Appendix K-1

Traffic Impact Analysis

Hesperia Commerce Center II

TRAFFIC IMPACT ANALYSIS

CITY OF HESPERIA

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LIST OF ABBREVIATED TERMS

(1)	Reference
ADT	Average Daily Traffic
CA MUTCD	California Manual on Uniform Traffic Control Devices
Caltrans	California Department of Transportation
CEQA	California Environmental Quality Act
CMP	Congestion Management Program
DIF	Development Impact Fee
E+P	Existing Plus Project
HCM	Highway Capacity Manual
HCS	Highway Capacity Software
HOV	High Occupancy Vehicle
ITE	Institute of Transportation Engineers
LOS	Level of Service
OPR	Office of Planning and Research
PCE	Passenger Car Equivalent
PeMS	Performance Measurement System
PHF	Peak Hour Factor
Project	Hesperia Commerce Center II
RTP	Regional Transportation Plan
SB	Senate Bill
SBCTA	San Bernardino County Transportation Authority
SBTAM	San Bernardino Transportation Analysis Model
SCAG	Southern California Association of Governments
SCS	Sustainable Communities Strategy
SHS	State Highway System
TCR	Transportation Concept Report
TIA	Traffic Impact Analysis
TUMF	Transportation Uniform Mitigation Fee
Vphgpl	Vehicles Per Hour Green Per Lane
VVTA	Victor Valley Transit Authority
WRCOG	Western Riverside Council of Governments
VMT	Vehicle Miles Traveled

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1 INTRODUCTION

This report presents the results of the traffic impact analysis (TIA) for the proposed Hesperia Commerce Center II development (referred to as "Project") located north of Phelan Road and west of US Highway 395 in the City of Hesperia, as shown on Exhibit 1-1.

The purpose of this TIA is to evaluate the potential circulation system deficiencies that may result from the development of the proposed Project, and to recommend improvements to achieve acceptable circulation system operational conditions. This traffic study has been prepared in accordance with the San Bernardino County Congestion Management Program (CMP) Guidelines for CMP Traffic Impact Analysis Reports (Appendix B, 2016 Update), the California Department of Transportation (Caltrans) Guide for the Preparation of Traffic Impact Studies, and through consultation with City of Hesperia staff during the scoping process. (1) (2) The approved Project Traffic Study Scoping agreement is provided in Appendix 1.1 of this TIA.

1.1 SUMMARY OF FINDINGS

The Project is proposing to construct the following improvements as design features in conjunction with development of the site.

Recommendation 1.1 – Driveway 1 & Phelan Road (#4) – The following improvements are necessary to accommodate site access:

- Project to install a stop control on the southbound approach and construct southbound shared left-right turn lane, and westbound right turn lane.

Recommendation 2.1 – Driveway 2 & Yucca Terrace Drive (#5) – The following improvements are necessary to accommodate site access:

- Project to install a stop control on the northbound approach and construct northbound shared left-right turn lane, eastbound shared through-right turn lane, westbound left turn lane within a two-way turn lane and a westbound through lane.

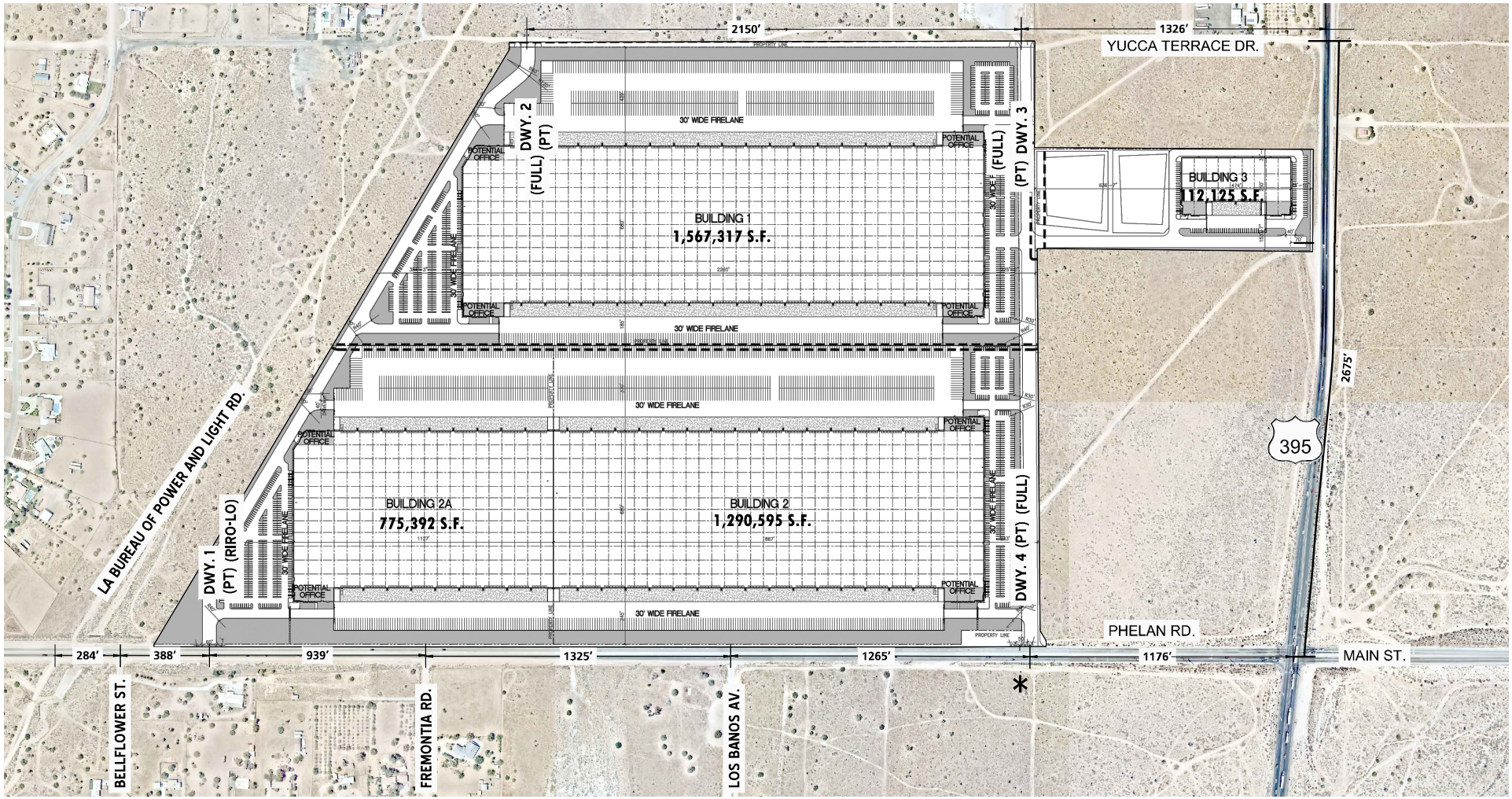
Recommendation 3.1 – Driveway 3 & Yucca Terrace Drive (#6) – The following improvements are necessary to accommodate site access:

- Project to install a stop control on the northbound approach and construct northbound shared left-right turn lane, eastbound shared through-right turn lane, westbound left turn lane within a two-way turn lane and a westbound through lane.

Recommendation 4.1 – Driveway 4 & Phelan Road (#7) – The following improvements are necessary to accommodate site access:

- Project to install a traffic signal and construct southbound shared left-right turn lane and eastbound left turn lane with a minimum of 150-feet of storage. Driveway 4 is proposed to provide reciprocal access with the adjacent (not-a-part) use to the east.

EXHIBIT 1-1 PRELIMINARY SITE PLAN



LEGEND:

RIRO	= RIGHT-IN/RIGHT-OUT ONLY ACCESS
FULL	= FULL ACCESS
PT	= PASSENGER CARS AND TRUCKS
LO	= LEFT OUT

*** NOTE: DRIVEWAY 4 IS A PROPOSED SIGNALIZED DRIVEWAY THAT WILL PROVIDE RECIPROCAL ACCESS WITH THE ADJACENT USE. A SIGNAL MODIFICATION WILL BE NECESSARY AT THIS LOCATION.**

Recommendation 5.1 – US Highway 395 & Yucca Terrace Drive (#11) – The following improvements are necessary to accommodate site access:

- Project to install a traffic signal and construct northbound left turn lane with a minimum of 260-feet of storage, eastbound left turn lane with a minimum of 200-feet of storage and an eastbound right turn lane.

Recommendation 6.1 – US Highway 395 & Phelan Road/Main Street (#12) – The following improvements are necessary to accommodate site access:

- Project to construct a 2nd northbound left turn lane.
- Project to construct a 2nd southbound left turn lane.

Recommendation 7.1 – Phelan Road – Project to construct Phelan Road from the western Project boundary to the eastern Project boundary at its ultimate half-section width as a Major Arterial (ultimate 120-foot right-of-way) in compliance with the circulation recommendations found in the City of Hesperia's General Plan. The additional westbound through lanes may not be striped until such time in the future when Phelan Road is widened to the west with additional receiving lanes.

Recommendation 8.1 – Yucca Terrace Drive – Project to construct Yucca Terrace Drive from the western Project boundary to the eastern Project boundary at its ultimate half-section width as an Industrial Collector (ultimate 70-foot right-of-way) in compliance with the circulation recommendations found in the City of Hesperia's General Plan. The project will provide an additional 12-feet of pavement width to accommodate one westbound lane from the western Project boundary to US Highway 395 and an additional 12-feet of pavement width to accommodate one eastbound lane from the eastern Project boundary to US Highway 395 in order to facilitate site access.

Recommendation 9.1 – US Highway 395 – Project to construct US Highway 395 from the northern Project boundary of Building 3 to the southern Project boundary of Building 3 at its ultimate half-section width (ultimate 130-foot right-of-way) in compliance with Caltrans standards and the circulation recommendations found in the City of Hesperia's General Plan. The additional southbound through lanes may not be striped until such time in the future when US Highway 395 is widened to the south with additional receiving lanes.

The Project Applicant's responsibility for the Project's contributions towards off-site deficient intersections is fulfilled through payment of fair share and/or payment into pre-existing fee programs (if applicable) that would be assigned to construction of the identified recommended improvements. The Project Applicant would be required to pay requisite fees and/or fair share contributions consistent with the City's requirements (see Section 8 *Local and Regional Funding Mechanisms*).

Recommendation 10.1 – Prior to the issuance of building permits, the Project Applicant shall pay the Project's fair share amount of $324,443 for the improvements identified in Table 1-3 at intersections located within the City of Hesperia, or as agreed to by the City and Project Applicant.

Recommendation 11.1 – The Developer's fair-share amount for the intersections that either share a mutual border with or are wholly located within the jurisdiction of Caltrans that have recommended improvements which are not covered by a pre-existing fee program is $893,156. Developer shall be required to pay the amount shown above to the City of Hesperia prior to the issuance of building permits. The City of Hesperia shall hold Developer's Fair Share contribution in trust and shall apply Developer's Fair Share Contribution to any fee program adopted or agreed upon with Caltrans.

1.2 PROJECT OVERVIEW

The proposed Project consists of the following uses:

- 2,361,648 square feet of High-Cube Fulfillment Center use (65% of the total square footage of Building 1 and Building 2)
- 1,383,781 square feet of General Light Industrial use; 1,271,656 square feet within Building 1 and Building 2 (35% of the total square footage of Building 1 and Building 2) and 112,125 square feet within Building 3

The Project is anticipated to be developed within a single phase with an anticipated opening year of 2021. Regional access to the Project site is available from the I-15 Freeway at the Main Street interchange. The Project is located north of Phelan Road and west of US Highway 395 in the City of Hesperia. Vehicular and truck traffic access will be provided via the following driveways:

- Driveway 1 via Phelan Road – Right-In/Right-Out/Left-Out access for both passenger cars and trucks (no left-in access)
- Driveway 2 via Yucca Terrace Drive – Full access for both passenger cars and trucks
- Driveway 3 via Yucca Terrace Drive – Full access for both passenger cars and trucks
- Driveway 4 via Phelan Road – Full access for both passenger cars and trucks

Trips generated by the Project's proposed land uses have been estimated based on trip generation rates published by the Institute of Transportation Engineers (ITE) as provided in their Trip Generation Manual, 10th Edition, 2017 and the High-Cube Warehouse Trip Generation Study (WSP, January 29, 2019). (3) (4) The Project is estimated to generate a total of 11,898 trip-ends per day on a typical weekday with 1,258 AM peak hour trips and 1,261 PM peak hour trips. The

assumptions and methods used to estimate the Project's trip generation characteristics are discussed in greater detail in Section 4.1 *Project Trip Generation* of this report.

1.3 ANALYSIS SCENARIOS

For the purposes of this traffic study, potential deficiencies to traffic and circulation have been assessed for each of the following conditions:

- Existing (2019)
- Existing Plus Project (E+P)
- Opening Year Cumulative (2021) Without Project
- Opening Year Cumulative (2021) With Project
- Horizon Year (2040) Without Project
- Horizon Year (2040) With Project

1.3.1 EXISTING (2019) CONDITIONS

Existing (2019) conditions represents the baseline traffic conditions as they existed at the time this report was prepared.

1.3.2 EXISTING PLUS PROJECT CONDITIONS

The E+P analysis determines circulation system deficiencies that would occur on the existing roadway system in the scenario of the Project being placed upon Existing conditions. The E+P analysis is intended to identify the project-specific traffic deficiencies associated solely with the development of the proposed Project based on a comparison of the E+P traffic conditions to Existing (2019) conditions.

1.3.3 OPENING YEAR CUMULATIVE (2021) CONDITIONS

The Opening Year Cumulative (2021) conditions analysis determines the potential near-term cumulative circulation system deficiencies. To account for growth in traffic between Existing (2019) traffic conditions and the Project Opening Year Cumulative (2021), a growth rate of 4.04 percent was assumed (2.0 percent per year, compounded annually over 2 years).

1.3.4 HORIZON YEAR (2040) CONDITIONS

Traffic projections for Horizon Year (2040) with Project conditions were derived from the San Bernardino Transportation Analysis Model (SBTAM). The Horizon Year (2040) conditions analysis will be utilized to determine if improvements funded through regional transportation mitigation fee programs, such as the City's Development Impact Fee (DIF) program or other approved funding mechanisms, can accommodate the long-range cumulative traffic at the target level of service (LOS) identified by the City of Hesperia (lead agency). If the planned and funded improvements can provide the target LOS, then the Project's payment into established fee programs will be considered as cumulative improvements. Other improvements needed beyond the "funded" improvements (such as localized improvements to non-DIF facilities) are identified as such.

1.4 STUDY AREA

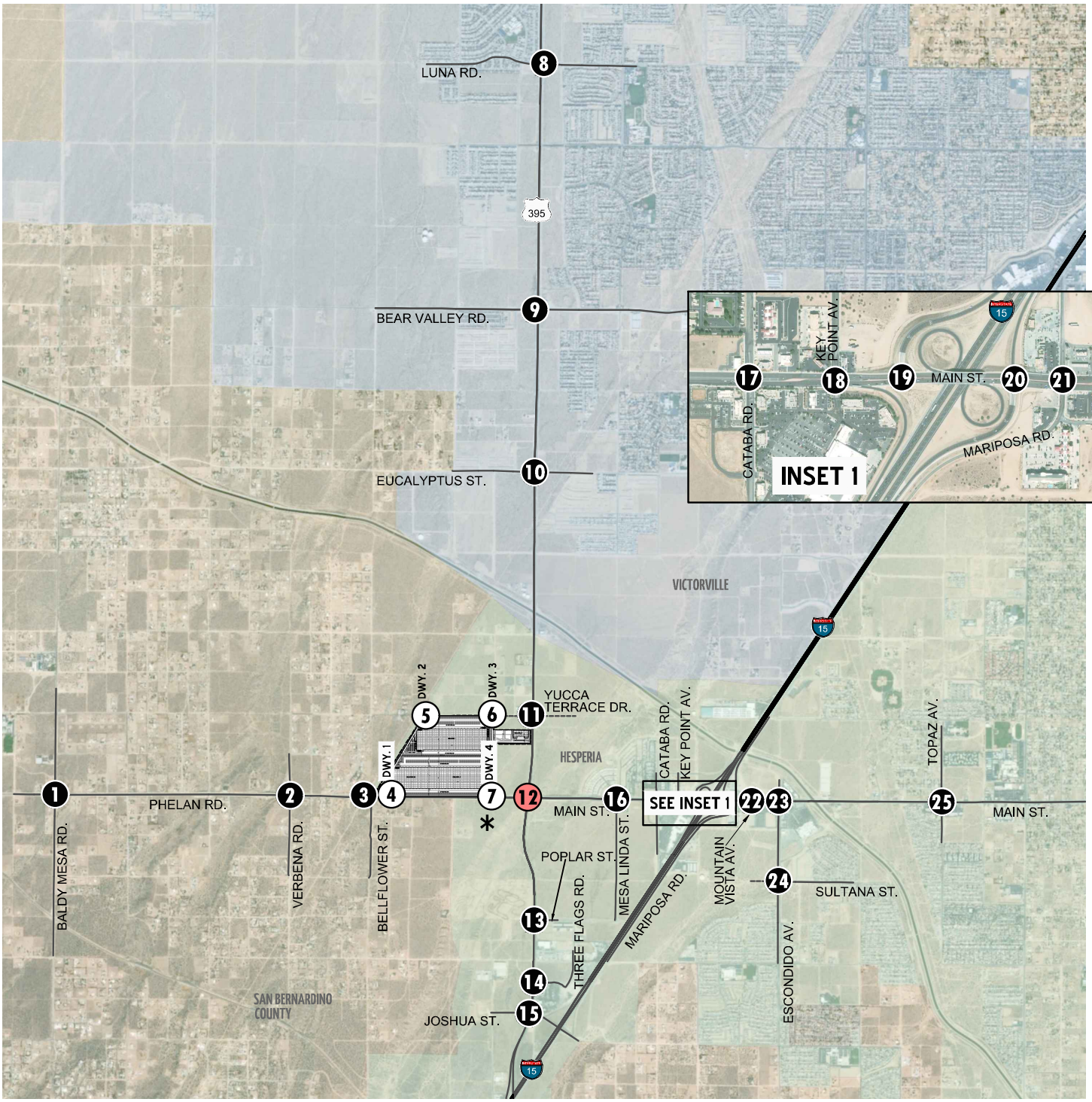
1.4.1 INTERSECTIONS

The following 25 study area intersections listed in Table 1-1 and shown on Exhibit 1-2 were selected for this TIA based on where the Project is anticipated to contribute 50 or more peak hour trips, or if the intersection provides access to the proposed Project.

TABLE 1-1: INTERSECTION ANALYSIS LOCATIONS

ID	Intersection Location	Jurisdiction	CMP?
1	Baldy Mesa Rd. & Phelan Rd.	County of San Bernardino	No
2	Verbena Rd. & Phelan Rd.	County of San Bernardino	No
3	Bellflower St. & Phelan Rd.	County of San Bernardino	No
4	Driveway 1 & Phelan Rd. – Future Intersection	City of Hesperia, County of San Bernardino	No
5	Driveway 2 & Yucca Terrace Dr. – Future Intersection	City of Hesperia	No
6	Driveway 3 & Yucca Terrace Dr. – Future Intersection	City of Hesperia	No
7	Driveway 4 & Phelan Rd. – Future Intersection	City of Hesperia	No
8	US Highway 395 & Luna Rd.	City of Victorville, Caltrans	No
9	US Highway 395 & Bear Valley Rd.	City of Victorville, Caltrans	No
10	US Highway 395 & Eucalyptus St.	City of Victorville, Caltrans	No
11	US Highway 395 & Yucca Terrace Dr.	City of Hesperia, Caltrans	No
12	US Highway 395 & Phelan Rd./Main St.	City of Hesperia, Caltrans	Yes
13	US Highway 395 & Poplar St.	City of Hesperia, Caltrans	No
14	US Highway 395 & Three Flags Rd.	City of Hesperia, Caltrans	No
15	US Highway 395 & Joshua St.	City of Hesperia, Caltrans	No
16	Mesa Linda St. & Main St.	City of Hesperia	No
17	Catawba Rd. & Main St.	City of Hesperia	No
18	Key Point Av. & Main St.	City of Hesperia	No
19	I-15 SB Ramps & Main St.	City of Hesperia, Caltrans	No
20	I-15 NB Ramps & Main St.	City of Hesperia, Caltrans	No
21	Mariposa Rd. & Main St.	City of Hesperia	No
22	Mountain Vista Av. & Main St.	City of Hesperia	No
23	Escondido Av. & Main St.	City of Hesperia	No
24	Escondido Av. & Sultana St.	City of Hesperia	No
25	Topaz Av. & Main St.	City of Hesperia	No

EXHIBIT 1-2: LOCATION MAP



LEGEND:

- 0 = EXISTING INTERSECTION ANALYSIS LOCATION
- 0 = FUTURE INTERSECTION ANALYSIS LOCATION
- 0 = SBCTA INTERSECTION
- ---- = DIRT ROAD

N

* NOTE: DRIVEWAY 4 IS A PROPOSED SIGNALIZED DRIVEWAY THAT WILL PROVIDE RECIPROCAL ACCESS WITH THE ADJACENT USE.

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URBAN CROSSROADS

The "50 peak hour trip" criterion utilized by the City of Hesperia is consistent with the methodology employed by the County of San Bernardino, and generally represents a minimum number of trips at which a typical intersection would have the potential to be affected by a given development proposal. Although each intersection may have unique operating characteristics, this traffic engineering rule of thumb is a widely-utilized tool for estimating a study area.

The intent of a CMP is to more directly link land use, transportation, and air quality, thereby prompting reasonable growth management programs that will effectively utilize new transportation funds, alleviate traffic congestion and related deficiencies, and improve air quality. Counties within California have developed CMPs with varying methods and strategies to meet the intent of the CMP legislation. The intersection of US Highway 395 & Phelan Road/Main Street is identified as a San Bernardino County Transportation Authority (SBCTA) CMP intersection.

1.4.2 FREEWAY MAINLINE AND RAMP JUNCTION ANALYSIS

Study area freeway mainline analysis locations were selected based on Caltrans traffic study guidelines, which may require the analysis of State highway facilities. (2) Consistent with recent Caltrans guidance, and because deficiencies to freeway segments tend to dissipate with distance from the point of State Highway System (SHS) entry, quantitative study of freeway segments beyond those immediately adjacent to the point of entry typically is not required. This study evaluates the following freeway facilities adjacent to the point of entry to the SHS at the I-15 Freeway and Main Street, and the I-15 Freeway and US Highway 395 (see Table 1-2):

TABLE 1-2: FREEWAY FACILITY ANALYSIS LOCATIONS

ID	Freeway Facilities
1	I-15 Freeway Southbound, North of Main St. (mainline segment)
2	I-15 Freeway Southbound, Off-Ramp at Main St. (diverge ramp junction)
3	I-15 Freeway Southbound, Loop On-Ramp at Main St. (merge ramp junction)
4	I-15 Freeway Southbound, On-Ramp at Main St. (merge ramp junction)
5	I-15 Freeway Southbound, South of Main St. (mainline segment)
6	I-15 Freeway Southbound, North of US Highway 395 (mainline segment)
7	I-15 Freeway Southbound, On-Ramp at US Highway 395 (merge ramp junction)
8	I-15 Freeway Southbound, South of US Highway 395 (mainline segment)
9	I-15 Freeway Northbound, North of Main St. (mainline segment)
10	I-15 Freeway Northbound, On-Ramp at Main St. (merge ramp junction)
11	I-15 Freeway Northbound, Loop On-Ramp at Main St. (merge ramp junction)
12	I-15 Freeway Northbound, Off-Ramp at Main St. (diverge ramp junction)
13	I-15 Freeway Northbound, South of Main St. (mainline segment)
14	I-15 Freeway Northbound, North of US Highway 395 (mainline segment)
15	I-15 Freeway Northbound, Off-Ramp at US Highway 395 (diverge ramp junction)
16	I-15 Freeway Northbound, South of US Highway 395 (mainline segment)

1.5 SENATE BILL 743 – VEHICLE MILES TRAVELED (VMT)

Senate Bill 743 (SB 743), approved in 2013, endeavors to change the way transportation impacts will be determined according to the California Environmental Quality Act (CEQA). The Office of Planning and Research (OPR) has recommended the use of vehicle miles traveled (VMT) as the replacement for automobile delay-based LOS. In December 2018, the Natural Resources Agency finalized updates to CEQA Guidelines to incorporate SB 743 (i.e., VMT). While a lead agency has the option to immediately apply the new VMT based analysis methodology and thresholds for the purposes of evaluating transportation impacts, statewide application of the new guidelines is required July 1, 2020. VMT analysis for the proposed Project has been prepared under separate cover.

It is our understanding that the City of Hesperia has not currently adopted VMT thresholds. In July 2019, the County of San Bernardino adopted new Traffic Impact Study Guidelines which includes a set of procedures and thresholds for conducting VMT analyses in the County. The County has concluded that County projects will be required to complete a TIA, in conjunction with a VMT assessment, in order to demonstrate consistency with the General Plan. For purposes of SB 743 compliance, VMT analysis should be conducted for land use projects as deemed necessary by the lead agency and would apply to projects that have the potential to increase the average VMT per person or employee. The County recommends VMT be estimated by multiplying average trip length by the trip generation for the project and that average trip length information be obtained for each trip purpose from the SBTAM traffic model. Using SBTAM to determine both trip generation and trip lengths allows the user to use an identical methodology when comparing project VMT per person/employee to the regional VMT per person/employee. The San Bernardino County Transportation Authority (SBCTA) is also currently conducting a multi-jurisdictional study to develop a set of procedures and provide local jurisdictions with sufficient information to adopt VMT baselines and thresholds of significance at or around the July 2020 required implementation date.

Caltrans has yet to formally adopted VMT thresholds of significance for purposes of determining transportation impacts under CEQA. The guidelines are set to be available in Spring/Summer 2020, however, Caltrans acknowledges automobile delay will no longer be considered a CEQA impact for development projects and will use VMT for projects on the SHS. As such, the LOS operations included in this TIA for intersections and freeway facilities are informational and are not anticipated to support the environmental document.

1.6 DEFICIENCIES

This section provides a summary of Project deficiencies. Section 2 *Methodologies* provides information on the methodologies used in the analysis and Section 5 *E+P Traffic Conditions*, Section 6 *Opening Year Cumulative (2021) Traffic Conditions*, and Section 7 *Horizon Year (2040) Traffic Conditions* includes the detailed analysis. A summary of LOS results for all analysis scenarios is presented on Exhibit 1-3.

1.6.1 E+P CONDITIONS

Intersections

US Highway 395 & Yucca Terrace Drive (#11) – This intersection was found to operate at an unacceptable LOS (LOS E or worse) during the PM peak hour under Existing traffic conditions and is anticipated to continue to operate at an unacceptable LOS during one or more peak hours with the addition of Project traffic resulting in a cumulative deficiency.

US Highway 395 & Phelan Road/Main Street (#12) – This intersection was found to operate at an acceptable LOS (LOS D or better) during the peak hours under Existing traffic conditions. However, the intersection is anticipated to operate at an unacceptable LOS (LOS E or worse) during the peak hours with the addition of Project traffic for E+P traffic conditions.

US Highway 395 & Poplar Street (#13) – This intersection was found to operate at an unacceptable LOS (LOS E or worse) during the peak hours under Existing traffic conditions and is anticipated to continue to operate at an unacceptable LOS during one or more peak hours with the addition of Project traffic resulting in a cumulative deficiency.

Queuing

The following turning movement is anticipated to experience periodic queuing issues during the peak hours based on the 95th percentile peak hour traffic flows under E+P traffic conditions:

- US Highway 395 & Phelan Road/Main Street (#12) Southbound Left – AM and PM peak hours

Consistent with Existing (2019) traffic conditions, there are no off-ramp movements that are anticipated to experience queuing issues during the weekday AM or weekday PM peak 95th percentile traffic flows.

Freeway Facilities

Consistent with Existing (2019) traffic conditions, the following study area freeway segments and merge/diverge ramp junctions analyzed for this study are anticipated to operate at an unacceptable LOS (i.e., LOS E or worse) during the peak hours for E+P traffic conditions:

- I-15 Freeway Northbound, North of Main Street (#9) – LOS E PM peak hour only
- I-15 Freeway Northbound, Off-Ramp at Main Street (#12) – LOS E PM peak hour only
- I-15 Freeway Northbound, South of Main Street (#13) – LOS E PM peak hour only

EXHIBIT 1-3: SUMMARY OF DEFICIENT INTERSECTIONS BY ANALYSIS SCENARIO

#	Intersection	Existing (2019)	E+P	Opening Year Cumulative (2021) Without Project	Opening Year Cumulative (2021) With Project	Horizon Year (2040) Without Project	Horizon Year (2040) With Project
1	Baldy Mesa Rd. & Phelan Rd.						
2	Verbena Rd. & Phelan Rd.						
3	Bellflower St. & Phelan Rd.						
4	Dwy. 1 & Phelan Rd.	NA		NA		NA	
5	Dwy. 2 & Yucca Terrace Dr.	NA		NA		NA	
6	Dwy. 3 & Yucca Terrace Dr.	NA		NA		NA	
7	Dwy. 4 & Phelan Rd.	NA					
8	US Highway 395 & Luna Rd.						
9	US Highway 395 & Bear Valley Rd.						
10	US Highway 395 & Eucalyptus St.						
11	US Highway 395 & Yucca Terrace Dr.						
12	US Highway 395 & Phelan Rd. / Main St.						
13	US Highway 395 & Poplar St.						
14	US Highway 395 & Three Flags Rd.						
15	US Highway 395 & Joshua St.						
16	Mesa Linda St. & Main St.						
17	Cataba Rd. & Main St.						
18	Key Point Av. & Main St.						
19	I-15 SB Ramps & Main St.						
20	I-15 NB Ramps & Main St.						
21	Mariposa Rd. & Main St.						
22	Mountain Vista Av. & Main St.						
23	Escondido Av. & Main St.						
24	Escondido Av. & Sultana St.						
25	Topaz Av. & Main St.						

LEGEND:

- = AM PEAK HOUR
- = PM PEAK HOUR
- = LOS A-D
- = LOS D-E
- = LOS F

NA = NOT AN ANALYSIS LOCATION FOR THIS SCENARIO

1.6.2 OPENING YEAR CUMULATIVE (2021) CONDITIONS

Intersections

The following intersections are anticipated to operate at an unacceptable LOS during the peak hours for Opening Year Cumulative (2021) Without Project traffic conditions:

- Verbena Road & Phelan Road (#2) – LOS D AM and PM peak hours
- US Highway 395 & Yucca Terrace Drive (#11) – LOS F AM and PM peak hours
- US Highway 395 & Phelan Road/Main Street (#12) – LOS E PM peak hour only
- US Highway 395 & Poplar Street (#13) – LOS F AM and PM peak hours
- Escondido Avenue & Main Street (#23) – LOS E PM peak hour only

Queuing

The following intersection turning movements are anticipated to experience periodic queuing issues during the peak hours based on the 95th percentile peak hour traffic flows for Opening Year Cumulative (2021) Without Project traffic conditions:

- US Highway 395 & Phelan Road/Main Street (#12) Southbound Left – AM and PM peak hours
- US Highway 395 & Three Flags Road (#14) Northbound Left – AM and PM peak hours

The following additional intersection turning movement is anticipated to experience queuing issues during the peak hours based on the 95th percentile peak hour traffic flows for Opening Year Cumulative (2021) With Project traffic conditions:

- US Highway 395 & Phelan Road/Main Street (#12) Northbound Left – AM and PM peak hours

Consistent with Existing (2019) traffic conditions, there are no off-ramp movements that are anticipated to experience queuing issues during the weekday AM or weekday PM peak 95th percentile traffic flows under Opening Year Cumulative (2021) Without Project and With Project traffic conditions.

Freeway Facilities

The following study area freeway segments and merge/diverge ramp junctions analyzed for this study are anticipated to operate at an unacceptable LOS (i.e., LOS E or worse) during the peak hours for Opening Year Cumulative (2021) Without Project traffic conditions:

- I-15 Freeway Northbound, North of Main Street (#9) – LOS E PM peak hour only
- I-15 Freeway Northbound, Off-Ramp at Main Street (#12) – LOS E PM peak hour only
- I-15 Freeway Northbound, South of Main Street (#13) – LOS E PM peak hour only

The following additional study area ramp junction is anticipated to operate at an unacceptable LOS under Horizon Year (2040) With Project traffic conditions, resulting in a cumulative deficiency:

- I-15 Freeway Northbound, On-Ramp at Main Street (#10) – LOS E PM peak hour only

1.6.3 HORIZON YEAR (2040) CONDITIONS

Intersections

The following study area intersections are anticipated to operate at an unacceptable LOS during the peak hours under Horizon Year (2040) Without Project conditions:

- Verbena Road & Phelan Road (#2) – LOS E AM peak hour; LOS D PM peak hour
- Bellflower Street & Phelan Road (#3) – LOS D AM and PM peak hours
- US Highway 395 & Luna Road (#8) – LOS E AM peak hour; LOS F PM peak hour
- US Highway 395 & Bear Valley Road (#9) – LOS E AM peak hour; LOS F PM peak hour
- US Highway 395 & Eucalyptus Road (#10) – LOS E AM and PM peak hours
- US Highway 395 & Yucca Terrace Drive (#11) – LOS F AM and PM peak hours
- US Highway 395 & Phelan Road/Main Street (#12) – LOS F AM and PM peak hours
- US Highway 395 & Poplar Street (#13) – LOS F AM and PM peak hours
- US Highway 395 & Three Flags Road (#14) – LOS F AM peak hour only
- US Highway 395 & Joshua Street (#15) – LOS F PM peak hour only
- Escondido Avenue & Main Street (#23) – LOS E AM and PM peak hours
- Escondido Avenue & Sultana Street (#24) – LOS E AM peak hour; LOS F PM peak hour
- Topaz Avenue & Main Street (#25) – LOS E PM peak hour only

Queuing

The following intersection turning movements are anticipated to experience periodic queuing issues during the peak hours based on the 95th percentile peak hour traffic flows for Horizon Year (2040) Without Project traffic conditions:

- US Highway 395 & Bear Valley Road (#9) Northbound Left – AM and PM peak hours
- US Highway 395 & Bear Valley Road (#9) Southbound Left – AM and PM peak hours
- US Highway 395 & Phelan Road/Main Street (#12) Northbound Left – PM peak hour only
- US Highway 395 & Phelan Road/Main Street (#12) Southbound Left – AM and PM peak hours
- US Highway 395 & Poplar Street (#13) Southbound Left – AM and PM peak hours
- US Highway 395 & Three Flags Road (#14) Northbound Left – AM and PM peak hours
- US Highway 395 & Joshua Street (#15) Southbound Left – AM and PM peak hours

With the addition of Project traffic, there are no additional intersection turning movements that are anticipated to experience queuing issues during the peak hours based on the 95th percentile peak hour traffic flows for Horizon Year (2040) With Project traffic conditions, in addition to the movements identified under Horizon Year (2040) Without Project traffic conditions.

Consistent with Existing (2019) traffic conditions, there are no off-ramp movements that are anticipated to experience queuing issues during the weekday AM or weekday PM peak 95th percentile traffic flows under Horizon Year (2040) Without Project and With Project traffic conditions.

Freeway Facilities

The following study area freeway segments and merge/diverge ramp junctions analyzed for this study are anticipated to operate at an unacceptable LOS (i.e., LOS E or worse) during the peak hours for Horizon Year (2040) Without Project traffic conditions:

- I-15 Freeway Southbound, North of Main Street (#1) – LOS E AM and PM peak hours
- I-15 Freeway Southbound, Off-Ramp at Main Street (#2) – LOS E AM and PM peak hours
- I-15 Freeway Southbound, South of Main Street (#5) – LOS E AM peak hour only
- I-15 Freeway Southbound, North of US Highway 395 (#6) – LOS F AM peak hour; LOS E PM peak hour
- I-15 Freeway Southbound, On-Ramp at US Highway 395 (#7) – LOS F AM peak hour only
- I-15 Freeway Southbound, South of US Highway 395 (#8) – LOS F AM peak hour; LOS E PM peak hour
- I-15 Freeway Northbound, North of Main Street (#9) – LOS F PM peak hour only
- I-15 Freeway Northbound, On-Ramp at Main Street (#10) – LOS F PM peak hour only
- I-15 Freeway Northbound, Off-Ramp at Main Street (#12) – LOS F PM peak hour only
- I-15 Freeway Northbound, South of Main Street (#13) – LOS F PM peak hour only
- I-15 Freeway Northbound, Off-Ramp at US Highway 395 (#15) – LOS F PM peak hour only
- I-15 Freeway Northbound, South of US Highway 395 (#16) – LOS F PM peak hour only

The following additional study area ramp junctions are anticipated to operate at an unacceptable LOS under Horizon Year (2040) With Project traffic conditions, resulting in a cumulative deficiency:

- I-15 Freeway Southbound, On-Ramp at Main Street (#4) – LOS E AM peak hour only
- I-15 Freeway Northbound, Loop On-Ramp at Main Street (#11) – LOS E PM peak hour only

1.7 RECOMMENDATIONS

The following recommendations are based on the improvements needed to accommodate site access. Exhibit 1-4 shows the site adjacent recommendations.

