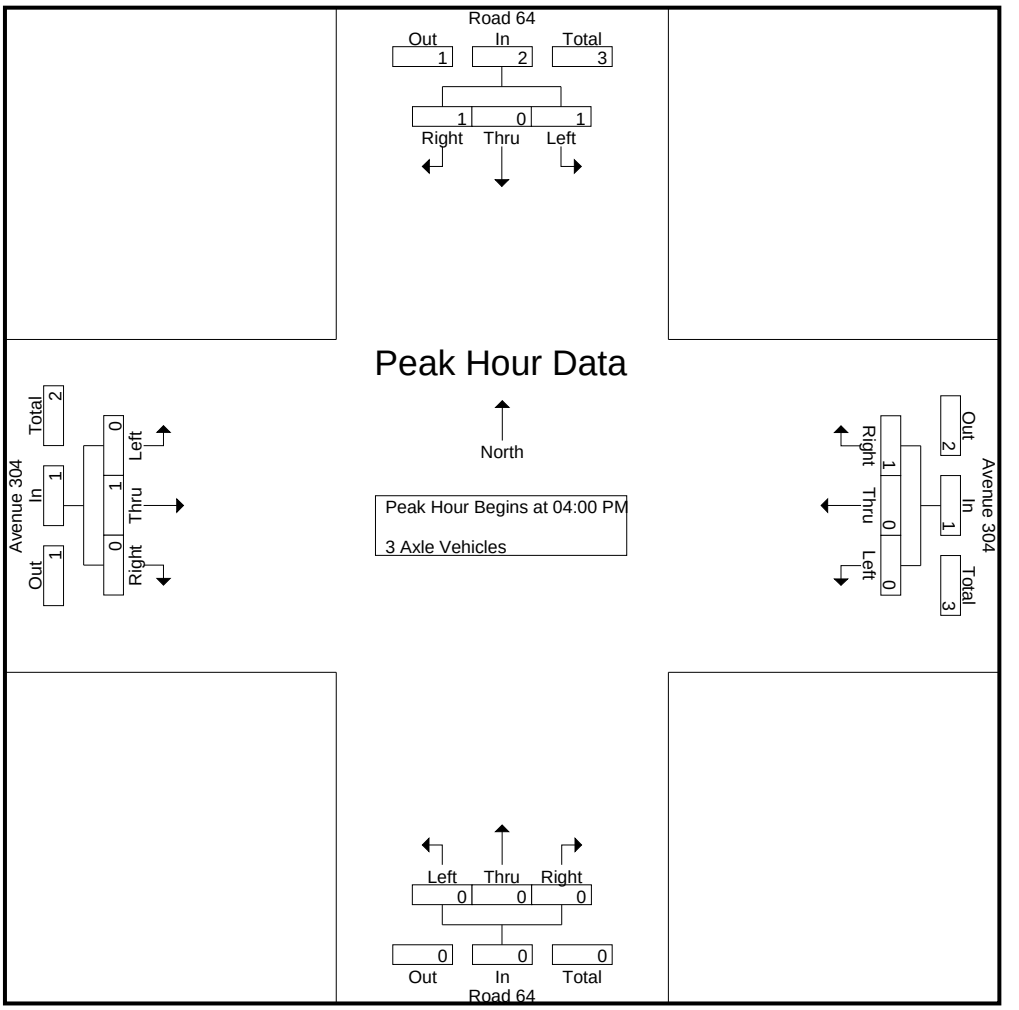
	Road 64 Southbound				Avenue 304 Westbound				Road 64 Northbound				Avenue 304 Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
04:15 PM	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1
04:30 PM	0	0	0	0	0	0	1	1	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	1	0	1	1
Total	1	0	1	2	0	0	1	1	0	0	0	0	0	1	0	1	4
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	1	0	1	2	0	0	1	1	0	0	0	0	0	1	0	1	4
Apprch %	50	0	50		0	0	100		0	0	0		0	100	0		
Total %	25	0	25	50	0	0	25	25	0	0	0	0	0	25	0	25	

	Road 64 Southbound				Avenue 304 Westbound				Road 64 Northbound				Avenue 304 Eastbound				
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**	0	0	**1**	0	0	0	0	0	0	0	0	0	0	0	0	**1**
04:15 PM	0	0	**1**	1	0	0	0	0	0	0	0	0	0	0	0	0	1
04:30 PM	0	0	0	0	0	0	**1**	**1**	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	**1**	0	**1**	1
Total Volume	1	0	1	2	0	0	1	1	0	0	0	0	0	1	0	1	4
% App. Total	50	0	50		0	0	100		0	0	0		0	100	0		
PHF	.250	.000	.250	.500	.000	.000	.250	.250	.000	.000	.000	.000	.000	.250	.000	.250	1.00

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County of Tulare
N/S: Road 64
E/W: Avenue 304
Weather: Clear

File Name : 04_CTE_Rd 64_Ave 304 PM
Site Code : 00322799
Start Date : 9/20/2022
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.	**1**	0	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	**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	**1**	0	**1**
Total Volume	1	0	1	2	0	0	1	1	0	0	0	0	0	1	0	1
% App. Total	50	0	50		0	0	100		0	0	0		0	100	0	
PHF	.250	.000	.250	.500	.000	.000	.250	.250	.000	.000	.000	.000	.000	.250	.000	.250

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County of Tulare
N/S: Road 64
E/W: Avenue 304
Weather: Clear

File Name : 04_CTE_Rd 64_Ave 304 PM
Site Code : 00322799
Start Date : 9/20/2022
Page No : 1

Groups Printed- 4+ Axle Trucks

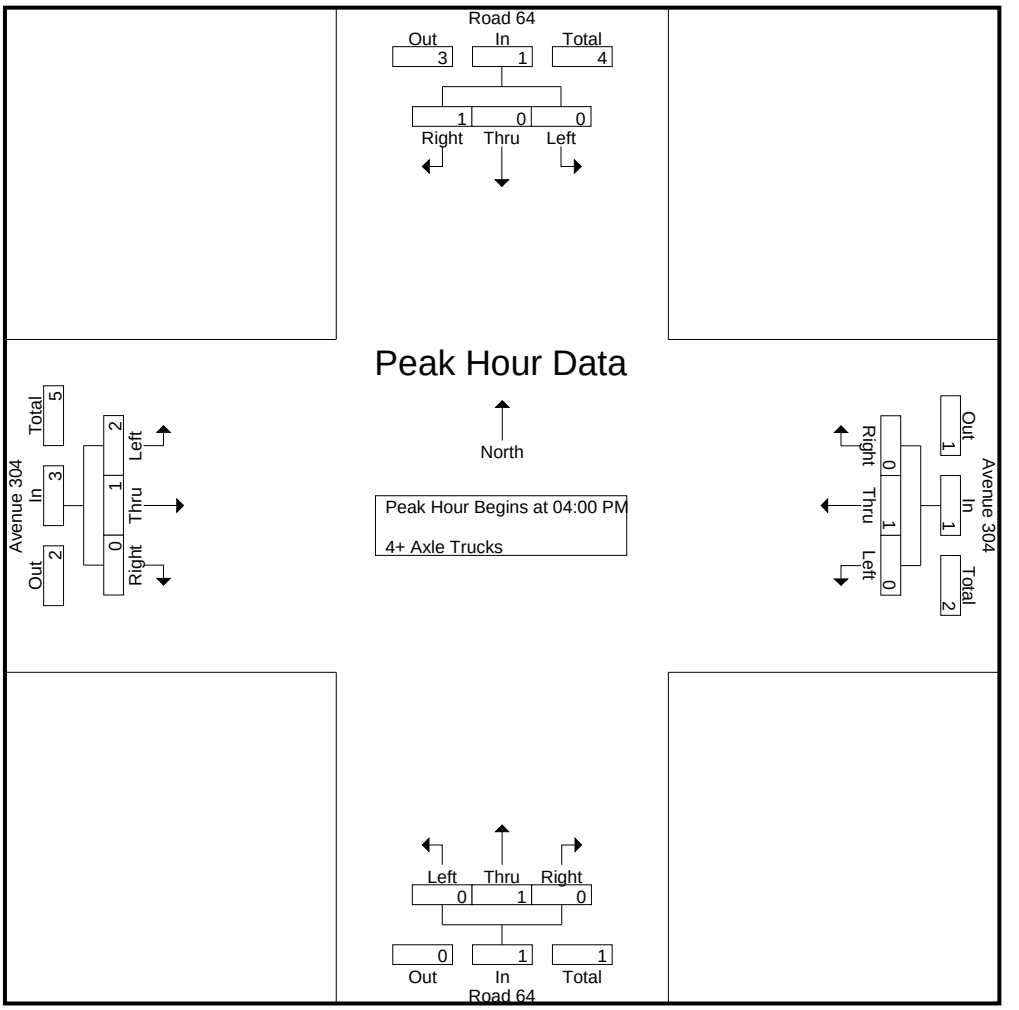
	Road 64 Southbound				Avenue 304 Westbound				Road 64 Northbound				Avenue 304 Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	1	1	0	0	0	0	0	0	0	0	1	0	0	1	2
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	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	1	0	1	0	1	0	1	1	0	0	1	3
Total	0	0	1	1	0	1	0	1	0	1	0	1	2	1	0	3	6
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
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	0	0	0	0	1	0	1	0	0	0	0	1
Total	1	0	1	2	0	0	0	0	0	1	0	1	0	0	0	0	3
Grand Total	1	0	2	3	0	1	0	1	0	2	0	2	2	1	0	3	9
Apprch %	33.3	0	66.7		0	100	0		0	100	0		66.7	33.3	0		
Total %	11.1	0	22.2	33.3	0	11.1	0	11.1	0	22.2	0	22.2	22.2	11.1	0	33.3	

	Road 64 Southbound				Avenue 304 Westbound				Road 64 Northbound				Avenue 304 Eastbound				
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	**1**	**1**	0	0	0	0	0	0	0	0	**1**	0	0	**1**	2
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**	0	1	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	**1**	0	**1**	0	**1**	0	**1**	1	0	0	1	**3**
Total Volume	0	0	1	1	0	1	0	1	0	1	0	1	2	1	0	3	6
% App. Total	0	0	100		0	100	0		0	100	0		66.7	33.3	0		
PHF	.000	.000	.250	.250	.000	.250	.000	.250	.000	.250	.000	.250	.500	.250	.000	.750	.500

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County of Tulare
N/S: Road 64
E/W: Avenue 304
Weather: Clear

File Name : 04_CTE_Rd 64_Ave 304 PM
Site Code : 00322799
Start Date : 9/20/2022
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	**1**	**1**	0	0	0	0	0	0	0	0	**1**	0	0	**1**
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**	0	1
+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	**1**	0	**1**	0	**1**	0	**1**	1	0	0	1
Total Volume	0	0	1	1	0	1	0	1	0	1	0	1	2	1	0	3
% App. Total	0	0	100		0	100	0		0	100	0		66.7	33.3	0	
PHF	.000	.000	.250	.250	.000	.250	.000	.250	.000	.250	.000	.250	.500	.250	.000	.750

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County of Tulare
N/S: Road 64
E/W: SR-198
Weather: Clear

File Name : 05_CTE_Rd 64_SR-198 AM
Site Code : 00322799
Start Date : 9/20/2022
Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

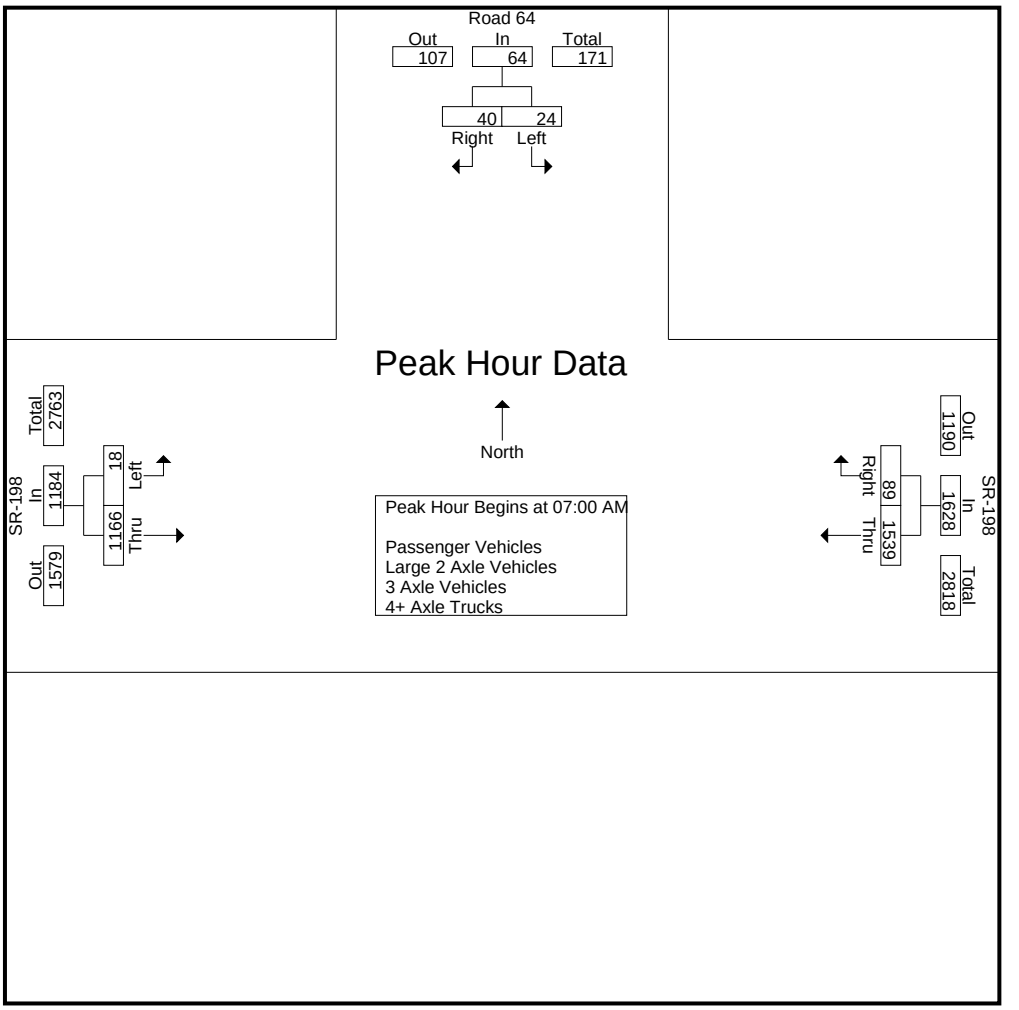
	Road 64 Southbound			SR-198 Westbound			SR-198 Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
07:00 AM	1	11	12	355	15	370	1	220	221	603
07:15 AM	7	9	16	425	20	445	4	276	280	741
07:30 AM	5	10	15	438	18	456	6	365	371	842
07:45 AM	11	10	21	321	36	357	7	305	312	690
Total	24	40	64	1539	89	1628	18	1166	1184	2876
08:00 AM	8	1	9	324	18	342	3	232	235	586
08:15 AM	8	8	16	252	17	269	3	216	219	504
08:30 AM	4	3	7	242	14	256	1	267	268	531
08:45 AM	1	7	8	217	10	227	5	196	201	436
Total	21	19	40	1035	59	1094	12	911	923	2057
Grand Total	45	59	104	2574	148	2722	30	2077	2107	4933
Apprch %	43.3	56.7		94.6	5.4		1.4	98.6		
Total %	0.9	1.2	2.1	52.2	3	55.2	0.6	42.1	42.7	
Passenger Vehicles	39	39	78	2355	127	2482	25	1930	1955	4515
% Passenger Vehicles	86.7	66.1	75	91.5	85.8	91.2	83.3	92.9	92.8	91.5
Large 2 Axle Vehicles	1	0	1	87	8	95	0	45	45	141
% Large 2 Axle Vehicles	2.2	0	1	3.4	5.4	3.5	0	2.2	2.1	2.9
3 Axle Vehicles	3	15	18	25	5	30	0	13	13	61
% 3 Axle Vehicles	6.7	25.4	17.3	1	3.4	1.1	0	0.6	0.6	1.2
4+ Axle Trucks	2	5	7	107	8	115	5	89	94	216
% 4+ Axle Trucks	4.4	8.5	6.7	4.2	5.4	4.2	16.7	4.3	4.5	4.4

	Road 64 Southbound			SR-198 Westbound			SR-198 Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	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 07:00 AM										
07:00 AM	1	**11**	12	355	15	370	1	220	221	603
07:15 AM	7	9	16	425	20	445	4	276	280	741
07:30 AM	5	10	15	**438**	18	**456**	6	**365**	**371**	**842**
07:45 AM	**11**	10	**21**	321	**36**	357	**7**	305	312	690
Total Volume	24	40	64	1539	89	1628	18	1166	1184	2876
% App. Total	37.5	62.5		94.5	5.5		1.5	98.5		
PHF	.545	.909	.762	.878	.618	.893	.643	.799	.798	.854

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County of Tulare
N/S: Road 64
E/W: SR-198
Weather: Clear

File Name : 05_CTE_Rd 64_SR-198 AM
Site Code : 00322799
Start Date : 9/20/2022
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			07:15 AM		
+0 mins.	1	**11**	12	355	15	370	4	276	280
+15 mins.	7	9	16	425	20	445	6	**365**	**371**
+30 mins.	5	10	15	**438**	18	**456**	**7**	305	312
+45 mins.	**11**	10	**21**	321	**36**	357	3	232	235
Total Volume	24	40	64	1539	89	1628	20	1178	1198
% App. Total	37.5	62.5		94.5	5.5		1.7	98.3	
PHF	.545	.909	.762	.878	.618	.893	.714	.807	.807

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County of Tulare
N/S: Road 64
E/W: SR-198
Weather: Clear

File Name : 05_CTE_Rd 64_SR-198 AM
Site Code : 00322799
Start Date : 9/20/2022
Page No : 1

Groups Printed- Passenger Vehicles

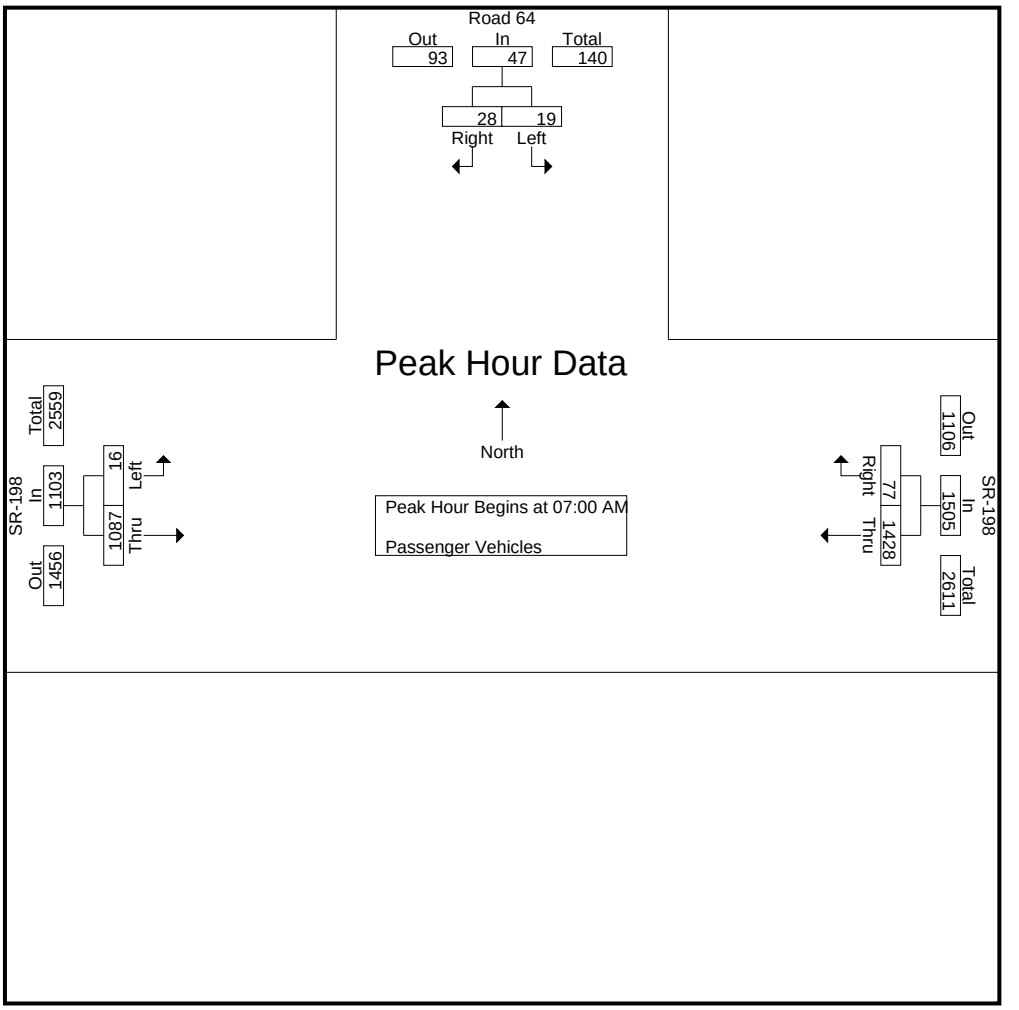
	Road 64 Southbound			SR-198 Westbound			SR-198 Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
07:00 AM	1	10	11	334	13	347	1	207	208	566
07:15 AM	4	1	5	403	16	419	3	238	241	665
07:30 AM	4	10	14	406	15	421	6	348	354	789
07:45 AM	10	7	17	285	33	318	6	294	300	635
Total	19	28	47	1428	77	1505	16	1087	1103	2655
08:00 AM	8	1	9	293	18	311	2	214	216	536
08:15 AM	7	4	11	223	13	236	2	205	207	454
08:30 AM	4	3	7	219	11	230	0	246	246	483
08:45 AM	1	3	4	192	8	200	5	178	183	387
Total	20	11	31	927	50	977	9	843	852	1860
Grand Total	39	39	78	2355	127	2482	25	1930	1955	4515
Apprch %	50	50		94.9	5.1		1.3	98.7		
Total %	0.9	0.9	1.7	52.2	2.8	55	0.6	42.7	43.3	

	Road 64 Southbound			SR-198 Westbound			SR-198 Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:00 AM										
07:00 AM	1	**10**	11	334	13	347	1	207	208	566
07:15 AM	4	1	5	403	16	419	3	238	241	665
07:30 AM	4	10	14	**406**	15	**421**	**6**	**348**	**354**	**789**
07:45 AM	**10**	7	**17**	285	**33**	318	6	294	300	635
Total Volume	19	28	47	1428	77	1505	16	1087	1103	2655
% App. Total	40.4	59.6		94.9	5.1		1.5	98.5		
PHF	.475	.700	.691	.879	.583	.894	.667	.781	.779	.841

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County of Tulare
N/S: Road 64
E/W: SR-198
Weather: Clear

File Name : 05_CTE_Rd 64_SR-198 AM
Site Code : 00322799
Start Date : 9/20/2022
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Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM			07:00 AM			07:00 AM		
+0 mins.	1	**10**	11	334	13	347	1	207	208
+15 mins.	4	1	5	403	16	419	3	238	241
+30 mins.	4	10	14	**406**	15	**421**	**6**	**348**	**354**
+45 mins.	**10**	7	**17**	285	**33**	318	6	294	300
Total Volume	19	28	47	1428	77	1505	16	1087	1103
% App. Total	40.4	59.6		94.9	5.1		1.5	98.5	
PHF	.475	.700	.691	.879	.583	.894	.667	.781	.779

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County of Tulare
N/S: Road 64
E/W: SR-198
Weather: Clear

File Name : 05_CTE_Rd 64_SR-198 AM
Site Code : 00322799
Start Date : 9/20/2022
Page No : 1

Groups Printed- Large 2 Axle Vehicles

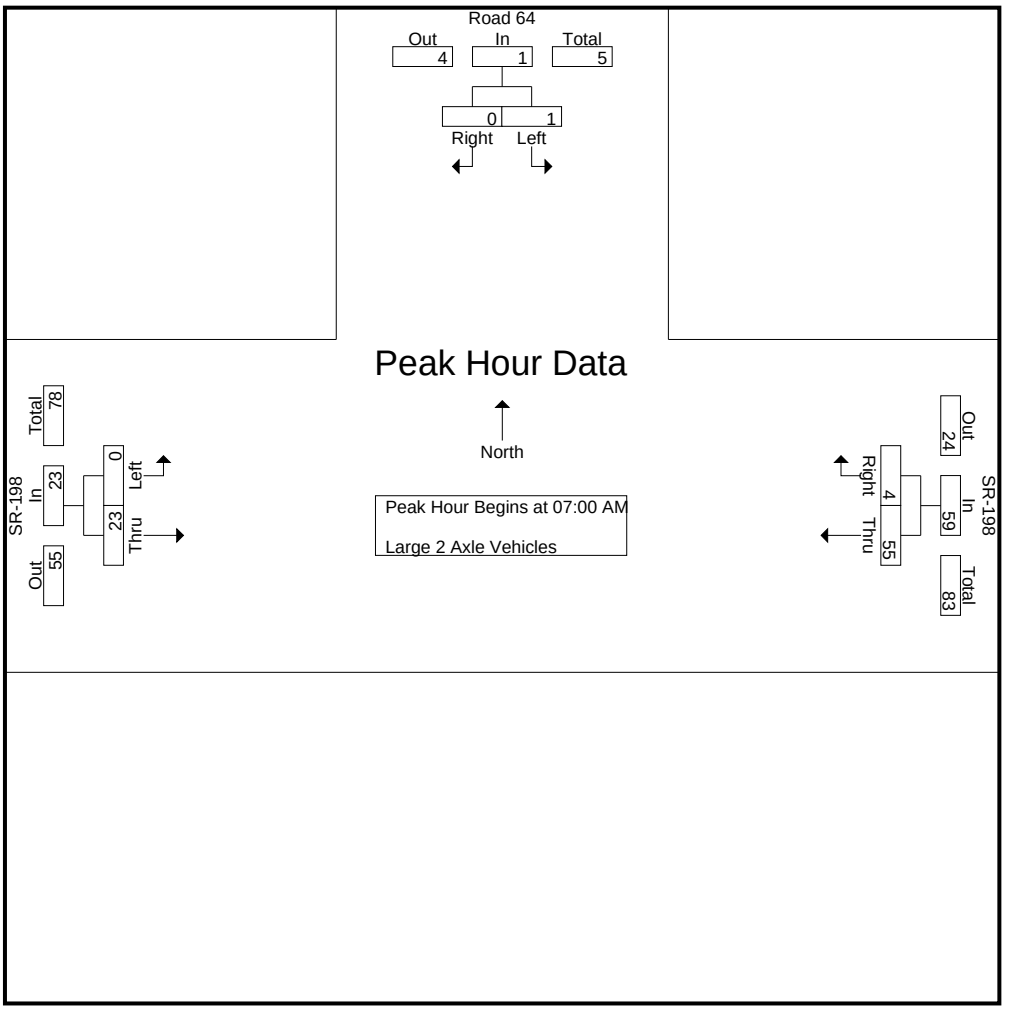
	Road 64 Southbound			SR-198 Westbound			SR-198 Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
07:00 AM	0	0	0	7	0	7	0	2	2	9
07:15 AM	1	0	1	9	2	11	0	17	17	29
07:30 AM	0	0	0	18	2	20	0	3	3	23
07:45 AM	0	0	0	21	0	21	0	1	1	22
Total	1	0	1	55	4	59	0	23	23	83
08:00 AM	0	0	0	12	0	12	0	5	5	17
08:15 AM	0	0	0	10	2	12	0	3	3	15
08:30 AM	0	0	0	6	2	8	0	6	6	14
08:45 AM	0	0	0	4	0	4	0	8	8	12
Total	0	0	0	32	4	36	0	22	22	58
Grand Total	1	0	1	87	8	95	0	45	45	141
Apprch %	100	0		91.6	8.4		0	100		
Total %	0.7	0	0.7	61.7	5.7	67.4	0	31.9	31.9	

	Road 64 Southbound			SR-198 Westbound			SR-198 Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:00 AM										
07:00 AM	0	0	0	7	0	7	0	2	2	9
07:15 AM	**1**	0	**1**	9	**2**	11	0	**17**	**17**	**29**
07:30 AM	0	0	0	18	2	20	0	3	3	23
07:45 AM	0	0	0	**21**	0	**21**	0	1	1	22
Total Volume	1	0	1	55	4	59	0	23	23	83
% App. Total	100	0		93.2	6.8		0	100		
PHF	.250	.000	.250	.655	.500	.702	.000	.338	.338	.716

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County of Tulare
N/S: Road 64
E/W: SR-198
Weather: Clear

File Name : 05_CTE_Rd 64_SR-198 AM
Site Code : 00322799
Start Date : 9/20/2022
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Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM			07:00 AM			07:00 AM		
+0 mins.	0	0	0	7	0	7	0	2	2
+15 mins.	**1**	0	**1**	9	**2**	11	0	**17**	**17**
+30 mins.	0	0	0	18	2	20	0	3	3
+45 mins.	0	0	0	**21**	0	**21**	0	1	1
Total Volume	1	0	1	55	4	59	0	23	23
% App. Total	100	0		93.2	6.8		0	100	
PHF	.250	.000	.250	.655	.500	.702	.000	.338	.338

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County of Tulare
N/S: Road 64
E/W: SR-198
Weather: Clear

File Name : 05_CTE_Rd 64_SR-198 AM
Site Code : 00322799
Start Date : 9/20/2022
Page No : 1

Groups Printed- 3 Axle Vehicles

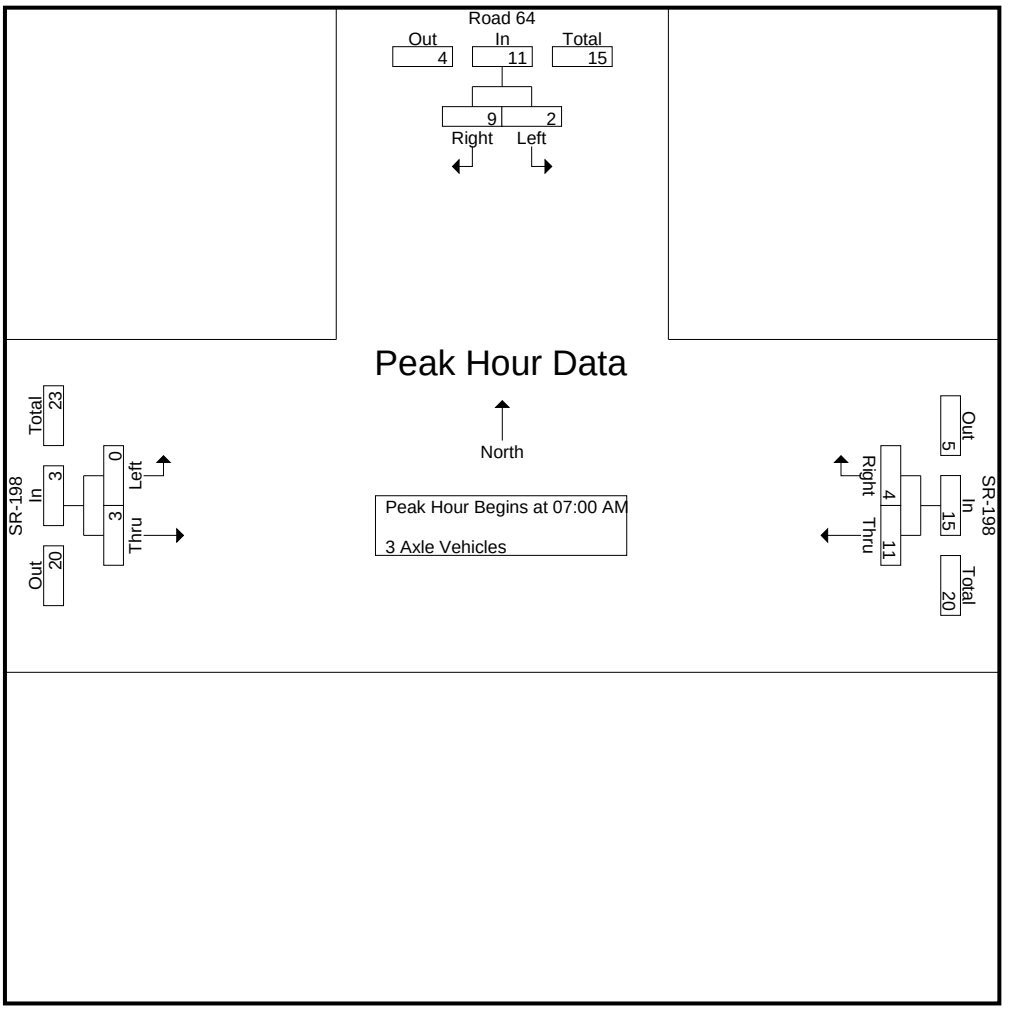
	Road 64 Southbound			SR-198 Westbound			SR-198 Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
07:00 AM	0	1	1	3	0	3	0	2	2	6
07:15 AM	1	7	8	2	1	3	0	0	0	11
07:30 AM	0	0	0	3	1	4	0	1	1	5
07:45 AM	1	1	2	3	2	5	0	0	0	7
Total	2	9	11	11	4	15	0	3	3	29
08:00 AM	0	0	0	6	0	6	0	2	2	8
08:15 AM	1	4	5	2	0	2	0	1	1	8
08:30 AM	0	0	0	6	0	6	0	2	2	8
08:45 AM	0	2	2	0	1	1	0	5	5	8
Total	1	6	7	14	1	15	0	10	10	32
Grand Total	3	15	18	25	5	30	0	13	13	61
Apprch %	16.7	83.3		83.3	16.7		0	100		
Total %	4.9	24.6	29.5	41	8.2	49.2	0	21.3	21.3	

	Road 64 Southbound			SR-198 Westbound			SR-198 Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:00 AM										
07:00 AM	0	1	1	**3**	0	3	0	**2**	**2**	6
07:15 AM	**1**	**7**	**8**	2	1	3	0	0	0	**11**
07:30 AM	0	0	0	3	1	4	0	1	1	5
07:45 AM	1	1	2	3	**2**	**5**	0	0	0	7
Total Volume	2	9	11	11	4	15	0	3	3	29
% App. Total	18.2	81.8		73.3	26.7		0	100		
PHF	.500	.321	.344	.917	.500	.750	.000	.375	.375	.659

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County of Tulare
N/S: Road 64
E/W: SR-198
Weather: Clear

File Name : 05_CTE_Rd 64_SR-198 AM
Site Code : 00322799
Start Date : 9/20/2022
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Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM			07:00 AM			07:00 AM		
+0 mins.	0	1	1	**3**	0	3	0	**2**	**2**
+15 mins.	**1**	**7**	**8**	2	1	3	0	0	0
+30 mins.	0	0	0	3	1	4	0	1	1
+45 mins.	1	1	2	3	**2**	**5**	0	0	0
Total Volume	2	9	11	11	4	15	0	3	3
% App. Total	18.2	81.8		73.3	26.7		0	100	
PHF	.500	.321	.344	.917	.500	.750	.000	.375	.375

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County of Tulare
N/S: Road 64
E/W: SR-198
Weather: Clear

File Name : 05_CTE_Rd 64_SR-198 AM
Site Code : 00322799
Start Date : 9/20/2022
Page No : 1

Groups Printed- 4+ Axle Trucks

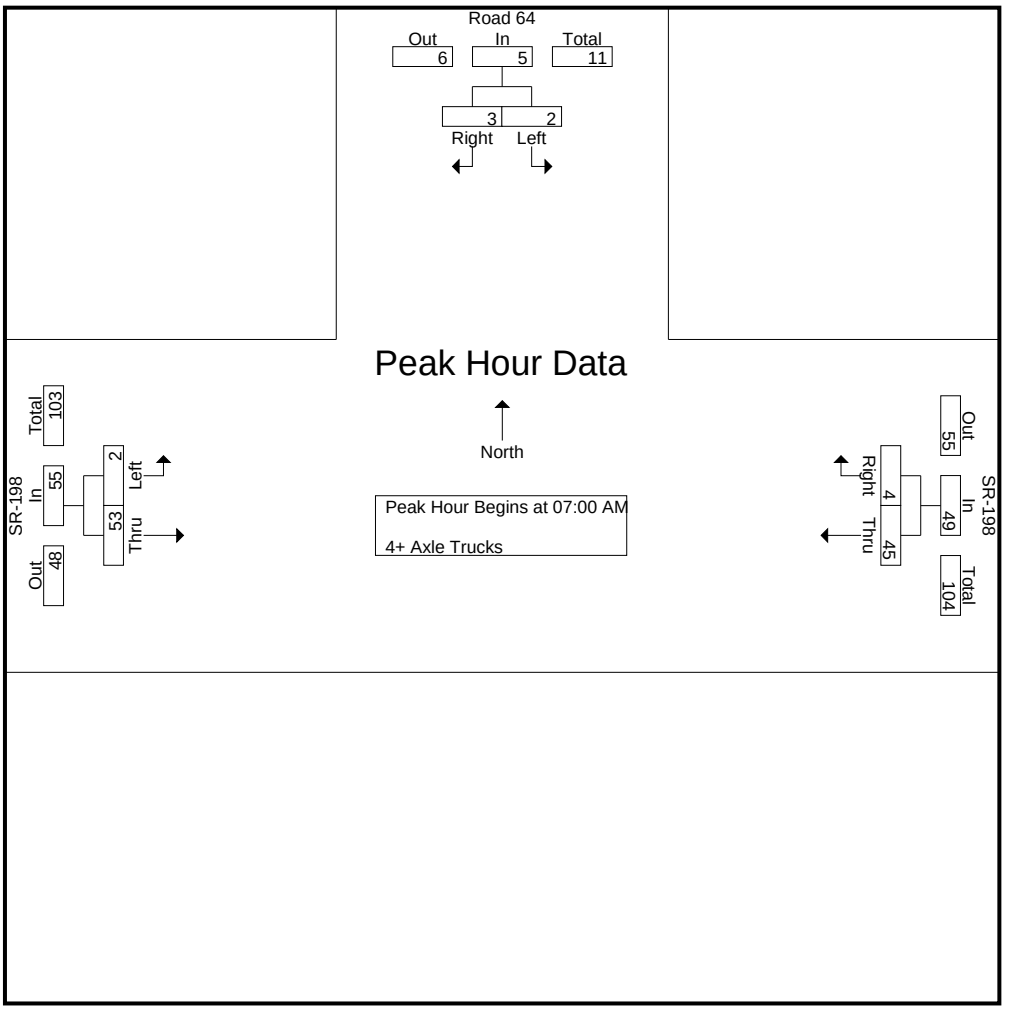
	Road 64 Southbound			SR-198 Westbound			SR-198 Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
07:00 AM	0	0	0	11	2	13	0	9	9	22
07:15 AM	1	1	2	11	1	12	1	21	22	36
07:30 AM	1	0	1	11	0	11	0	13	13	25
07:45 AM	0	2	2	12	1	13	1	10	11	26
Total	2	3	5	45	4	49	2	53	55	109
08:00 AM	0	0	0	13	0	13	1	11	12	25
08:15 AM	0	0	0	17	2	19	1	7	8	27
08:30 AM	0	0	0	11	1	12	1	13	14	26
08:45 AM	0	2	2	21	1	22	0	5	5	29
Total	0	2	2	62	4	66	3	36	39	107
Grand Total	2	5	7	107	8	115	5	89	94	216
Apprch %	28.6	71.4		93	7		5.3	94.7		
Total %	0.9	2.3	3.2	49.5	3.7	53.2	2.3	41.2	43.5	

	Road 64 Southbound			SR-198 Westbound			SR-198 Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:00 AM										
07:00 AM	0	0	0	11	**2**	**13**	0	9	9	22
07:15 AM	**1**	1	**2**	11	1	12	**1**	**21**	**22**	**36**
07:30 AM	1	0	1	11	0	11	0	13	13	25
07:45 AM	0	**2**	2	**12**	1	13	1	10	11	26
Total Volume	2	3	5	45	4	49	2	53	55	109
% App. Total	40	60		91.8	8.2		3.6	96.4		
PHF	.500	.375	.625	.938	.500	.942	.500	.631	.625	.757

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County of Tulare
N/S: Road 64
E/W: SR-198
Weather: Clear

File Name : 05_CTE_Rd 64_SR-198 AM
Site Code : 00322799
Start Date : 9/20/2022
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Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM			07:00 AM			07:00 AM		
+0 mins.	0	0	0	11	**2**	**13**	0	9	9
+15 mins.	**1**	1	**2**	11	1	12	**1**	**21**	**22**
+30 mins.	1	0	1	11	0	11	0	13	13
+45 mins.	0	**2**	2	**12**	1	13	1	10	11
Total Volume	2	3	5	45	4	49	2	53	55
% App. Total	40	60		91.8	8.2		3.6	96.4	
PHF	.500	.375	.625	.938	.500	.942	.500	.631	.625

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County of Tulare
N/S: Road 64
E/W: SR-198
Weather: Clear

File Name : 05_CTE_Rd 64_SR-198 PM
Site Code : 00322799
Start Date : 9/20/2022

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

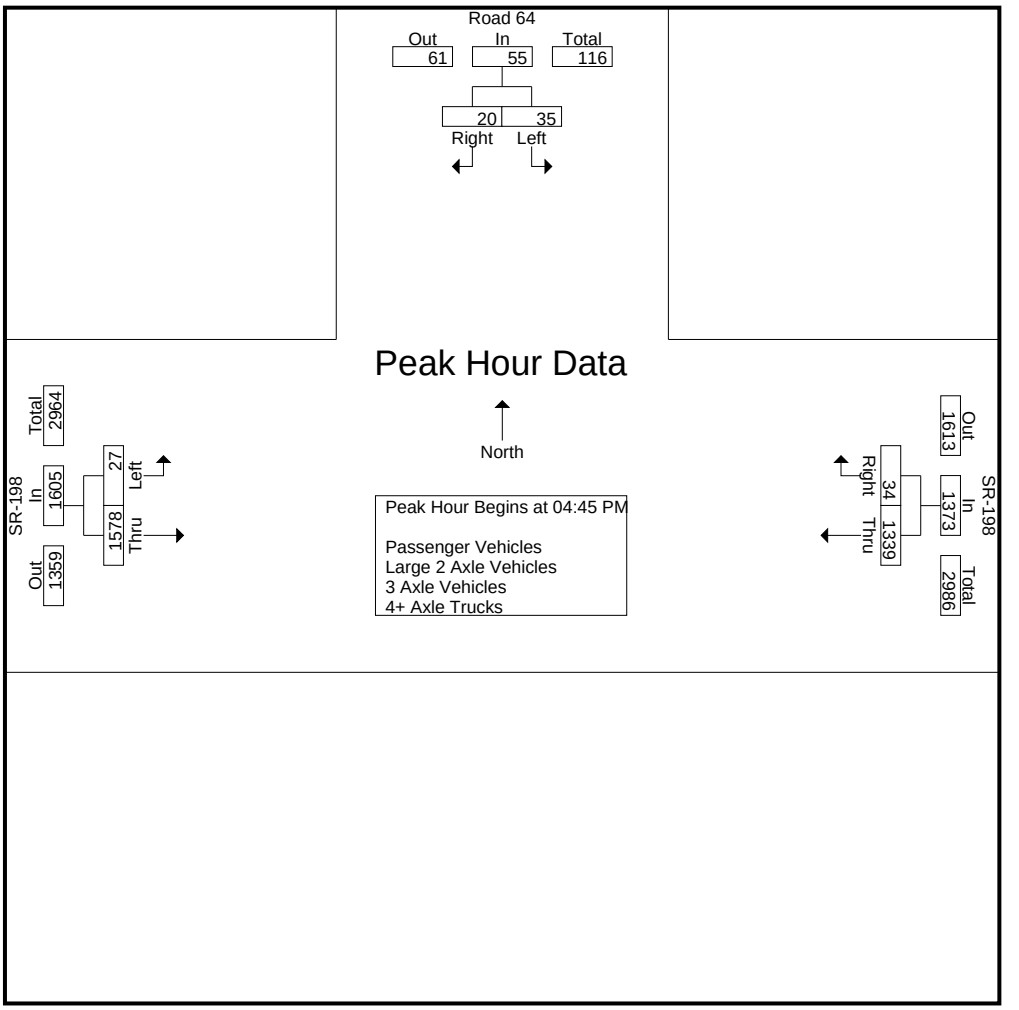
	Road 64 Southbound			SR-198 Westbound			SR-198 Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
04:00 PM	13	1	14	204	15	219	2	407	409	642
04:15 PM	10	3	13	286	10	296	4	369	373	682
04:30 PM	12	9	21	228	7	235	7	377	384	640
04:45 PM	20	9	29	298	12	310	11	359	370	709
Total	55	22	77	1016	44	1060	24	1512	1536	2673
05:00 PM	4	8	12	422	8	430	4	436	440	882
05:15 PM	4	2	6	314	9	323	8	444	452	781
05:30 PM	7	1	8	305	5	310	4	339	343	661
05:45 PM	4	3	7	242	7	249	3	271	274	530
Total	19	14	33	1283	29	1312	19	1490	1509	2854
Grand Total	74	36	110	2299	73	2372	43	3002	3045	5527
Apprch %	67.3	32.7		96.9	3.1		1.4	98.6		
Total %	1.3	0.7	2	41.6	1.3	42.9	0.8	54.3	55.1	
Passenger Vehicles	68	32	100	2184	59	2243	37	2819	2856	5199
% Passenger Vehicles	91.9	88.9	90.9	95	80.8	94.6	86	93.9	93.8	94.1
Large 2 Axle Vehicles	4	1	5	36	9	45	3	64	67	117
% Large 2 Axle Vehicles	5.4	2.8	4.5	1.6	12.3	1.9	7	2.1	2.2	2.1
3 Axle Vehicles	2	1	3	8	1	9	0	10	10	22
% 3 Axle Vehicles	2.7	2.8	2.7	0.3	1.4	0.4	0	0.3	0.3	0.4
4+ Axle Trucks	0	2	2	71	4	75	3	109	112	189
% 4+ Axle Trucks	0	5.6	1.8	3.1	5.5	3.2	7	3.6	3.7	3.4

	Road 64 Southbound			SR-198 Westbound			SR-198 Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	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	**20**	**9**	**29**	298	**12**	310	**11**	359	370	709
05:00 PM	4	8	12	**422**	8	**430**	4	436	440	**882**
05:15 PM	4	2	6	314	9	323	8	**444**	**452**	781
05:30 PM	7	1	8	305	5	310	4	339	343	661
Total Volume	35	20	55	1339	34	1373	27	1578	1605	3033
% App. Total	63.6	36.4		97.5	2.5		1.7	98.3		
PHF	.438	.556	.474	.793	.708	.798	.614	.889	.888	.860

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County of Tulare
N/S: Road 64
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Weather: Clear

File Name : 05_CTE_Rd 64_SR-198 PM
Site Code : 00322799
Start Date : 9/20/2022
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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			04:45 PM			04:30 PM		
+0 mins.	13	1	14	298	**12**	310	7	377	384
+15 mins.	10	3	13	**422**	8	**430**	**11**	359	370
+30 mins.	12	**9**	21	314	9	323	4	436	440
+45 mins.	**20**	9	**29**	305	5	310	8	**444**	**452**
Total Volume	55	22	77	1339	34	1373	30	1616	1646
% App. Total	71.4	28.6		97.5	2.5		1.8	98.2	
PHF	.688	.611	.664	.793	.708	.798	.682	.910	.910

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County of Tulare
N/S: Road 64
E/W: SR-198
Weather: Clear

File Name : 05_CTE_Rd 64_SR-198 PM
Site Code : 00322799
Start Date : 9/20/2022
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Groups Printed- Passenger Vehicles

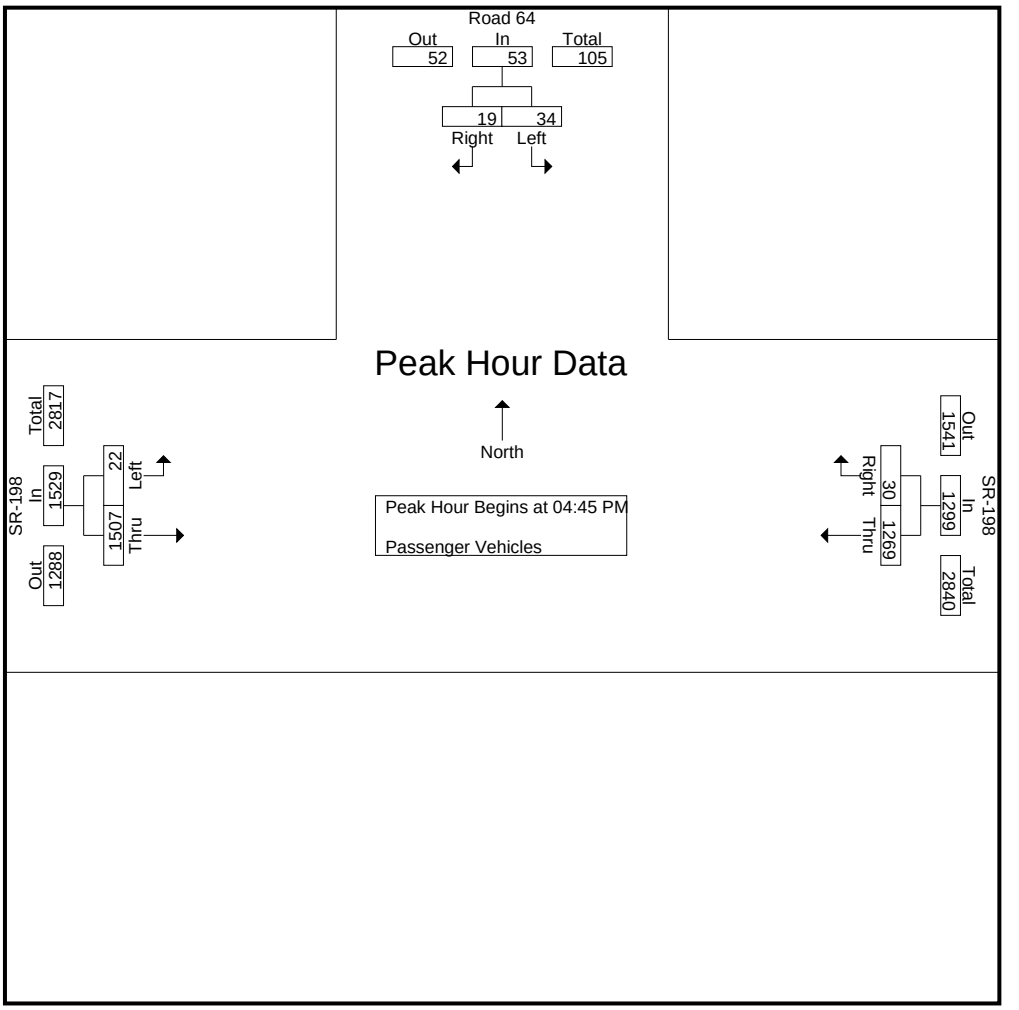
	Road 64 Southbound			SR-198 Westbound			SR-198 Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
04:00 PM	11	1	12	194	11	205	2	379	381	598
04:15 PM	10	2	12	271	9	280	4	342	346	638
04:30 PM	11	7	18	220	6	226	6	340	346	590
04:45 PM	19	9	28	280	11	291	10	340	350	669
Total	51	19	70	965	37	1002	22	1401	1423	2495
05:00 PM	4	7	11	401	7	408	3	417	420	839
05:15 PM	4	2	6	300	8	308	5	425	430	744
05:30 PM	7	1	8	288	4	292	4	325	329	629
05:45 PM	2	3	5	230	3	233	3	251	254	492
Total	17	13	30	1219	22	1241	15	1418	1433	2704
Grand Total	68	32	100	2184	59	2243	37	2819	2856	5199
Apprch %	68	32		97.4	2.6		1.3	98.7		
Total %	1.3	0.6	1.9	42	1.1	43.1	0.7	54.2	54.9	

	Road 64 Southbound			SR-198 Westbound			SR-198 Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	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	**19**	**9**	**28**	280	**11**	291	**10**	340	350	669
05:00 PM	4	7	11	**401**	7	**408**	3	417	420	**839**
05:15 PM	4	2	6	300	8	308	5	**425**	**430**	744
05:30 PM	7	1	8	288	4	292	4	325	329	629
Total Volume	34	19	53	1269	30	1299	22	1507	1529	2881
% App. Total	64.2	35.8		97.7	2.3		1.4	98.6		
PHF	.447	.528	.473	.791	.682	.796	.550	.886	.889	.858

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County of Tulare
N/S: Road 64
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Weather: Clear

File Name : 05_CTE_Rd 64_SR-198 PM
Site Code : 00322799
Start Date : 9/20/2022
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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		
+0 mins.	**19**	**9**	**28**	280	**11**	291	**10**	340	350
+15 mins.	4	7	11	**401**	7	**408**	3	417	420
+30 mins.	4	2	6	300	8	308	5	**425**	**430**
+45 mins.	7	1	8	288	4	292	4	325	329
Total Volume	34	19	53	1269	30	1299	22	1507	1529
% App. Total	64.2	35.8		97.7	2.3		1.4	98.6	
PHF	.447	.528	.473	.791	.682	.796	.550	.886	.889

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County of Tulare
N/S: Road 64
E/W: SR-198
Weather: Clear

File Name : 05_CTE_Rd 64_SR-198 PM
Site Code : 00322799
Start Date : 9/20/2022
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Groups Printed- Large 2 Axle Vehicles

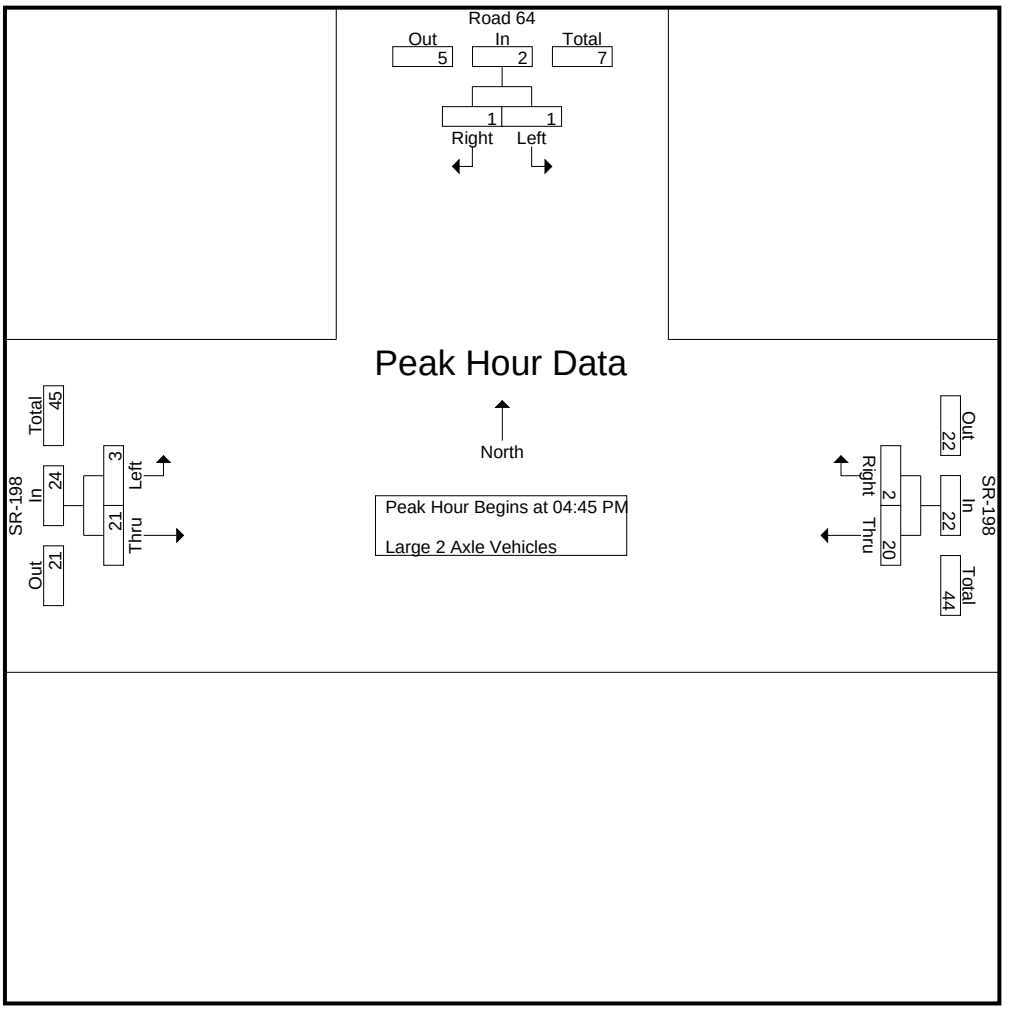
	Road 64 Southbound			SR-198 Westbound			SR-198 Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
04:00 PM	1	0	1	4	3	7	0	11	11	19
04:15 PM	0	0	0	8	0	8	0	6	6	14
04:30 PM	0	0	0	3	1	4	0	16	16	20
04:45 PM	1	0	1	2	1	3	0	6	6	10
Total	2	0	2	17	5	22	0	39	39	63
05:00 PM	0	1	1	8	0	8	1	4	5	14
05:15 PM	0	0	0	5	1	6	2	3	5	11
05:30 PM	0	0	0	5	0	5	0	8	8	13
05:45 PM	2	0	2	1	3	4	0	10	10	16
Total	2	1	3	19	4	23	3	25	28	54
Grand Total	4	1	5	36	9	45	3	64	67	117
Apprch %	80	20		80	20		4.5	95.5		
Total %	3.4	0.9	4.3	30.8	7.7	38.5	2.6	54.7	57.3	

	Road 64 Southbound			SR-198 Westbound			SR-198 Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	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	**1**	0	**1**	2	**1**	3	0	6	6	10
05:00 PM	0	**1**	1	**8**	0	**8**	1	4	5	**14**
05:15 PM	0	0	0	5	1	6	**2**	3	5	11
05:30 PM	0	0	0	5	0	5	0	**8**	**8**	13
Total Volume	1	1	2	20	2	22	3	21	24	48
% App. Total	50	50		90.9	9.1		12.5	87.5		
PHF	.250	.250	.500	.625	.500	.688	.375	.656	.750	.857

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County of Tulare
N/S: Road 64
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Weather: Clear

File Name : 05_CTE_Rd 64_SR-198 PM
Site Code : 00322799
Start Date : 9/20/2022
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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		
+0 mins.	**1**	0	**1**	2	**1**	3	0	6	6
+15 mins.	0	**1**	1	**8**	0	**8**	1	4	5
+30 mins.	0	0	0	5	1	6	**2**	3	5
+45 mins.	0	0	0	5	0	5	0	**8**	**8**
Total Volume	1	1	2	20	2	22	3	21	24
% App. Total	50	50		90.9	9.1		12.5	87.5	
PHF	.250	.250	.500	.625	.500	.688	.375	.656	.750

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County of Tulare
N/S: Road 64
E/W: SR-198
Weather: Clear

File Name : 05_CTE_Rd 64_SR-198 PM
Site Code : 00322799
Start Date : 9/20/2022
Page No : 1

Groups Printed- 3 Axle Vehicles

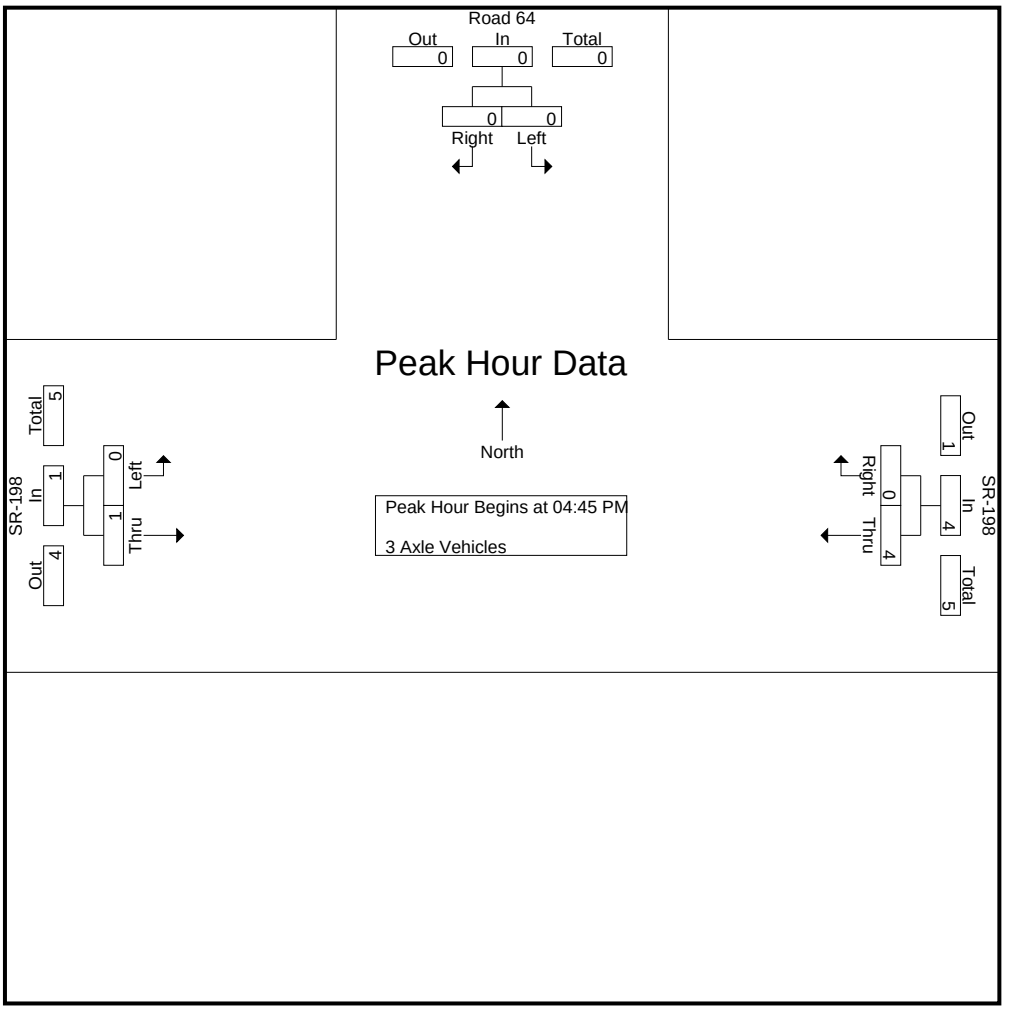
	Road 64 Southbound			SR-198 Westbound			SR-198 Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
04:00 PM	1	0	1	0	0	0	0	2	2	3
04:15 PM	0	0	0	1	1	2	0	2	2	4
04:30 PM	1	1	2	1	0	1	0	3	3	6
04:45 PM	0	0	0	1	0	1	0	0	0	1
Total	2	1	3	3	1	4	0	7	7	14
05:00 PM	0	0	0	3	0	3	0	0	0	3
05:15 PM	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	1	1	1
05:45 PM	0	0	0	2	0	2	0	2	2	4
Total	0	0	0	5	0	5	0	3	3	8
Grand Total	2	1	3	8	1	9	0	10	10	22
Apprch %	66.7	33.3		88.9	11.1		0	100		
Total %	9.1	4.5	13.6	36.4	4.5	40.9	0	45.5	45.5	

	Road 64 Southbound			SR-198 Westbound			SR-198 Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	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	1	0	1	0	0	0	1
05:00 PM	0	0	0	**3**	0	**3**	0	0	0	**3**
05:15 PM	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	**1**	**1**	1
Total Volume	0	0	0	4	0	4	0	1	1	5
% App. Total	0	0		100	0		0	100		
PHF	.000	.000	.000	.333	.000	.333	.000	.250	.250	.417

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N/S: Road 64
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Site Code : 00322799
Start Date : 9/20/2022
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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		
+0 mins.	0	0	0	1	0	1	0	0	0
+15 mins.	0	0	0	**3**	0	**3**	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	**1**	**1**
Total Volume	0	0	0	4	0	4	0	1	1
% App. Total	0	0		100	0		0	100	
PHF	.000	.000	.000	.333	.000	.333	.000	.250	.250

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N/S: Road 64
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File Name : 05_CTE_Rd 64_SR-198 PM
Site Code : 00322799
Start Date : 9/20/2022
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Groups Printed- 4+ Axle Trucks

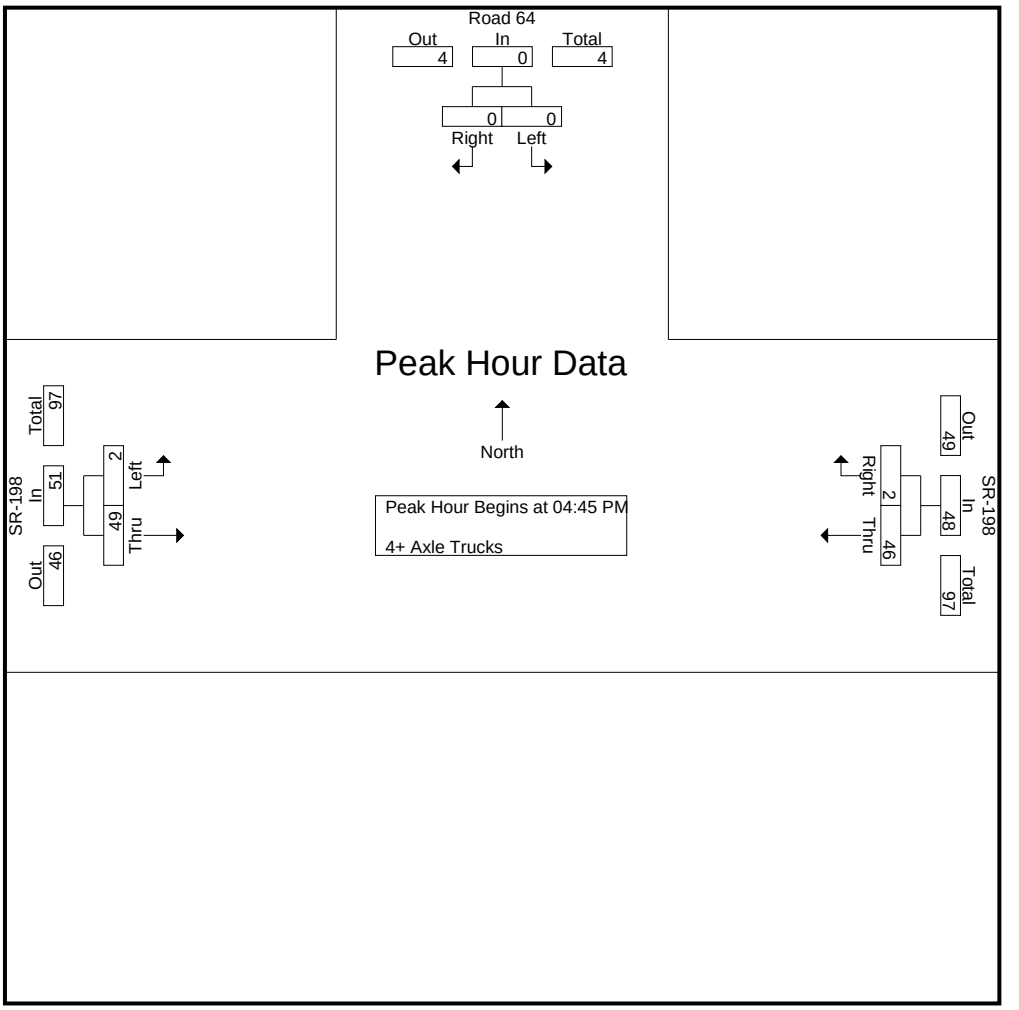
	Road 64 Southbound			SR-198 Westbound			SR-198 Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
04:00 PM	0	0	0	6	1	7	0	15	15	22
04:15 PM	0	1	1	6	0	6	0	19	19	26
04:30 PM	0	1	1	4	0	4	1	18	19	24
04:45 PM	0	0	0	15	0	15	1	13	14	29
Total	0	2	2	31	1	32	2	65	67	101
05:00 PM	0	0	0	10	1	11	0	15	15	26
05:15 PM	0	0	0	9	0	9	1	16	17	26
05:30 PM	0	0	0	12	1	13	0	5	5	18
05:45 PM	0	0	0	9	1	10	0	8	8	18
Total	0	0	0	40	3	43	1	44	45	88
Grand Total	0	2	2	71	4	75	3	109	112	189
Apprch %	0	100		94.7	5.3		2.7	97.3		
Total %	0	1.1	1.1	37.6	2.1	39.7	1.6	57.7	59.3	