Recommendation 1.1 – Driveway 1 & Phelan Road (#4) – The following improvements are necessary to accommodate site access:

- Project to install a stop control on the southbound approach and a southbound shared left-right turn lane.
- Project to construct a westbound right turn lane.

Recommendation 2.1 – Driveway 2 & Yucca Terrace Drive (#5) – The following improvements are necessary to accommodate site access:

- Project to install a stop control on the northbound approach and a northbound shared left-right turn lane.
- Project to construct an eastbound shared through-right turn lane.
- Project to construct a westbound left turn lane within a two-way turn lane and a westbound through lane.

Recommendation 3.1 – Driveway 3 & Yucca Terrace Drive (#6) – The following improvements are necessary to accommodate site access:

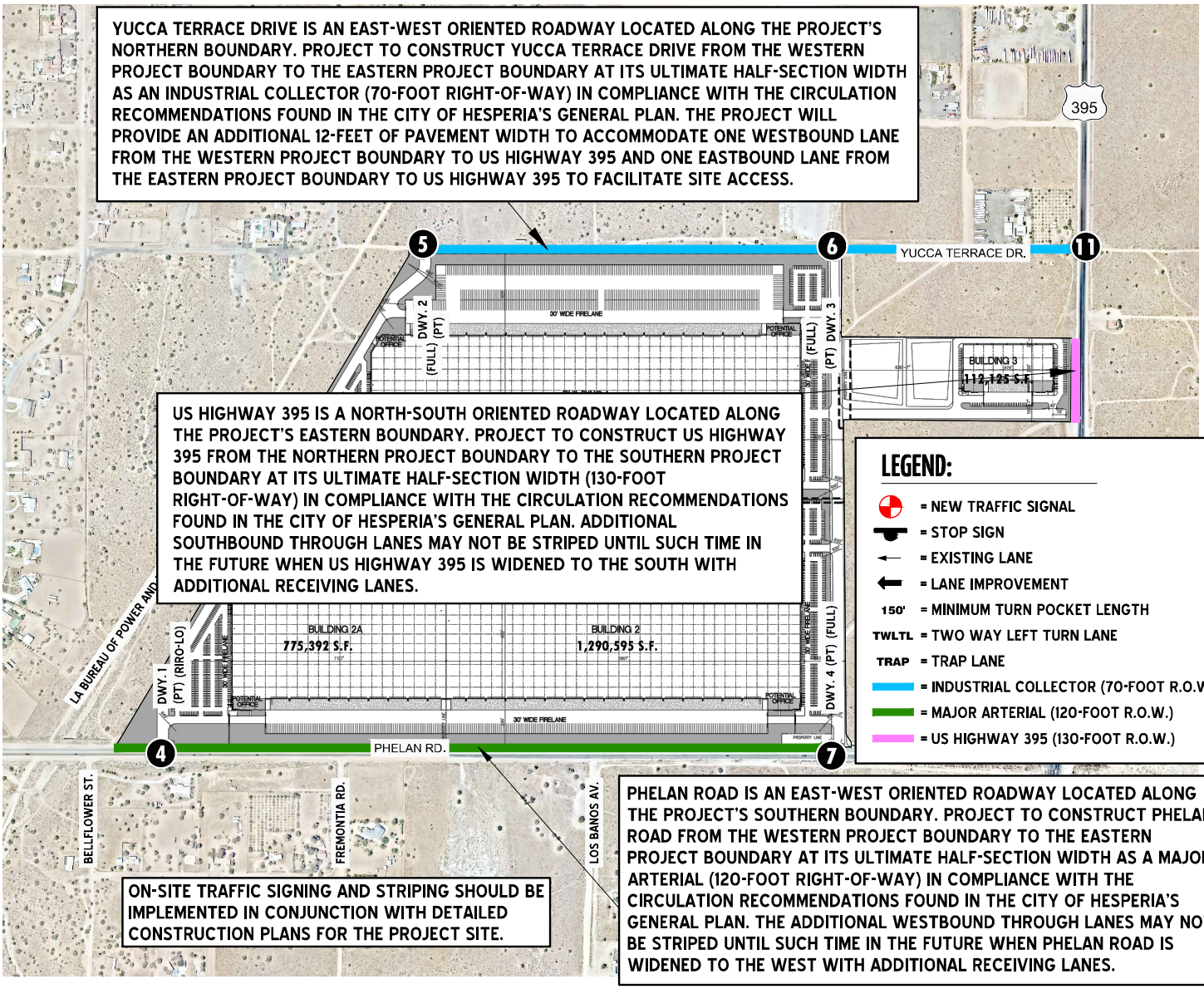
- Project to install a stop control on the northbound approach and a northbound shared left-right turn lane.
- Project to construct an eastbound shared through-right turn lane.
- Project to construct a westbound left turn lane within a two-way turn lane and a westbound through lane.

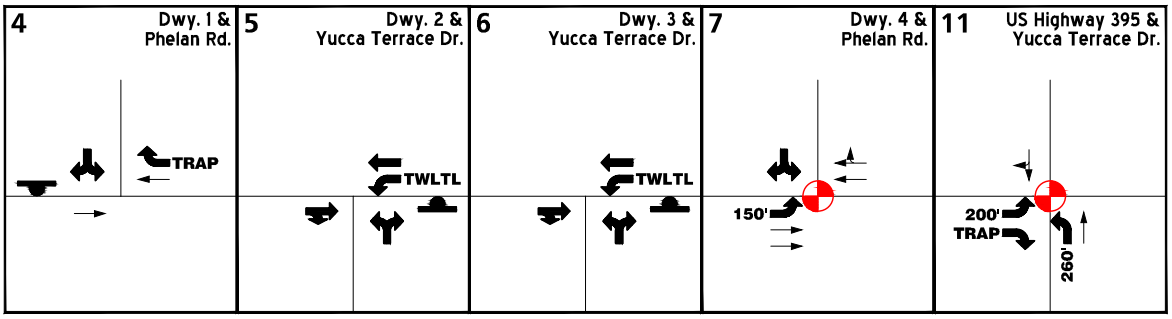
Recommendation 4.1 – Driveway 4 & Phelan Road (#7) – The following improvements are necessary to accommodate site access:

- Project to install a traffic signal.
- Project to construct a southbound shared left-right turn lane.
- Project to construct an eastbound left turn lane with a minimum of 150-feet of storage.

Driveway 4 is proposed to provide reciprocal access to the adjacent (not-a-part) use to the east.

EXHIBIT 1-4: SITE ADJACENT ROADWAY AND SITE ACCESS RECOMMENDATIONS





SIGHT DISTANCE AT EACH PROJECT ACCESS POINT SHOULD BE REVIEWED WITH RESPECT TO STANDARD CALTRANS AND CITY OF HESPERIA SIGHT DISTANCE STANDARDS AT THE TIME OF PREPARATION OF FINAL GRADING, LANDSCAPE AND STREET IMPROVEMENT PLANS.

DRIVEWAY 4 IS A PROPOSED SIGNALIZED DRIVEWAY THAT WILL PROVIDE RECIPROCAL ACCESS WITH THE ADJACENT USE. A SIGNAL MODIFICATION WILL BE NECESSARY AT THIS LOCATION.

Recommendation 5.1 – US Highway 395 & Yucca Terrace Drive (#11) – The following improvements are necessary to accommodate site access:

- Project to install a traffic signal.
- Project to construct a northbound left turn lane with a minimum of 260-feet of storage.
- Project to construct an eastbound left turn lane with a minimum of 200-feet of storage and an eastbound right turn lane.

Recommendation 6.1 – US Highway 395 & Phelan Road/Main Street (#12) – The following improvements are necessary to accommodate site access:

- Project to construct a 2nd northbound left turn lane.
- Project to construct a 2nd southbound left turn lane.

Recommendation 7.1 – Phelan Road – Phelan Road is an east-west oriented roadway located along the Project's southern boundary. Project to construct Phelan Road from the western Project boundary to the eastern Project boundary at its ultimate half-section width as a Major Arterial (ultimate 120-foot right-of-way) in compliance with the circulation recommendations found in the City of Hesperia's General Plan. The additional westbound through lanes may not be striped until such time in the future when Phelan Road is widened to the west with additional receiving lanes.

Recommendation 8.1 – Yucca Terrace Drive – Yucca Terrace Drive is an east-west oriented roadway located along the Project's northern boundary. Project to construct Yucca Terrace Drive from the western Project boundary to the eastern Project boundary at its ultimate half-section width as an Industrial Collector (ultimate 70-foot right-of-way) in compliance with the circulation recommendations found in the City of Hesperia's General Plan. The project will provide an additional 12-feet of pavement width to accommodate one westbound lane from the western Project boundary to US Highway 395 and an additional 12-feet of pavement width to accommodate one eastbound lane from the eastern Project boundary to US Highway 395 to facilitate site access.

Recommendation 9.1 – US Highway 395 – US Highway 395 is a north-south oriented roadway located along the Project's eastern boundary. Project to construct US Highway 395 from the northern Project boundary of Building 3 to the southern Project boundary of Building 3 at its ultimate half-section width (ultimate 130-foot right-of-way) in compliance with Caltrans standards and the circulation recommendations found in the City of Hesperia's General Plan. The additional southbound through lanes may not be striped until such time in the future when US Highway 395 is widened to the south with additional receiving lanes.

On-site traffic signing and striping should be implemented in conjunction with detailed construction plans for the Project site.

Sight distance at each project access point should be reviewed with respect to standard City of Hesperia sight distance standards at the time of preparation of final grading, landscape and street improvement plans.

The recommended improvements needed to address the cumulative deficiencies identified under E+P, Opening Year Cumulative (2021), and Horizon Year (2040) traffic conditions are shown in Table 1-3. For those improvements listed in Table 1-3 and not constructed as part of the Project, the Applicant's responsibility for the Project's contributions towards deficient intersections is fulfilled through payment of fair share that would be assigned to construction of the identified recommended improvements. Preliminary cost estimates and fee assessments for these improvements are summarized in Table 1-3. The Project Applicant would be required to pay fair share fees consistent with the City's requirements (see Section 8 *Local and Regional Funding Mechanisms*).

Recommendation 10.1 – Prior to the issuance of building permits, the Project Applicant shall pay the Project's fair share amount of $321,301 for the improvements identified in Table 1-3 at intersections located within the City of Hesperia, or as agreed to by the City and Project Applicant.

Recommendation 11.1 – The Developer's fair-share amount for the intersections that either share a mutual border with or are wholly located within the jurisdiction of Caltrans that have recommended improvements which are not covered by a pre-existing fee program is $680,227. Developer shall be required to pay the amount shown above to the City of Hesperia prior to the issuance of building permits. The City of Hesperia shall hold Developer's Fair Share contribution in trust and shall apply Developer's Fair Share Contribution to any fee program adopted or agreed upon by the City of Hesperia and other agencies.

1.8 TRUCK ACCESS

Due to the typical wide turning radius of large trucks, a truck turning template has been overlaid on the site plan at each applicable Project driveway and site adjacent intersection anticipated to be utilized by heavy trucks in order to determine appropriate curb radii and to verify that trucks will have sufficient space to execute turning maneuvers (see Exhibit 1-5). A WB-67 truck (53-foot trailer) has been utilized for the purposes of this analysis. As shown on Exhibit 1-5, the Project driveways are anticipated to accommodate the wide turning radius of trucks as currently designed.

Table 1-3

Summary of Improvements by Analysis Scenario

#	Intersection Location	Jurisdiction	Existing (2019)	E+P	2021 Without Project	2021 With Project	Horizon Year (2040) Without Project	Horizon Year (2040) With Project	Improvements in Fee Program?[1]	Project Responsibility[2]	Total Cost[3]	Fair Share %[4]	Fair Share Cost[5]
8	US Highway 395 & Luna Rd.	Victorville, Caltrans	None	None	None	None	Add 3rd NB through lane	Same	Yes (SBCTA CMP)	Fee Payment	$0	--	$0
							Restripe the SB right turn lane to a 3rd through lane	Same	Yes (SBCTA CMP)	Fee Payment	$0		$0
										Total	**$0**		**$0**
9	US Highway 395 & Bear Valley Rd.	Victorville, Caltrans	None	None	None	None	Add 2nd NB left turn lane	Same	No	Fair Share	$78,400	4.37%	$3,427
							Add 3rd NB through lane	Same	Yes (SBCTA CMP)	Fee Payment	$0		$0
							Add NB right turn lane	Same	No	Fair Share	$78,400		$3,427
							Add 2nd SB left turn lane	Same	No	Fair Share	$78,400		$3,427
							Add 3rd SB through lane	Same	Yes (SBCTA CMP)	Fee Payment	$0		$0
							Add SB right turn lane	Same	No	Fair Share	$78,400		$3,427
										Total	**$313,600**		**$13,706**
10	US Highway 395 & Eucalyptus St.	Victorville, Caltrans	None	None	None	None	Add 3rd NB through lane	Same	Yes (SBCTA CMP)	Fee Payment	$0	--	$0
							Add 3rd SB through lane	Same	Yes (SBCTA CMP)	Fee Payment	$0		$0
										Total	**$0**		**$0**
11	US Highway 395 & Yucca Terrace Dr.	Hesperia, Caltrans	Add 2nd NB through lane	Same	Same	Same	Same	Same	No	Fair Share	$282,240	19.51%	$55,076
			Add 2nd SB through lane	Same	Same	Same	Same	Same	No	Fair Share	$282,240		$55,076
				Install a Traffic Signal	Not Applicable	Same as E+P	Same as E+P	Same as E+P	No	Construct[9]	$0		$0
				Add NB left turn lane	Not Applicable	Same as E+P	Same as E+P	Same as E+P	No	Construct[9]	$0		$0
				Add EB left turn lane	Not Applicable	Same as E+P	Same as E+P	Same as E+P	No	Construct[9]	$0		$0
							Add 3rd NB through lane	Same	No	Fair Share	$282,240		$55,076
							Add 3rd SB through lane	Same	No	Fair Share	$282,240		$55,076
										Total	**$1,128,960**		**$220,303**
12	US Highway 395 & Phelan Rd./Main St.	Hesperia, Caltrans	None	Add 2nd NB left turn lane	Same	Same	Same	Same	No	Construct	$0	30.35%	$0
				Add 2nd SB left turn lane	Same	Same	Same	Same	No	Construct	$0		$0
					Add 3rd EB through lane	Same	Same	Same	No	Fair Share	$282,240		$85,669
					Add 3rd WB through lane	Same	Same	Same	No	Fair Share	$282,240		$85,669
					Add WB right turn lane	Same	Same	Same	No	Fair Share	$78,400		$23,797
					Modify the traffic signal to implement overlap phasing for the WB right turn lane	Same	Same	Same	No	Fair Share	$117,600		$35,695
							Add 3rd NB through lane	Same	No	Fair Share	$282,240		$85,669
							Add NB right turn lane	Same	No	Fair Share	$78,400		$23,797
							Add 3rd SB through lane	Same	No	Fair Share	$282,240		$85,669
							Add SB right turn lane	Same	No	Fair Share	$78,400		$23,797
							Add EB right turn lane	Same	No	Fair Share	$78,400		$23,797
										Total	**$1,560,160**		**$473,558**

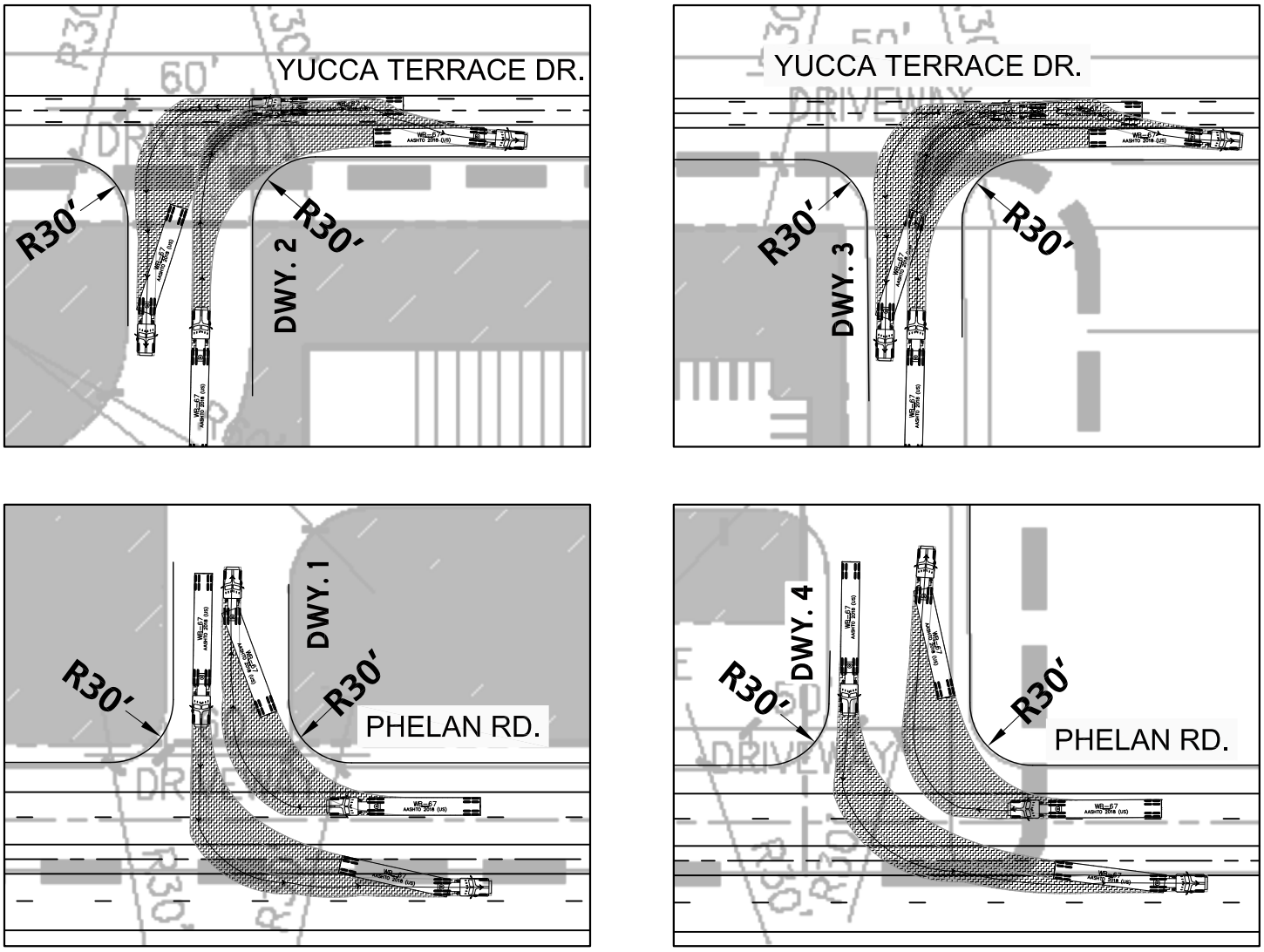
Table 1-3
Page 2 of 2

Summary of Improvements by Analysis Scenario

#	Intersection Location	Jurisdiction	Existing (2019)	E+P	2021 Without Project	2021 With Project	Horizon Year (2040) Without Project	Horizon Year (2040) With Project	Improvements in Fee Program?[1]	Project Responsibility[2]	Total Cost[3]	Fair Share %[4]	Fair Share Cost[5]
13	US Highway 395 & Poplar St.	Hesperia, Caltrans	Add 2nd SB through lane	Same	Same	Same	Same	Same	No	Fair Share	$282,240	7.49%	$21,126
							Install a Traffic Signal	Same	No	Fair Share	$600,000		$44,910
							Add 3rd NB through lane	Same	No	Fair Share	$282,240		$21,126
							Add NB right turn lane	Same	No	Fair Share	$78,400		$5,868
							Add 2nd SB left turn lane	Same	No	Fair Share	$78,400		$5,868
							Add 3rd SB through lane	Same	No	Fair Share	$282,240		$21,126
										Total	**$1,603,520**		**$120,024**
14	US Highway 395 & Three Flags Rd.	Hesperia, Caltrans	None	None	None	None	Add 3rd NB through lane	Same	No	Fair Share	$282,240	8.95%	$25,256
							Add 3rd SB through lane	Same	No	Fair Share	$282,240		$25,256
										Total	**$564,480**		**$50,513**
15	US Highway 395 & Joshua St.	Hesperia, Caltrans	None	None	None	None	Add 3rd NB through lane	Same	No	Fair Share	$282,240	8.83%	$24,914
							Add 3rd SB through lane	Same	No	Fair Share	$282,240		$24,914
							Add SB right turn lane	Same	No	Fair Share	$78,400		$6,921
										Total	**$642,880**		**$56,750**
23	Escondido Av. & Main St.	Hesperia	None	None	Add 3rd WB through lane	Same	Same	Same	No	Fair Share	$282,240	7.89%	$22,282
										Total	**$282,240**		**$22,282**
24	Escondido Av. & Sultana St.	Hesperia	None	None	None	None	Install a Traffic Signal	Same	No	Fair Share	$600,000	4.68%	$28,103
										Total	**$600,000**		**$28,103**
25	Topaz Av. & Main St.	Hesperia	None	None	None	None	Restripe the EB right turn lane to a 3rd through lane	Same	No	Fair Share	$39,200	5.07%	$1,986
							Add 3rd WB through lane	Same	No	Fair Share	$282,240		$14,303
										Total	**$321,440**		**$16,289**
										Total Costs for Horizon Year (2040) Improvements	$7,017,280		$1,001,527
										Total Project Fair Share Contribution to the City of Hesperia (non-DIF)[6]	**$321,301**		
										Total Project Fair Share Contribution to the City of Victorville[7]	**$0**		
										Total Project Fair Share Contribution to Caltrans[8]	**$680,227**		

[1] Improvements included in City of Hesperia Development Impact Fee (DIF) or the San Bernardino County Transportation Authority (SBCTA) Congestion Management Program (CMP) fee programs.
[2] Identifies the Project's responsibility to construct an improvement, contribute fair share, or contribute a fee payment towards the implementation of the improvements shown.
[3] Costs have been estimated using the data provided in Appendix "G" of the CMP (2016 Update) for preliminary construction costs.
[4] Program improvements constructed by project may be eligible for fee credit, at discretion of the City. See Table 8-1 for Fair Share Calculations.
[5] Rough order of magnitude cost estimate.
[6] Total project fair share contribution consists of the improvements which are not already included in a fee program for those intersections wholly or partially within the City of Hesperia.
[7] Total project fair share contribution consists of the improvements which are not already included in a fee program for those intersections wholly or partially within the City of Victorville.
[8] Total project fair share contribution consists of the improvements which are not already included in a fee program for those intersections wholly or partially within Caltrans' jurisdiction.
[9] Project will construct the improvement in order to facilitate site access.

EXHIBIT 1-5: TRUCK ACCESS



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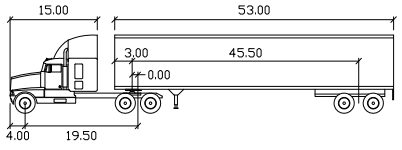

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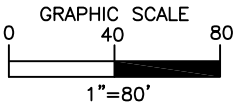
feet

Tractor Width	: 8.00	Lock to Lock Time	: 6.0
Trailer Width	: 8.50	Steering Angle	: 28.4
Tractor Track	: 8.00	Articulating Angle	: 75.0
Trailer Track	: 8.50		





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2 METHODOLOGIES

This section of the report presents the methodologies used to perform the traffic analyses summarized in this report. The methodologies described are generally consistent with the SBCTA CMP and Caltrans traffic study guidelines. (1) (2)

2.1 LEVEL OF SERVICE

Traffic operations of roadway facilities are described using the term "Level of Service" (LOS). LOS is a qualitative description of traffic flow based on several factors such as speed, travel time, delay, and freedom to maneuver. Six levels are typically defined ranging from LOS A, representing completely free-flow conditions, to LOS F, representing breakdown in flow resulting in stop-and-go conditions. LOS E represents operations at or near capacity, an unstable level where vehicles are operating with the minimum spacing for maintaining uniform flow.

2.2 INTERSECTION CAPACITY ANALYSIS

The definitions of LOS for interrupted traffic flow (flow restrained by the existence of traffic signals and other traffic control devices) differ slightly depending on the type of traffic control. The LOS is typically dependent on the quality of traffic flow at the intersections along a roadway. The Transportation Research Board's Highway Capacity Manual (HCM) 6th Edition methodology expresses the LOS at an intersection in terms of delay time for the various intersection approaches. (5) The HCM uses different procedures depending on the type of intersection control.

2.2.1 SIGNALIZED INTERSECTIONS

The City of Hesperia, City of Victorville, County of San Bernardino, and Caltrans require signalized intersection operations analysis based on the methodology described in the HCM 6th Edition. Intersection LOS operations are based on an intersection's average control delay. Control delay includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay. For signalized intersections, LOS is directly related to the average control delay per vehicle and is correlated to a LOS designation as described in Table 2-1. Study area intersections have been evaluated using the Synchro (Version 10) analysis software package.

TABLE 2-1: SIGNALIZED INTERSECTION LOS THRESHOLDS

Description	Average Control Delay (Seconds), V/C ≤ 1.0	Level of Service, V/C ≤ 1.0	Level of Service, V/C > 1.0
Operations with very low delay occurring with favorable progression and/or short cycle length.	0 to 10.00	A	F
Operations with low delay occurring with good progression and/or short cycle lengths.	10.01 to 20.00	B	F

Description	Average Control Delay (Seconds), V/C ≤ 1.0	Level of Service, V/C ≤ 1.0	Level of Service, V/C > 1.0
Operations with average delays resulting from fair progression and/or longer cycle lengths. Individual cycle failures begin to appear.	20.01 to 35.00	C	F
Operations with longer delays due to a combination of unfavorable progression, long cycle lengths, or high V/C ratios. Many vehicles stop and individual cycle failures are noticeable.	35.01 to 55.00	D	F
Operations with high delay values indicating poor progression, long cycle lengths, and high V/C ratios. Individual cycle failures are frequent occurrences. This is considered to be the limit of acceptable delay.	55.01 to 80.00	E	F
Operation with delays unacceptable to most drivers occurring due to over saturation, poor progression, or very long cycle lengths.	80.01 and up	F	F

Source: HCM, 6th Edition

Consistent with Appendix B of the SBCTA CMP, the following saturation flow rates, in vehicles per hour green per lane (vphgpl), will be utilized in the traffic analysis for signalized intersections:

Existing and Opening Year Cumulative (2021) Traffic Conditions:

- Exclusive through: 1800 vphgpl
- Exclusive left: 1700 vphgpl
- Exclusive right: 1800 vphgpl
- Exclusive dual left: 1600 vphgpl
- Exclusive triple left: 1500 vphgpl

Horizon Year (2040) Traffic Conditions:

- Exclusive through: 1900 vphgpl
- Exclusive left: 1800 vphgpl
- Exclusive right: 1900 vphgpl
- Exclusive dual left: 1700 vphgpl
- Exclusive triple left: 1600 vphgpl

Synchro is a macroscopic traffic software program that is based on the signalized intersection capacity analysis as specified in the HCM. Macroscopic level models represent traffic in terms of aggregate measures for each movement at the study intersections. Equations are used to determine measures of effectiveness such as delay and queue length. The level of service and capacity analysis performed by Synchro takes into consideration optimization and coordination of signalized intersections within a network.

The peak hour traffic volumes have been adjusted using a peak hour factor (PHF) to reflect peak 15-minute volumes. Common practice for LOS analysis is to use a peak 15-minute rate of flow. However, flow rates are typically expressed in vehicles per hour. The PHF is the relationship between the peak 15-minute flow rate and the full hourly volume (e.g. PHF = [Hourly Volume] / [4 x Peak 15-minute Flow Rate]). The use of a 15-minute PHF produces a more detailed analysis as compared to analyzing vehicles per hour. Existing PHFs have been used for all analysis scenarios. Per the HCM, PHF values over 0.95 often are indicative of high traffic volumes with capacity constraints on peak hour flows while lower PHF values are indicative of greater variability of flow during the peak hour. (5)

2.2.2 UNSIGNALIZED INTERSECTIONS

The City of Hesperia, City of Victorville, County of San Bernardino, and Caltrans require the operations of unsignalized intersections be evaluated using the methodology described the HCM 6th Edition. (5) The LOS rating is based on the weighted average control delay expressed in seconds per vehicle (see Table 2-2).

TABLE 2-2: UNSIGNALIZED INTERSECTION LOS THRESHOLDS

Description	Average Control Delay Per Vehicle (Seconds)	Level of Service, V/C ≤ 1.0	Level of Service, V/C > 1.0
Little or no delays.	0 to 10.00	A	F
Short traffic delays.	10.01 to 15.00	B	F
Average traffic delays.	15.01 to 25.00	C	F
Long traffic delays.	25.01 to 35.00	D	F
Very long traffic delays.	35.01 to 50.00	E	F
Extreme traffic delays with intersection capacity exceeded.	> 50.00	F	F

Source: HCM, 6th Edition

At two-way or side-street stop-controlled intersections, LOS is calculated for each controlled movement and for the left turn movement from the major street, as well as for the intersection as a whole. For approaches composed of a single lane, the delay is computed as the average of all movements in that lane. For all-way stop controlled intersections, LOS is computed for the intersection as a whole.

2.3 TRAFFIC SIGNAL WARRANT ANALYSIS METHODOLOGY

The term "signal warrants" refers to the list of established criteria used by Caltrans and other public agencies to quantitatively justify or ascertain the potential need for installation of a traffic signal at an otherwise unsignalized intersection. This TIA uses the signal warrant criteria presented in the latest edition of the Caltrans California Manual on Uniform Traffic Control Devices (CA MUTCD) for all unsignalized study area intersections. (6)

The signal warrant criteria for Existing study area intersections are based upon several factors, including volume of vehicular and pedestrian traffic, frequency of accidents, and location of school areas. The CA MUTCD indicate that the installation of a traffic signal should be considered if one or more of the signal warrants are met. (6) Specifically, this TIA utilizes the Peak Hour

Volume-based Warrant 3 as the appropriate representative traffic signal warrant analysis for existing traffic conditions. Warrant 3 is appropriate to use for this TIA because it provides specialized warrant criteria for intersections with rural characteristics (e.g. located in communities with populations of less than 10,000 persons or with adjacent major streets operating above 40 miles per hour). For the purposes of this study, the speed limit was the basis for determining whether Urban or Rural warrants were used for a given intersection.

Future unsignalized intersections, that currently do not exist, have been assessed regarding the potential need for new traffic signals based on future average daily traffic (ADT) volumes, using the Caltrans planning level ADT-based signal warrant analysis worksheets.

As shown in Table 2-3, traffic signal warrant analyses were performed for the following unsignalized study area intersections during the peak weekday conditions wherein the Project is anticipated to contribute the highest trips:

TABLE 2-3: TRAFFIC SIGNAL WARRANT ANALYSIS LOCATIONS

ID	Intersection Location	Jurisdiction
2	Verbena Rd. & Phelan Rd.	County of San Bernardino
3	Bellflower St. & Phelan Rd.	County of San Bernardino
5	Driveway 2 & Yucca Terrace Dr. – Future Intersection	City of Hesperia
6	Driveway 3 & Yucca Terrace Dr. – Future Intersection	City of Hesperia
7	Driveway 4 & Phelan Rd. – Future Intersection	City of Hesperia
11	US Highway 395 & Yucca Terrace Dr.	City of Hesperia, Caltrans
13	US Highway 395 & Poplar St.	City of Hesperia, Caltrans
24	Escondido Av. & Sultana St.	City of Hesperia

The Existing conditions traffic signal warrant analysis is presented in the subsequent section, Section 3 *Area Conditions* of this report. The traffic signal warrant analyses for future conditions are presented in Section 5 *E+P Traffic Analysis,* Section 6 *Opening Year Cumulative (2021) Traffic Analysis,* and Section 7 *Horizon Year (2040) Traffic Analysis* of this report.

It is important to note that a signal warrant defines the minimum condition under which the installation of a traffic signal might be warranted. Meeting this threshold condition does not require that a traffic control signal be installed at a particular location, but rather, that other traffic factors and conditions be evaluated in order to determine whether the signal is truly justified. It should also be noted that signal warrants do not necessarily correlate with LOS. An intersection may satisfy a signal warrant condition and operate at or above acceptable LOS or operate below acceptable LOS and not meet a signal warrant.

2.4 FREEWAY OFF-RAMP QUEUING ANALYSIS

Consistent with Caltrans requirements, the 95th percentile queuing of vehicles has been assessed at the off-ramps to determine potential queuing deficiencies at the freeway ramp intersections at the I-15 Freeway and Main Street interchange. Specifically, the queuing analysis is utilized to identify any potential queuing and "spill back" onto the I-15 Freeway mainline from the off-ramps.

The traffic progression analysis tool and HCM intersection analysis program, Synchro, has been used to assess the potential deficiencies/needs of the intersections with traffic added from the proposed Project. Storage (turn-pocket) length recommendations at the ramps have been based upon the 95th percentile queue resulting from the Synchro progression analysis. The footnote from the Synchro output sheets indicates if the 95th percentile cycle exceeds capacity. Traffic is simulated for two complete cycles of the 95th percentile traffic in Synchro in order to account for the effects of spillover between cycles. A vehicle is considered queued whenever it is traveling at less than 10 feet/second. A vehicle will only become queued when it is either at the stop bar or behind another queued vehicle. In practice, the 95th percentile queue shown will rarely be exceeded and the queues shown with the footnote are acceptable for the design of storage bays. The 95th percentile queue is derived from the average queue plus 1.65 standard deviations. The 95th percentile queue is not necessarily ever observed it is simply based on statistical calculations.

2.5 FREEWAY MAINLINE SEGMENT ANALYSIS METHODOLOGY

Consistent with recent Caltrans guidance, the traffic study has evaluated all freeway segments where the Project is anticipated to contribute 50 or more peak hour one-way trips, in an effort to conduct a conservative analysis and overstate as opposed to understand potential deficiencies.

The freeway system in the study area has been broken into segments defined by the freeway-to-arterial interchange locations. The freeway segments have been evaluated in this TIA based upon peak hour directional volumes. The freeway segment analysis is based on the methodology described in the HCM and performed using Highway Capacity Software (HCS) 7. The performance measure preferred by Caltrans to calculate LOS is density. Density is expressed in terms of passenger cars per mile per lane. Table 2-4 illustrates the freeway segment LOS descriptions for each density range utilized for this analysis.

TABLE 2-4: DESCRIPTION OF FREEWAY MAINLINE LOS

Level of Service	Description	Density Range (pc/mi/ln)[1]
A	Free-flow operations in which vehicles are relatively unimpeded in their ability to maneuver within the traffic stream. Effects of incidents are easily absorbed.	0.0 – 11.0
B	Relative free-flow operations in which vehicle maneuvers within the traffic stream are slightly restricted. Effects of minor incidents are easily absorbed.	11.1 – 18.0
C	Travel is still at relative free-flow speeds, but freedom to maneuver within the traffic stream is noticeably restricted. Minor incidents may be absorbed, but local deterioration in service will be substantial. Queues begin to form behind significant blockages.	18.1 – 26.0
D	Speeds begin to decline slightly, and flows and densities begin to increase more quickly. Freedom to maneuver is noticeably limited. Minor incidents can be expected to create queuing as the traffic stream has little space to absorb disruptions.	26.1 – 35.0
E	Operation at capacity. Vehicles are closely spaced with little room to maneuver. Any disruption in the traffic stream can establish a disruption wave that propagates throughout the upstream traffic flow. Any incident can be expected to produce a serious disruption in traffic flow and extensive queuing.	35.1 – 45.0
F	Breakdown in vehicle flow.	>45.0

[1] pc/mi/ln = passenger cars per mile per lane. Source: HCM, 6th Edition

The number of lanes for existing baseline conditions has been obtained from field observations conducted by Urban Crossroads in October 2019. These existing freeway geometrics have been utilized for Existing, E+P, Opening Year Cumulative (2021), and Horizon Year (2040) conditions.

The I-15 Freeway mainline volume data was obtained from the Caltrans Performance Measurement System (PeMS) website for the segments of the I-15 Freeway interchanges at Main Street. The data was obtained from September 2019. In an effort to conduct a conservative analysis, the maximum value observed within the 3-day period was utilized for the weekday morning (AM) and weekday evening (PM) peak hours. In addition, truck traffic, represented as a percentage of total traffic and actual vehicles (as opposed to PCE volumes) have been utilized for the purposes of the basic freeway segment analysis. (7)

2.6 FREEWAY MERGE/DIVERGE RAMP JUNCTION ANALYSIS

The freeway system in the study area has been broken into segments defined by freeway-to-arterial interchange locations resulting in 4 existing on and off ramp locations where the Project is anticipated to contribute 50 or more peak hour trips (see Table 1-2). Although the HCM indicates the influence area for a merge/diverge junction is 1,500 feet, the analysis presented in this traffic study has been performed at all ramp locations with respect to the nearest on or off ramp at each interchange in an effort to be consistent with Caltrans guidance/comments on other projects Urban Crossroads has worked on in the region.

The merge/diverge analysis is based on the HCM Ramps and Ramp Junctions analysis method and performed using HCS7 software. The measure of effectiveness (reported in passenger car/mile/lane) are calculated based on the existing number of travel lanes, number of lanes at the on and off ramps both at the analysis junction and at upstream and downstream locations (if applicable) and acceleration/deceleration lengths at each merge/diverge point. Table 2-5 presents the merge/diverge area level of service descriptions for each density range utilized for this analysis.

TABLE 2-5: DESCRIPTION OF FREEWAY MERGE AND DIVERGE LOS

Level of Service	Density Range (pc/mi/ln)[1]
A	≤10.0
B	10.0 – 20.0
C	20.0 – 28.0
D	28.0 – 35.0
E	>35.0
F	Demand Exceeds Capacity

[1] pc/mi/ln = passenger cars per mile per lane. Source: HCM, 6th Edition

Similar to the basic freeway segment analysis, the I-15 Freeway mainline volume data were obtained from the Caltrans maintained PeMS website for the segments of the I-15 Freeway interchanges at Joshua Street and Ranchero Road. The ramp data (per the count data presented in Appendix 3.1) were then utilized to flow conserve the mainline volumes to determine the remaining I-15 Freeway mainline segment volumes. Flow conservation checks ensure that traffic flows from north to south (and vice versa) of the interchange area with no unexplained loss of vehicles. The data was obtained from September 2019. In an effort to conduct a conservative analysis, the maximum value observed within the 3-day period was utilized for the weekday morning (AM) and weekday evening (PM) peak hours. In addition, truck traffic, represented as a percentage of total traffic and actual vehicles (as opposed to PCE volumes) have been utilized for the purposes of the freeway ramp junction (merge/diverge) analysis. (7)

2.7 MINIMUM ACCEPTABLE LEVELS OF SERVICE (LOS)

2.7.1 CITY OF HESPERIA

For the purposes of this traffic analysis, and consistent with the City of Hesperia General Plan Circulation Element, LOS D is considered acceptable for circulation element intersections.

2.7.2 CITY OF VICTORVILLE

For the purposes of this traffic analysis, and consistent with the City of Victorville General Plan Circulation Element, LOS D is considered acceptable for circulation element intersections.

2.7.3 COUNTY OF SAN BERNARDINO

The definition of an intersection deficiency in the County of San Bernardino is based on the County's General Plan Circulation Element. The County of San Bernardino's General Plan states

that target LOS C be maintained at County intersections and roadway segments wherever possible within the Desert region.

2.7.4 SAN BERNARDINO COUNTY CMP

The CMP definition of deficiency is based on maintaining a level of service standard of LOS E or better, where feasible, except where an existing LOS F condition is identified in the CMP document. However, for the purposes of this analysis, LOS D (or LOS C in County of San Bernardino) has been utilized for all study area intersections.

2.7.5 CALTRANS

Caltrans endeavors to maintain a target LOS at the transition between LOS C and LOS D on the SHS facilities; however, Caltrans acknowledges that this may not always be feasible and recommends that the lead agency consult with Caltrans to determine the appropriate target LOS. If an existing State highway facility is operating at less than this target LOS, the existing LOS should be maintained. Caltrans acknowledges that the region-wide goal for an acceptable LOS on all freeways, roadway segments, and intersections is LOS D. Consistent with the Caltrans LOS threshold of LOS D and in excess of the CMP stated LOS threshold of LOS E, LOS D will be used as the target LOS for freeway ramps, freeway segments, and freeway merge/diverge ramp junctions.

2.8 INTERSECTION DEFICIENCY CRITERIA

City of Hesperia, City of Victorville

To determine whether the addition of project traffic (as defined through the comparison of Existing traffic conditions to E+P traffic conditions) at a study intersection, which would result in a direct project-specific traffic deficiency, the following will be utilized:

- When the pre-Project condition is at or better than LOS D (i.e., acceptable LOS), and project-generated traffic, as measured by 50 or more peak hour trips, causes deterioration below LOS D (i.e., unacceptable LOS), a deficiency is deemed to occur.

However, when the pre-Project condition is already below LOS D (i.e., unacceptable LOS), the Project will be responsible for improving its contribution to a deficiency to a level of service equal to or better than it was without the Project for intersections that receive 50 or more peak hour project-related trips.

Cumulative traffic deficiencies are created as a result of a combination of the proposed Project together with other future developments contributing to the overall traffic deficiencies requiring additional improvements to maintain acceptable level of service operations with or without the Project. A Project's contribution to a cumulative deficiency can be reduced if the Project is required to implement or fund its fair share of improvements designed to alleviate its contribution to the deficiency. A cumulative deficiency is identified when the Project contributes 50 or more peak hour trips, and all facilities that would receive 50 or more peak hour trips from the Project are evaluated in this report.

County of San Bernardino

Consistent with the County of San Bernardino traffic study guidelines and the acceptable LOS for the Desert, Valley, and Mountain regions as described in the General Plan, the County will consider the following signalized intersection criteria when identifying operational deficiencies in a traffic study to demonstrate consistency with the General Plan: (8)

- Any signalized study intersection in the Valley or Mountain regions that is operating at an acceptable LOS D or better without project traffic in which the addition of project traffic causes the intersection to degrade to an LOS E or F shall identify improvements to improve operations to LOS D or better.
- Any signalized study intersection in the Desert region that is operating at an LOS C or better without project traffic in which the addition of project traffic causes the intersection to degrade to an LOS D, E, or F shall identify improvements to improve operations to LOS C.
- Any signalized study intersection in the Valley or Mountain regions that is operating at LOS E or F without project traffic where the project increases delay by 5.0 or more seconds shall identify improvements to offset the increase in delay.
- Any signalized study intersection in the Desert region that is operating at LOS D, E, or F without project traffic where the project increases delay by 5.0 or more seconds shall identify improvements to offset the increase in delay.

Consistent with the County of San Bernardino traffic study guidelines and the acceptable LOS for the Desert, Valley, and Mountain regions as described in the General Plan, the County will consider the following unsignalized intersection criteria when identifying operational deficiencies in a traffic study to demonstrate consistency with the General Plan:

- The addition of project related traffic causes the intersection to move from a LOS D or better to a LOS E or worse in the Valley and Mountain regions or from an LOS C or better to an LOS D or worse in the Desert region.

  OR

- The project contributes additional traffic to an intersection that is already projected to operate at an LOS E or F in the Valley and Mountain regions or at an LOS D, E, or F in the Desert region (per Section 10.5.2 b))

  AND

- One or both of the following conditions are met:
  - The project adds ten (10) or more trips to any approach
  - The intersection meets the peak hour traffic signal warrant after the addition of project traffic (per Section 10.5.2 c)).

If the conditions above are satisfied, improvements should be identified that achieve the following:

- In the Valley and Mountain regions, improvements should be identified that would achieve LOS D or better for case a) above or to pre-project LOS and delay for case b) above.
- In the Desert region, improvements should be identified that would achieve LOS C or better for case a) above or to pre-project LOS and delay for case b) above.

Improvements for project level deficiencies should focus on providing operations that offset the project deficiency (e.g. achieve a "no project" LOS). Improvements could consist of signal timing improvements, lane restriping, or new lanes to study facilities. Cumulative deficiencies should include a fair-share contribution toward achieving acceptable levels of service as noted below. Alternatively, if a cumulative location is included in an existing traffic impact fee program, payment of those fees would constitute an appropriate contribution. A key element of SB 743 is the elimination of automobile delay and level of service as the sole basis of determining CEQA impacts. The most recent CEQA guidelines, released in December 2018, recommend VMT as the most appropriate measure of project transportation impacts. However, SB 743 does not prevent a city or county from continuing to analyze delay or LOS as part of other plans (i.e., the general plan), studies, or ongoing network monitoring. VMT thresholds, methodology, analysis, and findings are discussed under separate cover.

2.9 PROJECT FAIR SHARE CALCULATION METHODOLOGY

Improvements found to be included in the City's DIF will be identified as such. For improvements that do not appear to be in any pre-existing fee programs, a fair share financial contribution based on the Project's proportional share may be imposed in order to improve the Project's share of deficiencies in lieu of construction. It should be noted that fair share calculations are for informational purposes only and the City Engineer will determine the appropriate improvements to be implemented by a project (to be identified in the conditions of approval).

The Project's fair share cost of improvements have been determined based on the following equation, which is the ratio of Project traffic to new traffic, where new traffic is total future traffic less existing baseline traffic:

Project Fair Share % = Project Traffic / (2040 With Project Total Traffic – Existing 2019 Traffic)

3 AREA CONDITIONS

This section provides a summary of the existing circulation network, the City of Hesperia General Plan Circulation Network, and a review of existing peak hour intersection operations, traffic signal warrant, queuing, and freeway facility operations analyses.

3.1 EXISTING CIRCULATION NETWORK

Pursuant to the scoping agreement with City of Hesperia staff (Appendix 1.1), the study area includes a total of 25 existing and future intersections as shown previously on Exhibit 1-2 where the Project is anticipated to contribute 50 or more peak hour trips. Exhibit 3-1 illustrates the study area intersections located near the proposed Project and identifies the number of through traffic lanes for existing roadways and intersection traffic controls.

3.2 CITY OF HESPERIA GENERAL PLAN CIRCULATION ELEMENT

As previously noted, the Project site is located within the City of Hesperia. Exhibit 3-2 shows the City of Hesperia General Plan Circulation Element, and Exhibit 3-3 illustrates the City of Hesperia General Plan roadway cross-sections. The roadway classifications and planned (ultimate) roadway cross-sections of the major roadways within the City of Hesperia in the vicinity of the proposed Project as identified on the City's General Plan Circulation Element are described subsequently.

Major Arterials can accommodate six travel lanes and may have raised medians. These roadways experience the most traffic within the city. Examples of a Major Arterial within the study area include:

- Phelan Road
- Main Street, west of I-15 Freeway

Major Arterials with Bike Lanes can accommodate six travel lanes with bike lanes on each side and may have raised medians. These roadways experience the most traffic within the city. An example of a Major Arterial with Bike Lanes within the study area includes:

- Escondido Avenue, north of Main Street

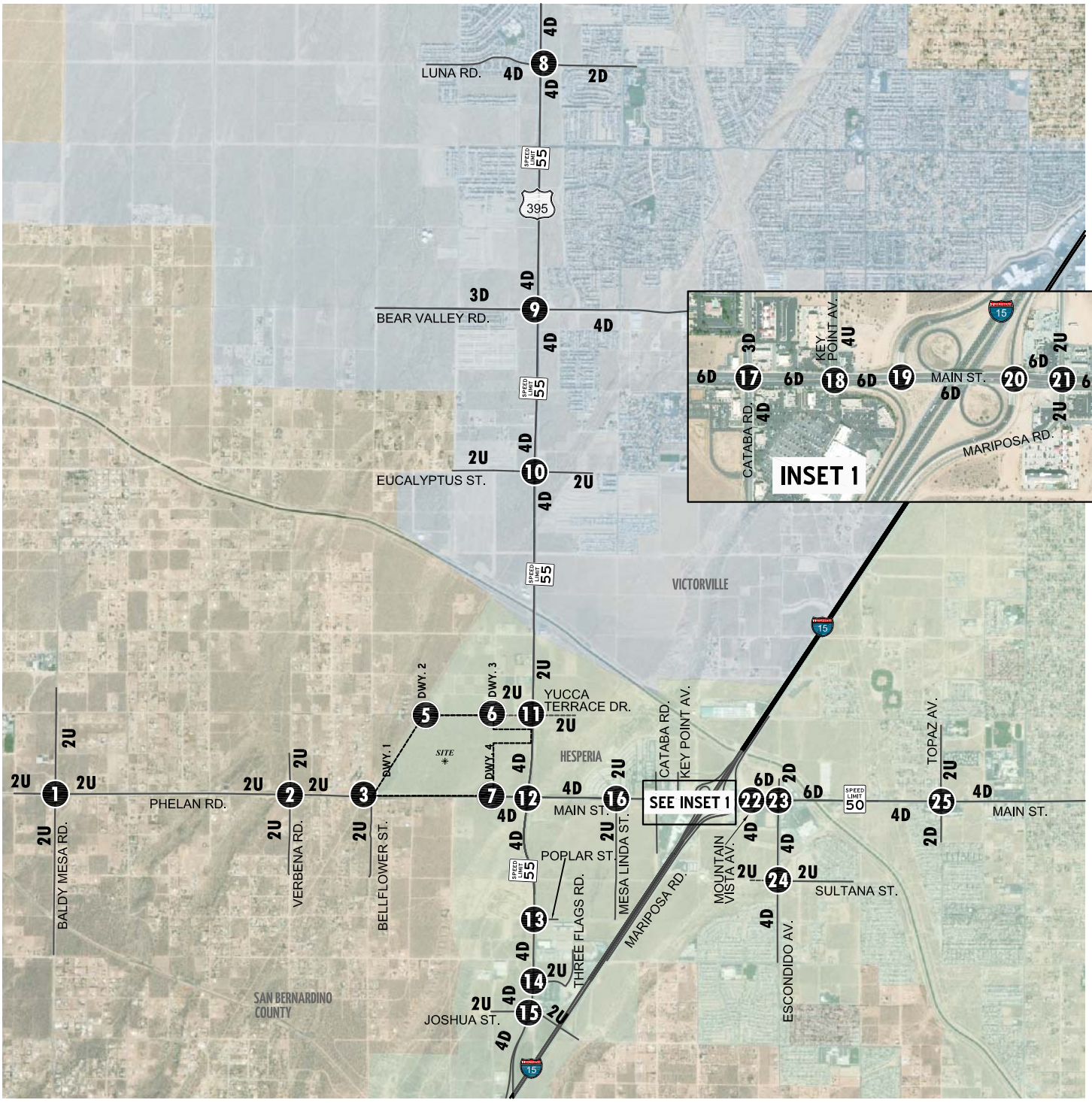
Arterials can accommodate four travel lanes. Arterials may have two-way left-turn lanes. Examples of Arterials within the study area include:

- Mesa Linda Street
- Escondido Avenue, south of Main Street

Secondary Arterials can accommodate two travel lanes and provide connection between collectors and arterials. Secondary Arterials may have two-way left-turn lanes. Examples of Secondary Arterials within the study area include:

- Poplar Street, west of Lassen Road
- Joshua Street

EXHIBIT 3-1 (1OF2): EXISTING NUMBER OF THROUGH LANES AND INTERSECTION CONTROLS



LEGEND:

- 4 = NUMBER OF LANES
- D = DIVIDED
- U = UNDIVIDED
- SPEED LIMIT 25 = SPEED LIMIT (MPH)

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EXHIBIT 3-1 (2OF2): EXISTING NUMBER OF THROUGH LANES AND INTERSECTION CONTROLS

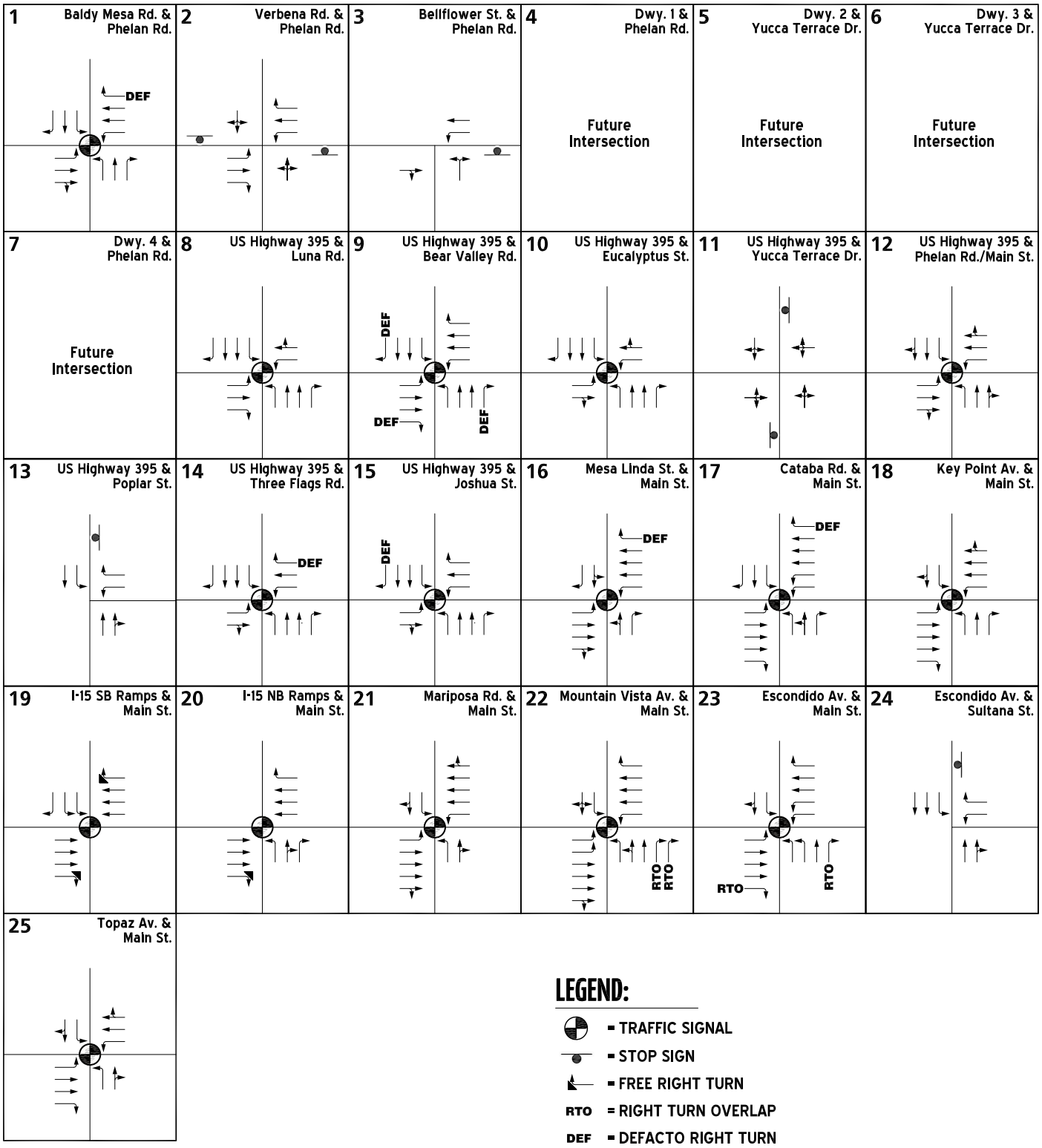
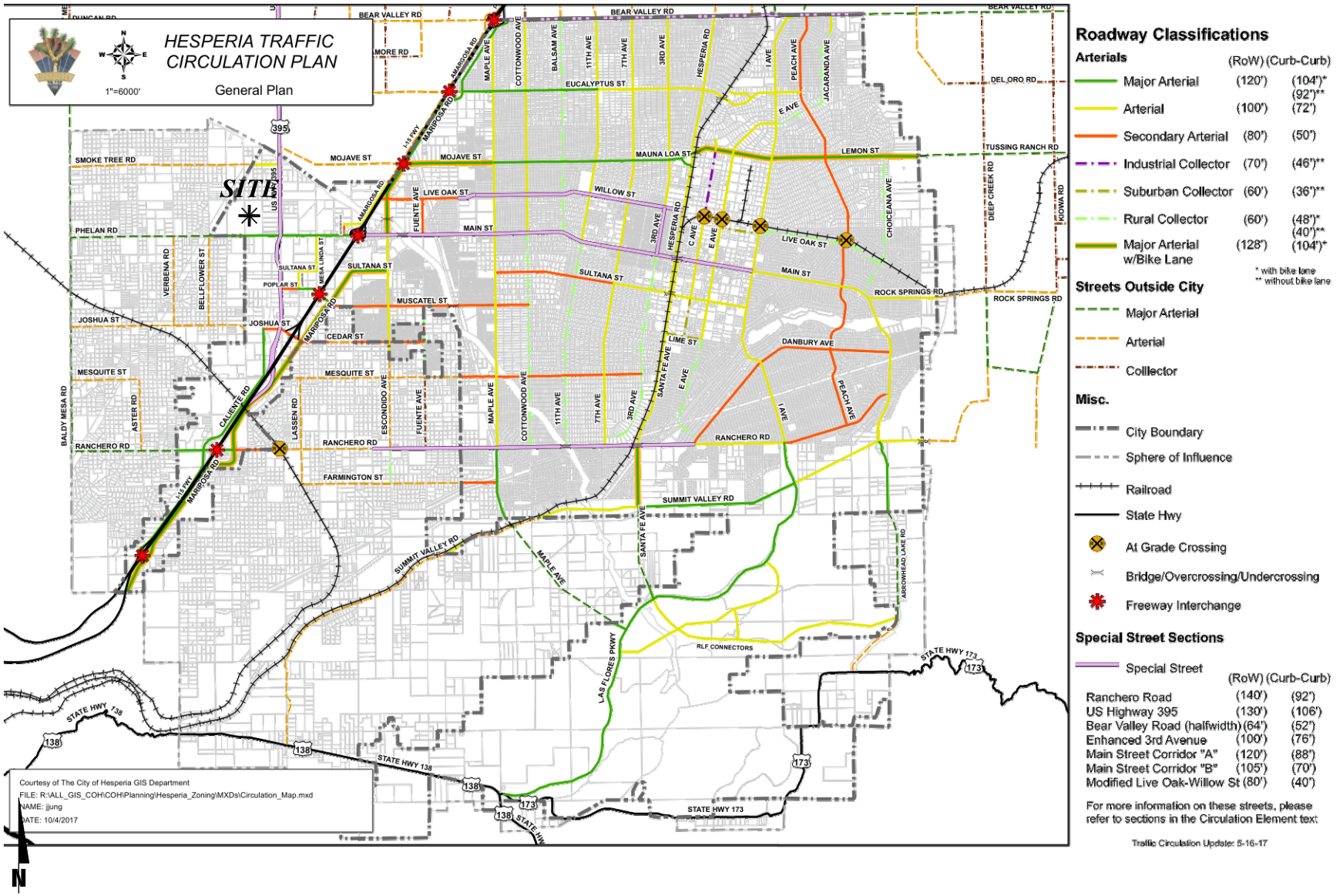
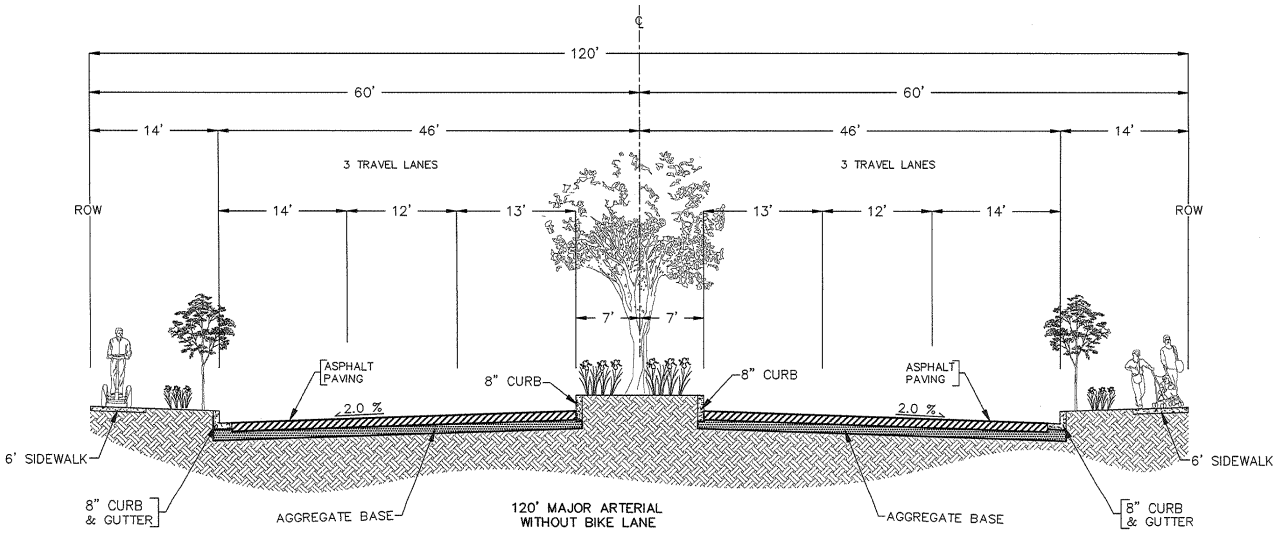


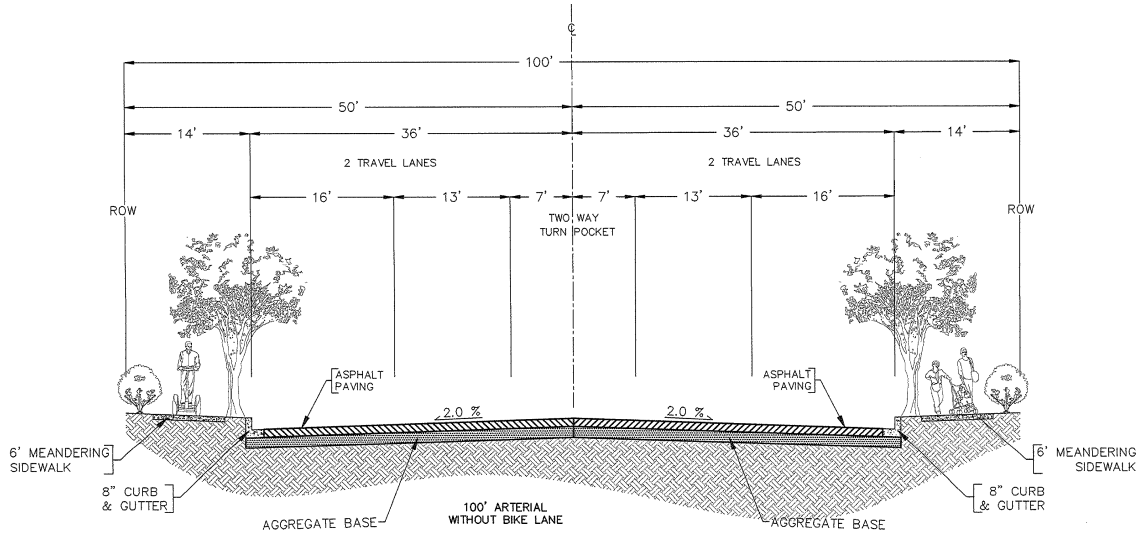
EXHIBIT 3-2: CITY OF HESPERIA GENERAL PLAN CIRCULATION ELEMENT



URBAN CROSSROADS

EXHIBIT 3-3 (1OF3): CITY OF HESPERIA GENERAL PLAN ROADWAY CROSS-SECTIONS





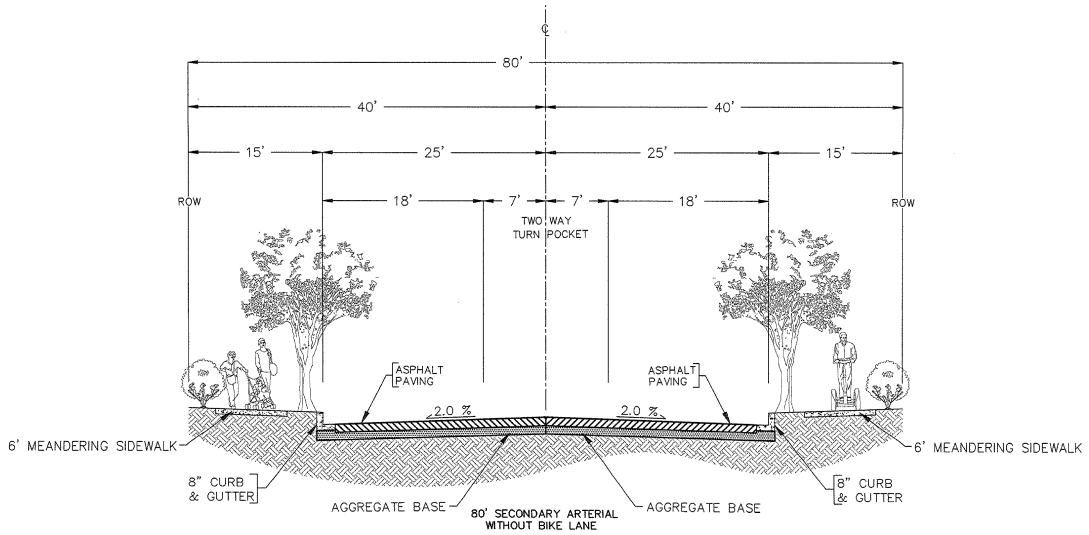
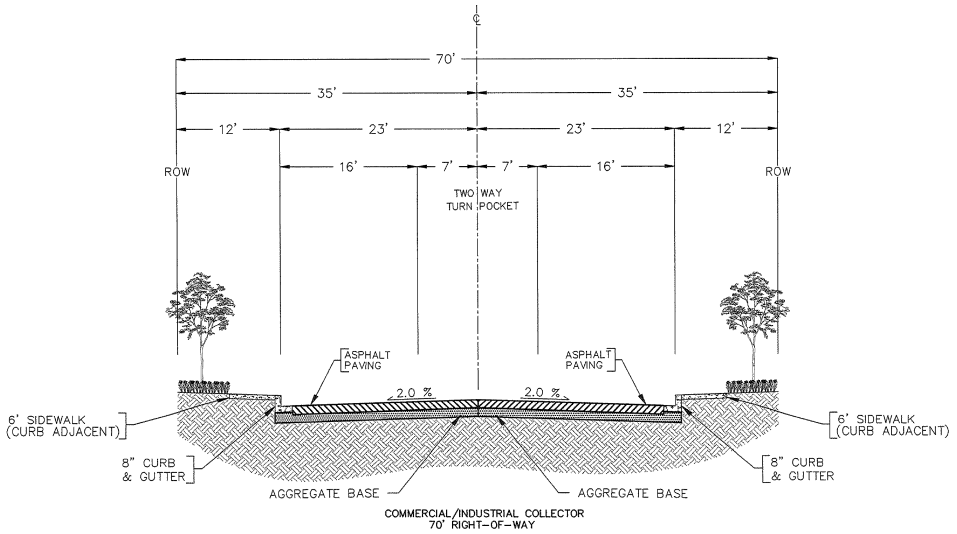
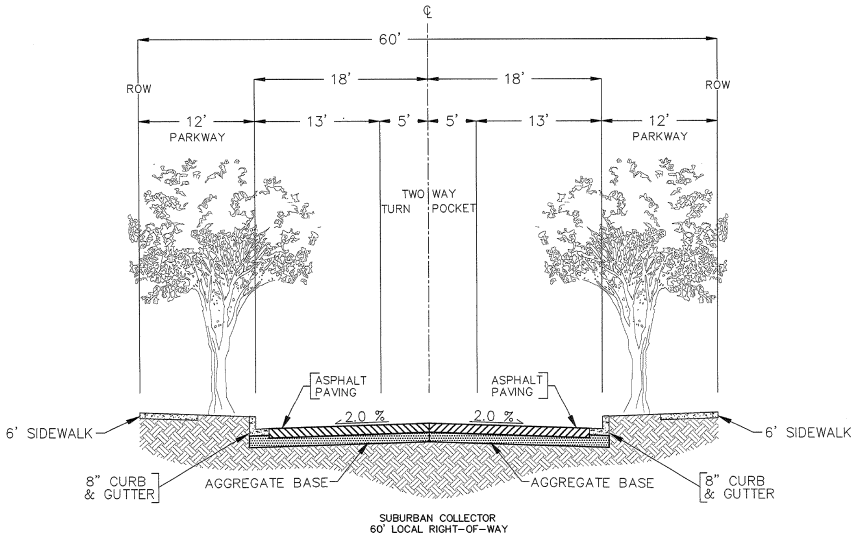


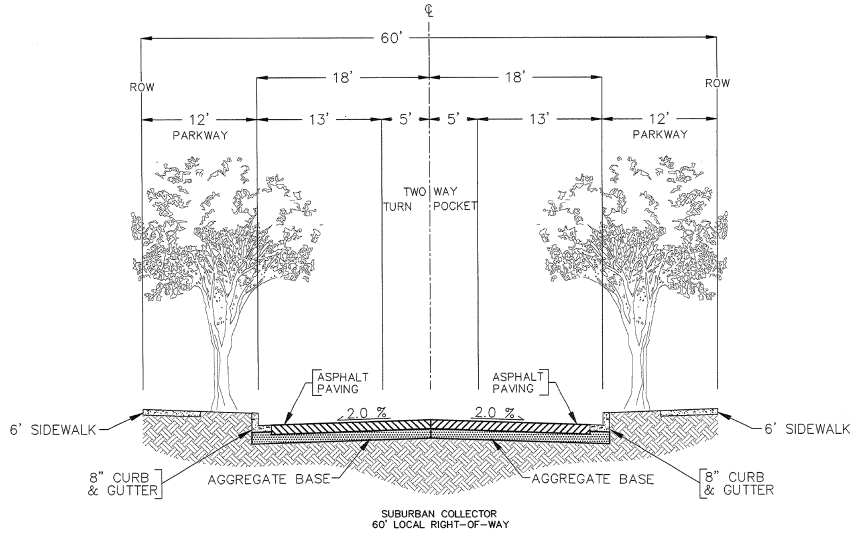
EXHIBIT 3-3 (2OF3): CITY OF HESPERIA GENERAL PLAN ROADWAY CROSS-SECTIONS



COMMERCIAL/INDUSTRIAL COLLECTOR
70' RIGHT-OF-WAY

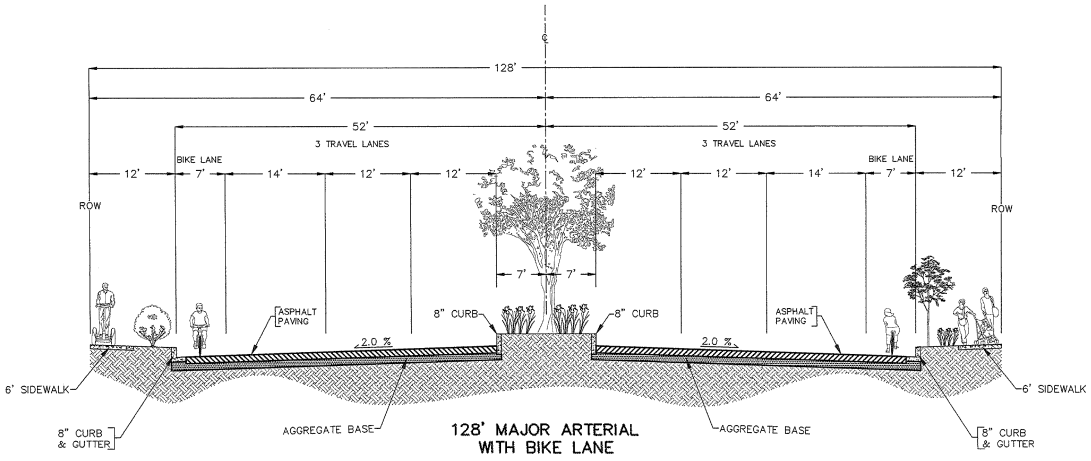


SUBURBAN COLLECTOR
60' LOCAL RIGHT-OF-WAY



SUBURBAN COLLECTOR
60' LOCAL RIGHT-OF-WAY

EXHIBIT 3-3 (3OF3): CITY OF HESPERIA GENERAL PLAN ROADWAY CROSS-SECTIONS



Main Street Corridor 'A' is the segment of Main Street from the I-15 Freeway to Ninth Avenue. This segment of Main Street can accommodate six travel lanes and includes a landscape median. This segment does not include bike lanes.

3.3 COUNTY OF SAN BERNARDINO AND CITY OF VICTORVILLE GENERAL PLAN CIRCULATION ELEMENT

Exhibits 3-4 and 3-5 show the County of San Bernardino's General Plan Circulation Element and roadway cross-sections, respectively. Exhibits 3-6 and 3-7 show the City of Victorville's General Plan Circulation Element and roadway cross-sections, respectively.

3.4 BICYCLE & PEDESTRIAN FACILITIES

In an effort to promote alternative modes of transportation, the City of Hesperia General Plan also includes a bike plan. The City of Hesperia bike plan is shown on Exhibit 3-8. Within the study area, there are existing Class II bike paths along Escondido Avenue. Within the study area, there are proposed Class I bike paths along Main Street, east of I-15 Freeway, proposed Class II bike facilities along Topaz Avenue and Mariposa Avenue, and a proposed Class III bike facility along Joshua Street.