	Road 64 Southbound			SR-198 Westbound			SR-198 Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	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	**15**	0	**15**	**1**	13	14	**29**
05:00 PM	0	0	0	10	**1**	11	0	15	15	26
05:15 PM	0	0	0	9	0	9	1	**16**	**17**	26
05:30 PM	0	0	0	12	1	13	0	5	5	18
Total Volume	0	0	0	46	2	48	2	49	51	99
% App. Total	0	0		95.8	4.2		3.9	96.1		
PHF	.000	.000	.000	.767	.500	.800	.500	.766	.750	.853

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County of Tulare
N/S: Road 64
E/W: SR-198
Weather: Clear

File Name : 05_CTE_Rd 64_SR-198 PM
Site Code : 00322799
Start Date : 9/20/2022
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		
+0 mins.	0	0	0	**15**	0	**15**	**1**	13	14
+15 mins.	0	0	0	10	**1**	11	0	15	15
+30 mins.	0	0	0	9	0	9	1	**16**	**17**
+45 mins.	0	0	0	12	1	13	0	5	5
Total Volume	0	0	0	46	2	48	2	49	51
% App. Total	0	0		95.8	4.2		3.9	96.1	
PHF	.000	.000	.000	.767	.500	.800	.500	.766	.750

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County of Tulare
N/S: SR-99 Southbound Ramps
E/W: Betty Drive
Weather: Clear

File Name : 01_CTE_99S_Betty AM
Site Code : 00323250
Start Date : 3/23/2023
Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

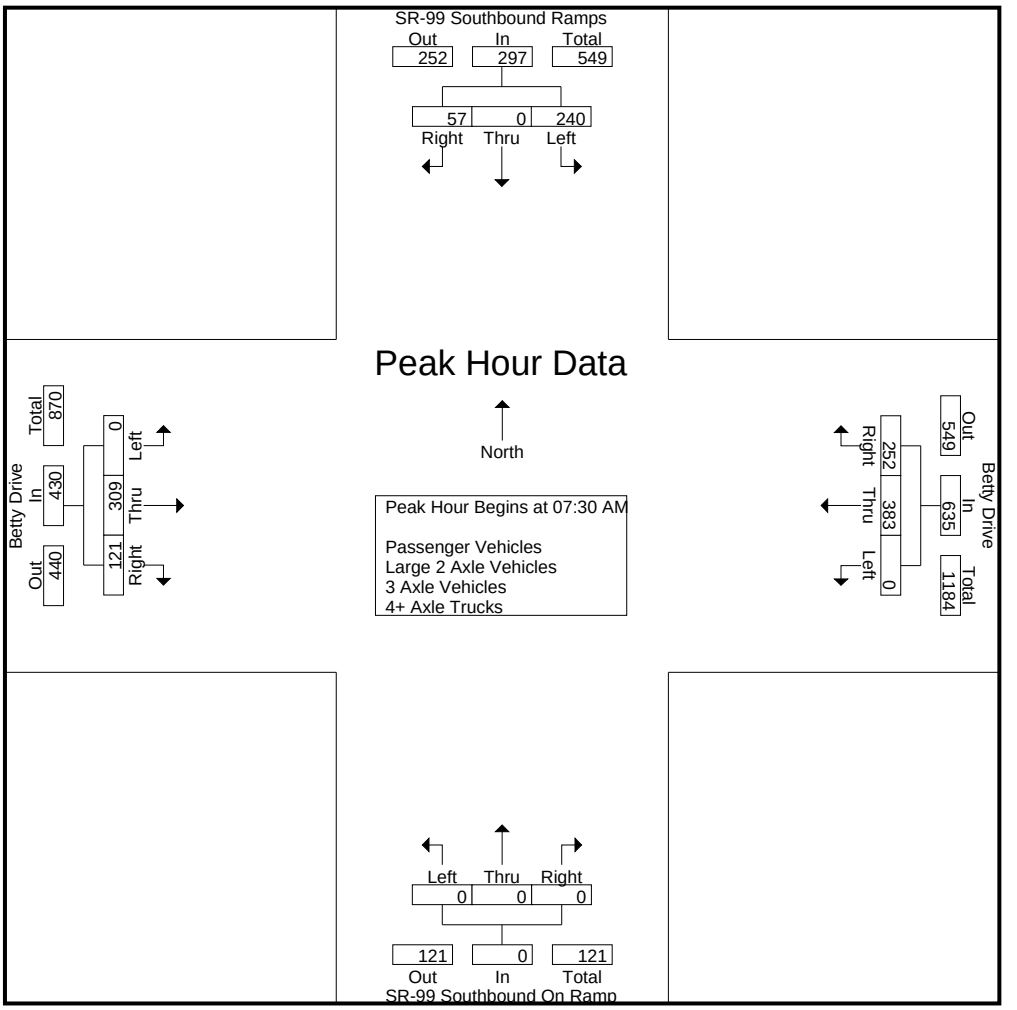
	SR-99 Southbound Ramps Southbound				Betty Drive Westbound				SR-99 Southbound On Ramp Northbound				Betty Drive Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	68	0	14	82	0	36	37	73	0	0	0	0	0	40	11	51	206
07:15 AM	59	0	8	67	0	48	67	115	0	0	0	0	0	30	19	49	231
07:30 AM	66	0	15	81	0	72	58	130	0	0	0	0	0	48	22	70	281
07:45 AM	69	0	12	81	0	105	78	183	0	0	0	0	0	65	30	95	359
Total	262	0	49	311	0	261	240	501	0	0	0	0	0	183	82	265	1077
08:00 AM	57	0	10	67	0	120	56	176	0	0	0	0	0	100	35	135	378
08:15 AM	48	0	20	68	0	86	60	146	0	0	0	0	0	96	34	130	344
08:30 AM	66	0	9	75	0	37	59	96	0	0	0	0	0	41	15	56	227
08:45 AM	59	0	10	69	0	28	66	94	0	0	0	0	0	31	12	43	206
Total	230	0	49	279	0	271	241	512	0	0	0	0	0	268	96	364	1155
Grand Total	492	0	98	590	0	532	481	1013	0	0	0	0	0	451	178	629	2232
Apprch %	83.4	0	16.6		0	52.5	47.5		0	0	0		0	71.7	28.3		
Total %	22	0	4.4	26.4	0	23.8	21.6	45.4	0	0	0	0	0	20.2	8	28.2	
Passenger Vehicles	367	0	68	435	0	473	358	831	0	0	0	0	0	377	154	531	1797
% Passenger Vehicles	74.6	0	69.4	73.7	0	88.9	74.4	82	0	0	0	0	0	83.6	86.5	84.4	80.5
Large 2 Axle Vehicles	45	0	21	66	0	41	29	70	0	0	0	0	0	49	15	64	200
% Large 2 Axle Vehicles	9.1	0	21.4	11.2	0	7.7	6	6.9	0	0	0	0	0	10.9	8.4	10.2	9
3 Axle Vehicles	6	0	1	7	0	7	6	13	0	0	0	0	0	4	3	7	27
% 3 Axle Vehicles	1.2	0	1	1.2	0	1.3	1.2	1.3	0	0	0	0	0	0.9	1.7	1.1	1.2
4+ Axle Trucks	74	0	8	82	0	11	88	99	0	0	0	0	0	21	6	27	208
% 4+ Axle Trucks	15	0	8.2	13.9	0	2.1	18.3	9.8	0	0	0	0	0	4.7	3.4	4.3	9.3

	SR-99 Southbound Ramps Southbound				Betty Drive Westbound				SR-99 Southbound On Ramp Northbound				Betty 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	66	0	15	**81**	0	72	58	130	0	0	0	0	0	48	22	70	281
07:45 AM	**69**	0	12	81	0	105	**78**	**183**	0	0	0	0	0	65	30	95	359
08:00 AM	57	0	10	67	0	**120**	56	176	0	0	0	0	0	**100**	**35**	**135**	**378**
08:15 AM	48	0	**20**	68	0	86	60	146	0	0	0	0	0	96	34	130	344
Total Volume	240	0	57	297	0	383	252	635	0	0	0	0	0	309	121	430	1362
% App. Total	80.8	0	19.2		0	60.3	39.7		0	0	0		0	71.9	28.1		
PHF	.870	.000	.713	.917	.000	.798	.808	.867	.000	.000	.000	.000	.000	.773	.864	.796	.901

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County of Tulare
N/S: SR-99 Southbound Ramps
E/W: Betty Drive
Weather: Clear

File Name : 01_CTE_99S_Betty AM
Site Code : 00323250
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:

	07:00 AM				07:30 AM				07:00 AM				07:30 AM			
+0 mins.	68	0	14	**82**	0	72	58	130	0	0	0	0	0	48	22	70
+15 mins.	59	0	8	67	0	105	**78**	**183**	0	0	0	0	0	65	30	95
+30 mins.	66	0	**15**	81	0	**120**	56	176	0	0	0	0	0	**100**	**35**	**135**
+45 mins.	**69**	0	12	81	0	86	60	146	0	0	0	0	0	96	34	130
Total Volume	262	0	49	311	0	383	252	635	0	0	0	0	0	309	121	430
% App. Total	84.2	0	15.8		0	60.3	39.7		0	0	0		0	71.9	28.1	
PHF	.949	.000	.817	.948	.000	.798	.808	.867	.000	.000	.000	.000	.000	.773	.864	.796

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County of Tulare
N/S: SR-99 Southbound Ramps
E/W: Betty Drive
Weather: Clear

File Name : 01_CTE_99S_Betty AM
Site Code : 00323250
Start Date : 3/23/2023
Page No : 1

Groups Printed- Passenger Vehicles

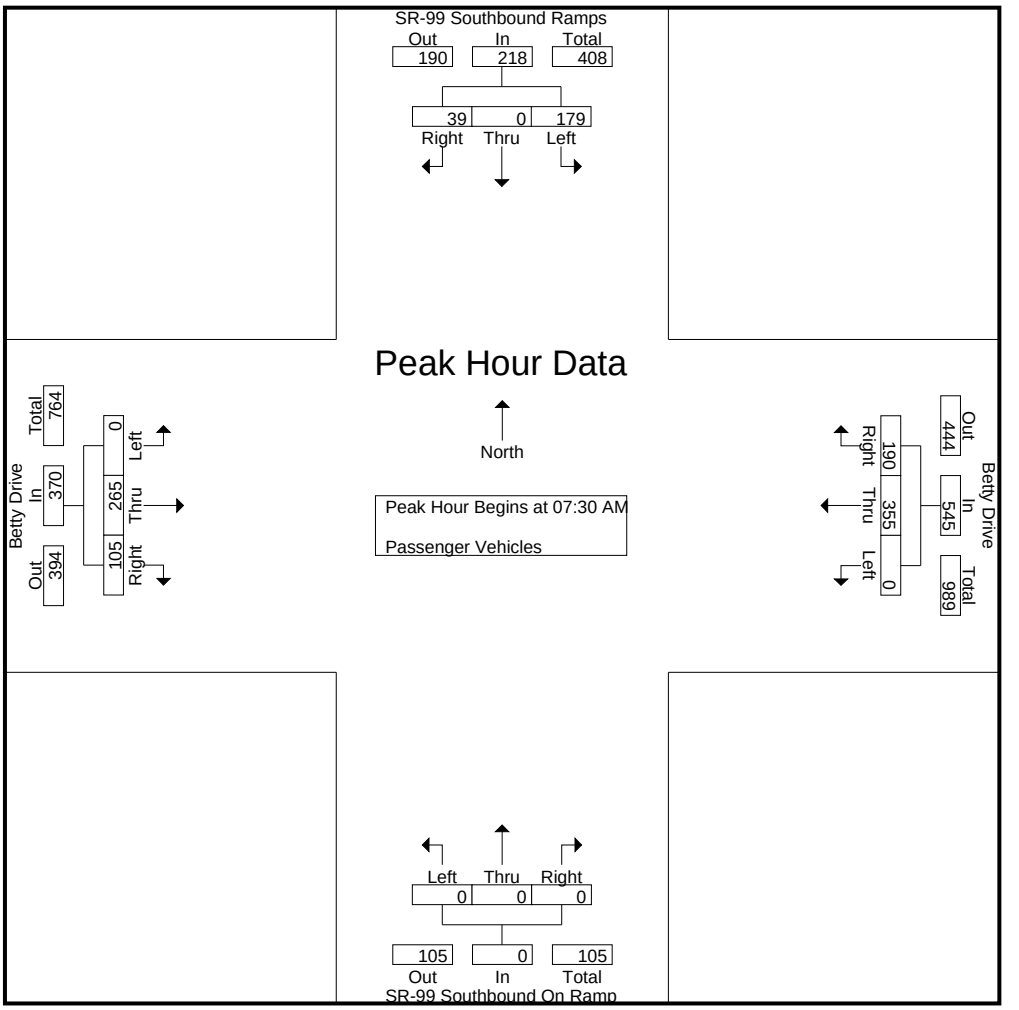
	SR-99 Southbound Ramps Southbound				Betty Drive Westbound				SR-99 Southbound On Ramp Northbound				Betty Drive Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	58	0	10	68	0	26	26	52	0	0	0	0	0	30	11	41	161
07:15 AM	44	0	7	51	0	42	54	96	0	0	0	0	0	23	15	38	185
07:30 AM	49	0	9	58	0	68	45	113	0	0	0	0	0	37	16	53	224
07:45 AM	46	0	10	56	0	96	61	157	0	0	0	0	0	59	27	86	299
Total	197	0	36	233	0	232	186	418	0	0	0	0	0	149	69	218	869
08:00 AM	45	0	7	52	0	113	40	153	0	0	0	0	0	87	32	119	324
08:15 AM	39	0	13	52	0	78	44	122	0	0	0	0	0	82	30	112	286
08:30 AM	37	0	7	44	0	30	44	74	0	0	0	0	0	34	13	47	165
08:45 AM	49	0	5	54	0	20	44	64	0	0	0	0	0	25	10	35	153
Total	170	0	32	202	0	241	172	413	0	0	0	0	0	228	85	313	928
Grand Total	367	0	68	435	0	473	358	831	0	0	0	0	0	377	154	531	1797
Apprch %	84.4	0	15.6		0	56.9	43.1		0	0	0		0	71	29		
Total %	20.4	0	3.8	24.2	0	26.3	19.9	46.2	0	0	0	0	0	21	8.6	29.5	

	SR-99 Southbound Ramps Southbound				Betty Drive Westbound				SR-99 Southbound On Ramp Northbound				Betty 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 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	**49**	0	9	**58**	0	68	45	113	0	0	0	0	0	37	16	53	224
07:45 AM	46	0	10	56	0	96	**61**	**157**	0	0	0	0	0	59	27	86	299
08:00 AM	45	0	7	52	0	**113**	40	153	0	0	0	0	0	**87**	**32**	**119**	**324**
08:15 AM	39	0	**13**	52	0	78	44	122	0	0	0	0	0	82	30	112	286
Total Volume	179	0	39	218	0	355	190	545	0	0	0	0	0	265	105	370	1133
% App. Total	82.1	0	17.9		0	65.1	34.9		0	0	0		0	71.6	28.4		
PHF	.913	.000	.750	.940	.000	.785	.779	.868	.000	.000	.000	.000	.000	.761	.820	.777	.874

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County of Tulare
N/S: SR-99 Southbound Ramps
E/W: Betty Drive
Weather: Clear

File Name : 01_CTE_99S_Betty AM
Site Code : 00323250
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.	**49**	0	9	**58**	0	68	45	113	0	0	0	0	0	37	16	53
+15 mins.	46	0	10	56	0	96	**61**	**157**	0	0	0	0	0	59	27	86
+30 mins.	45	0	7	52	0	**113**	40	153	0	0	0	0	0	**87**	**32**	**119**
+45 mins.	39	0	**13**	52	0	78	44	122	0	0	0	0	0	82	30	112
Total Volume	179	0	39	218	0	355	190	545	0	0	0	0	0	265	105	370
% App. Total	82.1	0	17.9		0	65.1	34.9		0	0	0		0	71.6	28.4	
PHF	.913	.000	.750	.940	.000	.785	.779	.868	.000	.000	.000	.000	.000	.761	.820	.777

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County of Tulare
N/S: SR-99 Southbound Ramps
E/W: Betty Drive
Weather: Clear

File Name : 01_CTE_99S_Betty AM
Site Code : 00323250
Start Date : 3/23/2023
Page No : 1

Groups Printed- Large 2 Axle Vehicles

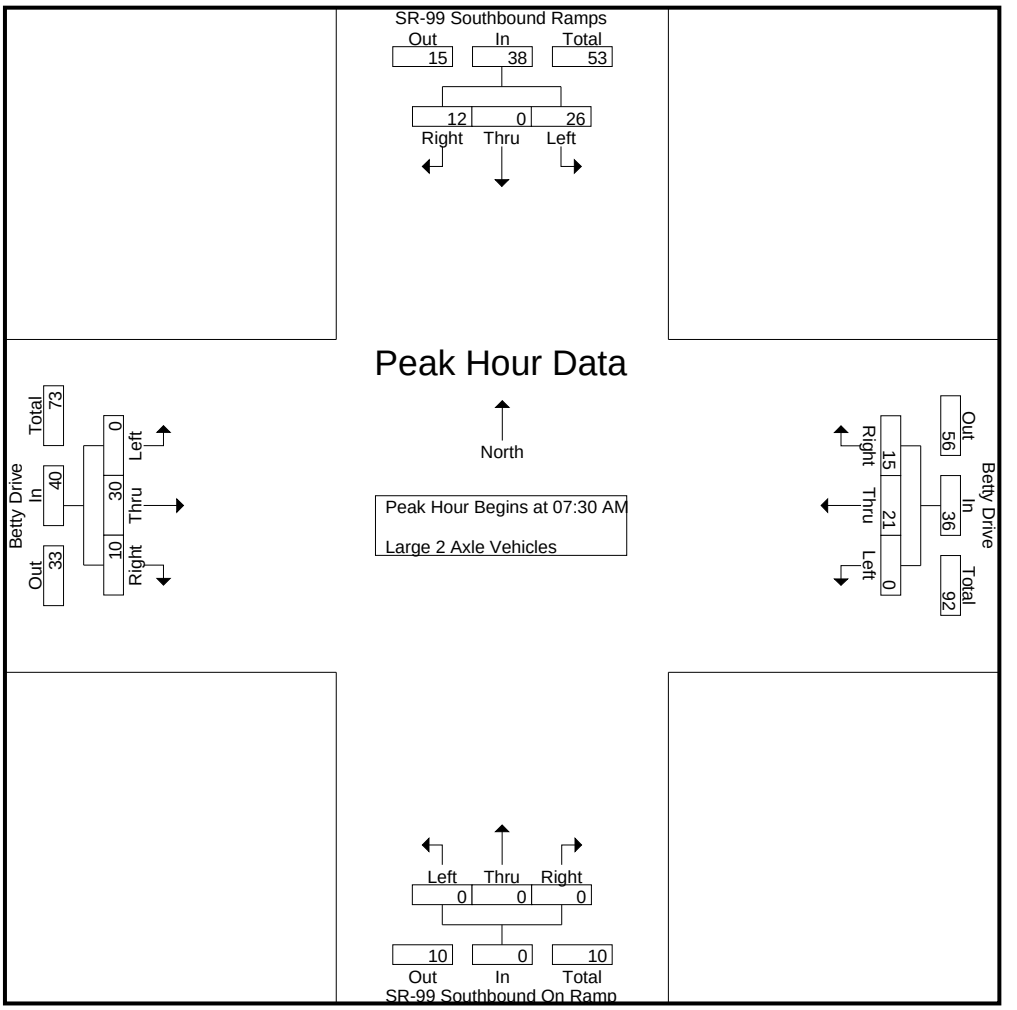
	SR-99 Southbound Ramps Southbound				Betty Drive Westbound				SR-99 Southbound On Ramp Northbound				Betty Drive Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	5	0	3	8	0	7	4	11	0	0	0	0	0	9	0	9	28
07:15 AM	3	0	0	3	0	3	5	8	0	0	0	0	0	1	3	4	15
07:30 AM	10	0	4	14	0	4	3	7	0	0	0	0	0	8	5	13	34
07:45 AM	9	0	2	11	0	6	7	13	0	0	0	0	0	5	2	7	31
Total	27	0	9	36	0	20	19	39	0	0	0	0	0	23	10	33	108
08:00 AM	4	0	2	6	0	5	3	8	0	0	0	0	0	7	1	8	22
08:15 AM	3	0	4	7	0	6	2	8	0	0	0	0	0	10	2	12	27
08:30 AM	8	0	2	10	0	5	2	7	0	0	0	0	0	7	0	7	24
08:45 AM	3	0	4	7	0	5	3	8	0	0	0	0	0	2	2	4	19
Total	18	0	12	30	0	21	10	31	0	0	0	0	0	26	5	31	92
Grand Total	45	0	21	66	0	41	29	70	0	0	0	0	0	49	15	64	200
Apprch %	68.2	0	31.8		0	58.6	41.4		0	0	0		0	76.6	23.4		
Total %	22.5	0	10.5	33	0	20.5	14.5	35	0	0	0	0	0	24.5	7.5	32	

	SR-99 Southbound Ramps Southbound				Betty Drive Westbound				SR-99 Southbound On Ramp Northbound				Betty 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 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	**10**	0	**4**	**14**	0	4	3	7	0	0	0	0	0	8	**5**	**13**	**34**
07:45 AM	9	0	2	11	0	**6**	**7**	**13**	0	0	0	0	0	5	2	7	31
08:00 AM	4	0	2	6	0	5	3	8	0	0	0	0	0	7	1	8	22
08:15 AM	3	0	4	7	0	6	2	8	0	0	0	0	0	**10**	2	12	27
Total Volume	26	0	12	38	0	21	15	36	0	0	0	0	0	30	10	40	114
% App. Total	68.4	0	31.6		0	58.3	41.7		0	0	0		0	75	25		
PHF	.650	.000	.750	.679	.000	.875	.536	.692	.000	.000	.000	.000	.000	.750	.500	.769	.838

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County of Tulare
N/S: SR-99 Southbound Ramps
E/W: Betty Drive
Weather: Clear

File Name : 01_CTE_99S_Betty AM
Site Code : 00323250
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.	**10**	0	**4**	**14**	0	4	3	7	0	0	0	0	0	8	**5**	**13**
+15 mins.	9	0	2	11	0	**6**	**7**	**13**	0	0	0	0	0	5	2	7
+30 mins.	4	0	2	6	0	5	3	8	0	0	0	0	0	7	1	8
+45 mins.	3	0	4	7	0	6	2	8	0	0	0	0	0	**10**	2	12
Total Volume	26	0	12	38	0	21	15	36	0	0	0	0	0	30	10	40
% App. Total	68.4	0	31.6		0	58.3	41.7		0	0	0		0	75	25	
PHF	.650	.000	.750	.679	.000	.875	.536	.692	.000	.000	.000	.000	.000	.750	.500	.769

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County of Tulare
N/S: SR-99 Southbound Ramps
E/W: Betty Drive
Weather: Clear

File Name : 01_CTE_99S_Betty AM
Site Code : 00323250
Start Date : 3/23/2023
Page No : 1

Groups Printed- 3 Axle Vehicles

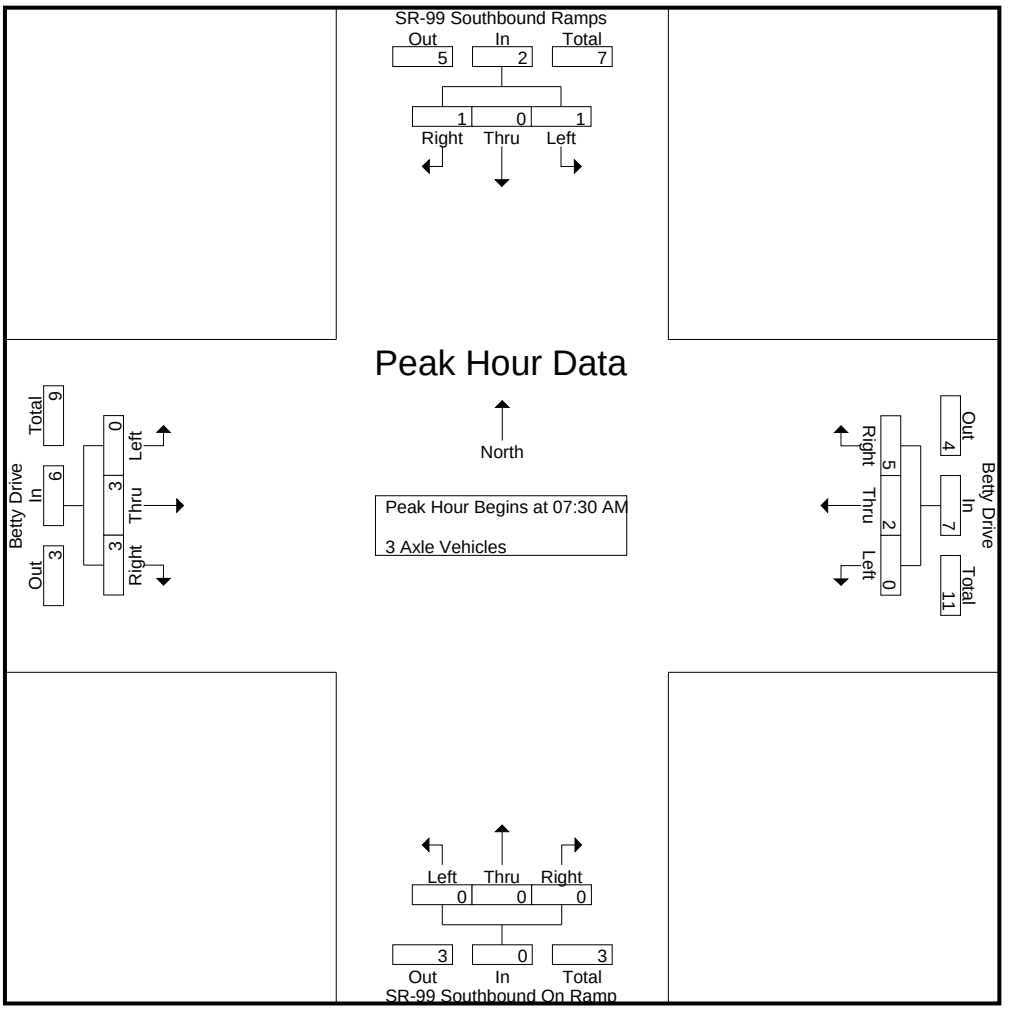
	SR-99 Southbound Ramps Southbound				Betty Drive Westbound				SR-99 Southbound On Ramp Northbound				Betty Drive Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	1	1	2	0	0	0	0	0	0	0	0	2
07:15 AM	2	0	0	2	0	1	0	1	0	0	0	0	0	0	0	0	3
07:30 AM	0	0	1	1	0	0	1	1	0	0	0	0	0	2	0	2	4
07:45 AM	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	3	0	1	4	0	2	2	4	0	0	0	0	0	2	0	2	10
08:00 AM	0	0	0	0	0	1	2	3	0	0	0	0	0	0	2	2	5
08:15 AM	0	0	0	0	0	1	2	3	0	0	0	0	0	1	1	2	5
08:30 AM	3	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	3
08:45 AM	0	0	0	0	0	3	0	3	0	0	0	0	0	1	0	1	4
Total	3	0	0	3	0	5	4	9	0	0	0	0	0	2	3	5	17
Grand Total	6	0	1	7	0	7	6	13	0	0	0	0	0	4	3	7	27
Apprch %	85.7	0	14.3		0	53.8	46.2		0	0	0		0	57.1	42.9		
Total %	22.2	0	3.7	25.9	0	25.9	22.2	48.1	0	0	0	0	0	14.8	11.1	25.9	

	SR-99 Southbound Ramps Southbound				Betty Drive Westbound				SR-99 Southbound On Ramp Northbound				Betty 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 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	0	**1**	**1**	0	0	1	1	0	0	0	0	0	**2**	0	**2**	4
07:45 AM	**1**	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
08:00 AM	0	0	0	0	0	**1**	**2**	**3**	0	0	0	0	0	0	**2**	2	**5**
08:15 AM	0	0	0	0	0	1	2	3	0	0	0	0	0	1	1	2	5
Total Volume	1	0	1	2	0	2	5	7	0	0	0	0	0	3	3	6	15
% App. Total	50	0	50		0	28.6	71.4		0	0	0		0	50	50		
PHF	.250	.000	.250	.500	.000	.500	.625	.583	.000	.000	.000	.000	.000	.375	.375	.750	.750

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County of Tulare
N/S: SR-99 Southbound Ramps
E/W: Betty Drive
Weather: Clear

File Name : 01_CTE_99S_Betty AM
Site Code : 00323250
Start Date : 3/23/2023
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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	**1**	**1**	0	0	1	1	0	0	0	0	0	**2**	0	**2**
+15 mins.	**1**	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	**1**	**2**	**3**	0	0	0	0	0	0	**2**	2
+45 mins.	0	0	0	0	0	1	2	3	0	0	0	0	0	1	1	2
Total Volume	1	0	1	2	0	2	5	7	0	0	0	0	0	3	3	6
% App. Total	50	0	50		0	28.6	71.4		0	0	0		0	50	50	
PHF	.250	.000	.250	.500	.000	.500	.625	.583	.000	.000	.000	.000	.000	.375	.375	.750

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County of Tulare
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File Name : 01_CTE_99S_Betty AM
Site Code : 00323250
Start Date : 3/23/2023
Page No : 1

Groups Printed- 4+ Axle Trucks

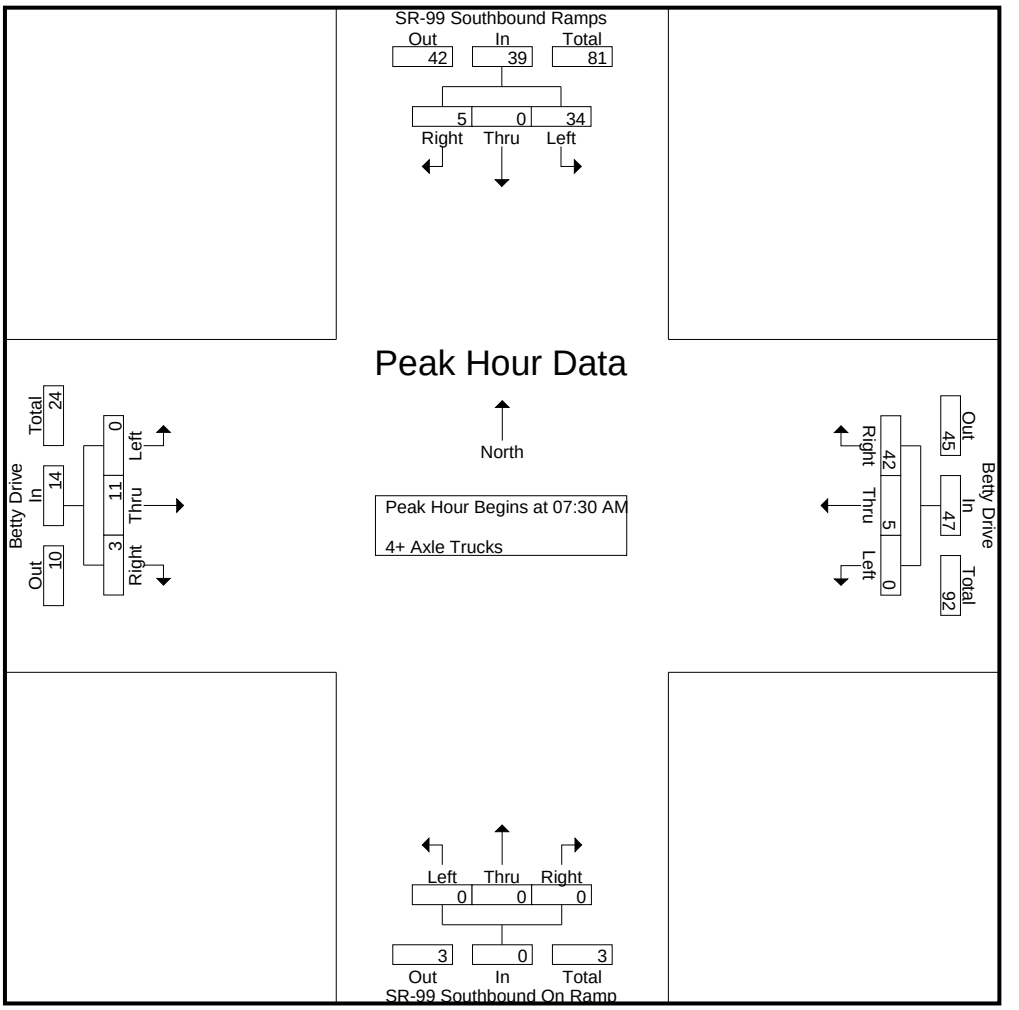
	SR-99 Southbound Ramps Southbound				Betty Drive Westbound				SR-99 Southbound On Ramp Northbound				Betty Drive Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	5	0	1	6	0	2	6	8	0	0	0	0	0	1	0	1	15
07:15 AM	10	0	1	11	0	2	8	10	0	0	0	0	0	6	1	7	28
07:30 AM	7	0	1	8	0	0	9	9	0	0	0	0	0	1	1	2	19
07:45 AM	13	0	0	13	0	3	10	13	0	0	0	0	0	1	1	2	28
Total	35	0	3	38	0	7	33	40	0	0	0	0	0	9	3	12	90
08:00 AM	8	0	1	9	0	1	11	12	0	0	0	0	0	6	0	6	27
08:15 AM	6	0	3	9	0	1	12	13	0	0	0	0	0	3	1	4	26
08:30 AM	18	0	0	18	0	2	13	15	0	0	0	0	0	0	2	2	35
08:45 AM	7	0	1	8	0	0	19	19	0	0	0	0	0	3	0	3	30
Total	39	0	5	44	0	4	55	59	0	0	0	0	0	12	3	15	118
Grand Total	74	0	8	82	0	11	88	99	0	0	0	0	0	21	6	27	208
Apprch %	90.2	0	9.8		0	11.1	88.9		0	0	0		0	77.8	22.2		
Total %	35.6	0	3.8	39.4	0	5.3	42.3	47.6	0	0	0	0	0	10.1	2.9	13	

	SR-99 Southbound Ramps Southbound				Betty Drive Westbound				SR-99 Southbound On Ramp Northbound				Betty 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 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	7	0	1	8	0	0	9	9	0	0	0	0	0	1	**1**	2	19
07:45 AM	**13**	0	0	**13**	0	**3**	10	**13**	0	0	0	0	0	1	1	2	**28**
08:00 AM	8	0	1	9	0	1	11	12	0	0	0	0	0	**6**	0	**6**	27
08:15 AM	6	0	**3**	9	0	1	**12**	13	0	0	0	0	0	3	1	4	26
Total Volume	34	0	5	39	0	5	42	47	0	0	0	0	0	11	3	14	100
% App. Total	87.2	0	12.8		0	10.6	89.4		0	0	0		0	78.6	21.4		
PHF	.654	.000	.417	.750	.000	.417	.875	.904	.000	.000	.000	.000	.000	.458	.750	.583	.893

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County of Tulare
N/S: SR-99 Southbound Ramps
E/W: Betty Drive
Weather: Clear

File Name : 01_CTE_99S_Betty AM
Site Code : 00323250
Start Date : 3/23/2023
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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.	7	0	1	8	0	0	9	9	0	0	0	0	0	1	**1**	2
+15 mins.	**13**	0	0	**13**	0	**3**	10	**13**	0	0	0	0	0	1	1	2
+30 mins.	8	0	1	9	0	1	11	12	0	0	0	0	0	**6**	0	**6**
+45 mins.	6	0	**3**	9	0	1	**12**	13	0	0	0	0	0	3	1	4
Total Volume	34	0	5	39	0	5	42	47	0	0	0	0	0	11	3	14
% App. Total	87.2	0	12.8		0	10.6	89.4		0	0	0		0	78.6	21.4	
PHF	.654	.000	.417	.750	.000	.417	.875	.904	.000	.000	.000	.000	.000	.458	.750	.583

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County of Tulare
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Weather: Clear

File Name : 01_CTE_99S_Betty PM
Site Code : 00323250
Start Date : 3/23/2023
Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

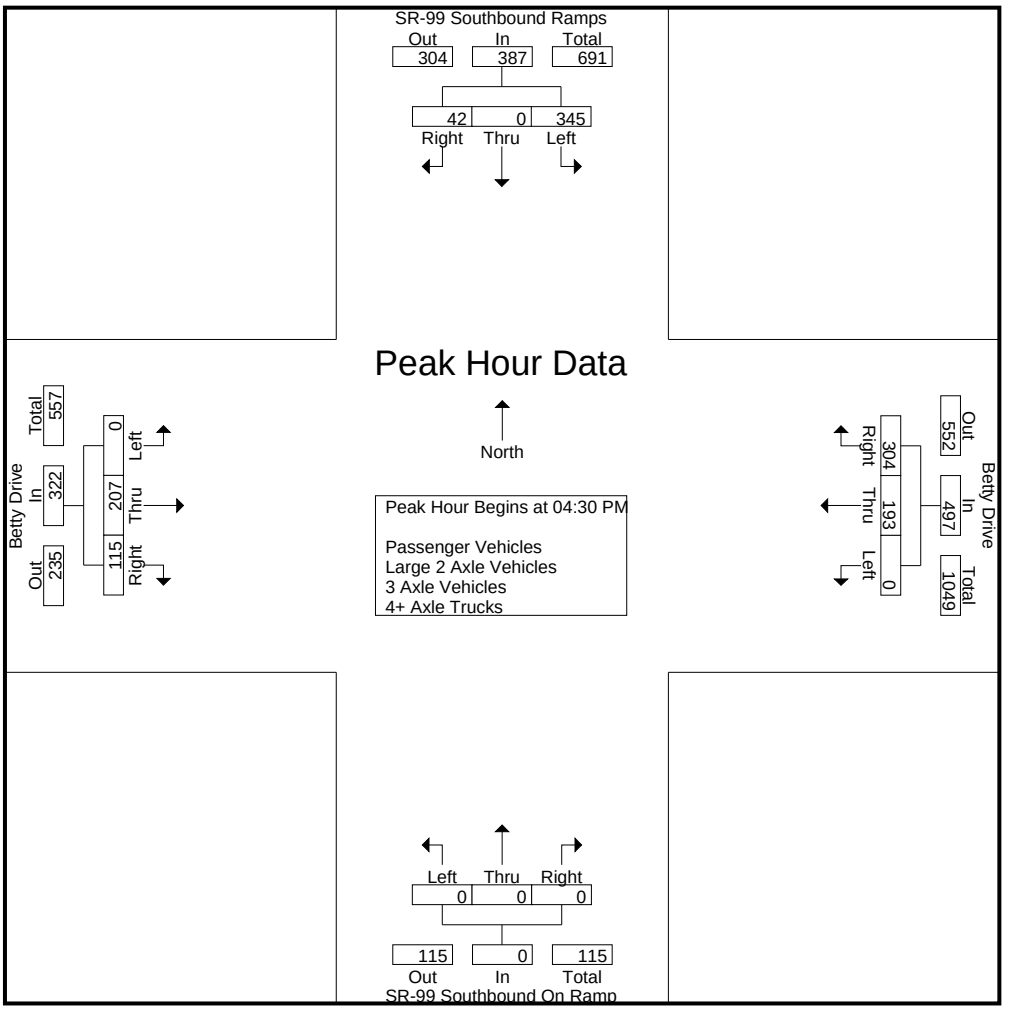
	SR-99 Southbound Ramps Southbound				Betty Drive Westbound				SR-99 Southbound On Ramp Northbound				Betty Drive Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	76	0	12	88	0	55	65	120	0	0	0	0	0	54	22	76	284
04:15 PM	57	0	13	70	0	48	81	129	0	0	0	0	2	41	26	69	268
04:30 PM	87	0	13	100	0	52	69	121	0	0	0	0	0	55	31	86	307
04:45 PM	77	0	10	87	0	44	83	127	0	0	0	0	0	42	31	73	287
Total	297	0	48	345	0	199	298	497	0	0	0	0	2	192	110	304	1146
05:00 PM	89	0	9	98	0	56	73	129	0	0	0	0	0	49	24	73	300
05:15 PM	92	0	10	102	0	41	79	120	0	0	0	0	0	61	29	90	312
05:30 PM	80	0	7	87	0	35	53	88	0	0	0	0	0	30	11	41	216
05:45 PM	73	0	9	82	0	45	57	102	0	0	0	0	0	36	17	53	237
Total	334	0	35	369	0	177	262	439	0	0	0	0	0	176	81	257	1065
Grand Total	631	0	83	714	0	376	560	936	0	0	0	0	2	368	191	561	2211
Apprch %	88.4	0	11.6		0	40.2	59.8		0	0	0		0.4	65.6	34		
Total %	28.5	0	3.8	32.3	0	17	25.3	42.3	0	0	0	0	0.1	16.6	8.6	25.4	
Passenger Vehicles	526	0	62	588	0	348	450	798	0	0	0	0	2	328	175	505	1891
% Passenger Vehicles	83.4	0	74.7	82.4	0	92.6	80.4	85.3	0	0	0	0	100	89.1	91.6	90	85.5
Large 2 Axle Vehicles	27	0	7	34	0	19	23	42	0	0	0	0	0	30	9	39	115
% Large 2 Axle Vehicles	4.3	0	8.4	4.8	0	5.1	4.1	4.5	0	0	0	0	0	8.2	4.7	7	5.2
3 Axle Vehicles	6	0	2	8	0	1	7	8	0	0	0	0	0	0	2	2	18
% 3 Axle Vehicles	1	0	2.4	1.1	0	0.3	1.2	0.9	0	0	0	0	0	0	1	0.4	0.8
4+ Axle Trucks	72	0	12	84	0	8	80	88	0	0	0	0	0	10	5	15	187
% 4+ Axle Trucks	11.4	0	14.5	11.8	0	2.1	14.3	9.4	0	0	0	0	0	2.7	2.6	2.7	8.5

	SR-99 Southbound Ramps Southbound				Betty Drive Westbound				SR-99 Southbound On Ramp Northbound				Betty 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	87	0	**13**	100	0	52	69	121	0	0	0	0	0	55	**31**	86	307
04:45 PM	77	0	10	87	0	44	**83**	127	0	0	0	0	0	42	31	73	287
05:00 PM	89	0	9	98	0	**56**	73	**129**	0	0	0	0	0	49	24	73	300
05:15 PM	**92**	0	10	**102**	0	41	79	120	0	0	0	0	0	**61**	29	**90**	**312**
Total Volume	345	0	42	387	0	193	304	497	0	0	0	0	0	207	115	322	1206
% App. Total	89.1	0	10.9		0	38.8	61.2		0	0	0		0	64.3	35.7		
PHF	.938	.000	.808	.949	.000	.862	.916	.963	.000	.000	.000	.000	.000	.848	.927	.894	.966

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County of Tulare
N/S: SR-99 Southbound Ramps
E/W: Betty Drive
Weather: Clear

File Name : 01_CTE_99S_Betty PM
Site Code : 00323250
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:

	04:30 PM				04:15 PM				04:00 PM				04:30 PM			
+0 mins.	87	0	**13**	100	0	48	81	**129**	0	0	0	0	0	55	**31**	86
+15 mins.	77	0	10	87	0	52	69	121	0	0	0	0	0	42	31	73
+30 mins.	89	0	9	98	0	44	**83**	127	0	0	0	0	0	49	24	73
+45 mins.	**92**	0	10	**102**	0	**56**	73	129	0	0	0	0	0	**61**	29	**90**
Total Volume	345	0	42	387	0	200	306	506	0	0	0	0	0	207	115	322
% App. Total	89.1	0	10.9		0	39.5	60.5		0	0	0		0	64.3	35.7	
PHF	.938	.000	.808	.949	.000	.893	.922	.981	.000	.000	.000	.000	.000	.848	.927	.894

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County of Tulare
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File Name : 01_CTE_99S_Betty PM
Site Code : 00323250
Start Date : 3/23/2023
Page No : 1

Groups Printed- Passenger Vehicles

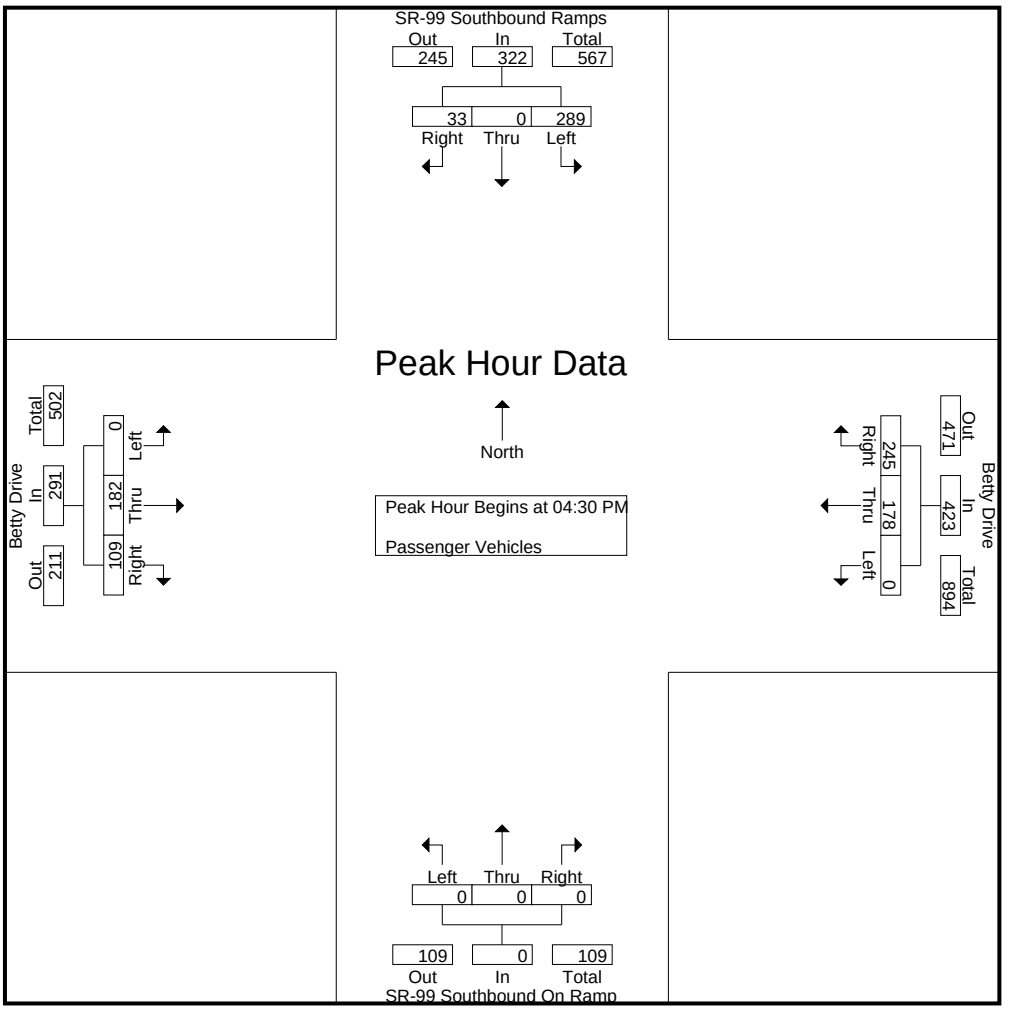
	SR-99 Southbound Ramps Southbound				Betty Drive Westbound				SR-99 Southbound On Ramp Northbound				Betty Drive Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	64	0	6	70	0	52	53	105	0	0	0	0	0	47	18	65	240
04:15 PM	46	0	10	56	0	44	63	107	0	0	0	0	2	40	22	64	227
04:30 PM	70	0	10	80	0	45	52	97	0	0	0	0	0	44	29	73	250
04:45 PM	66	0	6	72	0	41	72	113	0	0	0	0	0	38	30	68	253
Total	246	0	32	278	0	182	240	422	0	0	0	0	2	169	99	270	970
05:00 PM	75	0	9	84	0	53	59	112	0	0	0	0	0	47	22	69	265
05:15 PM	78	0	8	86	0	39	62	101	0	0	0	0	0	53	28	81	268
05:30 PM	66	0	7	73	0	33	45	78	0	0	0	0	0	27	11	38	189
05:45 PM	61	0	6	67	0	41	44	85	0	0	0	0	0	32	15	47	199
Total	280	0	30	310	0	166	210	376	0	0	0	0	0	159	76	235	921
Grand Total	526	0	62	588	0	348	450	798	0	0	0	0	2	328	175	505	1891
Apprch %	89.5	0	10.5		0	43.6	56.4		0	0	0		0.4	65	34.7		
Total %	27.8	0	3.3	31.1	0	18.4	23.8	42.2	0	0	0	0	0.1	17.3	9.3	26.7	

	SR-99 Southbound Ramps Southbound				Betty Drive Westbound				SR-99 Southbound On Ramp Northbound				Betty 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 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	70	0	**10**	80	0	45	52	97	0	0	0	0	0	44	29	73	250
04:45 PM	66	0	6	72	0	41	**72**	**113**	0	0	0	0	0	38	**30**	68	253
05:00 PM	75	0	9	84	0	**53**	59	112	0	0	0	0	0	47	22	69	265
05:15 PM	**78**	0	8	**86**	0	39	62	101	0	0	0	0	0	**53**	28	**81**	**268**
Total Volume	289	0	33	322	0	178	245	423	0	0	0	0	0	182	109	291	1036
% App. Total	89.8	0	10.2		0	42.1	57.9		0	0	0		0	62.5	37.5		
PHF	.926	.000	.825	.936	.000	.840	.851	.936	.000	.000	.000	.000	.000	.858	.908	.898	.966

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County of Tulare
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File Name : 01_CTE_99S_Betty PM
Site Code : 00323250
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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.	70	0	**10**	80	0	45	52	97	0	0	0	0	0	44	29	73
+15 mins.	66	0	6	72	0	41	**72**	**113**	0	0	0	0	0	38	**30**	68
+30 mins.	75	0	9	84	0	**53**	59	112	0	0	0	0	0	47	22	69
+45 mins.	**78**	0	8	**86**	0	39	62	101	0	0	0	0	0	**53**	28	**81**
Total Volume	289	0	33	322	0	178	245	423	0	0	0	0	0	182	109	291
% App. Total	89.8	0	10.2		0	42.1	57.9		0	0	0		0	62.5	37.5	
PHF	.926	.000	.825	.936	.000	.840	.851	.936	.000	.000	.000	.000	.000	.858	.908	.898

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County of Tulare
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File Name : 01_CTE_99S_Betty PM
Site Code : 00323250
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Groups Printed- Large 2 Axle Vehicles

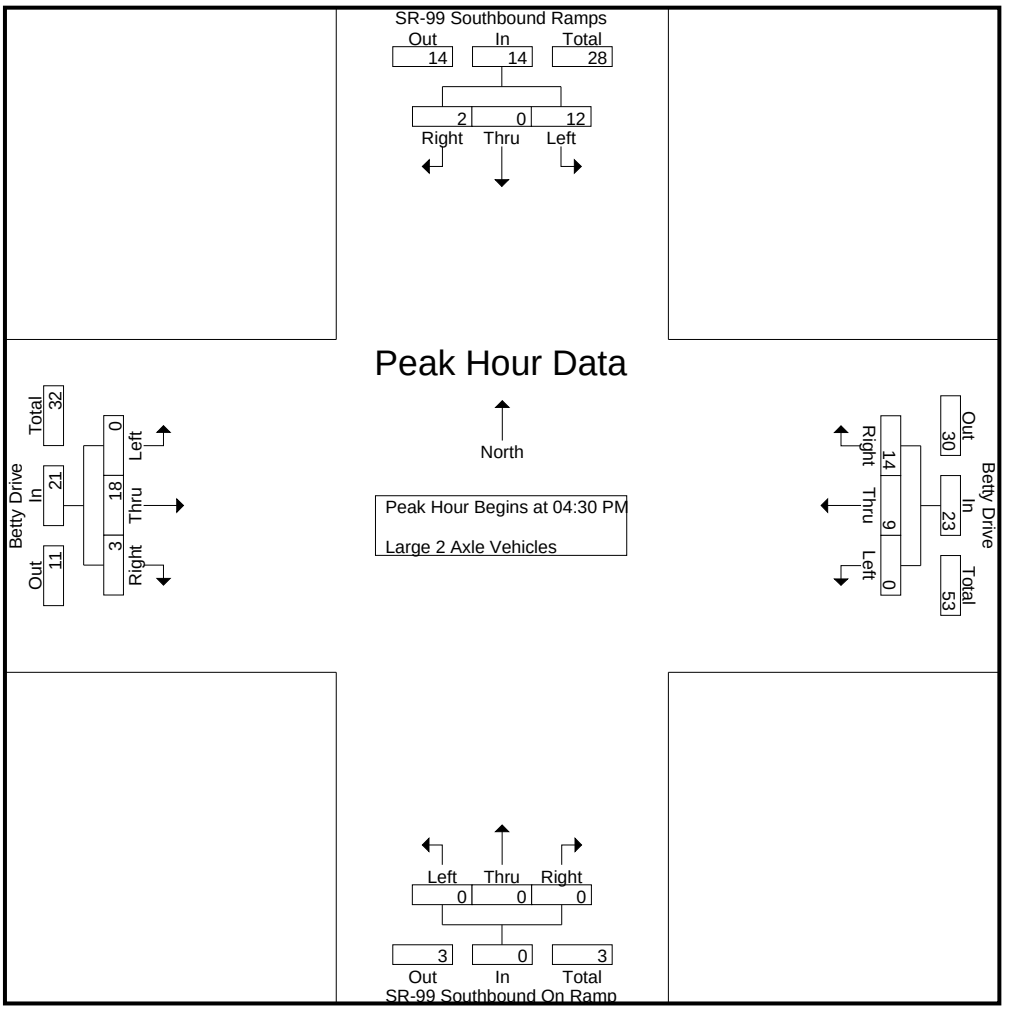
	SR-99 Southbound Ramps Southbound				Betty Drive Westbound				SR-99 Southbound On Ramp Northbound				Betty Drive Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	5	0	4	9	0	3	3	6	0	0	0	0	0	5	3	8	23
04:15 PM	2	0	1	3	0	3	4	7	0	0	0	0	0	1	2	3	13
04:30 PM	4	0	1	5	0	5	2	7	0	0	0	0	0	9	2	11	23
04:45 PM	2	0	1	3	0	1	2	3	0	0	0	0	0	3	1	4	10
Total	13	0	7	20	0	12	11	23	0	0	0	0	0	18	8	26	69
05:00 PM	3	0	0	3	0	2	6	8	0	0	0	0	0	1	0	1	12
05:15 PM	3	0	0	3	0	1	4	5	0	0	0	0	0	5	0	5	13
05:30 PM	6	0	0	6	0	1	0	1	0	0	0	0	0	2	0	2	9
05:45 PM	2	0	0	2	0	3	2	5	0	0	0	0	0	4	1	5	12
Total	14	0	0	14	0	7	12	19	0	0	0	0	0	12	1	13	46
Grand Total	27	0	7	34	0	19	23	42	0	0	0	0	0	30	9	39	115
Apprch %	79.4	0	20.6		0	45.2	54.8		0	0	0		0	76.9	23.1		
Total %	23.5	0	6.1	29.6	0	16.5	20	36.5	0	0	0	0	0	26.1	7.8	33.9	

	SR-99 Southbound Ramps Southbound				Betty Drive Westbound				SR-99 Southbound On Ramp Northbound				Betty 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 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	**4**	0	**1**	**5**	0	**5**	2	7	0	0	0	0	0	**9**	**2**	**11**	**23**
04:45 PM	2	0	1	3	0	1	2	3	0	0	0	0	0	3	1	4	10
05:00 PM	3	0	0	3	0	2	**6**	**8**	0	0	0	0	0	1	0	1	12
05:15 PM	3	0	0	3	0	1	4	5	0	0	0	0	0	5	0	5	13
Total Volume	12	0	2	14	0	9	14	23	0	0	0	0	0	18	3	21	58
% App. Total	85.7	0	14.3		0	39.1	60.9		0	0	0		0	85.7	14.3		
PHF	.750	.000	.500	.700	.000	.450	.583	.719	.000	.000	.000	.000	.000	.500	.375	.477	.630

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File Name : 01_CTE_99S_Betty PM
Site Code : 00323250
Start Date : 3/23/2023
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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.	**4**	0	**1**	**5**	0	**5**	2	7	0	0	0	0	0	**9**	**2**	**11**
+15 mins.	2	0	1	3	0	1	2	3	0	0	0	0	0	3	1	4
+30 mins.	3	0	0	3	0	2	**6**	**8**	0	0	0	0	0	1	0	1
+45 mins.	3	0	0	3	0	1	4	5	0	0	0	0	0	5	0	5
Total Volume	12	0	2	14	0	9	14	23	0	0	0	0	0	18	3	21
% App. Total	85.7	0	14.3		0	39.1	60.9		0	0	0		0	85.7	14.3	
PHF	.750	.000	.500	.700	.000	.450	.583	.719	.000	.000	.000	.000	.000	.500	.375	.477

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County of Tulare
N/S: SR-99 Southbound Ramps
E/W: Betty Drive
Weather: Clear

File Name : 01_CTE_99S_Betty PM
Site Code : 00323250
Start Date : 3/23/2023
Page No : 1

Groups Printed- 3 Axle Vehicles

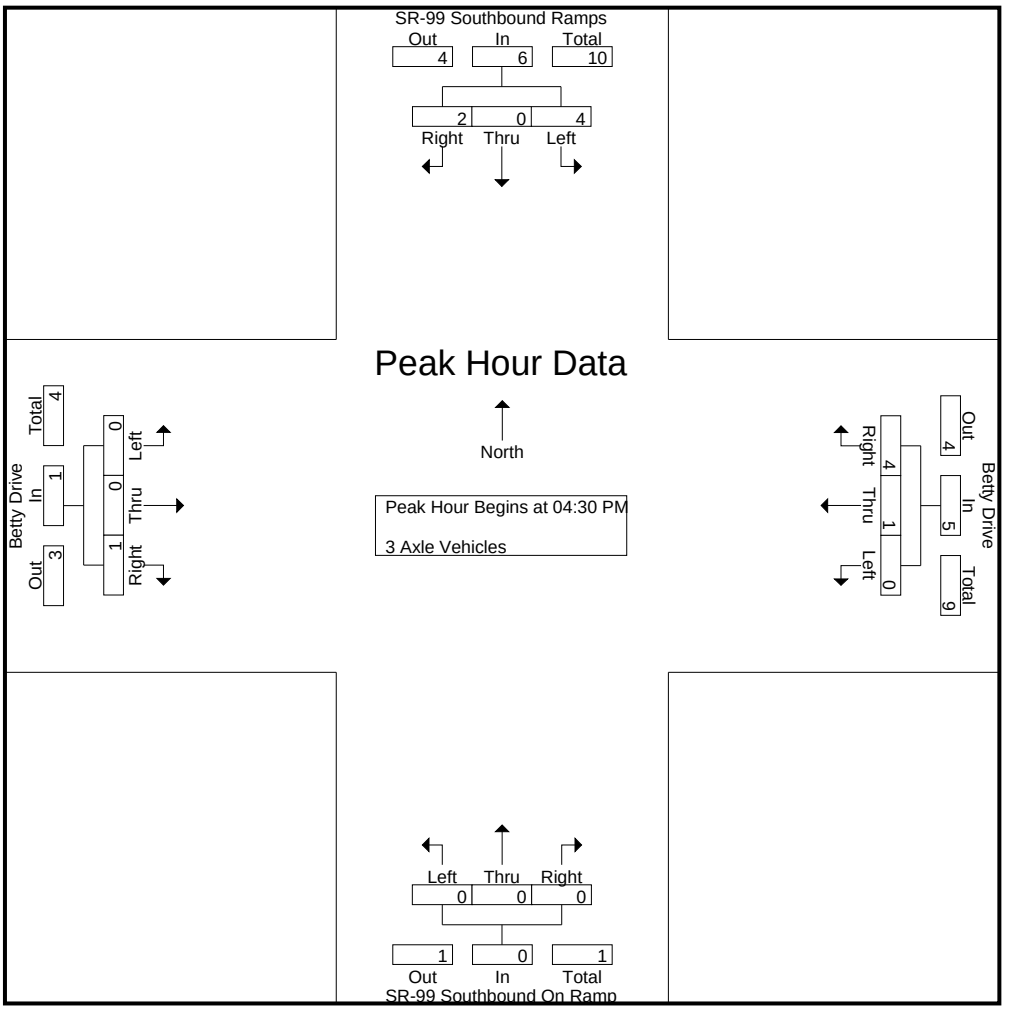
	SR-99 Southbound Ramps Southbound				Betty Drive Westbound				SR-99 Southbound On Ramp Northbound				Betty Drive Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1	1	2
04:15 PM	1	0	0	1	0	0	1	1	0	0	0	0	0	0	0	0	2
04:30 PM	1	0	1	2	0	0	1	1	0	0	0	0	0	0	0	0	3
04:45 PM	1	0	1	2	0	0	1	1	0	0	0	0	0	0	0	0	3
Total	3	0	2	5	0	0	4	4	0	0	0	0	0	0	1	1	10
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	2	0	0	2	0	1	2	3	0	0	0	0	0	0	1	1	6
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	1	1	0	0	0	0	0	0	0	0	2
Total	3	0	0	3	0	1	3	4	0	0	0	0	0	0	1	1	8
Grand Total	6	0	2	8	0	1	7	8	0	0	0	0	0	0	2	2	18
Apprch %	75	0	25		0	12.5	87.5		0	0	0		0	0	100		
Total %	33.3	0	11.1	44.4	0	5.6	38.9	44.4	0	0	0	0	0	0	11.1	11.1	

	SR-99 Southbound Ramps Southbound				Betty Drive Westbound				SR-99 Southbound On Ramp Northbound				Betty 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 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	1	0	**1**	**2**	0	0	1	1	0	0	0	0	0	0	0	0	3
04:45 PM	1	0	1	2	0	0	1	1	0	0	0	0	0	0	0	0	3
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	**2**	0	0	2	0	**1**	**2**	**3**	0	0	0	0	0	0	**1**	**1**	**6**
Total Volume	4	0	2	6	0	1	4	5	0	0	0	0	0	0	1	1	12
% App. Total	66.7	0	33.3		0	20	80		0	0	0		0	0	100		
PHF	.500	.000	.500	.750	.000	.250	.500	.417	.000	.000	.000	.000	.000	.000	.250	.250	.500

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County of Tulare
N/S: SR-99 Southbound Ramps
E/W: Betty Drive
Weather: Clear

File Name : 01_CTE_99S_Betty PM
Site Code : 00323250
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.	1	0	**1**	**2**	0	0	1	1	0	0	0	0	0	0	0	0
+15 mins.	1	0	1	2	0	0	1	1	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.	**2**	0	0	2	0	**1**	**2**	**3**	0	0	0	0	0	0	**1**	**1**
Total Volume	4	0	2	6	0	1	4	5	0	0	0	0	0	0	1	1
% App. Total	66.7	0	33.3		0	20	80		0	0	0		0	0	100	
PHF	.500	.000	.500	.750	.000	.250	.500	.417	.000	.000	.000	.000	.000	.000	.250	.250

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County of Tulare
N/S: SR-99 Southbound Ramps
E/W: Betty Drive
Weather: Clear

File Name : 01_CTE_99S_Betty PM
Site Code : 00323250
Start Date : 3/23/2023
Page No : 1

Groups Printed- 4+ Axle Trucks

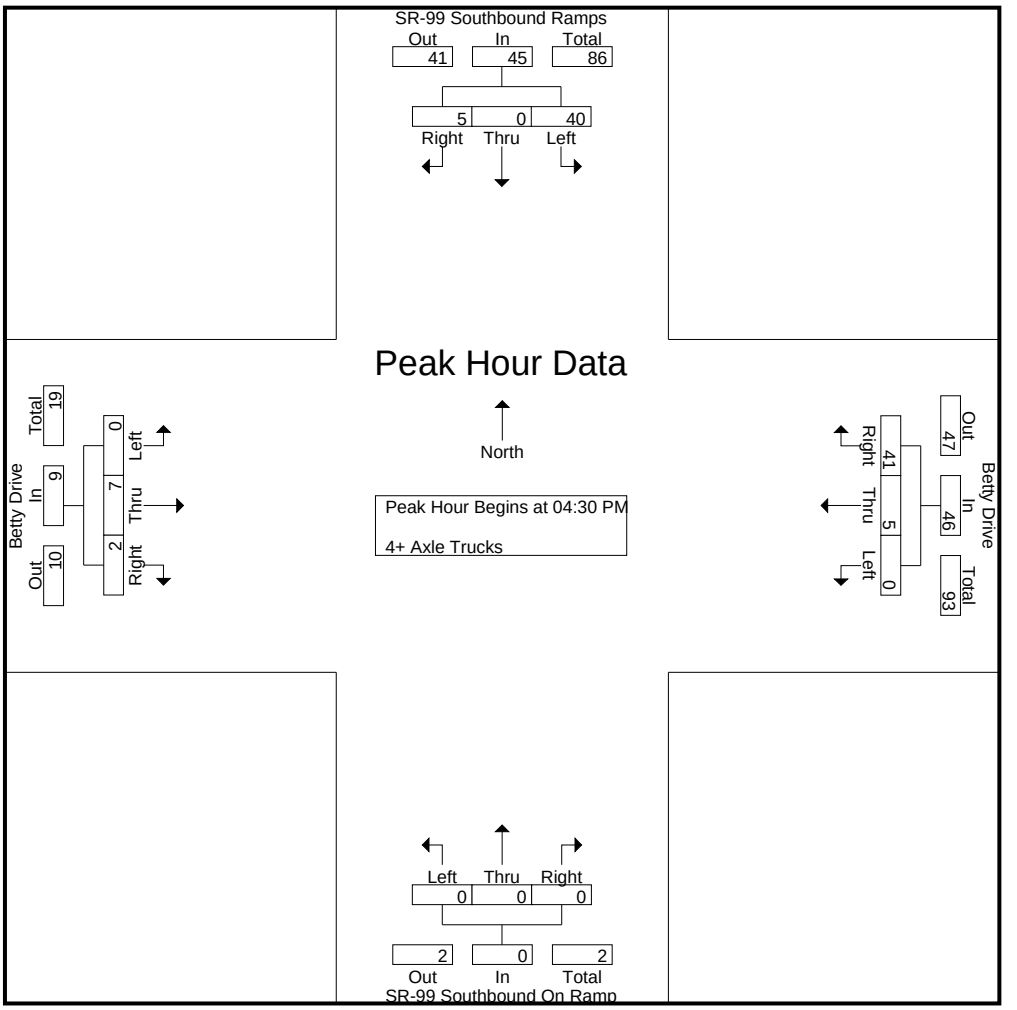
	SR-99 Southbound Ramps Southbound				Betty Drive Westbound				SR-99 Southbound On Ramp Northbound				Betty Drive Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	7	0	2	9	0	0	8	8	0	0	0	0	0	2	0	2	19
04:15 PM	8	0	2	10	0	1	13	14	0	0	0	0	0	0	2	2	26
04:30 PM	12	0	1	13	0	2	14	16	0	0	0	0	0	2	0	2	31
04:45 PM	8	0	2	10	0	2	8	10	0	0	0	0	0	1	0	1	21
Total	35	0	7	42	0	5	43	48	0	0	0	0	0	5	2	7	97
05:00 PM	11	0	0	11	0	1	8	9	0	0	0	0	0	1	2	3	23
05:15 PM	9	0	2	11	0	0	11	11	0	0	0	0	0	3	0	3	25
05:30 PM	8	0	0	8	0	1	8	9	0	0	0	0	0	1	0	1	18
05:45 PM	9	0	3	12	0	1	10	11	0	0	0	0	0	0	1	1	24
Total	37	0	5	42	0	3	37	40	0	0	0	0	0	5	3	8	90
Grand Total	72	0	12	84	0	8	80	88	0	0	0	0	0	10	5	15	187
Apprch %	85.7	0	14.3		0	9.1	90.9		0	0	0		0	66.7	33.3		
Total %	38.5	0	6.4	44.9	0	4.3	42.8	47.1	0	0	0	0	0	5.3	2.7	8	

	SR-99 Southbound Ramps Southbound				Betty Drive Westbound				SR-99 Southbound On Ramp Northbound				Betty 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 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	**12**	0	1	**13**	0	**2**	**14**	**16**	0	0	0	0	0	2	0	2	**31**
04:45 PM	8	0	**2**	10	0	2	8	10	0	0	0	0	0	1	0	1	21
05:00 PM	11	0	0	11	0	1	8	9	0	0	0	0	0	1	**2**	**3**	23
05:15 PM	9	0	2	11	0	0	11	11	0	0	0	0	0	**3**	0	3	25
Total Volume	40	0	5	45	0	5	41	46	0	0	0	0	0	7	2	9	100
% App. Total	88.9	0	11.1		0	10.9	89.1		0	0	0		0	77.8	22.2		
PHF	.833	.000	.625	.865	.000	.625	.732	.719	.000	.000	.000	.000	.000	.583	.250	.750	.806

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County of Tulare
N/S: SR-99 Southbound Ramps
E/W: Betty Drive
Weather: Clear

File Name : 01_CTE_99S_Betty PM
Site Code : 00323250
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.	**12**	0	1	**13**	0	**2**	**14**	**16**	0	0	0	0	0	2	0	2
+15 mins.	8	0	**2**	10	0	2	8	10	0	0	0	0	0	1	0	1
+30 mins.	11	0	0	11	0	1	8	9	0	0	0	0	0	1	**2**	**3**
+45 mins.	9	0	2	11	0	0	11	11	0	0	0	0	0	**3**	0	3
Total Volume	40	0	5	45	0	5	41	46	0	0	0	0	0	7	2	9
% App. Total	88.9	0	11.1		0	10.9	89.1		0	0	0		0	77.8	22.2	
PHF	.833	.000	.625	.865	.000	.625	.732	.719	.000	.000	.000	.000	.000	.583	.250	.750

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County of Tulare
N/S: SR-99 Northbound Ramps
E/W: Betty Drive
Weather: Clear

File Name : 02_CTE_99N_Betty AM
Site Code : 00323250
Start Date : 3/23/2023
Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

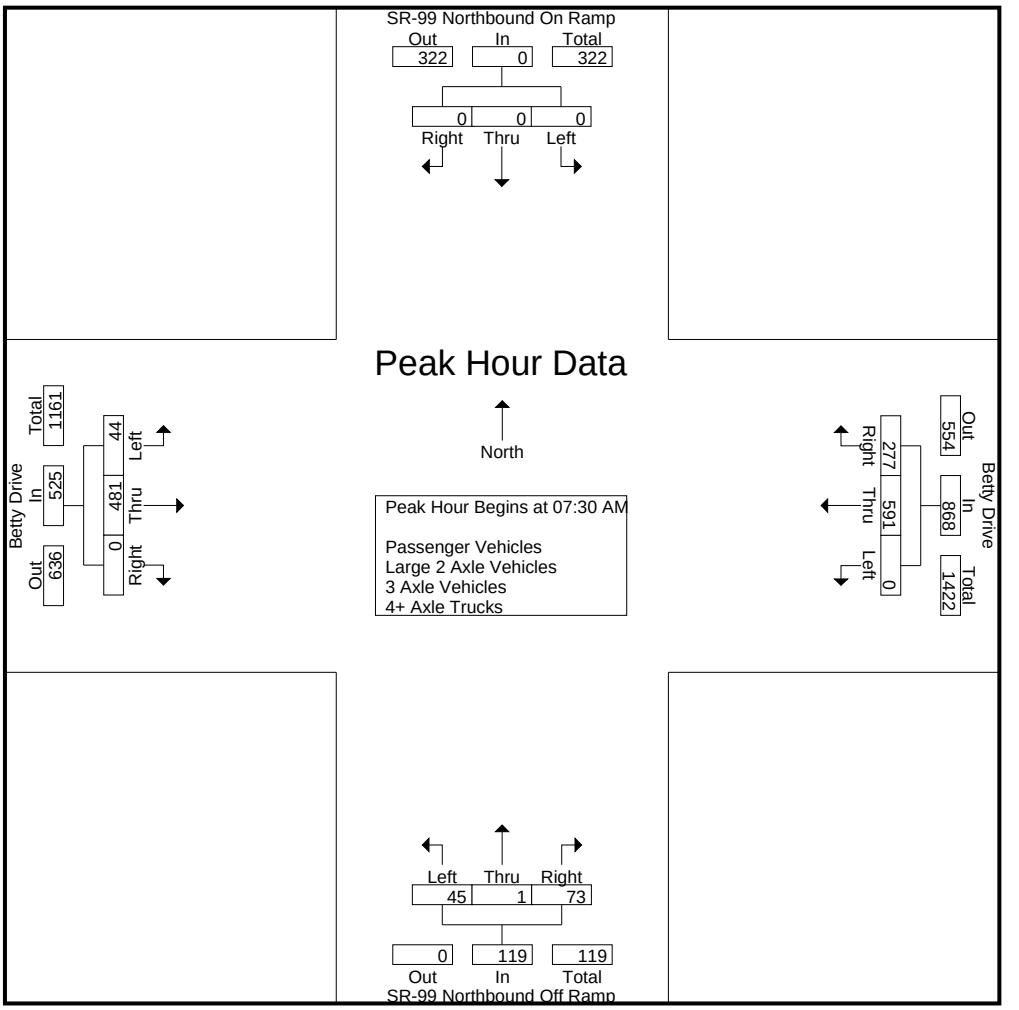
	SR-99 Northbound On Ramp Southbound				Betty Drive Westbound				SR-99 Northbound Off Ramp Northbound				Betty Drive Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	70	81	151	9	0	16	25	16	85	0	101	277
07:15 AM	0	0	0	0	0	99	105	204	15	0	20	35	9	83	0	92	331
07:30 AM	0	0	0	0	0	113	65	178	14	0	14	28	13	93	0	106	312
07:45 AM	0	0	0	0	0	170	68	238	11	1	25	37	9	116	0	125	400
Total	0	0	0	0	0	452	319	771	49	1	75	125	47	377	0	424	1320
08:00 AM	0	0	0	0	0	178	84	262	12	0	17	29	14	144	0	158	449
08:15 AM	0	0	0	0	0	130	60	190	8	0	17	25	8	128	0	136	351
08:30 AM	0	0	0	0	0	94	63	157	8	1	23	32	8	96	0	104	293
08:45 AM	0	0	0	0	0	80	55	135	8	0	26	34	7	75	0	82	251
Total	0	0	0	0	0	482	262	744	36	1	83	120	37	443	0	480	1344
Grand Total	0	0	0	0	0	934	581	1515	85	2	158	245	84	820	0	904	2664
Apprch %	0	0	0		0	61.7	38.3		34.7	0.8	64.5		9.3	90.7	0		
Total %	0	0	0	0	0	35.1	21.8	56.9	3.2	0.1	5.9	9.2	3.2	30.8	0	33.9	
Passenger Vehicles	0	0	0	0	0	770	478	1248	77	1	75	153	64	673	0	737	2138
% Passenger Vehicles	0	0	0	0	0	82.4	82.3	82.4	90.6	50	47.5	62.4	76.2	82.1	0	81.5	80.3
Large 2 Axle Vehicles	0	0	0	0	0	51	35	86	2	0	5	7	7	61	0	68	161
% Large 2 Axle Vehicles	0	0	0	0	0	5.5	6	5.7	2.4	0	3.2	2.9	8.3	7.4	0	7.5	6
3 Axle Vehicles	0	0	0	0	0	10	8	18	2	0	2	4	3	8	0	11	33
% 3 Axle Vehicles	0	0	0	0	0	1.1	1.4	1.2	2.4	0	1.3	1.6	3.6	1	0	1.2	1.2
4+ Axle Trucks	0	0	0	0	0	103	60	163	4	1	76	81	10	78	0	88	332
% 4+ Axle Trucks	0	0	0	0	0	11	10.3	10.8	4.7	50	48.1	33.1	11.9	9.5	0	9.7	12.5

	SR-99 Northbound On Ramp Southbound				Betty Drive Westbound				SR-99 Northbound Off Ramp Northbound				Betty 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	0	0	0	0	0	113	65	178	**14**	0	14	28	13	93	0	106	312
07:45 AM	0	0	0	0	0	170	68	238	11	**1**	**25**	**37**	9	116	0	125	400
08:00 AM	0	0	0	0	0	**178**	**84**	**262**	12	0	17	29	**14**	**144**	0	**158**	**449**
08:15 AM	0	0	0	0	0	130	60	190	8	0	17	25	8	128	0	136	351
Total Volume	0	0	0	0	0	591	277	868	45	1	73	119	44	481	0	525	1512
% App. Total	0	0	0		0	68.1	31.9		37.8	0.8	61.3		8.4	91.6	0		
PHF	.000	.000	.000	.000	.000	.830	.824	.828	.804	.250	.730	.804	.786	.835	.000	.831	.842

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County of Tulare
N/S: SR-99 Northbound Ramps
E/W: Betty Drive
Weather: Clear

File Name : 02_CTE_99N_Betty AM
Site Code : 00323250
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:

	07:00 AM				07:15 AM				07:15 AM				07:30 AM			
+0 mins.	0	0	0	0	0	99	**105**	204	**15**	0	20	35	13	93	0	106
+15 mins.	0	0	0	0	0	113	65	178	14	0	14	28	9	116	0	125
+30 mins.	0	0	0	0	0	170	68	238	11	**1**	**25**	**37**	**14**	**144**	0	**158**
+45 mins.	0	0	0	0	0	**178**	84	**262**	12	0	17	29	8	128	0	136
Total Volume	0	0	0	0	0	560	322	882	52	1	76	129	44	481	0	525
% App. Total	0	0	0		0	63.5	36.5		40.3	0.8	58.9		8.4	91.6	0	
PHF	.000	.000	.000	.000	.000	.787	.767	.842	.867	.250	.760	.872	.786	.835	.000	.831

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County of Tulare
N/S: SR-99 Northbound Ramps
E/W: Betty Drive
Weather: Clear

File Name : 02_CTE_99N_Betty AM
Site Code : 00323250
Start Date : 3/23/2023
Page No : 1

Groups Printed- Passenger Vehicles

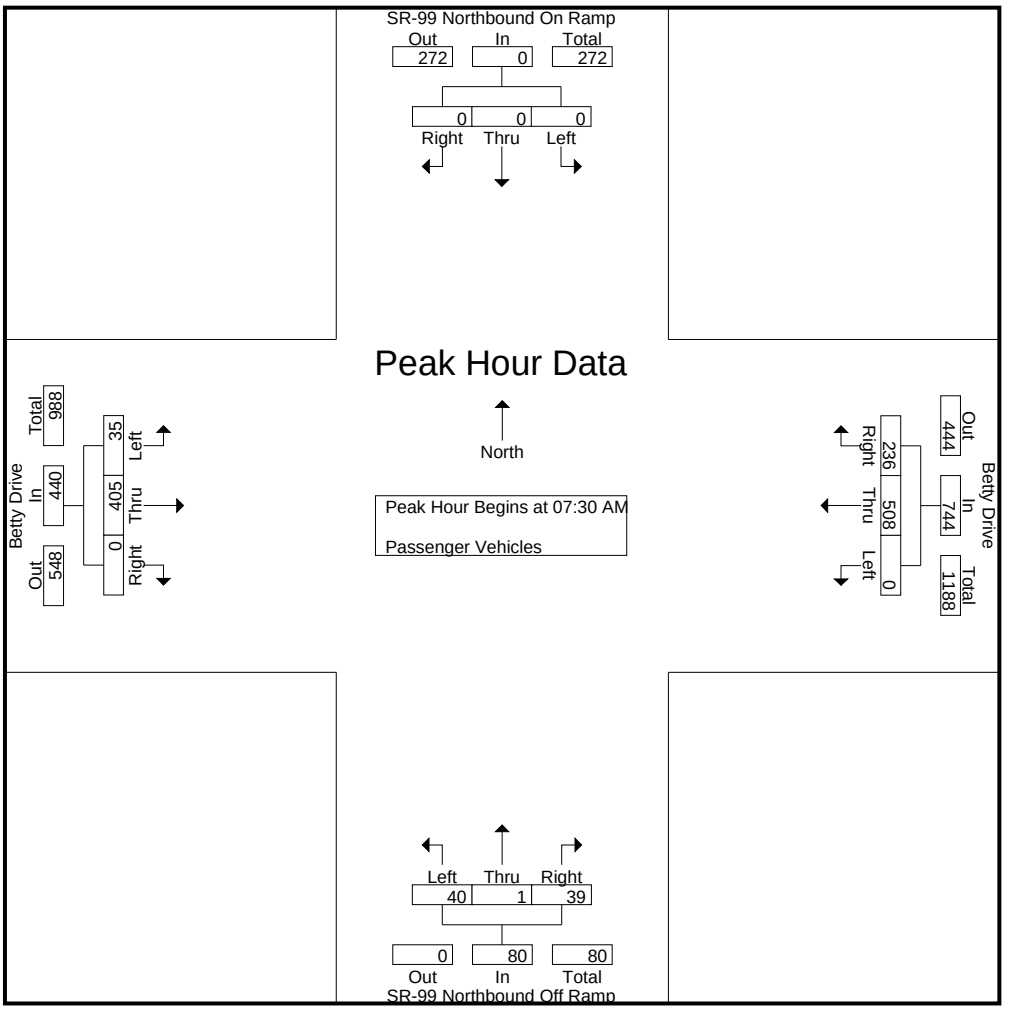
	SR-99 Northbound On Ramp Southbound				Betty Drive Westbound				SR-99 Northbound Off Ramp Northbound				Betty Drive Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	54	69	123	9	0	8	17	10	73	0	83	223
07:15 AM	0	0	0	0	0	82	85	167	14	0	11	25	8	71	0	79	271
07:30 AM	0	0	0	0	0	98	55	153	12	0	9	21	11	73	0	84	258
07:45 AM	0	0	0	0	0	146	56	202	11	1	14	26	8	99	0	107	335
Total	0	0	0	0	0	380	265	645	46	1	42	89	37	316	0	353	1087
08:00 AM	0	0	0	0	0	153	77	230	10	0	8	18	11	126	0	137	385
08:15 AM	0	0	0	0	0	111	48	159	7	0	8	15	5	107	0	112	286
08:30 AM	0	0	0	0	0	73	46	119	7	0	9	16	7	63	0	70	205
08:45 AM	0	0	0	0	0	53	42	95	7	0	8	15	4	61	0	65	175
Total	0	0	0	0	0	390	213	603	31	0	33	64	27	357	0	384	1051
Grand Total	0	0	0	0	0	770	478	1248	77	1	75	153	64	673	0	737	2138
Apprch %	0	0	0		0	61.7	38.3		50.3	0.7	49		8.7	91.3	0		
Total %	0	0	0	0	0	36	22.4	58.4	3.6	0	3.5	7.2	3	31.5	0	34.5	

	SR-99 Northbound On Ramp Southbound				Betty Drive Westbound				SR-99 Northbound Off Ramp Northbound				Betty 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 07:30 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	98	55	153	**12**	0	9	21	**11**	73	0	84	258
07:45 AM	0	0	0	0	0	146	56	202	11	**1**	**14**	**26**	8	99	0	107	335
08:00 AM	0	0	0	0	0	**153**	**77**	**230**	10	0	8	18	11	**126**	0	**137**	**385**
08:15 AM	0	0	0	0	0	111	48	159	7	0	8	15	5	107	0	112	286
Total Volume	0	0	0	0	0	508	236	744	40	1	39	80	35	405	0	440	1264
% App. Total	0	0	0		0	68.3	31.7		50	1.2	48.8		8	92	0		
PHF	.000	.000	.000	.000	.000	.830	.766	.809	.833	.250	.696	.769	.795	.804	.000	.803	.821

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County of Tulare
N/S: SR-99 Northbound Ramps
E/W: Betty Drive
Weather: Clear

File Name : 02_CTE_99N_Betty AM
Site Code : 00323250
Start Date : 3/23/2023
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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	98	55	153	**12**	0	9	21	**11**	73	0	84
+15 mins.	0	0	0	0	0	146	56	202	11	**1**	**14**	**26**	8	99	0	107
+30 mins.	0	0	0	0	0	**153**	**77**	**230**	10	0	8	18	11	**126**	0	**137**
+45 mins.	0	0	0	0	0	111	48	159	7	0	8	15	5	107	0	112
Total Volume	0	0	0	0	0	508	236	744	40	1	39	80	35	405	0	440
% App. Total	0	0	0		0	68.3	31.7		50	1.2	48.8		8	92	0	
PHF	.000	.000	.000	.000	.000	.830	.766	.809	.833	.250	.696	.769	.795	.804	.000	.803

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County of Tulare
N/S: SR-99 Northbound Ramps
E/W: Betty Drive
Weather: Clear

File Name : 02_CTE_99N_Betty AM
Site Code : 00323250
Start Date : 3/23/2023
Page No : 1

Groups Printed- Large 2 Axle Vehicles

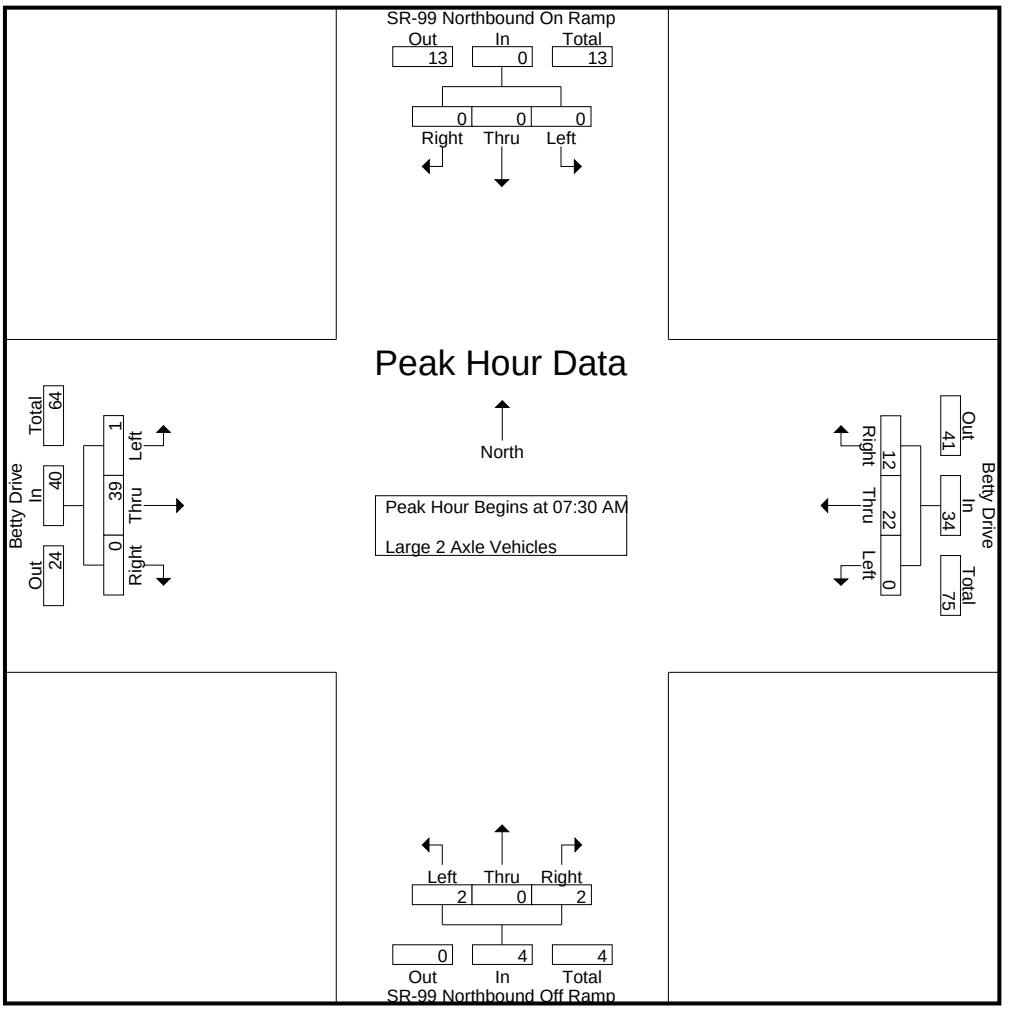
	SR-99 Northbound On Ramp Southbound				Betty Drive Westbound				SR-99 Northbound Off Ramp Northbound				Betty Drive Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	6	5	11	0	0	1	1	4	1	0	5	17
07:15 AM	0	0	0	0	0	6	9	15	0	0	2	2	0	5	0	5	22
07:30 AM	0	0	0	0	0	4	3	7	1	0	1	2	0	8	0	8	17
07:45 AM	0	0	0	0	0	8	3	11	0	0	0	0	1	9	0	10	21
Total	0	0	0	0	0	24	20	44	1	0	4	5	5	23	0	28	77
08:00 AM	0	0	0	0	0	7	2	9	0	0	0	0	0	8	0	8	17
08:15 AM	0	0	0	0	0	3	4	7	1	0	1	2	0	14	0	14	23
08:30 AM	0	0	0	0	0	10	4	14	0	0	0	0	1	12	0	13	27
08:45 AM	0	0	0	0	0	7	5	12	0	0	0	0	1	4	0	5	17
Total	0	0	0	0	0	27	15	42	1	0	1	2	2	38	0	40	84
Grand Total	0	0	0	0	0	51	35	86	2	0	5	7	7	61	0	68	161
Apprch %	0	0	0		0	59.3	40.7		28.6	0	71.4		10.3	89.7	0		
Total %	0	0	0	0	0	31.7	21.7	53.4	1.2	0	3.1	4.3	4.3	37.9	0	42.2	

	SR-99 Northbound On Ramp Southbound				Betty Drive Westbound				SR-99 Northbound Off Ramp Northbound				Betty 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 07:30 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	4	3	7	**1**	0	**1**	**2**	0	8	0	8	17
07:45 AM	0	0	0	0	0	**8**	3	**11**	0	0	0	0	**1**	9	0	10	21
08:00 AM	0	0	0	0	0	7	2	9	0	0	0	0	0	8	0	8	17
08:15 AM	0	0	0	0	0	3	**4**	7	1	0	1	2	0	**14**	0	**14**	**23**
Total Volume	0	0	0	0	0	22	12	34	2	0	2	4	1	39	0	40	78
% App. Total	0	0	0		0	64.7	35.3		50	0	50		2.5	97.5	0		
PHF	.000	.000	.000	.000	.000	.688	.750	.773	.500	.000	.500	.500	.250	.696	.000	.714	.848

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County of Tulare
N/S: SR-99 Northbound Ramps
E/W: Betty Drive
Weather: Clear

File Name : 02_CTE_99N_Betty AM
Site Code : 00323250
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	4	3	7	**1**	0	**1**	**2**	0	8	0	8
+15 mins.	0	0	0	0	0	**8**	3	**11**	0	0	0	0	**1**	9	0	10
+30 mins.	0	0	0	0	0	7	2	9	0	0	0	0	0	8	0	8
+45 mins.	0	0	0	0	0	3	**4**	7	1	0	1	2	0	**14**	0	**14**
Total Volume	0	0	0	0	0	22	12	34	2	0	2	4	1	39	0	40
% App. Total	0	0	0		0	64.7	35.3		50	0	50		2.5	97.5	0	
PHF	.000	.000	.000	.000	.000	.688	.750	.773	.500	.000	.500	.500	.250	.696	.000	.714

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County of Tulare
N/S: SR-99 Northbound Ramps
E/W: Betty Drive
Weather: Clear

File Name : 02_CTE_99N_Betty AM
Site Code : 00323250
Start Date : 3/23/2023
Page No : 1

Groups Printed- 3 Axle Vehicles

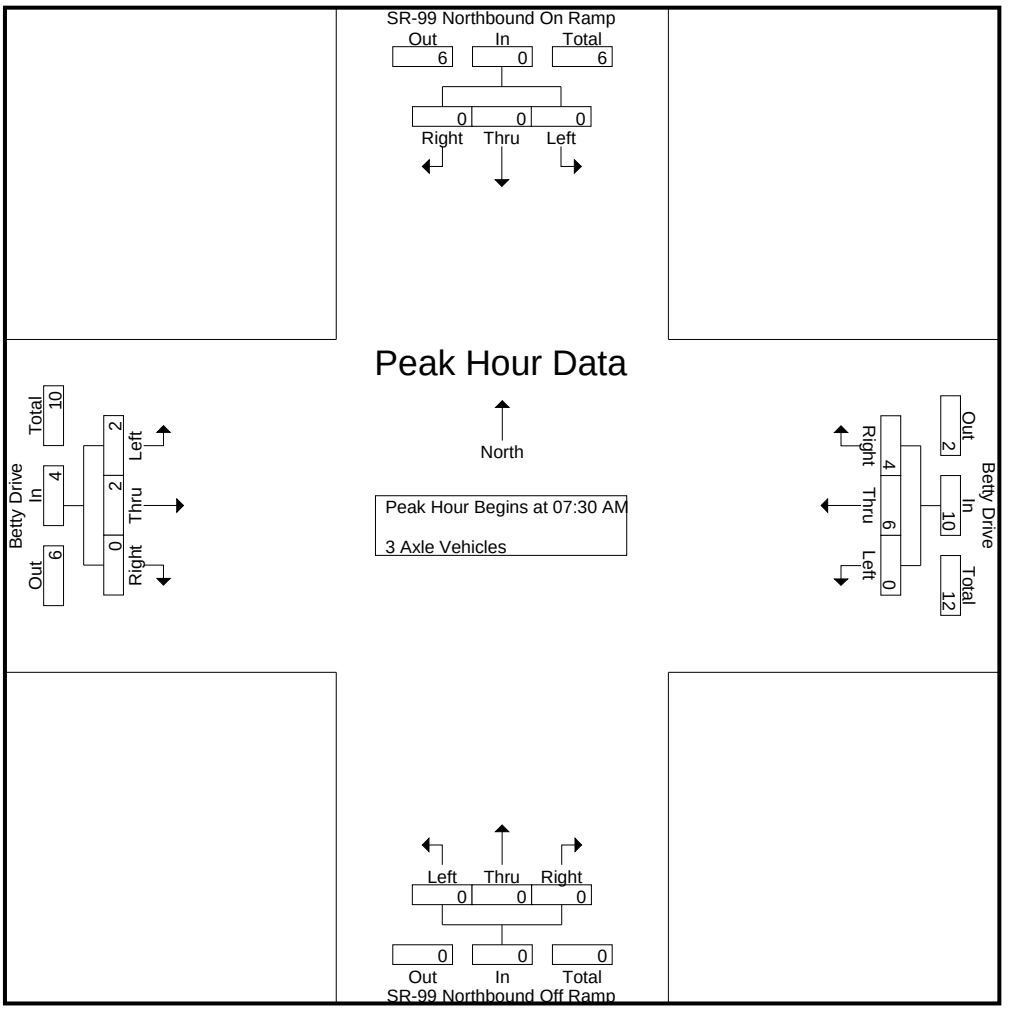
	SR-99 Northbound On Ramp Southbound				Betty Drive Westbound				SR-99 Northbound Off Ramp Northbound				Betty Drive Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	1	3	4	0	0	1	1	0	1	0	1	6
07:15 AM	0	0	0	0	0	0	1	1	1	0	0	1	1	2	0	3	5
07:30 AM	0	0	0	0	0	1	1	2	0	0	0	0	1	0	0	1	3
07:45 AM	0	0	0	0	0	1	1	2	0	0	0	0	0	1	0	1	3
Total	0	0	0	0	0	3	6	9	1	0	1	2	2	4	0	6	17
08:00 AM	0	0	0	0	0	2	1	3	0	0	0	0	0	0	0	0	3
08:15 AM	0	0	0	0	0	2	1	3	0	0	0	0	1	1	0	2	5
08:30 AM	0	0	0	0	0	1	0	1	1	0	0	1	0	3	0	3	5
08:45 AM	0	0	0	0	0	2	0	2	0	0	1	1	0	0	0	0	3
Total	0	0	0	0	0	7	2	9	1	0	1	2	1	4	0	5	16
Grand Total	0	0	0	0	0	10	8	18	2	0	2	4	3	8	0	11	33
Apprch %	0	0	0		0	55.6	44.4		50	0	50		27.3	72.7	0		
Total %	0	0	0	0	0	30.3	24.2	54.5	6.1	0	6.1	12.1	9.1	24.2	0	33.3	

	SR-99 Northbound On Ramp Southbound				Betty Drive Westbound				SR-99 Northbound Off Ramp Northbound				Betty 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 07:30 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	1	**1**	2	0	0	0	0	**1**	0	0	1	3
07:45 AM	0	0	0	0	0	1	1	2	0	0	0	0	0	**1**	0	1	3
08:00 AM	0	0	0	0	0	**2**	1	**3**	0	0	0	0	0	0	0	0	3
08:15 AM	0	0	0	0	0	2	1	3	0	0	0	0	1	1	0	**2**	**5**
Total Volume	0	0	0	0	0	6	4	10	0	0	0	0	2	2	0	4	14
% App. Total	0	0	0		0	60	40		0	0	0		50	50	0		
PHF	.000	.000	.000	.000	.000	.750	1.00	.833	.000	.000	.000	.000	.500	.500	.000	.500	.700

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County of Tulare
N/S: SR-99 Northbound Ramps
E/W: Betty Drive
Weather: Clear

File Name : 02_CTE_99N_Betty AM
Site Code : 00323250
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	1	**1**	2	0	0	0	0	**1**	0	0	1
+15 mins.	0	0	0	0	0	1	1	2	0	0	0	0	0	**1**	0	1
+30 mins.	0	0	0	0	0	**2**	1	**3**	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	2	1	3	0	0	0	0	1	1	0	**2**
Total Volume	0	0	0	0	0	6	4	10	0	0	0	0	2	2	0	4
% App. Total	0	0	0		0	60	40		0	0	0		50	50	0	
PHF	.000	.000	.000	.000	.000	.750	1.000	.833	.000	.000	.000	.000	.500	.500	.000	.500

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County of Tulare
N/S: SR-99 Northbound Ramps
E/W: Betty Drive
Weather: Clear

File Name : 02_CTE_99N_Betty AM
Site Code : 00323250
Start Date : 3/23/2023
Page No : 1

Groups Printed- 4+ Axle Trucks

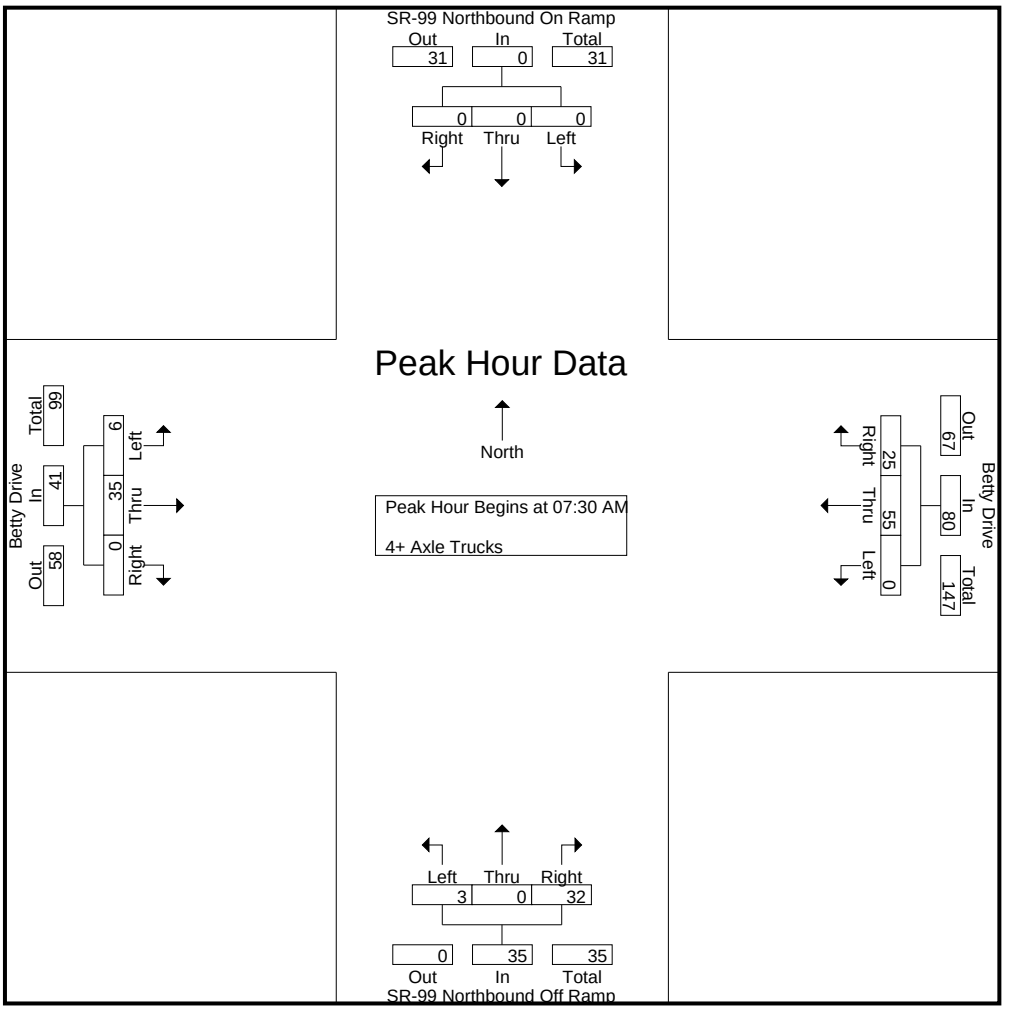
	SR-99 Northbound On Ramp Southbound				Betty Drive Westbound				SR-99 Northbound Off Ramp Northbound				Betty Drive Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	9	4	13	0	0	6	6	2	10	0	12	31
07:15 AM	0	0	0	0	0	11	10	21	0	0	7	7	0	5	0	5	33
07:30 AM	0	0	0	0	0	10	6	16	1	0	4	5	1	12	0	13	34
07:45 AM	0	0	0	0	0	15	8	23	0	0	11	11	0	7	0	7	41
Total	0	0	0	0	0	45	28	73	1	0	28	29	3	34	0	37	139
08:00 AM	0	0	0	0	0	16	4	20	2	0	9	11	3	10	0	13	44
08:15 AM	0	0	0	0	0	14	7	21	0	0	8	8	2	6	0	8	37
08:30 AM	0	0	0	0	0	10	13	23	0	1	14	15	0	18	0	18	56
08:45 AM	0	0	0	0	0	18	8	26	1	0	17	18	2	10	0	12	56
Total	0	0	0	0	0	58	32	90	3	1	48	52	7	44	0	51	193
Grand Total	0	0	0	0	0	103	60	163	4	1	76	81	10	78	0	88	332
Apprch %	0	0	0		0	63.2	36.8		4.9	1.2	93.8		11.4	88.6	0		
Total %	0	0	0	0	0	31	18.1	49.1	1.2	0.3	22.9	24.4	3	23.5	0	26.5	

	SR-99 Northbound On Ramp Southbound				Betty Drive Westbound				SR-99 Northbound Off Ramp Northbound				Betty 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 07:30 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	10	6	16	1	0	4	5	1	**12**	0	**13**	34
07:45 AM	0	0	0	0	0	15	**8**	**23**	0	0	**11**	**11**	0	7	0	7	41
08:00 AM	0	0	0	0	0	**16**	4	20	**2**	0	9	11	**3**	10	0	13	**44**
08:15 AM	0	0	0	0	0	14	7	21	0	0	8	8	2	6	0	8	37
Total Volume	0	0	0	0	0	55	25	80	3	0	32	35	6	35	0	41	156
% App. Total	0	0	0		0	68.8	31.2		8.6	0	91.4		14.6	85.4	0		
PHF	.000	.000	.000	.000	.000	.859	.781	.870	.375	.000	.727	.795	.500	.729	.000	.788	.886

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County of Tulare
N/S: SR-99 Northbound Ramps
E/W: Betty Drive
Weather: Clear

File Name : 02_CTE_99N_Betty AM
Site Code : 00323250
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	10	6	16	1	0	4	5	1	**12**	0	**13**
+15 mins.	0	0	0	0	0	15	**8**	**23**	0	0	**11**	**11**	0	7	0	7
+30 mins.	0	0	0	0	0	**16**	4	20	**2**	0	9	11	**3**	10	0	13
+45 mins.	0	0	0	0	0	14	7	21	0	0	8	8	2	6	0	8
Total Volume	0	0	0	0	0	55	25	80	3	0	32	35	6	35	0	41
% App. Total	0	0	0		0	68.8	31.2		8.6	0	91.4		14.6	85.4	0	
PHF	.000	.000	.000	.000	.000	.859	.781	.870	.375	.000	.727	.795	.500	.729	.000	.788

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County of Tulare
N/S: SR-99 Northbound Ramps
E/W: Betty Drive
Weather: Clear

File Name : 02_CTE_99N_Betty PM
Site Code : 00323250
Start Date : 3/23/2023
Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

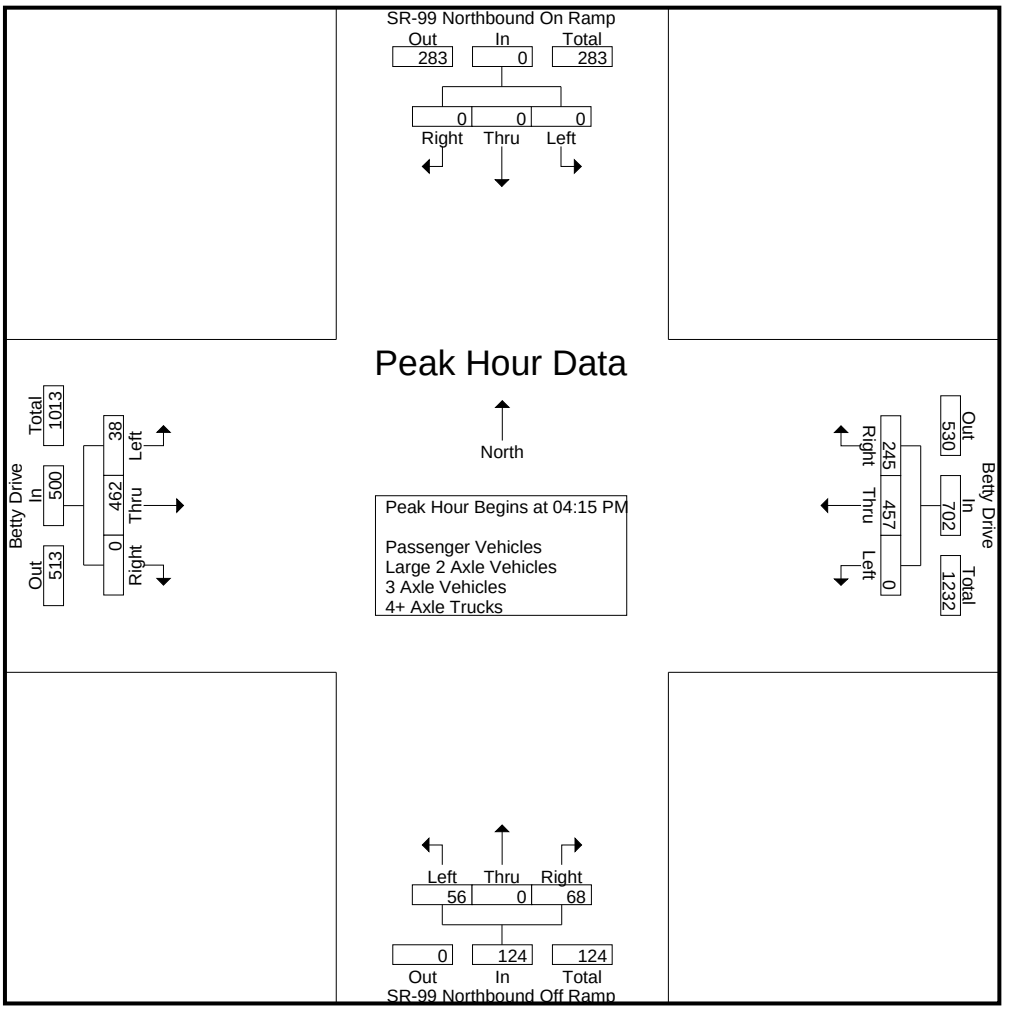
	SR-99 Northbound On Ramp Southbound				Betty Drive Westbound				SR-99 Northbound Off Ramp Northbound				Betty Drive Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	0	0	120	63	183	8	0	11	19	5	111	0	116	318
04:15 PM	0	0	0	0	0	119	67	186	18	0	19	37	9	100	0	109	332
04:30 PM	0	0	0	0	0	113	55	168	12	0	18	30	16	117	0	133	331
04:45 PM	0	0	0	0	0	114	55	169	12	0	16	28	7	118	0	125	322
Total	0	0	0	0	0	466	240	706	50	0	64	114	37	446	0	483	1303
05:00 PM	0	0	0	0	0	111	68	179	14	0	15	29	6	127	0	133	341
05:15 PM	0	0	0	0	0	101	67	168	7	0	16	23	6	135	0	141	332
05:30 PM	0	0	0	0	0	92	53	145	10	0	13	23	13	104	0	117	285
05:45 PM	0	0	0	0	0	78	71	149	6	0	15	21	7	105	0	112	282
Total	0	0	0	0	0	382	259	641	37	0	59	96	32	471	0	503	1240
Grand Total	0	0	0	0	0	848	499	1347	87	0	123	210	69	917	0	986	2543
Apprch %	0	0	0		0	63	37		41.4	0	58.6		7	93	0		
Total %	0	0	0	0	0	33.3	19.6	53	3.4	0	4.8	8.3	2.7	36.1	0	38.8	
Passenger Vehicles	0	0	0	0	0	716	414	1130	79	0	59	138	60	807	0	867	2135
% Passenger Vehicles	0	0	0	0	0	84.4	83	83.9	90.8	0	48	65.7	87	88	0	87.9	84
Large 2 Axle Vehicles	0	0	0	0	0	30	14	44	6	0	1	7	5	33	0	38	89
% Large 2 Axle Vehicles	0	0	0	0	0	3.5	2.8	3.3	6.9	0	0.8	3.3	7.2	3.6	0	3.9	3.5
3 Axle Vehicles	0	0	0	0	0	9	7	16	0	0	2	2	0	6	0	6	24
% 3 Axle Vehicles	0	0	0	0	0	1.1	1.4	1.2	0	0	1.6	1	0	0.7	0	0.6	0.9
4+ Axle Trucks	0	0	0	0	0	93	64	157	2	0	61	63	4	71	0	75	295
% 4+ Axle Trucks	0	0	0	0	0	11	12.8	11.7	2.3	0	49.6	30	5.8	7.7	0	7.6	11.6

	SR-99 Northbound On Ramp Southbound				Betty Drive Westbound				SR-99 Northbound Off Ramp Northbound				Betty 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 04:15 PM																	
04:15 PM	0	0	0	0	0	**119**	67	**186**	**18**	0	**19**	**37**	9	100	0	109	332
04:30 PM	0	0	0	0	0	113	55	168	12	0	18	30	**16**	117	0	**133**	331
04:45 PM	0	0	0	0	0	114	55	169	12	0	16	28	7	118	0	125	322
05:00 PM	0	0	0	0	0	111	**68**	179	14	0	15	29	6	**127**	0	133	**341**
Total Volume	0	0	0	0	0	457	245	702	56	0	68	124	38	462	0	500	1326
% App. Total	0	0	0		0	65.1	34.9		45.2	0	54.8		7.6	92.4	0		
PHF	.000	.000	.000	.000	.000	.960	.901	.944	.778	.000	.895	.838	.594	.909	.000	.940	.972

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County of Tulare
N/S: SR-99 Northbound Ramps
E/W: Betty Drive
Weather: Clear

File Name : 02_CTE_99N_Betty PM
Site Code : 00323250
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				04:00 PM				04:15 PM				04:30 PM			
+0 mins.	0	0	0	0	0	**120**	63	183	**18**	0	**19**	**37**	**16**	117	0	133
+15 mins.	0	0	0	0	0	119	**67**	**186**	12	0	18	30	7	118	0	125
+30 mins.	0	0	0	0	0	113	55	168	12	0	16	28	6	127	0	133
+45 mins.	0	0	0	0	0	114	55	169	14	0	15	29	6	**135**	0	**141**
Total Volume	0	0	0	0	0	466	240	706	56	0	68	124	35	497	0	532
% App. Total	0	0	0		0	66	34		45.2	0	54.8		6.6	93.4	0	
PHF	.000	.000	.000	.000	.000	.971	.896	.949	.778	.000	.895	.838	.547	.920	.000	.943

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County of Tulare
N/S: SR-99 Northbound Ramps
E/W: Betty Drive
Weather: Clear

File Name : 02_CTE_99N_Betty PM
Site Code : 00323250
Start Date : 3/23/2023
Page No : 1

Groups Printed- Passenger Vehicles

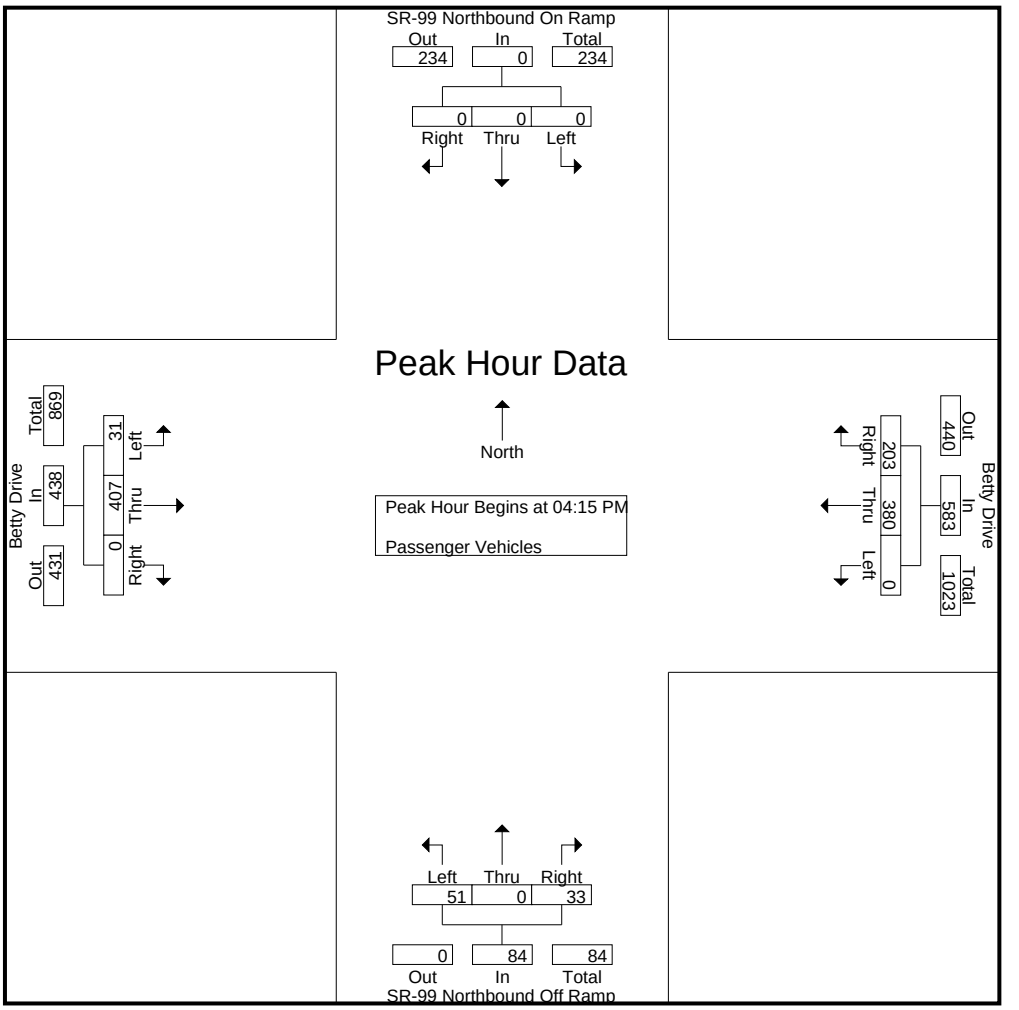
	SR-99 Northbound On Ramp Southbound				Betty Drive Westbound				SR-99 Northbound Off Ramp Northbound				Betty Drive Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	0	0	105	54	159	7	0	6	13	5	103	0	108	280
04:15 PM	0	0	0	0	0	93	53	146	16	0	6	22	8	83	0	91	259
04:30 PM	0	0	0	0	0	92	43	135	11	0	8	19	13	99	0	112	266
04:45 PM	0	0	0	0	0	99	46	145	11	0	9	20	4	108	0	112	277
Total	0	0	0	0	0	389	196	585	45	0	29	74	30	393	0	423	1082
05:00 PM	0	0	0	0	0	96	61	157	13	0	10	23	6	117	0	123	303
05:15 PM	0	0	0	0	0	85	50	135	7	0	6	13	4	119	0	123	271
05:30 PM	0	0	0	0	0	79	45	124	9	0	8	17	13	87	0	100	241
05:45 PM	0	0	0	0	0	67	62	129	5	0	6	11	7	91	0	98	238
Total	0	0	0	0	0	327	218	545	34	0	30	64	30	414	0	444	1053
Grand Total	0	0	0	0	0	716	414	1130	79	0	59	138	60	807	0	867	2135
Apprch %	0	0	0		0	63.4	36.6		57.2	0	42.8		6.9	93.1	0		
Total %	0	0	0	0	0	33.5	19.4	52.9	3.7	0	2.8	6.5	2.8	37.8	0	40.6	

	SR-99 Northbound On Ramp Southbound				Betty Drive Westbound				SR-99 Northbound Off Ramp Northbound				Betty 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 04:15 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	93	53	146	**16**	0	6	22	8	83	0	91	259
04:30 PM	0	0	0	0	0	92	43	135	11	0	8	19	**13**	99	0	112	266
04:45 PM	0	0	0	0	0	**99**	46	145	11	0	9	20	4	108	0	112	277
05:00 PM	0	0	0	0	0	96	**61**	**157**	13	0	**10**	**23**	6	**117**	0	**123**	**303**
Total Volume	0	0	0	0	0	380	203	583	51	0	33	84	31	407	0	438	1105
% App. Total	0	0	0		0	65.2	34.8		60.7	0	39.3		7.1	92.9	0		
PHF	.000	.000	.000	.000	.000	.960	.832	.928	.797	.000	.825	.913	.596	.870	.000	.890	.912

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

County of Tulare
N/S: SR-99 Northbound Ramps
E/W: Betty Drive
Weather: Clear

File Name : 02_CTE_99N_Betty PM
Site Code : 00323250
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	93	53	146	**16**	0	6	22	8	83	0	91
+15 mins.	0	0	0	0	0	92	43	135	11	0	8	19	**13**	99	0	112
+30 mins.	0	0	0	0	0	**99**	46	145	11	0	9	20	4	108	0	112
+45 mins.	0	0	0	0	0	96	**61**	**157**	13	0	**10**	**23**	6	**117**	0	**123**
Total Volume	0	0	0	0	0	380	203	583	51	0	33	84	31	407	0	438
% App. Total	0	0	0		0	65.2	34.8		60.7	0	39.3		7.1	92.9	0	
PHF	.000	.000	.000	.000	.000	.960	.832	.928	.797	.000	.825	.913	.596	.870	.000	.890

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

County of Tulare
N/S: SR-99 Northbound Ramps
E/W: Betty Drive
Weather: Clear

File Name : 02_CTE_99N_Betty PM
Site Code : 00323250
Start Date : 3/23/2023
Page No : 1

Groups Printed- Large 2 Axle Vehicles

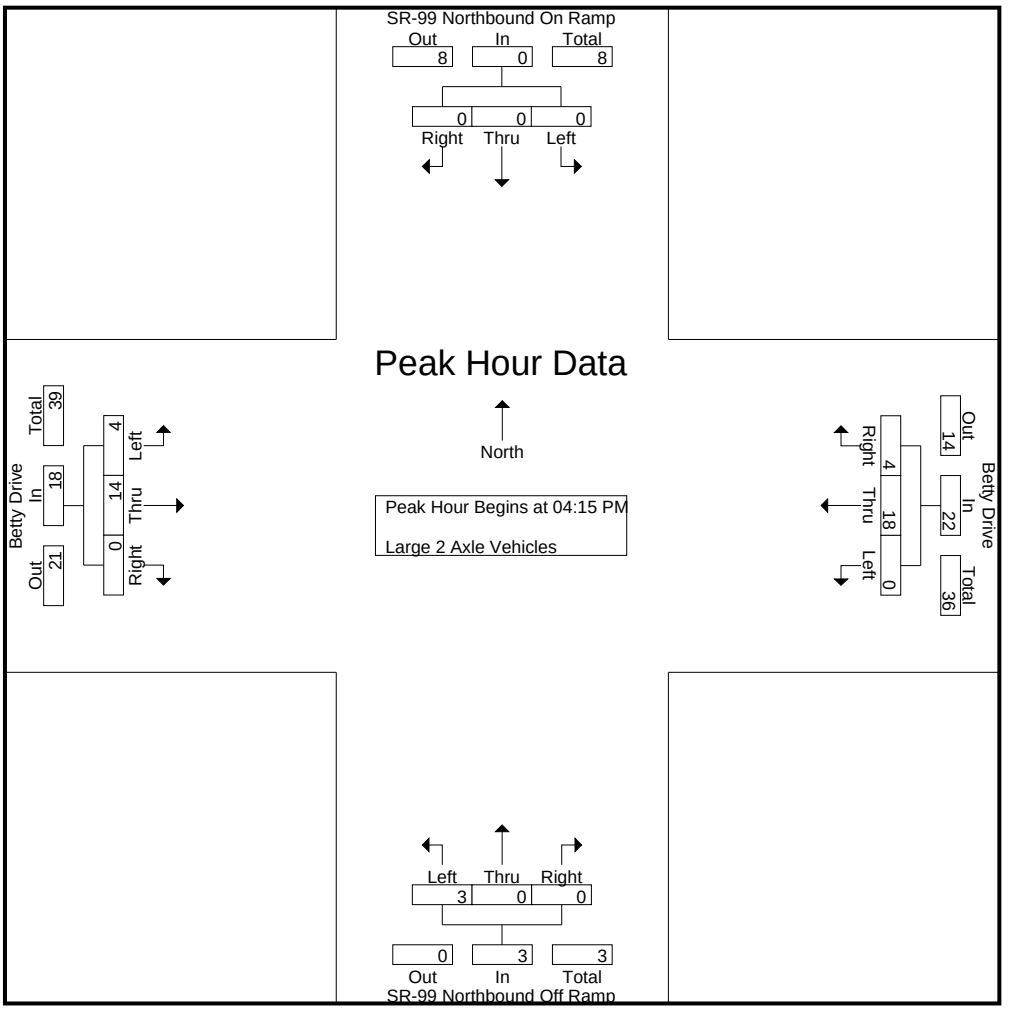
	SR-99 Northbound On Ramp Southbound				Betty Drive Westbound				SR-99 Northbound Off Ramp Northbound				Betty Drive Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	0	0	4	4	8	1	0	0	1	0	4	0	4	13
04:15 PM	0	0	0	0	0	5	1	6	2	0	0	2	1	5	0	6	14
04:30 PM	0	0	0	0	0	6	1	7	1	0	0	1	0	5	0	5	13
04:45 PM	0	0	0	0	0	2	2	4	0	0	0	0	3	1	0	4	8
Total	0	0	0	0	0	17	8	25	4	0	0	4	4	15	0	19	48
05:00 PM	0	0	0	0	0	5	0	5	0	0	0	0	0	3	0	3	8
05:15 PM	0	0	0	0	0	4	3	7	0	0	0	0	1	4	0	5	12
05:30 PM	0	0	0	0	0	1	0	1	1	0	0	1	0	8	0	8	10
05:45 PM	0	0	0	0	0	3	3	6	1	0	1	2	0	3	0	3	11
Total	0	0	0	0	0	13	6	19	2	0	1	3	1	18	0	19	41
Grand Total	0	0	0	0	0	30	14	44	6	0	1	7	5	33	0	38	89
Apprch %	0	0	0		0	68.2	31.8		85.7	0	14.3		13.2	86.8	0		
Total %	0	0	0	0	0	33.7	15.7	49.4	6.7	0	1.1	7.9	5.6	37.1	0	42.7	

	SR-99 Northbound On Ramp Southbound				Betty Drive Westbound				SR-99 Northbound Off Ramp Northbound				Betty 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 04:15 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	5	1	6	**2**	0	0	**2**	1	**5**	0	**6**	**14**
04:30 PM	0	0	0	0	0	**6**	1	**7**	1	0	0	1	0	5	0	5	13
04:45 PM	0	0	0	0	0	2	**2**	4	0	0	0	0	**3**	1	0	4	8
05:00 PM	0	0	0	0	0	5	0	5	0	0	0	0	0	3	0	3	8
Total Volume	0	0	0	0	0	18	4	22	3	0	0	3	4	14	0	18	43
% App. Total	0	0	0		0	81.8	18.2		100	0	0		22.2	77.8	0		
PHF	.000	.000	.000	.000	.000	.750	.500	.786	.375	.000	.000	.375	.333	.700	.000	.750	.768

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

County of Tulare
N/S: SR-99 Northbound Ramps
E/W: Betty Drive
Weather: Clear

File Name : 02_CTE_99N_Betty PM
Site Code : 00323250
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	5	1	6	**2**	0	0	**2**	1	**5**	0	**6**
+15 mins.	0	0	0	0	0	**6**	1	**7**	1	0	0	1	0	5	0	5
+30 mins.	0	0	0	0	0	2	**2**	4	0	0	0	0	**3**	1	0	4
+45 mins.	0	0	0	0	0	5	0	5	0	0	0	0	0	3	0	3
Total Volume	0	0	0	0	0	18	4	22	3	0	0	3	4	14	0	18
% App. Total	0	0	0		0	81.8	18.2		100	0	0		22.2	77.8	0	
PHF	.000	.000	.000	.000	.000	.750	.500	.786	.375	.000	.000	.375	.333	.700	.000	.750

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

County of Tulare
N/S: SR-99 Northbound Ramps
E/W: Betty Drive
Weather: Clear

File Name : 02_CTE_99N_Betty PM
Site Code : 00323250
Start Date : 3/23/2023
Page No : 1

Groups Printed- 3 Axle Vehicles

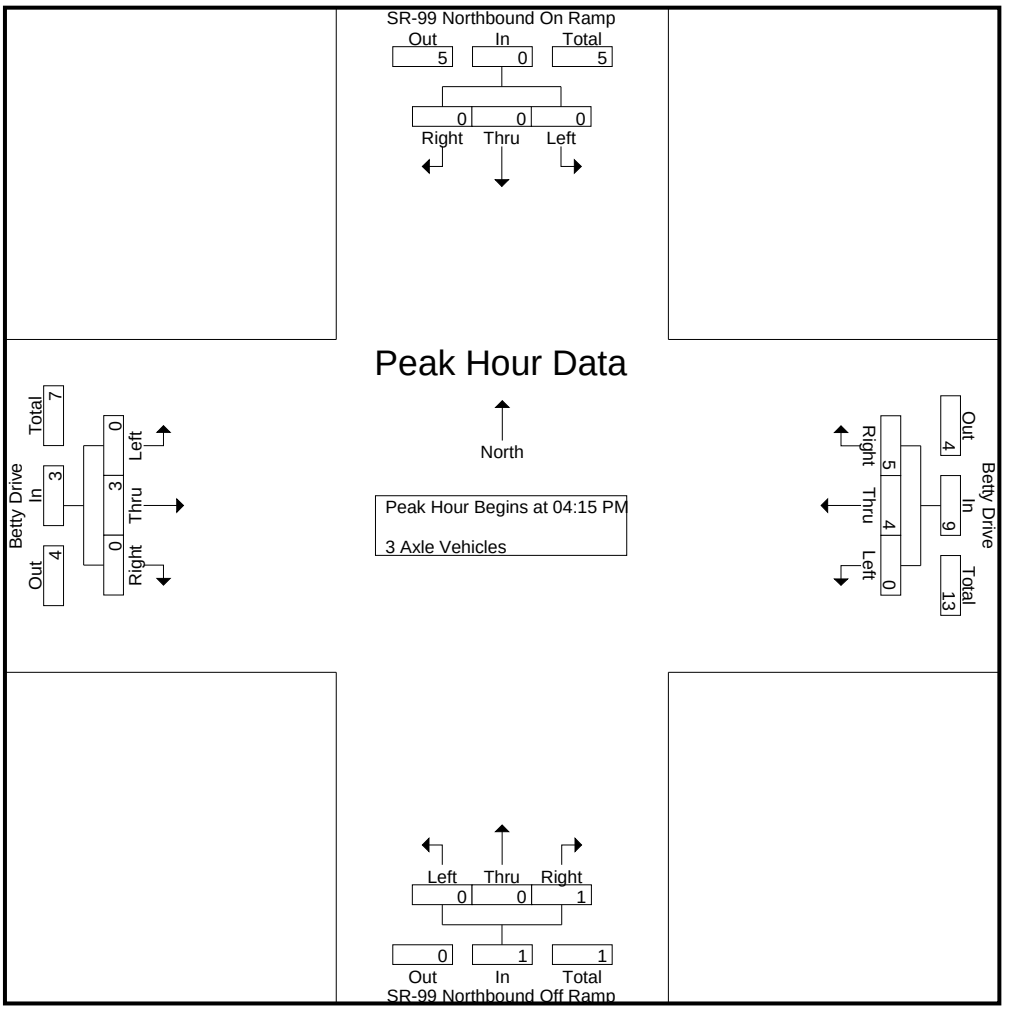
	SR-99 Northbound On Ramp Southbound				Betty Drive Westbound				SR-99 Northbound Off Ramp Northbound				Betty Drive Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
04:15 PM	0	0	0	0	0	1	4	5	0	0	0	0	0	1	0	1	6
04:30 PM	0	0	0	0	0	1	1	2	0	0	1	1	0	1	0	1	4
04:45 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
Total	0	0	0	0	0	4	5	9	0	0	1	1	0	3	0	3	13
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	2	1	3	0	0	0	0	0	2	0	2	5
05:30 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
05:45 PM	0	0	0	0	0	1	1	2	0	0	1	1	0	0	0	0	3
Total	0	0	0	0	0	5	2	7	0	0	1	1	0	3	0	3	11
Grand Total	0	0	0	0	0	9	7	16	0	0	2	2	0	6	0	6	24
Apprch %	0	0	0		0	56.2	43.8		0	0	100		0	100	0		
Total %	0	0	0	0	0	37.5	29.2	66.7	0	0	8.3	8.3	0	25	0	25	

	SR-99 Northbound On Ramp Southbound				Betty Drive Westbound				SR-99 Northbound Off Ramp Northbound				Betty 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 04:15 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	**1**	**4**	**5**	0	0	0	0	0	**1**	0	**1**	**6**
04:30 PM	0	0	0	0	0	1	1	2	0	0	**1**	**1**	0	1	0	1	4
04:45 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
05:00 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
Total Volume	0	0	0	0	0	4	5	9	0	0	1	1	0	3	0	3	13
% App. Total	0	0	0		0	44.4	55.6		0	0	100		0	100	0		
PHF	.000	.000	.000	.000	.000	1.00	.313	.450	.000	.000	.250	.250	.000	.750	.000	.750	.542

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

County of Tulare
N/S: SR-99 Northbound Ramps
E/W: Betty Drive
Weather: Clear

File Name : 02_CTE_99N_Betty PM
Site Code : 00323250
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	**1**	**4**	**5**	0	0	0	0	0	**1**	0	**1**
+15 mins.	0	0	0	0	0	1	1	2	0	0	**1**	**1**	0	1	0	1
+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	1	0	1	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	4	5	9	0	0	1	1	0	3	0	3
% App. Total	0	0	0		0	44.4	55.6		0	0	100		0	100	0	
PHF	.000	.000	.000	.000	.000	1.000	.313	.450	.000	.000	.250	.250	.000	.750	.000	.750

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

County of Tulare
N/S: SR-99 Northbound Ramps
E/W: Betty Drive
Weather: Clear

File Name : 02_CTE_99N_Betty PM
Site Code : 00323250
Start Date : 3/23/2023

Groups Printed- 4+ Axle Trucks

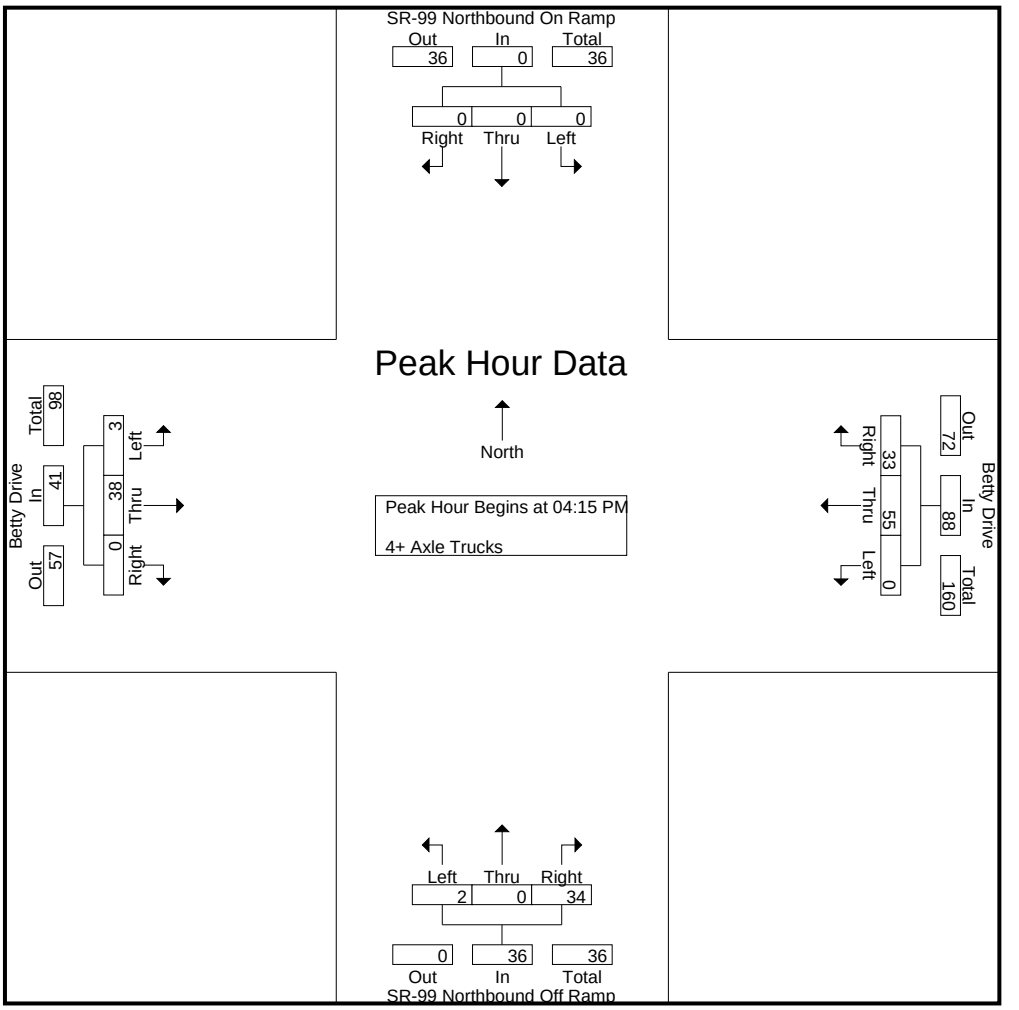
	SR-99 Northbound On Ramp Southbound				Betty Drive Westbound				SR-99 Northbound Off Ramp Northbound				Betty Drive Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	0	0	10	5	15	0	0	5	5	0	4	0	4	24
04:15 PM	0	0	0	0	0	20	9	29	0	0	13	13	0	11	0	11	53
04:30 PM	0	0	0	0	0	14	10	24	0	0	9	9	3	12	0	15	48
04:45 PM	0	0	0	0	0	12	7	19	1	0	7	8	0	8	0	8	35
Total	0	0	0	0	0	56	31	87	1	0	34	35	3	35	0	38	160
05:00 PM	0	0	0	0	0	9	7	16	1	0	5	6	0	7	0	7	29
05:15 PM	0	0	0	0	0	10	13	23	0	0	10	10	1	10	0	11	44
05:30 PM	0	0	0	0	0	11	8	19	0	0	5	5	0	8	0	8	32
05:45 PM	0	0	0	0	0	7	5	12	0	0	7	7	0	11	0	11	30
Total	0	0	0	0	0	37	33	70	1	0	27	28	1	36	0	37	135
Grand Total	0	0	0	0	0	93	64	157	2	0	61	63	4	71	0	75	295
Apprch %	0	0	0		0	59.2	40.8		3.2	0	96.8		5.3	94.7	0		
Total %	0	0	0	0	0	31.5	21.7	53.2	0.7	0	20.7	21.4	1.4	24.1	0	25.4	

	SR-99 Northbound On Ramp Southbound				Betty Drive Westbound				SR-99 Northbound Off Ramp Northbound				Betty 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 04:15 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	**20**	9	**29**	0	0	**13**	**13**	0	11	0	11	**53**
04:30 PM	0	0	0	0	0	14	**10**	24	0	0	9	9	**3**	**12**	0	**15**	48
04:45 PM	0	0	0	0	0	12	7	19	**1**	0	7	8	0	8	0	8	35
05:00 PM	0	0	0	0	0	9	7	16	1	0	5	6	0	7	0	7	29
Total Volume	0	0	0	0	0	55	33	88	2	0	34	36	3	38	0	41	165
% App. Total	0	0	0		0	62.5	37.5		5.6	0	94.4		7.3	92.7	0		
PHF	.000	.000	.000	.000	.000	.688	.825	.759	.500	.000	.654	.692	.250	.792	.000	.683	.778

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

County of Tulare
N/S: SR-99 Northbound Ramps
E/W: Betty Drive
Weather: Clear

File Name : 02_CTE_99N_Betty PM
Site Code : 00323250
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	**20**	9	**29**	0	0	**13**	**13**	0	11	0	11
+15 mins.	0	0	0	0	0	14	**10**	24	0	0	9	9	**3**	**12**	0	**15**
+30 mins.	0	0	0	0	0	12	7	19	**1**	0	7	8	0	8	0	8
+45 mins.	0	0	0	0	0	9	7	16	1	0	5	6	0	7	0	7
Total Volume	0	0	0	0	0	55	33	88	2	0	34	36	3	38	0	41
% App. Total	0	0	0		0	62.5	37.5		5.6	0	94.4		7.3	92.7	0	
PHF	.000	.000	.000	.000	.000	.688	.825	.759	.500	.000	.654	.692	.250	.792	.000	.683

Counts Unlimited, Inc.