Field observations conducted in October 2019 indicates nominal pedestrian and bicycle activity within the study area. Exhibit 3-9 illustrates the existing pedestrian facilities, including sidewalks and crosswalks. As shown on Exhibit 3-9, there are existing sidewalks along portions of Luna Road, Main Street, and Escondido Avenue within the study area.

3.5 TRANSIT SERVICE

The study area is currently served by the Victor Valley Transit Authority (VVTA), a public transit agency serving the Victor Valley area within San Bernardino County, with bus service along Mariposa Road, Main Street, Phelan Road, Bear Valley Road, and Escondido Avenue. Existing bus routes provided within the area by VVTA are shown on Exhibit 3-10. VVTA Route 21W could potentially serve the Project in the future. Transit service is reviewed and updated by VVTA periodically to address ridership, budget and community demand needs. Changes in land use can affect these periodic adjustments which may lead to either enhanced or reduced service where appropriate. As such, it is recommended that the Project Applicant work in conjunction with VVTA to potentially provide bus service to the site.

3.6 TRUCK ROUTES

The City of Hesperia's General Plan does not provide designated truck routes. The City of Victorville truck routes are shown on Exhibit 3-11. Truck routes for the proposed Project have been determined based on discussions with City staff. These truck routes serve both the proposed Project and future cumulative development projects throughout the study area.

EXHIBIT 3-4: COUNTY OF SAN BERNARDINO GENERAL PLAN CIRCULATION ELEMENT

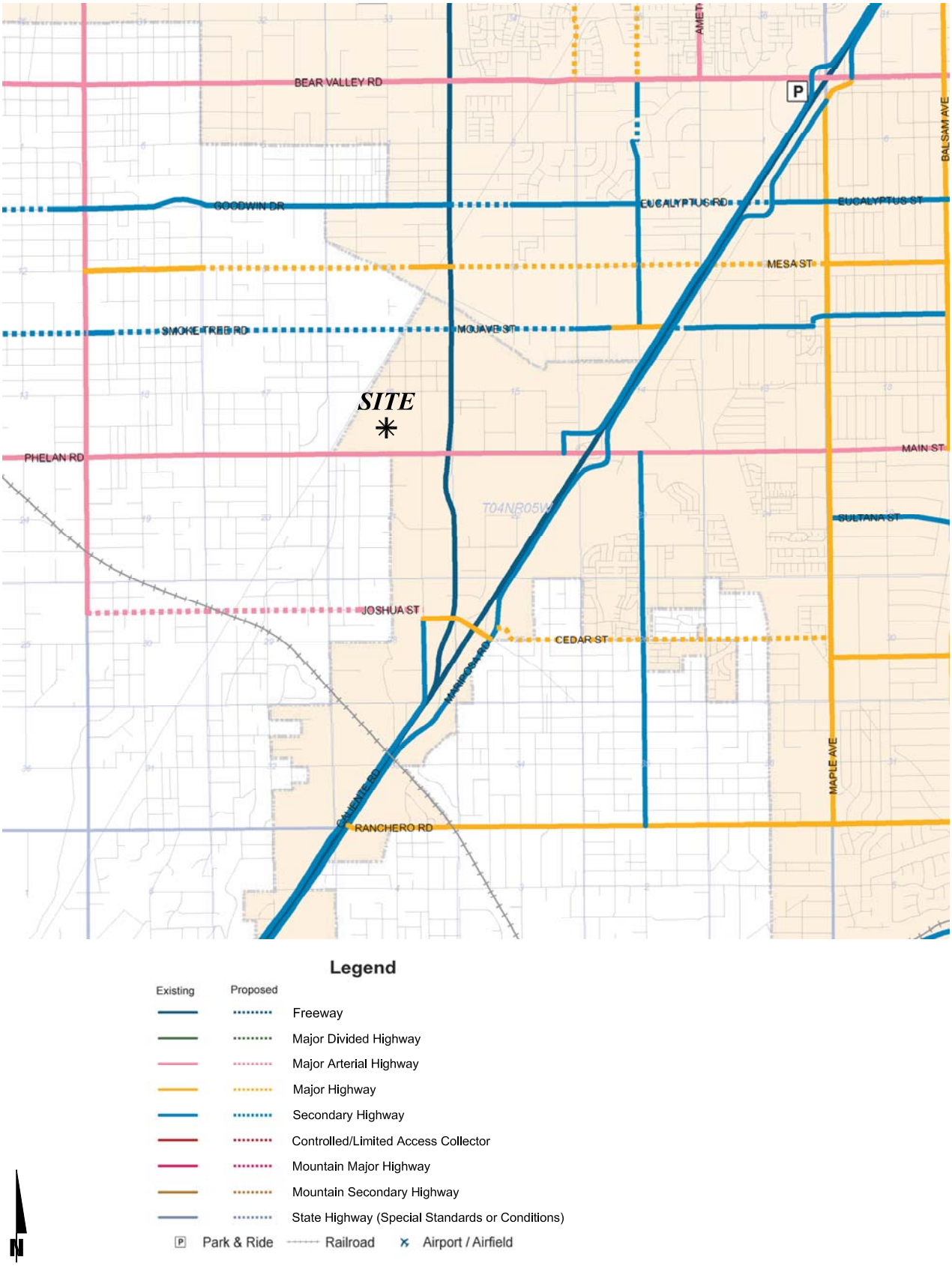


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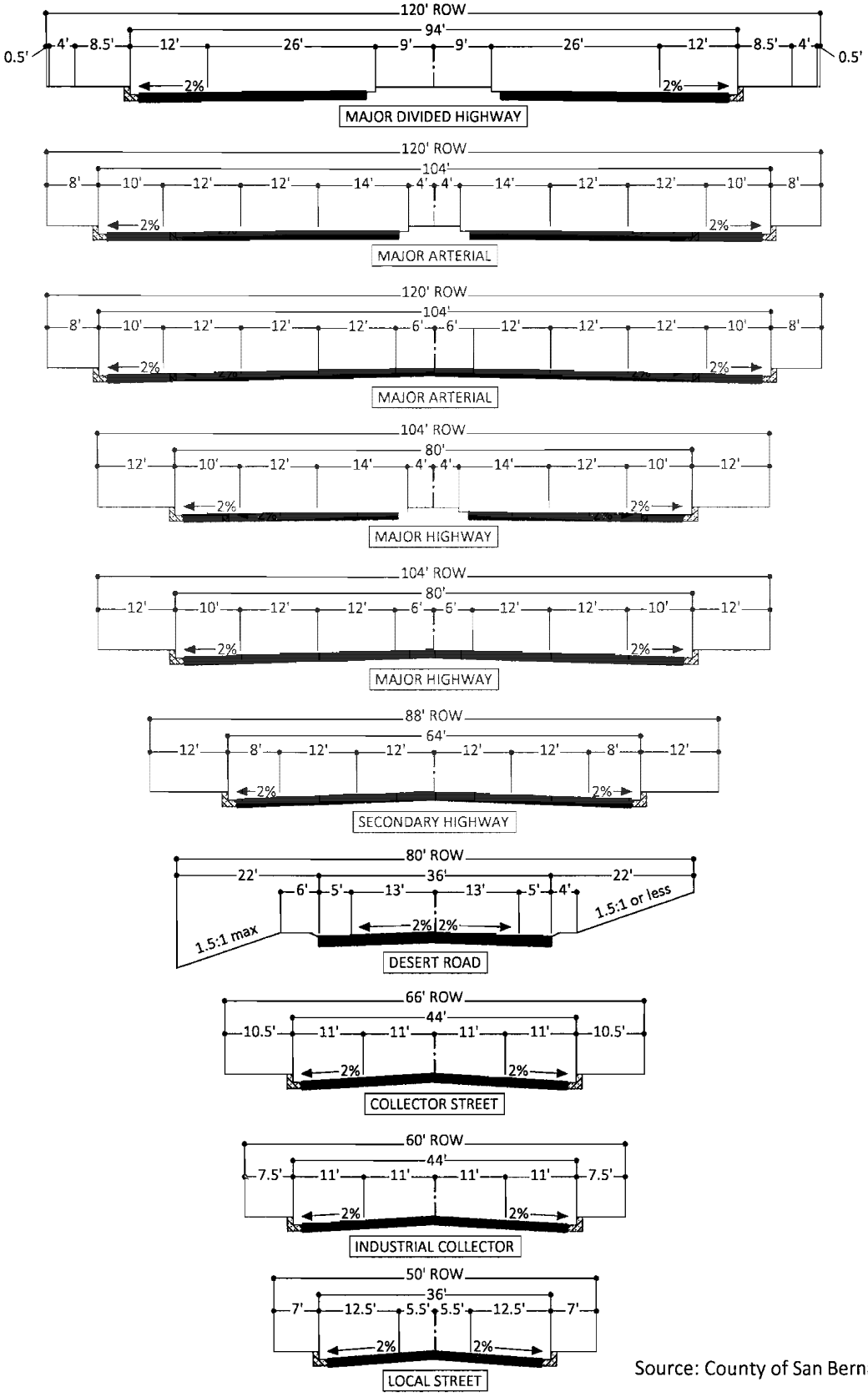
EXHIBIT 3-5 : COUNTY OF SAN BERNARDINO GENERAL PLAN ROADWAY CROSS-SECTIONS



Source: County of San Bernardino

EXHIBIT 3-6: CITY OF VICTORVILLE GENERAL PLAN CIRCULATION ELEMENT

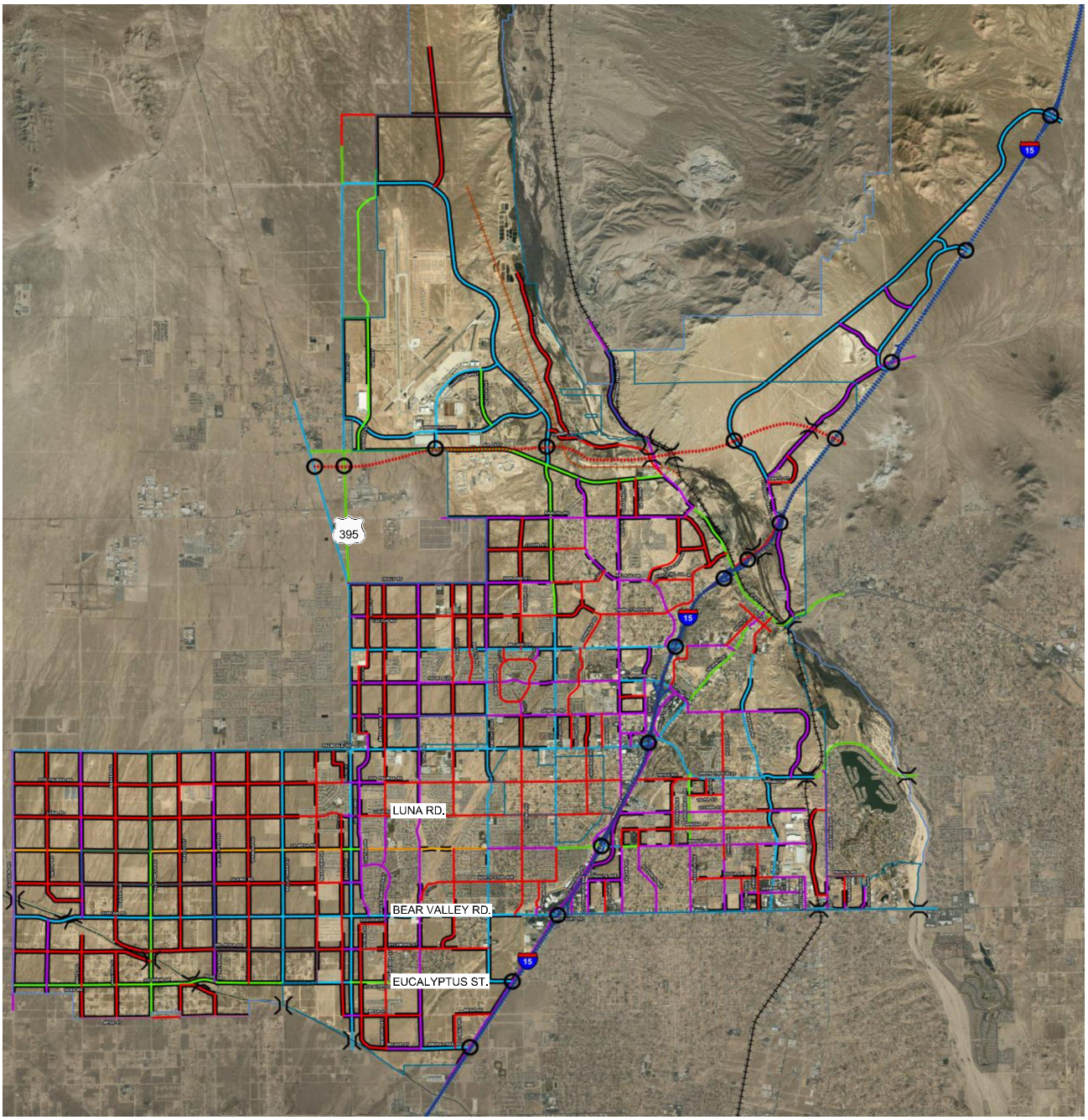


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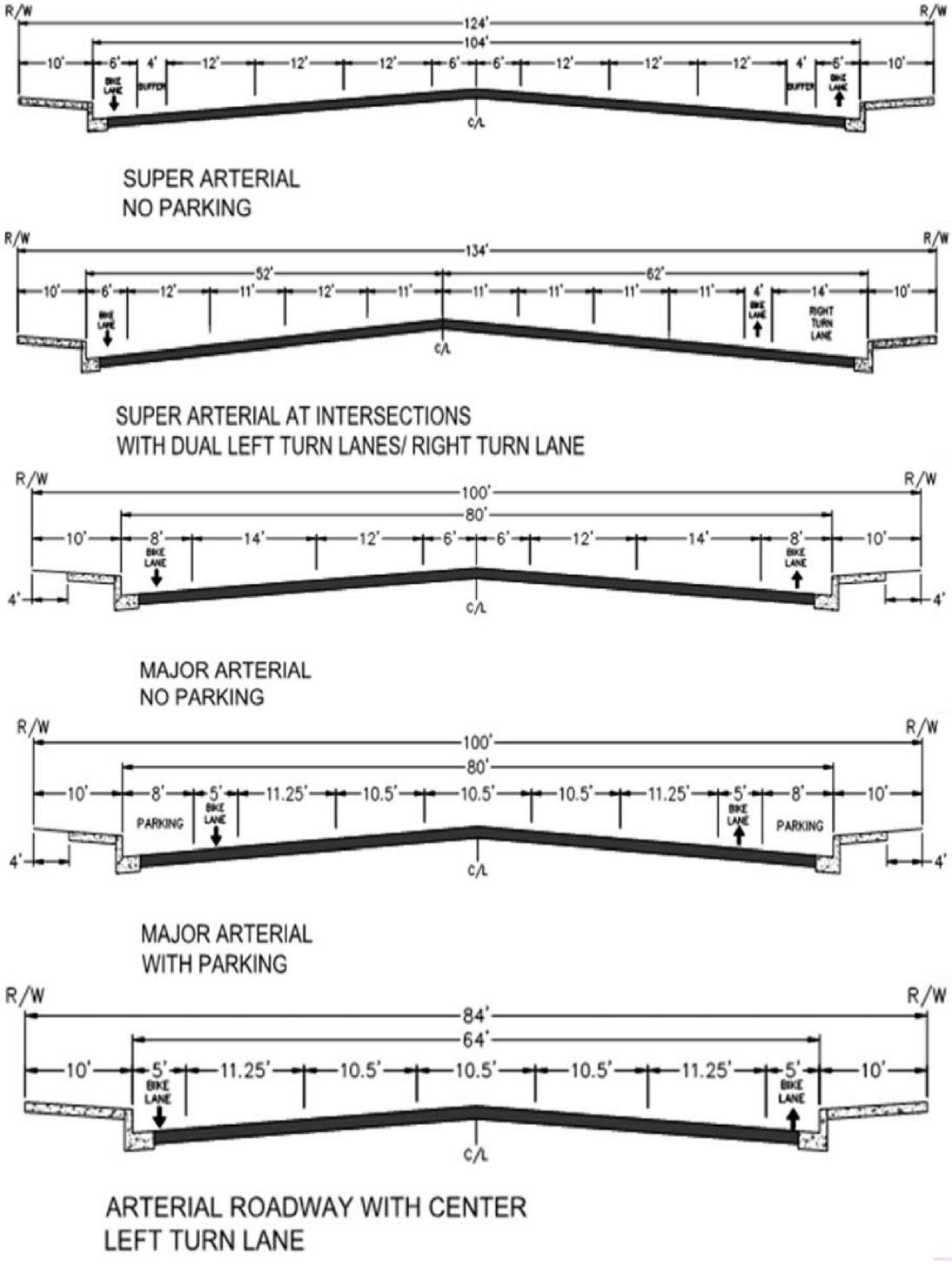
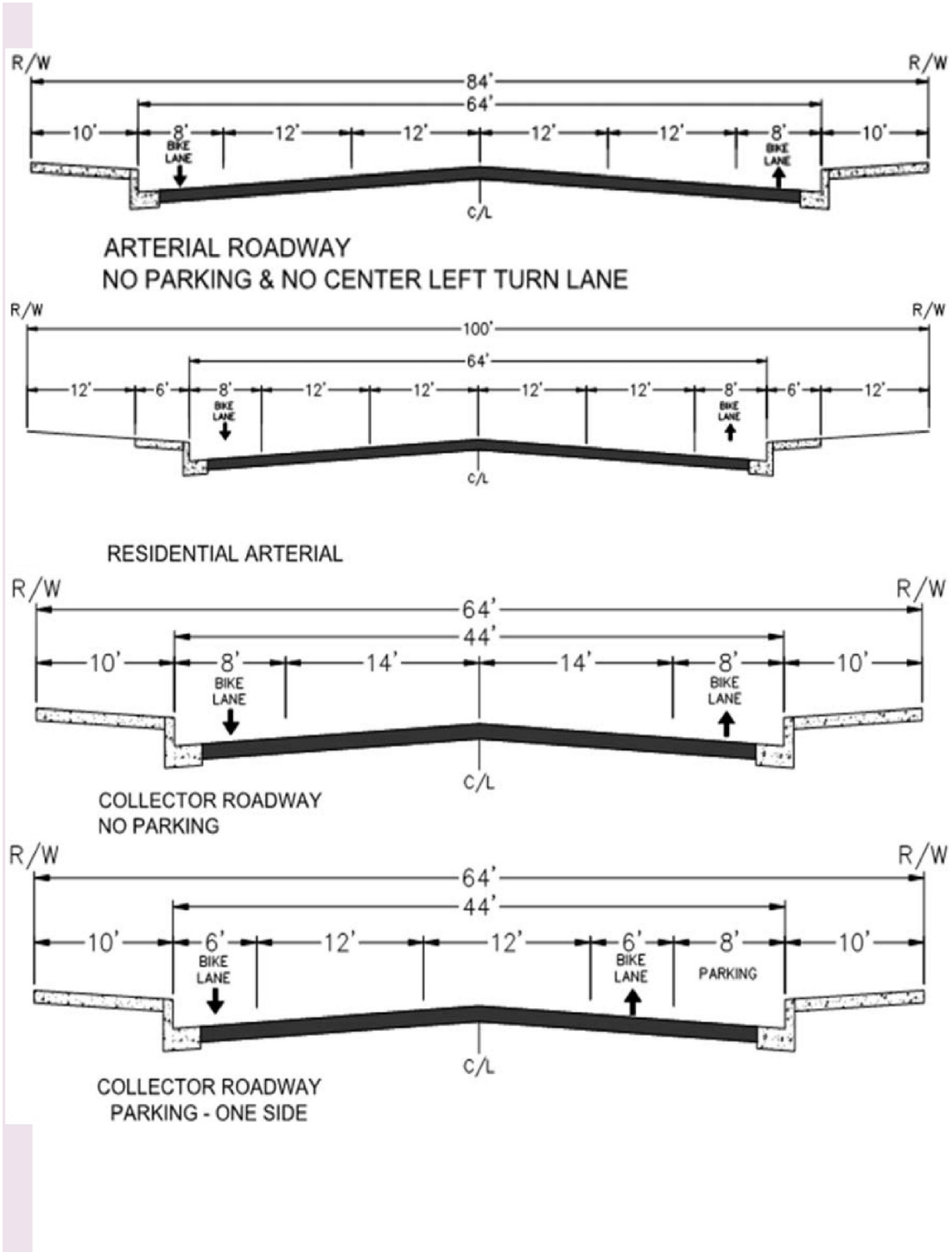
EXHIBIT 3-7 (1OF5): CITY OF VICTORVILLE GENERAL PLAN ROADWAY CROSS-SECTIONS



Retrofit Street Sections

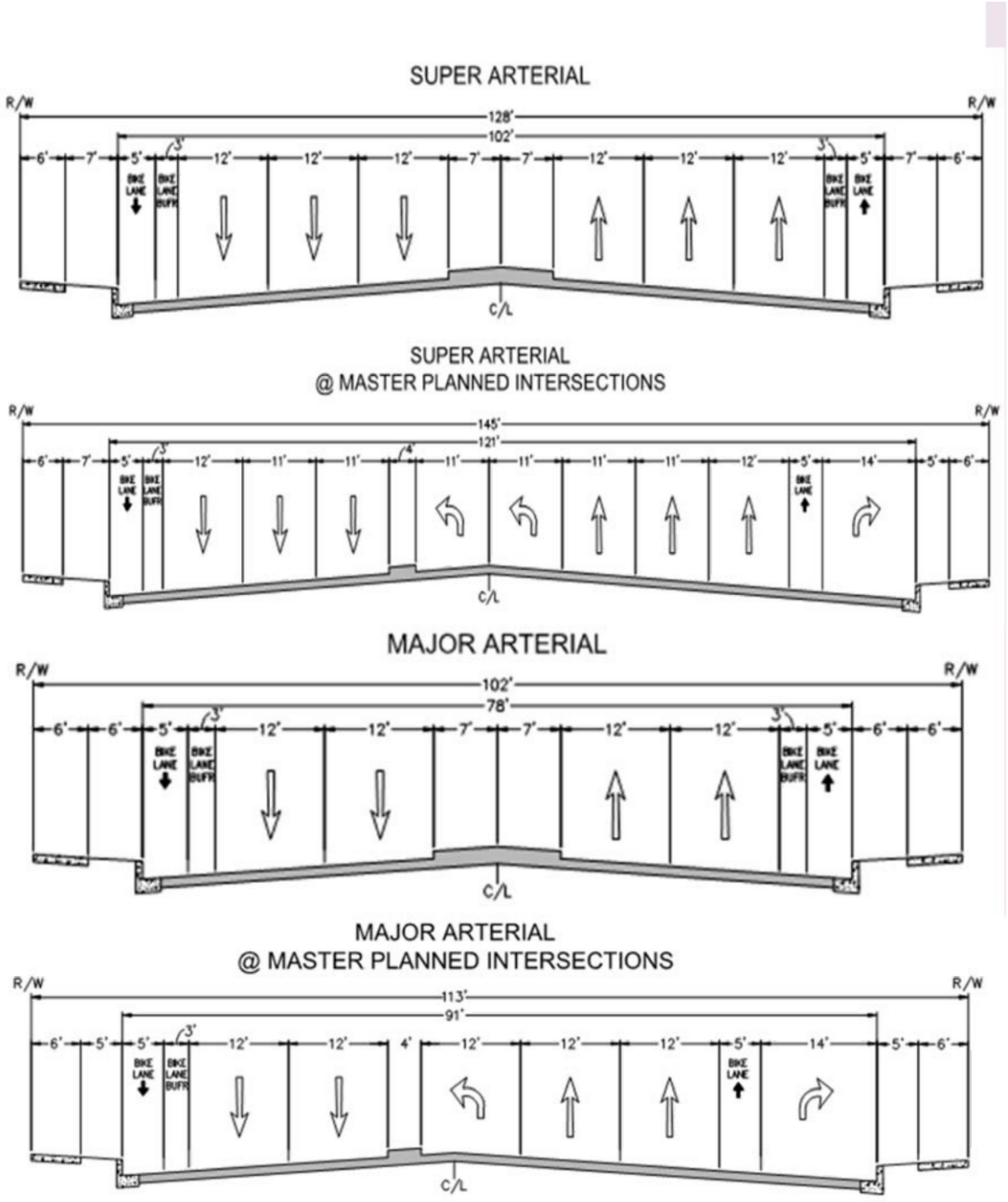
EXHIBIT 3-7 (2OF5): CITY OF VICTORVILLE GENERAL PLAN ROADWAY CROSS-SECTIONS



Retrofit Street Sections

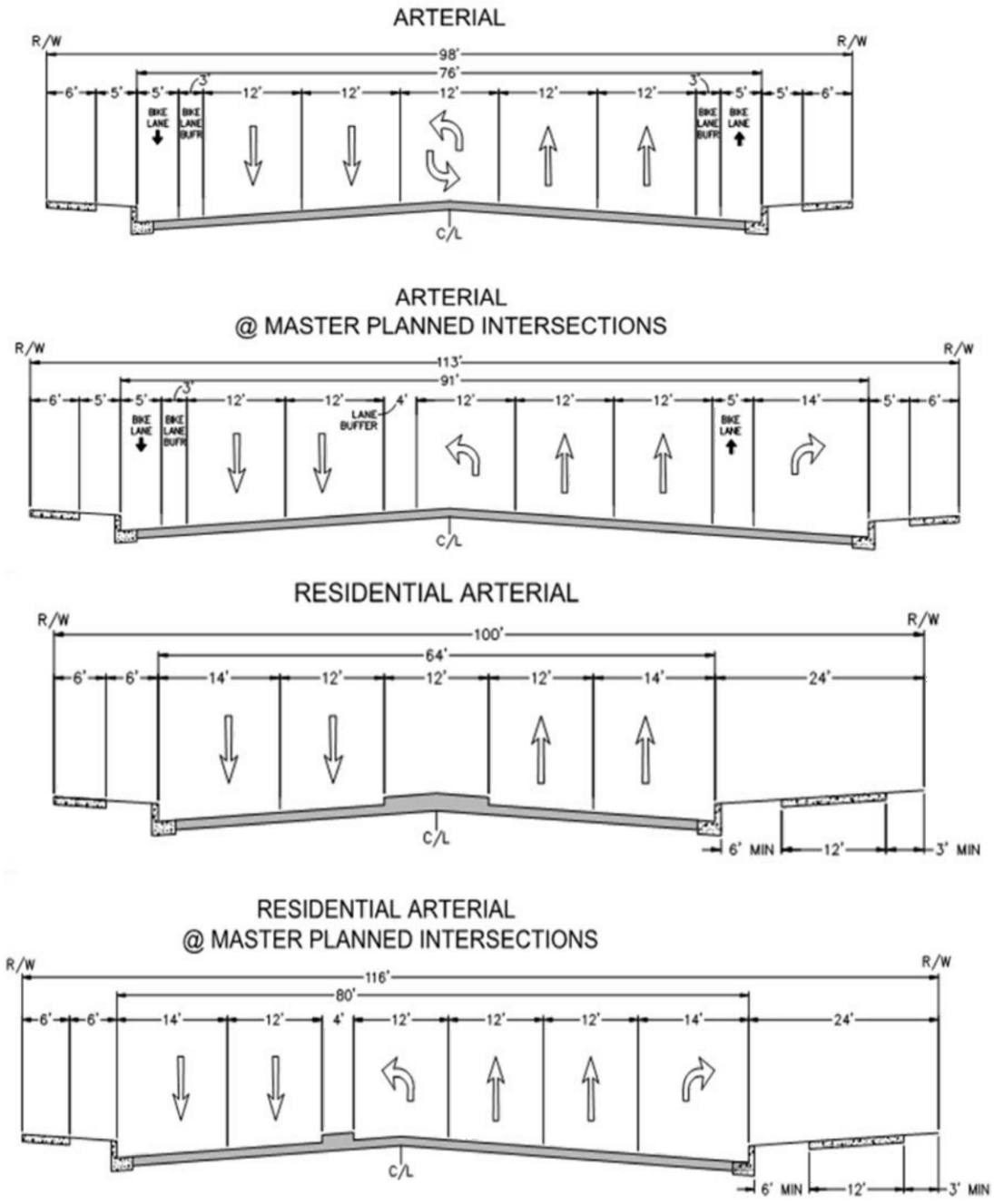
N

EXHIBIT 3-7 (3OF5): CITY OF VICTORVILLE GENERAL PLAN ROADWAY CROSS-SECTIONS



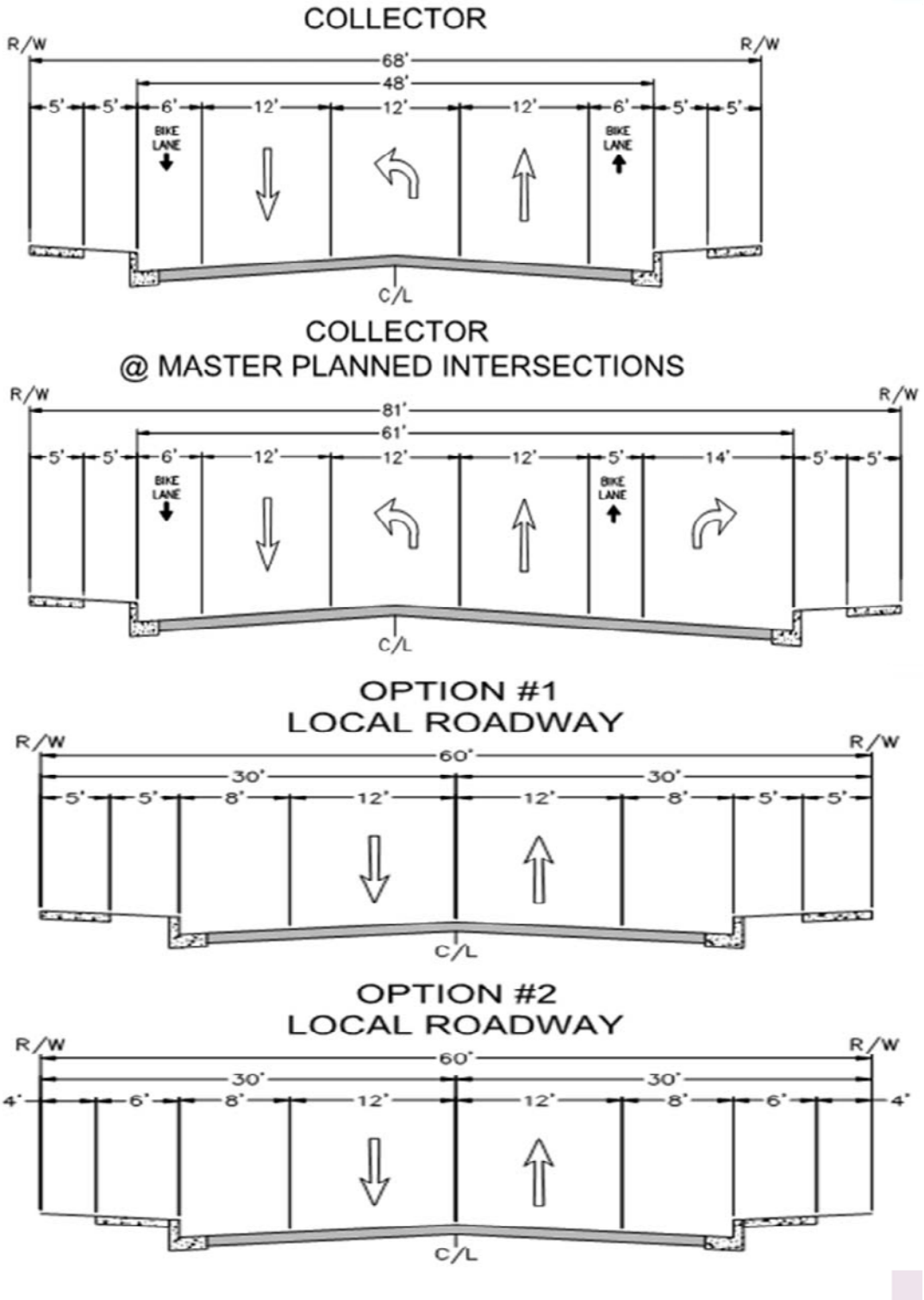
Street Sections

EXHIBIT 3-7 (4OF5): CITY OF VICTORVILLE GENERAL PLAN ROADWAY CROSS-SECTIONS



Street Sections

EXHIBIT 3-7 (5OF5): CITY OF VICTORVILLE GENERAL PLAN ROADWAY CROSS-SECTIONS



Street Sections

EXHIBIT 3-8: CITY OF HESPERIA GENERAL PLAN BIKE PLAN

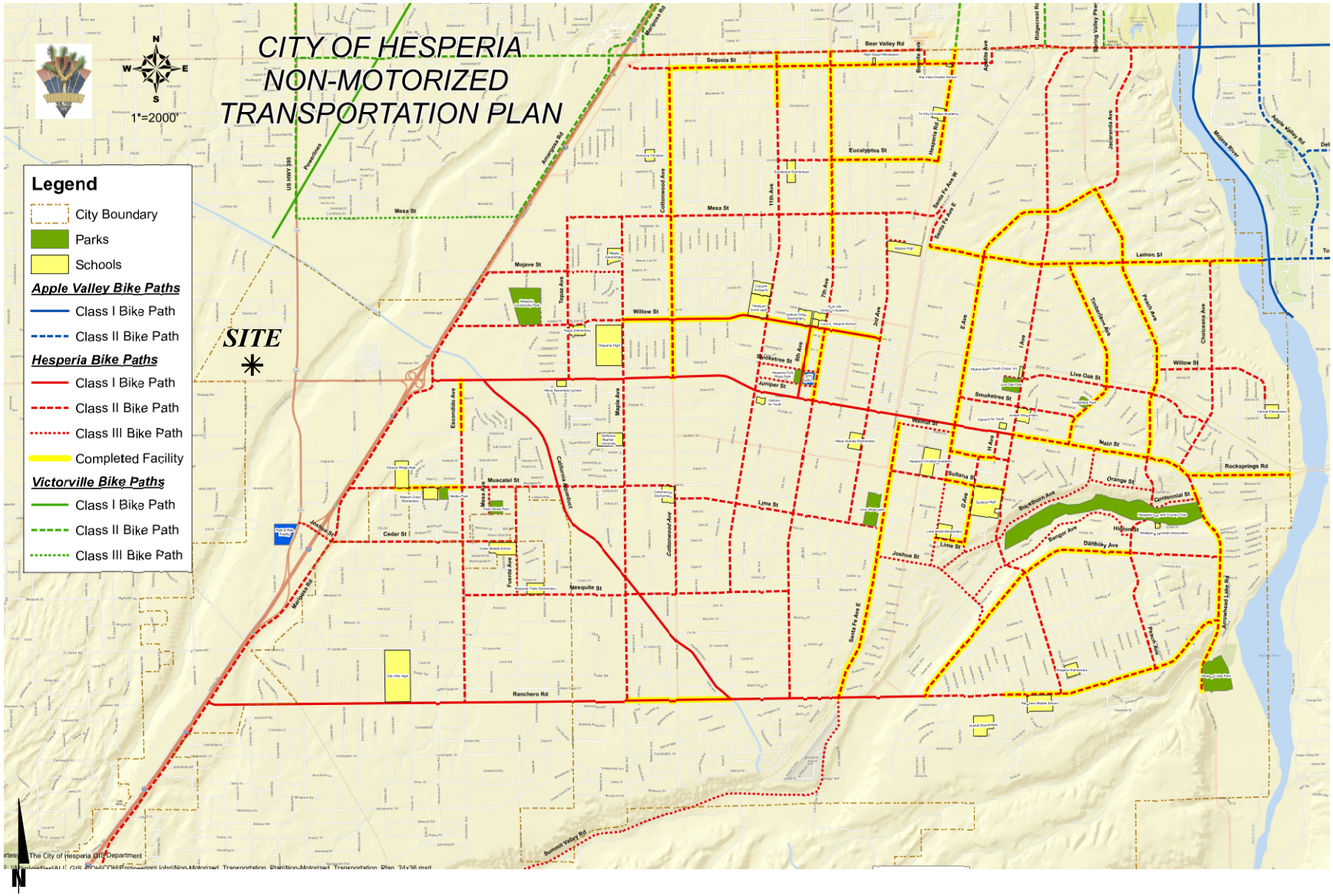
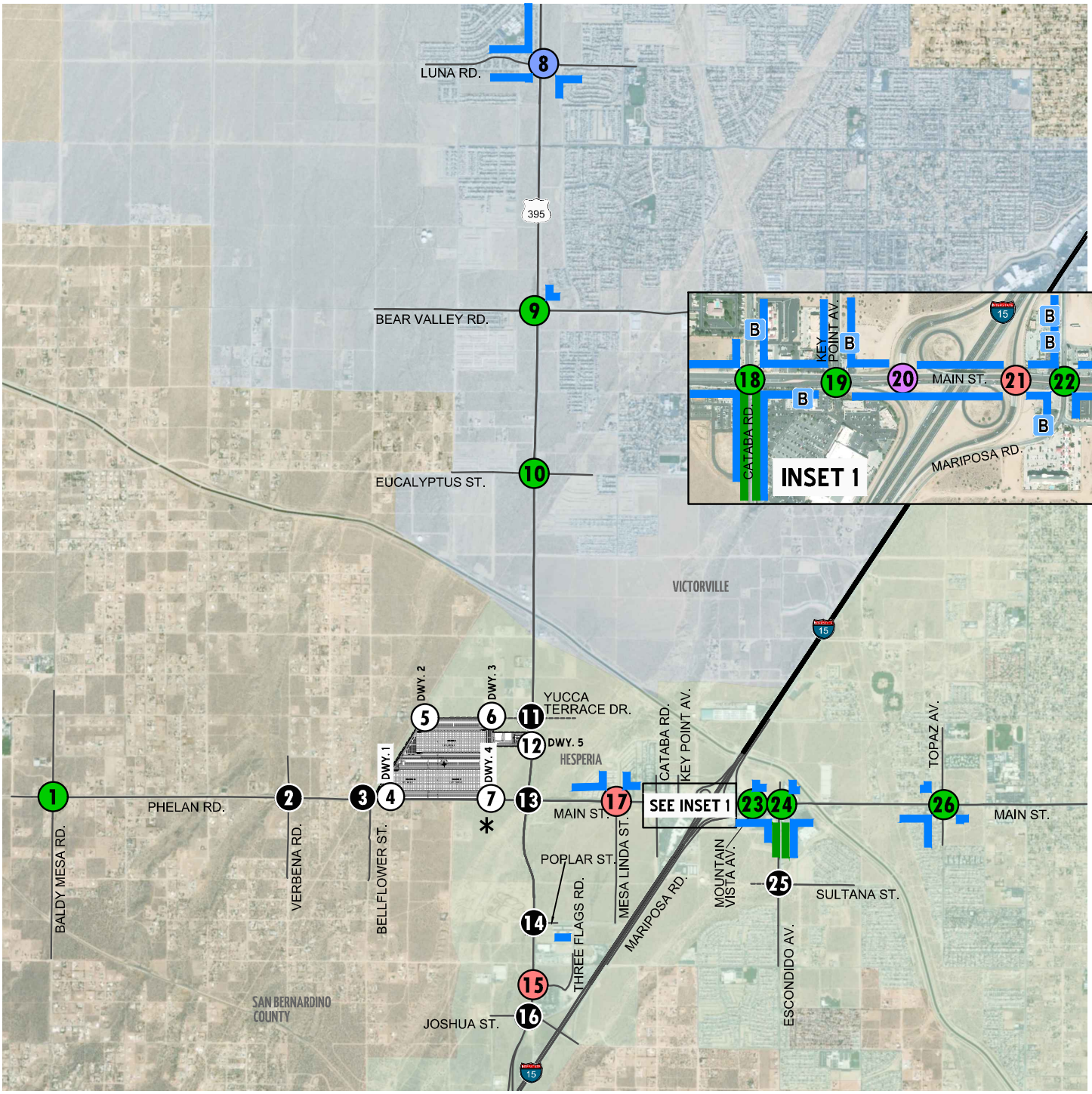