PO Box 1178
Corona, CA 92878
Phone: (951) 268-6268
email: counts@countsunlimited.com

County of Tulare
Avenue 304
W/ Road 64
24 Hour Directional Volume Count

CTE005
Site Code: 003-22799

Start Time	9/20/22 Tue	Eastbound Morning	Eastbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Westbound Morning	Westbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		2	13			2	9				
12:15		0	12			3	9				
12:30		0	12			2	10				
12:45		0	4	2	41	2	7	9	35	11	76
01:00		1	15			0	11				
01:15		0	24			0	9				
01:30		1	14			1	7				
01:45		3	18	5	71	0	4	1	31	6	102
02:00		4	16			1	10				
02:15		1	10			1	11				
02:30		1	21			2	13				
02:45		1	22	7	69	2	4	6	38	13	107
03:00		2	11			1	10				
03:15		2	**22**			1	**10**				
03:30		3	**22**			2	**20**				
03:45		4	**15**	11	70	1	**9**	5	49	16	119
04:00		1	**30**			3	**14**				
04:15		3	16			4	4				
04:30		2	18			4	9				
04:45		1	11	7	75	6	7	17	34	24	109
05:00		5	18			4	16				
05:15		9	13			5	11				
05:30		13	14			6	10				
05:45		7	8	34	53	6	7	21	44	55	97
06:00		4	13			10	10				
06:15		11	12			5	7				
06:30		11	14			7	7				
06:45		10	12	36	51	9	5	31	29	67	80
07:00		13	8			7	7				
07:15		**12**	6			10	3				
07:30		**11**	8			12	6				
07:45		**13**	5	49	27	5	2	34	18	83	45
08:00		**16**	6			9	3				
08:15		8	2			3	5				
08:30		7	8			11	7				
08:45		7	2	38	18	11	7	34	22	72	40
09:00		11	5			6	2				
09:15		12	2			5	4				
09:30		7	3			**10**	3				
09:45		4	2	34	12	**12**	2	33	11	67	23
10:00		6	4			**8**	4				
10:15		6	1			**10**	1				
10:30		6	3			8	1				
10:45		15	4	33	12	8	7	34	13	67	25
11:00		9	0			5	0				
11:15		8	0			8	3				
11:30		13	1			7	3				
11:45		13	1	43	2	5	2	25	8	68	10
Total		299	501	299	501	250	332	250	332	549	833
Combined Total		800		800		582		582		1382	
AM Peak	-	07:15	-	-	-	09:30	-	-	-	-	-
Vol.	-	52	-	-	-	40	-	-	-	-	-
P.H.F.		0.813				0.833					
PM Peak	-	-	03:15	-	-	-	03:15	-	-	-	-
Vol.	-	-	89	-	-	-	53	-	-	-	-
P.H.F.			0.742				0.663				
Percentage		37.4%	62.6%			43.0%	57.0%				
ADT/AADT		ADT 1,382		AADT 1,382							

Counts Unlimited, Inc.

PO Box 1178
Corona, CA 92878
Phone: (951) 268-6268
email: counts@countsunlimited.com

County of Tulare
Road 64
B/ Betty Drive - Avenue 308
24 Hour Directional Volume Count

CTE001
Site Code: 003-22799

Start Time	9/20/22 Tue	Northbound Morning	Northbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Southbound Morning	Southbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		4	56			7	34				
12:15		2	44			3	23				
12:30		3	39			4	28				
12:45		1	36	10	175	4	21	18	106	28	281
01:00		4	40			3	39				
01:15		4	52			2	33				
01:30		4	61			3	49				
01:45		3	70	15	223	3	**62**	11	183	26	406
02:00		7	**122**			3	**66**				
02:15		2	**66**			4	**46**				
02:30		2	**66**			6	**55**				
02:45		1	**85**	12	339	2	52	15	219	27	558
03:00		4	95			5	41				
03:15		7	70			1	52				
03:30		11	89			5	35				
03:45		9	62	31	316	3	48	14	176	45	492
04:00		6	61			6	38				
04:15		10	64			9	45				
04:30		13	66			9	54				
04:45		11	54	40	245	25	33	49	170	89	415
05:00		17	73			22	45				
05:15		21	59			23	34				
05:30		26	39			49	30				
05:45		28	44	92	215	47	29	141	138	233	353
06:00		27	41			68	40				
06:15		33	36			48	20				
06:30		46	36			30	25				
06:45		39	23	145	136	37	18	183	103	328	239
07:00		31	16			27	22				
07:15		34	33			**52**	19				
07:30		**74**	18			**82**	29				
07:45		**112**	22	251	89	**125**	26	286	96	537	185
08:00		**118**	20			**98**	14				
08:15		**76**	13			41	19				
08:30		33	15			42	21				
08:45		35	24	262	72	32	16	213	70	475	142
09:00		30	22			31	12				
09:15		39	8			29	14				
09:30		28	14			37	10				
09:45		35	11	132	55	28	7	125	43	257	98
10:00		33	9			24	6				
10:15		28	8			21	8				
10:30		34	6			32	6				
10:45		48	10	143	33	48	6	125	26	268	59
11:00		45	8			29	8				
11:15		35	7			34	5				
11:30		50	0			39	8				
11:45		47	2	177	17	35	3	137	24	314	41
Total		1310	1915	1310	1915	1317	1354	1317	1354	2627	3269
Combined Total		3225		3225		2671		2671		5896	
AM Peak	-	07:30	-	-	-	07:15	-	-	-	-	-
Vol.	-	380	-	-	-	357	-	-	-	-	-
P.H.F.		0.805				0.714					
PM Peak	-	-	02:00	-	-	-	01:45	-	-	-	-
Vol.	-	-	339	-	-	-	229	-	-	-	-
P.H.F.			0.695				0.867				
Percentage		40.6%	59.4%			49.3%	50.7%				
ADT/AADT		ADT 5,896		AADT 5,896							

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County of Tulare
Road 64
B/ Avenue 308 - Kenyon Plastering Driveway
24 Hour Directional Volume Count

CTE002
Site Code: 003-22799

Start Time	9/20/22 Tue	Northbound Morning	Northbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Southbound Morning	Southbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		2	20			5	15				
12:15		0	22			2	15				
12:30		2	16			3	16				
12:45		0	15	4	73	2	13	12	59	16	132
01:00		1	23			1	14				
01:15		0	22			0	13				
01:30		1	27			0	11				
01:45		2	25	4	97	0	**19**	1	57	5	154
02:00		5	25			1	**23**				
02:15		1	18			2	**17**				
02:30		1	23			3	**24**				
02:45		1	26	8	92	2	15	8	79	16	171
03:00		3	19			1	13				
03:15		4	**28**			0	25				
03:30		5	**36**			4	18				
03:45		5	**29**	17	112	1	19	6	75	23	187
04:00		2	**32**			6	13				
04:15		5	21			8	17				
04:30		8	30			3	18				
04:45		3	26	18	109	21	12	38	60	56	169
05:00		12	28			14	22				
05:15		13	31			13	14				
05:30		12	23			23	14				
05:45		19	20	56	102	19	15	69	65	125	167
06:00		17	16			19	14				
06:15		17	11			13	8				
06:30		18	15			14	11				
06:45		15	10	67	52	17	8	63	41	130	93
07:00		14	9			12	8				
07:15		**16**	9			**21**	12				
07:30		**20**	11			**19**	11				
07:45		**30**	8	80	37	**25**	8	77	39	157	76
08:00		**22**	14			**23**	4				
08:15		10	6			11	6				
08:30		12	8			20	12				
08:45		11	8	55	36	15	4	69	26	124	62
09:00		11	8			19	6				
09:15		18	7			11	5				
09:30		7	4			20	5				
09:45		10	6	46	25	15	2	65	18	111	43
10:00		16	6			9	3				
10:15		14	0			11	1				
10:30		12	5			19	5				
10:45		14	2	56	13	19	3	58	12	114	25
11:00		22	2			17	1				
11:15		12	3			21	1				
11:30		24	0			20	3				
11:45		22	1	80	6	21	2	79	7	159	13
Total		491	754	491	754	545	538	545	538	1036	1292
Combined Total		1245		1245		1083		1083		2328	
AM Peak	-	07:15	-	-	-	07:15	-	-	-	-	-
Vol.	-	88	-	-	-	88	-	-	-	-	-
P.H.F.		0.733				0.880					
PM Peak	-	-	03:15	-	-	-	01:45	-	-	-	-
Vol.	-	-	125	-	-	-	83	-	-	-	-
P.H.F.			0.868				0.865				
Percentage		39.4%	60.6%			50.3%	49.7%				
ADT/AADT		ADT 2,328		AADT 2,328							

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County of Tulare
Road 64
B/ Kenyon Plastering Driveway - Avenue 304
24 Hour Directional Volume Count

CTE003
Site Code: 003-22799

Start Time	9/20/22 Tue	Northbound Morning	Northbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Southbound Morning	Southbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		3	15			3	15				
12:15		0	18			3	19				
12:30		1	18			4	11				
12:45		0	11	4	62	3	15	13	60	17	122
01:00		1	20			1	13				
01:15		0	23			0	7				
01:30		1	22			0	13				
01:45		2	26	4	91	0	12	1	45	5	136
02:00		5	25			1	20				
02:15		1	18			2	18				
02:30		1	27			3	21				
02:45		2	26	9	96	2	13	8	72	17	168
03:00		2	23			1	**18**				
03:15		4	**26**			0	**23**				
03:30		5	**38**			3	**20**				
03:45		7	**27**	18	114	1	**19**	5	80	23	194
04:00		2	**28**			6	11				
04:15		7	20			7	16				
04:30		4	24			4	16				
04:45		3	21	16	93	15	12	32	55	48	148
05:00		11	25			7	22				
05:15		9	31			11	16				
05:30		18	15			14	13				
05:45		20	14	58	85	12	14	44	65	102	150
06:00		10	14			9	12				
06:15		23	14			8	8				
06:30		16	16			9	10				
06:45		13	11	62	55	16	8	42	38	104	93
07:00		17	9			11	6				
07:15		**18**	10			**18**	8				
07:30		**22**	11			**21**	8				
07:45		**25**	8	82	38	**23**	8	73	30	155	68
08:00		**24**	11			**17**	3				
08:15		13	4			7	5				
08:30		15	8			16	10				
08:45		4	8	56	31	16	5	56	23	112	54
09:00		14	8			10	4				
09:15		16	7			12	5				
09:30		14	7			14	5				
09:45		10	5	54	27	13	1	49	15	103	42
10:00		12	6			5	3				
10:15		14	2			12	1				
10:30		13	4			15	4				
10:45		17	4	56	16	13	6	45	14	101	30
11:00		17	2			11	0				
11:15		14	4			20	2				
11:30		19	0			15	4				
11:45		23	2	73	8	17	2	63	8	136	16
Total		492	716	492	716	431	505	431	505	923	1221
Combined Total		1208		1208		936		936		2144	
AM Peak	-	07:15	-	-	-	07:15	-	-	-	-	-
Vol.	-	89	-	-	-	79	-	-	-	-	-
P.H.F.		0.890				0.859					
PM Peak	-	-	03:15	-	-	-	03:00	-	-	-	-
Vol.	-	-	119	-	-	-	80	-	-	-	-
P.H.F.			0.783				0.870				
Percentage		40.7%	59.3%			46.0%	54.0%				
ADT/AADT		ADT 2,144		AADT 2,144							

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County of Tulare
Road 64
B/ Avenue 304 - State Route 198
24 Hour Directional Volume Count

CTE004
Site Code: 003-22799

Start Time	9/20/22 Tue	Northbound Morning	Northbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Southbound Morning	Southbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		1	7			0	11				
12:15		0	2			0	8				
12:30		1	9			2	8				
12:45		0	5	2	23	1	7	3	34	5	57
01:00		0	10			0	3				
01:15		0	14			0	8				
01:30		1	13			0	7				
01:45		0	10	1	47	0	9	0	27	1	74
02:00		1	8			0	9				
02:15		1	**12**			3	10				
02:30		0	**11**			1	8				
02:45		1	**12**	3	43	0	5	4	32	7	75
03:00		0	**18**			1	**11**				
03:15		2	9			0	**14**				
03:30		2	12			0	**8**				
03:45		2	11	6	50	0	**13**	1	46	7	96
04:00		1	8			4	10				
04:15		6	9			1	6				
04:30		4	10			1	15				
04:45		3	14	14	41	5	10	11	41	25	82
05:00		7	8			2	14				
05:15		7	14			5	6				
05:30		14	1			7	4				
05:45		16	7	44	30	2	8	16	32	60	62
06:00		11	5			1	5				
06:15		14	6			3	6				
06:30		10	5			7	2				
06:45		17	5	52	21	10	4	21	17	73	38
07:00		**12**	3			6	6				
07:15		**12**	4			**12**	5				
07:30		**15**	3			**10**	4				
07:45		**22**	2	61	12	**10**	3	38	18	99	30
08:00		10	5			**10**	2				
08:15		9	2			6	2				
08:30		10	0			4	2				
08:45		2	8	31	15	2	0	22	6	53	21
09:00		5	4			6	2				
09:15		11	5			6	2				
09:30		8	3			7	2				
09:45		8	3	32	15	2	0	21	6	53	21
10:00		7	2			6	0				
10:15		9	2			5	0				
10:30		7	1			5	2				
10:45		7	1	30	6	8	1	24	3	54	9
11:00		8	1			3	0				
11:15		8	5			5	1				
11:30		11	0			5	2				
11:45		8	1	35	7	9	1	22	4	57	11
Total		311	310	311	310	183	266	183	266	494	576
Combined Total		621		621		449		449		1070	
AM Peak	-	07:00	-	-	-	07:15	-	-	-	-	-
Vol.	-	61	-	-	-	42	-	-	-	-	-
P.H.F.		0.693				0.875					
PM Peak	-	-	02:15	-	-	-	03:00	-	-	-	-
Vol.	-	-	53	-	-	-	46	-	-	-	-
P.H.F.			0.736				0.821				
Percentage		50.1%	49.9%			40.8%	59.2%				
ADT/AADT		ADT 1,070		AADT 1,070							

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County of Tulare
Betty Drive
B/ Road 64 - State Route 99 Southbound Ramps
24 Hour Directional Volume Count

CTE001
Site Code: 003-23250

Start Time	3/23/23 Thu	Eastbound Morning	Eastbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Westbound Morning	Westbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		2	64			9	54				
12:15		5	51			10	52				
12:30		7	48			6	41				
12:45		5	43	19	206	6	59	31	206	50	412
01:00		7	40			11	52				
01:15		2	46			5	43				
01:30		5	60			6	63				
01:45		1	47	15	193	2	70	24	228	39	421
02:00		2	44			0	82				
02:15		5	127			3	76				
02:30		4	69			2	52				
02:45		4	72	15	312	5	**74**	10	284	25	596
03:00		4	69			6	**84**				
03:15		5	**128**			5	**58**				
03:30		7	**87**			5	**76**				
03:45		10	**100**	26	384	5	62	21	280	47	664
04:00		11	**86**			6	71				
04:15		7	57			9	61				
04:30		10	74			8	67				
04:45		7	66	35	283	11	66	34	265	69	548
05:00		14	63			13	45				
05:15		8	79			12	70				
05:30		19	42			19	35				
05:45		29	47	70	231	36	53	80	203	150	434
06:00		27	51			52	53				
06:15		19	31			27	36				
06:30		29	38			41	29				
06:45		43	40	118	160	51	47	171	165	289	325
07:00		42	19			42	44				
07:15		42	29			47	32				
07:30		52	33			**77**	29				
07:45		**85**	18	221	99	**100**	29	266	134	487	233
08:00		**121**	23			**132**	24				
08:15		**140**	16			**119**	30				
08:30		**57**	25			57	26				
08:45		44	21	362	85	40	30	348	110	710	195
09:00		27	17			48	27				
09:15		51	11			45	22				
09:30		45	18			56	21				
09:45		36	14	159	60	43	25	192	95	351	155
10:00		44	11			45	18				
10:15		42	9			58	19				
10:30		46	11			50	15				
10:45		59	7	191	38	54	14	207	66	398	104
11:00		56	5			54	11				
11:15		57	8			61	9				
11:30		70	3			55	10				
11:45		56	7	239	23	68	6	238	36	477	59
Total		1470	2074	1470	2074	1622	2072	1622	2072	3092	4146
Combined Total		3544		3544		3694		3694		7238	
AM Peak	-	07:45	-	-	-	07:30	-	-	-	-	-
Vol.	-	403	-	-	-	428	-	-	-	-	-
P.H.F.		0.720				0.811					
PM Peak	-	-	03:15	-	-	-	02:45	-	-	-	-
Vol.	-	-	401	-	-	-	292	-	-	-	-
P.H.F.			0.783				0.869				
Percentage		41.5%	58.5%			43.9%	56.1%				
ADT/AADT		ADT 7,238		AADT 7,238							

Group Assignment: **NONE**
Field Master Assignment: **NONE**
System Reference Number: **64**

N/S Street Name: **Rd 63**
E/W Street Name: **Betty Drv**
Cabinet Location: **NEC**

Last Database Change: **5/21/2022 8:58**

Change Record					
Change	By	Date	Change	By	Date

Notes:
10/01/2020 - Updated timing calculations, FDW, detector timing & attributes, and set First Phase Ø8 with a 6 second All Red-Start. (JT)
10/03/2020 - Updated timing calculations and Yellow Times. (JT)
05/21/2022 - Updated timing calculations & Yellow Times. Removed the 5 second delay from SBL. Also changed the call delay for J3U & J4U from 10 to 5 seconds. (JT)

Manual Plan
0 = Automatic
1-9 = Plan 1-9
14 = Free
15 = Flash

Manual Offset
0 = Automatic
1 = Offset A
2 = Offset B
3 = Offset C

Drop Number	**1**	<C/0+0+0>
Zone Number	**1**	<C/0+0+1>
Area Number	**1**	<C/0+0+2>
Area Address	**64**	<C/0+0+3>
QuicNet Channel	**COM1:**	(QuicNet)

Communication Addresses

Manual Plan	**14**	<C/0+A+1>
Manual Offset		<C/0+B+1>

Manual Selection

Flash Start	**0**	<F/1+0+E>
Red Revert	**3.0**	<F/1+0+F>
All Red Start	**6.0**	<F/1+C+0>

Start / Revert Times

Exclusive Walk	**0**	<F/1+0+0>
Exclusive FDW	**0**	<F/1+0+1>
All Red Clear	**0.0**	<F/1+0+2>

Exclusive Ped Phase
(Outputs specified in Assignable Outputs at E/127+A+E & F)

Row	Column Numbers ---->	Phase 1	2	3	4	5	6	7	8	Row
	Phase Names ---->	SBL	NB				SB		WB	
0	Ped Walk	0	7	0	0	0	0	0	0	0
1	Ped FDW	0	33	0	0	0	0	0	0	1
2	Min Green	5	8	0	0	0	8	0	8	2
3	Type 3 Disconnect	0	20	0	0	0	20	0	20	3
4	Added per Vehicle	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4
5	Veh Extension	2.0	5.0	0.0	0.0	0.0	5.0	0.0	5.4	5
6	Max Gap	2.0	7.8	0.0	0.0	0.0	7.8	0.0	7.2	6
7	Min Gap	2.0	2.0	0.0	0.0	0.0	2.0	0.0	2.0	7
8	Max Limit	20	25	0	0	0	25	0	35	8
9	Max Limit 2	12	15	0	0	0	15	0	25	9
A	Adv. / Delay Walk	0	0	0	0	0	0	0	0	A
B	PE Min Ped FDW	0	29	0	0	0	0	0	0	B
C	Cond Serv Check	0	0	0	0	0	0	0	0	C
D	Reduce Every	0.0	0.3	0.0	0.0	0.0	0.3	0.0	0.4	D
E	Yellow Change	3.7	4.1	0.0	0.0	0.0	4.1	0.0	4.8	E
F	Red Clear	1.0	1.0	0.0	0.0	0.0	1.0	0.0	2.0	F

Phase Timing - Bank 1 <C+0+F=1>

	9	A	B	C	D
	- - -	- - -	- - -	- - -	- - -
Phase 1	0	0	0	0	0.0
Phase 2	20	0	0	0	0.0
Phase 3	0	0	0	0	0.0
Phase 4	20	0	0	0	0.0
Phase 5	0	0	0	0	0.0
Phase 6	20	0	0	0	0.0
Phase 7	0	0	0	0	0.0
Phase 8	20	0	0	0	0.0
Max Initial					
Alternate Walk					
Alternate FDW					
Alternate Initial					
Alternate Extension					

Alternate Timing <C+0+F=1>

	E
RR-1 Delay	0
RR-1 Clear	0
EV-A Delay	0
EV-A Clear	10
EV-B Delay	0
EV-B Clear	10
EV-C Delay	0
EV-C Clear	10
EV-D Delay	0
EV-D Clear	10
RR-2 Delay	0
RR-2 Clear	0
View EV Delay	- - -
View EV Clear	- - -
View RR Delay	- - -
View RR Clear	- - -

Preempt Timing

Row		F	Row
0	Permit	12___6_8	0
1	Red Lock	_____	1
2	Yellow Lock	_____	2
3	Min Recall	_____	3
4	Ped Recall	_____	4
5	*View Set Peds*	- - - - -	5
6	Rest In Walk	_____	6
7	Red Rest	_____	7
8	Dual Entry	_2___6__	8
9	Max Recall	_____	9
A	Soft Recall	_____8	A
B	Max 2	_____	B
C	Cond. Service	_____	C
D	Man Cntrl Calls	_____	D
E	Yellow Start	_____	E
F	First Phases	_____8	F

Phase Functions <C+0+F=1>

Overlap Assignments <C+0+E=29>

Row	Column Numbers ---->	Overlap 1	2	3	4	5	6	7	8
	Overlap Name ---->								
0	Load Switch Number	0	0	0	0	0	0	0	0
1	Veh Set 1 - Phases								
2	Veh Set 2 - Phases								
3	Veh Set 3 - Phases								
4	Neg Veh Phases								
5	Neg Ped Phases								
6	Green Omit Phases								
7	Green Clear Omit Phs.								
8									
9									
A									
B									
C									
D	Green Clear	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
E	Yellow Change	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
F	Red Clear	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

E Key = F+9+E=1, turn off set to =0

Extra 1 Flags
1 = TBC Type 1
2 = NEMA Ext. Coord
3 = Auto Daylight Savings
4 = Solid FDW on EV
5 = Extended Status
6 = International Ped
7 = Flash - Clear Outputs
8 = Split Ring

Extra 2 Flags
1 = AWB During Initial
2 = RV2 FYA Enable
3 = Disable Min Walk
4 = QuicNet/4 System
5 = Ignore P/P on EV
6 = Police Adv hold in FDW
7 = Central PE Enable
8 = Flash GRN before YEL

Row		C	Row
0	EV-A	0	0
1	EV-B	0	1
2	EV-C	0	2
3	EV-D	0	3
4	RR-1 *	- - -	4
5	RR-2 *	- - -	5
6	SE-1	0	6
7	SE-2	0	7

Preempt Priority <C+0+E=125>
(* RR-1 is always Highest, and RR-2 is always Second Highest)

Configuration <C+0+E=125>

Row	Column Numbers ---->	E
0	Exclusive Phases	
1	RR-1 Clear Phases	
2	RR-2 Clear Phases	
3	RR-2 Limited Service	
4	Prot / Perm Phases	
5	Flash to PE Circuits	
6	Flash Entry Phases	
7	Disable Yellow Range	
8	Disable Ovp Yel Range	
9	Overlap Yellow Flash	
A	EV-A Phases	2
B	EV-B Phases	
C	EV-C Phases	1 6
D	EV-D Phases	8
E	Extra 1 Config. Bits	3
F	IC Select (Interconnect)	

Configuration <C+0+E=125>

	F
Ext. Permit 1 Phases	
Ext. Permit 2 Phases	
Exclusive Ped Assign	
Preempt Non-Lock	
Ped for 2P Output	2
Ped for 6P Output	
Ped for 4P Output	
Ped for 8P Output	
Yellow Flash Phases	
Low Priority A Phases	
Low Priority B Phases	
Low Priority C Phases	
Low Priority D Phases	
Restricted Phases	
Extra 2 Config. Bits	3

Specials <C+0+F=2>

	F
Fast Green Flash Phase	
Green Flash Phases	
Flashing Walk Phases	
Guaranteed Passage	
Simultaneous Gap Term	
Sequential Timing	
Advance Walk Phases	
Delay Walk Phases	
External Recall	
Start-up Overlap Green	
Max Extension	
Inhibit Ped Reservice	
Semi-Actuated	
Start-up Overlap Yellow	
Start-up Vehicle Calls	12 6 8
Start-up Ped Calls	

Flash to PE & PE Non-Lock
1 = EV A 5 = RR 1
2 = EV B 6 = RR 2
3 = EV C 7 = SE 1
4 = EV D 8 = SE 2

IC Select Flags
1 =
2 = Modem
3 = 7-Wire Slave
4 = Flash / Free
5 =
6 = Simplex Master
7 = 7-Wire Master
8 = Offset Interrupter

Row		2	Row
0			0
1	Phase 1	10	1
2	Phase 2	10	2
3	Phase 3	10	3
4	Phase 4	10	4
5	Phase 5	10	5
6	Phase 6	10	6
7	Phase 7	10	7
8	Phase 8	10	8

Coordination Transition Minimums <C+0+C=5>

INTERSECTION: Betty Drv x Rd 63

Coord Extra
1 = Programmed WALK Time for Sync Phases
2 = Always Terminate Sync Phase Peds

Row	Column Numbers ---->	Plan 1	2	3	4	5	6	7	8	9	Row
	Plan Name ---->										
0	Cycle Length	100	100	100	100	100	100	100	100	100	0
1	Phase 1 - ForceOff	55	55	55	55	55	55	55	55	55	1
2	Phase 2 - ForceOff	0	0	0	0	0	0	0	0	0	2
3	Phase 3 - ForceOff	20	20	20	20	20	20	20	20	20	3
4	Phase 4 - ForceOff	40	40	40	40	40	40	40	40	40	4
5	Phase 5 - ForceOff	55	55	55	55	55	55	55	55	55	5
6	Phase 6 - ForceOff	0	0	0	0	0	0	0	0	0	6
7	Phase 7 - ForceOff	20	20	20	20	20	20	20	20	20	7
8	Phase 8 - ForceOff	40	40	40	40	40	40	40	40	40	8
9	Ring Offset	0	0	0	0	0	0	0	0	0	9
A	Offset 1	0	0	0	0	0	0	0	0	0	A
B	Offset 2	0	0	0	0	0	0	0	0	0	B
C	Offset 3	0	0	0	0	0	0	0	0	0	C
D	Perm 1 - End	15	15	15	15	15	15	15	15	15	D
E	Hold Release	255	255	255	255	255	255	255	255	255	E
F	Zone Offset	0	0	0	0	0	0	0	0	0	F

Row		E	Row
			0
1	Plan 1 - Sync	_2___6__	1
2	Plan 2 - Sync	_2___6__	2
3	Plan 3 - Sync	_2___6__	3
4	Plan 4 - Sync	_2___6__	4
5	Plan 5 - Sync	_2___6__	5
6	Plan 6 - Sync	_2___6__	6
7	Plan 7 - Sync	_2___6__	7
8	Plan 8 - Sync	_2___6__	8
9	Plan 9 - Sync	_2___6__	9
A	NEMA Sync	_____	A
B	NEMA Hold	_____	B
C			C
D			D
E	Coord Extra	_____	E
F			F

Coordination - Bank 1 <C+0+C=1>

Sync Phases <C+0+C=1>

Row		1	2	3	4	5	6	7	8	9	Row
0	Ped Adjustment	0	0	0	0	0	0	0	0	0	0
1	Perm 2 - Start	0	0	0	0	0	0	0	0	0	1
2	Perm 2 - End	0	0	0	0	0	0	0	0	0	2
3	Perm 3 - Start	0	0	0	0	0	0	0	0	0	3
4	Perm 3 - End	0	0	0	0	0	0	0	0	0	4
5	Reservice Time	0	0	0	0	0	0	0	0	0	5
6	Reservice Phases	_____	_____	_____	_____	_____	_____	_____	_____	_____	6
7											7
8	Pretimed Phases	_____	_____	_____	_____	_____	_____	_____	_____	_____	8
9	Max Recall	_____	_____	_____	_____	_____	_____	_____	_____	_____	9
A	Perm 1 Veh Phase	12345678	12345678	12345678	12345678	12345678	12345678	12345678	12345678	12345678	A
B	Perm 1 Ped Phase	12345678	12345678	12345678	12345678	12345678	12345678	12345678	12345678	12345678	B
C	Perm 2 Veh Phase	_____	_____	_____	_____	_____	_____	_____	_____	_____	C
D	Perm 2 Ped Phase	_____	_____	_____	_____	_____	_____	_____	_____	_____	D
E	Perm 3 Veh Phase	_____	_____	_____	_____	_____	_____	_____	_____	_____	E
F	Perm 3 Ped Phase	_____	_____	_____	_____	_____	_____	_____	_____	_____	F

Row		F	Row
0	Free Lag	_2_4_6_8	0
1	Plan 1 - Lag	_2_4_6_8	1
2	Plan 2 - Lag	_2_4_6_8	2
3	Plan 3 - Lag	_2_4_6_8	3
4	Plan 4 - Lag	_2_4_6_8	4
5	Plan 5 - Lag	_2_4_6_8	5
6	Plan 6 - Lag	_2_4_6_8	6
7	Plan 7 - Lag	_2_4_6_8	7
8	Plan 8 - Lag	_2_4_6_8	8
9	Plan 9 - Lag	_2_4_6_8	9
A	External Lag	_____	A
B			B
C			C
D			D
E			E
F			F

Coordination - Bank 2 <C+0+C=2>

Lag Phases <C+0+C=1>

E Key = F+9+E=1, turn off set to =0

Row	Column 9		Column A		Column B		Column C		Column D		Column E		Column F		Row
0	Spec. Funct. 1	0	NOT-3	0	Max 2	0	Pretimed	0	Set Monday	0	Dial 2 (7-Wire)	0	Sim Term	0	0
1	Spec. Funct. 2	0	NOT-4	0	System Det 1	0	Plan 1	0	Ext. Perm 1	0	Dial 3 (7-Wire)	0	EV-A	71	1
2	Spec. Funct. 3	0	OR-4 (a)	0	System Det 2	0	Plan 2	0	Ext. Perm 2	0	Offset 1 (7-Wire)	0	EV-B	72	2
3	Spec. Funct. 4	0	OR-4 (b)	0	System Det 3	0	Plan 3	0	Gate Down	0	Offset 2 (7-Wire)	0	EV-C	73	3
4	NAND-3 (a)	0	OR-5 (a)	0	System Det 4	0	Plan 4	0	Set Clock	0	Offset 3 (7-Wire)	0	EV-D	74	4
5	NAND-3 (b)	0	OR-5 (b)	0	System Det 5	0	Plan 5	0	Stop Time	82	Free (7-Wire)	0	RR-1	51	5
6	NAND-4 (a)	0	OR-6 (a)	0	System Det 6	0	Plan 6	0	Flash Sense	81	Flash (7-Wire)	0	RR-2	52	6
7	NAND-4 (b)	0	OR-6 (b)	0	System Det 7	0	Plan 7	0	Manual Enable	0	Excl. Ped Omit	0	Spec. Event 1	0	7
8	OR-7 (a)	0	Fig 3 Diamond	0	System Det 8	0	Plan 8	0	Man. Advance	0	NOT-1	0	Spec. Event 2	0	8
9	OR-7 (b)	0	Fig 4 Diamond	0	Max Inhibit (nema)	0	Plan 9	0	External Alarm	0	NOT-2	0	External Lag	0	9
A	OR-7 (c)	0	AND-4 (a)	0	Force A (nema)	0	DELAY-A	0	Phase Bank 2	0	OR-1 (a)	0	AND-1 (a)	0	A
B	OR-7 (d)	0	AND-4 (b)	0	Force B (nema)	0	DELAY-B	0	Phase Bank 3	0	OR-1 (b)	0	AND-1 (b)	0	B
C	OR-8 (a)	0	NAND-1 (a)	0	C.N.A. (nema)	0	DELAY-C	0	Overlap Set 2	0	OR-2 (a)	0	AND-2 (a)	0	C
D	OR-8 (b)	0	NAND-1 (b)	0	Hold (nema)	0	DELAY-D	0	Overlap Set 3	0	OR-2 (b)	0	AND-2 (b)	0	D
E	OR-8 (c)	0	NAND-2 (a)	0	Max Recall	0	DELAY-E	0	Detector Set 2	0	OR-3 (a)	0	AND-3 (a)	0	E
F	OR-8 (d)	0	NAND-2 (b)	0	Min Recall	0	DELAY-F	0	Detector Set 3	0	OR-3 (b)	0	AND-3 (b)	0	F

Assignable Inputs <C+0+E=126>

Row	Column 9		Column A		Column B		Column C		Column D		Column E		Column F		Row
0	Phase ON - 1	0	Preempt Fail	0	Flasher 0	0	Free	0	NOT-1	0	TOD Out 1	0	Dial 2 (7-Wire)	0	0
1	Phase ON - 2	0	Sp Evnt Out 1	0	Flasher 1	0	Plan 1	0	OR-1	0	TOD Out 2	0	Dial 3 (7-Wire)	0	1
2	Phase ON - 3	0	Sp Evnt Out 2	0	Fast Flasher	0	Plan 2	0	OR-2	0	TOD Out 3	0	Offset 1 (7-Wire)	0	2
3	Phase ON - 4	0	Sp Evnt Out 3	0	Fig 3 Diamond	0	Plan 3	0	OR-3	0	TOD Out 4	0	Offset 2 (7-Wire)	0	3
4	Phase ON - 5	0	Sp Evnt Out 4	0	Fig 4 Diamond	0	Plan 4	0	AND-1	0	TOD Out 5	0	Offset 3 (7-Wire)	0	4
5	Phase ON - 6	0	Sp Evnt Out 5	0			Plan 5	0	AND-2	0	TOD Out 6	0	Free (7-Wire)	0	5
6	Phase ON - 7	0	Sp Evnt Out 6	0			Plan 6	0	AND-3	0	TOD Out 7	0	Flash (7-Wire)	0	6
7	Phase ON - 8	0	Sp Evnt Out 7	0			Plan 7	0	NOT-2	0	TOD Out 8	0	Preempt	0	7
8	Ph. Check - 1	0	Sp Evnt Out 8	0	NOT-3	0	Plan 8	0	EV-A	0	Adv. Warn - 1	0	Low Priority A	0	8
9	Ph. Check - 2	0			NOT-4	0	Plan 9	0	EV-B	0	Adv. Warn - 2	0	Low Priority B	0	9
A	Ph. Check - 3	0	Detector Fail	0	OR-4	0	Spec. Funct. 3	0	EV-C	0	DELAY-A	0	Low Priority C	0	A
B	Ph. Check - 4	0	Spec. Funct. 1	0	OR-5	0	Spec. Funct. 4	0	EV-D	0	DELAY-B	0	Low Priority D	0	B
C	Ph. Check - 5	0	Spec. Funct. 2	0	OR-6	0	NAND-3	0	RR-1	0	DELAY-C	0			C
D	Ph. Check - 6	0	Central Control	0	AND-4	0	NAND-4	0	RR-2	0	DELAY-D	0			D
E	Ph. Check - 7	0	Excl. Ped DW	0	NAND-1	0	OR-7	0	Spec. Event 1	0	DELAY-E	0			E
F	Ph. Check - 8	0	Excl. Ped WK	0	NAND-2	0	OR-8	0	Spec. Event 2	0	DELAY-F	0			F

Assignable Outputs <C+0+E=127>

Phase Timing - Bank 2 <C+0+F=2>

Row	Column Numbers ---->	Phase 1	2	3	4	5	6	7	8
	Phase Names ----->								
0	Ped Walk	0	7	0	7	0	7	0	7
1	Ped FDW	0	15	0	15	0	15	0	15
2	Min Green	4	7	4	4	4	7	4	4
3	Type 3 Disconnect	0	20	0	20	0	20	0	20
4	Added per Vehicle	0.0	2.0	0.0	2.0	0.0	2.0	0.0	2.0
5	Veh Extension	2.0	4.0	2.0	2.5	2.0	4.0	2.0	2.5
6	Max Gap	3.0	6.0	3.0	3.0	3.0	6.0	3.0	3.0
7	Min Gap	0.5	2.0	0.5	1.5	0.5	2.0	0.5	1.5
8	Max Limit	20	30	20	25	20	30	20	25
9	Max Limit 2	30	50	30	40	30	50	30	40
A	Adv. / Delay Walk	0	0	0	0	0	0	0	0
B	PE Min Ped FDW	7	7	7	7	7	7	7	7
C	Cond Serv Check	10	10	10	10	10	10	10	10
D	Reduce Every	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
E	Yellow Change	3.0	4.0	3.0	3.0	3.0	4.0	3.0	3.0
F	Red Clear	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0

Alternate Timing

	9	A	B	C	D
	- - -	- - -	- - -	- - -	- - -
Phase 1	0	0	0	0	0.0
Phase 2	0	0	0	0	0.0
Phase 3	0	0	0	0	0.0
Phase 4	0	0	0	0	0.0
Phase 5	0	0	0	0	0.0
Phase 6	0	0	0	0	0.0
Phase 7	0	0	0	0	0.0
Phase 8	0	0	0	0	0.0

Max Initial
Alternate Walk
Alternate FDW
Alternate Initial
Alternate Extension

Transition Type
0.X = Shortway
1.X = Lengthen
X.1 thru X.4 = Number of cycles when lengthing

Transition Type	0.3	<C/5+1+9>

TBC Transition

Lag Hold Phases		<C/5+1+A>

Coordinated Lag Hold Phases

Sync Output Time	0.0	<C/5+1+C>

7-Wire Master

Daylight Savings Date
If set to all zeros, standard dates will be used.

Begin Month	3	<C/5+2+A>
Begin Week	2	<C/5+2+B>
End Month	11	<C/5+2+C>
End Week	1	<C/5+2+D>

Daylight Savings Time

Phase Timing - Bank 3 <C+0+F=3>

Row		1	2	3	4	5	6	7	8
0	Ped Walk	0	7	0	7	0	7	0	7
1	Ped FDW	0	15	0	15	0	15	0	15
2	Min Green	4	7	4	4	4	7	4	4
3	Type 3 Disconnect	0	20	0	20	0	20	0	20
4	Added per Vehicle	0.0	2.0	0.0	2.0	0.0	2.0	0.0	2.0
5	Veh Extension	2.0	4.0	2.0	2.5	2.0	4.0	2.0	2.5
6	Max Gap	3.0	6.0	3.0	3.0	3.0	6.0	3.0	3.0
7	Min Gap	0.5	2.0	0.5	1.5	0.5	2.0	0.5	1.5
8	Max Limit	20	30	20	25	20	30	20	25
9	Max Limit 2	30	50	30	40	30	50	30	40
A	Adv. / Delay Walk	0	0	0	0	0	0	0	0
B	PE Min Ped FDW	7	7	7	7	7	7	7	7
C	Cond Serv Check	10	10	10	10	10	10	10	10
D	Reduce Every	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
E	Yellow Change	3.0	4.0	3.0	3.0	3.0	4.0	3.0	3.0
F	Red Clear	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0

Alternate Timing

	9	A	B	C	D
	- - -	- - -	- - -	- - -	- - -
Phase 1	0	0	0	0	0.0
Phase 2	0	0	0	0	0.0
Phase 3	0	0	0	0	0.0
Phase 4	0	0	0	0	0.0
Phase 5	0	0	0	0	0.0
Phase 6	0	0	0	0	0.0
Phase 7	0	0	0	0	0.0
Phase 8	0	0	0	0	0.0

Max Initial
Alternate Walk
Alternate FDW
Alternate Initial
Alternate Extension

Time B4 Yellow	0.0	<F/1+C+E>
Phase Number	0	<F/1+C+F>

Advance Warning Beacon - Sign 1

Time B4 Yellow	0.0	<F/1+D+E>
Phase Number	0	<F/1+D+F>

Advance Warning Beacon - Sign 2

Long Failure	0.7	<F/1+0+6>
Short Failure	0.7	<F/1+0+7>

Power Cycle Correction (Default = 0.7)

Column Numbers ---->	0	1	2	3	1	3
	C1 Pin					Carry-
Row	Detector Name	Number	Attributes	Phase(s)	Assign	Delay	over
0	I-2U	39	45_7_	2	123 8	0.0	0.0
1	J-2U (SB-FAR)	40	45	6	123 8	0.0	0.0
2	I-6U	41	45_7_	4	123 8	0.0	0.0
3	J-6U (WB-FAR)	42	45	8	123 8	0.0	0.0
4	I-2L (NB-FAR)	43	45	2	123 8	0.0	0.0
5	J-2L	44	45_7_	6	123 8	0.0	0.0
6	I-6L	45	45_7_	4	123 8	0.0	0.0
7	J-6L	46	45_7_	8	123 8	0.0	0.0
8	I-4 (NB-CT)	47	67_	2	123 8	10.0	2.0
9	J-4 (SB-CT)	48	67_	6	123 8	5.0	2.0
A	I-8	49	67_	4	123 8	0.0	0.0
B	J-8 (WBL-CT)	50	67_	8	123 8	0.0	2.0
C	J-1	55	45_7_	5	123 8	0.0	0.0
D	I-1 (SBL-CT)	56	45_7_	1	123 8	0.0	0.0
E	J-5	57	45_7_	7_	123 8	0.0	0.0
F	I-5	58	45_7_	3	123 8	0.0	0.0

	4	5	6	7	2	4
	C1 Pin					Carry-
Row	Detector Name	Number	Attributes	Phase(s)	Assign	Delay	over
0	J-9U	59	45_7_	5	123 8	0.0	0.0
1	I-9U (SBL-NR)	60	45_7_	1	123 8	0.0	0.0
2	J-9L	61	45_7_	7_	123 8	0.0	0.0
3	I-9L	62	45_7_	3	123 8	0.0	0.0
4	I-3U (NB-NR)	63	67_	2	123 8	10.0	2.0
5	J-3U (SB-NR)	64	67_	6	123 8	5.0	2.0
6	I-7U	65	45_7_	4	123 8	0.0	0.0
7	J-7U (WB-NR)	66	67_	8	123 8	0.0	2.0
8	I-12U (NB-PED)	67	2	2	123 8	0.0	0.0
9	I-13U	68	2	6	123 8	0.0	0.0
A	I-12L	69	2	4	123 8	0.0	0.0
B	I-13L	70	2	8	123 8	0.0	0.0
C	I-3L	76	45_7_	2	123 8	0.0	0.0
D	J-3L	77	45_7_	6	123 8	0.0	0.0
E	I-7L	78	45_7_	4	123 8	0.0	0.0
F	J-7L (WB-RT)	79	67_	8	123 8	0.0	2.0

Detector Assignments <C+0+E=126> <C+0+D=0>

Detector Attributes
1 = Full Time Delay
2 = Ped Call
3 =
4 = Count
5 = Extension
6 = Type 3
7 = Calling
8 = Alternate

Det. Assignments
1 = Det. Set 1
2 = Det. Set 2
3 = Det. Set 3
4 =
5 =
6 = Failure - Min Recall
7 = Failure - Max Recall
8 = Report on Failure

E Key = F+9+E=1, turn off set to =0

	Ped / Phase / Overlap								
Column Numbers ---->	1	2	3	4	5	6	7	8	Row
Walk	0	0	0	0	0	0	0	0	0
Don't Walk	0	0	0	0	0	0	0	0	1
Phase Green	0	0	0	0	0	0	0	0	2
Phase Yellow	0	0	0	0	0	0	0	0	3
Phase Red	0	0	0	0	0	0	0	0	4
Overlap Green	0	0	0	0	0	0	0	0	5
Overlap Yellow	0	0	0	0	0	0	0	0	6
Overlap Red	0	0	0	0	0	0	0	0	7

Redirect Phase Outputs <C+0+E=127>

Cabinet Type	0	<E/125+D+0>

Enable Redirection
(Enable Redirection = 30)

Max OFF (minutes)	20	<D/0+0+1>
Max ON (minutes)	7	<D/0+0+2>

Detector Failure Monitor

	D	Row
		0
Output Port 1		1
Output Port 2		2
Output Port 3		3
Output Port 4		4
Output Port 5		5
Output Port 6		6
Output Port 7		7

Dimming <C+0+E=125>

	D
Number of Digits	0
1 st Digit	0
2 ed Digit	0
3 ed Digit	0
4 th Digit	0
5 th Digit	0
6 th Digit	0
7 th Digit	0
8 th Digit	0
9 th Digit	0
10 th Digit	0
11 th Digit	0
12 th Digit	0
13 th Digit	0
14 th Digit	0
15 th Digit	0

<C+0+C=5>

Dial-Back Telephone Number

Disable Alarms
1 = Stop Time
2 = Flash Sense
3 = Keyboard Entry
4 = Manual Plan
5 = Police Control
6 = External Alarm
7 = Detector Failure
8 =

	B	Row
DELAY-A	0	A
DELAY-B	0	B
DELAY-C	0	C
DELAY-D	0	D
DELAY-E	0	E
DELAY-F	0	F

Delay Logic Times
<C+0+D=0> (seconds)

Omit Alarm		<C/5+F+0>

Disable Alarm Reporting

Time	0	<C/5+C+0>

Redial Time (minutes)
(View Redial Timer at E/2+D+6)

Row	Time	Plan	Offset	Day of Week
0	00 : 00	0	0	_____
1	00 : 00	0	0	_____
2	00 : 00	0	0	_____
3	00 : 00	0	0	_____
4	00 : 00	0	0	_____
5	00 : 00	0	0	_____
6	00 : 00	0	0	_____
7	00 : 00	0	0	_____
8	00 : 00	0	0	_____
9	00 : 00	0	0	_____
A	00 : 00	0	0	_____
B	00 : 00	0	0	_____
C	00 : 00	0	0	_____
D	00 : 00	0	0	_____
E	00 : 00	0	0	_____
F	00 : 00	0	0	_____

TOD Coordination <C+0+9=0.1>
(Bank 1)

Time	Funct.	Day of Week	Column 4 Phases/Bits
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____

TOD Function <C+0+7=0.1> <C+0+E=27>

Day	Year	Month	Holiday Type
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____

Holiday Dates <C+0+8=1.1>
(Bank 1)

Time	Plan	Offset	Holiday Type
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____

Holiday Events <C+0+9=1.1>
(Bank 1)

T.O.D. Functions
0 =
1 = Red Lock
2 = Yellow Lock
3 = Veh Min Recall
4 = Ped Recall
5 =
6 = Rest In Walk
7 = Red Rest
8 = Double Entry
9 = Veh Max Recall
A = Veh Soft Recall
B = Maximum 2
C = Conditional Service
D = Free Lag Phases
E = Bit 1 - Local Override
Bit 4 - Disable Detector OFF Monitor
Bit 5 - Disable Low Priority Preempt
Bit 6 - Disable FYA
Bit 7 - Detector Count Monitor
Bit 8 - Real Time Split Monitor
F = Output Bits 1 thru 8

Plan Select
1 thru 9 = Coordination Plan 1 thru 9
14 or E = Free
15 or F = Flash

Offset Select
A = Offset A
B = Offset B
C = Offset C

Month Select
1 = January
2 = February
3 = March
4 = April
5 = May
6 = June
7 = July
8 = August
9 = September
A = October
B = November
C = December

Row	Time	Plan	Offset	Day of Week
0	00 : 00	0	0	_____
1	00 : 00	0	0	_____
2	00 : 00	0	0	_____
3	00 : 00	0	0	_____
4	00 : 00	0	0	_____
5	00 : 00	0	0	_____
6	00 : 00	0	0	_____
7	00 : 00	0	0	_____
8	00 : 00	0	0	_____
9	00 : 00	0	0	_____
A	00 : 00	0	0	_____
B	00 : 00	0	0	_____
C	00 : 00	0	0	_____
D	00 : 00	0	0	_____
E	00 : 00	0	0	_____
F	00 : 00	0	0	_____

TOD Coordination <C+0+9=0.2>
(Bank 2)

Time	Funct.	Holiday Type	Column 4 Phases/Bits
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____

Holiday TOD Function <C+0+7=0.2> <C+0+E=28>

Day	Year	Month	Holiday Type
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____

Holiday Dates <C+0+8=1.2>
(Bank 2)

Time	Plan	Offset	Holiday Type
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____

Holiday Events <C+0+9=1.2>
(Bank 2)

Row	6 Clear	7 Time	8 Ped Call	9 Hold	A Advance	B Force Off	C Vehicle Call	D Permit Phases	E Ped Omit	F Output
0		0								
1		0								
2		0								
3		0								
4		0								
5		0								
6		0								
7		0								
8		0								
9		0								
A		0								
B		0								
C		0								
D		0								
E		0								
F		0								

Special Event Schedule -- Table 1 <C+0+E=27>

Notes:

0 <E/27+5+F>
Limited Service Interval

Row	6 Clear	7 Time	8 Ped Call	9 Hold	A Advance	B Force Off	C Vehicle Call	D Permit Phases	E Ped Omit	F Output
0		0								
1		0								
2		0								
3		0								
4		0								
5		0								
6		0								
7		0								
8		0								
9		0								
A		0								
B		0								
C		0								
D		0								
E		0								
F		0								

Special Event Schedule -- Table 2 <C+0+E=28>

Notes:

0 <E/28+5+F>
Limited Service Interval

Min Time (seconds)	6	<F/1+0+8>

Min Green Before PE Force Off

Max Time (minutes)	1	<F/1+0+9>

Max Preempt Time Before Failure

Min Time (seconds)	0	<F/1+0+A>

Min Time Between Same Preempts
(Does Not Apply To Railroad Preempt)

Low Pri. Channel	_____	<E/125+C+8>

Disable Low Priority Channel

Low Priority
1 = Channel A
2 = Channel B
3 = Channel C
4 = Channel D

Delay Time (seconds)	0	<F/1+A+D>

Bus Delay

Max Time (seconds)	0	<F/1+A+E>

Max Early Green

Max Time (seconds)	0	<F/1+A+F>

Max Green Extension

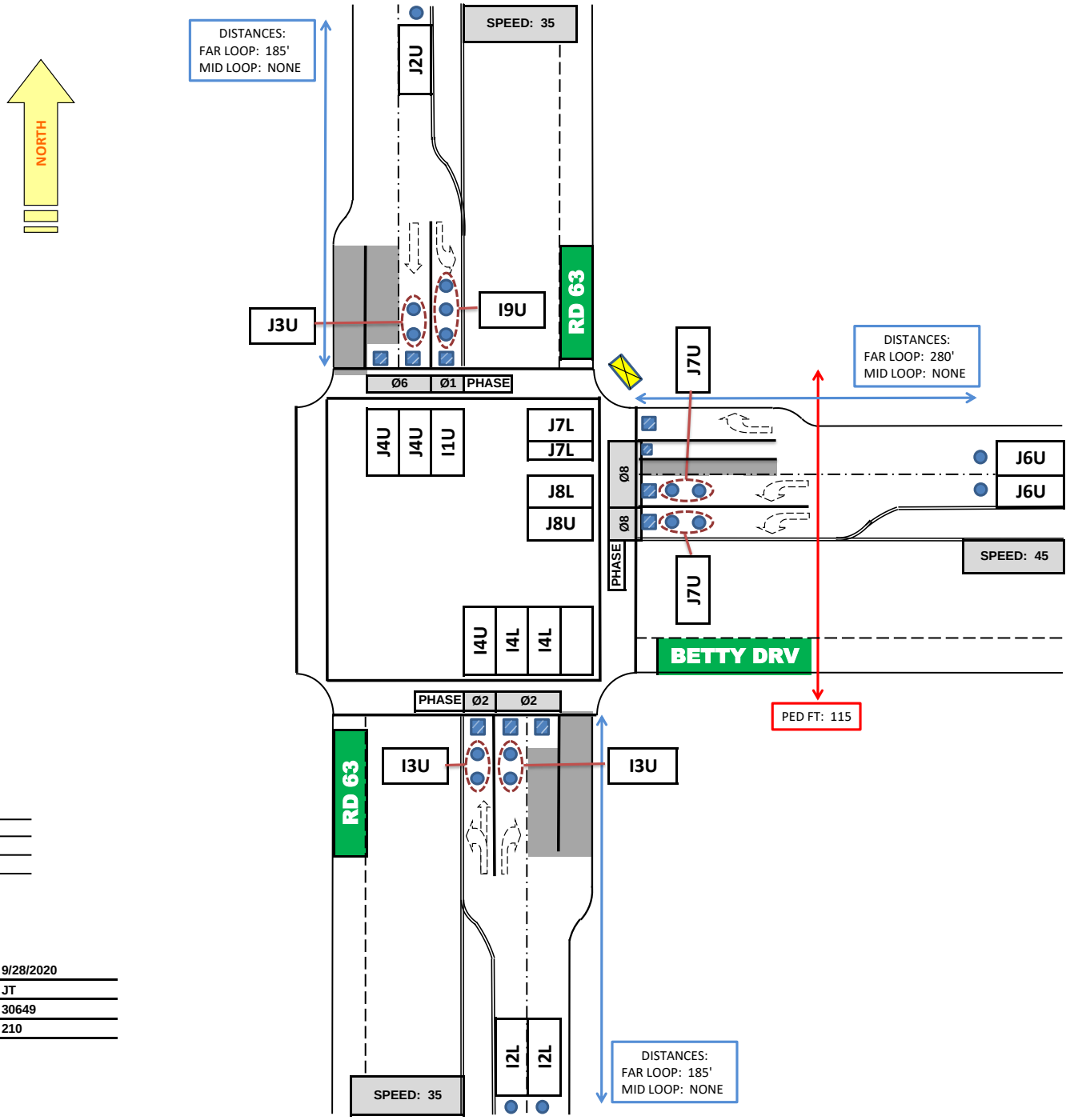
Row	Time	Headway	Direction	Day of Week
0	00 : 00	0	0	_____
1	00 : 00	0	0	_____
2	00 : 00	0	0	_____
3	00 : 00	0	0	_____
4	00 : 00	0	0	_____
5	00 : 00	0	0	_____
6	00 : 00	0	0	_____
7	00 : 00	0	0	_____
8	00 : 00	0	0	_____
9	00 : 00	0	0	_____
A	00 : 00	0	0	_____
B	00 : 00	0	0	_____
C	00 : 00	0	0	_____
D	00 : 00	0	0	_____
E	00 : 00	0	0	_____
F	00 : 00	0	0	_____

Headway <C+0+9=2.1>

Headway Time
(minutes)
1 thru 9 = 1 thru 9
A = 10
B = 11
C = 12
D = 13
E = 14
F = 15

Low Priority Preemption (Bus Priority)

Only available with *Program 233RV2.B* (and above)
Note: Also see "Time of Day Functions", Function E, Bit 5 (Disable Low Priority)



NBL: NONE
EBL: NONE
SBL: 250'
WBL: 470'

DATE: 9/28/2020
MAPPED BY: JT
SERIAL NUMBER: 30649
M.M.U. TYPE: 210

Detector Layout for the Intersection of: BETTY DRV & RD 63

Group Assignment: **NONE**
Field Master Assignment: **NONE**
System Reference Number: **63**

N/S Street Name: **Rd 63**
E/W Street Name: **Ave 308**
Cabinet Location: **NEC**

Last Database Change: **6/12/2022 12:06**

Change Record					
Change	By	Date	Change	By	Date

Notes: **10/01/2020 - Updated timing calculations, FDW, detector timing & attributes, and set First Phases Ø2 & Ø6 with a 6 second All Red-Start. (JT)**
10/03/2020 - Updated timing calculations, FDW, yellow times, attributes/timing, and set phases Ø2 & Ø6 to Soft Recall. (JT)
06/12/2022 - Updated timing calculations & Yellow Times. (JT)

Manual Plan
0 = Automatic
1-9 = Plan 1-9
14 = Free
15 = Flash

Manual Offset
0 = Automatic
1 = Offset A
2 = Offset B
3 = Offset C

Drop Number	**1**	<C/0+0+0>
Zone Number	**1**	<C/0+0+1>
Area Number	**1**	<C/0+0+2>
Area Address	**63**	<C/0+0+3>
QuicNet Channel	**COM1:**	(QuicNet)

Communication Addresses

Manual Plan	**14**	<C/0+A+1>
Manual Offset		<C/0+B+1>

Manual Selection

Flash Start	**0**	<F/1+0+E>
Red Revert	**3.0**	<F/1+0+F>
All Red Start	**6.0**	<F/1+C+0>

Start / Revert Times

Exclusive Walk	**0**	<F/1+0+0>
Exclusive FDW	**0**	<F/1+0+1>
All Red Clear	**0.0**	<F/1+0+2>

Exclusive Ped Phase
(Outputs specified in Assignable Outputs at E/127+A+E & F)

Row	Column Numbers ---->	Phase 1	2	3	4	5	6	7	8
	Phase Names ---->	SBL	NB	WBL	EB	NBL	SB	EBL	WB
0	Ped Walk	0	7	0	7	0	0	0	7
1	Ped FDW	0	26	0	33	0	0	0	38
2	Min Green	5	8	5	8	5	8	5	8
3	Type 3 Disconnect	0	20	0	20	0	20	0	20
4	Added per Vehicle	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	Veh Extension	3.0	5.4	2.0	2.8	2.0	5.0	3.0	5.0
6	Max Gap	3.0	7.7	2.0	3.5	2.0	7.1	3.0	7.8
7	Min Gap	3.0	2.0	2.0	2.0	2.0	2.0	3.0	2.0
8	Max Limit	25	30	20	25	25	30	20	25
9	Max Limit 2	17	20	12	15	17	20	12	15
A	Adv. / Delay Walk	0	0	0	0	0	0	0	0
B	PE Min Ped FDW	0	23	0	29	0	0	0	34
C	Cond Serv Check	0	0	0	0	0	0	0	0
D	Reduce Every	0.0	0.3	0.0	1.1	0.0	0.4	0.0	0.3
E	Yellow Change	3.7	4.8	3.7	5.5	4.4	4.1	5.2	5.5
F	Red Clear	1.0	1.0	1.0	2.0	1.0	1.0	2.0	2.0

Phase Timing - Bank 1 <C+0+F=1>

	9	A	B	C	D
	- - -	- - -	- - -	- - -	- - -
Phase 1	0	0	0	0	0.0
Phase 2	20	0	0	0	0.0
Phase 3	0	0	0	0	0.0
Phase 4	20	0	0	0	0.0
Phase 5	0	0	0	0	0.0
Phase 6	20	0	0	0	0.0
Phase 7	0	0	0	0	0.0
Phase 8	20	0	0	0	0.0
Max Initial					
Alternate Walk					
Alternate FDW					
Alternate Initial					
Alternate Extension					

Alternate Timing <C+0+F=1>

	E
RR-1 Delay	0
RR-1 Clear	0
EV-A Delay	0
EV-A Clear	10
EV-B Delay	0
EV-B Clear	10
EV-C Delay	0
EV-C Clear	10
EV-D Delay	0
EV-D Clear	10
RR-2 Delay	0
RR-2 Clear	0
View EV Delay	- - -
View EV Clear	- - -
View RR Delay	- - -
View RR Clear	- - -

Preempt Timing

Row		F
0	Permit	**12345678**
1	Red Lock	_____
2	Yellow Lock	_____
3	Min Recall	_____
4	Ped Recall	_____
5	*View Set Peds*	**- - - - -**
6	Rest In Walk	_____
7	Red Rest	_____
8	Dual Entry	**_2_4_6_8**
9	Max Recall	_____
A	Soft Recall	**_2___6__**
B	Max 2	_____
C	Cond. Service	_____
D	Man Cntrl Calls	_____
E	Yellow Start	_____
F	First Phases	**_2___6__**

Phase Functions <C+0+F=1>

Overlap Assignments <C+0+E=29>

Row	Column Numbers ---->	Overlap 1	2	3	4	5	6	7	8
0	Load Switch Number	0	0	0	0	0	0	0	0
1	Veh Set 1 - Phases								
2	Veh Set 2 - Phases								
3	Veh Set 3 - Phases								
4	Neg Veh Phases								
5	Neg Ped Phases								
6	Green Omit Phases								
7	Green Clear Omit Phs.								
8									
9									
A									
B									
C									
D	Green Clear	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
E	Yellow Change	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
F	Red Clear	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

E Key = F+9+E=1, turn off set to =0

Extra 1 Flags
1 = TBC Type 1
2 = NEMA Ext. Coord
3 = Auto Daylight Savings
4 = Solid FDW on EV
5 = Extended Status
6 = International Ped
7 = Flash - Clear Outputs
8 = Split Ring

Extra 2 Flags
1 = AWB During Initial
2 = RV2 FYA Enable
3 = Disable Min Walk
4 = QuicNet/4 System
5 = Ignore P/P on EV
6 = Police Adv hold in FDW
7 = Central PE Enable
8 = Flash GRN before YEL

Row		C	Row
0	EV-A	0	0
1	EV-B	0	1
2	EV-C	0	2
3	EV-D	0	3
4	RR-1 *	- - -	4
5	RR-2 *	- - -	5
6	SE-1	0	6
7	SE-2	0	7

Preempt Priority <C+0+E=125>
(* RR-1 is always Highest, and RR-2 is always Second Highest)

Configuration <C+0+E=125>

Row	Column Numbers ---->	E
0	Exclusive Phases	
1	RR-1 Clear Phases	
2	RR-2 Clear Phases	
3	RR-2 Limited Service	
4	Prot / Perm Phases	
5	Flash to PE Circuits	
6	Flash Entry Phases	
7	Disable Yellow Range	
8	Disable Ovp Yel Range	
9	Overlap Yellow Flash	
A	EV-A Phases	2 5
B	EV-B Phases	4 7
C	EV-C Phases	1 6
D	EV-D Phases	3 8
E	Extra 1 Config. Bits	3
F	IC Select (Interconnect)	

Configuration <C+0+E=125>

	F
Ext. Permit 1 Phases	
Ext. Permit 2 Phases	
Exclusive Ped Assign	
Preempt Non-Lock	
Ped for 2P Output	2
Ped for 6P Output	
Ped for 4P Output	4
Ped for 8P Output	8
Yellow Flash Phases	
Low Priority A Phases	
Low Priority B Phases	
Low Priority C Phases	
Low Priority D Phases	
Restricted Phases	
Extra 2 Config. Bits	3

Specials <C+0+F=2>

	F
Fast Green Flash Phase	
Green Flash Phases	
Flashing Walk Phases	
Guaranteed Passage	
Simultaneous Gap Term	
Sequential Timing	
Advance Walk Phases	
Delay Walk Phases	
External Recall	
Start-up Overlap Green	
Max Extension	
Inhibit Ped Reservice	
Semi-Actuated	
Start-up Overlap Yellow	
Start-up Vehicle Calls	12345678
Start-up Ped Calls	

Flash to PE & PE Non-Lock
1 = EV A 5 = RR 1
2 = EV B 6 = RR 2
3 = EV C 7 = SE 1
4 = EV D 8 = SE 2

IC Select Flags
1 =
2 = Modem
3 = 7-Wire Slave
4 = Flash / Free
5 =
6 = Simplex Master
7 = 7-Wire Master
8 = Offset Interrupter

Row		2	Row
0			0
1	Phase 1	10	1
2	Phase 2	10	2
3	Phase 3	10	3
4	Phase 4	10	4
5	Phase 5	10	5
6	Phase 6	10	6
7	Phase 7	10	7
8	Phase 8	10	8

Coordination Transition Minimums <C+0+C=5>

INTERSECTION: Ave 308 x Rd 63

Coord Extra
1 = Programmed WALK Time for Sync Phases
2 = Always Terminate Sync Phase Peds

Row	Column Numbers ---->	Plan 1	2	3	4	5	6	7	8	9	Row
	Plan Name ---->										
0	Cycle Length	100	100	100	100	100	100	100	100	100	0
1	Phase 1 - ForceOff	55	55	55	55	55	55	55	55	55	1
2	Phase 2 - ForceOff	0	0	0	0	0	0	0	0	0	2
3	Phase 3 - ForceOff	20	20	20	20	20	20	20	20	20	3
4	Phase 4 - ForceOff	40	40	40	40	40	40	40	40	40	4
5	Phase 5 - ForceOff	55	55	55	55	55	55	55	55	55	5
6	Phase 6 - ForceOff	0	0	0	0	0	0	0	0	0	6
7	Phase 7 - ForceOff	20	20	20	20	20	20	20	20	20	7
8	Phase 8 - ForceOff	40	40	40	40	40	40	40	40	40	8
9	Ring Offset	0	0	0	0	0	0	0	0	0	9
A	Offset 1	0	0	0	0	0	0	0	0	0	A
B	Offset 2	0	0	0	0	0	0	0	0	0	B
C	Offset 3	0	0	0	0	0	0	0	0	0	C
D	Perm 1 - End	15	15	15	15	15	15	15	15	15	D
E	Hold Release	255	255	255	255	255	255	255	255	255	E
F	Zone Offset	0	0	0	0	0	0	0	0	0	F

Row		E	Row
			0
	Plan 1 - Sync	_2___6__	1
	Plan 2 - Sync	_2___6__	2
	Plan 3 - Sync	_2___6__	3
	Plan 4 - Sync	_2___6__	4
	Plan 5 - Sync	_2___6__	5
	Plan 6 - Sync	_2___6__	6
	Plan 7 - Sync	_2___6__	7
	Plan 8 - Sync	_2___6__	8
	Plan 9 - Sync	_2___6__	9
	NEMA Sync	_____	A
	NEMA Hold	_____	B
			C
			D
	Coord Extra	_____	E
			F

Coordination - Bank 1 <C+0+C=1>

Row		1	2	3	4	5	6	7	8	9	Row
0	Ped Adjustment	0	0	0	0	0	0	0	0	0	0
1	Perm 2 - Start	0	0	0	0	0	0	0	0	0	1
2	Perm 2 - End	0	0	0	0	0	0	0	0	0	2
3	Perm 3 - Start	0	0	0	0	0	0	0	0	0	3
4	Perm 3 - End	0	0	0	0	0	0	0	0	0	4
5	Reservice Time	0	0	0	0	0	0	0	0	0	5
6	Reservice Phases	_____	_____	_____	_____	_____	_____	_____	_____	_____	6
7											7
8	Pretimed Phases	_____	_____	_____	_____	_____	_____	_____	_____	_____	8
9	Max Recall	_____	_____	_____	_____	_____	_____	_____	_____	_____	9
A	Perm 1 Veh Phase	12345678	12345678	12345678	12345678	12345678	12345678	12345678	12345678	12345678	A
B	Perm 1 Ped Phase	12345678	12345678	12345678	12345678	12345678	12345678	12345678	12345678	12345678	B
C	Perm 2 Veh Phase	_____	_____	_____	_____	_____	_____	_____	_____	_____	C
D	Perm 2 Ped Phase	_____	_____	_____	_____	_____	_____	_____	_____	_____	D
E	Perm 3 Veh Phase	_____	_____	_____	_____	_____	_____	_____	_____	_____	E
F	Perm 3 Ped Phase	_____	_____	_____	_____	_____	_____	_____	_____	_____	F

Coordination - Bank 2 <C+0+C=2>

Sync Phases <C+0+C=1>

Row		F	Row
0	Free Lag	_2_4_6_8	0
1	Plan 1 - Lag	_2_4_6_8	1
2	Plan 2 - Lag	_2_4_6_8	2
3	Plan 3 - Lag	_2_4_6_8	3
4	Plan 4 - Lag	_2_4_6_8	4
5	Plan 5 - Lag	_2_4_6_8	5
6	Plan 6 - Lag	_2_4_6_8	6
7	Plan 7 - Lag	_2_4_6_8	7
8	Plan 8 - Lag	_2_4_6_8	8
9	Plan 9 - Lag	_2_4_6_8	9
A	External Lag	_____	A
B			B
C			C
D			D
E			E
F			F

Lag Phases <C+0+C=1>

E Key = F+9+E=1, turn off set to =0

Row	Column 9		Column A		Column B		Column C		Column D		Column E		Column F		Row
0	Spec. Funct. 1	0	NOT-3	0	Max 2	0	Pretimed	0	Set Monday	0	Dial 2 (7-Wire)	0	Sim Term	0	0
1	Spec. Funct. 2	0	NOT-4	0	System Det 1	0	Plan 1	0	Ext. Perm 1	0	Dial 3 (7-Wire)	0	EV-A	71	1
2	Spec. Funct. 3	0	OR-4 (a)	0	System Det 2	0	Plan 2	0	Ext. Perm 2	0	Offset 1 (7-Wire)	0	EV-B	72	2
3	Spec. Funct. 4	0	OR-4 (b)	0	System Det 3	0	Plan 3	0	Gate Down	0	Offset 2 (7-Wire)	0	EV-C	73	3
4	NAND-3 (a)	0	OR-5 (a)	0	System Det 4	0	Plan 4	0	Set Clock	0	Offset 3 (7-Wire)	0	EV-D	74	4
5	NAND-3 (b)	0	OR-5 (b)	0	System Det 5	0	Plan 5	0	Stop Time	82	Free (7-Wire)	0	RR-1	51	5
6	NAND-4 (a)	0	OR-6 (a)	0	System Det 6	0	Plan 6	0	Flash Sense	81	Flash (7-Wire)	0	RR-2	52	6
7	NAND-4 (b)	0	OR-6 (b)	0	System Det 7	0	Plan 7	0	Manual Enable	0	Excl. Ped Omit	0	Spec. Event 1	0	7
8	OR-7 (a)	0	Fig 3 Diamond	0	System Det 8	0	Plan 8	0	Man. Advance	0	NOT-1	0	Spec. Event 2	0	8
9	OR-7 (b)	0	Fig 4 Diamond	0	Max Inhibit (nema)	0	Plan 9	0	External Alarm	0	NOT-2	0	External Lag	0	9
A	OR-7 (c)	0	AND-4 (a)	0	Force A (nema)	0	DELAY-A	0	Phase Bank 2	0	OR-1 (a)	0	AND-1 (a)	0	A
B	OR-7 (d)	0	AND-4 (b)	0	Force B (nema)	0	DELAY-B	0	Phase Bank 3	0	OR-1 (b)	0	AND-1 (b)	0	B
C	OR-8 (a)	0	NAND-1 (a)	0	C.N.A. (nema)	0	DELAY-C	0	Overlap Set 2	0	OR-2 (a)	0	AND-2 (a)	0	C
D	OR-8 (b)	0	NAND-1 (b)	0	Hold (nema)	0	DELAY-D	0	Overlap Set 3	0	OR-2 (b)	0	AND-2 (b)	0	D
E	OR-8 (c)	0	NAND-2 (a)	0	Max Recall	0	DELAY-E	0	Detector Set 2	0	OR-3 (a)	0	AND-3 (a)	0	E
F	OR-8 (d)	0	NAND-2 (b)	0	Min Recall	0	DELAY-F	0	Detector Set 3	0	OR-3 (b)	0	AND-3 (b)	0	F

Assignable Inputs <C+0+E=126>

Row	Column 9		Column A		Column B		Column C		Column D		Column E		Column F		Row
0	Phase ON - 1	0	Preempt Fail	0	Flasher 0	0	Free	0	NOT-1	0	TOD Out 1	0	Dial 2 (7-Wire)	0	0
1	Phase ON - 2	0	Sp Evnt Out 1	0	Flasher 1	0	Plan 1	0	OR-1	0	TOD Out 2	0	Dial 3 (7-Wire)	0	1
2	Phase ON - 3	0	Sp Evnt Out 2	0	Fast Flasher	0	Plan 2	0	OR-2	0	TOD Out 3	0	Offset 1 (7-Wire)	0	2
3	Phase ON - 4	0	Sp Evnt Out 3	0	Fig 3 Diamond	0	Plan 3	0	OR-3	0	TOD Out 4	0	Offset 2 (7-Wire)	0	3
4	Phase ON - 5	0	Sp Evnt Out 4	0	Fig 4 Diamond	0	Plan 4	0	AND-1	0	TOD Out 5	0	Offset 3 (7-Wire)	0	4
5	Phase ON - 6	0	Sp Evnt Out 5	0			Plan 5	0	AND-2	0	TOD Out 6	0	Free (7-Wire)	0	5
6	Phase ON - 7	0	Sp Evnt Out 6	0			Plan 6	0	AND-3	0	TOD Out 7	0	Flash (7-Wire)	0	6
7	Phase ON - 8	0	Sp Evnt Out 7	0			Plan 7	0	NOT-2	0	TOD Out 8	0	Preempt	0	7
8	Ph. Check - 1	0	Sp Evnt Out 8	0	NOT-3	0	Plan 8	0	EV-A	0	Adv. Warn - 1	0	Low Priority A	0	8
9	Ph. Check - 2	0			NOT-4	0	Plan 9	0	EV-B	0	Adv. Warn - 2	0	Low Priority B	0	9
A	Ph. Check - 3	0	Detector Fail	0	OR-4	0	Spec. Funct. 3	0	EV-C	0	DELAY-A	0	Low Priority C	0	A
B	Ph. Check - 4	0	Spec. Funct. 1	0	OR-5	0	Spec. Funct. 4	0	EV-D	0	DELAY-B	0	Low Priority D	0	B
C	Ph. Check - 5	0	Spec. Funct. 2	0	OR-6	0	NAND-3	0	RR-1	0	DELAY-C	0			C
D	Ph. Check - 6	0	Central Control	0	AND-4	0	NAND-4	0	RR-2	0	DELAY-D	0			D
E	Ph. Check - 7	0	Excl. Ped DW	0	NAND-1	0	OR-7	0	Spec. Event 1	0	DELAY-E	0			E
F	Ph. Check - 8	0	Excl. Ped WK	0	NAND-2	0	OR-8	0	Spec. Event 2	0	DELAY-F	0			F

Assignable Outputs <C+0+E=127>

Phase Timing - Bank 2 <C+0+F=2>

Row	Column Numbers ---->	Phase 1	2	3	4	5	6	7	8
	Phase Names ----->								
0	Ped Walk	0	7	0	7	0	7	0	7
1	Ped FDW	0	15	0	15	0	15	0	15
2	Min Green	4	7	4	4	4	7	4	4
3	Type 3 Disconnect	0	20	0	20	0	20	0	20
4	Added per Vehicle	0.0	2.0	0.0	2.0	0.0	2.0	0.0	2.0
5	Veh Extension	2.0	4.0	2.0	2.5	2.0	4.0	2.0	2.5
6	Max Gap	3.0	6.0	3.0	3.0	3.0	6.0	3.0	3.0
7	Min Gap	0.5	2.0	0.5	1.5	0.5	2.0	0.5	1.5
8	Max Limit	20	30	20	25	20	30	20	25
9	Max Limit 2	30	50	30	40	30	50	30	40
A	Adv. / Delay Walk	0	0	0	0	0	0	0	0
B	PE Min Ped FDW	7	7	7	7	7	7	7	7
C	Cond Serv Check	10	10	10	10	10	10	10	10
D	Reduce Every	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
E	Yellow Change	3.0	4.0	3.0	3.0	3.0	4.0	3.0	3.0
F	Red Clear	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0

Alternate Timing

	9	A	B	C	D
	- - -	- - -	- - -	- - -	- - -
Phase 1	0	0	0	0	0.0
Phase 2	0	0	0	0	0.0
Phase 3	0	0	0	0	0.0
Phase 4	0	0	0	0	0.0
Phase 5	0	0	0	0	0.0
Phase 6	0	0	0	0	0.0
Phase 7	0	0	0	0	0.0
Phase 8	0	0	0	0	0.0

Max Initial
Alternate Walk
Alternate FDW
Alternate Initial
Alternate Extension

Transition Type
0.X = Shortway
1.X = Lengthen
X.1 thru X.4 = Number of cycles when lengthing

Transition Type	0.3	<C/5+1+9>

TBC Transition

Lag Hold Phases		<C/5+1+A>

Coordinated Lag Hold Phases

Sync Output Time	0.0	<C/5+1+C>

7-Wire Master

Daylight Savings Date
If set to all zeros, standard dates will be used.

Begin Month	3	<C/5+2+A>
Begin Week	2	<C/5+2+B>
End Month	11	<C/5+2+C>
End Week	1	<C/5+2+D>

Daylight Savings Time

Phase Timing - Bank 3 <C+0+F=3>

Row		1	2	3	4	5	6	7	8
0	Ped Walk	0	7	0	7	0	7	0	7
1	Ped FDW	0	15	0	15	0	15	0	15
2	Min Green	4	7	4	4	4	7	4	4
3	Type 3 Disconnect	0	20	0	20	0	20	0	20
4	Added per Vehicle	0.0	2.0	0.0	2.0	0.0	2.0	0.0	2.0
5	Veh Extension	2.0	4.0	2.0	2.5	2.0	4.0	2.0	2.5
6	Max Gap	3.0	6.0	3.0	3.0	3.0	6.0	3.0	3.0
7	Min Gap	0.5	2.0	0.5	1.5	0.5	2.0	0.5	1.5
8	Max Limit	20	30	20	25	20	30	20	25
9	Max Limit 2	30	50	30	40	30	50	30	40
A	Adv. / Delay Walk	0	0	0	0	0	0	0	0
B	PE Min Ped FDW	7	7	7	7	7	7	7	7
C	Cond Serv Check	10	10	10	10	10	10	10	10
D	Reduce Every	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
E	Yellow Change	3.0	4.0	3.0	3.0	3.0	4.0	3.0	3.0
F	Red Clear	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0

Alternate Timing

	9	A	B	C	D
	- - -	- - -	- - -	- - -	- - -
Phase 1	0	0	0	0	0.0
Phase 2	0	0	0	0	0.0
Phase 3	0	0	0	0	0.0
Phase 4	0	0	0	0	0.0
Phase 5	0	0	0	0	0.0
Phase 6	0	0	0	0	0.0
Phase 7	0	0	0	0	0.0
Phase 8	0	0	0	0	0.0

Max Initial
Alternate Walk
Alternate FDW
Alternate Initial
Alternate Extension

Time B4 Yellow	0.0	<F/1+C+E>
Phase Number	0	<F/1+C+F>

Advance Warning Beacon - Sign 1

Time B4 Yellow	0.0	<F/1+D+E>
Phase Number	0	<F/1+D+F>

Advance Warning Beacon - Sign 2

Long Failure	0.7	<F/1+0+6>
Short Failure	0.7	<F/1+0+7>

Power Cycle Correction (Default = 0.7)

Column Numbers ---->	0	1	2	3	1	3
	C1 Pin					Carry-
Row — *Detector Name*	Number	Attributes	Phase(s)	Assign	Delay	over
0 I-2U	39	___45_7_	_2_____	123___8	0.0	0.0
1 J-2U	40	___45_7_	_____6__	123___8	0.0	0.0
2 I-6U	41	___45_7_	___4____	123___8	0.0	0.0
3 J-6U (WB-FAR)	42	___45___	_______8	123___8	0.0	0.0
4 I-2L (NB-FAR)	43	___45___	_2_____	123___8	0.0	0.0
5 J-2L (SB-FAR)	44	___45___	_____6__	123___8	0.0	0.0
6 I-6L (EB-FAR)	45	___45___	___4____	123___8	0.0	0.0
7 J-6L	46	___45_7_	_______8	123___8	0.0	0.0
8 I-4 (NB-CT)	47	_____67_	_2_____	123___8	0.0	2.0
9 J-4 (SB-CT)	48	_____67_	_____6__	123___8	0.0	2.0
A I-8 (EB-CT)	49	_____67_	___4____	123___8	10.0	2.0
B J-8 (WB-CT)	50	_____67_	_______8	123___8	10.0	2.0
C J-1 (NBL-CT)	55	___45_7_	____5___	123___8	0.0	0.0
D I-1 (SBL-CT)	56	___45_7_	1_______	123___8	0.0	0.0
E J-5 (EBL-CT)	57	___45_7_	_____7_	123___8	0.0	0.0
F I-5 (WBL-CT)	58	___45_7_	__3_____	123___8	0.0	0.0

	4	5	6	7	2	4
	C1 Pin					Carry-
Row — *Detector Name*	Number	Attributes	Phase(s)	Assign	Delay	over
0 J-9U (NBL-NR)	59	___45_7_	____5___	123___8	0.0	0.0
1 I-9U (SBL-NR)	60	___45_7_	1_______	123___8	0.0	0.0
2 J-9L (EBL-NR)	61	___45_7_	_____7_	123___8	0.0	0.0
3 I-9L (WBL-NR)	62	___45_7_	__3_____	123___8	0.0	0.0
4 I-3U (NB-NR)	63	_____67_	_2_____	123___8	0.0	2.0
5 J-3U (SB-NR)	64	_____67_	_____6__	123___8	0.0	2.0
6 I-7U (EB-NR)	65	_____67_	___4____	123___8	5.0	2.0
7 J-7U (WB-NR)	66	_____67_	_______8	123___8	5.0	2.0
8 I-12U (NB-PED)	67	_2_____	_2_____	123___8	0.0	0.0
9 I-13U	68	_2_____	_____6__	123___8	0.0	0.0
A I-12L (EB-PED)	69	_2_____	___4____	123___8	0.0	0.0
B I-13L (WB-PED)	70	_2_____	_______8	123___8	0.0	0.0
C I-3L	76	___45_7_	_2_____	123___8	0.0	0.0
D J-3L (SB-BIKE)	77	_____67_	_____6__	123___8	0.0	2.0
E I-7L	78	___45_7_	___4____	123___8	0.0	0.0
F J-7L	79	___45_7_	_______8	123___8	0.0	0.0

Detector Assignments <C+0+E=126> <C+0+D=0>

Detector Attributes
1 = Full Time Delay
2 = Ped Call
3 =
4 = Count
5 = Extension
6 = Type 3
7 = Calling
8 = Alternate

Det. Assignments
1 = Det. Set 1
2 = Det. Set 2
3 = Det. Set 3
4 =
5 =
6 = Failure - Min Recall
7 = Failure - Max Recall
8 = Report on Failure

E Key = F+9+E=1, turn off set to =0

	Ped / Phase / Overlap								
Column Numbers ---->	1	2	3	4	5	6	7	8	Row
Walk	0	0	0	0	0	0	0	0	0
Don't Walk	0	0	0	0	0	0	0	0	1
Phase Green	0	0	0	0	0	0	0	0	2
Phase Yellow	0	0	0	0	0	0	0	0	3
Phase Red	0	0	0	0	0	0	0	0	4
Overlap Green	0	0	0	0	0	0	0	0	5
Overlap Yellow	0	0	0	0	0	0	0	0	6
Overlap Red	0	0	0	0	0	0	0	0	7

Redirect Phase Outputs <C+0+E=127>

Cabinet Type	0	<E/125+D+0>

Enable Redirection
(Enable Redirection = 30)

Max OFF (minutes)	20	<D/0+0+1>
Max ON (minutes)	7	<D/0+0+2>

Detector Failure Monitor

	D	Row
		0
Output Port 1	_____	1
Output Port 2	_____	2
Output Port 3	_____	3
Output Port 4	_____	4
Output Port 5	_____	5
Output Port 6	_____	6
Output Port 7	_____	7

Dimming <C+0+E=125>

	D
Number of Digits	0
1 st Digit	0
2 ed Digit	0
3 ed Digit	0
4 th Digit	0
5 th Digit	0
6 th Digit	0
7 th Digit	0
8 th Digit	0
9 th Digit	0
10 th Digit	0
11 th Digit	0
12 th Digit	0
13 th Digit	0
14 th Digit	0
15 th Digit	0

<C+0+C=5>

Dial-Back Telephone Number

Disable Alarms
1 = Stop Time
2 = Flash Sense
3 = Keyboard Entry
4 = Manual Plan
5 = Police Control
6 = External Alarm
7 = Detector Failure
8 =

	B	Row
DELAY-A	0	A
DELAY-B	0	B
DELAY-C	0	C
DELAY-D	0	D
DELAY-E	0	E
DELAY-F	0	F

Delay Logic Times
<C+0+D=0> (seconds)

Omit Alarm	_____	<C/5+F+0>

Disable Alarm Reporting

Time	0	<C/5+C+0>

Redial Time (minutes)
(View Redial Timer at E/2+D+6)

Row	Time	Plan	Offset	Day of Week
0	00 : 00	0	0	_____
1	00 : 00	0	0	_____
2	00 : 00	0	0	_____
3	00 : 00	0	0	_____
4	00 : 00	0	0	_____
5	00 : 00	0	0	_____
6	00 : 00	0	0	_____
7	00 : 00	0	0	_____
8	00 : 00	0	0	_____
9	00 : 00	0	0	_____
A	00 : 00	0	0	_____
B	00 : 00	0	0	_____
C	00 : 00	0	0	_____
D	00 : 00	0	0	_____
E	00 : 00	0	0	_____
F	00 : 00	0	0	_____

TOD Coordination <C+0+9=0.1>
(Bank 1)

Time	Funct.	Day of Week	Column 4 Phases/Bits
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____

TOD Function <C+0+7=0.1> <C+0+E=27>

Day	Year	Month	Holiday Type
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____

Holiday Dates <C+0+8=1.1>
(Bank 1)

Time	Plan	Offset	Holiday Type
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____

Holiday Events <C+0+9=1.1>
(Bank 1)

T.O.D. Functions
0 =
1 = Red Lock
2 = Yellow Lock
3 = Veh Min Recall
4 = Ped Recall
5 =
6 = Rest In Walk
7 = Red Rest
8 = Double Entry
9 = Veh Max Recall
A = Veh Soft Recall
B = Maximum 2
C = Conditional Service
D = Free Lag Phases
E = Bit 1 - Local Override
Bit 4 - Disable Detector OFF Monitor
Bit 5 - Disable Low Priority Preempt
Bit 6 - Disable FYA
Bit 7 - Detector Count Monitor
Bit 8 - Real Time Split Monitor
F = Output Bits 1 thru 8

Plan Select
1 thru 9 = Coordination Plan 1 thru 9
14 or E = Free
15 or F = Flash

Offset Select
A = Offset A
B = Offset B
C = Offset C

Month Select
1 = January
2 = February
3 = March
4 = April
5 = May
6 = June
7 = July
8 = August
9 = September
A = October
B = November
C = December

Row	Time	Plan	Offset	Day of Week
0	00 : 00	0	0	_____
1	00 : 00	0	0	_____
2	00 : 00	0	0	_____
3	00 : 00	0	0	_____
4	00 : 00	0	0	_____
5	00 : 00	0	0	_____
6	00 : 00	0	0	_____
7	00 : 00	0	0	_____
8	00 : 00	0	0	_____
9	00 : 00	0	0	_____
A	00 : 00	0	0	_____
B	00 : 00	0	0	_____
C	00 : 00	0	0	_____
D	00 : 00	0	0	_____
E	00 : 00	0	0	_____
F	00 : 00	0	0	_____

TOD Coordination <C+0+9=0.2>
(Bank 2)

Time	Funct.	Holiday Type	Column 4 Phases/Bits
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____

Holiday TOD Function <C+0+7=0.2> <C+0+E=28>

Day	Year	Month	Holiday Type
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____

Holiday Dates <C+0+8=1.2>
(Bank 2)

Time	Plan	Offset	Holiday Type
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____

Holiday Events <C+0+9=1.2>
(Bank 2)

Row	6 Clear	7 Time	8 Ped Call	9 Hold	A Advance	B Force Off	C Vehicle Call	D Permit Phases	E Ped Omit	F Output
0		0								
1		0								
2		0								
3		0								
4		0								
5		0								
6		0								
7		0								
8		0								
9		0								
A		0								
B		0								
C		0								
D		0								
E		0								
F		0								

Notes:

Special Event Schedule -- Table 1 <C+0+E=27>

0 <E/27+5+F>

Limited Service Interval

Row	6 Clear	7 Time	8 Ped Call	9 Hold	A Advance	B Force Off	C Vehicle Call	D Permit Phases	E Ped Omit	F Output
0		0								
1		0								
2		0								
3		0								
4		0								
5		0								
6		0								
7		0								
8		0								
9		0								
A		0								
B		0								
C		0								
D		0								
E		0								
F		0								

Notes:

Special Event Schedule -- Table 2 <C+0+E=28>

0 <E/28+5+F>

Limited Service Interval

Min Time (seconds)	6	<F/1+0+8>

Min Green Before PE Force Off

Max Time (minutes)	1	<F/1+0+9>

Max Preempt Time Before Failure

Min Time (seconds)	0	<F/1+0+A>

Min Time Between Same Preempts
(Does Not Apply To Railroad Preempt)

Low Pri. Channel	_____	<E/125+C+8>

Disable Low Priority Channel

Low Priority
1 = Channel A
2 = Channel B
3 = Channel C
4 = Channel D

Delay Time (seconds)	0	<F/1+A+D>

Bus Delay

Max Time (seconds)	0	<F/1+A+E>

Max Early Green

Max Time (seconds)	0	<F/1+A+F>

Max Green Extension

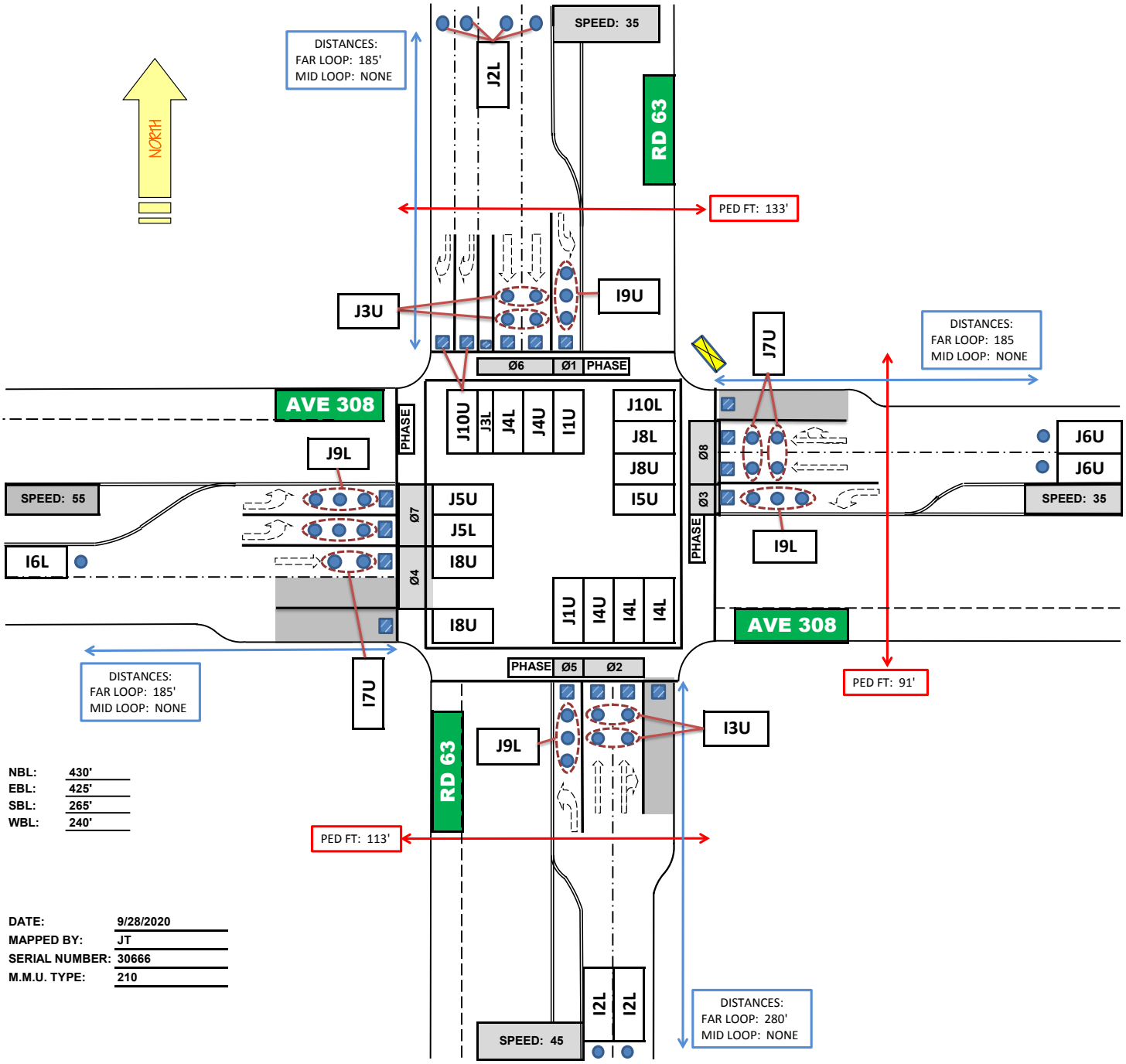
Row	Time	Headway	Direction	Day of Week
0	00 : 00	0	0	_____
1	00 : 00	0	0	_____
2	00 : 00	0	0	_____
3	00 : 00	0	0	_____
4	00 : 00	0	0	_____
5	00 : 00	0	0	_____
6	00 : 00	0	0	_____
7	00 : 00	0	0	_____
8	00 : 00	0	0	_____
9	00 : 00	0	0	_____
A	00 : 00	0	0	_____
B	00 : 00	0	0	_____
C	00 : 00	0	0	_____
D	00 : 00	0	0	_____
E	00 : 00	0	0	_____
F	00 : 00	0	0	_____

Headway <C+0+9=2.1>

Headway Time
(minutes)
1 thru 9 = 1 thru 9
A = 10
B = 11
C = 12
D = 13
E = 14
F = 15

Low Priority Preemption (Bus Priority)

Only available with *Program 233RV2.B* (and above)
Note: Also see "Time of Day Functions", Function E, Bit 5 (Disable Low Priority)



NBL: 430'
EBL: 425'
SBL: 265'
WBL: 240'

DATE: 9/28/2020
MAPPED BY: JT
SERIAL NUMBER: 30666
M.M.U. TYPE: 210

Detector Layout for the Intersection of: AVE 308 & RD 63

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:	AAC8	Page 8:	85AF
Page 3:	5C96	Page 9:	33C2
Page 4:	F29E	Page 10:	BAC2
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Page 6:	191A	Page 12:	D68F
Page 7:	B9CF	Page 13:	86F7

CONFIGURATION PHASE FLAGS

Phases (2-1-1-1)	
Permitted	- 2 - 4 - 6 - -
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	- - - - - - - -
Rest In Walk	- - - - - - - -
Rest In Red	- - - - - - - -
Walk2	- - - - - - - -
Max Green 2	- - - - - - - -
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	6.0

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	- - - - - - - -
P3	- - - - - - - -
P4	- - - - - - - -
P5	- - - - - - - -
P6	- - - - - 6 - -
P7	- - - - - - - -
P8	- - - - - - - -

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:** AAC8

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	18	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	20	0	25	0	0
Max Green 2	0	35	0	30	0	35	0	0
Max Green 3	0	0	0	0	0	0	0	0
Extension	0.0	5.6	0.0	4.5	0.0	5.6	0.0	0.0
Maximum Gap	0.0	7.4	0.0	5.9	0.0	7.4	0.0	0.0
Minimum Gap	0.0	3.0	0.0	3.0	0.0	3.0	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	0.6	0.0	0.6	0.0	0.6	0.0	0.0
Yellow	3.0	4.8	3.0	4.8	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

Local Plan 1...9 (7-1) TIMING DATA

COORDINATION

		Cycle	Multi	Lag Gap	[Offsets] A	B	C	Green Factors or Press [F] to Select -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	- - - - - - - -											

Local Plan 1...9 (7-1) PHASE FLAGS

	Lag	Sync	Hold	Omit	Veh Min	Veh Max	Ped	Bike
Plan 1	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
Plan 2	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
Plan 3	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
Plan 4	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
Plan 5	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
Plan 6	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
Plan 7	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
Plan 8	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
Plan 9	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -

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: 1-9
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: F29E

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+Extend	- 2 - - - - - -	NO	I2U
4	Count+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	- - 3 - - - - -	NO	I5U
10	Count+Call+Extend	- - 3 - - - - -	NO	I5L
11	Count+Extend	- - - 4 - - - -	NO	I6U
12	Count+Extend	- - - 4 - - - -	NO	I6L
13	Count+Call+Extend	- - - 4 - - - -	NO	I7U
14	Call+Extend	- - - 4 - - - -	NO	I7L
15	Limited	- - - 4 - - - -	NO	I8U
16	Limited	- - - 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+Extend	- - - - - 6 - -	NO	J2U
24	Count+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	- - - - - - 7 -	NO	J5U
30	Count+Call+Extend	- - - - - - 7 -	NO	J5L
31	Count+Extend	- - - - - - - 8	NO	J6U
32	Count+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	0.5	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	15	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	0.5	10	1.6
25	0	0.0	10	4.6
26	0	0.0	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

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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

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	34
West Longitude	118
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	2000	1 2 3 4 5 6 7	27	- 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

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

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RAILROAD PREEMPTION

RR 1

(3-1-1)	Timing	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
Delay	0									
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)		
		Grn Hold	Yel Flash	Red Flash	Walk	Flash DW	Solid DW	Grn Hold	Yel Flash	Red Flash
Delay	0									
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	0.0
Adv Enable	0.0

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	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

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

CONTROLLER ID

Manufacturer ID	Caltrans TSCP Ver 2.21
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

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CONFIGURATION PHASE FLAGS

Phases (2-1-1-1)	
Permitted	- 2 - - 5 6 - 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	- - - - - - - -
Rest In Walk	- - - - - - - -
Rest In Red	- - - - - - - -
Walk2	- - - - - - - -
Max Green 2	- - - - - - - -
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	6.0

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	- - - - - - - -
P5	- - - - - - - -
P6	- - - - - 6 - -
P7	- - - - - - - -
P8	- - - - - - - -

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:** 3608

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	19	0	0	0	19	0	0
Minimum Green	0	10	0	0	6	10	0	8
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	35
Max Green 3	0	0	0	0	0	0	0	0
Extension	0.0	5.6	0.0	0.0	2.0	5.6	0.0	5.6
Maximum Gap	0.0	7.4	0.0	0.0	2.0	7.4	0.0	7.3
Minimum Gap	0.0	3.0	0.0	0.0	2.0	3.0	0.0	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	0.0	0.0	0.1	0.0	0.1
Reduce Every	0.0	0.6	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	4.8
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: 05EB

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	- - - - - - - - -
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	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
Plan 2	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
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: F29E

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+Extend	- 2 - - - - - -	NO	I2U
4	Count+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	- - 3 - - - - -	NO	I5U
10	Count+Call+Extend	- - 3 - - - - -	NO	I5L
11	Count+Extend	- - - 4 - - - -	NO	I6U
12	Count+Extend	- - - 4 - - - -	NO	I6L
13	Count+Call+Extend	- - - 4 - - - -	NO	I7U
14	Call+Extend	- - - 4 - - - -	NO	I7L
15	Limited	- - - 4 - - - -	NO	I8U
16	Limited	- - - 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+Extend	- - - - - 6 - -	NO	J2U
24	Count+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	- - - - - - 7 -	NO	J5U
30	Count+Call+Extend	- - - - - - 7 -	NO	J5L
31	Count+Extend	- - - - - - - 8	NO	J6U
32	Count+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	0.5	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	0	0.0	10	3.1
22	0	0.0	10	7.1
23	0	0.0	10	1.2
24	0	0.5	10	1.6
25	0	0.0	10	4.6
26	0	0.0	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	2.0	10	4.8
34	0	0.0	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	15	0.0	10	4.3
40	15	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

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

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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	34
West Longitude	118
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	2000	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

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	4
Netmask	255	255	255	0
Broadcast	192	168	13	255
Gateway	192	168	13	254

RAILROAD PREEMPTION

RR 1	(3-1-1)	Timing	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
	Delay	0									
	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)		
			Grn Hold	Yel Flash	Red Flash	Walk	Flash DW	Solid DW	Grn Hold	Yel Flash	Red Flash
	Delay	0									
	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	0.0
Adv Enable	0.0

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	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

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

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

	A.M. Peak Hour			P.M. Peak Hour		
	Existing No Project	Net Project Trips	Existing Plus Project	Existing No Project	Net Project Trips	Existing Plus Project
1 Project Driveway 1/Avenue 304						
NBL	0	0	0	0	0	0
NBT	0	0	0	0	0	0
NBR	0	0	0	0	0	0
SBL	0	46	46	0	31	31
SBT	0	0	0	0	0	0
SBR	0	2	2	0	1	1
EBL	0	1	1	0	2	2
EBT	63	0	63	91	0	91
EBR	0	0	0	0	0	0
WBL	0	0	0	0	0	0
WBT	43	0	43	41	0	41
WBR	0	16	16	0	52	52
North Leg						
Approach	0	48	48	0	32	32
Departure	0	17	17	0	54	54
Total	0	65	65	0	86	86
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	43	16	59	41	52	93
Departure	63	46	109	91	31	122
Total	106	62	168	132	83	215
West Leg						
Approach	63	1	64	91	2	93
Departure	43	2	45	41	1	42
Total	106	3	109	132	3	135
Total Approaches						
Approach	106	65	171	132	86	218
Departure	106	65	171	132	86	218
Total	211	130	341	263	172	435

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Table C-1 - Existing Peak Hour Volume Summary

	A.M. Peak Hour			P.M. Peak Hour		
	Existing No Project	Net Project Trips	Existing Plus Project	Existing No Project	Net Project Trips	Existing Plus Project
2 Project Driveway 2/Avenue 304						
NBL	0	0	0	0	0	0
NBT	0	0	0	0	0	0
NBR	0	0	0	0	0	0
SBL	0	38	38	0	25	25
SBT	0	0	0	0	0	0
SBR	0	0	0	0	0	0
EBL	0	0	0	0	0	0
EBT	63	46	109	91	31	122
EBR	0	0	0	0	0	0
WBL	0	0	0	0	0	0
WBT	43	16	59	41	52	93
WBR	0	0	0	0	0	0
North Leg						
Approach	0	38	38	0	25	25
Departure	0	0	0	0	0	0
Total	0	38	38	0	25	25
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	43	16	59	41	52	93
Departure	63	84	147	91	56	147
Total	106	100	206	132	108	240
West Leg						
Approach	63	46	109	91	31	122
Departure	43	16	59	41	52	93
Total	106	62	168	132	83	215
Total Approaches						
Approach	106	100	206	132	108	240
Departure	106	100	206	132	108	240
Total	211	200	411	263	216	479

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Table C-1 - Existing Peak Hour Volume Summary

	A.M. Peak Hour			P.M. Peak Hour		
	Existing No Project	Net Project Trips	Existing Plus Project	Existing No Project	Net Project Trips	Existing Plus Project
3 Road 63/Betty Drive						
NBL	0	0	0	0	0	0
NBT	5	0	5	4	0	4
NBR	422	47	469	317	32	349
SBL	8	0	8	5	0	5
SBT	0	0	0	1	0	1
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	439	16	455	233	53	286
WBT	0	0	0	0	0	0
WBR	1	0	1	2	0	2
North Leg						
Approach	8	0	8	6	0	6
Departure	6	0	6	6	0	6
Total	14	0	14	12	0	12
South Leg						
Approach	427	47	474	321	32	353
Departure	439	16	455	234	53	287
Total	866	63	929	555	85	640
East Leg						
Approach	440	16	456	235	53	288
Departure	430	47	477	322	32	354
Total	870	63	933	557	85	642
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	875	63	938	562	85	647
Departure	875	63	938	562	85	647
Total	1,750	126	1,876	1,124	170	1,294

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Table C-1 - Existing Peak Hour Volume Summary

	A.M. Peak Hour			P.M. Peak Hour		
	Existing No Project	Net Project Trips	Existing Plus Project	Existing No Project	Net Project Trips	Existing Plus Project
4 Road 63/Avenue 308						
NBL	7	0	7	9	0	9
NBT	81	47	128	127	32	159
NBR	14	2	16	9	1	10
SBL	289	0	289	79	0	79
SBT	93	16	109	78	53	131
SBR	57	0	57	77	0	77
EBL	61	0	61	60	0	60
EBT	37	0	37	22	0	22
EBR	10	0	10	5	0	5
WBL	3	1	4	2	2	4
WBT	26	0	26	34	0	34
WBR	285	0	285	134	0	134
North Leg						
Approach	439	16	455	234	53	287
Departure	427	47	474	321	32	353
Total	866	63	929	555	85	640
South Leg						
Approach	102	49	151	145	33	178
Departure	106	17	123	85	55	140
Total	208	66	274	230	88	318
East Leg						
Approach	314	1	315	170	2	172
Departure	340	2	342	110	1	111
Total	654	3	657	280	3	283
West Leg						
Approach	108	0	108	87	0	87
Departure	90	0	90	120	0	120
Total	198	0	198	207	0	207
Total Approaches						
Approach	963	66	1,029	636	88	724
Departure	963	66	1,029	636	88	724
Total	1,926	132	2,058	1,272	176	1,448

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Table C-1 - Existing Peak Hour Volume Summary

	A.M. Peak Hour			P.M. Peak Hour		
	Existing No Project	Net Project Trips	Existing Plus Project	Existing No Project	Net Project Trips	Existing Plus Project
5 Road 63/Project Driveway 3-Kenyon Plastering Driveway						
NBL	0	8	8	0	27	27
NBT	94	0	94	120	0	120
NBR	6	0	6	3	0	3
SBL	3	0	3	1	0	1
SBT	79	0	79	66	0	66
SBR	0	17	17	0	55	55
EBL	0	49	49	0	33	33
EBT	0	0	0	0	0	0
EBR	0	24	24	0	16	16
WBL	5	0	5	4	0	4
WBT	0	0	0	0	0	0
WBR	1	0	1	2	0	2
North Leg						
Approach	82	17	99	67	55	122
Departure	95	49	144	122	33	155
Total	178	66	244	189	88	277
South Leg						
Approach	101	8	109	123	27	150
Departure	84	24	108	71	16	87
Total	185	32	217	194	43	237
East Leg						
Approach	6	0	6	6	0	6
Departure	9	0	9	4	0	4
Total	15	0	15	11	0	11
West Leg						
Approach	0	73	73	0	49	49
Departure	0	25	25	0	82	82
Total	0	98	98	0	131	131
Total Approaches						
Approach	189	98	287	197	131	328
Departure	189	98	287	197	131	328
Total	378	196	574	394	262	656

LSA

Table C-1 - Existing Peak Hour Volume Summary

	A.M. Peak Hour			P.M. Peak Hour		
	Existing No Project	Net Project Trips	Existing Plus Project	Existing No Project	Net Project Trips	Existing Plus Project
6 Road 64/Avenue 304						
NBL	3	28	31	5	91	96
NBT	37	7	44	32	23	55
NBR	22	0	22	12	0	12
SBL	26	3	29	22	2	24
SBT	33	21	54	22	14	36
SBR	27	0	27	22	0	22
EBL	40	0	40	60	0	60
EBT	18	3	21	22	2	24
EBR	5	81	86	9	54	63
WBL	8	0	8	14	0	14
WBT	12	1	13	13	4	17
WBR	25	1	26	29	4	33
North Leg						
Approach	86	24	110	67	16	83
Departure	102	8	110	121	27	148
Total	188	32	220	188	43	231
South Leg						
Approach	62	35	97	49	114	163
Departure	46	102	148	45	68	113
Total	108	137	245	94	182	276
East Leg						
Approach	46	2	48	56	8	64
Departure	67	6	73	57	4	61
Total	113	8	121	112	12	124
West Leg						
Approach	63	84	147	91	56	147
Departure	43	29	72	41	95	136
Total	106	113	219	132	151	283
Total Approaches						
Approach	257	145	402	263	194	457
Departure	257	145	402	263	194	457
Total	514	290	804	526	388	914

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Table C-1 - Existing Peak Hour Volume Summary

		A.M. Peak Hour			P.M. Peak Hour		
		Existing No Project	Net Project Trips	Existing Plus Project	Existing No Project	Net Project Trips	Existing Plus Project
7	**Road 64/SR-198**						
NBL		0	0	0	0	0	0
NBT		0	0	0	0	0	0
NBR		0	0	0	0	0	0
SBL		24	101	125	37	68	105
SBT		0	0	0	0	0	0
SBR		41	0	41	21	0	21
EBL		18	0	18	29	0	29
EBT		1,185	0	1,185	1,688	0	1,688
EBR		0	0	0	0	0	0
WBL		0	0	0	0	0	0
WBT		1,563	0	1,563	1,432	0	1,432
WBR		90	35	125	36	115	151
North Leg							
	Approach	65	101	166	59	68	127
	Departure	109	35	144	65	115	180
	Total	174	136	310	124	183	307
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	1,654	35	1,689	1,469	115	1,584
	Departure	1,209	101	1,310	1,725	68	1,793
	Total	2,863	136	2,999	3,194	183	3,377
West Leg							
	Approach	1,203	0	1,203	1,717	0	1,717
	Departure	1,604	0	1,604	1,454	0	1,454
	Total	2,807	0	2,807	3,170	0	3,170
Total Approaches							
	Approach	2,922	136	3,058	3,244	183	3,427
	Departure	2,922	136	3,058	3,244	183	3,427
	Total	5,843	272	6,115	6,488	366	6,854

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Table C-1 - Existing Peak Hour Volume Summary

		A.M. Peak Hour			P.M. Peak Hour		
		Existing No Project	Net Project Trips	Existing Plus Project	Existing No Project	Net Project Trips	Existing Plus Project
8	**SR-99 Southbound Ramps/Betty Drive**						
NBL		0	0	0	0	0	0
NBT		0	0	0	0	0	0
NBR		0	0	0	0	0	0
SBL		240	0	240	345	0	345
SBT		0	0	0	0	0	0
SBR		57	4	61	42	14	56
EBL		0	0	0	0	0	0
EBT		309	47	356	207	32	239
EBR		121	0	121	115	0	115
WBL		0	0	0	0	0	0
WBT		383	12	395	193	39	232
WBR		252	0	252	304	0	304
North Leg							
	Approach	297	4	301	387	14	401
	Departure	252	0	252	304	0	304
	Total	549	4	553	691	14	705
South Leg							
	Approach	0	0	0	0	0	0
	Departure	121	0	121	115	0	115
	Total	121	0	121	115	0	115
East Leg							
	Approach	635	12	647	497	39	536
	Departure	549	47	596	552	32	584
	Total	1,184	59	1,243	1,049	71	1,120
West Leg							
	Approach	430	47	477	322	32	354
	Departure	440	16	456	235	53	288
	Total	870	63	933	557	85	642
Total Approaches							
	Approach	1,362	63	1,425	1,206	85	1,291
	Departure	1,362	63	1,425	1,206	85	1,291
	Total	2,724	126	2,850	2,412	170	2,582

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Table C-1 - Existing Peak Hour Volume Summary

	A.M. Peak Hour			P.M. Peak Hour		
	Existing No Project	Net Project Trips	Existing Plus Project	Existing No Project	Net Project Trips	Existing Plus Project
9 SR-99 Northbound Ramps/Betty Drive						
NBL	45	0	45	54	0	54
NBT	0	0	0	0	0	0
NBR	74	0	74	68	0	68
SBL	0	0	0	0	0	0
SBT	0	0	0	0	0	0
SBR	0	0	0	0	0	0
EBL	46	13	59	42	8	50
EBT	503	35	538	510	23	533
EBR	0	0	0	0	0	0
WBL	0	0	0	0	0	0
WBT	590	12	602	443	39	482
WBR	277	0	277	245	0	245
North Leg						
Approach	0	0	0	0	0	0
Departure	323	13	336	287	8	295
Total	323	13	336	287	8	295
South Leg						
Approach	119	0	119	122	0	122
Departure	0	0	0	0	0	0
Total	119	0	119	122	0	122
East Leg						
Approach	867	12	879	688	39	727
Departure	577	35	612	578	23	601
Total	1,444	47	1,491	1,266	62	1,328
West Leg						
Approach	549	48	597	552	31	583
Departure	635	12	647	497	39	536
Total	1,184	60	1,244	1,049	70	1,119
Total Approaches						
Approach	1,535	60	1,595	1,362	70	1,432
Departure	1,535	60	1,595	1,362	70	1,432
Total	3,070	120	3,190	2,724	140	2,864

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Table C-2 - Near-term Peak Hour Volume Summary

	AM Peak Hour					PM Peak Hour				
	Existing No Project	Cumulative Project Trips	Near-term No Project	Net Project Trips	Near-term Plus Project	Existing No Project	Cumulative Project Trips	Near-term No Project	Net Project Trips	Near-term Plus Project
1 Project Driveway 1/Avenue 304										
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	46	46	0	0	0	31	31
SBT	0	0	0	0	0	0	0	0	0	0
SBR	0	0	0	2	2	0	0	0	1	1
EBL	0	0	0	1	1	0	0	0	2	2
EBT	63	33	96	0	96	91	43	134	0	134
EBR	0	0	0	0	0	0	0	0	0	0
WBL	0	0	0	0	0	0	0	0	0	0
WBT	43	38	81	0	81	41	37	78	0	78
WBR	0	0	0	16	16	0	0	0	52	52
North Leg										
Approach	0	0	0	48	48	0	0	0	32	32
Departure	0	0	0	17	17	0	0	0	54	54
Total	0	0	0	65	65	0	0	0	86	86
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	43	38	81	16	97	41	37	78	52	130
Departure	63	33	96	46	142	91	43	134	31	165
Total	106	71	177	62	239	132	80	212	83	295
West Leg										
Approach	63	33	96	1	97	91	43	134	2	136
Departure	43	38	81	2	83	41	37	78	1	79
Total	106	71	177	3	180	132	80	212	3	215
Total Approaches										
Approach	106	71	177	65	242	132	80	212	86	298
Departure	106	71	177	65	242	132	80	212	86	298
Total	211	142	353	130	484	263	160	423	172	596

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Table C-2 - Near-term Peak Hour Volume Summary

	AM Peak Hour					PM Peak Hour				
	Existing No Project	Cumulative Project Trips	Near-term No Project	Net Project Trips	Near-term Plus Project	Existing No Project	Cumulative Project Trips	Near-term No Project	Net Project Trips	Near-term Plus Project
2 Project Driveway 2/Avenue 304										
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	38	38	0	0	0	25	25
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	63	33	96	46	142	91	43	134	31	165
EBR	0	0	0	0	0	0	0	0	0	0
WBL	0	0	0	0	0	0	0	0	0	0
WBT	43	38	81	16	97	41	37	78	52	130
WBR	0	0	0	0	0	0	0	0	0	0
North Leg										
Approach	0	0	0	38	38	0	0	0	25	25
Departure	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	38	38	0	0	0	25	25
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	43	38	81	16	97	41	37	78	52	130
Departure	63	33	96	84	180	91	43	134	56	190
Total	106	71	177	100	277	132	80	212	108	320
West Leg										
Approach	63	33	96	46	142	91	43	134	31	165
Departure	43	38	81	16	97	41	37	78	52	130
Total	106	71	177	62	239	132	80	212	83	295
Total Approaches										
Approach	106	71	177	100	277	132	80	212	108	320
Departure	106	71	177	100	277	132	80	212	108	320
Total	211	142	353	200	554	263	160	423	216	640

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Table C-2 - Near-term Peak Hour Volume Summary

	AM Peak Hour					PM Peak Hour				
	Existing No Project	Cumulative Project Trips	Near-term No Project	Net Project Trips	Near-term Plus Project	Existing No Project	Cumulative Project Trips	Near-term No Project	Net Project Trips	Near-term Plus Project
3 Road 63/Betty Drive										
NBL	0	0	0	0	0	0	0	0	0	0
NBT	5	0	5	0	5	4	0	4	0	4
NBR	422	143	565	47	612	317	157	474	32	506
SBL	8	0	8	0	8	5	0	5	0	5
SBT	0	0	0	0	0	1	0	1	0	1
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	439	125	564	16	580	233	160	393	53	446
WBT	0	0	0	0	0	0	0	0	0	0
WBR	1	0	1	0	1	2	0	2	0	2
North Leg										
Approach	8	0	8	0	8	6	0	6	0	6
Departure	6	0	6	0	6	6	0	6	0	6
Total	14	0	14	0	14	12	0	12	0	12
South Leg										
Approach	427	143	570	47	617	321	157	478	32	510
Departure	439	125	564	16	580	234	160	394	53	447
Total	866	268	1,134	63	1,197	555	317	872	85	957
East Leg										
Approach	440	125	565	16	581	235	160	395	53	448
Departure	430	143	573	47	620	322	157	479	32	511
Total	870	268	1,138	63	1,201	557	317	874	85	959
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	875	268	1,143	63	1,206	562	317	879	85	964
Departure	875	268	1,143	63	1,206	562	317	879	85	964
Total	1,750	536	2,286	126	2,412	1,124	634	1,758	170	1,928

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Table C-2 - Near-term Peak Hour Volume Summary

		AM Peak Hour					PM Peak Hour				
		Existing No Project	Cumulative Project Trips	Near-term No Project	Net Project Trips	Near-term Plus Project	Existing No Project	Cumulative Project Trips	Near-term No Project	Net Project Trips	Near-term Plus Project
4	**Road 63/Avenue 308**										
NBL		7	5	12	0	12	9	13	22	0	22
NBT		81	50	131	47	178	127	64	191	32	223
NBR		14	0	14	2	16	9	1	10	1	11
SBL		289	1	290	0	290	79	2	81	0	81
SBT		93	53	146	16	162	78	56	134	53	187
SBR		57	70	127	0	127	77	101	178	0	178
EBL		61	92	153	0	153	60	92	152	0	152
EBT		37	0	37	0	37	22	0	22	0	22
EBR		10	12	22	0	22	5	9	14	0	14
WBL		3	2	5	1	6	2	1	3	2	5
WBT		26	0	26	0	26	34	0	34	0	34
WBR		285	1	286	0	286	134	2	136	0	136
North Leg											
	Approach	439	124	563	16	579	234	159	393	53	446
	Departure	427	143	570	47	617	321	158	479	32	511
	Total	866	267	1,133	63	1,196	555	317	872	85	957
South Leg											
	Approach	102	55	157	49	206	145	78	223	33	256
	Departure	106	67	173	17	190	85	66	151	55	206
	Total	208	122	330	66	396	230	144	374	88	462
East Leg											
	Approach	314	3	317	1	318	170	3	173	2	175
	Departure	340	1	341	2	343	110	3	113	1	114
	Total	654	4	658	3	661	280	6	286	3	289
West Leg											
	Approach	108	104	212	0	212	87	101	188	0	188
	Departure	90	75	165	0	165	120	114	234	0	234
	Total	198	179	377	0	377	207	215	422	0	422
Total Approaches											
	Approach	963	286	1,249	66	1,315	636	341	977	88	1,065
	Departure	963	286	1,249	66	1,315	636	341	977	88	1,065
	Total	1,926	572	2,498	132	2,630	1,272	682	1,954	176	2,130

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Table C-2 - Near-term Peak Hour Volume Summary

	AM Peak Hour					PM Peak Hour				
	Existing No Project	Cumulative Project Trips	Near-term No Project	Net Project Trips	Near-term Plus Project	Existing No Project	Cumulative Project Trips	Near-term No Project	Net Project Trips	Near-term Plus Project
5 Road 63/Project Driveway 3-Kenyon Plastering Driveway										
NBL	0	0	0	8	8	0	0	0	27	27
NBT	94	46	140	0	140	120	75	195	0	195
NBR	6	0	6	0	6	3	0	3	0	3
SBL	3	0	3	0	3	1	0	1	0	1
SBT	79	66	145	0	145	66	59	125	0	125
SBR	0	0	0	17	17	0	0	0	55	55
EBL	0	0	0	49	49	0	0	0	33	33
EBT	0	0	0	0	0	0	0	0	0	0
EBR	0	0	0	24	24	0	0	0	16	16
WBL	5	0	5	0	5	4	0	4	0	4
WBT	0	0	0	0	0	0	0	0	0	0
WBR	1	0	1	0	1	2	0	2	0	2
North Leg										
Approach	82	66	148	17	165	67	59	126	55	181
Departure	95	46	141	49	190	122	75	197	33	230
Total	178	112	290	66	355	189	134	323	88	411
South Leg										
Approach	101	46	147	8	154	123	75	198	27	225
Departure	84	66	150	24	174	71	59	130	16	145
Total	185	112	297	32	328	194	134	328	43	370
East Leg										
Approach	6	0	6	0	6	6	0	6	0	6
Departure	9	0	9	0	9	4	0	4	0	4
Total	15	0	15	0	15	11	0	11	0	10
West Leg										
Approach	0	0	0	73	73	0	0	0	49	49
Departure	0	0	0	25	25	0	0	0	82	82
Total	0	0	0	98	98	0	0	0	131	131
Total Approaches										
Approach	189	112	301	98	398	197	134	331	131	461
Departure	189	112	301	98	398	197	134	331	131	461
Total	378	224	602	196	796	394	268	662	262	922

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Table C-2 - Near-term Peak Hour Volume Summary

		AM Peak Hour					PM Peak Hour				
		Existing No Project	Cumulative Project Trips	Near-term No Project	Net Project Trips	Near-term Plus Project	Existing No Project	Cumulative Project Trips	Near-term No Project	Net Project Trips	Near-term Plus Project
6	**Road 64/Avenue 304**										
NBL		3	0	3	28	31	5	0	5	91	96
NBT		37	5	42	7	49	32	13	45	23	68
NBR		22	0	22	0	22	12	1	13	0	13
SBL		26	15	41	3	44	22	14	36	2	38
SBT		33	13	46	21	67	22	9	31	14	45
SBR		27	38	65	0	65	22	37	59	0	59
EBL		40	33	73	0	73	60	43	103	0	103
EBT		18	0	18	3	21	22	0	22	2	24
EBR		5	0	5	81	86	9	0	9	54	63
WBL		8	2	10	0	10	14	1	15	0	15
WBT		12	0	12	1	13	13	0	13	4	17
WBR		25	7	32	1	33	29	20	49	4	53
North Leg											
	Approach	86	66	152	24	176	67	60	127	16	142
	Departure	102	45	147	8	155	121	76	197	27	224
	Total	188	111	299	32	331	188	136	324	43	366
South Leg											
	Approach	62	5	67	35	102	49	14	63	114	177
	Departure	46	15	61	102	163	45	10	55	68	123
	Total	108	20	128	137	265	94	24	118	182	300
East Leg											
	Approach	46	9	55	2	56	56	21	77	8	85
	Departure	67	15	82	6	87	57	15	72	4	75
	Total	113	24	137	8	143	112	36	148	12	160
West Leg											
	Approach	63	33	96	84	180	91	43	134	56	190
	Departure	43	38	81	29	109	41	37	78	95	172
	Total	106	71	177	113	289	132	80	212	151	362
Total Approaches											
	Approach	257	113	370	145	514	263	138	401	194	594
	Departure	257	113	370	145	514	263	138	401	194	594
	Total	514	226	740	290	1,028	526	276	802	388	1,188

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Table C-2 - Near-term Peak Hour Volume Summary

		AM Peak Hour					PM Peak Hour				
		Existing No Project	Cumulative Project Trips	Near-term No Project	Net Project Trips	Near-term Plus Project	Existing No Project	Cumulative Project Trips	Near-term No Project	Net Project Trips	Near-term Plus Project
7	**Road 64/SR-198**										
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		24	5	29	101	130	37	3	40	68	108
SBT		0	0	0	0	0	0	0	0	0	0
SBR		41	9	50	0	50	21	7	28	0	28
EBL		18	4	22	0	22	29	10	39	0	39
EBT		1,185	84	1,269	0	1,269	1,688	106	1,794	0	1,794
EBR		0	0	0	0	0	0	0	0	0	0
WBL		0	0	0	0	0	0	0	0	0	0
WBT		1,563	90	1,653	0	1,653	1,432	91	1,523	0	1,523
WBR		90	1	91	35	126	36	4	40	115	155
North Leg											
	Approach	65	14	79	101	180	59	10	69	68	136
	Departure	109	5	114	35	148	65	14	79	115	194
	Total	174	19	193	136	328	124	24	148	183	330
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	1,654	91	1,745	35	1,779	1,469	95	1,564	115	1,678
	Departure	1,209	89	1,298	101	1,399	1,725	109	1,834	68	1,902
	Total	2,863	180	3,043	136	3,178	3,194	204	3,398	183	3,580
West Leg											
	Approach	1,203	88	1,291	0	1,291	1,717	116	1,833	0	1,833
	Departure	1,604	99	1,703	0	1,703	1,454	98	1,552	0	1,551
	Total	2,807	187	2,994	0	2,994	3,170	214	3,384	0	3,384
Total Approaches											
	Approach	2,922	193	3,115	136	3,250	3,244	221	3,465	183	3,647
	Departure	2,922	193	3,115	136	3,250	3,244	221	3,465	183	3,647
	Total	5,843	386	6,229	272	6,500	6,488	442	6,930	366	7,294

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Table C-2 - Near-term Peak Hour Volume Summary

	AM Peak Hour					PM Peak Hour				
	Existing No Project	Cumulative Project Trips	Near-term No Project	Net Project Trips	Near-term Plus Project	Existing No Project	Cumulative Project Trips	Near-term No Project	Net Project Trips	Near-term Plus Project
8 SR-99 Southbound Ramps/Betty Drive										
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	240	306	546	0	546	345	329	674	0	674
SBT	0	0	0	0	0	0	0	0	0	0
SBR	57	4	61	4	65	42	12	54	14	68
EBL	0	0	0	0	0	0	0	0	0	0
EBT	309	104	413	47	460	207	125	332	32	364
EBR	121	38	159	0	159	115	32	147	0	147
WBL	0	0	0	0	0	0	0	0	0	0
WBT	383	122	505	12	517	193	149	342	39	381
WBR	252	175	427	0	427	304	181	485	0	485
North Leg										
Approach	297	310	607	4	611	387	341	728	14	742
Departure	252	175	427	0	427	304	181	485	0	485
Total	549	485	1,034	4	1,038	691	522	1,213	14	1,227
South Leg										
Approach	0	0	0	0	0	0	0	0	0	0
Departure	121	38	159	0	159	115	32	147	0	147
Total	121	38	159	0	159	115	32	147	0	147
East Leg										
Approach	635	297	932	12	944	497	330	827	39	866
Departure	549	410	959	47	1,006	552	454	1,006	32	1,038
Total	1,184	707	1,891	59	1,950	1,049	784	1,833	71	1,904
West Leg										
Approach	430	142	572	47	619	322	157	479	32	511
Departure	440	126	566	16	582	235	161	396	53	449
Total	870	268	1,138	63	1,201	557	318	875	85	960
Total Approaches										
Approach	1,362	749	2,111	63	2,174	1,206	828	2,034	85	2,119
Departure	1,362	749	2,111	63	2,174	1,206	828	2,034	85	2,119
Total	2,724	1,498	4,222	126	4,348	2,412	1,656	4,068	170	4,238

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Table C-2 - Near-term Peak Hour Volume Summary

	AM Peak Hour					PM Peak Hour				
	Existing No Project	Cumulative Project Trips	Near-term No Project	Net Project Trips	Near-term Plus Project	Existing No Project	Cumulative Project Trips	Near-term No Project	Net Project Trips	Near-term Plus Project
9 SR-99 Northbound Ramps/Betty Drive										
NBL	45	21	66	0	66	54	43	97	0	97
NBT	0	0	0	0	0	0	0	0	0	0
NBR	74	178	252	0	252	68	195	263	0	263
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	46	11	57	13	70	42	7	49	8	57
EBT	503	398	901	35	936	510	446	956	23	979
EBR	0	0	0	0	0	0	0	0	0	0
WBL	0	0	0	0	0	0	0	0	0	0
WBT	590	276	866	12	878	443	288	731	39	770
WBR	277	291	568	0	568	245	316	561	0	561
North Leg										
Approach	0	0	0	0	0	0	0	0	0	0
Departure	323	302	625	13	638	287	323	610	8	618
Total	323	302	625	13	638	287	323	610	8	618
South Leg										
Approach	119	199	318	0	318	122	238	360	0	360
Departure	0	0	0	0	0	0	0	0	0	0
Total	119	199	318	0	318	122	238	360	0	360
East Leg										
Approach	867	567	1,434	12	1,446	688	604	1,292	39	1,331
Departure	577	576	1,153	35	1,188	578	641	1,219	23	1,242
Total	1,444	1,143	2,587	47	2,634	1,266	1,245	2,511	62	2,573
West Leg										
Approach	549	409	958	48	1,006	552	453	1,005	31	1,036
Departure	635	297	932	12	944	497	331	828	39	867
Total	1,184	706	1,890	60	1,950	1,049	784	1,833	70	1,903
Total Approaches										
Approach	1,535	1,175	2,710	60	2,770	1,362	1,295	2,657	70	2,727
Departure	1,535	1,175	2,710	60	2,770	1,362	1,295	2,657	70	2,727
Total	3,070	2,350	5,420	120	5,540	2,724	2,590	5,314	140	5,454

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Table C-3 - Horizon Year Peak Hour Volume Summary

	AM Peak Hour			PM Peak Hour		
	Horizon No Project	Net Project Trips	Horizon Plus Project	Horizon No Project	Net Project Trips	Horizon Plus Project
1 Project Driveway 1/Avenue 304						
NBL	0	0	0	0	0	0
NBT	0	0	0	0	0	0
NBR	0	0	0	0	0	0
SBL	0	46	46	0	31	31
SBT	0	0	0	0	0	0
SBR	0	2	2	0	1	1
EBL	0	1	1	0	2	2
EBT	176	0	176	169	0	169
EBR	0	0	0	0	0	0
WBL	0	0	0	0	0	0
WBT	130	0	130	99	0	99
WBR	0	16	16	0	52	52
North Leg						
Approach	0	48	48	0	32	32
Departure	0	17	17	0	54	54
Total	0	65	65	0	86	86
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	130	16	146	99	52	151
Departure	176	46	222	169	31	200
Total	306	62	368	268	83	351
West Leg						
Approach	176	1	177	169	2	171
Departure	130	2	132	99	1	100
Total	306	3	309	268	3	271
Total Approaches						
Approach	306	65	371	268	86	354
Departure	306	65	371	268	86	354
Total	612	130	742	536	172	708

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Table C-3 - Horizon Year Peak Hour Volume Summary

	AM Peak Hour			PM Peak Hour		
	Horizon No Project	Net Project Trips	Horizon Plus Project	Horizon No Project	Net Project Trips	Horizon Plus Project
2 Project Driveway 2/Avenue 304						
NBL	0	0	0	0	0	0
NBT	0	0	0	0	0	0
NBR	0	0	0	0	0	0
SBL	0	38	38	0	25	25
SBT	0	0	0	0	0	0
SBR	0	0	0	0	0	0
EBL	0	0	0	0	0	0
EBT	176	46	222	169	31	200
EBR	0	0	0	0	0	0
WBL	0	0	0	0	0	0
WBT	130	16	146	99	52	151
WBR	0	0	0	0	0	0
North Leg						
Approach	0	38	38	0	25	25
Departure	0	0	0	0	0	0
Total	0	38	38	0	25	25
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	130	16	146	99	52	151
Departure	176	84	260	169	56	225
Total	306	100	406	268	108	376
West Leg						
Approach	176	46	222	169	31	200
Departure	130	16	146	99	52	151
Total	306	62	368	268	83	351
Total Approaches						
Approach	306	100	406	268	108	376
Departure	306	100	406	268	108	376
Total	612	200	812	536	216	752

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Table C-3 - Horizon Year Peak Hour Volume Summary

	AM Peak Hour			PM Peak Hour		
	Horizon No Project	Net Project Trips	Horizon Plus Project	Horizon No Project	Net Project Trips	Horizon Plus Project
3 Road 63/Betty Drive						
NBL	0	0	0	0	0	0
NBT	8	0	8	7	0	7
NBR	665	47	712	498	32	530
SBL	12	0	12	8	0	8
SBT	0	0	0	2	0	2
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	593	16	609	458	53	511
WBT	0	0	0	0	0	0
WBR	1	0	1	5	0	5
North Leg						
Approach	12	0	12	10	0	10
Departure	9	0	9	12	0	12
Total	21	0	21	22	0	22
South Leg						
Approach	673	47	720	505	32	537
Departure	593	16	609	460	53	513
Total	1,266	63	1,329	965	85	1,050
East Leg						
Approach	594	16	610	463	53	516
Departure	677	47	724	506	32	538
Total	1,271	63	1,334	969	85	1,054
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	1,279	63	1,342	978	85	1,063
Departure	1,279	63	1,342	978	85	1,063
Total	2,558	126	2,684	1,956	170	2,126

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Table C-3 - Horizon Year Peak Hour Volume Summary

	AM Peak Hour			PM Peak Hour		
	Horizon No Project	Net Project Trips	Horizon Plus Project	Horizon No Project	Net Project Trips	Horizon Plus Project
4 Road 63/Avenue 308						
NBL	13	0	13	23	0	23
NBT	160	47	207	194	32	226
NBR	15	2	17	12	1	13
SBL	323	0	323	107	0	107
SBT	145	16	161	169	53	222
SBR	126	0	126	184	0	184
EBL	164	0	164	154	0	154
EBT	39	0	39	23	0	23
EBR	23	0	23	15	0	15
WBL	5	1	6	4	2	6
WBT	27	0	27	36	0	36
WBR	350	0	350	157	0	157
North Leg						
Approach	594	16	610	460	53	513
Departure	674	47	721	505	32	537
Total	1,268	63	1,331	965	85	1,050
South Leg						
Approach	188	49	237	229	33	262
Departure	173	17	190	188	55	243
Total	361	66	427	417	88	505
East Leg						
Approach	382	1	383	197	2	199
Departure	377	2	379	142	1	143
Total	759	3	762	339	3	342
West Leg						
Approach	226	0	226	192	0	192
Departure	166	0	166	243	0	243
Total	392	0	392	435	0	435
Total Approaches						
Approach	1,390	66	1,456	1,078	88	1,166
Departure	1,390	66	1,456	1,078	88	1,166
Total	2,780	132	2,912	2,156	176	2,332