EXHIBIT 3-9: EXISTING PEDESTRIAN FACILITIES



LEGEND:

- = SIDEWALK
- = BIKE LANE
- B = BUS STOP
- 0 = NO CROSSWALK
- 0 = FUTURE INTERSECTION
- 0 = CROSSWALK ON ALL APPROACHES
- 0 = CROSSWALK ON THREE APPROACHES
- 0 = CROSSWALK ON TWO APPROACHES
- 0 = CROSSWALK ON ONE APPROACH

N

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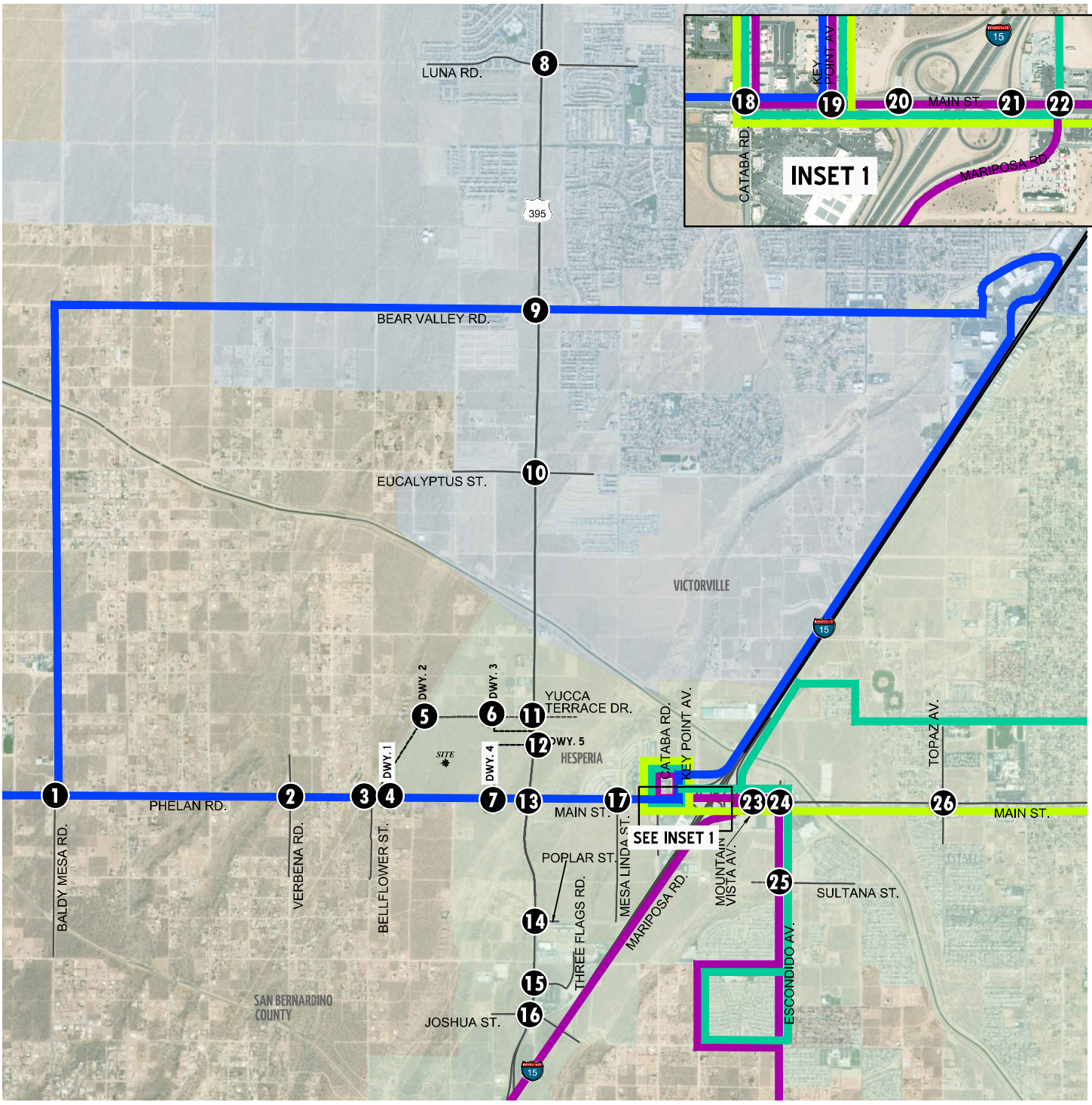
URBAN CROSSROADS

EXHIBIT 3-10: EXISTING TRANSIT ROUTES



LEGEND:

- = VVTA ROUTE 21W
- = VVTA ROUTE 25
- = VVTA ROUTE 64
- = VVTA ROUTE 68

N

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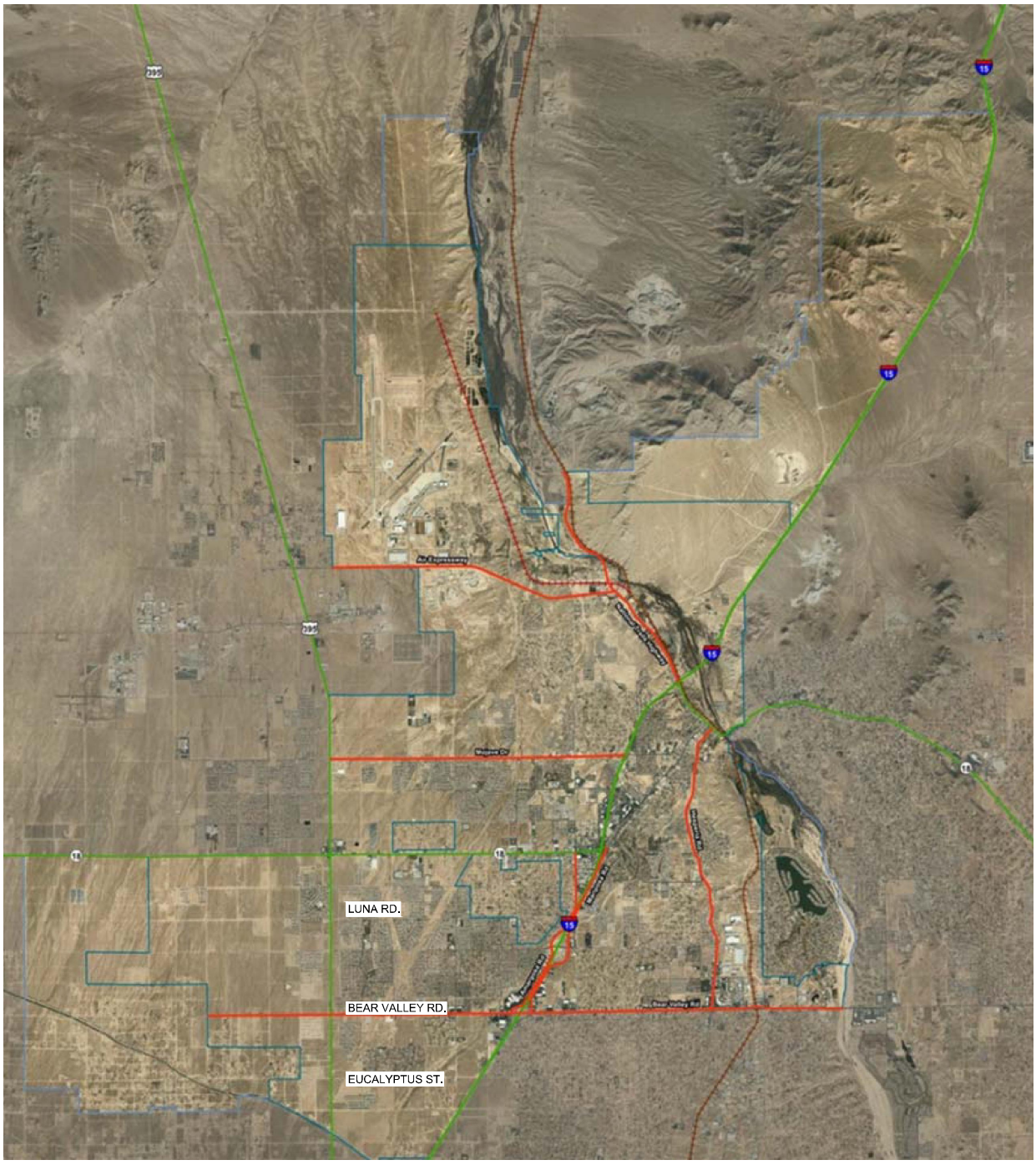
URBAN CROSSROADS

EXHIBIT 3-11: CITY OF VICTORVILLE STATE RAIL AND TRUCK ROUTES



3.7 EXISTING TRAFFIC COUNTS

The intersection LOS analysis is based on the traffic volumes observed during the peak hour conditions using traffic count data collected in September 2019 and January 2020, while schools were in session. Consistent with standard engineering practice, these traffic counts were conducted either on Tuesday, Wednesday, or Thursday due to potential fluctuations in traffic that typically occur on Mondays, Fridays, Holidays, or weekends. The following peak hours were selected for analysis:

- Weekday AM Peak Hour (peak hour between 7:00 AM and 9:00 AM)
- Weekday PM Peak Hour (peak hour between 4:00 PM and 6:00 PM)

The weekday AM and weekday PM peak hour count data are representative of typical weekday peak hour traffic conditions in the study area, which are based on the traffic conditions in September 2019 and January 2020. There were no observations made in the field that would indicate atypical traffic conditions on the count dates, such as construction activity or detour routes and near-by schools were in session and operating on normal schedules.

The raw manual peak hour turning movement traffic count data sheets are included in Appendix 3.1. These raw turning volumes have been flow conserved between intersections with limited access, no access, and where there are currently no uses generating traffic. The traffic counts collected in September 2019 and January 2020 include the vehicle classifications as shown below:

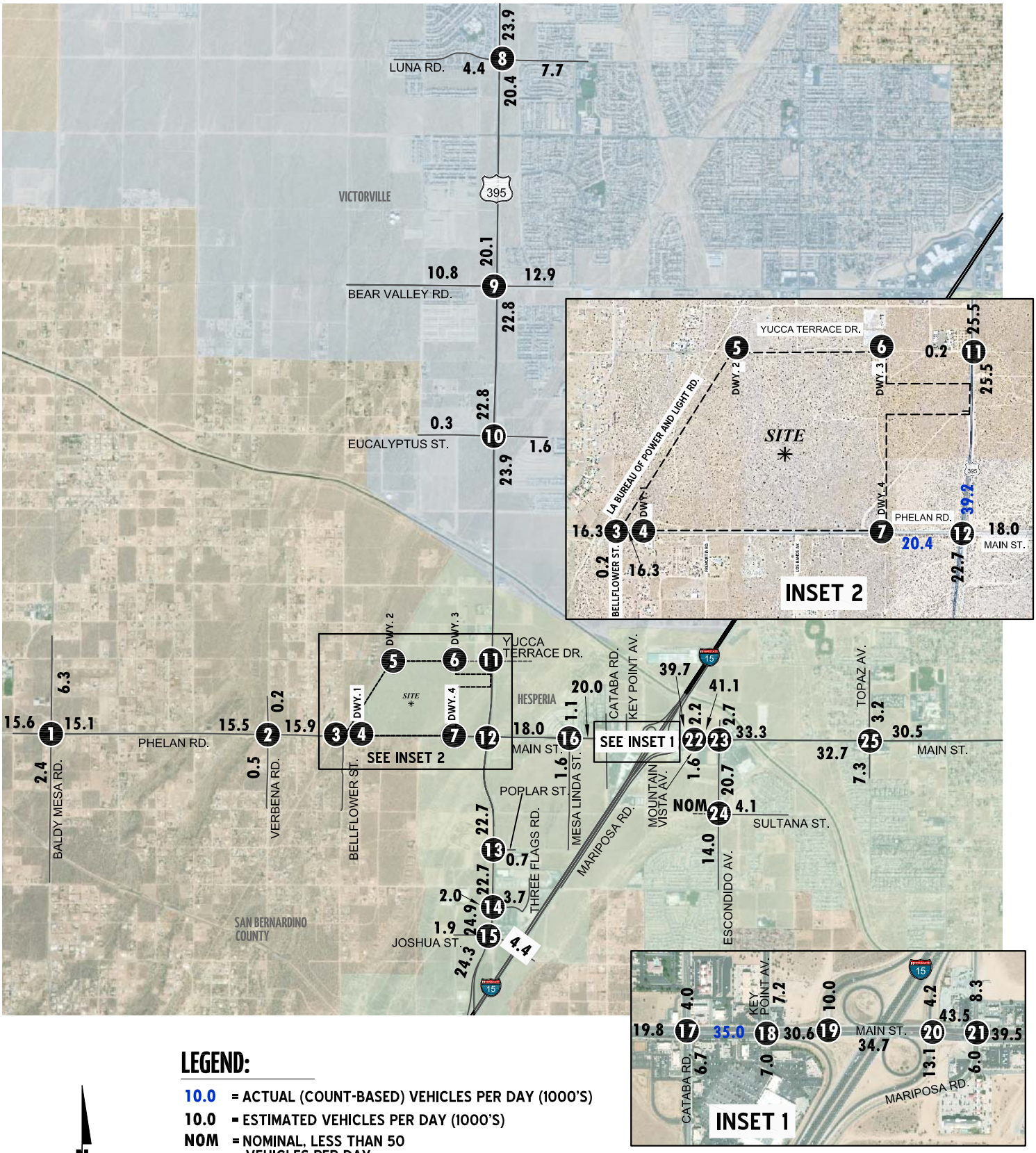
- Passenger Cars
- 2-Axle Trucks
- 3-Axle Trucks
- 4 or More Axle Trucks

To represent the effect of large trucks, buses, and recreational vehicles have on traffic flow, all trucks were converted into PCEs. By their size alone, these vehicles occupy the same space as two or more passenger cars. In addition, the time it takes for them to accelerate and slow-down is also much longer than for passenger cars and varies depending on the type of vehicle and number of axles. For this analysis, a PCE factor of 1.5 has been applied to 2-axle trucks, 2.0 for 3-axle trucks, and 3.0 for 4+-axle trucks to estimate each turning movement. These factors are consistent with the values recommended for use in the SBCTA CMP. (9)

Existing weekday ADT volumes on arterial highways throughout the study area are shown on Exhibit 3-12. Where actual 24-hour tube count data was not available, Existing ADT volumes were based upon factored intersection peak hour counts collected by Urban Crossroads, Inc. using the following formula for each intersection leg:

Weekday PM Peak Hour (Approach Volume + Exit Volume) x 10.66 = Leg Volume

EXHIBIT 3-12: EXISTING (2019) AVERAGE DAILY TRAFFIC (ADT) (IN PCE)



LEGEND:

10.0 = ACTUAL (COUNT-BASED) VEHICLES PER DAY (1000'S)

10.0 = ESTIMATED VEHICLES PER DAY (1000'S)

NOM = NOMINAL, LESS THAN 50 VEHICLES PER DAY

N

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URBAN CROSSROADS

A comparison of the PM peak hour and daily traffic volumes of various roadway segments within the study area indicated that the peak-to-daily relationship is approximately 9.38 percent. As such, the above equation utilizing a factor of 10.66 estimates the ADT volumes on the study area roadway segments assuming a peak-to-daily relationship of approximately 9.38 percent (i.e., 1/0.0938 = 10.66) and was assumed to sufficiently estimate average daily traffic (ADT) volumes for planning-level analyses. Existing weekday AM and weekday PM peak hour intersection volumes (in PCE) are shown on Exhibit 3-13.

3.8 INTERSECTION OPERATIONS ANALYSIS

Existing peak hour traffic operations have been evaluated for the study area intersections based on the analysis methodologies presented in Section 2.2 *Intersection Capacity Analysis* of this report. The intersection operations analysis results are summarized in Table 3-1, which indicates that the following study area intersections are currently operating at an unacceptable LOS during the peak hours (i.e., LOS E or worse):

- US Highway 395 & Yucca Terrace Drive (#11) – LOS F PM peak hour only
- US Highway 395 & Poplar Street (#13) – LOS F AM and PM peak hours

Consistent with Table 3-1, a summary of the peak hour intersection LOS for Existing conditions is shown on Exhibit 3-14. The intersection operations analysis worksheets are included in Appendix 3.2 of this TIA.

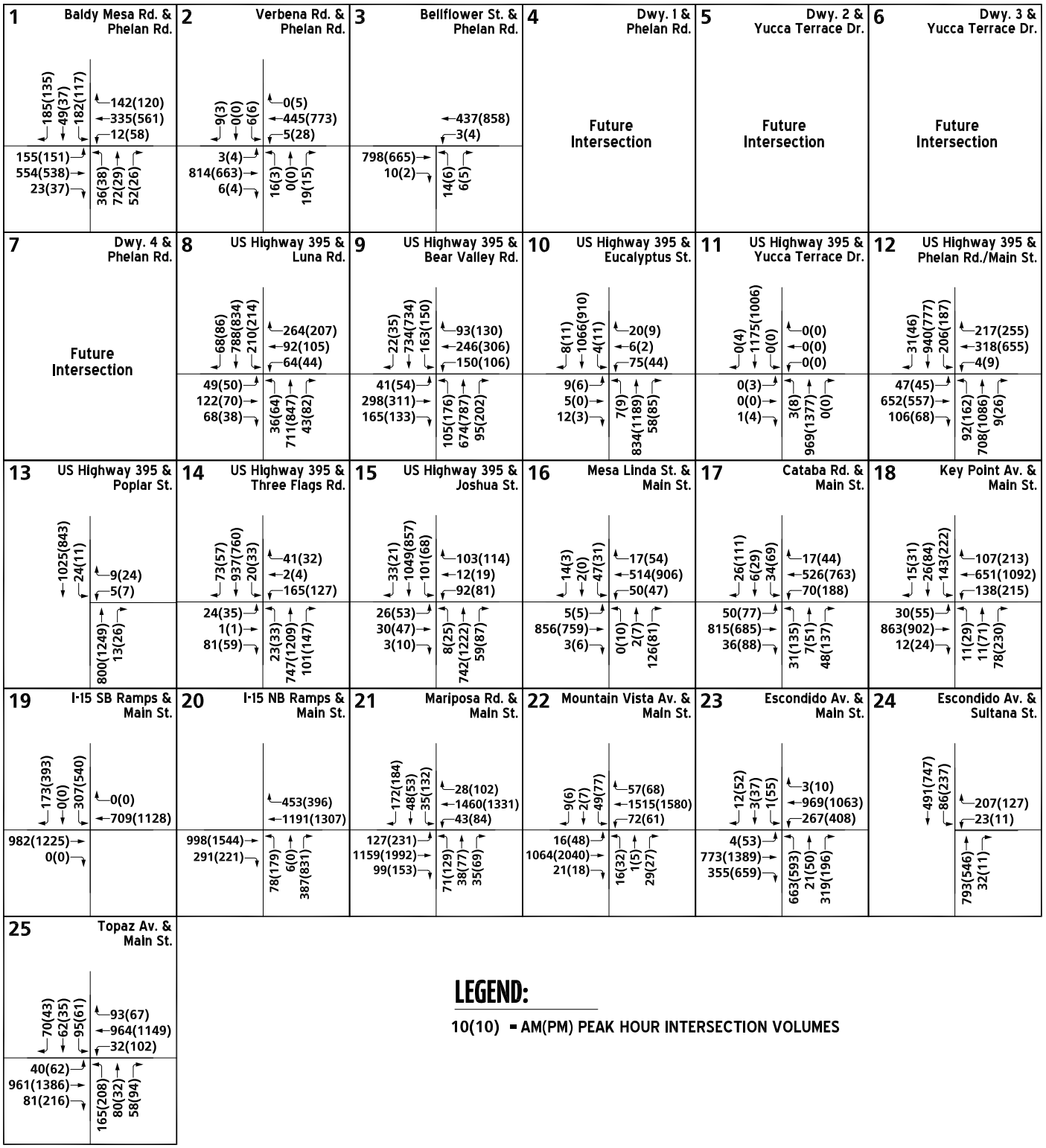
3.9 TRAFFIC SIGNAL WARRANTS ANALYSIS

Traffic signal warrants for Existing (2019) traffic conditions are based on existing peak hour intersection turning volumes. The following study area intersection currently warrants a traffic signal under Existing (2019) traffic conditions:

- Escondido Avenue & Sultana Street (#24)

Existing (2019) traffic conditions traffic signal warrant analysis worksheets are provided in Appendix 3.3.

EXHIBIT 3-13: EXISTING (2019) TRAFFIC VOLUMES (IN PCE)



LEGEND:

10(10) = AM(PM) PEAK HOUR INTERSECTION VOLUMES

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EXHIBIT 3-14: EXISTING (2019) SUMMARY OF LOS

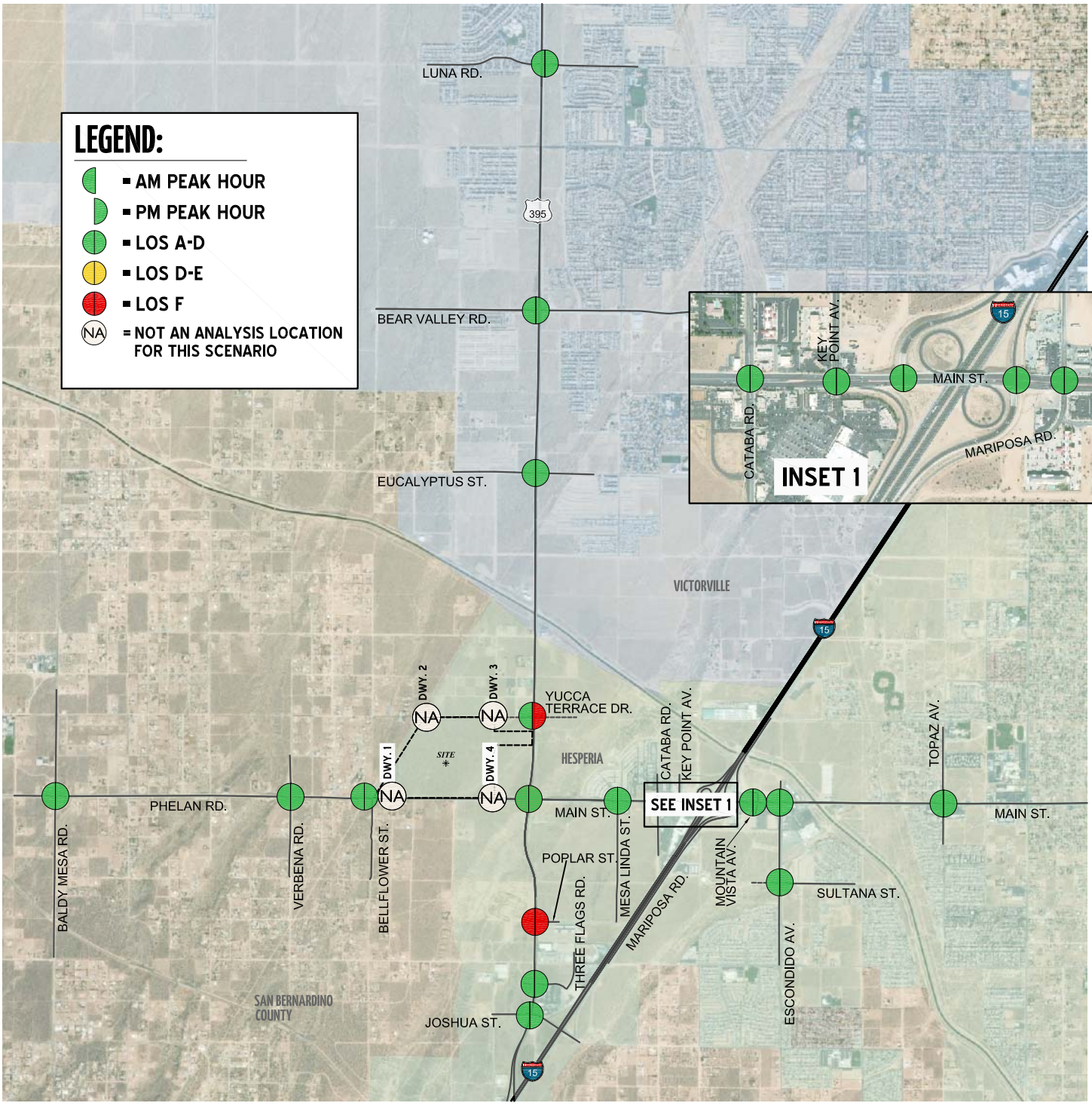


Table 3-1

Intersection Analysis for Existing (2019) Conditions

#	Intersection	Traffic Control[3]	Intersection Approach Lanes[1]												Delay[2] (secs.)		Level of Service		Acceptable LOS
			Northbound			Southbound			Eastbound			Westbound							
			L	T	R	L	T	R	L	T	R	L	T	R	AM	PM	AM	PM	
1	Baldy Mesa Rd. & Phelan Rd.	TS	1	1	1	1	1	1	1	2	0	1	2	d	28.0	23.1	C	C	C
2	Verbena Rd. & Phelan Rd.	CSS	0	1	0	0	1	0	1	1	1	1	1	1	21.0	20.6	C	C	C
3	Bellflower St. & Phelan Rd.	CSS	0	1	0	0	0	0	0	1	0	1	1	0	18.2	16.7	C	C	C
4	Driveway 1 & Phelan Rd.		Future Intersection																
5	Driveway 2 & Yucca Terrace Dr.		Future Intersection																
6	Driveway 3 & Yucca Terrace Dr.		Future Intersection																
7	Driveway 4 & Phelan Rd.		Future Intersection																
8	US Highway 395 & Luna Rd.	TS	1	2	1	1	2	1	1	1	1	1	1	0	24.5	22.0	C	C	D
9	US Highway 395 & Bear Valley Rd.	TS	1	2	d	1	2	d	1	2	d	1	2	1	27.0	27.5	C	C	D
10	US Highway 395 & Eucalyptus St.	TS	1	2	1	1	2	1	1	1	0	1	1	0	11.3	9.3	B	A	D
11	US Highway 395 & Yucca Terrace Dr.	CSS	0	1	0	0	1	0	0	1	0	0	1	0	22.7	**77.2**	C	**F**	D
12	US Highway 395 & Phelan Rd./Main St.	TS	1	2	0	1	2	0	1	2	0	1	2	0	24.5	36.3	C	D	D
13	US Highway 395 & Poplar St.	CSS	0	2	0	1	1	0	0	0	0	1	0	1	**69.6**	**85.0**	**F**	**F**	D
14	US Highway 395 & Three Flags Rd.	TS	1	2	1	1	2	1	1	1	0	1	1	d	13.8	11.9	B	B	D
15	US Highway 395 & Joshua St.	TS	1	2	1	1	2	d	1	1	0	1	1	1	11.0	11.1	B	B	D
16	Mesa Linda St. & Main St.	TS	0	1	1	0	1	1	1	3	0	1	3	d	16.2	10.9	B	B	D
17	Cataba Rd. & Main St.	TS	1	1	1	1	1	1	1	3	1	2	3	d	15.3	22.4	B	C	D
18	Key Point Av. & Main St.	TS	1	1	1	1	1	0	1	3	1	1	3	0	14.2	22.9	B	C	D
19	I-15 SB Ramps & Main St.	TS	0	0	0	2	0	1	0	3	1>>	0	3	1>>	5.7	8.7	A	A	D
20	I-15 NB Ramps & Main St.	TS	1	1	1	0	0	0	0	3	1>>	0	3	1	4.8	9.9	A	B	D
21	Mariposa Rd. & Main St.	TS	1	1	0	1	1	0	1	4	0	1	4	0	16.3	25.1	B	C	D
22	Mountain Vista Av. & Main St.	TS	1	2	2>	1	1	0	2	4	0	1	3	1	12.2	16.5	B	B	D
23	Escondido Av. & Main St.	TS	2	1	1>	1	1	0	1	3	1>	2	2	1	32.9	46.6	C	D	D
24	Escondido Av. & Sultana St.	CSS	0	2	0	1	2	0	0	0	0	1	0	1	21.1	23.9	C	C	D
25	Topaz Av. & Main St.	TS	1	1	0	1	1	0	1	2	1	1	2	0	17.6	23.1	B	C	D

[1] When a right turn is designated, the lane can either be striped or unstriped. To function as a right turn lane there must be sufficient width for right turning vehicles to travel outside the through lanes.

L = Left; T = Through; R = Right; > = Right-Turn Overlap Phasing; >> = Free-Right Turn Lane; d= Defacto Right Turn Lane

[2] Per the Highway Capacity Manual (6th Edition), overall average intersection delay and level of service are shown for intersections with a traffic signal or all way stop control. For intersections with cross street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown. HCM delay reported in seconds.

[3] CSS = Cross-street Stop; TS = Traffic Signal

3.10 QUEUING ANALYSIS

3.10.1 ARTERIAL ANALYSIS

A queuing analysis was performed for US Highway 395 from Luna Road to Joshua Street to assess vehicle queues along the roadways. Queuing analysis findings are presented in Table 3-2. It is important to note that the available stacking distances are consistent with the measured turn pocket lengths. As shown in Table 3-2, there are no intersection turning movements that currently experience periodic queuing issues during the peak hours based on the 95th percentile peak hour traffic flows. Worksheets for Existing (2019) traffic conditions queuing analysis are provided in Appendix 3.4.

3.10.2 FREEWAY OFF-RAMP ANALYSIS

A queuing analysis was performed for the off-ramps at the I-15 Freeway and Main Street interchange to assess vehicle queues for the off ramps that may potentially result in deficient peak hour operations at the ramp-to-arterial intersections and may potentially "spill back" onto the I-15 Freeway mainline. Queuing analysis findings are presented in Table 3-2. It is important to note that off-ramp lengths are consistent with the measured distance between the intersection and the freeway mainline. As shown in Table 3-2, there are no off-ramp movements that are currently experiencing queuing issues during the weekday AM or weekday PM peak 95th percentile traffic flows. Worksheets for Existing (2019) traffic conditions queuing analysis are provided in Appendix 3.4.

3.11 FREEWAY FACILITY ANALYSIS

Existing (2019) mainline directional volumes for the AM and PM peak hours are provided on Exhibit 3-15. As shown in Table 3-3, the following study area freeway segments and merge/diverge ramp junctions analyzed for this study are currently operating at an unacceptable LOS (i.e., LOS E or worse) during the peak hours for Existing (2019) traffic conditions:

- I-15 Freeway Northbound, North of Main Street (#9) – LOS E PM peak hour only
- I-15 Freeway Northbound, Off-Ramp at Main Street (#12) – LOS E PM peak hour only
- I-15 Freeway Northbound, South of Main Street (#13) – LOS E PM peak hour only

Existing (2019) freeway facility analysis worksheets are provided in Appendix 3.5.

Table 3-2

Peak Hour Queuing Summary for Existing (2019) Conditions

Intersection	Movement	Available Stacking Distance (Feet)	95th Percentile Queue (Feet)		Acceptable? [1]	
			AM Peak Hour	PM Peak Hour	AM	PM
US Highway 395 & Luna Rd.	NBL	360	67	99	Yes	Yes
	NBR	455	4	31	Yes	Yes
	SBL	400	240	242	Yes	Yes
	SBR	400	24	28	Yes	Yes
US Highway 395 & Bear Valley Rd.	NBL	220	160 [2]	228 [2,3]	Yes	Yes
	SBL	230	232 [2,3]	224 [2]	Yes	Yes
US Highway 395 & Eucalyptus St.	NBL	475	23	25	Yes	Yes
	NBR	345	10	28	Yes	Yes
	SBL	440	15	30	Yes	Yes
	SBR	300	0	0	Yes	Yes
US Highway 95 & Phelan Rd./Main St.	NBL	280	128	198	Yes	Yes
	SBL	250	238	263 [2,3]	Yes	No
US Highway 395 & Poplar St.	SBL	375	3	3	Yes	Yes
US Highway 395 & Three Flags Rd.	NBL	190	45	58	Yes	Yes
	NBR	190		26	Yes	Yes
	SBL	225	41	58	Yes	Yes
	SBR	225	22	12	Yes	Yes
US Highway 395 & Joshua St.	NBL	190	24	51	Yes	Yes
	NBR	330	14	29	Yes	Yes
	SBL	220	138	101	Yes	Yes
I-15 SB Ramps & Main St.	SBL	1,750	48	122	Yes	Yes
	SBR	1,200	30	211	Yes	Yes
I-15 NB Ramps & Main St.	NBL	1,290	51	133	Yes	Yes
	NBT/R	1,200	65	342	Yes	Yes
	NBR	700	66	342	Yes	Yes

[1] Stacking Distance is acceptable if the required stacking distance is less than or equal to the stacking distance providec

[2] 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles.

[3] An additional 15 feet of stacking which is assumed to be provided in the transition for turn pockets is reflected in the stacking distance shown on this table.

Table 3-3

Freeway Facility Analysis for Existing (2019) Conditions

Freeway	Direction[1]	Mainline Segment	Lanes[2]	Volume		LOS[4]	
				AM	PM	AM	PM
I-15 Freeway	SB	North of Main St.	3	20.1	22.0	C	C
		Off-Ramp at Main St.	3	27.2	29.6	C	D
		Loop On-Ramp at Main St.	3	24.0	22.0	C	C
		On-Ramp at Main St.	3	22.4	21.2	C	C
		South of Main St.	3	20.9	19.7	C	C
		North of US Highway 395	3	16.9	17.6	B	B
		On-Ramp at US Highway 395	4	12.5	13.0	B	B
		South of US Highway 395	4	16.9	16.6	B	B
	NB	North of Main St.	3	18.3	**35.1**	C	**E**
		On-Ramp at Main St.	3	21.6	32.3	C	D
		Loop On-Ramp at Main St.	3	18.2	29.3	B	D
		Off-Ramp at Main St.	3	23.6	**38.0**	C	**E**
		South of Main St.	3	16.7	**37.7**	B	**E**
		North of US Highway 395	4	11.4	18.0	B	B
		Off-Ramp at US Highway 395	4	18.0	29.7	B	D
		South of US Highway 395	4	14.4	23.6	B	C

[1] NB = Northbound; SB = Southbound

[2] Number of lanes are in the specified direction and is based on existing conditions.

[3] Density is measured by passenger cars per mile per lane (pc/mi/ln).

[4] LOS = Level of Service

EXHIBIT 3-15: EXISTING (2019) FREEWAY MAINLINE VOLUMES



3.12 DEFICIENCIES AND RECOMMENDED IMPROVEMENTS

This section provides a summary of existing deficiencies and recommended improvements. Based on the City of Hesperia deficiency criteria discussed in Section 2.7 *Minimum Acceptable Levels of Service (LOS) and Intersection Deficiency Criteria*, the following intersections were found to be deficient. Improvements necessary to improve traffic deficiencies back to acceptable levels are also discussed below.

3.12.1 RECOMMENDED IMPROVEMENTS TO ADDRESS DEFICIENCIES AT INTERSECTIONS

The effectiveness of the proposed recommended improvements is presented in Table 3-4 for Existing (2019) traffic conditions. The intersection operations analysis worksheets for Existing (2019) traffic conditions, with improvements, are included in Appendix 3.6 of this TIA.

Recommended Improvement – US Highway 395 & Yucca Terrace Drive (#11) – The following improvements are necessary to bring the LOS back to acceptable levels:

- Add a 2nd northbound through lane.
- Add a 2nd southbound through lane.

Recommended Improvement – US Highway 395 & Poplar Street (#13) – The following improvement is necessary to bring the LOS back to acceptable levels:

- Add a 2nd southbound through lane.

3.12.2 RECOMMENDED IMPROVEMENTS TO ADDRESS QUEUING DEFICIENCIES

As shown previously in Table 3-2, there are currently no peak hour queuing issues for Existing (2019) traffic conditions. As such, no improvements have been recommended.

3.12.3 RECOMMENDED IMPROVEMENTS TO ADDRESS DEFICIENCIES ON FREEWAY FACILITIES

As shown previously in Table 3-3, there are study area freeway mainline segments and ramp junctions that currently operate at an unacceptable LOS for Existing (2019) traffic conditions. At this time, Caltrans has no fee programs or other improvement programs in place to address the deficiencies caused by development projects in the City of Hesperia (or other neighboring jurisdictions) on the SHS roadway segments. As such, no improvements have been recommended to address the Existing (2019) deficiencies on the SHS.

Table 3-4

Intersection Analysis for Existing (2019) Conditions With Improvements

#	Intersection	Traffic Control[3]	Intersection Approach Lanes[1]												Delay[2] (secs.)		Level of Service	
			Northbound			Southbound			Eastbound			Westbound						
			L	T	R	L	T	R	L	T	R	L	T	R	AM	PM	AM	PM
11	US Highway 395 & Yucca Terrace Dr.																	
	- Without Improvements	CSS	0	1	0	0	1	0	0	1	0	0	1	0	22.7	**77.2**	C	**F**
	- With Improvements	CSS	0	**2**	0	0	**2**	0	0	1	0	0	1	0	13.5	32.5	B	D
13	US Highway 395 & Poplar St.																	
	- Without Improvements	CSS	0	2	0	1	1	0	0	0	0	1	0	1	**69.6**	**85.0**	**F**	**F**
	- With Improvements	CSS	0	2	0	1	**2**	0	0	0	0	1	0	1	19.4	24.3	C	C

[1] When a right turn is designated, the lane can either be striped or unstriped. To function as a right turn lane there must be sufficient width for right turning vehicles to travel outside the through lanes.

L = Left; T = Through; R = Right; **1** = Improvement

[2] Per the Highway Capacity Manual (6th Edition), overall average intersection delay and level of service are shown for intersections with a traffic signal or all way stop control. For intersections with cross street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown.

[3] CSS = Cross-street Stop

4 PROJECTED FUTURE TRAFFIC

This section presents the traffic volumes estimated to be generated by the Project, as well as the Project's trip assignment, onto the study area roadway network. The proposed Project consists of the following uses:

- 2,361,648 square feet of High-Cube Fulfillment Center use (65% of the total square footage of Building 1 and Building 2)
- 1,383,781 square feet of General Light Industrial use; 1,271,656 square feet within Building 1 and Building 2 (35% of the total square footage of Building 1 and Building 2) and 112,125 square feet within Building 3

The Project is anticipated to be developed within a single phase with an anticipated opening year of 2021. Regional access to the Project site is available from the I-15 Freeway at Main Street interchange. The Project is located north of Phelan Road and west of US Highway 395 in the City of Hesperia. Vehicular and truck traffic access will be provided via the following driveways:

- Driveway 1 via Phelan Road – Right-In/Right-Out/Left-Out access for both passenger cars and trucks
- Driveway 2 via Yucca Terrace Drive – Full access for both passenger cars and trucks
- Driveway 3 via Yucca Terrace Drive – Full access for both passenger cars and trucks
- Driveway 4 via Phelan Road – Full access for both passenger cars and trucks

4.1 PROJECT TRIP GENERATION

Trip generation represents the amount of traffic that is attracted and produced by a development, and is based upon the specific land uses planned for a given project. In order to develop the traffic characteristics of the proposed project, the trip generation rates used for this analysis are based upon information collected by the ITE as provided in their Trip Generation Manual, 10th Edition, 2017 and the High-Cube Warehouse Trip Generation Study (WSP, January 29, 2019). (3) (4) Trip generation rates for the Project are shown in Table 4-1. The trip generation summary illustrating daily, and peak hour trip generation estimates for the proposed Project in actual vehicles and PCE are shown in Table 4-2.

Table 4-1

Project Trip Generation Rates

Land Use[1]	Units[2]	ITE LU Code	AM Peak Hour			PM Peak Hour			Daily
			In	Out	Total	In	Out	Total	
Actual Vehicle Trip Generation Rates									
General Light Industrial[5]	TSF	110	0.616	0.084	0.700	0.082	0.548	0.630	4.960
Passenger Cars (78.6%)			0.484	0.066	0.550	0.064	0.431	0.495	3.899
2-Axle Trucks (8.0%)			0.049	0.007	0.056	0.007	0.044	0.050	0.397
3-Axle Trucks (3.9%)			0.024	0.003	0.027	0.003	0.021	0.025	0.193
4-Axle+ Trucks (9.5%)			0.059	0.008	0.067	0.008	0.052	0.060	0.471
High-Cube Fulfillment Center Warehouse[4]	TSF	--	0.094	0.028	0.122	0.046	0.119	0.165	2.129
Passenger Cars (AM-84.3%; PM-87.2%; Daily-82.2%)			0.079	0.024	0.103	0.040	0.104	0.144	1.750
2-4 Axle Trucks (AM-6.3%; PM-6.4%; Daily-7.6%)			0.006	0.002	0.008	0.003	0.008	0.011	0.162
5+-Axle Trucks (AM-9.4%; PM-6.4%; Daily-10.2%)			0.008	0.003	0.011	0.003	0.007	0.010	0.217
Passenger Car Equivalent (PCE) Trip Generation Rates[5]									
General Light Industrial[5]	TSF	110	0.616	0.084	0.700	0.082	0.548	0.630	4.960
Passenger Cars (78.6%)			0.484	0.066	0.550	0.064	0.431	0.495	3.899
2-Axle Trucks (8.0%) (PCE = 1.5)			0.074	0.010	0.084	0.010	0.066	0.076	0.595
3-Axle Trucks (3.9%) (PCE = 2.0)			0.048	0.007	0.055	0.006	0.043	0.049	0.387
4-Axle+ Trucks (9.5%) (PCE = 3.0)			0.176	0.024	0.200	0.023	0.156	0.180	1.414
High-Cube Fulfillment Center Warehouse[4]	TSF	--	0.094	0.028	0.122	0.046	0.119	0.165	2.129
Passenger Cars (AM-84.3%; PM-87.2%; Daily-82.2%)			0.079	0.024	0.103	0.040	0.104	0.144	1.750
2-4 Axle Trucks (AM-6.3%; PM-6.4%; Daily-7.6%) (PCE = 2.0)			0.012	0.004	0.016	0.006	0.016	0.022	0.324
5+-Axle Trucks (AM-9.4%; PM-6.4%; Daily-10.2%) (PCE = 3.0)			0.025	0.008	0.033	0.008	0.022	0.030	0.651

[1] Trip Generation Source: Institute of Transportation Engineers (ITE), Trip Generation Manual, Tenth Edition (2017).

[2] TSF = thousand square feet

[3] Vehicle mix source: ITE Trip Generation Handbook, 2017. Truck Mix Source: City of Fontana Truck Trip Generation Study (Land Use 150), August 2003.

[4] Vehicle Mix Source: High Cube Warehouse Trip Generation Study, WSP, January 29, 2019.
Inbound and outbound split source: High Cube Warehouse Vehicle Trip Generation Analysis, October 2016, ITE.

[5] Vehicle Mix Source: Truck mix (by axle type) source from City of Fontana Truck Trip Generation Study (August 2003). PCE rates are per SBCTA.

Table 4-2

Project Trip Generation Summary

Land Use	Quantity	Units[1]	AM Peak Hour In	AM Peak Hour Out	AM Peak Hour Total	PM Peak Hour In	PM Peak Hour Out	PM Peak Hour Total	Daily
Project Trip Generation Summary (Actual)									
High-Cube Fulfillment Center Warehouse (65% of Bldg. 1, 2)	2,361.648	TSF							
Passenger Cars:			187	56	243	95	245	340	4,134
Truck Trips:									
2-4 axle:			15	4	19	7	19	26	384
5+-axle:			20	6	26	7	17	24	512
- Net Truck Trips			35	10	45	14	36	50	896
FULFILLMENT CENTER TOTAL NET TRIPS (Actual Vehicles) [2]			**222**	**66**	**288**	**109**	**281**	**390**	**5,030**
General Light Industrial (35% of Bldg. 1, 2)	1,271.656	TSF							
Passenger Cars:			616	84	700	82	548	630	4,958
Truck Trips:									
2-axle:			63	9	72	8	56	64	506
3-axle:			31	4	35	4	27	31	246
4+-axle:			74	10	84	10	66	76	600
- Net Truck Trips			168	23	191	22	149	171	1,352
GENERAL LIGHT INDUSTRIAL TOTAL NET TRIPS (Actual Vehicles) [2]			**784**	**107**	**891**	**104**	**697**	**801**	**6,310**
General Light Industrial (Bldg. 3)	112.125	TSF							
Passenger Cars:			54	7	61	7	48	55	438
Truck Trips:									
2-axle:			6	1	7	1	5	6	44
3-axle:			3	0	3	0	2	2	22
4+-axle:			7	1	8	1	6	7	54
- Net Truck Trips			16	2	18	2	13	15	120
GENERAL LIGHT INDUSTRIAL TOTAL NET TRIPS (Actual Vehicles) [2]			**70**	**9**	**79**	**9**	**61**	**70**	**558**
Passenger Car Total			**857**	**147**	**1,004**	**184**	**841**	**1,025**	**9,530**
Truck Total (Actual Vehicles)			**219**	**35**	**254**	**38**	**198**	**236**	**2,368**
TOTAL PROPOSED PROJECT (Actual Vehicles)			**1,076**	**182**	**1,258**	**222**	**1,039**	**1,261**	**11,898**
Project Trip Generation Summary (PCE)									
High-Cube Fulfillment Center Warehouse (65% of Bldg. 1, 2)	2,361.648	TSF							
Passenger Cars:			187	56	243	95	245	340	4,134
Truck Trips:									
2-4 axle:			29	9	38	15	37	52	766
5+-axle:			60	18	78	20	51	71	1,538
- Net Truck Trips			89	27	116	35	88	123	2,304
FULFILLMENT CENTER TOTAL NET TRIPS (PCE) [2]			**276**	**83**	**359**	**130**	**333**	**463**	**6,438**
General Light Industrial (35% of Bldg. 1, 2)	1,271.656	TSF							
Passenger Cars:			616	84	700	82	548	630	4,958
Truck Trips:									
2-axle:			94	13	107	12	84	96	758
3-axle:			61	8	69	8	54	62	492
4+-axle:			223	30	253	30	199	229	1,798
- Net Truck Trips			378	51	429	50	337	387	3,048
GENERAL LIGHT INDUSTRIAL TOTAL NET TRIPS (PCE) [2]			**994**	**135**	**1,129**	**132**	**885**	**1,017**	**8,006**
General Light Industrial (Bldg. 3)	112.125	TSF							
Passenger Cars:			54	7	61	7	48	55	438
Truck Trips:									
2-axle:			8	1	9	1	7	8	68
3-axle:			5	1	6	1	5	6	44
4+-axle:			20	3	23	3	18	21	158
- Net Truck Trips			33	5	38	5	30	35	270
GENERAL LIGHT INDUSTRIAL TOTAL NET TRIPS (PCE) [2]			**87**	**12**	**99**	**12**	**78**	**90**	**708**
Passenger Car Total			**857**	**147**	**1,004**	**184**	**841**	**1,025**	**9,530**
Truck Total (PCE)			**500**	**83**	**583**	**90**	**455**	**545**	**5,622**
TOTAL PROPOSED PROJECT (PCE)			**1,357**	**230**	**1,587**	**274**	**1,296**	**1,570**	**15,152**

[1] TSF = thousand square feet

[2] TOTAL NET TRIPS = Passenger Cars + Net Truck Trips.

For purposes of this analysis, the following ITE land use codes and vehicle mixes have been utilized for the proposed Project:

- High-Cube Fulfillment Center Warehouse has been used to derive site specific trip generation estimates for up to 2,361,648 square feet of the proposed Project. The ITE Trip Generation Manual (2017) has trip generation rates for high-cube fulfillment center use (ITE land use code 155), however, these rates are unreliable because they are based on limited data (i.e., one to two surveyed sites) and the ITE Trip Generation Manual recommends the use of local data sources where available. As such, the trip-generation statistics published in the High-Cube Warehouse Trip Generation Study (WSP, January 29, 2019) which was commissioned by the Western Riverside Council of Governments (WRCOG) in support of the Transportation Uniform Mitigation Fee (TUMF) update, has been utilized for the high-cube fulfillment center use. The WSP trip generation rates were published in January 2019 and are based on data collected at 11 local high-cube fulfillment center sites. However, the WSP study does not include a split for inbound and outbound vehicles, as such, the inbound and outbound splits per the ITE High-Cube Warehouse Vehicle Trip Generation Analysis (October 2016) have been utilized. (10)
- ITE land use code 110 (General Light Industrial) has been used to derive site specific trip generation estimates for up to 1,383,781 square feet of the proposed Project. The ITE Trip Generation Manual includes very limited data regarding the types of vehicles that are generated for general light industrial uses (passenger cars and various sizes of trucks). As such, data regarding the vehicle mix has been obtained from a separate report; the City of Fontana's Truck Trip Generation Study (August 2003) for the general light industrial uses proposed as part of the Project. The "Light Industrial" vehicle mix data has been utilized: 8.0% 2-axle trucks, 3.9% 3-axle trucks, and 9.5% 4+-axle trucks (total of 21.4% trucks). (11)

As shown in Table 4-1, refinements to the raw trip generation estimates have been made to provide a more detailed breakdown of trips between passenger cars and trucks. Trip generation for heavy trucks was further broken down by truck type (or axle type). The total truck percentage is comprised of 3 different truck types: 2-axle, 3-axle, and 4+-axle trucks for General Light Industrial and 2 different truck types: 2-4-axle and 5+-axle for High-Cube Fulfillment Center Warehouse use. PCE factors were applied to the trip generation rates for heavy trucks (large 2-axles, 3-axles, 4+-axles). PCEs allow the typical "real-world" mix of vehicle types to be represented as a single, standardized unit, such as the passenger car, to be used for the purposes of capacity and level of service analyses. The PCE factors are consistent with the recommended PCE factors in Appendix B of the San Bernardino County Congestion Management Program (CMP) (2016 Update). (9)

As shown in Table 4-2, the proposed Project is anticipated to generate a total of 11,898 actual vehicle trip-ends per day, with 1,258 AM peak hour trips and 1,261 PM peak hour trips. Consistent with the City's traffic study guidelines, the peak hour operations analysis has been conducted using PCE volumes. The proposed Project is anticipated to generate a total of 15,152 PCE trip-ends per day, 1,587 PCE AM peak hour trips and 1,570 PCE PM peak hour trips, as shown in Table 4-2.

4.2 PROJECT TRIP DISTRIBUTION

Trip distribution is the process of identifying the probable destinations, directions, or traffic routes that will be utilized by Project traffic. The potential interaction between the planned land uses and surrounding regional access routes are considered to identify the route where the Project traffic would distribute.

The Project trip distribution was developed based on anticipated travel patterns to and from the Project site for both passenger cars and truck traffic. The Project trip distribution patterns have been developed based on the anticipated travel patterns for the warehousing trucks. For both passenger cars and trucks, the Project trip distribution was developed based on an understanding of existing travel patterns in the area, the geographical location of the site, and the site's proximity to the regional arterial and state highway system.

The Project truck trip distribution pattern is graphically depicted on Exhibit 4-1. The Project passenger car trip distribution pattern is graphically depicted on Exhibit 4-2. Each of these distribution patterns was reviewed by the City of Hesperia as part of the traffic study scoping process (see Appendix 1.1).

4.3 MODAL SPLIT

The traffic reducing potential of public transit, walking, or bicycling have not been considered in this TIA. Essentially, the traffic projections are "conservative" in that these alternative travel modes might be able to reduce the forecasted traffic volumes (employee trips only).

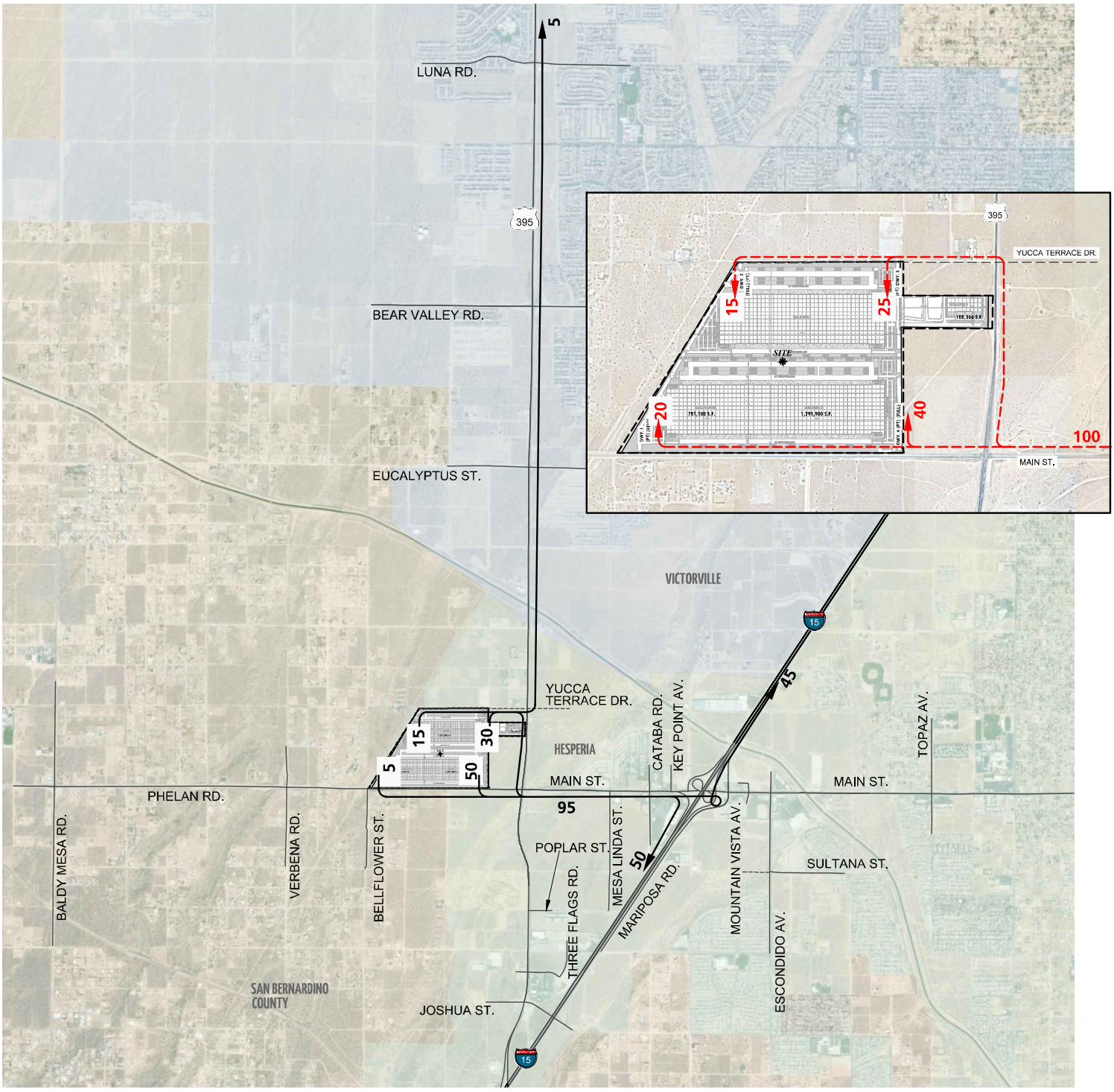
4.4 PROJECT TRIP ASSIGNMENT

The assignment of traffic from the Project area to the adjoining roadway system is based upon the Project trip generation, trip distribution, and the arterial highway and local street system improvements that would be in place by the time of initial occupancy of the Project. Based on the identified Project traffic generation and trip distribution patterns, Project ADT and peak hour intersection turning movement volumes in PCE are shown on Exhibits 4-3 and 4-4, respectively.

4.5 BACKGROUND TRAFFIC

Future year traffic forecasts have been based upon two years of background (ambient) growth at 2% per year for 2021 traffic conditions. The total ambient growth is 4.04% for 2021 traffic conditions (growth of 2 percent per year, compounded over two years or $1.02^{2\ years}$). This ambient growth factor is added to existing traffic volumes to account for area-wide growth not reflected by cumulative development projects. Ambient growth has been added to daily and peak hour traffic volumes on surrounding roadways. Ambient growth has been added to daily and peak hour traffic volumes on surrounding roadways, in addition to traffic generated by the development of future projects that have been approved but not yet built and/or for which development applications have been filed and are under consideration by governing agencies.

EXHIBIT 4-1: PROJECT (TRUCK) TRIP DISTRIBUTION



LEGEND:

10 = PERCENT TO/FROM PROJECT

= OUTBOUND

= INBOUND

N

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URBAN CROSSROADS

EXHIBIT 4-2: PROJECT (PASSENGER CAR) TRIP DISTRIBUTION

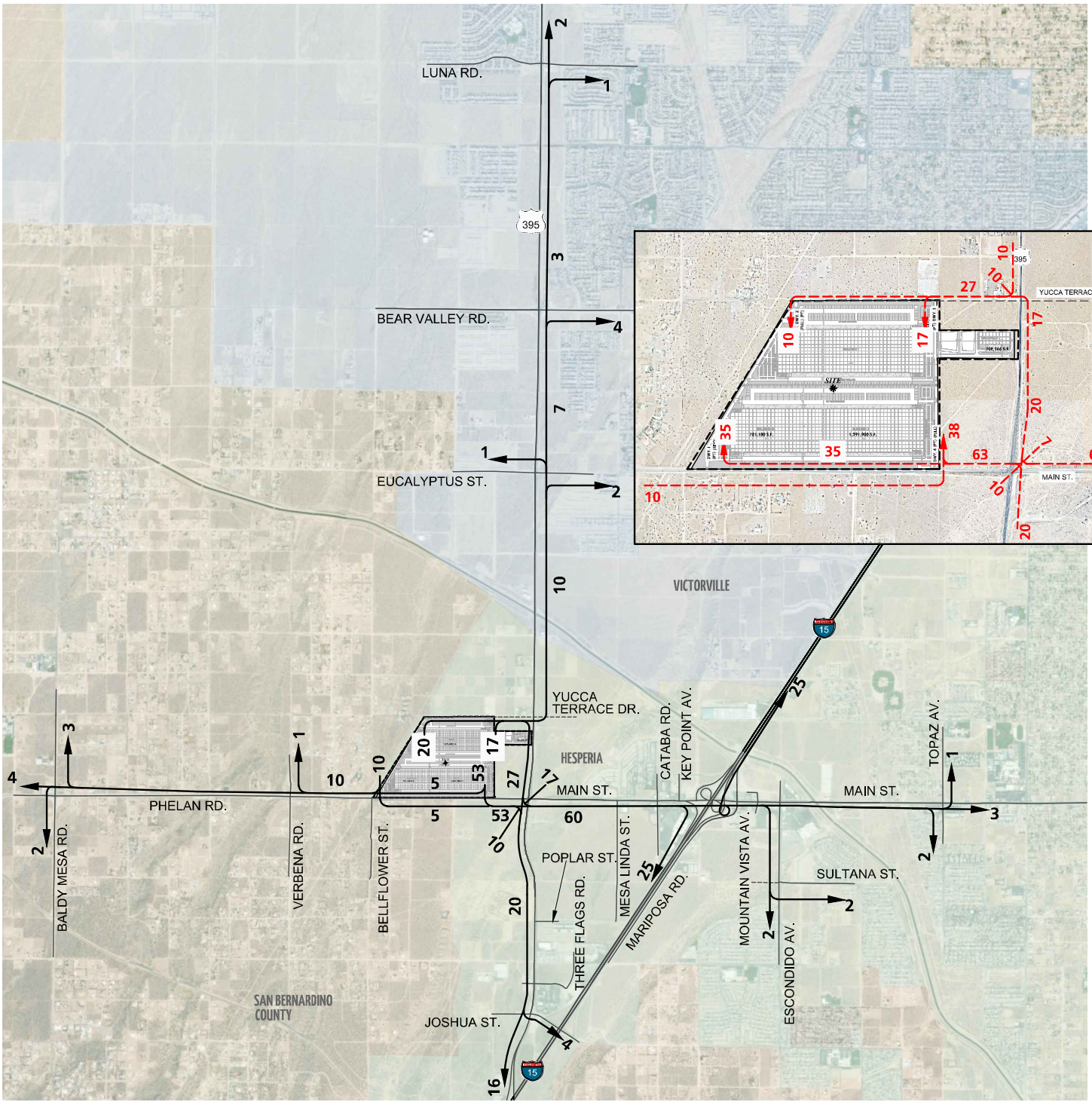
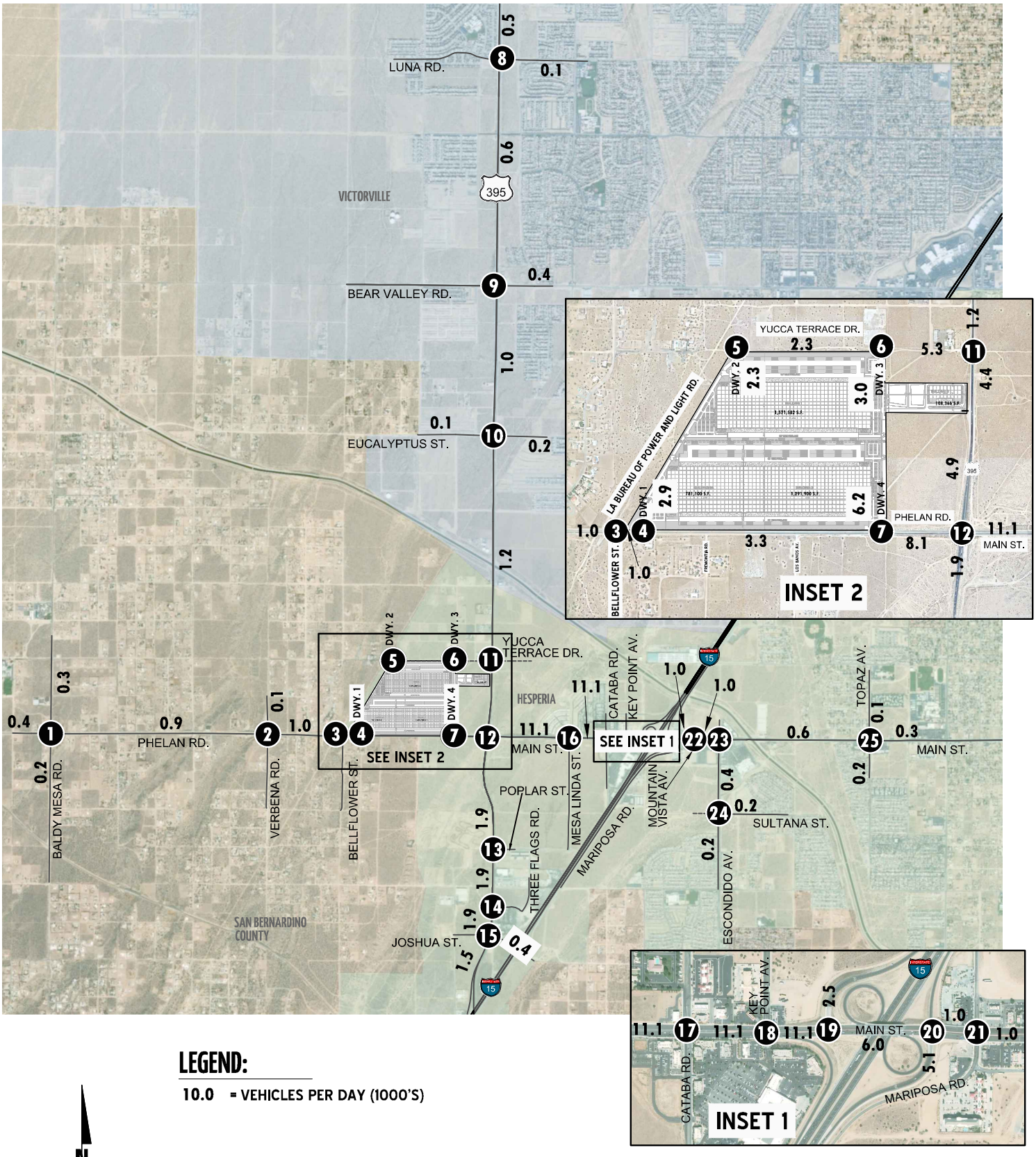


EXHIBIT 4-3: PROJECT ONLY AVERAGE DAILY TRAFFIC (ADT) (IN PCE)



LEGEND:

10.0 = VEHICLES PER DAY (1000'S)

N

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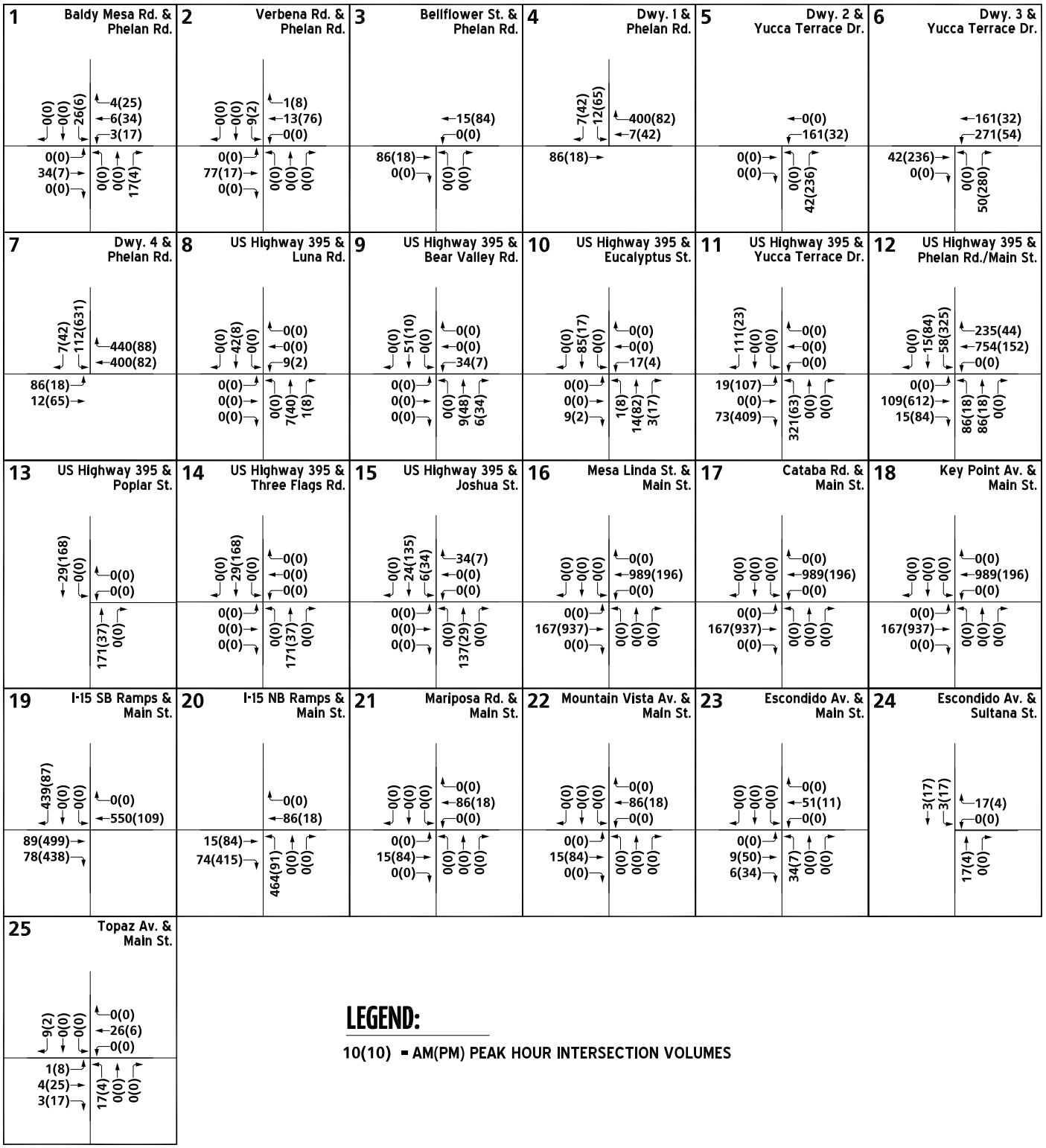
EXHIBIT 4-4: PROJECT ONLY TRAFFIC VOLUMES (IN PCE)



LEGEND:

10(10) = AM(PM) PEAK HOUR INTERSECTION VOLUMES

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The 2.0 percent annual growth rate is intended to capture non-specific ambient traffic growth. Conservatively, the TIA estimates area-wide traffic growth, then adds traffic generated by other known or probable related projects. These related projects are at least in part already accounted for in the assumed annual 2.0 percent ambient growth in traffic noted above; and in some instances, these related projects would likely not be implemented and operational within the 2021 Opening Year Cumulative time frame assumed for the Project. The resulting traffic growth rate used in the TIA (2.0 percent compounded annual ambient growth plus traffic generated by related projects) would therefore tend to overstate rather than understate background cumulative traffic deficiencies under 2021 traffic conditions.

The currently adopted Southern California Association of Governments (SCAG) 2016 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) (April 2016) growth forecasts for the City of Hesperia identifies projected growth in population of 91,5100 in 2012 to 129,100 in 2040, or a 41.7 percent increase over the 28-year period. The change in population equates to roughly a 1.25 percent growth rate, compounded annually. Similarly, growth over the same 28-year period in households is projected to increase by 48.1 percent, or 1.41 percent annual growth rate. Finally, growth in employment over the same 28-year period is projected to increase by 89.9 percent, or a 2.32 percent annual growth rate.

Therefore, the use of an annual growth rate of 2.0 percent would appear to conservatively approximate the anticipated regional growth in traffic volumes in the City of Hesperia, especially when considered along with the addition of Project-related traffic and traffic generated by other known development projects. As such, the growth in traffic volumes assumed in this TIA would tend to overstate as opposed to understate the potential deficiencies to traffic and circulation.

4.6 CUMULATIVE DEVELOPMENT TRAFFIC

California Environmental Quality Act (CEQA) guidelines require that other reasonably foreseeable development projects which are either approved or being processed concurrently in the study area also be included as part of a cumulative analysis scenario. A cumulative project list was developed for the purposes of this analysis through consultation with planning and engineering staff from the City of Hesperia, City of Victorville, and County of San Bernardino. The cumulative project list includes known and foreseeable projects that are anticipated to contribute traffic to the study area intersections.

Where applicable, cumulative projects anticipated to contribute measurable traffic (i.e. 50 or more peak hour trips) to study area intersections have been manually added to the study area network to generate Opening Year Cumulative (2021) forecasts. In other words, this list of cumulative development projects has been reviewed to determine which projects would likely contribute measurable traffic through the study area intersections (e.g., those cumulative projects in close proximity to the proposed Project). For the purposes of this analysis, the cumulative projects that were determined to affect one or more of the study area intersections are shown on Exhibit 4-5, listed in Table 4-3, and have been considered for inclusion.