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Table C-3 - Horizon Year Peak Hour Volume Summary

	AM Peak Hour			PM Peak Hour		
	Horizon No Project	Net Project Trips	Horizon Plus Project	Horizon No Project	Net Project Trips	Horizon Plus Project
5 Road 63/Project Driveway 3-Kenyon Plastering Driveway						
NBL	0	8	8	0	27	27
NBT	172	0	172	205	0	205
NBR	6	0	6	3	0	3
SBL	6	0	6	1	0	1
SBT	153	0	153	169	0	169
SBR	0	17	17	0	55	55
EBL	0	49	49	0	33	33
EBT	0	0	0	0	0	0
EBR	0	24	24	0	16	16
WBL	5	0	5	4	0	4
WBT	0	0	0	0	0	0
WBR	4	0	4	2	0	2
North Leg						
Approach	159	17	176	170	55	225
Departure	176	49	225	207	33	240
Total	335	66	401	377	88	465
South Leg						
Approach	178	8	186	208	27	235
Departure	158	24	182	173	16	189
Total	336	32	368	381	43	424
East Leg						
Approach	9	0	9	6	0	6
Departure	12	0	12	4	0	4
Total	21	0	21	10	0	10
West Leg						
Approach	0	73	73	0	49	49
Departure	0	25	25	0	82	82
Total	0	98	98	0	131	131
Total Approaches						
Approach	346	98	444	384	131	515
Departure	346	98	444	384	131	515
Total	692	196	888	768	262	1,030

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Table C-3 - Horizon Year Peak Hour Volume Summary

	AM Peak Hour			PM Peak Hour		
	Horizon No Project	Net Project Trips	Horizon Plus Project	Horizon No Project	Net Project Trips	Horizon Plus Project
6 Road 64/Avenue 304						
NBL	48	28	76	24	91	115
NBT	119	7	126	109	23	132
NBR	37	0	37	23	0	23
SBL	43	3	46	38	2	40
SBT	48	21	69	118	14	132
SBR	69	0	69	62	0	62
EBL	76	0	76	108	0	108
EBT	19	3	22	24	2	26
EBR	81	81	162	37	54	91
WBL	15	0	15	29	0	29
WBT	13	1	14	13	4	17
WBR	34	1	35	51	4	55
North Leg						
Approach	160	24	184	218	16	234
Departure	229	8	237	268	27	295
Total	389	32	421	486	43	529
South Leg						
Approach	204	35	239	156	114	270
Departure	144	102	246	184	68	252
Total	348	137	485	340	182	522
East Leg						
Approach	62	2	64	93	8	101
Departure	99	6	105	85	4	89
Total	161	8	169	178	12	190
West Leg						
Approach	176	84	260	169	56	225
Departure	130	29	159	99	95	194
Total	306	113	419	268	151	419
Total Approaches						
Approach	602	145	747	636	194	830
Departure	602	145	747	636	194	830
Total	1,204	290	1,494	1,272	388	1,660

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Table C-3 - Horizon Year Peak Hour Volume Summary

		AM Peak Hour			PM Peak Hour		
		Horizon No Project	Net Project Trips	Horizon Plus Project	Horizon No Project	Net Project Trips	Horizon Plus Project
7	**Road 64/SR-198**						
NBL		0	0	0	0	0	0
NBT		0	0	0	0	0	0
NBR		0	0	0	0	0	0
SBL		52	101	153	101	68	169
SBT		0	0	0	0	0	0
SBR		98	0	98	96	0	96
EBL		49	0	49	98	0	98
EBT		1,560	0	1,560	1,862	0	1,862
EBR		0	0	0	0	0	0
WBL		0	0	0	0	0	0
WBT		1,968	0	1,968	1,594	0	1,594
WBR		203	35	238	75	115	190
North Leg							
	Approach	150	101	251	197	68	265
	Departure	252	35	287	173	115	288
	Total	402	136	538	370	183	553
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	2,171	35	2,206	1,669	115	1,784
	Departure	1,612	101	1,713	1,963	68	2,031
	Total	3,783	136	3,919	3,632	183	3,815
West Leg							
	Approach	1,609	0	1,609	1,960	0	1,960
	Departure	2,066	0	2,066	1,690	0	1,690
	Total	3,675	0	3,675	3,650	0	3,650
Total Approaches							
	Approach	3,930	136	4,066	3,826	183	4,009
	Departure	3,930	136	4,066	3,826	183	4,009
	Total	7,860	272	8,132	7,652	366	8,018

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Table C-3 - Horizon Year Peak Hour Volume Summary

		AM Peak Hour			PM Peak Hour		
		Horizon No Project	Net Project Trips	Horizon Plus Project	Horizon No Project	Net Project Trips	Horizon Plus Project
8	**SR-99 Southbound Ramps/Betty Drive**						
NBL		0	0	0	0	0	0
NBT		0	0	0	0	0	0
NBR		0	0	0	0	0	0
SBL		573	0	573	708	0	708
SBT		0	0	0	0	0	0
SBR		64	4	68	101	14	115
EBL		0	0	0	0	0	0
EBT		510	47	557	349	32	381
EBR		167	0	167	154	0	154
WBL		0	0	0	0	0	0
WBT		530	12	542	359	39	398
WBR		448	0	448	509	0	509
North Leg							
	Approach	637	4	641	809	14	823
	Departure	448	0	448	509	0	509
	Total	1,085	4	1,089	1,318	14	1,332
South Leg							
	Approach	0	0	0	0	0	0
	Departure	167	0	167	154	0	154
	Total	167	0	167	154	0	154
East Leg							
	Approach	978	12	990	868	39	907
	Departure	1,083	47	1,130	1,057	32	1,089
	Total	2,061	59	2,120	1,925	71	1,996
West Leg							
	Approach	677	47	724	503	32	535
	Departure	594	16	610	460	53	513
	Total	1,271	63	1,334	963	85	1,048
Total Approaches							
	Approach	2,292	63	2,355	2,180	85	2,265
	Departure	2,292	63	2,355	2,180	85	2,265
	Total	4,584	126	4,710	4,360	170	4,530

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Table C-3 - Horizon Year Peak Hour Volume Summary

	AM Peak Hour			PM Peak Hour		
	Horizon No Project	Net Project Trips	Horizon Plus Project	Horizon No Project	Net Project Trips	Horizon Plus Project
9 SR-99 Northbound Ramps/Betty Drive						
NBL	69	0	69	102	0	102
NBT	0	0	0	0	0	0
NBR	265	0	265	278	0	278
SBL	0	0	0	0	0	0
SBT	0	0	0	0	0	0
SBR	0	0	0	0	0	0
EBL	104	13	117	51	8	59
EBT	979	35	1,014	1,014	23	1,037
EBR	0	0	0	0	0	0
WBL	0	0	0	0	0	0
WBT	909	12	921	772	39	811
WBR	596	0	596	595	0	595
North Leg						
Approach	0	0	0	0	0	0
Departure	700	13	713	646	8	654
Total	700	13	713	646	8	654
South Leg						
Approach	334	0	334	380	0	380
Departure	0	0	0	0	0	0
Total	334	0	334	380	0	380
East Leg						
Approach	1,505	12	1,517	1,367	39	1,406
Departure	1,244	35	1,279	1,292	23	1,315
Total	2,749	47	2,796	2,659	62	2,721
West Leg						
Approach	1,083	48	1,131	1,065	31	1,096
Departure	978	12	990	874	39	913
Total	2,061	60	2,121	1,939	70	2,009
Total Approaches						
Approach	2,922	60	2,982	2,812	70	2,882
Departure	2,922	60	2,982	2,812	70	2,882
Total	5,844	120	5,964	5,624	140	5,764

APPENDIX D

LEVEL OF SERVICE WORKSHEETS



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	439	1	5	422	8	0
Future Volume (veh/h)	439	1	5	422	8	0
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	1811	1900	1900	1722	1722	1811
Adj Flow Rate, veh/h	549	1	0	532	10	0
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80
Percent Heavy Veh, %	6	0	0	12	12	6
Cap, veh/h	983	473	598	918	21	788
Arrive On Green	0.29	0.29	0.00	0.31	0.01	0.00
Sat Flow, veh/h	3346	1610	1900	2919	1640	1811
Grp Volume(v), veh/h	549	1	0	532	10	0
Grp Sat Flow(s),veh/h/ln	1673	1610	1900	1459	1640	1811
Q Serve(g_s), s	6.1	0.0	0.0	6.7	0.3	0.0
Cycle Q Clear(g_c), s	6.1	0.0	0.0	6.7	0.3	0.0
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	983	473	598	918	21	788
V/C Ratio(X)	0.56	0.00	0.00	0.58	0.47	0.00
Avail Cap(c_a), veh/h	2153	1036	1730	2657	573	1649
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	13.1	10.9	0.0	12.6	21.5	0.0
Incr Delay (d2), s/veh	1.3	0.0	0.0	1.2	5.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	0.0	0.0	1.7	0.1	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	14.4	10.9	0.0	13.8	27.2	0.0
LnGrp LOS	B	B	A	B	C	A
Approach Vol, veh/h	550		532			10
Approach Delay, s/veh	14.4		13.8			27.2
Approach LOS	B		B			C

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	5.3	18.9			24.2	19.7
Change Period (Y+Rc), s	* 4.7	5.1			5.1	6.8
Max Green Setting (Gmax), s	* 15	39.9			39.9	28.2
Max Q Clear Time (g_c+I1), s	2.3	8.7			0.0	8.1
Green Ext Time (p_c), s	0.0	5.1			0.0	4.8

Intersection Summary	
HCM 6th Ctrl Delay	14.2
HCM 6th LOS	B

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)	61	37	10	3	26	285	7	81	14	289	93	57
Future Volume (veh/h)	61	37	10	3	26	285	7	81	14	289	93	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	1767	1826	1796	1796	1752	1767	1752	1767	1826	1826	1796	1752
Adj Flow Rate, veh/h	74	45	12	4	32	348	9	99	17	352	113	70
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Percent Heavy Veh, %	9	5	7	7	10	9	10	9	5	5	7	10
Cap, veh/h	173	487	130	9	447	399	19	312	52	397	1078	825
Arrive On Green	0.05	0.35	0.35	0.01	0.27	0.27	0.01	0.11	0.11	0.23	0.32	0.32
Sat Flow, veh/h	3264	1389	370	1711	1664	1485	1668	2875	483	1739	3413	2613
Grp Volume(v), veh/h	74	0	57	4	32	348	9	57	59	352	113	70
Grp Sat Flow(s),veh/h/ln	1632	0	1759	1711	1664	1485	1668	1678	1680	1739	1706	1306
Q Serve(g_s), s	1.6	0.0	1.6	0.2	1.1	16.5	0.4	2.3	2.4	14.5	1.7	1.4
Cycle Q Clear(g_c), s	1.6	0.0	1.6	0.2	1.1	16.5	0.4	2.3	2.4	14.5	1.7	1.4
Prop In Lane	1.00		0.21	1.00		1.00	1.00		0.29	1.00		1.00
Lane Grp Cap(c), veh/h	173	0	616	9	447	399	19	182	182	397	1078	825
V/C Ratio(X)	0.43	0.00	0.09	0.44	0.07	0.87	0.47	0.31	0.32	0.89	0.10	0.08
Avail Cap(c_a), veh/h	566	0	616	355	507	453	443	550	551	478	1152	882
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	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.9	0.0	16.1	36.6	20.1	25.8	36.3	30.4	30.4	27.5	17.9	17.7
Incr Delay (d2), s/veh	1.7	0.0	0.1	11.8	0.1	17.7	6.6	2.5	2.7	15.8	0.1	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	0.6	0.0	0.6	0.1	0.4	7.3	0.2	1.0	1.0	7.2	0.6	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	35.5	0.0	16.2	48.4	20.3	43.4	42.9	32.9	33.1	43.4	18.0	17.8
LnGrp LOS	D	A	B	D	C	D	D	C	C	D	B	B
Approach Vol, veh/h		131			384			125			535	
Approach Delay, s/veh		27.1			41.5			33.7			34.7	
Approach LOS		C			D			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	21.5	13.8	5.1	33.3	6.2	29.1	11.1	27.3
Change Period (Y+Rc), s	* 4.7	5.8	* 4.7	7.5	5.4	* 5.8	7.2	7.5
Max Green Setting (Gmax), s	* 26	24.2	* 15	22.5	19.6	* 25	12.8	22.5
Max Q Clear Time (g_c+I1), s	16.5	4.4	2.2	3.6	2.4	3.7	3.6	18.5
Green Ext Time (p_c), s	0.4	1.0	0.0	0.2	0.0	1.6	0.1	1.3

Intersection Summary	
HCM 6th Ctrl Delay	36.0
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	0.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	5	1	94	6	3	79
Future Vol, veh/h	5	1	94	6	3	79
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	-	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	0	0	11	0	0	7
Mvmt Flow	5	1	103	7	3	87

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	200	107	0	0	110	0
Stage 1	107	-	-	-	-	-
Stage 2	93	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	793	953	-	-	1493	-
Stage 1	922	-	-	-	-	-
Stage 2	936	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	791	953	-	-	1493	-
Mov Cap-2 Maneuver	784	-	-	-	-	-
Stage 1	922	-	-	-	-	-
Stage 2	934	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.5	0	0.3
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	808	1493	-
HCM Lane V/C Ratio	-	-	0.008	0.002	-
HCM Control Delay (s)	-	-	9.5	7.4	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	0	0	-

Intersection	
Int Delay, s/veh	7.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	40	18	5	8	12	25	3	37	22	26	33	27
Future Vol, veh/h	40	18	5	8	12	25	3	37	22	26	33	27
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	-	-	-	-	-	-	-	-	-	-	-	150
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	83	83	83	83	83	83	83	83	83	83	83	83
Heavy Vehicles, %	11	9	7	7	14	11	14	11	9	9	7	14
Mvmt Flow	48	22	6	10	14	30	4	45	27	31	40	33

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	44	0	0	28	0	0	207	185	25	206	173	29
Stage 1	-	-	-	-	-	-	121	121	-	49	49	-
Stage 2	-	-	-	-	-	-	86	64	-	157	124	-
Critical Hdwy	4.21	-	-	4.17	-	-	7.24	6.61	6.29	7.19	6.57	6.34
Critical Hdwy Stg 1	-	-	-	-	-	-	6.24	5.61	-	6.19	5.57	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.24	5.61	-	6.19	5.57	-
Follow-up Hdwy	2.299	-	-	2.263	-	-	3.626	4.099	3.381	3.581	4.063	3.426
Pot Cap-1 Maneuver	1508	-	-	1554	-	-	725	693	1031	737	711	1012
Stage 1	-	-	-	-	-	-	855	779	-	947	844	-
Stage 2	-	-	-	-	-	-	893	824	-	829	784	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1508	-	-	1554	-	-	651	666	1031	661	683	1012
Mov Cap-2 Maneuver	-	-	-	-	-	-	651	666	-	661	683	-
Stage 1	-	-	-	-	-	-	828	754	-	917	838	-
Stage 2	-	-	-	-	-	-	818	818	-	736	759	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	4.7	1.3	10.2	10.3
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	761	1508	-	-	1554	-	-	673	1012
HCM Lane V/C Ratio	0.098	0.032	-	-	0.006	-	-	0.106	0.032
HCM Control Delay (s)	10.2	7.5	0	-	7.3	0	-	11	8.7
HCM Lane LOS	B	A	A	-	A	A	-	B	A
HCM 95th %tile Q(veh)	0.3	0.1	-	-	0	-	-	0.4	0.1

Intersection	
Int Delay, s/veh	6.9

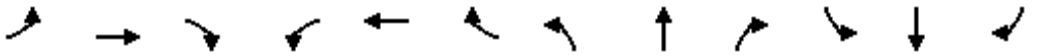
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	18	1185	1563	90	24	41
Future Vol, veh/h	18	1185	1563	90	24	41
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	470	-	-	480	0	1
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	13	7	8	13	7	8
Mvmt Flow	21	1394	1839	106	28	48

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1945	0	-	0	2578	920
Stage 1	-	-	-	-	1839	-
Stage 2	-	-	-	-	739	-
Critical Hdwy	4.36	-	-	-	6.94	7.06
Critical Hdwy Stg 1	-	-	-	-	5.94	-
Critical Hdwy Stg 2	-	-	-	-	5.94	-
Follow-up Hdwy	2.33	-	-	-	3.57	3.38
Pot Cap-1 Maneuver	258	-	-	-	~ 19	262
Stage 1	-	-	-	-	105	-
Stage 2	-	-	-	-	420	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	258	-	-	-	~ 17	262
Mov Cap-2 Maneuver	-	-	-	-	~ 17	-
Stage 1	-	-	-	-	96	-
Stage 2	-	-	-	-	420	-

Approach	EB	WB	SB
HCM Control Delay, s	0.3	0	$ 305.5
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	258	-	-	-	17	262
HCM Lane V/C Ratio	0.082	-	-	-	1.661	0.184
HCM Control Delay (s)	20.2	-	-	-	-$ 790.2	21.8
HCM Lane LOS	C	-	-	-	F	C
HCM 95th %tile Q(veh)	0.3	-	-	-	4	0.7

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↱		↑↑	↱				↰	✣	↱
Traffic Volume (veh/h)	0	309	121	0	383	252	0	0	0	240	0	57
Future Volume (veh/h)	0	309	121	0	383	252	0	0	0	240	0	57
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	0	1618	1707	0	1752	1530				1618	1707	1752
Adj Flow Rate, veh/h	0	343	0	0	426	0				287	0	42
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90				0.90	0.90	0.90
Percent Heavy Veh, %	0	19	13	0	10	25				19	13	10
Cap, veh/h	0	990		0	1072					774	0	373
Arrive On Green	0.00	0.32	0.00	0.00	0.32	0.00				0.25	0.00	0.25
Sat Flow, veh/h	0	3156	1447	0	3416	1296				3083	0	1485
Grp Volume(v), veh/h	0	343	0	0	426	0				287	0	42
Grp Sat Flow(s),veh/h/ln	0	1537	1447	0	1664	1296				1541	0	1485
Q Serve(g_s), s	0.0	2.7	0.0	0.0	3.2	0.0				2.4	0.0	0.7
Cycle Q Clear(g_c), s	0.0	2.7	0.0	0.0	3.2	0.0				2.4	0.0	0.7
Prop In Lane	0.00		1.00	0.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	990		0	1072					774	0	373
V/C Ratio(X)	0.00	0.35		0.00	0.40					0.37	0.00	0.11
Avail Cap(c_a), veh/h	0	2432		0	2633					2051	0	988
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	0.00	0.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	8.2	0.0	0.0	8.4	0.0				9.9	0.0	9.2
Incr Delay (d2), s/veh	0.0	0.6	0.0	0.0	0.7	0.0				0.5	0.0	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
%ile BackOfQ(50%),veh/ln	0.0	0.6	0.0	0.0	0.7	0.0				0.6	0.0	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	8.8	0.0	0.0	9.1	0.0				10.4	0.0	9.4
LnGrp LOS	A	A		A	A					B	A	A
Approach Vol, veh/h		343			426						329	
Approach Delay, s/veh		8.8			9.1						10.2	
Approach LOS		A			A						B	

Timer - Assigned Phs		2		4		6						
Phs Duration (G+Y+Rc), s		17.1		14.8		17.1						
Change Period (Y+Rc), s		6.8		6.8		6.8						
Max Green Setting (Gmax), s		25.2		21.2		25.2						
Max Q Clear Time (g_c+I1), s		4.7		4.4		5.2						
Green Ext Time (p_c), s		4.1		1.9		5.1						

Intersection Summary	
HCM 6th Ctrl Delay	9.4
HCM 6th LOS	A

Notes

User approved volume balancing among the lanes for turning movement.

Unsignalized Delay for [EBR, WBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	46	503	0	0	590	277	45	0	74	0	0	0
Future Volume (veh/h)	46	503	0	0	590	277	45	0	74	0	0	0
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	1663	1604	0	0	1693	1663	1693	1663	1604			
Adj Flow Rate, veh/h	55	599	0	0	702	330	36	0	107			
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84			
Percent Heavy Veh, %	16	20	0	0	14	16	14	16	20			
Cap, veh/h	169	1874	0	0	1244	545	230	0	388			
Arrive On Green	0.11	0.61	0.00	0.00	0.39	0.39	0.14	0.00	0.14			
Sat Flow, veh/h	1584	3127	0	0	3300	1409	1612	0	2718			
Grp Volume(v), veh/h	55	599	0	0	702	330	36	0	107			
Grp Sat Flow(s),veh/h/ln	1584	1523	0	0	1608	1409	1612	0	1359			
Q Serve(g_s), s	1.8	5.3	0.0	0.0	9.6	10.5	1.1	0.0	2.0			
Cycle Q Clear(g_c), s	1.8	5.3	0.0	0.0	9.6	10.5	1.1	0.0	2.0			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	169	1874	0	0	1244	545	230	0	388			
V/C Ratio(X)	0.32	0.32	0.00	0.00	0.56	0.61	0.16	0.00	0.28			
Avail Cap(c_a), veh/h	460	2672	0	0	1559	683	782	0	1318			
HCM Platoon Ratio	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	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	23.2	5.2	0.0	0.0	13.5	13.8	21.1	0.0	21.5			
Incr Delay (d2), s/veh	0.4	0.3	0.0	0.0	1.2	3.1	0.9	0.0	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			
%ile BackOfQ(50%),veh/ln	0.6	1.0	0.0	0.0	2.9	3.1	0.4	0.0	0.6			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.6	5.5	0.0	0.0	14.7	16.9	22.0	0.0	22.6			
LnGrp LOS	C	A	A	A	B	B	C	A	C			
Approach Vol, veh/h		654			1032			143				
Approach Delay, s/veh		7.0			15.4			22.4				
Approach LOS		A			B			C				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		41.3			12.8	28.5		14.8				
Change Period (Y+Rc), s		6.8			6.8	* 6.8		6.8				
Max Green Setting (Gmax), s		49.2			16.3	* 27		27.2				
Max Q Clear Time (g_c+I1), s		7.3			3.8	12.5		4.0				
Green Ext Time (p_c), s		10.0			0.0	9.2		1.2				

Intersection Summary	
HCM 6th Ctrl Delay	12.9
HCM 6th LOS	B

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	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	233	2	4	317	5	1
Future Volume (veh/h)	233	2	4	317	5	1
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	1796	1900	1900	1767	1767	1796
Adj Flow Rate, veh/h	268	2	0	367	6	1
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	7	0	0	9	9	7
Cap, veh/h	794	385	487	768	14	728
Arrive On Green	0.24	0.24	0.00	0.26	0.01	0.41
Sat Flow, veh/h	3319	1610	1900	2994	1682	1796
Grp Volume(v), veh/h	268	2	0	367	6	1
Grp Sat Flow(s),veh/h/ln	1659	1610	1900	1497	1682	1796
Q Serve(g_s), s	2.2	0.0	0.0	3.5	0.1	0.0
Cycle Q Clear(g_c), s	2.2	0.0	0.0	3.5	0.1	0.0
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	794	385	487	768	14	728
V/C Ratio(X)	0.34	0.01	0.00	0.48	0.44	0.00
Avail Cap(c_a), veh/h	2798	1357	2266	3571	770	2142
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	10.5	9.7	0.0	10.5	16.5	5.9
Incr Delay (d2), s/veh	0.7	0.0	0.0	1.0	8.1	0.0
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	0.0	0.8	0.1	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	11.2	9.7	0.0	11.5	24.6	5.9
LnGrp LOS	B	A	A	B	C	A
Approach Vol, veh/h	270		367			7
Approach Delay, s/veh	11.2		11.5			21.9
Approach LOS	B		B			C

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	5.0	13.7			18.7	14.8
Change Period (Y+Rc), s	* 4.7	5.1			5.1	6.8
Max Green Setting (Gmax), s	* 15	39.9			39.9	28.2
Max Q Clear Time (g_c+I1), s	2.1	5.5			2.0	4.2
Green Ext Time (p_c), s	0.0	3.4			0.0	2.3

Intersection Summary	
HCM 6th Ctrl Delay	11.5
HCM 6th LOS	B

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)	60	22	5	2	34	134	9	127	9	79	78	77
Future Volume (veh/h)	60	22	5	2	34	134	9	127	9	79	78	77
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	1737	1559	1693	1693	1722	1737	1722	1737	1559	1559	1693	1722
Adj Flow Rate, veh/h	67	24	6	2	38	149	10	141	10	88	87	86
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	11	23	14	14	12	11	12	11	23	23	14	12
Cap, veh/h	199	329	82	4	264	235	21	531	37	108	690	551
Arrive On Green	0.06	0.27	0.27	0.00	0.16	0.16	0.01	0.17	0.17	0.07	0.21	0.21
Sat Flow, veh/h	3209	1204	301	1612	1636	1459	1640	3128	220	1485	3216	2569
Grp Volume(v), veh/h	67	0	30	2	38	149	10	74	77	88	87	86
Grp Sat Flow(s),veh/h/ln	1605	0	1505	1612	1636	1459	1640	1650	1697	1485	1608	1284
Q Serve(g_s), s	0.9	0.0	0.7	0.1	0.9	4.5	0.3	1.8	1.9	2.8	1.0	1.3
Cycle Q Clear(g_c), s	0.9	0.0	0.7	0.1	0.9	4.5	0.3	1.8	1.9	2.8	1.0	1.3
Prop In Lane	1.00		0.20	1.00		1.00	1.00		0.13	1.00		1.00
Lane Grp Cap(c), veh/h	199	0	411	4	264	235	21	280	288	108	690	551
V/C Ratio(X)	0.34	0.00	0.07	0.45	0.14	0.63	0.47	0.26	0.27	0.82	0.13	0.16
Avail Cap(c_a), veh/h	871	0	718	523	781	697	682	847	871	640	1699	1357
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	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.2	0.0	12.7	23.5	17.0	18.5	23.1	17.0	17.0	21.5	14.9	15.0
Incr Delay (d2), s/veh	1.0	0.0	0.1	24.6	0.5	5.9	5.8	1.3	1.3	13.8	0.2	0.3
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	0.2	0.0	0.3	1.7	0.1	0.7	0.7	1.2	0.3	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	22.2	0.0	12.8	48.0	17.5	24.4	28.9	18.3	18.3	35.3	15.1	15.3
LnGrp LOS	C	A	B	D	B	C	C	B	B	D	B	B
Approach Vol, veh/h		97			189			161			261	
Approach Delay, s/veh		19.3			23.2			19.0			22.0	
Approach LOS		B			C			B			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.1	13.8	4.8	20.4	6.0	15.9	10.1	15.1
Change Period (Y+Rc), s	* 4.7	5.8	* 4.7	7.5	5.4	* 5.8	7.2	7.5
Max Green Setting (Gmax), s	* 3.4	24.2	* 15	22.5	19.6	* 25	12.8	22.5
Max Q Clear Time (g_c+I1), s	4.8	3.9	2.1	2.7	2.3	3.3	2.9	6.5
Green Ext Time (p_c), s	0.2	1.4	0.0	0.1	0.0	1.4	0.1	1.6

Intersection Summary	
HCM 6th Ctrl Delay	21.3
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	0.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	4	2	120	3	1	66
Future Vol, veh/h	4	2	120	3	1	66
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	-	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	0	18	0	0	13
Mvmt Flow	4	2	133	3	1	73

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	210	135	0	0	136	0
Stage 1	135	-	-	-	-	-
Stage 2	75	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	783	919	-	-	1461	-
Stage 1	896	-	-	-	-	-
Stage 2	953	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	782	919	-	-	1461	-
Mov Cap-2 Maneuver	776	-	-	-	-	-
Stage 1	896	-	-	-	-	-
Stage 2	952	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.4	0	0.1
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	818	1461	-
HCM Lane V/C Ratio	-	-	0.008	0.001	-
HCM Control Delay (s)	-	-	9.4	7.5	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	0	0	-

Intersection	
Int Delay, s/veh	6.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	60	22	9	14	13	29	5	32	12	22	22	22
Future Vol, veh/h	60	22	9	14	13	29	5	32	12	22	22	22
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	-	-	-	-	-	-	-	-	-	-	-	150
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	83	83	83	83	83	83	83	83	83	83	83	83
Heavy Vehicles, %	18	13	2	2	10	18	10	18	13	13	2	10
Mvmt Flow	72	27	11	17	16	35	6	39	14	27	27	27

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	51	0	0	38	0	0	272	262	33	271	250	34
Stage 1	-	-	-	-	-	-	177	177	-	68	68	-
Stage 2	-	-	-	-	-	-	95	85	-	203	182	-
Critical Hdwy	4.28	-	-	4.12	-	-	7.2	6.68	6.33	7.23	6.52	6.3
Critical Hdwy Stg 1	-	-	-	-	-	-	6.2	5.68	-	6.23	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.2	5.68	-	6.23	5.52	-
Follow-up Hdwy	2.362	-	-	2.218	-	-	3.59	4.162	3.417	3.617	4.018	3.39
Pot Cap-1 Maneuver	1459	-	-	1572	-	-	665	617	1010	660	653	1017
Stage 1	-	-	-	-	-	-	806	723	-	915	838	-
Stage 2	-	-	-	-	-	-	892	794	-	774	749	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1459	-	-	1572	-	-	598	580	1010	589	614	1017
Mov Cap-2 Maneuver	-	-	-	-	-	-	598	580	-	589	614	-
Stage 1	-	-	-	-	-	-	766	687	-	869	829	-
Stage 2	-	-	-	-	-	-	832	785	-	684	712	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	5	1.8	11.1	10.6
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	650	1459	-	-	1572	-	-	601	1017
HCM Lane V/C Ratio	0.091	0.05	-	-	0.011	-	-	0.088	0.026
HCM Control Delay (s)	11.1	7.6	0	-	7.3	0	-	11.6	8.6
HCM Lane LOS	B	A	A	-	A	A	-	B	A
HCM 95th %tile Q(veh)	0.3	0.2	-	-	0	-	-	0.3	0.1

Intersection	
Int Delay, s/veh	17.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	29	1688	1432	36	37	21
Future Vol, veh/h	29	1688	1432	36	37	21
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	470	-	-	480	0	1
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	15	4	5	15	4	5
Mvmt Flow	34	1963	1665	42	43	24

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1707	0	-	0	2715	833
Stage 1	-	-	-	-	1665	-
Stage 2	-	-	-	-	1050	-
Critical Hdwy	4.4	-	-	-	6.88	7
Critical Hdwy Stg 1	-	-	-	-	5.88	-
Critical Hdwy Stg 2	-	-	-	-	5.88	-
Follow-up Hdwy	2.35	-	-	-	3.54	3.35
Pot Cap-1 Maneuver	315	-	-	-	~ 16	306
Stage 1	-	-	-	-	136	-
Stage 2	-	-	-	-	293	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	315	-	-	-	~ 14	306
Mov Cap-2 Maneuver	-	-	-	-	~ 14	-
Stage 1	-	-	-	-	121	-
Stage 2	-	-	-	-	293	-

Approach	EB	WB	SB
HCM Control Delay, s	0.3	0	$ 954.2
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	315	-	-	-	14	306
HCM Lane V/C Ratio	0.107	-	-	-	3.073	0.08
HCM Control Delay (s)	17.8	-	-	-	$ 1485.7	17.8
HCM Lane LOS	C	-	-	-	F	C
HCM 95th %tile Q(veh)	0.4	-	-	-	6.2	0.3

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↱		↑↑	↱				↰	✣	↱
Traffic Volume (veh/h)	0	207	115	0	193	304	0	0	0	345	0	42
Future Volume (veh/h)	0	207	115	0	193	304	0	0	0	345	0	42
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	0	1678	1826	0	1752	1618				1678	1826	1752
Adj Flow Rate, veh/h	0	213	0	0	199	0				369	0	29
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97				0.97	0.97	0.97
Percent Heavy Veh, %	0	15	5	0	10	19				15	5	10
Cap, veh/h	0	1009		0	1053					809	0	376
Arrive On Green	0.00	0.32	0.00	0.00	0.32	0.00				0.25	0.00	0.25
Sat Flow, veh/h	0	3272	1547	0	3416	1372				3196	0	1485
Grp Volume(v), veh/h	0	213	0	0	199	0				369	0	29
Grp Sat Flow(s),veh/h/ln	0	1594	1547	0	1664	1372				1598	0	1485
Q Serve(g_s), s	0.0	1.5	0.0	0.0	1.4	0.0				3.1	0.0	0.5
Cycle Q Clear(g_c), s	0.0	1.5	0.0	0.0	1.4	0.0				3.1	0.0	0.5
Prop In Lane	0.00		1.00	0.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1009		0	1053					809	0	376
V/C Ratio(X)	0.00	0.21		0.00	0.19					0.46	0.00	0.08
Avail Cap(c_a), veh/h	0	2542		0	2654					2144	0	996
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	0.00	0.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	7.9	0.0	0.0	7.9	0.0				10.0	0.0	9.0
Incr Delay (d2), s/veh	0.0	0.3	0.0	0.0	0.3	0.0				0.7	0.0	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
%ile BackOfQ(50%),veh/ln	0.0	0.3	0.0	0.0	0.3	0.0				0.8	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	8.2	0.0	0.0	8.1	0.0				10.7	0.0	9.1
LnGrp LOS	A	A		A	A					B	A	A
Approach Vol, veh/h		213			199						398	
Approach Delay, s/veh		8.2			8.1						10.5	
Approach LOS		A			A						B	

Timer - Assigned Phs		2		4		6						
Phs Duration (G+Y+Rc), s		16.8		14.8		16.8						
Change Period (Y+Rc), s		6.8		6.8		6.8						
Max Green Setting (Gmax), s		25.2		21.2		25.2						
Max Q Clear Time (g_c+I1), s		3.5		5.1		3.4						
Green Ext Time (p_c), s		2.4		2.4		2.2						

Intersection Summary	
HCM 6th Ctrl Delay	9.3
HCM 6th LOS	A

Notes

User approved volume balancing among the lanes for turning movement.

Unsignalized Delay for [EBR, WBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	42	510	0	0	443	245	54	0	68	0	0	0
Future Volume (veh/h)	42	510	0	0	443	245	54	0	68	0	0	0
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	1648	1648	0	0	1663	1648	1663	1648	1648			
Adj Flow Rate, veh/h	43	526	0	0	457	253	80	0	44			
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97			
Percent Heavy Veh, %	17	17	0	0	16	17	16	17	17			
Cap, veh/h	184	1812	0	0	1040	460	494	0	218			
Arrive On Green	0.12	0.58	0.00	0.00	0.33	0.33	0.16	0.00	0.16			
Sat Flow, veh/h	1570	3214	0	0	3243	1397	3167	0	1397			
Grp Volume(v), veh/h	43	526	0	0	457	253	80	0	44			
Grp Sat Flow(s),veh/h/ln	1570	1566	0	0	1580	1397	1584	0	1397			
Q Serve(g_s), s	1.3	4.4	0.0	0.0	5.8	7.6	1.1	0.0	1.4			
Cycle Q Clear(g_c), s	1.3	4.4	0.0	0.0	5.8	7.6	1.1	0.0	1.4			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	184	1812	0	0	1040	460	494	0	218			
V/C Ratio(X)	0.23	0.29	0.00	0.00	0.44	0.55	0.16	0.00	0.20			
Avail Cap(c_a), veh/h	499	3004	0	0	1676	741	1680	0	741			
HCM Platoon Ratio	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	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	20.6	5.5	0.0	0.0	13.5	14.1	18.7	0.0	18.9			
Incr Delay (d2), s/veh	0.2	0.3	0.0	0.0	0.9	3.0	0.4	0.0	1.3			
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	0.4	0.8	0.0	0.0	1.7	2.2	0.4	0.0	0.5			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	20.8	5.7	0.0	0.0	14.3	17.1	19.2	0.0	20.2			
LnGrp LOS	C	A	A	A	B	B	B	A	C			
Approach Vol, veh/h		569			710			124				
Approach Delay, s/veh		6.9			15.3			19.5				
Approach LOS		A			B			B				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		36.5			12.8	23.7		14.8				
Change Period (Y+Rc), s		6.8			6.8	* 6.8		6.8				
Max Green Setting (Gmax), s		49.2			16.3	* 27		27.2				
Max Q Clear Time (g_c+I1), s		6.4			3.3	9.6		3.4				
Green Ext Time (p_c), s		8.5			0.0	7.3		1.0				

Intersection Summary	
HCM 6th Ctrl Delay	12.3
HCM 6th LOS	B

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.

Intersection	
Int Delay, s/veh	2.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	1	63	43	16	46	2
Future Vol, veh/h	1	63	43	16	46	2
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	9	14	0	0	0
Mvmt Flow	1	68	47	17	50	2

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	64	0	-	0	126	56
Stage 1	-	-	-	-	56	-
Stage 2	-	-	-	-	70	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1551	-	-	-	874	1016
Stage 1	-	-	-	-	972	-
Stage 2	-	-	-	-	958	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1551	-	-	-	873	1016
Mov Cap-2 Maneuver	-	-	-	-	873	-
Stage 1	-	-	-	-	971	-
Stage 2	-	-	-	-	958	-

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	9.4
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1551	-	-	-	878
HCM Lane V/C Ratio	0.001	-	-	-	0.059
HCM Control Delay (s)	7.3	0	-	-	9.4
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0.2

Intersection	
Int Delay, s/veh	1.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	109	59	0	38	0
Future Vol, veh/h	0	109	59	0	38	0
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	9	14	0	0	0
Mvmt Flow	0	118	64	0	41	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	64	0	-	0	182	64
Stage 1	-	-	-	-	64	-
Stage 2	-	-	-	-	118	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1551	-	-	-	812	1006
Stage 1	-	-	-	-	964	-
Stage 2	-	-	-	-	912	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1551	-	-	-	812	1006
Mov Cap-2 Maneuver	-	-	-	-	812	-
Stage 1	-	-	-	-	964	-
Stage 2	-	-	-	-	912	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	9.7
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1551	-	-	-	812
HCM Lane V/C Ratio	-	-	-	-	0.051
HCM Control Delay (s)	0	-	-	-	9.7
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0.2



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	455	1	5	469	8	0
Future Volume (veh/h)	455	1	5	469	8	0
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	1811	1900	1900	1722	1722	1811
Adj Flow Rate, veh/h	569	1	0	590	10	0
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80
Percent Heavy Veh, %	6	0	0	12	12	6
Cap, veh/h	984	473	636	977	21	814
Arrive On Green	0.29	0.29	0.00	0.33	0.01	0.00
Sat Flow, veh/h	3346	1610	1900	2919	1640	1811
Grp Volume(v), veh/h	569	1	0	590	10	0
Grp Sat Flow(s),veh/h/ln	1673	1610	1900	1459	1640	1811
Q Serve(g_s), s	6.7	0.0	0.0	7.8	0.3	0.0
Cycle Q Clear(g_c), s	6.7	0.0	0.0	7.8	0.3	0.0
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	984	473	636	977	21	814
V/C Ratio(X)	0.58	0.00	0.00	0.60	0.47	0.00
Avail Cap(c_a), veh/h	2036	979	1635	2512	541	1559
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	13.9	11.6	0.0	12.9	22.7	0.0
Incr Delay (d2), s/veh	1.4	0.0	0.0	1.3	5.8	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	0.0	0.0	2.0	0.1	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	15.3	11.6	0.0	14.1	28.5	0.0
LnGrp LOS	B	B	A	B	C	A
Approach Vol, veh/h	570		590			10
Approach Delay, s/veh	15.3		14.1			28.5
Approach LOS	B		B			C

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	5.3	20.6			25.9	20.4
Change Period (Y+Rc), s	* 4.7	5.1			5.1	6.8
Max Green Setting (Gmax), s	* 15	39.9			39.9	28.2
Max Q Clear Time (g_c+I1), s	2.3	9.8			0.0	8.7
Green Ext Time (p_c), s	0.0	5.7			0.0	4.9

Intersection Summary		
HCM 6th Ctrl Delay		14.8
HCM 6th LOS		B

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)	61	37	10	4	26	285	7	128	16	289	109	57
Future Volume (veh/h)	61	37	10	4	26	285	7	128	16	289	109	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	1767	1826	1796	1796	1752	1767	1752	1767	1826	1826	1796	1752
Adj Flow Rate, veh/h	74	45	12	5	32	348	9	156	20	352	133	70
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Percent Heavy Veh, %	9	5	7	7	10	9	10	9	5	5	7	10
Cap, veh/h	173	485	129	11	447	399	19	325	41	397	1078	825
Arrive On Green	0.05	0.35	0.35	0.01	0.27	0.27	0.01	0.11	0.11	0.23	0.32	0.32
Sat Flow, veh/h	3264	1389	370	1711	1664	1485	1668	2998	379	1739	3413	2613
Grp Volume(v), veh/h	74	0	57	5	32	348	9	86	90	352	133	70
Grp Sat Flow(s),veh/h/ln	1632	0	1759	1711	1664	1485	1668	1678	1698	1739	1706	1306
Q Serve(g_s), s	1.6	0.0	1.6	0.2	1.1	16.5	0.4	3.6	3.7	14.5	2.0	1.4
Cycle Q Clear(g_c), s	1.6	0.0	1.6	0.2	1.1	16.5	0.4	3.6	3.7	14.5	2.0	1.4
Prop In Lane	1.00		0.21	1.00		1.00	1.00		0.22	1.00		1.00
Lane Grp Cap(c), veh/h	173	0	614	11	447	399	19	182	184	397	1078	825
V/C Ratio(X)	0.43	0.00	0.09	0.44	0.07	0.87	0.47	0.47	0.49	0.89	0.12	0.08
Avail Cap(c_a), veh/h	566	0	614	355	507	453	443	550	557	478	1152	882
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	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.9	0.0	16.2	36.5	20.1	25.8	36.3	30.9	31.0	27.5	18.0	17.7
Incr Delay (d2), s/veh	1.7	0.0	0.1	9.8	0.1	17.7	6.6	4.9	5.1	15.8	0.1	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	0.6	0.0	0.6	0.1	0.4	7.3	0.2	1.6	1.7	7.2	0.7	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	35.5	0.0	16.2	46.3	20.3	43.4	42.9	35.9	36.1	43.4	18.1	17.8
LnGrp LOS	D	A	B	D	C	D	D	D	D	D	B	B
Approach Vol, veh/h		131			385			185			555	
Approach Delay, s/veh		27.1			41.5			36.3			34.1	
Approach LOS		C			D			D			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	21.5	13.8	5.2	33.3	6.2	29.1	11.1	27.3
Change Period (Y+Rc), s	* 4.7	5.8	* 4.7	7.5	5.4	* 5.8	7.2	7.5
Max Green Setting (Gmax), s	* 20	24.2	* 15	22.5	19.6	* 25	12.8	22.5
Max Q Clear Time (g_c+I1), s	16.5	5.7	2.2	3.6	2.4	4.0	3.6	18.5
Green Ext Time (p_c), s	0.4	1.6	0.0	0.2	0.0	1.8	0.1	1.3

Intersection Summary	
HCM 6th Ctrl Delay	36.0
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔		↰	↑		↰	↑	
Traffic Vol, veh/h	49	0	24	5	0	1	8	94	6	3	79	17
Future Vol, veh/h	49	0	24	5	0	1	8	94	6	3	79	17
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	0	0	0	0	0	0	0	11	0	0	7	0
Mvmt Flow	54	0	26	5	0	1	9	103	7	3	87	19

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	228	231	97	241	237	107	106	0	0	110	0	0
Stage 1	103	103	-	125	125	-	-	-	-	-	-	-
Stage 2	125	128	-	116	112	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	731	672	965	717	667	953	1498	-	-	1493	-	-
Stage 1	908	814	-	884	796	-	-	-	-	-	-	-
Stage 2	884	794	-	894	807	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	726	667	965	693	662	953	1498	-	-	1493	-	-
Mov Cap-2 Maneuver	726	667	-	693	662	-	-	-	-	-	-	-
Stage 1	903	812	-	879	791	-	-	-	-	-	-	-
Stage 2	878	789	-	868	805	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	10.1	10	0.5	0.2
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1498	-	-	790	726	1493	-	-
HCM Lane V/C Ratio	0.006	-	-	0.102	0.009	0.002	-	-
HCM Control Delay (s)	7.4	-	-	10.1	10	7.4	-	-
HCM Lane LOS	A	-	-	B	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.3	0	0	-	-

Intersection	
Int Delay, s/veh	6.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	40	21	86	8	13	26	31	44	22	29	54	27
Future Vol, veh/h	40	21	86	8	13	26	31	44	22	29	54	27
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	-	-	-	-	-	-	-	-	-	-	-	150
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	83	83	83	83	83	83	83	83	83	83	83	83
Heavy Vehicles, %	11	9	7	7	14	11	14	11	9	9	7	14
Mvmt Flow	48	25	104	10	16	31	37	53	27	35	65	33

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	47	0	0	129	0	0	274	240	77	265	277	32
Stage 1	-	-	-	-	-	-	173	173	-	52	52	-
Stage 2	-	-	-	-	-	-	101	67	-	213	225	-
Critical Hdwy	4.21	-	-	4.17	-	-	7.24	6.61	6.29	7.19	6.57	6.34
Critical Hdwy Stg 1	-	-	-	-	-	-	6.24	5.61	-	6.19	5.57	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.24	5.61	-	6.19	5.57	-
Follow-up Hdwy	2.299	-	-	2.263	-	-	3.626	4.099	3.381	3.581	4.063	3.426
Pot Cap-1 Maneuver	1505	-	-	1426	-	-	655	646	965	674	622	1008
Stage 1	-	-	-	-	-	-	802	739	-	943	842	-
Stage 2	-	-	-	-	-	-	876	822	-	773	708	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1505	-	-	1426	-	-	563	619	965	593	596	1008
Mov Cap-2 Maneuver	-	-	-	-	-	-	563	619	-	593	596	-
Stage 1	-	-	-	-	-	-	774	713	-	910	836	-
Stage 2	-	-	-	-	-	-	776	816	-	672	683	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	2	1.3	11.7	11.4
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	651	1505	-	-	1426	-	-	595	1008
HCM Lane V/C Ratio	0.18	0.032	-	-	0.007	-	-	0.168	0.032
HCM Control Delay (s)	11.7	7.5	0	-	7.5	0	-	12.3	8.7
HCM Lane LOS	B	A	A	-	A	A	-	B	A
HCM 95th %tile Q(veh)	0.7	0.1	-	-	0	-	-	0.6	0.1

Intersection	
Int Delay, s/veh	159.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	18	1185	1563	125	125	41
Future Vol, veh/h	18	1185	1563	125	125	41
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	470	-	-	480	0	1
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	13	7	8	13	7	8
Mvmt Flow	21	1394	1839	147	147	48

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1986	0	-	0	2578	920
Stage 1	-	-	-	-	1839	-
Stage 2	-	-	-	-	739	-
Critical Hdwy	4.36	-	-	-	6.94	7.06
Critical Hdwy Stg 1	-	-	-	-	5.94	-
Critical Hdwy Stg 2	-	-	-	-	5.94	-
Follow-up Hdwy	2.33	-	-	-	3.57	3.38
Pot Cap-1 Maneuver	248	-	-	-	~ 19	262
Stage 1	-	-	-	-	~ 105	-
Stage 2	-	-	-	-	420	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	248	-	-	-	~ 17	262
Mov Cap-2 Maneuver	-	-	-	-	~ 17	-
Stage 1	-	-	-	-	~ 96	-
Stage 2	-	-	-	-	420	-

Approach	EB	WB	SB
HCM Control Delay, s	0.3	0	$ 2930.3
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	248	-	-	-	17	262
HCM Lane V/C Ratio	0.085	-	-	-	8.651	0.184
HCM Control Delay (s)	20.9	-	-	-	$ 3884.3	21.8
HCM Lane LOS	C	-	-	-	F	C
HCM 95th %tile Q(veh)	0.3	-	-	-	19.1	0.7

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	356	121	0	395	252	0	0	0	240	0	61
Future Volume (veh/h)	0	356	121	0	395	252	0	0	0	240	0	61
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	0	1618	1707	0	1752	1530				1618	1707	1752
Adj Flow Rate, veh/h	0	396	0	0	439	0				288	0	45
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90				0.90	0.90	0.90
Percent Heavy Veh, %	0	19	13	0	10	25				19	13	10
Cap, veh/h	0	1007		0	1090					768	0	370
Arrive On Green	0.00	0.33	0.00	0.00	0.33	0.00				0.25	0.00	0.25
Sat Flow, veh/h	0	3156	1447	0	3416	1296				3083	0	1485
Grp Volume(v), veh/h	0	396	0	0	439	0				288	0	45
Grp Sat Flow(s),veh/h/ln	0	1537	1447	0	1664	1296				1541	0	1485
Q Serve(g_s), s	0.0	3.2	0.0	0.0	3.3	0.0				2.5	0.0	0.8
Cycle Q Clear(g_c), s	0.0	3.2	0.0	0.0	3.3	0.0				2.5	0.0	0.8
Prop In Lane	0.00		1.00	0.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1007		0	1090					768	0	370
V/C Ratio(X)	0.00	0.39		0.00	0.40					0.38	0.00	0.12
Avail Cap(c_a), veh/h	0	2412		0	2611					2034	0	980
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	0.00	0.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	8.3	0.0	0.0	8.4	0.0				10.0	0.0	9.3
Incr Delay (d2), s/veh	0.0	0.7	0.0	0.0	0.7	0.0				0.5	0.0	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
%ile BackOfQ(50%),veh/ln	0.0	0.7	0.0	0.0	0.7	0.0				0.6	0.0	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	9.1	0.0	0.0	9.1	0.0				10.5	0.0	9.6
LnGrp LOS	A	A		A	A					B	A	A
Approach Vol, veh/h		396			439						333	
Approach Delay, s/veh		9.1			9.1						10.4	
Approach LOS		A			A						B	

Timer - Assigned Phs		2		4		6						
Phs Duration (G+Y+Rc), s		17.3		14.8		17.3						
Change Period (Y+Rc), s		6.8		6.8		6.8						
Max Green Setting (Gmax), s		25.2		21.2		25.2						
Max Q Clear Time (g_c+I1), s		5.2		4.5		5.3						
Green Ext Time (p_c), s		4.7		1.9		5.2						

Intersection Summary	
HCM 6th Ctrl Delay	9.4
HCM 6th LOS	A

Notes

User approved volume balancing among the lanes for turning movement.

Unsignalized Delay for [EBR, WBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	59	538	0	0	602	277	45	0	74	0	0	0
Future Volume (veh/h)	59	538	0	0	602	277	45	0	74	0	0	0
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	1663	1604	0	0	1693	1663	1693	1663	1604			
Adj Flow Rate, veh/h	70	640	0	0	717	330	36	0	107			
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84			
Percent Heavy Veh, %	16	20	0	0	14	16	14	16	20			
Cap, veh/h	169	1876	0	0	1248	547	229	0	387			
Arrive On Green	0.11	0.62	0.00	0.00	0.39	0.39	0.14	0.00	0.14			
Sat Flow, veh/h	1584	3127	0	0	3300	1409	1612	0	2718			
Grp Volume(v), veh/h	70	640	0	0	717	330	36	0	107			
Grp Sat Flow(s),veh/h/ln	1584	1523	0	0	1608	1409	1612	0	1359			
Q Serve(g_s), s	2.3	5.7	0.0	0.0	9.9	10.5	1.1	0.0	2.0			
Cycle Q Clear(g_c), s	2.3	5.7	0.0	0.0	9.9	10.5	1.1	0.0	2.0			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	169	1876	0	0	1248	547	229	0	387			
V/C Ratio(X)	0.41	0.34	0.00	0.00	0.57	0.60	0.16	0.00	0.28			
Avail Cap(c_a), veh/h	459	2666	0	0	1556	682	780	0	1315			
HCM Platoon Ratio	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	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	23.5	5.3	0.0	0.0	13.5	13.7	21.2	0.0	21.5			
Incr Delay (d2), s/veh	0.6	0.3	0.0	0.0	1.2	3.1	0.9	0.0	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			
%ile BackOfQ(50%),veh/ln	0.8	1.1	0.0	0.0	3.0	3.1	0.4	0.0	0.6			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	24.1	5.6	0.0	0.0	14.8	16.8	22.1	0.0	22.6			
LnGrp LOS	C	A	A	A	B	B	C	A	C			
Approach Vol, veh/h		710			1047			143				
Approach Delay, s/veh		7.4			15.4			22.5				
Approach LOS		A			B			C				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		41.4			12.8	28.6		14.8				
Change Period (Y+Rc), s		6.8			6.8	* 6.8		6.8				
Max Green Setting (Gmax), s		49.2			16.3	* 27		27.2				
Max Q Clear Time (g_c+I1), s		7.7			4.3	12.5		4.0				
Green Ext Time (p_c), s		10.8			0.0	9.3		1.2				

Intersection Summary	
HCM 6th Ctrl Delay	13.0
HCM 6th LOS	B

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.

Intersection	
Int Delay, s/veh	1.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	2	91	41	52	31	1
Future Vol, veh/h	2	91	41	52	31	1
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	13	10	0	0	0
Mvmt Flow	2	99	45	57	34	1

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	102	0	-	0	177	74
Stage 1	-	-	-	-	74	-
Stage 2	-	-	-	-	103	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1503	-	-	-	817	993
Stage 1	-	-	-	-	954	-
Stage 2	-	-	-	-	926	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1503	-	-	-	816	993
Mov Cap-2 Maneuver	-	-	-	-	816	-
Stage 1	-	-	-	-	953	-
Stage 2	-	-	-	-	926	-

Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	9.6
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1503	-	-	-	821
HCM Lane V/C Ratio	0.001	-	-	-	0.042
HCM Control Delay (s)	7.4	0	-	-	9.6
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0.1

Intersection	
Int Delay, s/veh	1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	122	93	0	25	0
Future Vol, veh/h	0	122	93	0	25	0
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	13	10	0	0	0
Mvmt Flow	0	133	101	0	27	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	101	0	-	0	234	101
Stage 1	-	-	-	-	101	-
Stage 2	-	-	-	-	133	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1504	-	-	-	759	960
Stage 1	-	-	-	-	928	-
Stage 2	-	-	-	-	898	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1504	-	-	-	759	960
Mov Cap-2 Maneuver	-	-	-	-	759	-
Stage 1	-	-	-	-	928	-
Stage 2	-	-	-	-	898	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	9.9
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1504	-	-	-	759
HCM Lane V/C Ratio	-	-	-	-	0.036
HCM Control Delay (s)	0	-	-	-	9.9
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0.1



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	286	2	4	349	5	1
Future Volume (veh/h)	286	2	4	349	5	1
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	1796	1900	1900	1767	1767	1796
Adj Flow Rate, veh/h	329	2	0	404	6	1
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	7	0	0	9	9	7
Cap, veh/h	773	375	523	825	14	755
Arrive On Green	0.23	0.23	0.00	0.28	0.01	0.42
Sat Flow, veh/h	3319	1610	1900	2994	1682	1796
Grp Volume(v), veh/h	329	2	0	404	6	1
Grp Sat Flow(s),veh/h/ln	1659	1610	1900	1497	1682	1796
Q Serve(g_s), s	2.9	0.0	0.0	3.9	0.1	0.0
Cycle Q Clear(g_c), s	2.9	0.0	0.0	3.9	0.1	0.0
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	773	375	523	825	14	755
V/C Ratio(X)	0.43	0.01	0.00	0.49	0.44	0.00
Avail Cap(c_a), veh/h	2726	1323	2208	3480	750	2087
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	11.2	10.1	0.0	10.4	17.0	5.8
Incr Delay (d2), s/veh	1.0	0.0	0.0	1.0	8.1	0.0
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	0.0	0.9	0.1	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	12.2	10.1	0.0	11.4	25.0	5.8
LnGrp LOS	B	B	A	B	C	A
Approach Vol, veh/h	331		404			7
Approach Delay, s/veh	12.2		11.4			22.3
Approach LOS	B		B			C

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	5.0	14.6			19.5	14.8
Change Period (Y+Rc), s	* 4.7	5.1			5.1	6.8
Max Green Setting (Gmax), s	* 15	39.9			39.9	28.2
Max Q Clear Time (g_c+I1), s	2.1	5.9			2.0	4.9
Green Ext Time (p_c), s	0.0	3.8			0.0	2.9

Intersection Summary	
HCM 6th Ctrl Delay	11.8
HCM 6th LOS	B

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)	60	22	5	4	34	134	9	159	10	79	131	77
Future Volume (veh/h)	60	22	5	4	34	134	9	159	10	79	131	77
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	1737	1559	1693	1693	1722	1737	1722	1737	1559	1559	1693	1722
Adj Flow Rate, veh/h	67	24	6	4	38	149	10	177	11	88	146	86
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	11	23	14	14	12	11	12	11	23	23	14	12
Cap, veh/h	320	259	65	161	271	242	21	504	31	106	658	525
Arrive On Green	0.10	0.22	0.22	0.10	0.17	0.17	0.01	0.16	0.16	0.07	0.20	0.20
Sat Flow, veh/h	3209	1204	301	1612	1636	1459	1640	3157	195	1485	3216	2569
Grp Volume(v), veh/h	67	0	30	4	38	149	10	92	96	88	146	86
Grp Sat Flow(s),veh/h/ln	1605	0	1505	1612	1636	1459	1640	1650	1702	1485	1608	1284
Q Serve(g_s), s	1.0	0.0	0.8	0.1	1.0	4.8	0.3	2.5	2.5	2.9	1.9	1.4
Cycle Q Clear(g_c), s	1.0	0.0	0.8	0.1	1.0	4.8	0.3	2.5	2.5	2.9	1.9	1.4
Prop In Lane	1.00		0.20	1.00		1.00	1.00		0.11	1.00		1.00
Lane Grp Cap(c), veh/h	320	0	324	161	271	242	21	264	272	106	658	525
V/C Ratio(X)	0.21	0.00	0.09	0.02	0.14	0.62	0.47	0.35	0.35	0.83	0.22	0.16
Avail Cap(c_a), veh/h	820	0	676	492	735	656	642	797	822	602	1599	1277
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	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.7	0.0	15.7	20.3	17.8	19.4	24.5	18.7	18.7	22.9	16.6	16.4
Incr Delay (d2), s/veh	0.3	0.0	0.1	0.0	0.5	5.4	5.9	2.1	2.0	14.7	0.4	0.3
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	0.2	0.0	0.4	1.7	0.1	0.9	1.0	1.3	0.6	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	21.0	0.0	15.8	20.4	18.4	24.8	30.4	20.8	20.8	37.6	17.0	16.7
LnGrp LOS	C	A	B	C	B	C	C	C	C	D	B	B
Approach Vol, veh/h		97			191			198			320	
Approach Delay, s/veh		19.4			23.4			21.3			22.6	
Approach LOS		B			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.3	13.8	9.7	18.3	6.0	16.0	12.2	15.8
Change Period (Y+Rc), s	* 4.7	5.8	* 4.7	7.5	5.4	* 5.8	7.2	7.5
Max Green Setting (Gmax), s	* 3.6	24.2	* 15	22.5	19.6	* 25	12.8	22.5
Max Q Clear Time (g_c+I1), s	4.9	4.5	2.1	2.8	2.3	3.9	3.0	6.8
Green Ext Time (p_c), s	0.2	1.8	0.0	0.1	0.0	2.1	0.1	1.5

Intersection Summary	
HCM 6th Ctrl Delay	22.1
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	2.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔		↰	↱		↰	↱	
Traffic Vol, veh/h	33	0	16	4	0	2	27	120	3	1	66	55
Future Vol, veh/h	33	0	16	4	0	2	27	120	3	1	66	55
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	0	0	0	0	0	0	0	18	0	0	13	0
Mvmt Flow	37	0	18	4	0	2	30	133	3	1	73	61

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	302	302	104	310	331	135	134	0	0	136	0	0
Stage 1	106	106	-	195	195	-	-	-	-	-	-	-
Stage 2	196	196	-	115	136	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	654	614	956	646	592	919	1463	-	-	1461	-	-
Stage 1	905	811	-	811	743	-	-	-	-	-	-	-
Stage 2	810	742	-	895	788	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	642	600	956	624	579	919	1463	-	-	1461	-	-
Mov Cap-2 Maneuver	642	600	-	624	579	-	-	-	-	-	-	-
Stage 1	886	810	-	794	727	-	-	-	-	-	-	-
Stage 2	791	726	-	878	787	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	10.4	10.2	1.4	0.1
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1463	-	-	719	699	1461	-	-
HCM Lane V/C Ratio	0.021	-	-	0.076	0.01	0.001	-	-
HCM Control Delay (s)	7.5	-	-	10.4	10.2	7.5	-	-
HCM Lane LOS	A	-	-	B	B	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.2	0	0	-	-

Intersection	
Int Delay, s/veh	8.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	60	24	63	14	17	33	96	55	12	24	36	22
Future Vol, veh/h	60	24	63	14	17	33	96	55	12	24	36	22
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	-	-	-	-	-	-	-	-	-	-	-	150
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	83	83	83	83	83	83	83	83	83	83	83	83
Heavy Vehicles, %	18	13	2	2	10	18	10	18	13	13	2	10
Mvmt Flow	72	29	76	17	20	40	116	66	14	29	43	27

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	60	0	0	105	0	0	320	305	67	325	323	40
Stage 1	-	-	-	-	-	-	211	211	-	74	74	-
Stage 2	-	-	-	-	-	-	109	94	-	251	249	-
Critical Hdwy	4.28	-	-	4.12	-	-	7.2	6.68	6.33	7.23	6.52	6.3
Critical Hdwy Stg 1	-	-	-	-	-	-	6.2	5.68	-	6.23	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.2	5.68	-	6.23	5.52	-
Follow-up Hdwy	2.362	-	-	2.218	-	-	3.59	4.162	3.417	3.617	4.018	3.39
Pot Cap-1 Maneuver	1447	-	-	1486	-	-	618	583	967	607	595	1009
Stage 1	-	-	-	-	-	-	773	699	-	909	833	-
Stage 2	-	-	-	-	-	-	877	787	-	729	701	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1447	-	-	1486	-	-	538	546	967	516	557	1009
Mov Cap-2 Maneuver	-	-	-	-	-	-	538	546	-	516	557	-
Stage 1	-	-	-	-	-	-	732	662	-	861	823	-
Stage 2	-	-	-	-	-	-	799	778	-	612	664	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	3.1	1.6	14.9	11.6
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	559	1447	-	-	1486	-	-	540	1009
HCM Lane V/C Ratio	0.351	0.05	-	-	0.011	-	-	0.134	0.026
HCM Control Delay (s)	14.9	7.6	0	-	7.5	0	-	12.7	8.7
HCM Lane LOS	B	A	A	-	A	A	-	B	A
HCM 95th %tile Q(veh)	1.6	0.2	-	-	0	-	-	0.5	0.1

Intersection	
Int Delay, s/veh	123

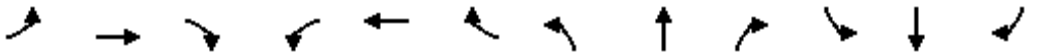
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	29	1688	1432	151	105	21
Future Vol, veh/h	29	1688	1432	151	105	21
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	470	-	-	480	0	1
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	15	4	5	15	4	5
Mvmt Flow	34	1963	1665	176	122	24

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1841	0	-	0	2715	833
Stage 1	-	-	-	-	1665	-
Stage 2	-	-	-	-	1050	-
Critical Hdwy	4.4	-	-	-	6.88	7
Critical Hdwy Stg 1	-	-	-	-	5.88	-
Critical Hdwy Stg 2	-	-	-	-	5.88	-
Follow-up Hdwy	2.35	-	-	-	3.54	3.35
Pot Cap-1 Maneuver	277	-	-	-	~ 16	306
Stage 1	-	-	-	-	136	-
Stage 2	-	-	-	-	293	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	277	-	-	-	~ 14	306
Mov Cap-2 Maneuver	-	-	-	-	~ 14	-
Stage 1	-	-	-	-	~ 119	-
Stage 2	-	-	-	-	293	-

Approach	EB	WB	SB
HCM Control Delay, s	0.3	0	$ 3341.4
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	277	-	-	-	14	306
HCM Lane V/C Ratio	0.122	-	-	-	8.721	0.08
HCM Control Delay (s)	19.8	-	-	-	$ 4006.1	17.8
HCM Lane LOS	C	-	-	-	F	C
HCM 95th %tile Q(veh)	0.4	-	-	-	16.3	0.3

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↱		↑↑	↱				↰	✣	↱
Traffic Volume (veh/h)	0	239	115	0	232	304	0	0	0	345	0	56
Future Volume (veh/h)	0	239	115	0	232	304	0	0	0	345	0	56
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	0	1678	1826	0	1752	1618				1678	1826	1752
Adj Flow Rate, veh/h	0	246	0	0	239	0				374	0	39
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97				0.97	0.97	0.97
Percent Heavy Veh, %	0	15	5	0	10	19				15	5	10
Cap, veh/h	0	1009		0	1053					809	0	376
Arrive On Green	0.00	0.32	0.00	0.00	0.32	0.00				0.25	0.00	0.25
Sat Flow, veh/h	0	3272	1547	0	3416	1372				3196	0	1485
Grp Volume(v), veh/h	0	246	0	0	239	0				374	0	39
Grp Sat Flow(s),veh/h/ln	0	1594	1547	0	1664	1372				1598	0	1485
Q Serve(g_s), s	0.0	1.8	0.0	0.0	1.7	0.0				3.1	0.0	0.6
Cycle Q Clear(g_c), s	0.0	1.8	0.0	0.0	1.7	0.0				3.1	0.0	0.6
Prop In Lane	0.00		1.00	0.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1009		0	1053					809	0	376
V/C Ratio(X)	0.00	0.24		0.00	0.23					0.46	0.00	0.10
Avail Cap(c_a), veh/h	0	2542		0	2654					2144	0	996
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	0.00	0.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	8.0	0.0	0.0	8.0	0.0				10.0	0.0	9.1
Incr Delay (d2), s/veh	0.0	0.4	0.0	0.0	0.3	0.0				0.7	0.0	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
%ile BackOfQ(50%),veh/ln	0.0	0.4	0.0	0.0	0.4	0.0				0.8	0.0	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	8.4	0.0	0.0	8.3	0.0				10.7	0.0	9.3
LnGrp LOS	A	A		A	A					B	A	A
Approach Vol, veh/h		246			239						413	
Approach Delay, s/veh		8.4			8.3						10.6	
Approach LOS		A			A						B	

Timer - Assigned Phs		2		4		6						
Phs Duration (G+Y+Rc), s		16.8		14.8		16.8						
Change Period (Y+Rc), s		6.8		6.8		6.8						
Max Green Setting (Gmax), s		25.2		21.2		25.2						
Max Q Clear Time (g_c+I1), s		3.8		5.1		3.7						
Green Ext Time (p_c), s		2.8		2.4		2.8						

Intersection Summary		
HCM 6th Ctrl Delay	9.3	
HCM 6th LOS	A	

Notes

User approved volume balancing among the lanes for turning movement.

Unsignalized Delay for [EBR, WBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	50	533	0	0	482	245	54	0	68	0	0	0
Future Volume (veh/h)	50	533	0	0	482	245	54	0	68	0	0	0
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	1648	1648	0	0	1663	1648	1663	1648	1648			
Adj Flow Rate, veh/h	52	549	0	0	497	253	80	0	44			
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97			
Percent Heavy Veh, %	17	17	0	0	16	17	16	17	17			
Cap, veh/h	182	1824	0	0	1058	468	490	0	216			
Arrive On Green	0.12	0.58	0.00	0.00	0.34	0.34	0.15	0.00	0.15			
Sat Flow, veh/h	1570	3214	0	0	3243	1397	3167	0	1397			
Grp Volume(v), veh/h	52	549	0	0	497	253	80	0	44			
Grp Sat Flow(s),veh/h/ln	1570	1566	0	0	1580	1397	1584	0	1397			
Q Serve(g_s), s	1.6	4.6	0.0	0.0	6.4	7.6	1.1	0.0	1.4			
Cycle Q Clear(g_c), s	1.6	4.6	0.0	0.0	6.4	7.6	1.1	0.0	1.4			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	182	1824	0	0	1058	468	490	0	216			
V/C Ratio(X)	0.29	0.30	0.00	0.00	0.47	0.54	0.16	0.00	0.20			
Avail Cap(c_a), veh/h	495	2978	0	0	1661	734	1665	0	734			
HCM Platoon Ratio	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	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	20.9	5.5	0.0	0.0	13.6	14.0	19.0	0.0	19.1			
Incr Delay (d2), s/veh	0.3	0.3	0.0	0.0	0.9	2.8	0.5	0.0	1.3			
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	0.5	0.9	0.0	0.0	1.9	2.2	0.4	0.0	0.5			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	21.2	5.7	0.0	0.0	14.5	16.8	19.4	0.0	20.4			
LnGrp LOS	C	A	A	A	B	B	B	A	C			
Approach Vol, veh/h		601			750			124				
Approach Delay, s/veh		7.1			15.3			19.8				
Approach LOS		A			B			B				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		36.9			12.8	24.1		14.8				
Change Period (Y+Rc), s		6.8			6.8	* 6.8		6.8				
Max Green Setting (Gmax), s		49.2			16.3	* 27		27.2				
Max Q Clear Time (g_c+I1), s		6.6			3.6	9.6		3.4				
Green Ext Time (p_c), s		9.0			0.0	7.7		1.0				

Intersection Summary	
HCM 6th Ctrl Delay	12.3
HCM 6th LOS	B

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	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	564	1	5	565	8	0
Future Volume (veh/h)	564	1	5	565	8	0
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	1811	1900	1900	1722	1722	1811
Adj Flow Rate, veh/h	705	1	0	710	10	0
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80
Percent Heavy Veh, %	6	0	0	12	12	6
Cap, veh/h	1074	517	694	1066	21	839
Arrive On Green	0.32	0.32	0.00	0.37	0.01	0.00
Sat Flow, veh/h	3346	1610	1900	2919	1640	1811
Grp Volume(v), veh/h	705	1	0	710	10	0
Grp Sat Flow(s),veh/h/ln	1673	1610	1900	1459	1640	1811
Q Serve(g_s), s	10.0	0.0	0.0	11.2	0.3	0.0
Cycle Q Clear(g_c), s	10.0	0.0	0.0	11.2	0.3	0.0
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	1074	517	694	1066	21	839
V/C Ratio(X)	0.66	0.00	0.00	0.67	0.47	0.00
Avail Cap(c_a), veh/h	1712	824	1375	2113	455	1311
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	16.1	12.7	0.0	14.7	27.0	0.0
Incr Delay (d2), s/veh	1.8	0.0	0.0	1.5	6.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.3	0.0	0.0	3.1	0.2	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	17.9	12.7	0.0	16.2	33.0	0.0
LnGrp LOS	B	B	A	B	C	A
Approach Vol, veh/h	706		710			10
Approach Delay, s/veh	17.9		16.2			33.0
Approach LOS	B		B			C

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	5.4	25.2			30.6	24.5
Change Period (Y+Rc), s	* 4.7	5.1			5.1	6.8
Max Green Setting (Gmax), s	* 15	39.9			39.9	28.2
Max Q Clear Time (g_c+I1), s	2.3	13.2			0.0	12.0
Green Ext Time (p_c), s	0.0	6.9			0.0	5.7

Intersection Summary	
HCM 6th Ctrl Delay	17.2
HCM 6th LOS	B

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)	153	37	22	5	26	286	12	131	14	290	146	127
Future Volume (veh/h)	153	37	22	5	26	286	12	131	14	290	146	127
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	1767	1826	1796	1796	1752	1767	1752	1767	1826	1826	1796	1752
Adj Flow Rate, veh/h	187	45	27	6	32	349	15	160	17	354	178	155
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Percent Heavy Veh, %	9	5	7	7	10	9	10	9	5	5	7	10
Cap, veh/h	273	398	239	13	440	392	30	314	33	395	1034	791
Arrive On Green	0.08	0.37	0.37	0.01	0.26	0.26	0.02	0.10	0.10	0.23	0.30	0.30
Sat Flow, veh/h	3264	1069	641	1711	1664	1485	1668	3065	322	1739	3413	2613
Grp Volume(v), veh/h	187	0	72	6	32	349	15	87	90	354	178	155
Grp Sat Flow(s),veh/h/ln	1632	0	1710	1711	1664	1485	1668	1678	1709	1739	1706	1306
Q Serve(g_s), s	4.4	0.0	2.2	0.3	1.1	17.7	0.7	3.8	3.9	15.4	3.0	3.4
Cycle Q Clear(g_c), s	4.4	0.0	2.2	0.3	1.1	17.7	0.7	3.8	3.9	15.4	3.0	3.4
Prop In Lane	1.00		0.38	1.00		1.00	1.00		0.19	1.00		1.00
Lane Grp Cap(c), veh/h	273	0	636	13	440	392	30	172	175	395	1034	791
V/C Ratio(X)	0.69	0.00	0.11	0.45	0.07	0.89	0.51	0.50	0.52	0.90	0.17	0.20
Avail Cap(c_a), veh/h	535	0	636	335	479	428	419	520	529	452	1088	833
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	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.8	0.0	16.1	38.6	21.6	27.6	38.0	33.2	33.2	29.3	20.0	20.2
Incr Delay (d2), s/veh	3.0	0.0	0.1	8.5	0.1	20.9	4.9	5.9	6.0	18.6	0.2	0.3
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	1.8	0.0	0.8	0.1	0.4	8.0	0.3	1.7	1.8	7.9	1.1	1.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	37.8	0.0	16.2	47.1	21.7	48.5	42.9	39.1	39.3	47.9	20.2	20.4
LnGrp LOS	D	A	B	D	C	D	D	D	D	D	C	C
Approach Vol, veh/h		259			387			192			687	
Approach Delay, s/veh		31.8			46.3			39.5			34.5	
Approach LOS		C			D			D			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	32.4	13.8	5.3	36.6	6.8	29.5	13.7	28.1
Change Period (Y+Rc), s	* 4.7	5.8	* 4.7	7.5	5.4	* 5.8	7.2	7.5
Max Green Setting (Gmax), s	* 28	24.2	* 15	22.5	19.6	* 25	12.8	22.5
Max Q Clear Time (g_c+I1), s	17.4	5.9	2.3	4.2	2.7	5.4	6.4	19.7
Green Ext Time (p_c), s	0.3	1.6	0.0	0.2	0.0	2.9	0.3	1.0

Intersection Summary	
HCM 6th Ctrl Delay	37.7
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	0.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	5	1	140	6	3	145
Future Vol, veh/h	5	1	140	6	3	145
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	-	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	0	0	11	0	0	7
Mvmt Flow	5	1	154	7	3	159

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	323	158	0	0	161	0
Stage 1	158	-	-	-	-	-
Stage 2	165	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	675	893	-	-	1430	-
Stage 1	875	-	-	-	-	-
Stage 2	869	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	674	893	-	-	1430	-
Mov Cap-2 Maneuver	705	-	-	-	-	-
Stage 1	875	-	-	-	-	-
Stage 2	867	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10	0	0.2
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	731	1430	-
HCM Lane V/C Ratio	-	-	0.009	0.002	-
HCM Control Delay (s)	-	-	10	7.5	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	0	0	-

Intersection	
Int Delay, s/veh	8.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	↱
Traffic Vol, veh/h	73	18	5	10	12	32	3	42	22	41	46	65
Future Vol, veh/h	73	18	5	10	12	32	3	42	22	41	46	65
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	-	-	-	-	-	-	-	-	-	-	-	150
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	83	83	83	83	83	83	83	83	83	83	83	83
Heavy Vehicles, %	11	9	7	7	14	11	14	11	9	9	7	14
Mvmt Flow	88	22	6	12	14	39	4	51	27	49	55	78

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	53	0	0	28	0	0	325	278	25	298	262	34
Stage 1	-	-	-	-	-	-	201	201	-	58	58	-
Stage 2	-	-	-	-	-	-	124	77	-	240	204	-
Critical Hdwy	4.21	-	-	4.17	-	-	7.24	6.61	6.29	7.19	6.57	6.34
Critical Hdwy Stg 1	-	-	-	-	-	-	6.24	5.61	-	6.19	5.57	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.24	5.61	-	6.19	5.57	-
Follow-up Hdwy	2.299	-	-	2.263	-	-	3.626	4.099	3.381	3.581	4.063	3.426
Pot Cap-1 Maneuver	1497	-	-	1554	-	-	606	615	1031	641	634	1006
Stage 1	-	-	-	-	-	-	774	718	-	936	837	-
Stage 2	-	-	-	-	-	-	852	814	-	748	723	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1497	-	-	1554	-	-	492	573	1031	553	591	1006
Mov Cap-2 Maneuver	-	-	-	-	-	-	492	573	-	553	591	-
Stage 1	-	-	-	-	-	-	728	675	-	880	830	-
Stage 2	-	-	-	-	-	-	727	807	-	634	680	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	5.7	1.4	11.2	11.1
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	665	1497	-	-	1554	-	-	572	1006
HCM Lane V/C Ratio	0.121	0.059	-	-	0.008	-	-	0.183	0.078
HCM Control Delay (s)	11.2	7.6	0	-	7.3	0	-	12.7	8.9
HCM Lane LOS	B	A	A	-	A	A	-	B	A
HCM 95th %tile Q(veh)	0.4	0.2	-	-	0	-	-	0.7	0.3

Intersection	
Int Delay, s/veh	12.9

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	22	1269	1653	91	29	50
Future Vol, veh/h	22	1269	1653	91	29	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	470	-	-	480	0	1
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	13	7	8	13	7	8
Mvmt Flow	26	1493	1945	107	34	59

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	2052	0	-	0	2744	973
Stage 1	-	-	-	-	1945	-
Stage 2	-	-	-	-	799	-
Critical Hdwy	4.36	-	-	-	6.94	7.06
Critical Hdwy Stg 1	-	-	-	-	5.94	-
Critical Hdwy Stg 2	-	-	-	-	5.94	-
Follow-up Hdwy	2.33	-	-	-	3.57	3.38
Pot Cap-1 Maneuver	233	-	-	-	~ 15	241
Stage 1	-	-	-	-	92	-
Stage 2	-	-	-	-	391	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	233	-	-	-	~ 13	241
Mov Cap-2 Maneuver	-	-	-	-	~ 13	-
Stage 1	-	-	-	-	82	-
Stage 2	-	-	-	-	391	-

Approach	EB	WB	SB
HCM Control Delay, s	0.4	0	$ 502.4
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	233	-	-	-	13	241
HCM Lane V/C Ratio	0.111	-	-	-	2.624	0.244
HCM Control Delay (s)	22.4	-	-	-	$ 1326.1	24.7
HCM Lane LOS	C	-	-	-	F	C
HCM 95th %tile Q(veh)	0.4	-	-	-	5.1	0.9

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↱		↑↑	↱				↰	✣	↱
Traffic Volume (veh/h)	0	413	159	0	505	427	0	0	0	546	0	61
Future Volume (veh/h)	0	413	159	0	505	427	0	0	0	546	0	61
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	0	1618	1707	0	1752	1530				1618	1707	1752
Adj Flow Rate, veh/h	0	459	0	0	561	0				628	0	45
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90				0.90	0.90	0.90
Percent Heavy Veh, %	0	19	13	0	10	25				19	13	10
Cap, veh/h	0	1056		0	1143					978	0	471
Arrive On Green	0.00	0.34	0.00	0.00	0.34	0.00				0.32	0.00	0.32
Sat Flow, veh/h	0	3156	1447	0	3416	1296				3083	0	1485
Grp Volume(v), veh/h	0	459	0	0	561	0				628	0	45
Grp Sat Flow(s),veh/h/ln	0	1537	1447	0	1664	1296				1541	0	1485
Q Serve(g_s), s	0.0	4.6	0.0	0.0	5.3	0.0				7.0	0.0	0.9
Cycle Q Clear(g_c), s	0.0	4.6	0.0	0.0	5.3	0.0				7.0	0.0	0.9
Prop In Lane	0.00		1.00	0.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1056		0	1143					978	0	471
V/C Ratio(X)	0.00	0.43		0.00	0.49					0.64	0.00	0.10
Avail Cap(c_a), veh/h	0	1934		0	2093					1631	0	785
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	0.00	0.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	10.2	0.0	0.0	10.4	0.0				11.7	0.0	9.6
Incr Delay (d2), s/veh	0.0	0.8	0.0	0.0	1.0	0.0				1.2	0.0	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
%ile BackOfQ(50%),veh/ln	0.0	1.1	0.0	0.0	1.4	0.0				1.9	0.0	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	11.0	0.0	0.0	11.3	0.0				12.9	0.0	9.8
LnGrp LOS	A	B		A	B					B	A	A
Approach Vol, veh/h		459			561						673	
Approach Delay, s/veh		11.0			11.3						12.7	
Approach LOS		B			B						B	

Timer - Assigned Phs	2	4	6
Phs Duration (G+Y+Rc), s	20.6	19.5	20.6
Change Period (Y+Rc), s	6.8	6.8	6.8
Max Green Setting (Gmax), s	25.2	21.2	25.2
Max Q Clear Time (g_c+I1), s	6.6	9.0	7.3
Green Ext Time (p_c), s	5.3	3.7	6.4

Intersection Summary	
HCM 6th Ctrl Delay	11.8
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Unsignalized Delay for [EBR, WBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	57	901	0	0	866	568	66	0	252	0	0	0
Future Volume (veh/h)	57	901	0	0	866	568	66	0	252	0	0	0
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	1663	1604	0	0	1693	1663	1693	1663	1604			
Adj Flow Rate, veh/h	68	1073	0	0	1031	676	53	0	328			
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84			
Percent Heavy Veh, %	16	20	0	0	14	16	14	16	20			
Cap, veh/h	143	1837	0	0	1318	578	310	0	522			
Arrive On Green	0.09	0.60	0.00	0.00	0.41	0.41	0.19	0.00	0.19			
Sat Flow, veh/h	1584	3127	0	0	3300	1409	1612	0	2718			
Grp Volume(v), veh/h	68	1073	0	0	1031	676	53	0	328			
Grp Sat Flow(s),veh/h/ln	1584	1523	0	0	1608	1409	1612	0	1359			
Q Serve(g_s), s	2.7	14.3	0.0	0.0	18.5	27.2	1.8	0.0	7.4			
Cycle Q Clear(g_c), s	2.7	14.3	0.0	0.0	18.5	27.2	1.8	0.0	7.4			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	143	1837	0	0	1318	578	310	0	522			
V/C Ratio(X)	0.47	0.58	0.00	0.00	0.78	1.17	0.17	0.00	0.63			
Avail Cap(c_a), veh/h	389	2259	0	0	1318	578	661	0	1114			
HCM Platoon Ratio	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	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	28.7	8.1	0.0	0.0	17.0	19.6	22.4	0.0	24.6			
Incr Delay (d2), s/veh	0.9	0.9	0.0	0.0	3.9	94.0	0.8	0.0	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			
%ile BackOfQ(50%),veh/ln	1.0	3.3	0.0	0.0	6.3	22.2	0.7	0.0	2.5			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	29.6	8.9	0.0	0.0	20.9	113.6	23.1	0.0	28.2			
LnGrp LOS	C	A	A	A	C	F	C	A	C			
Approach Vol, veh/h		1141			1707			381				
Approach Delay, s/veh		10.2			57.6			27.5				
Approach LOS		B			E			C				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		46.8			12.8	34.0		19.5				
Change Period (Y+Rc), s		6.8			6.8	* 6.8		6.8				
Max Green Setting (Gmax), s		49.2			16.3	* 27		27.2				
Max Q Clear Time (g_c+I1), s		16.3			4.7	29.2		9.4				
Green Ext Time (p_c), s		18.2			0.0	0.0		3.4				

Intersection Summary	
HCM 6th Ctrl Delay	37.3
HCM 6th LOS	D

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	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	396	2	4	477	5	1
Future Volume (veh/h)	396	2	4	477	5	1
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	1796	1900	1900	1767	1767	1796
Adj Flow Rate, veh/h	455	2	0	551	6	1
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	7	0	0	9	9	7
Cap, veh/h	870	422	623	983	14	808
Arrive On Green	0.26	0.26	0.00	0.33	0.01	0.45
Sat Flow, veh/h	3319	1610	1900	2994	1682	1796
Grp Volume(v), veh/h	455	2	0	551	6	1
Grp Sat Flow(s),veh/h/ln	1659	1610	1900	1497	1682	1796
Q Serve(g_s), s	4.8	0.0	0.0	6.3	0.1	0.0
Cycle Q Clear(g_c), s	4.8	0.0	0.0	6.3	0.1	0.0
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	870	422	623	983	14	808
V/C Ratio(X)	0.52	0.00	0.00	0.56	0.44	0.00
Avail Cap(c_a), veh/h	2265	1099	1834	2891	623	1734
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	13.0	11.3	0.0	11.4	20.4	6.3
Incr Delay (d2), s/veh	1.3	0.0	0.0	1.1	8.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	0.0	0.0	1.5	0.1	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	14.3	11.3	0.0	12.5	28.6	6.3
LnGrp LOS	B	B	A	B	C	A
Approach Vol, veh/h	457		551			7
Approach Delay, s/veh	14.3		12.5			25.4
Approach LOS	B		B			C

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	5.0	18.7			23.7	17.6
Change Period (Y+Rc), s	* 4.7	5.1			5.1	6.8
Max Green Setting (Gmax), s	* 15	39.9			39.9	28.2
Max Q Clear Time (g_c+I1), s	2.1	8.3			2.0	6.8
Green Ext Time (p_c), s	0.0	5.3			0.0	4.0

Intersection Summary	
HCM 6th Ctrl Delay	13.4
HCM 6th LOS	B

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)	153	22	14	3	34	136	22	193	10	81	137	179
Future Volume (veh/h)	153	22	14	3	34	136	22	193	10	81	137	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	1737	1559	1693	1693	1722	1737	1722	1737	1559	1559	1693	1722
Adj Flow Rate, veh/h	170	24	16	3	38	151	24	214	11	90	152	199
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	11	23	14	14	12	11	12	11	23	23	14	12
Cap, veh/h	294	262	175	7	265	236	47	518	26	109	621	496
Arrive On Green	0.09	0.30	0.30	0.00	0.16	0.16	0.03	0.16	0.16	0.07	0.19	0.19
Sat Flow, veh/h	3209	873	582	1612	1636	1459	1640	3194	163	1485	3216	2569
Grp Volume(v), veh/h	170	0	40	3	38	151	24	110	115	90	152	199
Grp Sat Flow(s),veh/h/ln	1605	0	1454	1612	1636	1459	1640	1650	1708	1485	1608	1284
Q Serve(g_s), s	2.5	0.0	1.0	0.1	1.0	4.8	0.7	3.0	3.0	2.9	2.0	3.3
Cycle Q Clear(g_c), s	2.5	0.0	1.0	0.1	1.0	4.8	0.7	3.0	3.0	2.9	2.0	3.3
Prop In Lane	1.00		0.40	1.00		1.00	1.00		0.10	1.00		1.00
Lane Grp Cap(c), veh/h	294	0	436	7	265	236	47	268	277	109	621	496
V/C Ratio(X)	0.58	0.00	0.09	0.46	0.14	0.64	0.52	0.41	0.42	0.83	0.24	0.40
Avail Cap(c_a), veh/h	833	0	664	500	746	666	652	810	838	611	1624	1297
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	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.5	0.0	12.4	24.5	17.7	19.3	23.6	18.5	18.6	22.5	16.9	17.4
Incr Delay (d2), s/veh	1.8	0.0	0.1	17.2	0.5	6.0	3.2	2.6	2.6	14.3	0.4	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	0.9	0.0	0.3	0.1	0.4	1.8	0.3	1.1	1.2	1.3	0.6	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.3	0.0	12.5	41.7	18.3	25.3	26.9	21.2	21.1	36.8	17.3	18.5
LnGrp LOS	C	A	B	D	B	C	C	C	C	D	B	B
Approach Vol, veh/h		210			192			249			441	
Approach Delay, s/veh		21.2			24.2			21.7			21.8	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.3	13.8	4.9	22.3	6.8	15.3	11.7	15.5
Change Period (Y+Rc), s	* 4.7	5.8	* 4.7	7.5	5.4	* 5.8	7.2	7.5
Max Green Setting (Gmax), s	* 3.6	24.2	* 15	22.5	19.6	* 25	12.8	22.5
Max Q Clear Time (g_c+I1), s	4.9	5.0	2.1	3.0	2.7	5.3	4.5	6.8
Green Ext Time (p_c), s	0.2	2.1	0.0	0.1	0.0	3.0	0.3	1.6

Intersection Summary	
HCM 6th Ctrl Delay	22.1
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	0.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	4	2	197	3	1	128
Future Vol, veh/h	4	2	197	3	1	128
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	-	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	0	18	0	0	13
Mvmt Flow	4	2	219	3	1	142

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	365	221	0	0	222	0
Stage 1	221	-	-	-	-	-
Stage 2	144	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	639	824	-	-	1359	-
Stage 1	821	-	-	-	-	-
Stage 2	888	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	638	824	-	-	1359	-
Mov Cap-2 Maneuver	679	-	-	-	-	-
Stage 1	821	-	-	-	-	-
Stage 2	887	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10	0	0.1
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	721	1359	-
HCM Lane V/C Ratio	-	-	0.009	0.001	-
HCM Control Delay (s)	-	-	10	7.7	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	0	0	-

Intersection	
Int Delay, s/veh	8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↕	↱
Traffic Vol, veh/h	104	22	9	15	13	50	5	45	13	37	31	60
Future Vol, veh/h	104	22	9	15	13	50	5	45	13	37	31	60
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	-	-	-	-	-	-	-	-	-	-	-	150
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	83	83	83	83	83	83	83	83	83	83	83	83
Heavy Vehicles, %	18	13	2	2	10	18	10	18	13	13	2	10
Mvmt Flow	125	27	11	18	16	60	6	54	16	45	37	72

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	76	0	0	38	0	0	420	395	33	400	370	46
Stage 1	-	-	-	-	-	-	283	283	-	82	82	-
Stage 2	-	-	-	-	-	-	137	112	-	318	288	-
Critical Hdwy	4.28	-	-	4.12	-	-	7.2	6.68	6.33	7.23	6.52	6.3
Critical Hdwy Stg 1	-	-	-	-	-	-	6.2	5.68	-	6.23	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.2	5.68	-	6.23	5.52	-
Follow-up Hdwy	2.362	-	-	2.218	-	-	3.59	4.162	3.417	3.617	4.018	3.39
Pot Cap-1 Maneuver	1427	-	-	1572	-	-	530	518	1010	541	560	1001
Stage 1	-	-	-	-	-	-	707	649	-	900	827	-
Stage 2	-	-	-	-	-	-	847	773	-	671	674	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1427	-	-	1572	-	-	428	466	1010	448	503	1001
Mov Cap-2 Maneuver	-	-	-	-	-	-	428	466	-	448	503	-
Stage 1	-	-	-	-	-	-	643	591	-	819	817	-
Stage 2	-	-	-	-	-	-	741	764	-	546	613	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	6	1.4	13.1	11.7
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	520	1427	-	-	1572	-	-	472	1001
HCM Lane V/C Ratio	0.146	0.088	-	-	0.011	-	-	0.174	0.072
HCM Control Delay (s)	13.1	7.8	0	-	7.3	0	-	14.2	8.9
HCM Lane LOS	B	A	A	-	A	A	-	B	A
HCM 95th %tile Q(veh)	0.5	0.3	-	-	0	-	-	0.6	0.2

Intersection	
Int Delay, s/veh	27.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	39	1796	1526	40	40	28
Future Vol, veh/h	39	1796	1526	40	40	28
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	470	-	-	480	0	1
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	15	4	5	15	4	5
Mvmt Flow	45	2088	1774	47	47	33

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1821	0	-	0	2908	887
Stage 1	-	-	-	-	1774	-
Stage 2	-	-	-	-	1134	-
Critical Hdwy	4.4	-	-	-	6.88	7
Critical Hdwy Stg 1	-	-	-	-	5.88	-
Critical Hdwy Stg 2	-	-	-	-	5.88	-
Follow-up Hdwy	2.35	-	-	-	3.54	3.35
Pot Cap-1 Maneuver	283	-	-	-	~ 12	281
Stage 1	-	-	-	-	119	-
Stage 2	-	-	-	-	265	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	283	-	-	-	~ 10	281
Mov Cap-2 Maneuver	-	-	-	-	~ 10	-
Stage 1	-	-	-	-	100	-
Stage 2	-	-	-	-	265	-

Approach	EB	WB	SB
HCM Control Delay, s	0.4	0	$ 1409
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	283	-	-	-	10	281
HCM Lane V/C Ratio	0.16	-	-	-	4.651	0.116
HCM Control Delay (s)	20.1	-	-	-	$ 2381.7	19.5
HCM Lane LOS	C	-	-	-	F	C
HCM 95th %tile Q(veh)	0.6	-	-	-	7	0.4

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	335	147	0	345	488	0	0	0	679	0	54
Future Volume (veh/h)	0	335	147	0	345	488	0	0	0	679	0	54
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	0	1678	1826	0	1752	1618				1678	1826	1752
Adj Flow Rate, veh/h	0	345	0	0	356	0				717	0	37
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97				0.97	0.97	0.97
Percent Heavy Veh, %	0	15	5	0	10	19				15	5	10
Cap, veh/h	0	870		0	908					1138	0	529
Arrive On Green	0.00	0.27	0.00	0.00	0.27	0.00				0.36	0.00	0.36
Sat Flow, veh/h	0	3272	1547	0	3416	1372				3196	0	1485
Grp Volume(v), veh/h	0	345	0	0	356	0				717	0	37
Grp Sat Flow(s),veh/h/ln	0	1594	1547	0	1664	1372				1598	0	1485
Q Serve(g_s), s	0.0	3.2	0.0	0.0	3.2	0.0				6.8	0.0	0.6
Cycle Q Clear(g_c), s	0.0	3.2	0.0	0.0	3.2	0.0				6.8	0.0	0.6
Prop In Lane	0.00		1.00	0.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	870		0	908					1138	0	529
V/C Ratio(X)	0.00	0.40		0.00	0.39					0.63	0.00	0.07
Avail Cap(c_a), veh/h	0	2192		0	2288					1848	0	859
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	0.00	0.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	10.9	0.0	0.0	10.9	0.0				9.8	0.0	7.8
Incr Delay (d2), s/veh	0.0	0.9	0.0	0.0	0.8	0.0				1.0	0.0	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
%ile BackOfQ(50%),veh/ln	0.0	0.8	0.0	0.0	0.9	0.0				1.7	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	11.7	0.0	0.0	11.7	0.0				10.8	0.0	7.9
LnGrp LOS	A	B		A	B					B	A	A
Approach Vol, veh/h		345			356						754	
Approach Delay, s/veh		11.7			11.7						10.6	
Approach LOS		B			B						B	

Timer - Assigned Phs	2	4	6
Phs Duration (G+Y+Rc), s	16.8	19.9	16.8
Change Period (Y+Rc), s	6.8	6.8	6.8
Max Green Setting (Gmax), s	25.2	21.2	25.2
Max Q Clear Time (g_c+I1), s	5.2	8.8	5.2
Green Ext Time (p_c), s	4.0	4.2	4.2

Intersection Summary	
HCM 6th Ctrl Delay	11.1
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Unsignalized Delay for [EBR, WBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	49	965	0	0	737	567	97	0	265	0	0	0
Future Volume (veh/h)	49	965	0	0	737	567	97	0	265	0	0	0
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	1648	1648	0	0	1663	1648	1663	1648	1648			
Adj Flow Rate, veh/h	51	995	0	0	760	585	67	0	309			
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97			
Percent Heavy Veh, %	17	17	0	0	16	17	16	17	17			
Cap, veh/h	143	1908	0	0	1309	579	290	0	512			
Arrive On Green	0.09	0.61	0.00	0.00	0.41	0.41	0.18	0.00	0.18			
Sat Flow, veh/h	1570	3214	0	0	3243	1397	1584	0	2793			
Grp Volume(v), veh/h	51	995	0	0	760	585	67	0	309			
Grp Sat Flow(s),veh/h/ln	1570	1566	0	0	1580	1397	1584	0	1397			
Q Serve(g_s), s	2.0	11.9	0.0	0.0	12.2	27.2	2.4	0.0	6.7			
Cycle Q Clear(g_c), s	2.0	11.9	0.0	0.0	12.2	27.2	2.4	0.0	6.7			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	143	1908	0	0	1309	579	290	0	512			
V/C Ratio(X)	0.36	0.52	0.00	0.00	0.58	1.01	0.23	0.00	0.60			
Avail Cap(c_a), veh/h	390	2347	0	0	1309	579	656	0	1158			
HCM Platoon Ratio	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	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	28.0	7.3	0.0	0.0	14.8	19.2	22.9	0.0	24.6			
Incr Delay (d2), s/veh	0.6	0.6	0.0	0.0	1.3	40.1	1.2	0.0	3.3			
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	0.7	2.8	0.0	0.0	3.8	13.5	0.9	0.0	2.3			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	28.6	8.0	0.0	0.0	16.1	59.3	24.0	0.0	27.9			
LnGrp LOS	C	A	A	A	B	F	C	A	C			
Approach Vol, veh/h		1046			1345			376				
Approach Delay, s/veh		9.0			34.9			27.2				
Approach LOS		A			C			C				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		46.8			12.8	34.0		18.8				
Change Period (Y+Rc), s		6.8			6.8	* 6.8		6.8				
Max Green Setting (Gmax), s		49.2			16.3	* 27		27.2				
Max Q Clear Time (g_c+I1), s		13.9			4.0	29.2		8.7				
Green Ext Time (p_c), s		17.4			0.0	0.0		3.4				

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.

Intersection	
Int Delay, s/veh	2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	1	96	81	16	46	2
Future Vol, veh/h	1	96	81	16	46	2
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	9	14	0	0	0
Mvmt Flow	1	104	88	17	50	2

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	105	0	-	0	203	97
Stage 1	-	-	-	-	97	-
Stage 2	-	-	-	-	106	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1499	-	-	-	790	965
Stage 1	-	-	-	-	932	-
Stage 2	-	-	-	-	923	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1499	-	-	-	789	965
Mov Cap-2 Maneuver	-	-	-	-	789	-
Stage 1	-	-	-	-	931	-
Stage 2	-	-	-	-	923	-

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	9.8
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1499	-	-	-	795
HCM Lane V/C Ratio	0.001	-	-	-	0.066
HCM Control Delay (s)	7.4	0	-	-	9.8
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0.2

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	142	97	0	38	0
Future Vol, veh/h	0	142	97	0	38	0
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	9	14	0	0	0
Mvmt Flow	0	154	105	0	41	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	105	0	-	0	259	105
Stage 1	-	-	-	-	105	-
Stage 2	-	-	-	-	154	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1499	-	-	-	734	955
Stage 1	-	-	-	-	924	-
Stage 2	-	-	-	-	879	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1499	-	-	-	734	955
Mov Cap-2 Maneuver	-	-	-	-	734	-
Stage 1	-	-	-	-	924	-
Stage 2	-	-	-	-	879	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	10.2
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1499	-	-	-	734
HCM Lane V/C Ratio	-	-	-	-	0.056
HCM Control Delay (s)	0	-	-	-	10.2
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.2



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	580	1	5	612	8	0
Future Volume (veh/h)	580	1	5	612	8	0
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	1811	1900	1900	1722	1722	1811
Adj Flow Rate, veh/h	725	1	0	769	10	0
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80
Percent Heavy Veh, %	6	0	0	12	12	6
Cap, veh/h	1070	515	726	1116	21	862
Arrive On Green	0.32	0.32	0.00	0.38	0.01	0.00
Sat Flow, veh/h	3346	1610	1900	2919	1640	1811
Grp Volume(v), veh/h	725	1	0	769	10	0
Grp Sat Flow(s),veh/h/ln	1673	1610	1900	1459	1640	1811
Q Serve(g_s), s	11.0	0.0	0.0	12.9	0.4	0.0
Cycle Q Clear(g_c), s	11.0	0.0	0.0	12.9	0.4	0.0
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	1070	515	726	1116	21	862
V/C Ratio(X)	0.68	0.00	0.00	0.69	0.48	0.00
Avail Cap(c_a), veh/h	1620	780	1302	2000	431	1241
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	17.2	13.5	0.0	15.1	28.5	0.0
Incr Delay (d2), s/veh	2.0	0.0	0.0	1.6	6.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.7	0.0	0.0	3.6	0.2	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	19.2	13.5	0.0	16.7	34.6	0.0
LnGrp LOS	B	B	A	B	C	A
Approach Vol, veh/h	726		769			10
Approach Delay, s/veh	19.2		16.7			34.6
Approach LOS	B		B			C

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	5.4	27.4			32.8	25.4
Change Period (Y+Rc), s	* 4.7	5.1			5.1	6.8
Max Green Setting (Gmax), s	* 15	39.9			39.9	28.2
Max Q Clear Time (g_c+I1), s	2.4	14.9			0.0	13.0
Green Ext Time (p_c), s	0.0	7.4			0.0	5.7

Intersection Summary		
HCM 6th Ctrl Delay		18.0
HCM 6th LOS		B

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)	153	37	22	6	26	286	12	178	16	290	162	127
Future Volume (veh/h)	153	37	22	6	26	286	12	178	16	290	162	127
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	1767	1826	1796	1796	1752	1767	1752	1767	1826	1826	1796	1752
Adj Flow Rate, veh/h	187	45	27	7	32	349	15	217	20	354	198	155
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Percent Heavy Veh, %	9	5	7	7	10	9	10	9	5	5	7	10
Cap, veh/h	270	391	235	15	435	388	30	367	34	393	1084	830
Arrive On Green	0.08	0.37	0.37	0.01	0.26	0.26	0.02	0.12	0.12	0.23	0.32	0.32
Sat Flow, veh/h	3264	1069	641	1711	1664	1485	1668	3110	284	1739	3413	2613
Grp Volume(v), veh/h	187	0	72	7	32	349	15	116	121	354	198	155
Grp Sat Flow(s),veh/h/ln	1632	0	1710	1711	1664	1485	1668	1678	1715	1739	1706	1306
Q Serve(g_s), s	4.5	0.0	2.2	0.3	1.2	18.3	0.7	5.3	5.4	16.0	3.4	3.5
Cycle Q Clear(g_c), s	4.5	0.0	2.2	0.3	1.2	18.3	0.7	5.3	5.4	16.0	3.4	3.5
Prop In Lane	1.00		0.38	1.00		1.00	1.00		0.17	1.00		1.00
Lane Grp Cap(c), veh/h	270	0	626	15	435	388	30	198	202	393	1084	830
V/C Ratio(X)	0.69	0.00	0.11	0.45	0.07	0.90	0.51	0.59	0.60	0.90	0.18	0.19
Avail Cap(c_a), veh/h	517	0	626	324	464	414	405	503	514	437	1084	830
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	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.0	0.0	16.9	39.8	22.5	28.8	39.3	33.8	33.8	30.4	20.0	20.0
Incr Delay (d2), s/veh	3.2	0.0	0.1	7.6	0.2	23.0	4.9	7.0	7.2	20.2	0.2	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	1.8	0.0	0.8	0.2	0.5	8.5	0.3	2.4	2.5	8.3	1.3	1.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	39.2	0.0	17.0	47.4	22.6	51.8	44.3	40.8	41.0	50.6	20.1	20.2
LnGrp LOS	D	A	B	D	C	D	D	D	D	D	C	C
Approach Vol, veh/h		259			388			252			707	
Approach Delay, s/veh		33.0			49.3			41.1			35.4	
Approach LOS		C			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.9	15.3	5.4	37.1	6.8	31.4	13.9	28.6
Change Period (Y+Rc), s	* 4.7	5.8	* 4.7	7.5	5.4	* 5.8	7.2	7.5
Max Green Setting (Gmax), s	* 8	24.2	* 15	22.5	19.6	* 25	12.8	22.5
Max Q Clear Time (g_c+I1), s	19.3	7.4	2.3	4.2	2.7	5.5	6.5	20.3
Green Ext Time (p_c), s	0.3	2.1	0.0	0.2	0.0	3.1	0.3	0.8

Intersection Summary	
HCM 6th Ctrl Delay	39.3
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	2.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↰	↱		↰	↱	
Traffic Vol, veh/h	49	0	24	5	0	1	8	140	6	3	145	17
Future Vol, veh/h	49	0	24	5	0	1	8	140	6	3	145	17
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	0	0	0	0	0	0	0	11	0	0	7	0
Mvmt Flow	54	0	26	5	0	1	9	154	7	3	159	19

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	351	354	169	364	360	158	178	0	0	161	0	0
Stage 1	175	175	-	176	176	-	-	-	-	-	-	-
Stage 2	176	179	-	188	184	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	608	574	880	596	570	893	1410	-	-	1430	-	-
Stage 1	832	758	-	831	757	-	-	-	-	-	-	-
Stage 2	831	755	-	818	751	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	603	569	880	575	565	893	1410	-	-	1430	-	-
Mov Cap-2 Maneuver	603	569	-	575	565	-	-	-	-	-	-	-
Stage 1	827	756	-	826	752	-	-	-	-	-	-	-
Stage 2	825	750	-	792	749	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	11.1	11	0.4	0.1
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1410	-	-	673	611	1430	-	-
HCM Lane V/C Ratio	0.006	-	-	0.119	0.011	0.002	-	-
HCM Control Delay (s)	7.6	-	-	11.1	11	7.5	-	-
HCM Lane LOS	A	-	-	B	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.4	0	0	-	-

Intersection	
Int Delay, s/veh	8.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	↱
Traffic Vol, veh/h	73	21	86	10	13	33	31	49	22	44	67	65
Future Vol, veh/h	73	21	86	10	13	33	31	49	22	44	67	65
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	-	-	-	-	-	-	-	-	-	-	-	150
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	83	83	83	83	83	83	83	83	83	83	83	83
Heavy Vehicles, %	11	9	7	7	14	11	14	11	9	9	7	14
Mvmt Flow	88	25	104	12	16	40	37	59	27	53	81	78

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	56	0	0	129	0	0	393	333	77	356	365	36
Stage 1	-	-	-	-	-	-	253	253	-	60	60	-
Stage 2	-	-	-	-	-	-	140	80	-	296	305	-
Critical Hdwy	4.21	-	-	4.17	-	-	7.24	6.61	6.29	7.19	6.57	6.34
Critical Hdwy Stg 1	-	-	-	-	-	-	6.24	5.61	-	6.19	5.57	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.24	5.61	-	6.19	5.57	-
Follow-up Hdwy	2.299	-	-	2.263	-	-	3.626	4.099	3.381	3.581	4.063	3.426
Pot Cap-1 Maneuver	1493	-	-	1426	-	-	545	573	965	586	555	1003
Stage 1	-	-	-	-	-	-	725	681	-	934	835	-
Stage 2	-	-	-	-	-	-	835	811	-	698	653	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1493	-	-	1426	-	-	418	532	965	493	515	1003
Mov Cap-2 Maneuver	-	-	-	-	-	-	418	532	-	493	515	-
Stage 1	-	-	-	-	-	-	679	637	-	874	827	-
Stage 2	-	-	-	-	-	-	688	804	-	576	611	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	3.1	1.3	13.6	12.6
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	539	1493	-	-	1426	-	-	506	1003
HCM Lane V/C Ratio	0.228	0.059	-	-	0.008	-	-	0.264	0.078
HCM Control Delay (s)	13.6	7.6	0	-	7.5	0	-	14.7	8.9
HCM Lane LOS	B	A	A	-	A	A	-	B	A
HCM 95th %tile Q(veh)	0.9	0.2	-	-	0	-	-	1.1	0.3

Intersection	
Int Delay, s/veh	217

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	22	1269	1653	126	130	50
Future Vol, veh/h	22	1269	1653	126	130	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	470	-	-	480	0	1
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	13	7	8	13	7	8
Mvmt Flow	26	1493	1945	148	153	59

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	2093	0	-	0	2744	973
Stage 1	-	-	-	-	1945	-
Stage 2	-	-	-	-	799	-
Critical Hdwy	4.36	-	-	-	6.94	7.06
Critical Hdwy Stg 1	-	-	-	-	5.94	-
Critical Hdwy Stg 2	-	-	-	-	5.94	-
Follow-up Hdwy	2.33	-	-	-	3.57	3.38
Pot Cap-1 Maneuver	224	-	-	-	~ 15	241
Stage 1	-	-	-	-	~ 92	-
Stage 2	-	-	-	-	391	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	224	-	-	-	~ 13	241
Mov Cap-2 Maneuver	-	-	-	-	~ 13	-
Stage 1	-	-	-	-	~ 81	-
Stage 2	-	-	-	-	391	-

Approach	EB	WB	SB
HCM Control Delay, s	0.4	0	$ 3915.4
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	224	-	-	-	13	241
HCM Lane V/C Ratio	0.116	-	-	-	11.765	0.244
HCM Control Delay (s)	23.2	-	-	-	$ 5411.8	24.7
HCM Lane LOS	C	-	-	-	F	C
HCM 95th %tile Q(veh)	0.4	-	-	-	20.3	0.9

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↱		↑↑	↱				↰	✣	↱
Traffic Volume (veh/h)	0	460	159	0	517	427	0	0	0	546	0	65
Future Volume (veh/h)	0	460	159	0	517	427	0	0	0	546	0	65
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	0	1618	1707	0	1752	1530				1618	1707	1752
Adj Flow Rate, veh/h	0	511	0	0	574	0				629	0	48
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90				0.90	0.90	0.90
Percent Heavy Veh, %	0	19	13	0	10	25				19	13	10
Cap, veh/h	0	1068		0	1156					976	0	470
Arrive On Green	0.00	0.35	0.00	0.00	0.35	0.00				0.32	0.00	0.32
Sat Flow, veh/h	0	3156	1447	0	3416	1296				3083	0	1485
Grp Volume(v), veh/h	0	511	0	0	574	0				629	0	48
Grp Sat Flow(s),veh/h/ln	0	1537	1447	0	1664	1296				1541	0	1485
Q Serve(g_s), s	0.0	5.3	0.0	0.0	5.5	0.0				7.1	0.0	0.9
Cycle Q Clear(g_c), s	0.0	5.3	0.0	0.0	5.5	0.0				7.1	0.0	0.9
Prop In Lane	0.00		1.00	0.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1068		0	1156					976	0	470
V/C Ratio(X)	0.00	0.48		0.00	0.50					0.64	0.00	0.10
Avail Cap(c_a), veh/h	0	1916		0	2073					1616	0	778
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	0.00	0.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	10.3	0.0	0.0	10.4	0.0				11.9	0.0	9.8
Incr Delay (d2), s/veh	0.0	1.0	0.0	0.0	1.0	0.0				1.2	0.0	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
%ile BackOfQ(50%),veh/ln	0.0	1.3	0.0	0.0	1.5	0.0				2.0	0.0	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	11.3	0.0	0.0	11.4	0.0				13.1	0.0	9.9
LnGrp LOS	A	B		A	B					B	A	A
Approach Vol, veh/h		511			574						677	
Approach Delay, s/veh		11.3			11.4						12.9	
Approach LOS		B			B						B	

Timer - Assigned Phs	2	4	6
Phs Duration (G+Y+Rc), s	20.8	19.6	20.8
Change Period (Y+Rc), s	6.8	6.8	6.8
Max Green Setting (Gmax), s	25.2	21.2	25.2
Max Q Clear Time (g_c+I1), s	7.3	9.1	7.5
Green Ext Time (p_c), s	5.9	3.7	6.5

Intersection Summary	
HCM 6th Ctrl Delay	11.9
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Unsignalized Delay for [EBR, WBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	70	936	0	0	878	568	66	0	252	0	0	0
Future Volume (veh/h)	70	936	0	0	878	568	66	0	252	0	0	0
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	1663	1604	0	0	1693	1663	1693	1663	1604			
Adj Flow Rate, veh/h	83	1114	0	0	1045	676	53	0	328			
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84			
Percent Heavy Veh, %	16	20	0	0	14	16	14	16	20			
Cap, veh/h	143	1832	0	0	1315	576	313	0	528			
Arrive On Green	0.09	0.60	0.00	0.00	0.41	0.41	0.19	0.00	0.19			
Sat Flow, veh/h	1584	3127	0	0	3300	1409	1612	0	2718			
Grp Volume(v), veh/h	83	1114	0	0	1045	676	53	0	328			
Grp Sat Flow(s),veh/h/ln	1584	1523	0	0	1608	1409	1612	0	1359			
Q Serve(g_s), s	3.3	15.3	0.0	0.0	18.9	27.2	1.8	0.0	7.4			
Cycle Q Clear(g_c), s	3.3	15.3	0.0	0.0	18.9	27.2	1.8	0.0	7.4			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	143	1832	0	0	1315	576	313	0	528			
V/C Ratio(X)	0.58	0.61	0.00	0.00	0.79	1.17	0.17	0.00	0.62			
Avail Cap(c_a), veh/h	340	2162	0	0	1315	576	708	0	1193			
HCM Platoon Ratio	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	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	29.1	8.3	0.0	0.0	17.2	19.7	22.3	0.0	24.6			
Incr Delay (d2), s/veh	1.4	1.0	0.0	0.0	4.3	95.2	0.7	0.0	3.5			
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	3.6	0.0	0.0	6.5	22.4	0.7	0.0	2.5			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	30.4	9.3	0.0	0.0	21.5	114.8	23.1	0.0	28.0			
LnGrp LOS	C	A	A	A	C	F	C	A	C			
Approach Vol, veh/h		1197			1721			381				
Approach Delay, s/veh		10.8			58.2			27.3				
Approach LOS		B			E			C				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		46.8			12.8	34.0		19.7				
Change Period (Y+Rc), s		6.8			6.8	* 6.8		6.8				
Max Green Setting (Gmax), s		47.2			14.3	* 27		29.2				
Max Q Clear Time (g_c+I1), s		17.3			5.3	29.2		9.4				
Green Ext Time (p_c), s		17.9			0.1	0.0		3.6				

Intersection Summary	
HCM 6th Ctrl Delay	37.4
HCM 6th LOS	D

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.

Intersection	
Int Delay, s/veh	1.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	2	135	79	52	31	1
Future Vol, veh/h	2	135	79	52	31	1
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	13	10	0	0	0
Mvmt Flow	2	147	86	57	34	1

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	143	0	-	0	266	115
Stage 1	-	-	-	-	115	-
Stage 2	-	-	-	-	151	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1452	-	-	-	727	943
Stage 1	-	-	-	-	915	-
Stage 2	-	-	-	-	882	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1452	-	-	-	726	943
Mov Cap-2 Maneuver	-	-	-	-	726	-
Stage 1	-	-	-	-	914	-
Stage 2	-	-	-	-	882	-

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	10.2
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1452	-	-	-	731
HCM Lane V/C Ratio	0.001	-	-	-	0.048
HCM Control Delay (s)	7.5	0	-	-	10.2
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.1

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	166	131	0	25	0
Future Vol, veh/h	0	166	131	0	25	0
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	13	10	0	0	0
Mvmt Flow	0	180	142	0	27	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	142	0	-	0	322	142
Stage 1	-	-	-	-	142	-
Stage 2	-	-	-	-	180	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1453	-	-	-	676	911
Stage 1	-	-	-	-	890	-
Stage 2	-	-	-	-	856	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1453	-	-	-	676	911
Mov Cap-2 Maneuver	-	-	-	-	676	-
Stage 1	-	-	-	-	890	-
Stage 2	-	-	-	-	856	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	10.5
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1453	-	-	-	676
HCM Lane V/C Ratio	-	-	-	-	0.04
HCM Control Delay (s)	0	-	-	-	10.5
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.1



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	449	2	4	509	5	1
Future Volume (veh/h)	449	2	4	509	5	1
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	1796	1900	1900	1767	1767	1796
Adj Flow Rate, veh/h	516	2	0	588	6	1
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	7	0	0	9	9	7
Cap, veh/h	929	451	639	1007	14	810
Arrive On Green	0.28	0.28	0.00	0.34	0.01	0.45
Sat Flow, veh/h	3319	1610	1900	2994	1682	1796
Grp Volume(v), veh/h	516	2	0	588	6	1
Grp Sat Flow(s),veh/h/ln	1659	1610	1900	1497	1682	1796
Q Serve(g_s), s	5.9	0.0	0.0	7.2	0.2	0.0
Cycle Q Clear(g_c), s	5.9	0.0	0.0	7.2	0.2	0.0
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	929	451	639	1007	14	810
V/C Ratio(X)	0.56	0.00	0.00	0.58	0.44	0.00
Avail Cap(c_a), veh/h	2118	1028	1716	2704	583	1622
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	13.6	11.5	0.0	12.1	21.8	6.7
Incr Delay (d2), s/veh	1.4	0.0	0.0	1.2	8.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	0.0	0.0	1.8	0.1	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	14.9	11.5	0.0	13.3	30.1	6.7
LnGrp LOS	B	B	A	B	C	A
Approach Vol, veh/h	518		588			7
Approach Delay, s/veh	14.9		13.3			26.7
Approach LOS	B		B			C

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	5.1	20.0			25.0	19.2
Change Period (Y+Rc), s	* 4.7	5.1			5.1	6.8
Max Green Setting (Gmax), s	* 15	39.9			39.9	28.2
Max Q Clear Time (g_c+I1), s	2.2	9.2			2.0	7.9
Green Ext Time (p_c), s	0.0	5.7			0.0	4.5

Intersection Summary	
HCM 6th Ctrl Delay	14.1
HCM 6th LOS	B

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)	153	22	14	5	34	136	22	225	11	81	190	179
Future Volume (veh/h)	153	22	14	5	34	136	22	225	11	81	190	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	1737	1559	1693	1693	1722	1737	1722	1737	1559	1559	1693	1722
Adj Flow Rate, veh/h	170	24	16	6	38	151	24	250	12	90	211	199
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	11	23	14	14	12	11	12	11	23	23	14	12
Cap, veh/h	293	258	172	13	265	237	47	522	25	109	623	498
Arrive On Green	0.09	0.30	0.30	0.01	0.16	0.16	0.03	0.16	0.16	0.07	0.19	0.19
Sat Flow, veh/h	3209	873	582	1612	1636	1459	1640	3206	153	1485	3216	2569
Grp Volume(v), veh/h	170	0	40	6	38	151	24	128	134	90	211	199
Grp Sat Flow(s),veh/h/ln	1605	0	1454	1612	1636	1459	1640	1650	1709	1485	1608	1284
Q Serve(g_s), s	2.5	0.0	1.0	0.2	1.0	4.8	0.7	3.5	3.5	3.0	2.8	3.3
Cycle Q Clear(g_c), s	2.5	0.0	1.0	0.2	1.0	4.8	0.7	3.5	3.5	3.0	2.8	3.3
Prop In Lane	1.00		0.40	1.00		1.00	1.00		0.09	1.00		1.00
Lane Grp Cap(c), veh/h	293	0	431	13	265	237	47	269	278	109	623	498
V/C Ratio(X)	0.58	0.00	0.09	0.47	0.14	0.64	0.52	0.48	0.48	0.83	0.34	0.40
Avail Cap(c_a), veh/h	832	0	663	499	745	665	651	809	838	610	1621	1295
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	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.5	0.0	12.6	24.4	17.8	19.3	23.7	18.8	18.8	22.6	17.2	17.4
Incr Delay (d2), s/veh	1.8	0.0	0.1	9.4	0.5	6.0	3.2	3.4	3.3	14.3	0.7	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	0.9	0.0	0.3	0.1	0.4	1.8	0.3	1.4	1.4	1.3	0.9	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.3	0.0	12.7	33.8	18.3	25.3	26.9	22.2	22.1	36.9	17.9	18.5
LnGrp LOS	C	A	B	C	B	C	C	C	C	D	B	B
Approach Vol, veh/h		210			195			286			500	
Approach Delay, s/veh		21.3			24.2			22.5			21.5	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.3	13.8	5.1	22.1	6.8	15.4	11.7	15.5
Change Period (Y+Rc), s	* 4.7	5.8	* 4.7	7.5	5.4	* 5.8	7.2	7.5
Max Green Setting (Gmax), s	* 3.6	24.2	* 15	22.5	19.6	* 25	12.8	22.5
Max Q Clear Time (g_c+I1), s	5.0	5.5	2.2	3.0	2.7	5.3	4.5	6.8
Green Ext Time (p_c), s	0.2	2.5	0.0	0.1	0.0	3.7	0.3	1.6

Intersection Summary	
HCM 6th Ctrl Delay	22.2
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	1.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔		↰	↑		↰	↑	
Traffic Vol, veh/h	33	0	16	4	0	2	27	197	3	1	128	55
Future Vol, veh/h	33	0	16	4	0	2	27	197	3	1	128	55
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	0	0	0	0	0	0	0	18	0	0	13	0
Mvmt Flow	37	0	18	4	0	2	30	219	3	1	142	61

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	457	457	173	465	486	221	203	0	0	222	0	0
Stage 1	175	175	-	281	281	-	-	-	-	-	-	-
Stage 2	282	282	-	184	205	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	517	503	876	511	484	824	1381	-	-	1359	-	-
Stage 1	832	758	-	730	682	-	-	-	-	-	-	-
Stage 2	729	681	-	822	736	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	507	491	876	492	473	824	1381	-	-	1359	-	-
Mov Cap-2 Maneuver	507	491	-	492	473	-	-	-	-	-	-	-
Stage 1	814	757	-	714	667	-	-	-	-	-	-	-
Stage 2	711	666	-	805	735	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	11.7	11.4	0.9	0
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1381	-	-	588	568	1359	-	-
HCM Lane V/C Ratio	0.022	-	-	0.093	0.012	0.001	-	-
HCM Control Delay (s)	7.7	-	-	11.7	11.4	7.7	-	-
HCM Lane LOS	A	-	-	B	B	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.3	0	0	-	-

Intersection	
Int Delay, s/veh	11.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↕	↱
Traffic Vol, veh/h	104	24	63	15	17	54	96	68	13	39	45	60
Future Vol, veh/h	104	24	63	15	17	54	96	68	13	39	45	60
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	-	-	-	-	-	-	-	-	-	-	-	150
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	83	83	83	83	83	83	83	83	83	83	83	83
Heavy Vehicles, %	18	13	2	2	10	18	10	18	13	13	2	10
Mvmt Flow	125	29	76	18	20	65	116	82	16	47	54	72

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	85	0	0	105	0	0	469	438	67	455	444	53
Stage 1	-	-	-	-	-	-	317	317	-	89	89	-
Stage 2	-	-	-	-	-	-	152	121	-	366	355	-
Critical Hdwy	4.28	-	-	4.12	-	-	7.2	6.68	6.33	7.23	6.52	6.3
Critical Hdwy Stg 1	-	-	-	-	-	-	6.2	5.68	-	6.23	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.2	5.68	-	6.23	5.52	-
Follow-up Hdwy	2.362	-	-	2.218	-	-	3.59	4.162	3.417	3.617	4.018	3.39
Pot Cap-1 Maneuver	1416	-	-	1486	-	-	491	489	967	497	508	992
Stage 1	-	-	-	-	-	-	678	627	-	892	821	-
Stage 2	-	-	-	-	-	-	832	766	-	631	630	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1416	-	-	1486	-	-	381	437	967	385	454	992
Mov Cap-2 Maneuver	-	-	-	-	-	-	381	437	-	385	454	-
Stage 1	-	-	-	-	-	-	614	567	-	807	810	-
Stage 2	-	-	-	-	-	-	710	756	-	481	570	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	4.2	1.3	22.1	13.2
HCM LOS			C	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	420	1416	-	-	1486	-	-	419	992
HCM Lane V/C Ratio	0.508	0.088	-	-	0.012	-	-	0.242	0.073
HCM Control Delay (s)	22.1	7.8	0	-	7.5	0	-	16.3	8.9
HCM Lane LOS	C	A	A	-	A	A	-	C	A
HCM 95th %tile Q(veh)	2.8	0.3	-	-	0	-	-	0.9	0.2

Intersection	
Int Delay, s/veh	175.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	39	1796	1526	155	108	28
Future Vol, veh/h	39	1796	1526	155	108	28
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	470	-	-	480	0	1
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	15	4	5	15	4	5
Mvmt Flow	45	2088	1774	180	126	33

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1954	0	-	0	2908	887
Stage 1	-	-	-	-	1774	-
Stage 2	-	-	-	-	1134	-
Critical Hdwy	4.4	-	-	-	6.88	7
Critical Hdwy Stg 1	-	-	-	-	5.88	-
Critical Hdwy Stg 2	-	-	-	-	5.88	-
Follow-up Hdwy	2.35	-	-	-	3.54	3.35
Pot Cap-1 Maneuver	249	-	-	-	~ 12	281
Stage 1	-	-	-	-	~ 119	-
Stage 2	-	-	-	-	265	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	249	-	-	-	~ 10	281
Mov Cap-2 Maneuver	-	-	-	-	~ 10	-
Stage 1	-	-	-	-	~ 97	-
Stage 2	-	-	-	-	265	-

Approach	EB	WB	SB
HCM Control Delay, s	0.5	0	$ 4714.4
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	249	-	-	-	10	281
HCM Lane V/C Ratio	0.182	-	-	-	12.558	0.116
HCM Control Delay (s)	22.6	-	-	-	$ 5931.6	19.5
HCM Lane LOS	C	-	-	-	F	C
HCM 95th %tile Q(veh)	0.7	-	-	-	17.2	0.4

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	367	147	0	384	488	0	0	0	679	0	68
Future Volume (veh/h)	0	367	147	0	384	488	0	0	0	679	0	68
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	0	1678	1826	0	1752	1618				1678	1826	1752
Adj Flow Rate, veh/h	0	378	0	0	396	0				722	0	47
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97				0.97	0.97	0.97
Percent Heavy Veh, %	0	15	5	0	10	19				15	5	10
Cap, veh/h	0	882		0	921					1140	0	530
Arrive On Green	0.00	0.28	0.00	0.00	0.28	0.00				0.36	0.00	0.36
Sat Flow, veh/h	0	3272	1547	0	3416	1372				3196	0	1485
Grp Volume(v), veh/h	0	378	0	0	396	0				722	0	47
Grp Sat Flow(s),veh/h/ln	0	1594	1547	0	1664	1372				1598	0	1485
Q Serve(g_s), s	0.0	3.6	0.0	0.0	3.6	0.0				7.0	0.0	0.8
Cycle Q Clear(g_c), s	0.0	3.6	0.0	0.0	3.6	0.0				7.0	0.0	0.8
Prop In Lane	0.00		1.00	0.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	882		0	921					1140	0	530
V/C Ratio(X)	0.00	0.43		0.00	0.43					0.63	0.00	0.09
Avail Cap(c_a), veh/h	0	2165		0	2260					1826	0	848
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	0.00	0.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	11.0	0.0	0.0	11.0	0.0				9.9	0.0	7.9
Incr Delay (d2), s/veh	0.0	1.0	0.0	0.0	0.9	0.0				1.0	0.0	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
%ile BackOfQ(50%),veh/ln	0.0	0.9	0.0	0.0	1.0	0.0				1.8	0.0	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	12.0	0.0	0.0	11.9	0.0				10.9	0.0	8.0
LnGrp LOS	A	B		A	B					B	A	A
Approach Vol, veh/h		378			396						769	
Approach Delay, s/veh		12.0			11.9						10.7	
Approach LOS		B			B						B	

Timer - Assigned Phs		2		4		6						
Phs Duration (G+Y+Rc), s		17.1		20.0		17.1						
Change Period (Y+Rc), s		6.8		6.8		6.8						
Max Green Setting (Gmax), s		25.2		21.2		25.2						
Max Q Clear Time (g_c+I1), s		5.6		9.0		5.6						
Green Ext Time (p_c), s		4.4		4.3		4.6						

Intersection Summary		
HCM 6th Ctrl Delay		11.4
HCM 6th LOS		B

Notes

User approved volume balancing among the lanes for turning movement.

Unsignalized Delay for [EBR, WBR] is excluded from calculations of the approach delay and intersection delay.