EXHIBIT 4-5: CUMULATIVE DEVELOPMENT LOCATION MAP

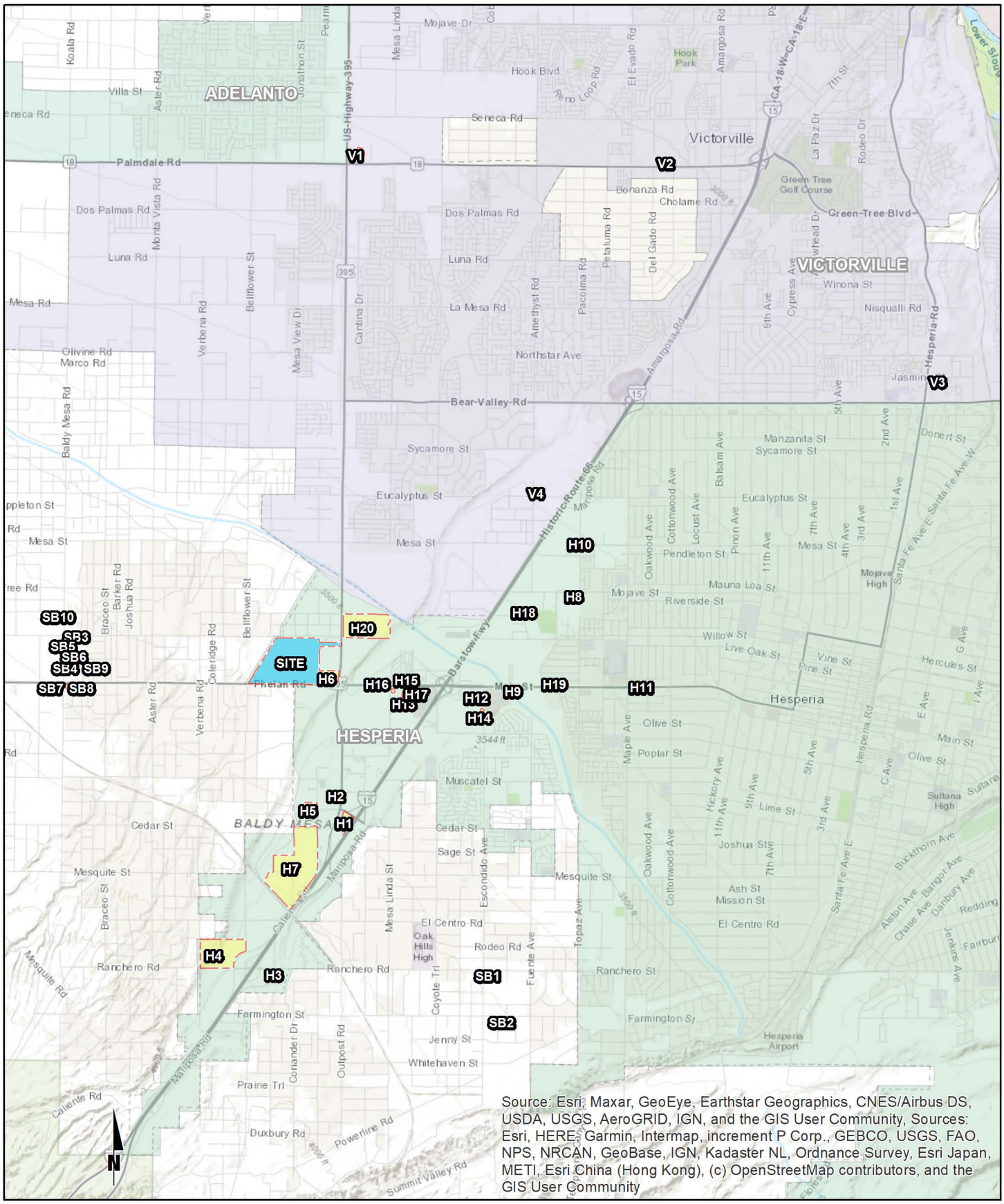

Table 4-3

Cumulative Development Land Use Summary

#	Case No.	Land Use	Quantity	Units[1]
City of Hesperia				
H1	CUP12-10189: SEC of Outpost Rd. & Joshua St.	Travel Center	12.271	TSF
H2	CUP15-00009: SWC of US-395 & Three Flags Rd.	Gas Station w/ Convenience Market and Car Wash	12	VFP
		High-Turnover Sit-Down Restaurant	1.300	TSF
		Fast Food w/ Drive Thru	3.000	TSF
H3	CUP16-00007: SEC of Mariposa Rd. & Ranchero Rd.	Gas Station w/ Convenience Market and Car Wash	8	VFP
		Fast Food w/ Drive Thru	2.546	TSF
H4	CUPE16-00002: SEC of Verbena Rd. & Rodeo St.	Hotel	212	RM
		Quality Restaurant	11.600	TSF
		Golf Course	9	Holes
H5	SPR16-00016: south of Muscatel St., west of Caliente Rd.	Manufacturing	75.000	TSF
H6	CUP18-00003	Gas Station	9	VFP
		High-Turnover Sit-Down Restaurant	4.188	TSF
H7	Hesperia Commerce Center	High-Cube Fulfillment Center	4382.800	TSF
H8	TTE 19-00007 (TT 17916)	Single Family Detached Residential	177	DU
H9	TPM 19-00001	Shopping Center	13.0	Acres
H10	TTE 16-00002 (TT 17243)	Single Family Detached Residential	125	DU
H11	SPR 19-00005	Shopping Center	4.889	TSF
H12	Kaiser Medical Office	Medical Office	54.168	TSF
H13	Hesperia West	Shopping Center	34.675	TSF
		Department Store	40.400	TSF
		Furniture Store	38.000	TSF
		Walk in Bank	4.500	TSF
		High-Turnover Sit-Down Restaurant	5.926	TSF
		Fast Food w/ Drive Thru	3.260	TSF
H14	Hesperia Walmart	Fast Food w/ Drive Thru	2.500	TSF
H15	SPR 16-00011	Shopping Center	4.377	TSF
H16	CUP 16-00011	Shopping Center	5.423	TSF
H17	High Desert Gateway West I & II	Shopping Center	3.000	TSF
		Shopping Center	9.450	TSF
H18	SPRE16-00004 ext	Senior Adult Housing - Detached	96	DU
H19	SPR18-00002	Medical Office	8.400	TSF
H20	US Cold Storage	High-Cube Cold Storage Warehouse	1012.816	TSF
County of San Bernardino				
SB1	P201400514/RMC PM 19030	Gasoline/Service Station w/Conven. Mkt.	8	VFP
		High Turnover (Sit-Down) Restaurant	2.700	TSF
SB2	P201600125/TT	Assisted Living	12	BEDS
SB3	P201800466/CUP	Church	17.355	TSF
		Recreation Area with Restroom	0.5850	TSF
SB4	P201200482/CUP	General Office/Retail	20.4500	TSF
		Fast Food w/ Drive Thru	2.850	TSF
SB5	P201400478/CUP	Church	3.996	TSF

Table 4-3

Cumulative Development Land Use Summary

#	Case No.	Land Use	Quantity	Units[1]
SB6	P201400342/PREAPPDR PM 19590	Commercial Retail	881.285	TSF
SB7	P201600418/CUP	Church	1.440	TSF
SB8	P201400220/CUP	Church	2.3	Acres
SB9	P201300184/PREAPPDR	Commercial Retail	70.000	TSF
SB10	P201500257/PREAPPDR	Commercial Retail	9.100	TSF
City of Victorville				
V1	ADMN19-00068	Shopping Center	4.300	TSF
V2	ADMN19-00058	Church	2.800	TSF
V3	PLAN19-00023	Medical Office	16.500	TSF
V4	PLAN19-00020	Single Family Detached Residential	168	DU

[1] TSF = Thousand Square Feet; VFP = Vehicle Fueling Positions; RM = Room; DU = Dwelling Units

Any other cumulative projects located beyond the study area that are not expected to contribute measurable traffic to study area intersections have not been included since the traffic would dissipate due to the distance from the Project site and study area intersections. Any additional traffic generated by other projects not on the cumulative projects list is accounted for through background ambient growth factors that have been applied to the peak hour volumes at study area intersections as discussed in Section 4.5 *Background Traffic*. Cumulative only ADT and peak hour traffic volumes are shown on Exhibits 4-6 and 4-7, respectively.

4.7 TRAFFIC FORECASTS

To provide a comprehensive assessment of the deficiencies, two types of analyses, "buildup" and "buildout", were performed in support of this work effort. The "buildup" method was used to approximate E+P and Opening Year Cumulative (2021) traffic conditions and is intended to identify the near-term deficiencies on both the existing and planned near-term circulation system. The Opening Year Cumulative (2021) traffic conditions includes background traffic, traffic generated by other cumulative development projects within the study area, and traffic generated by the proposed Project. The "buildout" method was utilized for Horizon Year traffic conditions and is based on the regional traffic model for 2040 traffic conditions.

4.8 NEAR-TERM TRAFFIC CONDITIONS

The "buildup" approach combines existing traffic counts with a background ambient growth factor to forecast Opening Year Cumulative (2021) traffic conditions. An ambient growth factor of 2.0% per year has been used to account for background (area-wide) traffic increases that occur over time up to the year 2021 from the year 2019 (2.0 percent per year growth rate, compounded annually over a 2-year period). Traffic volumes generated by the Project are then added to assess the near-term traffic conditions. The 2021 roadway networks are similar to the Existing conditions roadway network, with the exception of future driveways proposed to be developed by the Project.

The near-term traffic analyses include the following traffic conditions, with the various traffic components:

- Opening Year Cumulative (2021) Without Project
    - Existing 2019 counts
    - Ambient growth (4.04%)
    - Cumulative Development traffic
- Opening Year Cumulative (2021) With Project
    - Existing 2019 counts
    - Ambient growth (4.04%)
    - Cumulative Development traffic
    - Project traffic

EXHIBIT 4-6: CUMULATIVE ONLY AVERAGE DAILY TRAFFIC (ADT) (IN PCE)

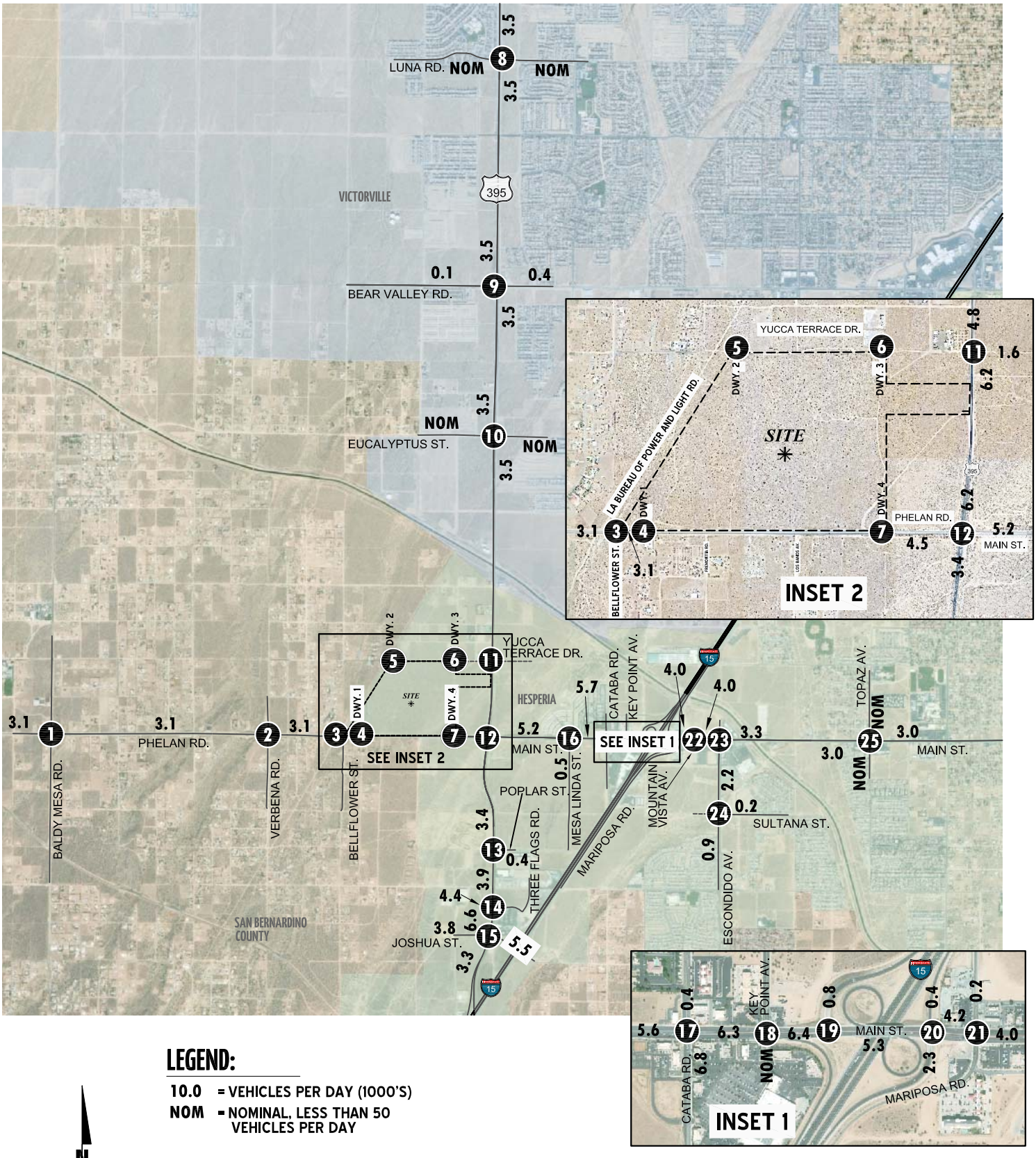

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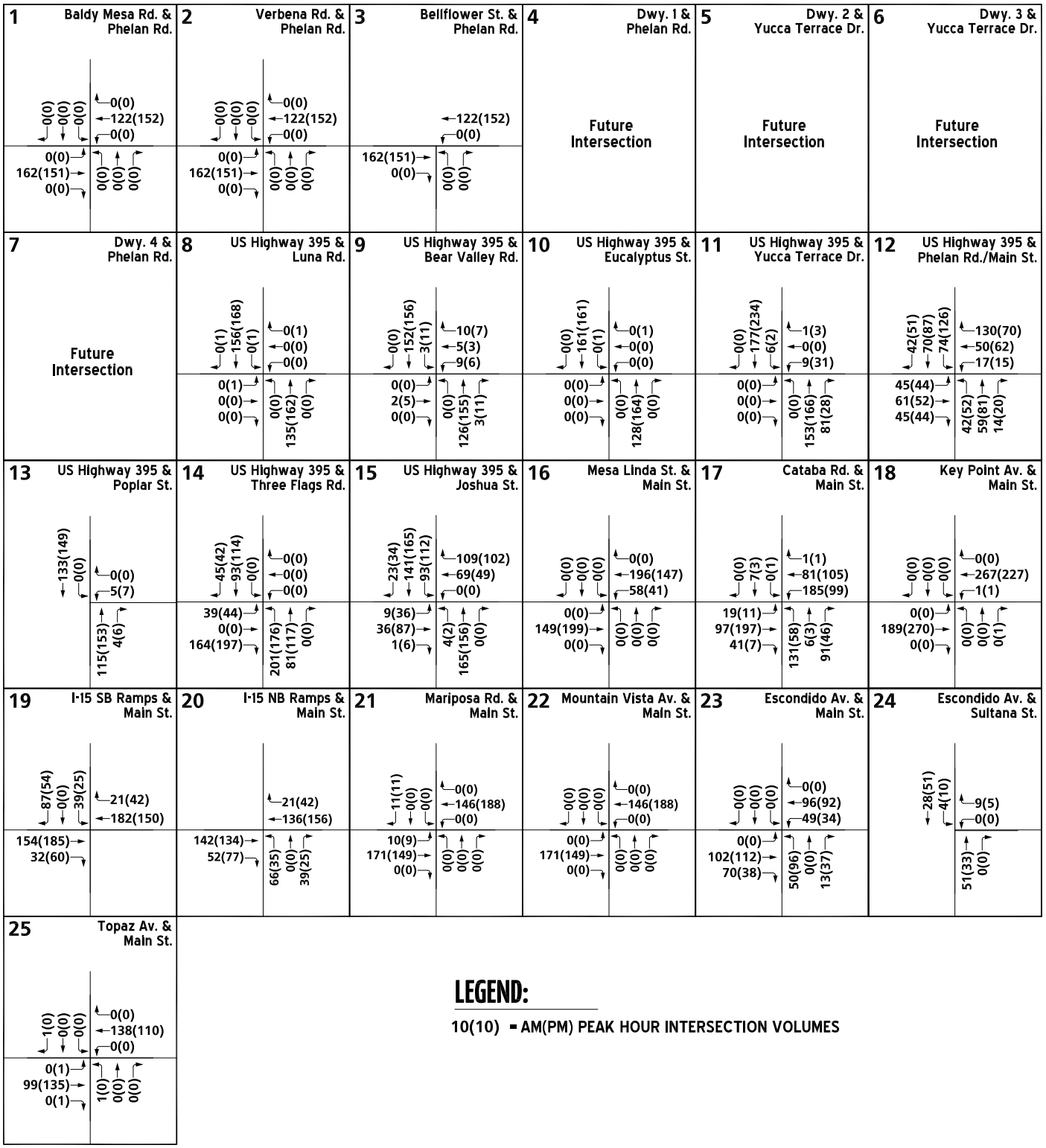
EXHIBIT 4-7: CUMULATIVE ONLY TRAFFIC VOLUMES (IN PCE)



4.9 HORIZON YEAR (2040) CONDITIONS

Traffic projections for Horizon Year (2040) with Project conditions were derived from the SBTAM modified to represent buildout of the City of Hesperia. The SBTAM uses an AM peak period-to-peak hour factor of 0.35 and a PM peak period-to-peak hour factor of 0.27. These factors represent the relationship of the highest single AM peak hour to the modeled 3-hour AM peak period (an even distribution would result in a factor of 0.33) and the highest single PM peak hour to the modeled 4-hour PM peak period (an even distribution would result in a factor of 0.25).

In some instances, the traffic model zone structure is not designed to provide accurate turning movements along arterial roadways unless refinement and reasonableness checking is performed. Horizon Year (2040) turning volumes were compared to Opening Year Cumulative (2021) volumes in order to ensure a minimum growth as a part of the refinement process, where applicable. The minimum growth includes any additional growth between Opening Year Cumulative (2021) and Horizon Year traffic conditions that is not accounted for by the traffic generated by cumulative development projects and the ambient growth between Existing and Opening Year Cumulative (2021) traffic conditions. The initial estimate of the future Horizon Year (2040) peak hour turning movements were then reviewed by Urban Crossroads for reasonableness at intersections where model results showed unreasonable turning movements. The initial raw model estimates were adjusted to achieve flow conservation (where applicable), reasonable growth, and reasonable diversion between parallel routes. Post-processing worksheets for Horizon Year with Project traffic conditions are provided in Appendix 4.1.

The Horizon Year (2040) conditions analysis will be utilized to determine if improvements funded through regional transportation mitigation fee programs, such as the City's DIF program or other approved funding mechanisms, can accommodate the long-range cumulative traffic at the target LOS identified by the City of Hesperia (lead agency). If the planned and funded improvements can provide the target LOS, then the Project's payment into established fee programs will be considered as cumulative improvements. Other improvements needed beyond the "funded" improvements (such as localized improvements to non-DIF facilities) are identified as such.

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5 E+P TRAFFIC ANALYSIS

This section discusses the traffic forecasts for Existing plus Project (E+P) conditions and the resulting peak hour intersection operations, traffic signal warrant, queuing, and freeway facility operations analyses.

5.1 ROADWAY IMPROVEMENTS

The lane configurations and traffic controls assumed to be in place for E+P conditions are consistent with those shown previously on Exhibit 3-1, with the exception of the following:

- Project driveways and those facilities assumed to be constructed by the Project to provide site access are also assumed to be in place for E+P conditions only (e.g., intersection and roadway improvements at the Project's frontage and driveways).

5.2 E+P TRAFFIC VOLUME FORECASTS

This scenario includes Existing traffic volumes plus Project traffic. The ADT volumes and weekday AM and PM peak hour intersection turning movement volumes which can be expected for E+P traffic conditions are shown on Exhibits 5-1 and 5-2, respectively.

5.3 INTERSECTION OPERATIONS ANALYSIS

E+P peak hour traffic operations have been evaluated for the study area intersections based on the analysis methodologies presented in Section 2 *Methodologies* of this TIA. The intersection analysis results are summarized in Table 5-1, which indicates that with the addition of Project traffic, the following additional study area intersection is anticipated to operate at unacceptable LOS for E+P traffic conditions, in addition to the intersections previously identified under Existing (2019) traffic conditions:

- US Highway 395 & Phelan Road/Main Street (#12) – LOS F AM and PM peak hours

A summary of the peak hour intersection LOS for E+P traffic conditions is shown on Exhibit 5-3. The intersection operations analysis worksheets for E+P traffic conditions are included in Appendix 5.1.

5.4 TRAFFIC SIGNAL WARRANTS ANALYSIS

The following study area intersection is anticipated to meet a traffic signal warrant for E+P traffic conditions:

- Driveway 4 & Phelan Road (#7)

A traffic signal will be constructed by the Project at the intersection of Driveway 4 & Phelan Road as part of the site adjacent Project design features. For all Project design features, see Section 1.7 *Recommendations* of this report. Driveway 4 is proposed to provide reciprocal access to both the proposed Project and future adjacent not-a-part development.

EXHIBIT 5-1: E+P AVERAGE DAILY TRAFFIC (ADT) (IN PCE)

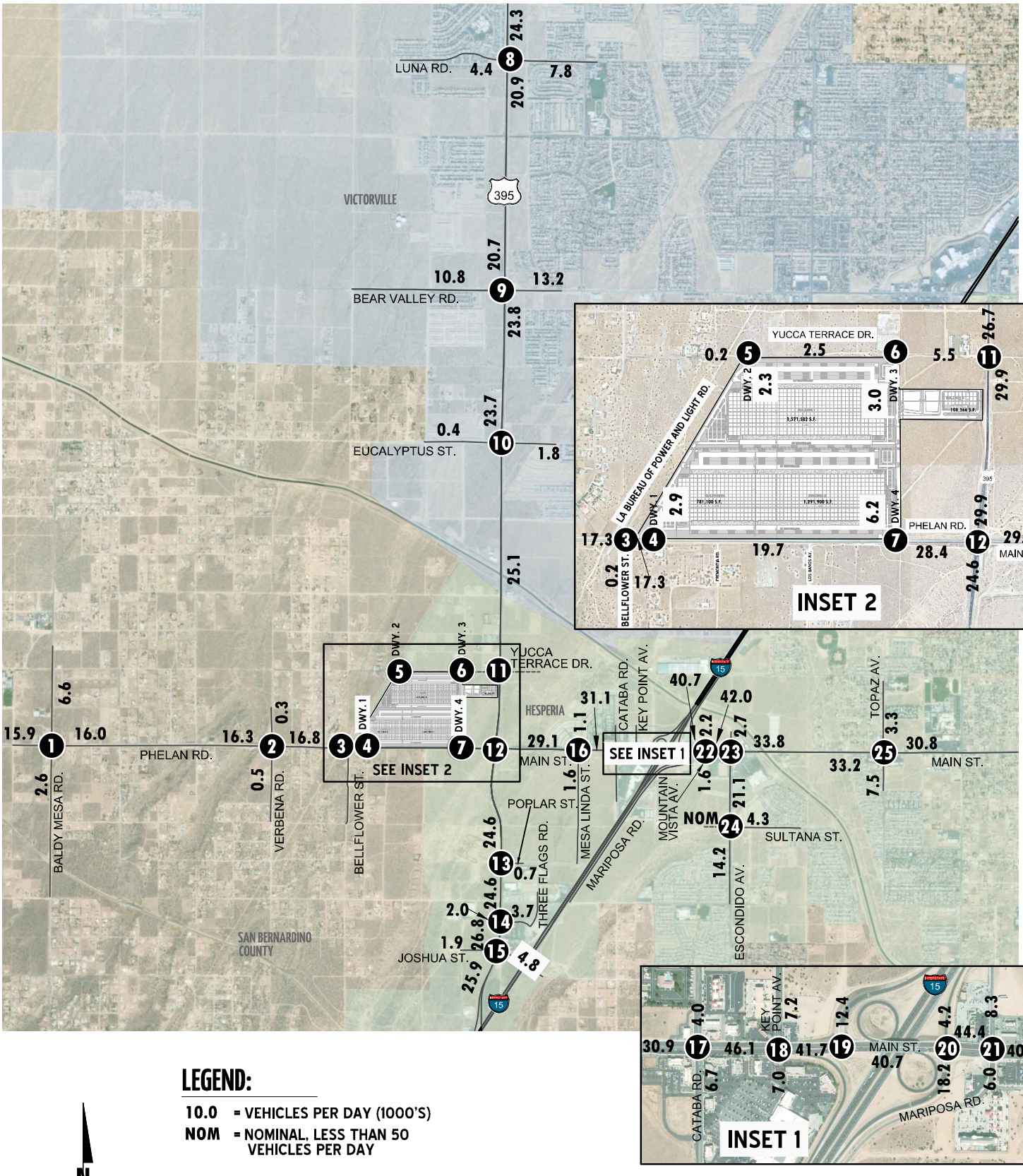


EXHIBIT 5-2: E+P TRAFFIC VOLUMES (IN PCE)

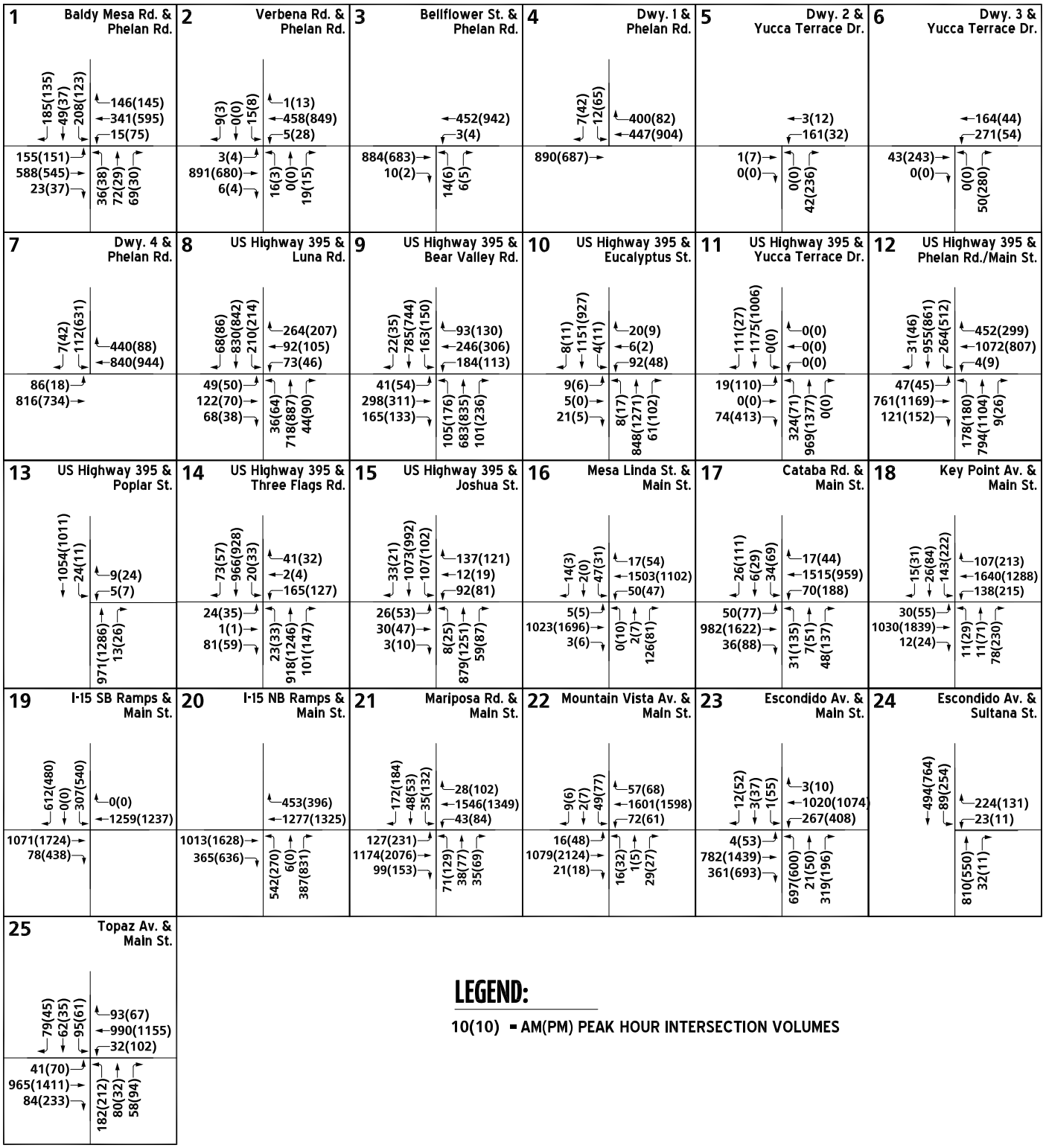


EXHIBIT 5-3: E+P SUMMARY OF LOS

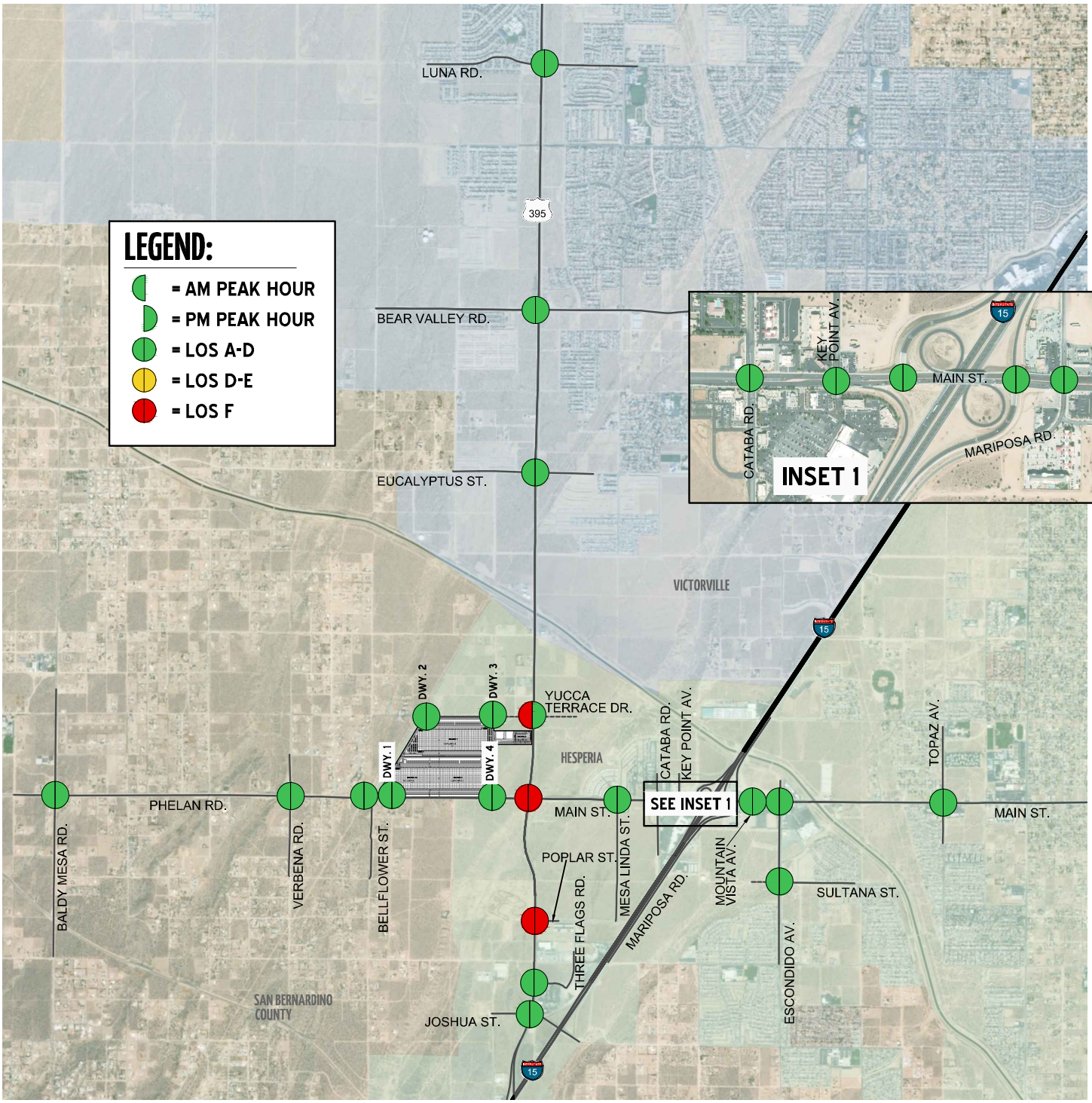


Table 5-1

Intersection Analysis for E+P Conditions

#	Intersection	Traffic Control[2]	Existing (2019) Delay[1] (secs.) AM	Existing (2019) Delay[1] (secs.) PM	Existing (2019) Level of Service AM	Existing (2019) Level of Service PM	E+P Delay[1] (secs.) AM	E+P Delay[1] (secs.) PM	E+P Level of Service AM	E+P Level of Service PM	Acceptable LOS
1	Baldy Mesa Rd. & Phelan Rd.	TS	28.0	23.1	C	C	30.1	23.8	C	C	C
2	Verbena Rd. & Phelan Rd.	CSS	21.0	20.6	C	C	23.2	22.9	C	C	C
3	Bellflower St. & Phelan Rd.	CSS	18.2	16.7	C	C	20.0	17.6	C	C	C
4	Driveway 1 & Phelan Rd.	**CSS**	Future Intersection				16.3	21.4	C	C	D
5	Driveway 2 & Yucca Terrace Dr.	**CSS**	Future Intersection				8.4	9.4	A	A	D
6	Driveway 3 & Yucca Terrace Dr.	**CSS**	Future Intersection				8.7	12.5	A	B	D
7	Driveway 4 & Phelan Rd.	**TS**	Future Intersection				15.1	46.9	B	D	D
8	US Highway 395 & Luna Rd.	TS	24.5	22.0	C	C	24.5	22.1	C	C	D
9	US Highway 395 & Bear Valley Rd.	TS	27.0	27.5	C	C	29.2	27.7	C	C	D
10	US Highway 395 & Eucalyptus St.	TS	11.3	9.3	B	A	12.9	10.1	B	B	D
11	US Highway 395 & Yucca Terrace Dr.	CSS/**TS**[3]	22.7	**77.2**	C	**F**	**92.8**	45.3	**F**	D	D
12	US Highway 395 & Phelan Rd./Main St.	TS	24.5	36.3	C	D	**85.1**	**118.9**	**F**	**F**	D
13	US Highway 395 & Poplar St.	CSS	**69.6**	**85.0**	**F**	**F**	**>100.0**	**>100.0**	**F**	**F**	D
14	US Highway 395 & Three Flags Rd.	TS	13.8	11.9	B	B	13.8	11.8	B	B	D
15	US Highway 395 & Joshua St.	TS	11.0	11.1	B	B	11.4	12.0	B	B	D
16	Mesa Linda St. & Main St.	TS	16.2	10.9	B	B	16.7	13.1	B	B	D
17	Cataba Rd. & Main St.	TS	15.3	22.4	B	C	17.9	28.7	B	C	D
18	Key Point Av. & Main St.	TS	14.2	22.9	B	C	13.4	27.6	B	C	D
19	I-15 SB Ramps & Main St.	TS	5.7	8.7	A	A	13.5	11.8	B	B	D
20	I-15 NB Ramps & Main St.	TS	4.8	9.9	A	B	12.1	11.1	B	B	D
21	Mariposa Rd. & Main St.	TS	16.3	25.1	B	C	16.6	25.8	B	C	D
22	Mountain Vista Av. & Main St.	TS	12.2	16.5	B	B	12.4	16.7	B	B	D
23	Escondido Av. & Main St.	TS	32.9	46.6	C	D	40.4	54.4	D	D	D
24	Escondido Av. & Sultana St.	CSS	21.1	23.9	C	C	17.0	25.3	C	D	D
25	Topaz Av. & Main St.	TS	17.6	23.1	B	C	18.8	24.1	B	C	D

* **BOLD** = Level of Service (LOS) does not meet the applicable jurisdictional requirements (i.e., unacceptable LOS).

[1] Per the Highway Capacity Manual (6th Edition), overall average intersection delay and level of service are shown for intersections with a traffic signal or all way stop control. For intersections with cross street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown. HCM delay reported in seconds.