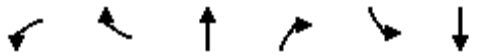
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	57	988	0	0	776	567	97	0	265	0	0	0
Future Volume (veh/h)	57	988	0	0	776	567	97	0	265	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking 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	1648	1648	0	0	1663	1648	1663	1648	1648			
Adj Flow Rate, veh/h	59	1019	0	0	800	585	67	0	309			
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97			
Percent Heavy Veh, %	17	17	0	0	16	17	16	17	17			
Cap, veh/h	143	1904	0	0	1306	577	293	0	518			
Arrive On Green	0.09	0.61	0.00	0.00	0.41	0.41	0.19	0.00	0.19			
Sat Flow, veh/h	1570	3214	0	0	3243	1397	1584	0	2793			
Grp Volume(v), veh/h	59	1019	0	0	800	585	67	0	309			
Grp Sat Flow(s),veh/h/ln	1570	1566	0	0	1580	1397	1584	0	1397			
Q Serve(g_s), s	2.3	12.4	0.0	0.0	13.1	27.2	2.4	0.0	6.7			
Cycle Q Clear(g_c), s	2.3	12.4	0.0	0.0	13.1	27.2	2.4	0.0	6.7			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	143	1904	0	0	1306	577	293	0	518			
V/C Ratio(X)	0.41	0.54	0.00	0.00	0.61	1.01	0.23	0.00	0.60			
Avail Cap(c_a), veh/h	341	2247	0	0	1306	577	703	0	1240			
HCM Platoon Ratio	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	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	28.2	7.5	0.0	0.0	15.2	19.3	22.8	0.0	24.6			
Incr Delay (d2), s/veh	0.7	0.7	0.0	0.0	1.5	40.8	1.1	0.0	3.2			
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	0.8	2.9	0.0	0.0	4.1	13.6	0.9	0.0	2.3			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	28.9	8.2	0.0	0.0	16.7	60.1	23.9	0.0	27.7			
LnGrp LOS	C	A	A	A	B	F	C	A	C			
Approach Vol, veh/h		1078			1385			376				
Approach Delay, s/veh		9.3			35.0			27.1				
Approach LOS		A			D			C				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		46.8			12.8	34.0		19.0				
Change Period (Y+Rc), s		6.8			6.8	* 6.8		6.8				
Max Green Setting (Gmax), s		47.2			14.3	* 27		29.2				
Max Q Clear Time (g_c+I1), s		14.4			4.3	29.2		8.7				
Green Ext Time (p_c), s		17.1			0.0	0.0		3.5				

Intersection Summary	
HCM 6th Ctrl Delay	24.2
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	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	593	1	8	665	12	0
Future Volume (veh/h)	593	1	8	665	12	0
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	1811	1900	1900	1722	1722	1811
Adj Flow Rate, veh/h	645	1	0	729	13	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	6	0	0	12	12	6
Cap, veh/h	1010	486	714	1096	27	867
Arrive On Green	0.30	0.30	0.00	0.38	0.02	0.00
Sat Flow, veh/h	3346	1610	1900	2919	1640	1811
Grp Volume(v), veh/h	645	1	0	729	13	0
Grp Sat Flow(s),veh/h/ln	1673	1610	1900	1459	1640	1811
Q Serve(g_s), s	9.0	0.0	0.0	11.3	0.4	0.0
Cycle Q Clear(g_c), s	9.0	0.0	0.0	11.3	0.4	0.0
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	1010	486	714	1096	27	867
V/C Ratio(X)	0.64	0.00	0.00	0.67	0.48	0.00
Avail Cap(c_a), veh/h	1740	837	1398	2148	463	1333
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	16.4	13.2	0.0	14.1	26.4	0.0
Incr Delay (d2), s/veh	1.8	0.0	0.0	1.5	4.9	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.0	0.0	0.0	3.1	0.2	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	18.1	13.2	0.0	15.6	31.4	0.0
LnGrp LOS	B	B	A	B	C	A
Approach Vol, veh/h	646		729			13
Approach Delay, s/veh	18.1		15.6			31.4
Approach LOS	B		B			C

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	5.6	25.5			31.1	23.2
Change Period (Y+Rc), s	* 4.7	5.1			5.1	6.8
Max Green Setting (Gmax), s	* 15	39.9			39.9	28.2
Max Q Clear Time (g_c+I1), s	2.4	13.3			0.0	11.0
Green Ext Time (p_c), s	0.0	7.1			0.0	5.3

Intersection Summary	
HCM 6th Ctrl Delay	16.9
HCM 6th LOS	B

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)	164	39	23	5	27	350	13	160	15	323	145	126
Future Volume (veh/h)	164	39	23	5	27	350	13	160	15	323	145	126
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	1767	1826	1796	1796	1752	1767	1752	1767	1826	1826	1796	1752
Adj Flow Rate, veh/h	178	42	25	5	29	380	14	174	16	351	158	137
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, %	9	5	7	7	10	9	10	9	5	5	7	10
Cap, veh/h	262	410	244	11	462	412	28	313	28	391	1024	784
Arrive On Green	0.08	0.38	0.38	0.01	0.28	0.28	0.02	0.10	0.10	0.22	0.30	0.30
Sat Flow, veh/h	3264	1073	638	1711	1664	1485	1668	3111	283	1739	3413	2613
Grp Volume(v), veh/h	178	0	67	5	29	380	14	93	97	351	158	137
Grp Sat Flow(s),veh/h/ln	1632	0	1711	1711	1664	1485	1668	1678	1716	1739	1706	1306
Q Serve(g_s), s	4.2	0.0	2.0	0.2	1.0	19.8	0.7	4.2	4.3	15.6	2.7	3.1
Cycle Q Clear(g_c), s	4.2	0.0	2.0	0.2	1.0	19.8	0.7	4.2	4.3	15.6	2.7	3.1
Prop In Lane	1.00		0.37	1.00		1.00	1.00		0.17	1.00		1.00
Lane Grp Cap(c), veh/h	262	0	654	11	462	412	28	169	173	391	1024	784
V/C Ratio(X)	0.68	0.00	0.10	0.44	0.06	0.92	0.50	0.55	0.56	0.90	0.15	0.17
Avail Cap(c_a), veh/h	525	0	654	329	471	420	411	511	522	444	1069	818
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	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.6	0.0	15.8	39.4	21.1	27.9	38.8	34.0	34.1	29.9	20.4	20.6
Incr Delay (d2), s/veh	3.1	0.0	0.1	9.9	0.1	26.5	5.1	7.2	7.3	19.1	0.1	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	1.7	0.0	0.7	0.1	0.4	9.5	0.3	1.9	2.0	8.0	1.0	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	38.7	0.0	15.8	49.2	21.2	54.4	43.9	41.2	41.4	49.0	20.6	20.8
LnGrp LOS	D	A	B	D	C	D	D	D	D	D	C	C
Approach Vol, veh/h		245			414			204			646	
Approach Delay, s/veh		32.4			52.1			41.5			36.1	
Approach LOS		C			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	32.6	13.8	5.2	37.9	6.7	29.7	13.6	29.6
Change Period (Y+Rc), s	* 4.7	5.8	* 4.7	7.5	5.4	* 5.8	7.2	7.5
Max Green Setting (Gmax), s	* 28	24.2	* 15	22.5	19.6	* 25	12.8	22.5
Max Q Clear Time (g_c+I1), s	17.6	6.3	2.2	4.0	2.7	5.1	6.2	21.8
Green Ext Time (p_c), s	0.3	1.7	0.0	0.2	0.0	2.6	0.3	0.3

Intersection Summary	
HCM 6th Ctrl Delay	40.6
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	0.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	5	4	172	6	6	153
Future Vol, veh/h	5	4	172	6	6	153
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	-	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	11	0	0	7
Mvmt Flow	5	4	187	7	7	166

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	371	191	0	0	194	0
Stage 1	191	-	-	-	-	-
Stage 2	180	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	634	856	-	-	1391	-
Stage 1	846	-	-	-	-	-
Stage 2	856	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	631	856	-	-	1391	-
Mov Cap-2 Maneuver	675	-	-	-	-	-
Stage 1	846	-	-	-	-	-
Stage 2	852	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.9	0	0.3
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	745	1391	-
HCM Lane V/C Ratio	-	-	0.013	0.005	-
HCM Control Delay (s)	-	-	9.9	7.6	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	0	0	-

Intersection	
Int Delay, s/veh	9.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↕	↱
Traffic Vol, veh/h	76	19	81	15	13	34	48	119	37	43	48	69
Future Vol, veh/h	76	19	81	15	13	34	48	119	37	43	48	69
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	-	-	-	-	-	-	-	-	-	-	-	150
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, %	11	9	7	7	14	11	14	11	9	9	7	14
Mvmt Flow	83	21	88	16	14	37	52	129	40	47	52	75

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	51	0	0	109	0	0	359	314	65	381	340	33
Stage 1	-	-	-	-	-	-	231	231	-	65	65	-
Stage 2	-	-	-	-	-	-	128	83	-	316	275	-
Critical Hdwy	4.21	-	-	4.17	-	-	7.24	6.61	6.29	7.19	6.57	6.34
Critical Hdwy Stg 1	-	-	-	-	-	-	6.24	5.61	-	6.19	5.57	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.24	5.61	-	6.19	5.57	-
Follow-up Hdwy	2.299	-	-	2.263	-	-	3.626	4.099	3.381	3.581	4.063	3.426
Pot Cap-1 Maneuver	1499	-	-	1451	-	-	575	587	980	564	574	1007
Stage 1	-	-	-	-	-	-	746	697	-	928	831	-
Stage 2	-	-	-	-	-	-	848	809	-	680	673	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1499	-	-	1451	-	-	466	546	980	419	534	1007
Mov Cap-2 Maneuver	-	-	-	-	-	-	466	546	-	419	534	-
Stage 1	-	-	-	-	-	-	701	655	-	872	822	-
Stage 2	-	-	-	-	-	-	727	800	-	492	633	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	3.3	1.8	15.3	12.1
HCM LOS			C	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	569	1499	-	-	1451	-	-	473	1007
HCM Lane V/C Ratio	0.39	0.055	-	-	0.011	-	-	0.209	0.074
HCM Control Delay (s)	15.3	7.5	0	-	7.5	0	-	14.6	8.9
HCM Lane LOS	C	A	A	-	A	A	-	B	A
HCM 95th %tile Q(veh)	1.8	0.2	-	-	0	-	-	0.8	0.2

Intersection	
Int Delay, s/veh	67.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	49	1560	1968	203	52	98
Future Vol, veh/h	49	1560	1968	203	52	98
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	470	-	-	480	0	1
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	13	7	8	13	7	8
Mvmt Flow	53	1696	2139	221	57	107

Major/Minor	Major1			Major2		Minor2	
Conflicting Flow All	2360	0	-	0	3093	1070	
Stage 1	-	-	-	-	2139	-	
Stage 2	-	-	-	-	954	-	
Critical Hdwy	4.36	-	-	-	6.94	7.06	
Critical Hdwy Stg 1	-	-	-	-	5.94	-	
Critical Hdwy Stg 2	-	-	-	-	5.94	-	
Follow-up Hdwy	2.33	-	-	-	3.57	3.38	
Pot Cap-1 Maneuver	173	-	-	-	~ 8	207	
Stage 1	-	-	-	-	71	-	
Stage 2	-	-	-	-	323	-	
Platoon blocked, %		-	-	-			
Mov Cap-1 Maneuver	173	-	-	-	~ 6	207	
Mov Cap-2 Maneuver	-	-	-	-	~ 6	-	
Stage 1	-	-	-	-	~ 49	-	
Stage 2	-	-	-	-	323	-	

Approach	EB	WB	SB
HCM Control Delay, s	1.1	0	$ 1750.8
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	173	-	-	-	6	207
HCM Lane V/C Ratio	0.308	-	-	-	9.42	0.515
HCM Control Delay (s)	34.8	-	-	-	$ 4976	39.5
HCM Lane LOS	D	-	-	-	F	E
HCM 95th %tile Q(veh)	1.2	-	-	-	8.7	2.6

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	510	167	0	530	448	0	0	0	573	0	64
Future Volume (veh/h)	0	510	167	0	530	448	0	0	0	573	0	64
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	0	1618	1707	0	1752	1530				1618	1707	1752
Adj Flow Rate, veh/h	0	554	0	0	576	0				645	0	47
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92				0.92	0.92	0.92
Percent Heavy Veh, %	0	19	13	0	10	25				19	13	10
Cap, veh/h	0	1064		0	1152					989	0	476
Arrive On Green	0.00	0.35	0.00	0.00	0.35	0.00				0.32	0.00	0.32
Sat Flow, veh/h	0	3156	1447	0	3416	1296				3083	0	1485
Grp Volume(v), veh/h	0	554	0	0	576	0				645	0	47
Grp Sat Flow(s),veh/h/ln	0	1537	1447	0	1664	1296				1541	0	1485
Q Serve(g_s), s	0.0	5.9	0.0	0.0	5.6	0.0				7.3	0.0	0.9
Cycle Q Clear(g_c), s	0.0	5.9	0.0	0.0	5.6	0.0				7.3	0.0	0.9
Prop In Lane	0.00		1.00	0.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1064		0	1152					989	0	476
V/C Ratio(X)	0.00	0.52		0.00	0.50					0.65	0.00	0.10
Avail Cap(c_a), veh/h	0	1897		0	2054					1600	0	771
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	0.00	0.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	10.6	0.0	0.0	10.6	0.0				11.9	0.0	9.7
Incr Delay (d2), s/veh	0.0	1.1	0.0	0.0	1.0	0.0				1.3	0.0	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
%ile BackOfQ(50%),veh/ln	0.0	1.5	0.0	0.0	1.5	0.0				2.0	0.0	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	11.8	0.0	0.0	11.5	0.0				13.2	0.0	9.9
LnGrp LOS	A	B		A	B					B	A	A
Approach Vol, veh/h		554			576						692	
Approach Delay, s/veh		11.8			11.5						12.9	
Approach LOS		B			B						B	

Timer - Assigned Phs	2	4	6
Phs Duration (G+Y+Rc), s	20.9	19.9	20.9
Change Period (Y+Rc), s	6.8	6.8	6.8
Max Green Setting (Gmax), s	25.2	21.2	25.2
Max Q Clear Time (g_c+I1), s	7.9	9.3	7.6
Green Ext Time (p_c), s	6.3	3.8	6.6

Intersection Summary	
HCM 6th Ctrl Delay	12.1
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Unsignalized Delay for [EBR, WBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	104	979	0	0	909	596	69	0	265	0	0	0
Future Volume (veh/h)	104	979	0	0	909	596	69	0	265	0	0	0
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	1663	1604	0	0	1693	1663	1693	1663	1604			
Adj Flow Rate, veh/h	113	1064	0	0	988	648	50	0	315			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	16	20	0	0	14	16	14	16	20			
Cap, veh/h	159	1860	0	0	1312	575	299	0	504			
Arrive On Green	0.10	0.61	0.00	0.00	0.41	0.41	0.19	0.00	0.19			
Sat Flow, veh/h	1584	3127	0	0	3300	1409	1612	0	2718			
Grp Volume(v), veh/h	113	1064	0	0	988	648	50	0	315			
Grp Sat Flow(s),veh/h/ln	1584	1523	0	0	1608	1409	1612	0	1359			
Q Serve(g_s), s	4.6	13.9	0.0	0.0	17.5	27.2	1.7	0.0	7.1			
Cycle Q Clear(g_c), s	4.6	13.9	0.0	0.0	17.5	27.2	1.7	0.0	7.1			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	159	1860	0	0	1312	575	299	0	504			
V/C Ratio(X)	0.71	0.57	0.00	0.00	0.75	1.13	0.17	0.00	0.62			
Avail Cap(c_a), veh/h	387	2249	0	0	1312	575	658	0	1109			
HCM Platoon Ratio	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	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	29.0	7.8	0.0	0.0	16.9	19.7	22.8	0.0	25.0			
Incr Delay (d2), s/veh	2.2	0.8	0.0	0.0	3.3	77.6	0.8	0.0	3.7			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	1.7	3.2	0.0	0.0	5.9	19.6	0.7	0.0	2.4			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	31.2	8.6	0.0	0.0	20.2	97.3	23.6	0.0	28.7			
LnGrp LOS	C	A	A	A	C	F	C	A	C			
Approach Vol, veh/h		1177			1636			365				
Approach Delay, s/veh		10.8			50.7			28.0				
Approach LOS		B			D			C				

Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		47.5			13.5	34.0		19.2				
Change Period (Y+Rc), s		6.8			6.8	* 6.8		6.8				
Max Green Setting (Gmax), s		49.2			16.3	* 27		27.2				
Max Q Clear Time (g_c+I1), s		15.9			6.6	29.2		9.1				
Green Ext Time (p_c), s		18.2			0.1	0.0		3.3				

Intersection Summary												
HCM 6th Ctrl Delay			33.3									
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	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	458	5	7	498	8	2
Future Volume (veh/h)	458	5	7	498	8	2
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	1796	1900	1900	1767	1767	1796
Adj Flow Rate, veh/h	498	5	0	546	9	2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	7	0	0	9	9	7
Cap, veh/h	921	447	610	962	20	796
Arrive On Green	0.28	0.28	0.00	0.32	0.01	0.44
Sat Flow, veh/h	3319	1610	1900	2994	1682	1796
Grp Volume(v), veh/h	498	5	0	546	9	2
Grp Sat Flow(s),veh/h/ln	1659	1610	1900	1497	1682	1796
Q Serve(g_s), s	5.4	0.1	0.0	6.5	0.2	0.0
Cycle Q Clear(g_c), s	5.4	0.1	0.0	6.5	0.2	0.0
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	921	447	610	962	20	796
V/C Ratio(X)	0.54	0.01	0.00	0.57	0.45	0.00
Avail Cap(c_a), veh/h	2196	1065	1778	2803	604	1681
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	13.1	11.2	0.0	12.0	20.9	6.6
Incr Delay (d2), s/veh	1.3	0.0	0.0	1.1	5.8	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	0.0	0.0	1.6	0.1	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	14.4	11.2	0.0	13.1	26.7	6.6
LnGrp LOS	B	B	A	B	C	A
Approach Vol, veh/h	503		546			11
Approach Delay, s/veh	14.4		13.1			23.1
Approach LOS	B		B			C

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	5.2	18.8			24.0	18.6
Change Period (Y+Rc), s	* 4.7	5.1			5.1	6.8
Max Green Setting (Gmax), s	* 15	39.9			39.9	28.2
Max Q Clear Time (g_c+I1), s	2.2	8.5			2.0	7.4
Green Ext Time (p_c), s	0.0	5.3			0.0	4.4

Intersection Summary	
HCM 6th Ctrl Delay	13.8
HCM 6th LOS	B

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)	154	23	15	4	36	157	23	194	12	107	169	184
Future Volume (veh/h)	154	23	15	4	36	157	23	194	12	107	169	184
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	1737	1559	1693	1693	1722	1737	1722	1737	1559	1559	1693	1722
Adj Flow Rate, veh/h	167	25	16	4	39	171	25	211	13	116	184	200
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, %	11	23	14	14	12	11	12	11	23	23	14	12
Cap, veh/h	281	272	174	9	289	257	48	486	30	144	670	535
Arrive On Green	0.09	0.31	0.31	0.01	0.18	0.18	0.03	0.15	0.15	0.10	0.21	0.21
Sat Flow, veh/h	3209	888	569	1612	1636	1459	1640	3159	193	1485	3216	2569
Grp Volume(v), veh/h	167	0	41	4	39	171	25	110	114	116	184	200
Grp Sat Flow(s),veh/h/ln	1605	0	1457	1612	1636	1459	1640	1650	1702	1485	1608	1284
Q Serve(g_s), s	2.6	0.0	1.0	0.1	1.0	5.7	0.8	3.1	3.2	4.0	2.5	3.5
Cycle Q Clear(g_c), s	2.6	0.0	1.0	0.1	1.0	5.7	0.8	3.1	3.2	4.0	2.5	3.5
Prop In Lane	1.00		0.39	1.00		1.00	1.00		0.11	1.00		1.00
Lane Grp Cap(c), veh/h	281	0	447	9	289	257	48	254	262	144	670	535
V/C Ratio(X)	0.59	0.00	0.09	0.46	0.14	0.66	0.52	0.43	0.44	0.81	0.27	0.37
Avail Cap(c_a), veh/h	791	0	631	475	709	632	619	769	793	580	1541	1231
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	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.8	0.0	12.8	25.8	18.0	20.0	24.9	19.9	19.9	23.0	17.3	17.7
Incr Delay (d2), s/veh	2.0	0.0	0.1	13.4	0.5	6.1	3.3	3.0	3.0	10.1	0.5	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	0.9	0.0	0.3	0.1	0.4	2.1	0.3	1.2	1.3	1.6	0.8	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	24.8	0.0	12.9	39.1	18.5	26.1	28.1	22.9	22.9	33.1	17.7	18.6
LnGrp LOS	C	A	B	D	B	C	C	C	C	C	B	B
Approach Vol, veh/h		208			214			249			500	
Approach Delay, s/veh		22.5			25.0			23.4			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	9.7	13.8	5.0	23.4	6.9	16.6	11.8	16.7
Change Period (Y+Rc), s	* 4.7	5.8	* 4.7	7.5	5.4	* 5.8	7.2	7.5
Max Green Setting (Gmax), s	* 5	24.2	* 15	22.5	19.6	* 25	12.8	22.5
Max Q Clear Time (g_c+I1), s	6.0	5.2	2.1	3.0	2.8	5.5	4.6	7.7
Green Ext Time (p_c), s	0.2	2.1	0.0	0.1	0.0	3.4	0.3	1.7

Intersection Summary	
HCM 6th Ctrl Delay	22.8
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	0.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	4	2	207	3	1	169
Future Vol, veh/h	4	2	207	3	1	169
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	-	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	0	18	0	0	13
Mvmt Flow	4	2	230	3	1	188

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	422	232	0	0	233	0
Stage 1	232	-	-	-	-	-
Stage 2	190	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	592	812	-	-	1346	-
Stage 1	811	-	-	-	-	-
Stage 2	847	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	591	812	-	-	1346	-
Mov Cap-2 Maneuver	647	-	-	-	-	-
Stage 1	811	-	-	-	-	-
Stage 2	846	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.2	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	694	1346	-
HCM Lane V/C Ratio	-	-	0.01	0.001	-
HCM Control Delay (s)	-	-	10.2	7.7	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	0	0	-

Intersection	
Int Delay, s/veh	11.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	109	24	37	29	13	52	24	109	23	39	118	63
Future Vol, veh/h	109	24	37	29	13	52	24	109	23	39	118	63
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	-	-	-	-	-	-	-	-	-	-	-	150
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, %	18	13	2	2	10	18	10	18	13	13	2	10
Mvmt Flow	118	26	40	32	14	57	26	118	25	42	128	68

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	71	0	0	66	0	0	487	417	46	461	409	43
Stage 1	-	-	-	-	-	-	282	282	-	107	107	-
Stage 2	-	-	-	-	-	-	205	135	-	354	302	-
Critical Hdwy	4.28	-	-	4.12	-	-	7.2	6.68	6.33	7.23	6.52	6.3
Critical Hdwy Stg 1	-	-	-	-	-	-	6.2	5.68	-	6.23	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.2	5.68	-	6.23	5.52	-
Follow-up Hdwy	2.362	-	-	2.218	-	-	3.59	4.162	3.417	3.617	4.018	3.39
Pot Cap-1 Maneuver	1434	-	-	1536	-	-	478	503	993	493	532	1005
Stage 1	-	-	-	-	-	-	708	650	-	872	807	-
Stage 2	-	-	-	-	-	-	779	755	-	641	664	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1434	-	-	1536	-	-	326	450	993	353	476	1005
Mov Cap-2 Maneuver	-	-	-	-	-	-	326	450	-	353	476	-
Stage 1	-	-	-	-	-	-	647	594	-	797	789	-
Stage 2	-	-	-	-	-	-	595	738	-	457	607	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	5	2.3	17.3	15.7
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	460	1434	-	-	1536	-	-	438	1005
HCM Lane V/C Ratio	0.369	0.083	-	-	0.021	-	-	0.39	0.068
HCM Control Delay (s)	17.3	7.7	0	-	7.4	0	-	18.4	8.8
HCM Lane LOS	C	A	A	-	A	A	-	C	A
HCM 95th %tile Q(veh)	1.7	0.3	-	-	0.1	-	-	1.8	0.2

Intersection	
Int Delay, s/veh	202.9

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	98	1862	1594	75	101	96
Future Vol, veh/h	98	1862	1594	75	101	96
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	470	-	-	480	0	1
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	15	4	5	15	4	5
Mvmt Flow	107	2024	1733	82	110	104

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1815	0	-	0	2959	867
Stage 1	-	-	-	-	1733	-
Stage 2	-	-	-	-	1226	-
Critical Hdwy	4.4	-	-	-	6.88	7
Critical Hdwy Stg 1	-	-	-	-	5.88	-
Critical Hdwy Stg 2	-	-	-	-	5.88	-
Follow-up Hdwy	2.35	-	-	-	3.54	3.35
Pot Cap-1 Maneuver	284	-	-	-	~ 11	290
Stage 1	-	-	-	-	125	-
Stage 2	-	-	-	-	236	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	284	-	-	-	~ 7	290
Mov Cap-2 Maneuver	-	-	-	-	~ 7	-
Stage 1	-	-	-	-	~ 78	-
Stage 2	-	-	-	-	236	-

Approach	EB	WB	SB
HCM Control Delay, s	1.3	0	$ 3927.1
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	284	-	-	-	7	290
HCM Lane V/C Ratio	0.375	-	-	-	15.683	0.36
HCM Control Delay (s)	25.1	-	-	-	$ 7636.7	24.2
HCM Lane LOS	D	-	-	-	F	C
HCM 95th %tile Q(veh)	1.7	-	-	-	15.5	1.6

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↱		↑↑	↱				↰	✣	↱
Traffic Volume (veh/h)	0	352	154	0	362	512	0	0	0	713	0	101
Future Volume (veh/h)	0	352	154	0	362	512	0	0	0	713	0	101
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	0	1678	1826	0	1752	1618				1678	1826	1752
Adj Flow Rate, veh/h	0	363	0	0	373	0				767	0	69
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97				0.97	0.97	0.97
Percent Heavy Veh, %	0	15	5	0	10	19				15	5	10
Cap, veh/h	0	848		0	885					1190	0	553
Arrive On Green	0.00	0.27	0.00	0.00	0.27	0.00				0.37	0.00	0.37
Sat Flow, veh/h	0	3272	1547	0	3416	1372				3196	0	1485
Grp Volume(v), veh/h	0	363	0	0	373	0				767	0	69
Grp Sat Flow(s),veh/h/ln	0	1594	1547	0	1664	1372				1598	0	1485
Q Serve(g_s), s	0.0	3.5	0.0	0.0	3.5	0.0				7.5	0.0	1.2
Cycle Q Clear(g_c), s	0.0	3.5	0.0	0.0	3.5	0.0				7.5	0.0	1.2
Prop In Lane	0.00		1.00	0.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	848		0	885					1190	0	553
V/C Ratio(X)	0.00	0.43		0.00	0.42					0.64	0.00	0.12
Avail Cap(c_a), veh/h	0	2137		0	2231					1802	0	837
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	0.00	0.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	11.4	0.0	0.0	11.4	0.0				9.7	0.0	7.8
Incr Delay (d2), s/veh	0.0	1.0	0.0	0.0	0.9	0.0				1.0	0.0	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
%ile BackOfQ(50%),veh/ln	0.0	1.0	0.0	0.0	1.0	0.0				1.9	0.0	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	12.4	0.0	0.0	12.3	0.0				10.8	0.0	7.9
LnGrp LOS	A	B		A	B					B	A	A
Approach Vol, veh/h		363			373						836	
Approach Delay, s/veh		12.4			12.3						10.5	
Approach LOS		B			B						B	

Timer - Assigned Phs	2	4	6
Phs Duration (G+Y+Rc), s	16.8	20.8	16.8
Change Period (Y+Rc), s	6.8	6.8	6.8
Max Green Setting (Gmax), s	25.2	21.2	25.2
Max Q Clear Time (g_c+I1), s	5.5	9.5	5.5
Green Ext Time (p_c), s	4.2	4.5	4.4

Intersection Summary	
HCM 6th Ctrl Delay	11.4
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Unsignalized Delay for [EBR, WBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	51	1014	0	0	772	595	102	0	278	0	0	0
Future Volume (veh/h)	51	1014	0	0	772	595	102	0	278	0	0	0
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	1648	1648	0	0	1663	1648	1663	1648	1648			
Adj Flow Rate, veh/h	53	1045	0	0	796	613	70	0	324			
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97			
Percent Heavy Veh, %	17	17	0	0	16	17	16	17	17			
Cap, veh/h	142	1894	0	0	1299	574	300	0	530			
Arrive On Green	0.09	0.60	0.00	0.00	0.41	0.41	0.19	0.00	0.19			
Sat Flow, veh/h	1570	3214	0	0	3243	1397	1584	0	2793			
Grp Volume(v), veh/h	53	1045	0	0	796	613	70	0	324			
Grp Sat Flow(s),veh/h/ln	1570	1566	0	0	1580	1397	1584	0	1397			
Q Serve(g_s), s	2.1	13.1	0.0	0.0	13.1	27.2	2.5	0.0	7.0			
Cycle Q Clear(g_c), s	2.1	13.1	0.0	0.0	13.1	27.2	2.5	0.0	7.0			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	142	1894	0	0	1299	574	300	0	530			
V/C Ratio(X)	0.37	0.55	0.00	0.00	0.61	1.07	0.23	0.00	0.61			
Avail Cap(c_a), veh/h	387	2329	0	0	1299	574	651	0	1149			
HCM Platoon Ratio	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	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	28.3	7.8	0.0	0.0	15.3	19.5	22.7	0.0	24.6			
Incr Delay (d2), s/veh	0.6	0.7	0.0	0.0	1.5	56.8	1.1	0.0	3.3			
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	0.7	3.1	0.0	0.0	4.1	16.1	1.0	0.0	2.4			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	28.9	8.5	0.0	0.0	16.9	76.3	23.9	0.0	27.9			
LnGrp LOS	C	A	A	A	B	F	C	A	C			
Approach Vol, veh/h		1098			1409			394				
Approach Delay, s/veh		9.5			42.7			27.2				
Approach LOS		A			D			C				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		46.8			12.8	34.0		19.3				
Change Period (Y+Rc), s		6.8			6.8	* 6.8		6.8				
Max Green Setting (Gmax), s		49.2			16.3	* 27		27.2				
Max Q Clear Time (g_c+I1), s		15.1			4.1	29.2		9.0				
Green Ext Time (p_c), s		18.0			0.0	0.0		3.5				

Intersection Summary	
HCM 6th Ctrl Delay	28.0
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.

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	1	176	130	16	46	2
Future Vol, veh/h	1	176	130	16	46	2
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	9	14	0	0	0
Mvmt Flow	1	191	141	17	50	2

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	158	0	-	0	343	150
Stage 1	-	-	-	-	150	-
Stage 2	-	-	-	-	193	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1434	-	-	-	657	902
Stage 1	-	-	-	-	883	-
Stage 2	-	-	-	-	845	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1434	-	-	-	656	902
Mov Cap-2 Maneuver	-	-	-	-	656	-
Stage 1	-	-	-	-	882	-
Stage 2	-	-	-	-	845	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	10.9
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1434	-	-	-	664
HCM Lane V/C Ratio	0.001	-	-	-	0.079
HCM Control Delay (s)	7.5	0	-	-	10.9
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.3

Intersection	
Int Delay, s/veh	1.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	222	146	0	38	0
Future Vol, veh/h	0	222	146	0	38	0
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	9	14	0	0	0
Mvmt Flow	0	241	159	0	41	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	159	0	-	0	400	159
Stage 1	-	-	-	-	159	-
Stage 2	-	-	-	-	241	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1433	-	-	-	610	892
Stage 1	-	-	-	-	875	-
Stage 2	-	-	-	-	804	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1433	-	-	-	610	892
Mov Cap-2 Maneuver	-	-	-	-	610	-
Stage 1	-	-	-	-	875	-
Stage 2	-	-	-	-	804	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	11.3
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1433	-	-	-	610
HCM Lane V/C Ratio	-	-	-	-	0.068
HCM Control Delay (s)	0	-	-	-	11.3
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.2



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	609	1	8	712	12	0
Future Volume (veh/h)	609	1	8	712	12	0
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	1811	1900	1900	1722	1722	1811
Adj Flow Rate, veh/h	662	1	0	780	13	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	6	0	0	12	12	6
Cap, veh/h	1009	486	741	1139	27	886
Arrive On Green	0.30	0.30	0.00	0.39	0.02	0.00
Sat Flow, veh/h	3346	1610	1900	2919	1640	1811
Grp Volume(v), veh/h	662	1	0	780	13	0
Grp Sat Flow(s),veh/h/ln	1673	1610	1900	1459	1640	1811
Q Serve(g_s), s	9.8	0.0	0.0	12.6	0.4	0.0
Cycle Q Clear(g_c), s	9.8	0.0	0.0	12.6	0.4	0.0
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	1009	486	741	1139	27	886
V/C Ratio(X)	0.66	0.00	0.00	0.68	0.49	0.00
Avail Cap(c_a), veh/h	1659	798	1333	2048	441	1271
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	17.3	13.9	0.0	14.4	27.7	0.0
Incr Delay (d2), s/veh	1.9	0.0	0.0	1.6	5.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.3	0.0	0.0	3.5	0.2	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	19.2	13.9	0.0	16.0	32.7	0.0
LnGrp LOS	B	B	A	B	C	A
Approach Vol, veh/h	663		780			13
Approach Delay, s/veh	19.2		16.0			32.7
Approach LOS	B		B			C

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	5.6	27.3			32.9	24.0
Change Period (Y+Rc), s	* 4.7	5.1			5.1	6.8
Max Green Setting (Gmax), s	* 15	39.9			39.9	28.2
Max Q Clear Time (g_c+I1), s	2.4	14.6			0.0	11.8
Green Ext Time (p_c), s	0.0	7.5			0.0	5.4

Intersection Summary	
HCM 6th Ctrl Delay	17.6
HCM 6th LOS	B

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)	164	39	23	6	27	350	13	207	17	323	161	126
Future Volume (veh/h)	164	39	23	6	27	350	13	207	17	323	161	126
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	1767	1826	1796	1796	1752	1767	1752	1767	1826	1826	1796	1752
Adj Flow Rate, veh/h	178	42	25	7	29	380	14	225	18	351	175	137
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, %	9	5	7	7	10	9	10	9	5	5	7	10
Cap, veh/h	259	400	238	15	454	405	28	375	30	389	1083	829
Arrive On Green	0.08	0.37	0.37	0.01	0.27	0.27	0.02	0.12	0.12	0.22	0.32	0.32
Sat Flow, veh/h	3264	1073	638	1711	1664	1485	1668	3150	250	1739	3413	2613
Grp Volume(v), veh/h	178	0	67	7	29	380	14	119	124	351	175	137
Grp Sat Flow(s),veh/h/ln	1632	0	1711	1711	1664	1485	1668	1678	1722	1739	1706	1306
Q Serve(g_s), s	4.4	0.0	2.1	0.3	1.1	20.6	0.7	5.6	5.6	16.2	3.0	3.1
Cycle Q Clear(g_c), s	4.4	0.0	2.1	0.3	1.1	20.6	0.7	5.6	5.6	16.2	3.0	3.1
Prop In Lane	1.00		0.37	1.00		1.00	1.00		0.15	1.00		1.00
Lane Grp Cap(c), veh/h	259	0	639	15	454	405	28	200	205	389	1083	829
V/C Ratio(X)	0.69	0.00	0.10	0.46	0.06	0.94	0.50	0.60	0.61	0.90	0.16	0.17
Avail Cap(c_a), veh/h	506	0	639	317	454	405	396	492	505	428	1083	829
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	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.0	0.0	16.9	40.7	22.2	29.3	40.2	34.5	34.5	31.2	20.3	20.3
Incr Delay (d2), s/veh	3.2	0.0	0.1	7.6	0.1	30.3	5.2	7.2	7.3	20.9	0.1	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	1.8	0.0	0.8	0.2	0.4	10.2	0.3	2.5	2.6	8.5	1.1	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	40.2	0.0	16.9	48.3	22.3	59.6	45.4	41.7	41.8	52.1	20.4	20.5
LnGrp LOS	D	A	B	D	C	E	D	D	D	D	C	C
Approach Vol, veh/h		245			416			257			663	
Approach Delay, s/veh		33.8			56.8			42.0			37.2	
Approach LOS		C			E			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	23.1	15.6	5.4	38.3	6.8	32.0	13.7	30.0
Change Period (Y+Rc), s	* 4.7	5.8	* 4.7	7.5	5.4	* 5.8	7.2	7.5
Max Green Setting (Gmax), s	* 20	24.2	* 15	22.5	19.6	* 25	12.8	22.5
Max Q Clear Time (g_c+I1), s	19.2	7.6	2.3	4.1	2.7	5.1	6.4	22.6
Green Ext Time (p_c), s	0.2	2.2	0.0	0.2	0.0	2.7	0.3	0.0

Intersection Summary	
HCM 6th Ctrl Delay	42.6
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	2.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	49	0	24	5	0	4	8	172	6	6	153	17
Future Vol, veh/h	49	0	24	5	0	4	8	172	6	6	153	17
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	100	-	-
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	0	0	0	0	0	0	11	0	0	7	0
Mvmt Flow	53	0	26	5	0	4	9	187	7	7	166	18

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	400	401	175	411	407	191	184	0	0	194	0	0
Stage 1	189	189	-	209	209	-	-	-	-	-	-	-
Stage 2	211	212	-	202	198	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	564	541	874	555	537	856	1403	-	-	1391	-	-
Stage 1	817	748	-	798	733	-	-	-	-	-	-	-
Stage 2	796	731	-	805	741	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	556	535	874	534	531	856	1403	-	-	1391	-	-
Mov Cap-2 Maneuver	556	535	-	534	531	-	-	-	-	-	-	-
Stage 1	812	744	-	793	729	-	-	-	-	-	-	-
Stage 2	787	727	-	777	737	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	11.5	10.7	0.3	0.3
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1403	-	-	632	641	1391	-	-
HCM Lane V/C Ratio	0.006	-	-	0.126	0.015	0.005	-	-
HCM Control Delay (s)	7.6	-	-	11.5	10.7	7.6	-	-
HCM Lane LOS	A	-	-	B	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.4	0	0	-	-

Intersection	
Int Delay, s/veh	10.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	76	22	162	15	14	35	76	126	37	46	69	69
Future Vol, veh/h	76	22	162	15	14	35	76	126	37	46	69	69
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	-	-	-	-	-	-	-	-	-	-	-	150
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, %	11	9	7	7	14	11	14	11	9	9	7	14
Mvmt Flow	83	24	176	16	15	38	83	137	40	50	75	75

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	53	0	0	200	0	0	419	363	112	433	432	34
Stage 1	-	-	-	-	-	-	278	278	-	66	66	-
Stage 2	-	-	-	-	-	-	141	85	-	367	366	-
Critical Hdwy	4.21	-	-	4.17	-	-	7.24	6.61	6.29	7.19	6.57	6.34
Critical Hdwy Stg 1	-	-	-	-	-	-	6.24	5.61	-	6.19	5.57	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.24	5.61	-	6.19	5.57	-
Follow-up Hdwy	2.299	-	-	2.263	-	-	3.626	4.099	3.381	3.581	4.063	3.426
Pot Cap-1 Maneuver	1497	-	-	1343	-	-	524	551	922	521	509	1006
Stage 1	-	-	-	-	-	-	703	664	-	927	830	-
Stage 2	-	-	-	-	-	-	834	807	-	638	614	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1497	-	-	1343	-	-	402	510	922	373	471	1006
Mov Cap-2 Maneuver	-	-	-	-	-	-	402	510	-	373	471	-
Stage 1	-	-	-	-	-	-	658	622	-	868	820	-
Stage 2	-	-	-	-	-	-	693	797	-	445	575	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	2.2	1.8	19.6	13.9
HCM LOS			C	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	502	1497	-	-	1343	-	-	426	1006
HCM Lane V/C Ratio	0.517	0.055	-	-	0.012	-	-	0.293	0.075
HCM Control Delay (s)	19.6	7.5	0	-	7.7	0	-	16.9	8.9
HCM Lane LOS	C	A	A	-	A	A	-	C	A
HCM 95th %tile Q(veh)	2.9	0.2	-	-	0	-	-	1.2	0.2

Intersection	
Int Delay, s/veh	601.6

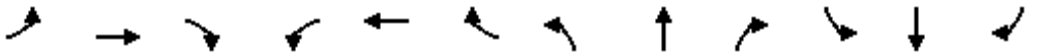
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	49	1560	1968	238	153	98
Future Vol, veh/h	49	1560	1968	238	153	98
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	470	-	-	480	0	1
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	13	7	8	13	7	8
Mvmt Flow	53	1696	2139	259	166	107

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	2398	0	-	0	3093	1070
Stage 1	-	-	-	-	2139	-
Stage 2	-	-	-	-	954	-
Critical Hdwy	4.36	-	-	-	6.94	7.06
Critical Hdwy Stg 1	-	-	-	-	5.94	-
Critical Hdwy Stg 2	-	-	-	-	5.94	-
Follow-up Hdwy	2.33	-	-	-	3.57	3.38
Pot Cap-1 Maneuver	167	-	-	-	~ 8	207
Stage 1	-	-	-	-	~ 71	-
Stage 2	-	-	-	-	323	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	167	-	-	-	~ 5	207
Mov Cap-2 Maneuver	-	-	-	-	~ 5	-
Stage 1	-	-	-	-	~ 48	-
Stage 2	-	-	-	-	323	-

Approach	EB	WB	SB
HCM Control Delay, s	1.1	0	$ 9738.1
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	167	-	-	-	5	207
HCM Lane V/C Ratio	0.319	-	-	-	33.261	0.515
HCM Control Delay (s)	36.3	-	-	-	$ 15950.2	39.5
HCM Lane LOS	E	-	-	-	F	E
HCM 95th %tile Q(veh)	1.3	-	-	-	22.9	2.6

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↱		↑↑	↱				↰	✣	↱
Traffic Volume (veh/h)	0	557	167	0	542	448	0	0	0	573	0	68
Future Volume (veh/h)	0	557	167	0	542	448	0	0	0	573	0	68
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	0	1618	1707	0	1752	1530				1618	1707	1752
Adj Flow Rate, veh/h	0	605	0	0	589	0				646	0	49
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92				0.92	0.92	0.92
Percent Heavy Veh, %	0	19	13	0	10	25				19	13	10
Cap, veh/h	0	1112		0	1204					976	0	470
Arrive On Green	0.00	0.36	0.00	0.00	0.36	0.00				0.32	0.00	0.32
Sat Flow, veh/h	0	3156	1447	0	3416	1296				3083	0	1485
Grp Volume(v), veh/h	0	605	0	0	589	0				646	0	49
Grp Sat Flow(s),veh/h/ln	0	1537	1447	0	1664	1296				1541	0	1485
Q Serve(g_s), s	0.0	6.6	0.0	0.0	5.8	0.0				7.7	0.0	1.0
Cycle Q Clear(g_c), s	0.0	6.6	0.0	0.0	5.8	0.0				7.7	0.0	1.0
Prop In Lane	0.00		1.00	0.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1112		0	1204					976	0	470
V/C Ratio(X)	0.00	0.54		0.00	0.49					0.66	0.00	0.10
Avail Cap(c_a), veh/h	0	1833		0	1984					1546	0	745
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	0.00	0.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	10.7	0.0	0.0	10.5	0.0				12.5	0.0	10.2
Incr Delay (d2), s/veh	0.0	1.2	0.0	0.0	0.9	0.0				1.3	0.0	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
%ile BackOfQ(50%),veh/ln	0.0	1.7	0.0	0.0	1.6	0.0				2.2	0.0	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	11.9	0.0	0.0	11.4	0.0				13.8	0.0	10.4
LnGrp LOS	A	B		A	B					B	A	B
Approach Vol, veh/h		605			589						695	
Approach Delay, s/veh		11.9			11.4						13.6	
Approach LOS		B			B						B	

Timer - Assigned Phs		2		4		6						
Phs Duration (G+Y+Rc), s		22.1		20.2		22.1						
Change Period (Y+Rc), s		6.8		6.8		6.8						
Max Green Setting (Gmax), s		25.2		21.2		25.2						
Max Q Clear Time (g_c+I1), s		8.6		9.7		7.8						
Green Ext Time (p_c), s		6.7		3.7		6.7						

Intersection Summary		
HCM 6th Ctrl Delay		12.4
HCM 6th LOS		B

Notes

User approved volume balancing among the lanes for turning movement.

Unsignalized Delay for [EBR, WBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	117	1014	0	0	921	596	69	0	265	0	0	0
Future Volume (veh/h)	117	1014	0	0	921	596	69	0	265	0	0	0
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	1663	1604	0	0	1693	1663	1693	1663	1604			
Adj Flow Rate, veh/h	127	1102	0	0	1001	648	50	0	315			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	16	20	0	0	14	16	14	16	20			
Cap, veh/h	172	1869	0	0	1298	569	298	0	502			
Arrive On Green	0.11	0.61	0.00	0.00	0.40	0.40	0.18	0.00	0.18			
Sat Flow, veh/h	1584	3127	0	0	3300	1409	1612	0	2718			
Grp Volume(v), veh/h	127	1102	0	0	1001	648	50	0	315			
Grp Sat Flow(s),veh/h/ln	1584	1523	0	0	1608	1409	1612	0	1359			
Q Serve(g_s), s	5.2	14.8	0.0	0.0	18.2	27.2	1.8	0.0	7.2			
Cycle Q Clear(g_c), s	5.2	14.8	0.0	0.0	18.2	27.2	1.8	0.0	7.2			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	172	1869	0	0	1298	569	298	0	502			
V/C Ratio(X)	0.74	0.59	0.00	0.00	0.77	1.14	0.17	0.00	0.63			
Avail Cap(c_a), veh/h	383	2225	0	0	1298	569	651	0	1097			
HCM Platoon Ratio	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	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	29.1	7.9	0.0	0.0	17.4	20.1	23.1	0.0	25.3			
Incr Delay (d2), s/veh	2.3	0.9	0.0	0.0	3.7	82.3	0.8	0.0	3.7			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	1.9	3.4	0.0	0.0	6.2	20.3	0.7	0.0	2.4			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	31.4	8.8	0.0	0.0	21.1	102.4	23.9	0.0	29.0			
LnGrp LOS	C	A	A	A	C	F	C	A	C			
Approach Vol, veh/h		1229			1649			365				
Approach Delay, s/veh		11.1			53.0			28.3				
Approach LOS		B			D			C				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		48.1			14.1	34.0		19.2				
Change Period (Y+Rc), s		6.8			6.8	* 6.8		6.8				
Max Green Setting (Gmax), s		49.2			16.3	* 27		27.2				
Max Q Clear Time (g_c+I1), s		16.8			7.2	29.2		9.2				
Green Ext Time (p_c), s		18.6			0.1	0.0		3.2				

Intersection Summary	
HCM 6th Ctrl Delay	34.4
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.

Intersection	
Int Delay, s/veh	1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	2	170	100	52	31	1
Future Vol, veh/h	2	170	100	52	31	1
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	13	10	0	0	0
Mvmt Flow	2	185	109	57	34	1

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	166	0	-	0	327	138
Stage 1	-	-	-	-	138	-
Stage 2	-	-	-	-	189	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1424	-	-	-	671	916
Stage 1	-	-	-	-	894	-
Stage 2	-	-	-	-	848	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1424	-	-	-	670	916
Mov Cap-2 Maneuver	-	-	-	-	670	-
Stage 1	-	-	-	-	892	-
Stage 2	-	-	-	-	848	-

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	10.6
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1424	-	-	-	676
HCM Lane V/C Ratio	0.002	-	-	-	0.051
HCM Control Delay (s)	7.5	0	-	-	10.6
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.2

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	201	152	0	25	0
Future Vol, veh/h	0	201	152	0	25	0
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	13	10	0	0	0
Mvmt Flow	0	218	165	0	27	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	165	0	-	0	383	165
Stage 1	-	-	-	-	165	-
Stage 2	-	-	-	-	218	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1426	-	-	-	624	885
Stage 1	-	-	-	-	869	-
Stage 2	-	-	-	-	823	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1426	-	-	-	624	885
Mov Cap-2 Maneuver	-	-	-	-	624	-
Stage 1	-	-	-	-	869	-
Stage 2	-	-	-	-	823	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	11
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1426	-	-	-	624
HCM Lane V/C Ratio	-	-	-	-	0.044
HCM Control Delay (s)	0	-	-	-	11
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.1



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	511	5	7	530	8	2
Future Volume (veh/h)	511	5	7	530	8	2
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	1796	1900	1900	1767	1767	1796
Adj Flow Rate, veh/h	555	5	0	581	9	2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	7	0	0	9	9	7
Cap, veh/h	973	472	626	986	20	799
Arrive On Green	0.29	0.29	0.00	0.33	0.01	0.44
Sat Flow, veh/h	3319	1610	1900	2994	1682	1796
Grp Volume(v), veh/h	555	5	0	581	9	2
Grp Sat Flow(s),veh/h/ln	1659	1610	1900	1497	1682	1796
Q Serve(g_s), s	6.4	0.1	0.0	7.3	0.2	0.0
Cycle Q Clear(g_c), s	6.4	0.1	0.0	7.3	0.2	0.0
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	973	472	626	986	20	799
V/C Ratio(X)	0.57	0.01	0.00	0.59	0.45	0.00
Avail Cap(c_a), veh/h	2063	1001	1671	2633	567	1580
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	13.6	11.4	0.0	12.7	22.3	7.0
Incr Delay (d2), s/veh	1.4	0.0	0.0	1.2	5.9	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	0.0	0.0	1.9	0.1	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	15.0	11.4	0.0	13.9	28.1	7.0
LnGrp LOS	B	B	A	B	C	A
Approach Vol, veh/h	560		581			11
Approach Delay, s/veh	15.0		13.9			24.3
Approach LOS	B		B			C

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	5.2	20.0			25.3	20.1
Change Period (Y+Rc), s	* 4.7	5.1			5.1	6.8
Max Green Setting (Gmax), s	* 15	39.9			39.9	28.2
Max Q Clear Time (g_c+I1), s	2.2	9.3			2.0	8.4
Green Ext Time (p_c), s	0.0	5.6			0.0	4.9

Intersection Summary	
HCM 6th Ctrl Delay	14.5
HCM 6th LOS	B

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)	154	23	15	6	36	157	23	226	13	107	222	184
Future Volume (veh/h)	154	23	15	6	36	157	23	226	13	107	222	184
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	1737	1559	1693	1693	1722	1737	1722	1737	1559	1559	1693	1722
Adj Flow Rate, veh/h	167	25	16	7	39	171	25	246	14	116	241	200
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, %	11	23	14	14	12	11	12	11	23	23	14	12
Cap, veh/h	280	268	172	15	288	257	48	499	28	144	681	544
Arrive On Green	0.09	0.30	0.30	0.01	0.18	0.18	0.03	0.16	0.16	0.10	0.21	0.21
Sat Flow, veh/h	3209	888	569	1612	1636	1459	1640	3175	180	1485	3216	2569
Grp Volume(v), veh/h	167	0	41	7	39	171	25	127	133	116	241	200
Grp Sat Flow(s),veh/h/ln	1605	0	1457	1612	1636	1459	1640	1650	1705	1485	1608	1284
Q Serve(g_s), s	2.6	0.0	1.1	0.2	1.1	5.7	0.8	3.7	3.7	4.0	3.3	3.5
Cycle Q Clear(g_c), s	2.6	0.0	1.1	0.2	1.1	5.7	0.8	3.7	3.7	4.0	3.3	3.5
Prop In Lane	1.00		0.39	1.00		1.00	1.00		0.11	1.00		1.00
Lane Grp Cap(c), veh/h	280	0	440	15	288	257	48	259	268	144	681	544
V/C Ratio(X)	0.60	0.00	0.09	0.47	0.14	0.66	0.52	0.49	0.50	0.81	0.35	0.37
Avail Cap(c_a), veh/h	786	0	627	472	705	629	615	764	790	577	1533	1224
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	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.0	0.0	13.1	25.8	18.2	20.1	25.0	20.1	20.1	23.1	17.6	17.6
Incr Delay (d2), s/veh	2.0	0.0	0.1	8.3	0.5	6.2	3.3	3.7	3.7	10.1	0.7	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	0.9	0.0	0.3	0.1	0.4	2.1	0.3	1.5	1.5	1.6	1.1	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	25.0	0.0	13.2	34.0	18.6	26.2	28.3	23.8	23.8	33.2	18.2	18.5
LnGrp LOS	C	A	B	C	B	C	C	C	C	C	B	B
Approach Vol, veh/h		208			217			285			557	
Approach Delay, s/veh		22.7			25.1			24.2			21.4	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.8	14.0	5.2	23.3	6.9	16.9	11.8	16.7
Change Period (Y+Rc), s	* 4.7	5.8	* 4.7	7.5	5.4	* 5.8	7.2	7.5
Max Green Setting (Gmax), s	* 5	24.2	* 15	22.5	19.6	* 25	12.8	22.5
Max Q Clear Time (g_c+I1), s	6.0	5.7	2.2	3.1	2.8	5.5	4.6	7.7
Green Ext Time (p_c), s	0.2	2.5	0.0	0.1	0.0	4.0	0.3	1.7

Intersection Summary	
HCM 6th Ctrl Delay	22.9
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	1.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	33	0	16	4	0	2	27	207	3	1	169	55
Future Vol, veh/h	33	0	16	4	0	2	27	207	3	1	169	55
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	0	0	0	0	0	0	0	18	0	0	13	0
Mvmt Flow	37	0	18	4	0	2	30	230	3	1	188	61

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	514	514	219	522	543	232	249	0	0	233	0	0
Stage 1	221	221	-	292	292	-	-	-	-	-	-	-
Stage 2	293	293	-	230	251	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	474	467	826	468	450	812	1328	-	-	1346	-	-
Stage 1	786	724	-	720	675	-	-	-	-	-	-	-
Stage 2	719	674	-	777	703	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	465	456	826	450	439	812	1328	-	-	1346	-	-
Mov Cap-2 Maneuver	465	456	-	450	439	-	-	-	-	-	-	-
Stage 1	768	723	-	703	659	-	-	-	-	-	-	-
Stage 2	701	658	-	760	702	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	12.4	11.9	0.9	0
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1328	-	-	542	529	1346	-	-
HCM Lane V/C Ratio	0.023	-	-	0.1	0.013	0.001	-	-
HCM Control Delay (s)	7.8	-	-	12.4	11.9	7.7	-	-
HCM Lane LOS	A	-	-	B	B	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.3	0	0	-	-

Intersection	
Int Delay, s/veh	21.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	109	26	91	29	17	56	115	132	23	41	132	63
Future Vol, veh/h	109	26	91	29	17	56	115	132	23	41	132	63
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	-	-	-	-	-	-	-	-	-	-	-	150
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, %	18	13	2	2	10	18	10	18	13	13	2	10
Mvmt Flow	118	28	99	32	18	61	125	143	25	45	143	68

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	79	0	0	127	0	0	532	457	78	511	476	49
Stage 1	-	-	-	-	-	-	314	314	-	113	113	-
Stage 2	-	-	-	-	-	-	218	143	-	398	363	-
Critical Hdwy	4.28	-	-	4.12	-	-	7.2	6.68	6.33	7.23	6.52	6.3
Critical Hdwy Stg 1	-	-	-	-	-	-	6.2	5.68	-	6.23	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.2	5.68	-	6.23	5.52	-
Follow-up Hdwy	2.362	-	-	2.218	-	-	3.59	4.162	3.417	3.617	4.018	3.39
Pot Cap-1 Maneuver	1424	-	-	1459	-	-	446	477	953	456	488	997
Stage 1	-	-	-	-	-	-	680	628	-	866	802	-
Stage 2	-	-	-	-	-	-	766	749	-	606	625	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1424	-	-	1459	-	-	284	424	953	301	434	997
Mov Cap-2 Maneuver	-	-	-	-	-	-	284	424	-	301	434	-
Stage 1	-	-	-	-	-	-	619	571	-	788	784	-
Stage 2	-	-	-	-	-	-	569	732	-	402	569	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	3.7	2.1	45	18.7
HCM LOS			E	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	365	1424	-	-	1459	-	-	393	997
HCM Lane V/C Ratio	0.804	0.083	-	-	0.022	-	-	0.478	0.069
HCM Control Delay (s)	45	7.8	0	-	7.5	0	-	22.3	8.9
HCM Lane LOS	E	A	A	-	A	A	-	C	A
HCM 95th %tile Q(veh)	6.9	0.3	-	-	0.1	-	-	2.5	0.2

Intersection	
Int Delay, s/veh	613.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	98	1862	1594	190	169	96
Future Vol, veh/h	98	1862	1594	190	169	96
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	470	-	-	480	0	1
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	15	4	5	15	4	5
Mvmt Flow	107	2024	1733	207	184	104

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1940	0	-	0	2959	867
Stage 1	-	-	-	-	1733	-
Stage 2	-	-	-	-	1226	-
Critical Hdwy	4.4	-	-	-	6.88	7
Critical Hdwy Stg 1	-	-	-	-	5.88	-
Critical Hdwy Stg 2	-	-	-	-	5.88	-
Follow-up Hdwy	2.35	-	-	-	3.54	3.35
Pot Cap-1 Maneuver	252	-	-	-	~ 11	290
Stage 1	-	-	-	-	~ 125	-
Stage 2	-	-	-	-	236	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	252	-	-	-	~ 6	290
Mov Cap-2 Maneuver	-	-	-	-	~ 6	-
Stage 1	-	-	-	-	~ 72	-
Stage 2	-	-	-	-	236	-

Approach	EB	WB	SB
HCM Control Delay, s	1.5	0	$ 9272.5
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	252	-	-	-	6	290
HCM Lane V/C Ratio	0.423	-	-	-	30.616	0.36
HCM Control Delay (s)	29.4	-	-	-	$ 14526	24.2
HCM Lane LOS	D	-	-	-	F	C
HCM 95th %tile Q(veh)	2	-	-	-	25	1.6

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	384	154	0	401	512	0	0	0	713	0	115
Future Volume (veh/h)	0	384	154	0	401	512	0	0	0	713	0	115
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	0	1678	1826	0	1752	1618				1678	1826	1752
Adj Flow Rate, veh/h	0	396	0	0	413	0				772	0	79
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97				0.97	0.97	0.97
Percent Heavy Veh, %	0	15	5	0	10	19				15	5	10
Cap, veh/h	0	888		0	927					1182	0	549
Arrive On Green	0.00	0.28	0.00	0.00	0.28	0.00				0.37	0.00	0.37
Sat Flow, veh/h	0	3272	1547	0	3416	1372				3196	0	1485
Grp Volume(v), veh/h	0	396	0	0	413	0				772	0	79
Grp Sat Flow(s),veh/h/ln	0	1594	1547	0	1664	1372				1598	0	1485
Q Serve(g_s), s	0.0	4.0	0.0	0.0	4.0	0.0				7.8	0.0	1.4
Cycle Q Clear(g_c), s	0.0	4.0	0.0	0.0	4.0	0.0				7.8	0.0	1.4
Prop In Lane	0.00		1.00	0.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	888		0	927					1182	0	549
V/C Ratio(X)	0.00	0.45		0.00	0.45					0.65	0.00	0.14
Avail Cap(c_a), veh/h	0	2077		0	2168					1751	0	814
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	0.00	0.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	11.5	0.0	0.0	11.5	0.0				10.1	0.0	8.1
Incr Delay (d2), s/veh	0.0	1.0	0.0	0.0	1.0	0.0				1.1	0.0	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
%ile BackOfQ(50%),veh/ln	0.0	1.1	0.0	0.0	1.1	0.0				2.0	0.0	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	12.5	0.0	0.0	12.5	0.0				11.2	0.0	8.3
LnGrp LOS	A	B		A	B					B	A	A
Approach Vol, veh/h		396			413						851	
Approach Delay, s/veh		12.5			12.5						10.9	
Approach LOS		B			B						B	

Timer - Assigned Phs	2	4	6
Phs Duration (G+Y+Rc), s	17.6	21.1	17.6
Change Period (Y+Rc), s	6.8	6.8	6.8
Max Green Setting (Gmax), s	25.2	21.2	25.2
Max Q Clear Time (g_c+I1), s	6.0	9.8	6.0
Green Ext Time (p_c), s	4.6	4.5	4.8

Intersection Summary	
HCM 6th Ctrl Delay	11.7
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Unsignalized Delay for [EBR, WBR] is excluded from calculations of the approach delay and intersection delay.



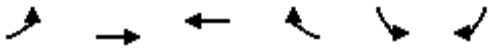
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	59	1037	0	0	811	595	102	0	278	0	0	0
Future Volume (veh/h)	59	1037	0	0	811	595	102	0	278	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
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	1648	1648	0	0	1663	1648	1663	1648	1648			
Adj Flow Rate, veh/h	61	1069	0	0	836	613	70	0	324			
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97			
Percent Heavy Veh, %	17	17	0	0	16	17	16	17	17			
Cap, veh/h	142	1891	0	0	1297	574	302	0	533			
Arrive On Green	0.09	0.60	0.00	0.00	0.41	0.41	0.19	0.00	0.19			
Sat Flow, veh/h	1570	3214	0	0	3243	1397	1584	0	2793			
Grp Volume(v), veh/h	61	1069	0	0	836	613	70	0	324			
Grp Sat Flow(s),veh/h/ln	1570	1566	0	0	1580	1397	1584	0	1397			
Q Serve(g_s), s	2.4	13.6	0.0	0.0	14.0	27.2	2.5	0.0	7.0			
Cycle Q Clear(g_c), s	2.4	13.6	0.0	0.0	14.0	27.2	2.5	0.0	7.0			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	142	1891	0	0	1297	574	302	0	533			
V/C Ratio(X)	0.43	0.57	0.00	0.00	0.64	1.07	0.23	0.00	0.61			
Avail Cap(c_a), veh/h	363	2279	0	0	1297	574	674	0	1189			
HCM Platoon Ratio	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	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	28.5	7.9	0.0	0.0	15.6	19.5	22.7	0.0	24.5			
Incr Delay (d2), s/veh	0.8	0.8	0.0	0.0	1.8	57.3	1.1	0.0	3.2			
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	0.9	3.2	0.0	0.0	4.5	16.2	1.0	0.0	2.4			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	29.3	8.7	0.0	0.0	17.5	76.8	23.8	0.0	27.8			
LnGrp LOS	C	A	A	A	B	F	C	A	C			
Approach Vol, veh/h		1130			1449			394				
Approach Delay, s/veh		9.8			42.6			27.1				
Approach LOS		A			D			C				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		46.8			12.8	34.0		19.4				
Change Period (Y+Rc), s		6.8			6.8	* 6.8		6.8				
Max Green Setting (Gmax), s		48.2			15.3	* 27		28.2				
Max Q Clear Time (g_c+I1), s		15.6			4.4	29.2		9.0				
Green Ext Time (p_c), s		18.0			0.0	0.0		3.6				

Intersection Summary	
HCM 6th Ctrl Delay	28.1
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

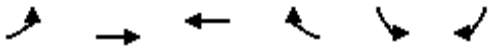
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	18	1185	1563	125	125	41
Future Volume (veh/h)	18	1185	1563	125	125	41
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	1707	1796	1781	1707	1796	1781
Adj Flow Rate, veh/h	21	1394	1839	147	147	48
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	13	7	8	13	7	8
Cap, veh/h	37	2231	1967	841	421	372
Arrive On Green	0.02	0.65	0.58	0.58	0.25	0.25
Sat Flow, veh/h	1626	3503	3474	1447	1711	1510
Grp Volume(v), veh/h	21	1394	1839	147	147	48
Grp Sat Flow(s),veh/h/ln	1626	1706	1692	1447	1711	1510
Q Serve(g_s), s	1.2	21.5	44.9	4.3	6.4	2.2
Cycle Q Clear(g_c), s	1.2	21.5	44.9	4.3	6.4	2.2
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	37	2231	1967	841	421	372
V/C Ratio(X)	0.57	0.62	0.94	0.17	0.35	0.13
Avail Cap(c_a), veh/h	90	2389	2012	860	421	372
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	43.5	9.1	17.3	8.8	28.0	26.4
Incr Delay (d2), s/veh	13.0	0.5	8.8	0.1	2.3	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	5.6	15.4	1.1	2.7	2.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	56.6	9.6	26.1	8.9	30.2	27.1
LnGrp LOS	E	A	C	A	C	C
Approach Vol, veh/h		1415	1986		195	
Approach Delay, s/veh		10.3	24.8		29.5	
Approach LOS		B	C		C	

Timer - Assigned Phs	4	6	7	8
Phs Duration (G+Y+Rc), s	63.3	26.7	6.5	56.8
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	63.0	18.0	5.0	53.5
Max Q Clear Time (g_c+I1), s	23.5	8.4	3.2	46.9
Green Ext Time (p_c), s	12.0	0.3	0.0	5.4

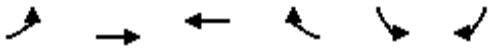
Intersection Summary	
HCM 6th Ctrl Delay	19.3
HCM 6th LOS	B



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	29	1688	1432	151	105	21
Future Volume (veh/h)	29	1688	1432	151	105	21
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	1678	1841	1826	1678	1841	1826
Adj Flow Rate, veh/h	34	1963	1665	176	122	24
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	15	4	5	15	4	5
Cap, veh/h	58	2584	2169	889	186	164
Arrive On Green	0.04	0.74	0.63	0.63	0.11	0.11
Sat Flow, veh/h	1598	3589	3561	1422	1753	1547
Grp Volume(v), veh/h	34	1963	1665	176	122	24
Grp Sat Flow(s),veh/h/ln	1598	1749	1735	1422	1753	1547
Q Serve(g_s), s	1.2	19.4	20.1	3.1	3.9	0.8
Cycle Q Clear(g_c), s	1.2	19.4	20.1	3.1	3.9	0.8
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	58	2584	2169	889	186	164
V/C Ratio(X)	0.59	0.76	0.77	0.20	0.66	0.15
Avail Cap(c_a), veh/h	234	3703	2896	1187	588	519
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	27.6	4.5	7.9	4.7	24.9	23.6
Incr Delay (d2), s/veh	9.0	0.6	0.9	0.1	3.9	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	0.5	0.7	3.6	0.4	1.6	0.8
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	36.6	5.1	8.8	4.8	28.8	24.0
LnGrp LOS	D	A	A	A	C	C
Approach Vol, veh/h		1997	1841		146	
Approach Delay, s/veh		5.6	8.4		28.0	
Approach LOS		A	A		C	

Timer - Assigned Phs	4	6	7	8
Phs Duration (G+Y+Rc), s	47.4	10.7	6.6	40.8
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	61.5	19.5	8.5	48.5
Max Q Clear Time (g_c+I1), s	21.4	5.9	3.2	22.1
Green Ext Time (p_c), s	21.2	0.3	0.0	14.2

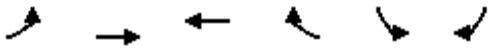
Intersection Summary	
HCM 6th Ctrl Delay	7.7
HCM 6th LOS	A



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	22	1269	1653	126	130	50
Future Volume (veh/h)	22	1269	1653	126	130	50
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	1707	1796	1781	1707	1796	1781
Adj Flow Rate, veh/h	26	1493	1945	148	153	59
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	13	7	8	13	7	8
Cap, veh/h	43	2283	2005	857	395	349
Arrive On Green	0.03	0.67	0.59	0.59	0.23	0.23
Sat Flow, veh/h	1626	3503	3474	1447	1711	1510
Grp Volume(v), veh/h	26	1493	1945	148	153	59
Grp Sat Flow(s),veh/h/ln	1626	1706	1692	1447	1711	1510
Q Serve(g_s), s	1.4	23.2	49.6	4.2	6.8	2.8
Cycle Q Clear(g_c), s	1.4	23.2	49.6	4.2	6.8	2.8
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	43	2283	2005	857	395	349
V/C Ratio(X)	0.60	0.65	0.97	0.17	0.39	0.17
Avail Cap(c_a), veh/h	90	2389	2012	860	395	349
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	43.3	8.8	17.6	8.3	29.2	27.7
Incr Delay (d2), s/veh	12.7	0.6	13.7	0.1	2.8	1.0
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	5.8	17.9	1.0	2.9	2.7
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	56.1	9.4	31.3	8.4	32.1	28.7
LnGrp LOS	E	A	C	A	C	C
Approach Vol, veh/h		1519	2093		212	
Approach Delay, s/veh		10.2	29.7		31.1	
Approach LOS		B	C		C	

Timer - Assigned Phs			4		6	7	8
Phs Duration (G+Y+Rc), s			64.7		25.3	6.9	57.8
Change Period (Y+Rc), s			4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s			63.0		18.0	5.0	53.5
Max Q Clear Time (g_c+I1), s			25.2		8.8	3.4	51.6
Green Ext Time (p_c), s			13.3		0.4	0.0	1.7

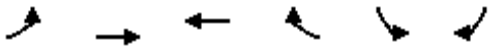
Intersection Summary		
HCM 6th Ctrl Delay		22.0
HCM 6th LOS		C



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	39	1796	1526	155	108	28
Future Volume (veh/h)	39	1796	1526	155	108	28
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	1678	1841	1826	1678	1841	1826
Adj Flow Rate, veh/h	45	2088	1774	180	126	33
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	15	4	5	15	4	5
Cap, veh/h	69	2627	2207	905	186	164
Arrive On Green	0.04	0.75	0.64	0.64	0.11	0.11
Sat Flow, veh/h	1598	3589	3561	1422	1753	1547
Grp Volume(v), veh/h	45	2088	1774	180	126	33
Grp Sat Flow(s),veh/h/ln	1598	1749	1735	1422	1753	1547
Q Serve(g_s), s	1.7	23.2	24.0	3.3	4.4	1.2
Cycle Q Clear(g_c), s	1.7	23.2	24.0	3.3	4.4	1.2
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	69	2627	2207	905	186	164
V/C Ratio(X)	0.65	0.79	0.80	0.20	0.68	0.20
Avail Cap(c_a), veh/h	216	3417	2673	1095	543	479
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	29.6	4.8	8.5	4.8	27.1	25.7
Incr Delay (d2), s/veh	9.9	1.0	1.6	0.1	4.3	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	0.8	1.3	4.7	0.5	1.9	1.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	39.5	5.9	10.1	4.9	31.4	26.3
LnGrp LOS	D	A	B	A	C	C
Approach Vol, veh/h		2133	1954		159	
Approach Delay, s/veh		6.6	9.6		30.3	
Approach LOS		A	A		C	

Timer - Assigned Phs			4		6	7	8
Phs Duration (G+Y+Rc), s			51.8		11.2	7.2	44.6
Change Period (Y+Rc), s			4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s			61.5		19.5	8.5	48.5
Max Q Clear Time (g_c+I1), s			25.2		6.4	3.7	26.0
Green Ext Time (p_c), s			22.1		0.3	0.0	14.0

Intersection Summary	
HCM 6th Ctrl Delay	8.9
HCM 6th LOS	A



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	49	1560	1968	238	153	98
Future Volume (veh/h)	49	1560	1968	238	153	98
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	1707	1796	1781	1707	1796	1781
Adj Flow Rate, veh/h	53	1696	2139	259	166	107
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	13	7	8	13	7	8
Cap, veh/h	66	2339	2012	860	367	324
Arrive On Green	0.04	0.69	0.59	0.59	0.21	0.21
Sat Flow, veh/h	1626	3503	3474	1447	1711	1510
Grp Volume(v), veh/h	53	1696	2139	259	166	107
Grp Sat Flow(s),veh/h/ln	1626	1706	1692	1447	1711	1510
Q Serve(g_s), s	2.9	28.0	53.5	8.0	7.6	5.4
Cycle Q Clear(g_c), s	2.9	28.0	53.5	8.0	7.6	5.4
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	66	2339	2012	860	367	324
V/C Ratio(X)	0.80	0.73	1.06	0.30	0.45	0.33
Avail Cap(c_a), veh/h	90	2389	2012	860	367	324
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	42.8	8.9	18.2	9.0	30.7	29.9
Incr Delay (d2), s/veh	28.8	1.1	39.3	0.2	4.0	2.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	6.9	26.2	2.0	3.4	5.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	71.6	10.0	57.5	9.2	34.7	32.6
LnGrp LOS	E	A	F	A	C	C
Approach Vol, veh/h		1749	2398		273	
Approach Delay, s/veh		11.8	52.3		33.9	
Approach LOS		B	D		C	

Timer - Assigned Phs	4	6	7	8
Phs Duration (G+Y+Rc), s	66.2	23.8	8.2	58.0
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	63.0	18.0	5.0	53.5
Max Q Clear Time (g_c+I1), s	30.0	9.6	4.9	55.5
Green Ext Time (p_c), s	15.4	0.5	0.0	0.0

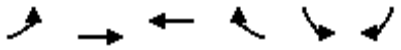
Intersection Summary	
HCM 6th Ctrl Delay	35.2
HCM 6th LOS	D

Intersection	
Intersection Delay, s/veh	12.2
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	109	26	91	29	17	56	115	132	23	41	132	63
Future Vol, veh/h	109	26	91	29	17	56	115	132	23	41	132	63
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, %	18	13	2	2	10	18	10	18	13	13	2	10
Mvmt Flow	118	28	99	32	18	61	125	143	25	45	143	68
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	2	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	2	1	1
HCM Control Delay	12.6	10	13.6	11.3
HCM LOS	B	A	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	43%	48%	28%	24%	0%
Vol Thru, %	49%	12%	17%	76%	0%
Vol Right, %	9%	40%	55%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	270	226	102	173	63
LT Vol	115	109	29	41	0
Through Vol	132	26	17	132	0
RT Vol	23	91	56	0	63
Lane Flow Rate	293	246	111	188	68
Geometry Grp	5	2	2	7	7
Degree of Util (X)	0.464	0.396	0.175	0.33	0.101
Departure Headway (Hd)	5.695	5.807	5.698	6.323	5.303
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	631	619	626	568	674
Service Time	3.742	3.857	3.76	4.072	3.051
HCM Lane V/C Ratio	0.464	0.397	0.177	0.331	0.101
HCM Control Delay	13.6	12.6	10	12.2	8.7
HCM Lane LOS	B	B	A	B	A
HCM 95th-tile Q	2.5	1.9	0.6	1.4	0.3



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	98	1862	1594	190	169	96
Future Volume (veh/h)	98	1862	1594	190	169	96
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	1678	1841	1826	1678	1841	1826
Adj Flow Rate, veh/h	107	2024	1733	207	184	104
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	15	4	5	15	4	5
Cap, veh/h	133	2581	2056	842	241	212
Arrive On Green	0.08	0.74	0.59	0.59	0.14	0.14
Sat Flow, veh/h	1598	3589	3561	1422	1753	1547
Grp Volume(v), veh/h	107	2024	1733	207	184	104
Grp Sat Flow(s),veh/h/ln	1598	1749	1735	1422	1753	1547
Q Serve(g_s), s	4.7	26.0	29.3	5.0	7.3	4.5
Cycle Q Clear(g_c), s	4.7	26.0	29.3	5.0	7.3	4.5
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	133	2581	2056	842	241	212
V/C Ratio(X)	0.81	0.78	0.84	0.25	0.76	0.49
Avail Cap(c_a), veh/h	188	2983	2333	956	474	418
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	32.5	5.9	12.0	7.0	30.0	28.8
Incr Delay (d2), s/veh	15.5	1.2	2.7	0.2	5.0	1.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	3.4	7.9	1.0	3.2	0.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	48.0	7.1	14.7	7.2	35.0	30.5
LnGrp LOS	D	A	B	A	D	C
Approach Vol, veh/h		2131	1940		288	
Approach Delay, s/veh		9.2	13.9		33.4	
Approach LOS		A	B		C	

Timer - Assigned Phs	4	6	7	8
Phs Duration (G+Y+Rc), s	57.7	14.4	10.5	47.2
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	61.5	19.5	8.5	48.5
Max Q Clear Time (g_c+I1), s	28.0	9.3	6.7	31.3
Green Ext Time (p_c), s	20.1	0.6	0.0	11.4

Intersection Summary	
HCM 6th Ctrl Delay	12.9
HCM 6th LOS	B

APPENDIX E

VMT CALCULATION WORKSHEETS

LSA

Appendix E - VMT Calculation Worksheet

2015	Goshen Residential (Project)	Project Location TAZ[1] (TAZ 1824)
Total Households	303	57
Total Population	836	157
Homebased (HB) VMT	10,940	1,858
VMT per capita	13.086	11.817

Notes:

[1] Calculated using TCAG Model base year no project model run.