[2] CSS = Cross-street Stop; TS = Traffic Signal; **CSS** = Improvement

[3] The Project will construct a traffic signal as part of the Project design features.

E+P traffic conditions traffic signal warrant analysis worksheets are provided in Appendix 5.2.

5.5 QUEUING ANALYSIS

5.5.1 ARTERIAL ANALYSIS

A queuing analysis was performed for US Highway 395 from Luna Road to Joshua Street to assess vehicle queues along the roadways. Queuing analysis findings are presented in Table 5-2. It is important to note that the available stacking distances are consistent with the measured turn pocket lengths. As shown in Table 5-2, the following intersection turning movement is anticipated to experience periodic queuing issues during the peak hours based on the 95th percentile peak hour traffic flows with the addition of Project traffic under E+P traffic conditions:

- US Highway 395 & Phelan Road/Main Street (#12) Southbound Left – AM and PM peak hours

Worksheets for E+P traffic conditions queuing analysis are provided in Appendix 5.3.

5.5.2 FREEWAY OFF-RAMP ANALYSIS

A queuing analysis was performed for the off-ramps at the I-15 Freeway and Main Street interchange to assess vehicle queues for the off ramps that may potentially result in deficient peak hour operations at the ramp-to-arterial intersections and may potentially "spill back" onto the I-15 Freeway mainline. Queuing analysis findings are presented in Table 5-2. It is important to note that off-ramp lengths are consistent with the measured distance between the intersection and the freeway mainline. As shown in Table 5-2 and consistent with Existing (2019) traffic conditions, there are no off-ramp movements that are anticipated to experience queuing issues during the weekday AM or weekday PM peak 95th percentile traffic flows. Worksheets for E+P traffic conditions queuing analysis are provided in Appendix 5.3.

5.6 FREEWAY FACILITY ANALYSIS

E+P mainline directional volumes for the AM and PM peak hours are provided on Exhibit 5-4. As shown in Table 5-3, there are no additional study area freeway segments and merge/diverge ramp junctions analyzed for this study that are anticipated to operate at an unacceptable LOS (i.e., LOS E or worse) during the peak hours with the addition of Project traffic for E+P traffic conditions in addition to the deficient locations identified under Existing traffic conditions. E+P freeway facility analysis worksheets are provided in Appendix 5.4.

Table 5-2

Peak Hour Queuing Summary for E+P Conditions

Intersection	Movement	Available Stacking Distance (Feet)	Existing (2019)				E+P			
			95th Percentile Queue (Feet)		Acceptable? [1]		95th Percentile Queue (Feet)		Acceptable? [1]	
			AM Peak Hour	PM Peak Hour	AM	PM	AM Peak Hour	PM Peak Hour	AM	PM
US Highway 395 & Luna Rd.	NBL	360	67	99	Yes	Yes	67	99	Yes	Yes
	NBR	455	4	31	Yes	Yes	5	36	Yes	Yes
	SBL	400	240	242	Yes	Yes	240	242	Yes	Yes
	SBR	400	24	28	Yes	Yes	24	28	Yes	Yes
US Highway 395 & Bear Valley Rd.	NBL	220	160 [2]	228 [2,3]	Yes	Yes	160 [2]	228 [2]	Yes	Yes
	SBL	230	232 [2,3]	224 [2]	Yes	Yes	232 [2,3]	224 [2]	Yes	Yes
US Highway 395 & Eucalyptus St.	NBL	475	23	25	Yes	Yes	25	39	Yes	Yes
	NBR	345	10	28	Yes	Yes	12	36	Yes	Yes
	SBL	440	15	30	Yes	Yes	15	30	Yes	Yes
	SBR	300	0	0	Yes	Yes	0	0	Yes	Yes
US Highway 95 & Phelan Rd./Main St.	NBL	280	128	198	Yes	Yes	289 [2,3]	218	Yes	Yes
	SBL	250	238	263 [2,3]	Yes	Yes	**337** [2]	**879** [2]	**No**	**No**
US Highway 395 & Poplar St.	SBL	375	3	3	Yes	Yes	3	3	Yes	Yes
US Highway 395 & Three Flags Rd.	NBL	190	45	58	Yes	Yes	45	58	Yes	Yes
	NBR	190	0	26	Yes	Yes	25	26	Yes	Yes
	SBL	225	41	58	Yes	Yes	41	58	Yes	Yes
	SBR	225	22	12	Yes	Yes	22	12	Yes	Yes

Table 5-2

Peak Hour Queuing Summary for E+P Conditions

Intersection	Movement	Available Stacking Distance (Feet)	Existing (2019)				E+P			
			95th Percentile Queue (Feet)		Acceptable? [1]		95th Percentile Queue (Feet)		Acceptable? [1]	
			AM Peak Hour	PM Peak Hour	AM	PM	AM Peak Hour	PM Peak Hour	AM	PM
US Highway 395 & Joshua St.	NBL	190	24	51	Yes	Yes	24	51	Yes	Yes
	NBR	330	14	29	Yes	Yes	14	29	Yes	Yes
	SBL	220	138	101	Yes	Yes	143	152 [2]	Yes	Yes
I-15 SB Ramps & Main St.	SBL	1,750	48	122	Yes	Yes	77	171	Yes	Yes
	SBR	1,200	30	211	Yes	Yes	454 [2]	383	Yes	Yes
I-15 NB Ramps & Main St.	NBL	1,290	51	133	Yes	Yes	402	199	Yes	Yes
	NBT/R	1,200	65	342	Yes	Yes	80	360	Yes	Yes
	NBR	700	66	342	Yes	Yes	81	358	Yes	Yes

[1] Stacking Distance is acceptable if the required stacking distance is less than or equal to the stacking distance provided.

[2] 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles.

[3] An additional 15 feet of stacking which is assumed to be provided in the transition for turn pockets is reflected in the stacking distance shown on this table.

Table 5-3

Freeway Facility Analysis for E+P Conditions

Freeway	Direction[1]	Mainline Segment	Lanes[2]	Existing (2019)				E+P			
				Density[3]		LOS[4]		Density[3]		LOS[4]	
				AM	PM	AM	PM	AM	PM	AM	PM
I-15 Freeway	SB	North of Main St.	3	20.1	22.0	C	C	22.3	22.3	C	C
		Off-Ramp at Main St.	3	27.2	29.6	C	D	29.8	30.1	D	D
		Loop On-Ramp at Main St.	3	24.0	22.0	C	C	24.0	22.0	C	C
		On-Ramp at Main St.	3	22.4	21.2	C	C	20.5	24.2	C	C
		South of Main St.	3	20.9	19.7	C	C	21.4	21.8	C	C
		North of US Highway 395	3	16.9	17.6	B	B	17.4	19.9	B	C
		On-Ramp at US Highway 395	4	12.5	13.0	B	B	12.9	14.3	B	B
		South of US Highway 395	4	16.9	16.6	B	B	17.3	18.8	B	C
	NB	North of Main St.	3	18.3	**35.1**	C	**E**	18.6	**37.8**	C	**E**
		On-Ramp at Main St.	3	21.6	32.3	C	D	21.9	34.3	C	D
		Loop On-Ramp at Main St.	3	18.2	29.3	B	D	18.7	32.4	B	D
		Off-Ramp at Main St.	3	23.6	**38.0**	C	**E**	26.9	**38.4**	C	**E**
		South of Main St.	3	16.7	**37.7**	B	**E**	19.0	**38.5**	C	**E**
		North of US Highway 395	4	11.4	18.0	B	B	13.1	18.3	B	C
		Off-Ramp at US Highway 395	4	18.0	29.7	B	D	21.0	30.3	C	D
		South of US Highway 395	4	14.4	23.6	B	C	16.6	24.1	B	C

[1] NB = Northbound; SB = Southbound

[2] Number of lanes are in the specified direction and is based on existing conditions.

[3] Density is measured by passenger cars per mile per lane (pc/mi/ln).

[4] LOS = Level of Service

EXHIBIT 5-4: E+P FREEWAY MAINLINE VOLUMES



5.7 RECOMMENDED IMPROVEMENTS

This section provides a summary of E+P deficiencies and recommended improvements. Based on the deficiency criteria discussed in Section 2.7 *Minimum Acceptable Levels of Service (LOS) and Intersection Deficiency Criteria*, the following intersections were found to be deficient. Improvements necessary to improve traffic deficiencies back to acceptable levels are also discussed below.

5.7.1 RECOMMENDED IMPROVEMENTS TO ADDRESS DEFICIENCIES AT INTERSECTIONS

The effectiveness of the proposed recommended improvements is presented in Table 5-4 for E+P traffic conditions. The intersection operations analysis worksheets for E+P traffic conditions, with improvements, are included in Appendix 5.5 of this TIA.

Recommended Improvement – US Highway 395 & Yucca Terrace Drive (#11) – The following improvements are necessary to bring the LOS back to acceptable levels:

- Add a 2nd northbound through lane.
- Add a 2nd southbound through lane.
- Install a traffic signal (Project design feature).
- Add a northbound left turn lane (Project design feature).
- Add an eastbound left turn lane (Project design feature).

Recommended Improvement – US Highway 395 & Phelan Road/Main Street (#12) – The following improvements are necessary to bring the LOS back to acceptable levels:

- Add a 2nd northbound left turn lane.
- Add a 2nd southbound left turn lane.

Recommended Improvement – US Highway 395 & Poplar Street (#13) – The following improvement is necessary to bring the LOS back to acceptable levels:

- Add a 2nd southbound through lane.

5.7.2 RECOMMENDED IMPROVEMENTS TO ADDRESS QUEUING DEFICIENCIES

As shown previously in Table 5-2, there is one peak hour queuing issue at the intersection of US Highway 395 & Phelan Road/Main Street. Recommended improvements to address queuing issues for E+P traffic conditions are shown in Table 5-5 and reflect the recommended improvements to address intersection deficiencies, as previously described in Section 5.8.1 *Recommended Improvements to Address Deficiencies at Intersections*. In order to accommodate the 95th percentile peak hour queues for E+P traffic conditions, a 475-foot southbound left turn pocket is recommended at the intersection of US Highway 395 & Phelan Road/Main Street. Worksheets for E+P traffic conditions off-ramp queuing analysis, with improvements, are provided in Appendix 5.6.

Table 5-4

Intersection Analysis for E+P Conditions With Improvements

#	Intersection	Traffic Control[3]	Intersection Approach Lanes[1]												Delay[2] (secs.)		Level of Service	
			Northbound			Southbound			Eastbound			Westbound						
			L	T	R	L	T	R	L	T	R	L	T	R	AM	PM	AM	PM
11	US Highway 395 & Yucca Terrace Dr.																	
	Existing (2019)																	
	- Without Improvements	CSS	0	1	0	0	1	0	0	1	0	0	1	0	22.7	**77.2**	C	**F**
	- With Improvements	CSS	0	**2**	0	0	**2**	0	0	1	0	0	1	0	21.0	32.5	C	D
	E+P																	
	- Without Improvements	CSS	0	1	0	0	1	0	0	1	0	0	1	0	**92.8**	45.3	**F**	D
	- With Improvements	**TS**	**1**	**2**	0	0	**2**	0	**1**	1	0	0	1	0	21.8	40.4	C	D
12	US Highway 395 & Phelan Rd./Main St.																	
	Existing (2019)																	
	- Without Improvements	TS	1	2	0	1	2	0	1	2	0	1	2	0	24.5	36.3	C	D
	- With Improvements		Not Applicable															
	E+P																	
	- Without Improvements	TS	1	2	0	1	2	0	1	2	0	1	2	0	**85.1**	**118.9**	**F**	**F**
	- With Improvements	TS	**2**	2	0	**2**	2	0	1	2	0	1	2	0	52.4	54.3	D	D
13	US Highway 395 & Poplar St.																	
	Existing (2019)																	
	- Without Improvements	CSS	0	2	0	1	1	0	0	0	0	1	0	1	**69.6**	**85.0**	**F**	**F**
	- With Improvements	CSS	0	2	0	1	**2**	0	0	0	0	1	0	1	19.4	24.3	C	C
	E+P																	
	- Without Improvements	CSS	0	2	0	1	1	0	0	0	0	1	0	1	**>100.0**	**>100.0**	**F**	**F**
	- With Improvements	CSS	0	2	0	1	**2**	0	0	0	0	1	0	1	22.9	27.9	C	D

[1] When a right turn is designated, the lane can either be striped or unstriped. To function as a right turn lane there must be sufficient width for right turning vehicles to travel outside the through lanes.

L = Left; T = Through; R = Right; **1** = Improvement

[2] Per the Highway Capacity Manual (6th Edition), overall average intersection delay and level of service are shown for intersections with a traffic signal or all way stop control. For intersections with cross street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown.

[3] CSS = Cross-street Stop; TS = Traffic Signal; **TS** = Improvement

Table 5-5

Peak Hour Queuing Summary for E+P Conditions With Improvements

Intersection	Movement	Available Stacking Distance (Feet)	Existing (2019)				E+P			
			95th Percentile Queue (Feet)		Acceptable? [1]		95th Percentile Queue (Feet)		Acceptable? [1]	
			AM Peak Hour	PM Peak Hour	AM	PM	AM Peak Hour	PM Peak Hour	AM	PM
US Highway 95 & Phelan Rd./Main St.	NBL	280	Not Applicable				145 [2]	109	Yes	Yes
	SBL	**475**					196 [2]	312 [2]	Yes	Yes

[1] Stacking Distance is acceptable if the required stacking distance is less than or equal to the stacking distance provided.

[2] 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles.

5.7.3 RECOMMENDED IMPROVEMENTS TO ADDRESS DEFICIENCIES ON FREEWAY FACILITIES

As shown previously in Table 5-3, there are study area freeway mainline segments and ramp junctions that are anticipated to operate at an unacceptable LOS for E+P traffic conditions. At this time, Caltrans has no fee programs or other improvement programs in place to address the deficiencies caused by development projects in the City of Hesperia (or other neighboring jurisdictions) on the SHS roadway segments. As such, no improvements have been recommended to address the E+P deficiencies on the SHS.

6 OPENING YEAR CUMULATIVE (2021) TRAFFIC ANALYSIS

This section discusses the traffic forecasts for Opening Year Cumulative (2021) conditions and the resulting peak hour intersection operations, traffic signal warrant, queuing, and freeway facility operations analyses.

6.1 ROADWAY IMPROVEMENTS

The lane configurations and traffic controls assumed to be in place for Opening Year Cumulative (2021) conditions are consistent with those shown previously on Exhibit 3-1, with the exception of the following:

- Project driveways and those facilities assumed to be constructed by the Project to provide site access are also assumed to be in place for Opening Year Cumulative conditions only (e.g., intersection and roadway improvements along the Project's frontage and driveways).
- Driveways and those facilities assumed to be constructed by cumulative developments to provide site access are also assumed to be in place for Opening Year Cumulative conditions only (e.g., intersection and roadway improvements along the cumulative development's frontages and driveways).

6.2 OPENING YEAR CUMULATIVE (2021) WITHOUT PROJECT VOLUME FORECASTS

To account for background traffic, other known cumulative development projects in the study area were included in addition to 4.04% of ambient growth for Opening Year Cumulative traffic conditions. The weekday ADT and weekday AM and PM peak hour volumes which can be expected for Opening Year Cumulative (2021) Without Project traffic conditions are shown on Exhibits 6-1 and 6-2, respectively.

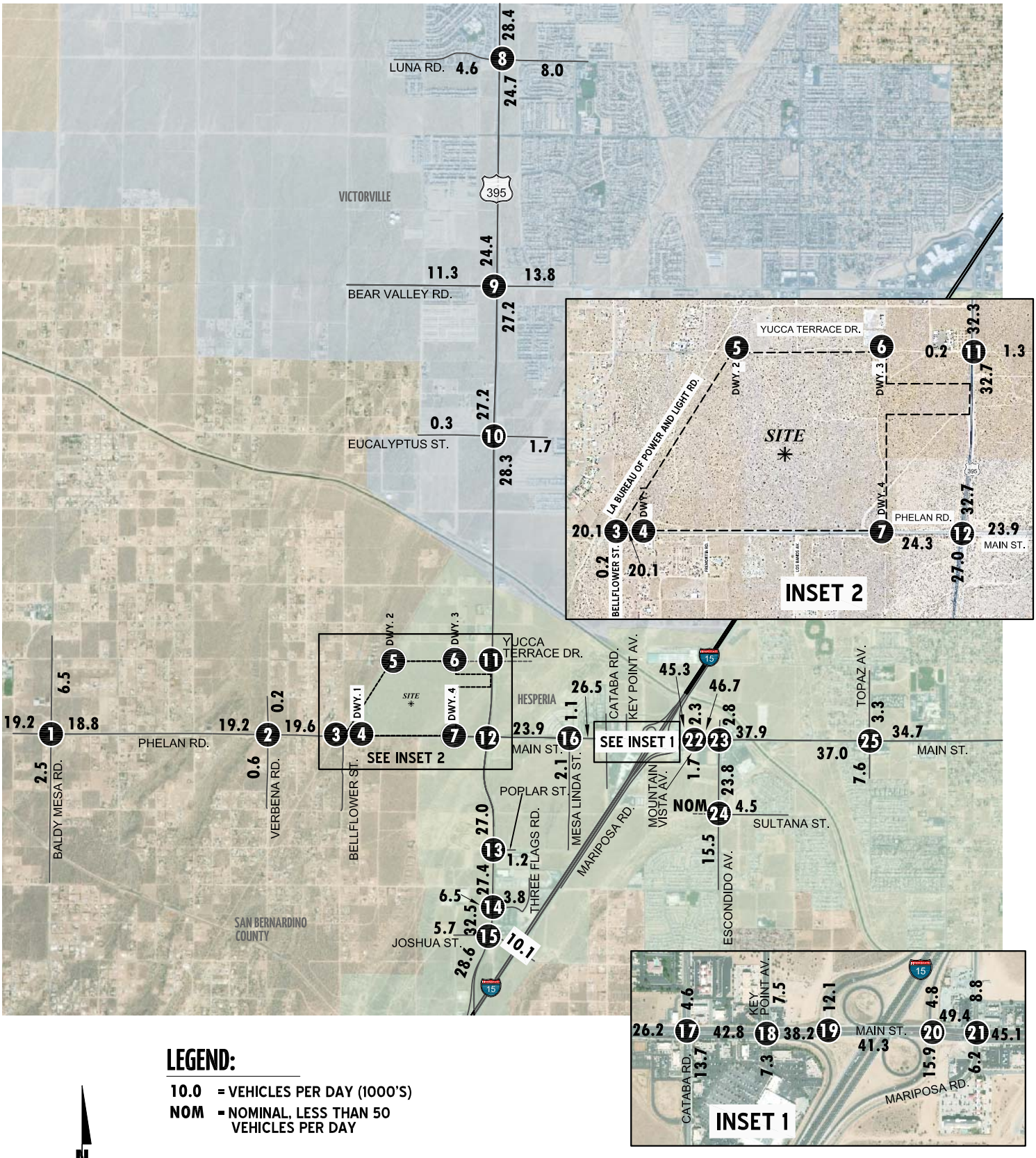
6.3 OPENING YEAR CUMULATIVE (2021) WITH PROJECT VOLUME FORECASTS

To account for background traffic, other known cumulative development projects in the study area were included in addition to 4.04% of ambient growth for Opening Year Cumulative traffic conditions in conjunction with traffic associated with the proposed Project. The weekday ADT and weekday AM and PM peak hour volumes which can be expected for Opening Year Cumulative (2021) With Project traffic conditions are shown on Exhibits 6-3 and 6-4, respectively.

6.4 INTERSECTION OPERATIONS ANALYSIS

Opening Year Cumulative (2021) Without and With Project peak hour traffic operations have been evaluated for the study area intersections based on the analysis methodologies presented in Section 2 *Methodologies* of this TIA. The intersection analysis results are summarized in Table 6-1 for both Opening Year Cumulative (2021) Without and With Project traffic conditions.

EXHIBIT 6-1: OPENING YEAR CUMULATIVE (2021) WITHOUT PROJECT AVERAGE DAILY TRAFFIC (ADT) (IN PCE)



LEGEND:

10.0 = VEHICLES PER DAY (1000'S)
NOM = NOMINAL, LESS THAN 50 VEHICLES PER DAY

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URBAN CROSSROADS

EXHIBIT 6-2: OPENING YEAR CUMULATIVE (2021) WITHOUT PROJECT TRAFFIC VOLUMES (IN PCE)

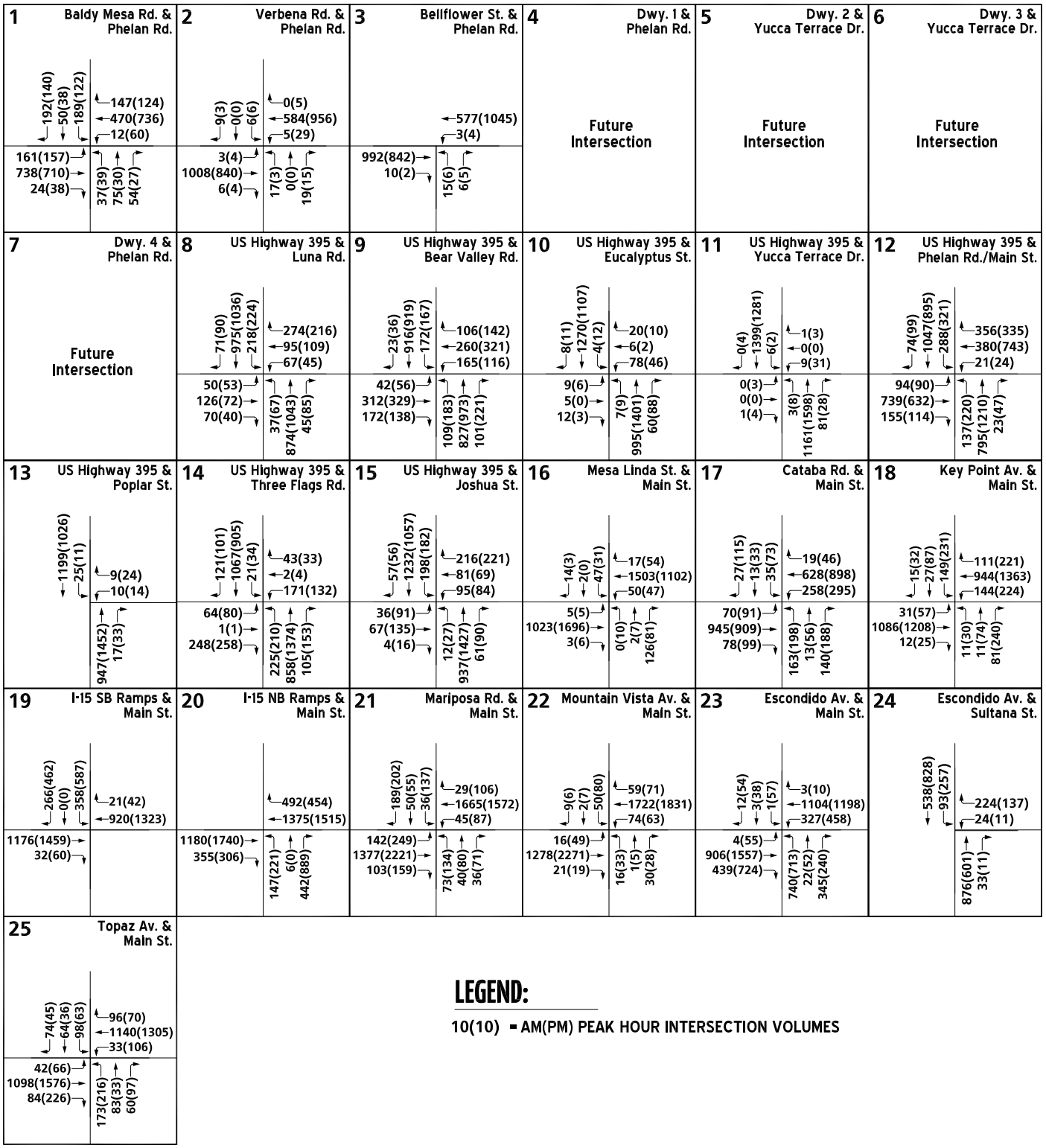

EXHIBIT 6-3: OPENING YEAR CUMULATIVE (2021) WITH PROJECT AVERAGE DAILY TRAFFIC (ADT) (IN PCE)

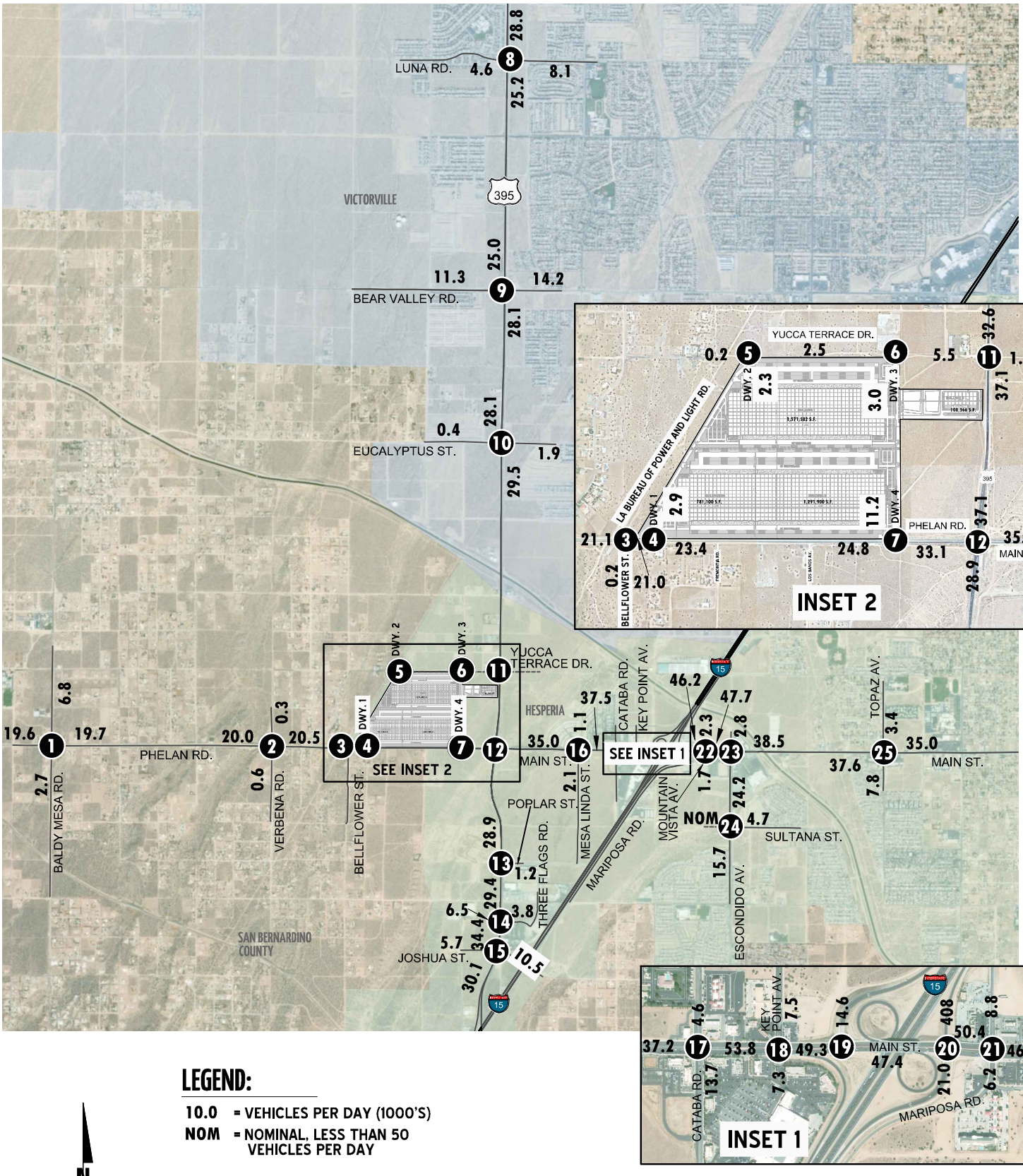

EXHIBIT 6-4: OPENING YEAR CUMULATIVE (2021) WITH PROJECT TRAFFIC VOLUMES (IN PCE)

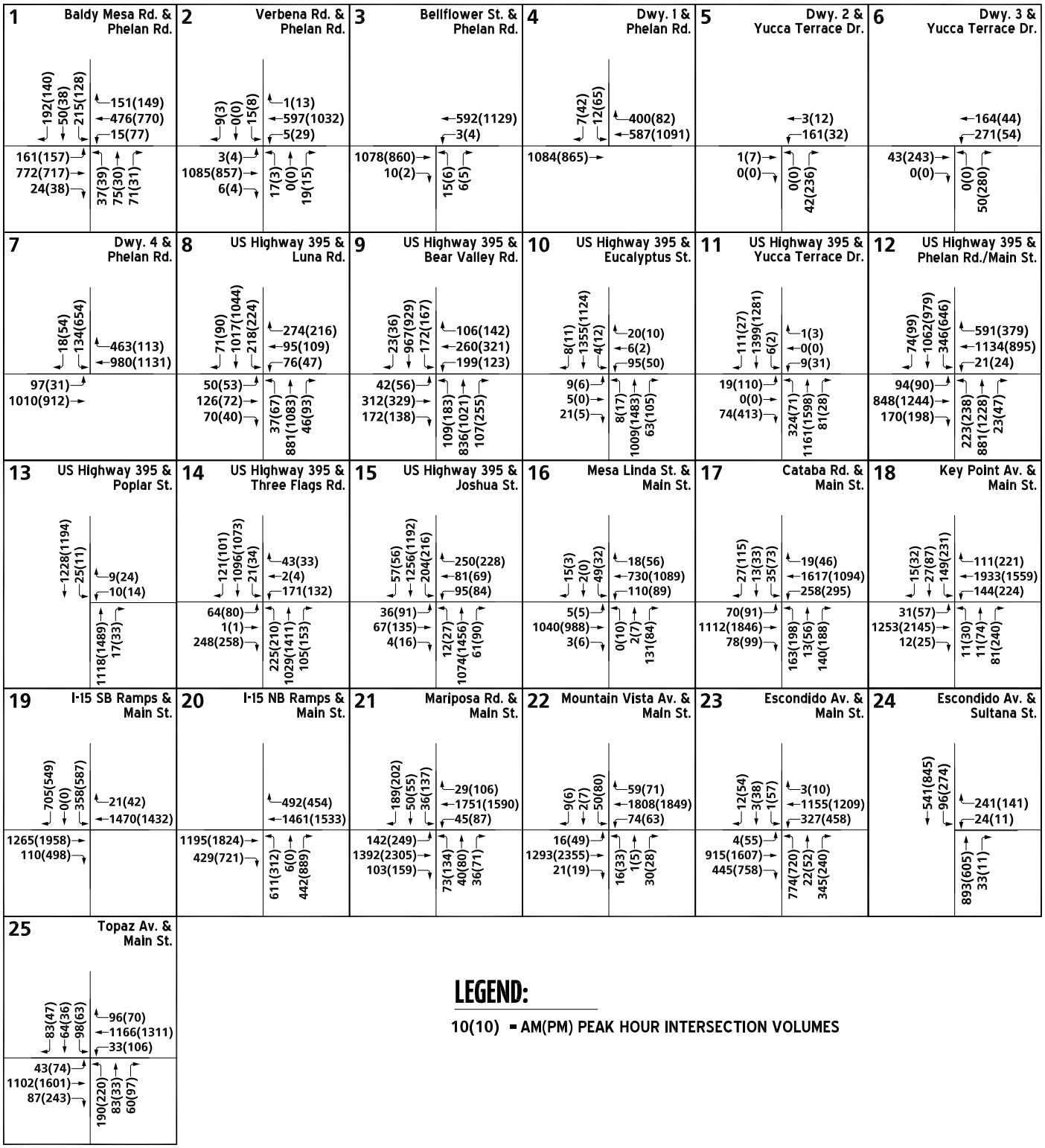

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Table 6-1

Intersection Analysis for Opening Year Cumulative (2021) Conditions

#	Intersection	Traffic Control[2]	2021 Without Project				2021 With Project				Acceptable LOS
			Delay[1] (secs.)		Level of Service		Delay[1] (secs.)		Level of Service		
			AM	PM	AM	PM	AM	PM	AM	PM	
1	Baldy Mesa Rd. & Phelan Rd.	TS	28.5	23.7	C	C	30.7	24.5	C	C	C
2	Verbena Rd. & Phelan Rd.	CSS	**28.9**	**26.6**	**D**	**D**	**32.5**	**29.9**	**D**	**D**	C
3	Bellflower St. & Phelan Rd.	CSS	23.4	20.5	C	C	24.9	21.5	C	C	C
4	Driveway 1 & Phelan Rd.	**CSS**	Future Intersection				19.8	30.4	C	D	D
5	Driveway 2 & Yucca Terrace Dr.	**CSS**	Future Intersection				8.4	9.4	A	A	D
6	Driveway 3 & Yucca Terrace Dr.	**CSS**	Future Intersection				8.7	12.5	A	B	D
7	Driveway 4 & Phelan Rd.	**CSS/TS**[3]	15.4	22.3	C	C	19.4	54.4	B	D	D
8	US Highway 395 & Luna Rd.	TS	25.4	23.2	C	C	25.5	23.3	C	C	D
9	US Highway 395 & Bear Valley Rd.	TS	28.9	29.6	C	C	32.9	30.3	C	C	D
10	US Highway 395 & Eucalyptus St.	TS	12.2	10.4	B	B	14.2	11.4	B	B	D
11	US Highway 395 & Yucca Terrace Dr.	CSS/**TS**[3]	**>100.0**	**>100.0**	**F**	**F**	**162.8**	**104.3**	**F**	**F**	D
12	US Highway 395 & Phelan Rd./Main St.	TS	39.3	**79.5**	D	**E**	**148.6**	**189.3**	**F**	**F**	D
13	US Highway 395 & Poplar St.	TS	**>100.0**	**>100.0**	**F**	**F**	**>100.0**	**>100.0**	**F**	**F**	D
14	US Highway 395 & Three Flags Rd.	TS	30.9	25.5	C	C	31.0	26.1	C	C	D
15	US Highway 395 & Joshua St.	TS	15.6	18.6	B	B	17.1	19.3	B	B	D
16	Mesa Linda St. & Main St.	TS	16.7	13.1	B	B	18.9	13.3	B	B	D
17	Cataba Rd. & Main St.	TS	29.8	30.4	C	C	34.9	51.5	C	D	D
18	Key Point Av. & Main St.	TS	14.0	24.6	B	C	14.5	45.8	B	D	D
19	I-15 SB Ramps & Main St.	TS	6.9	10.6	A	B	20.4	15.3	C	B	D
20	I-15 NB Ramps & Main St.	TS	5.6	12.3	A	B	16.0	13.0	B	B	D
21	Mariposa Rd. & Main St.	TS	18.1	28.7	B	C	18.2	29.3	B	C	D
22	Mountain Vista Av. & Main St.	TS	12.9	17.9	B	B	13.1	18.3	B	B	D
23	Escondido Av. & Main St.	TS	50.6	**70.4**	D	**E**	**60.9**	**79.7**	**E**	**E**	D
24	Escondido Av. & Sultana St.	CSS	23.5	27.0	C	D	24.1	28.7	C	D	D
25	Topaz Av. & Main St.	TS	19.7	27.8	B	C	21.4	29.2	C	C	D

[1] Per the Highway Capacity Manual (6th Edition), overall average intersection delay and level of service are shown for intersections with a traffic signal or all way stop control. For intersections with cross street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown. HCM delay reported in seconds.

[2] CSS = Cross-street Stop; TS = Traffic Signal; **CSS** = Improvement

6.4.1 OPENING YEAR CUMULATIVE (2021) WITHOUT PROJECT CONDITIONS

Opening Year Cumulative (2021) peak hour traffic operations have been evaluated for the study area intersections based on the analysis methodologies presented in Section 2 *Methodologies* of this TIA. The intersection analysis results are summarized in Table 6-1 and shown on Exhibit 6-5, which indicates that the following intersections are anticipated to operate at an unacceptable LOS during the peak hours:

- Verbena Road & Phelan Road (#2) – LOS D AM and PM peak hours
- US Highway 395 & Yucca Terrace Drive (#11) – LOS F AM and PM peak hours
- US Highway 395 & Phelan Road/Main Street (#12) – LOS E PM peak hour only
- US Highway 395 & Poplar Street (#13) – LOS F AM and PM peak hours
- Escondido Avenue & Main Street (#23) – LOS E PM peak hour only

The intersection operations analysis worksheets for Opening Year Cumulative (2021) Without Project traffic conditions are included in Appendix 6.1 of this TIA.

6.4.2 OPENING YEAR CUMULATIVE (2021) WITH PROJECT CONDITIONS

With the addition of Project traffic, there are no additional study area intersections that are anticipated to operate at an unacceptable LOS during the peak hours. Consistent with Table 6-1, a summary of the peak hour intersection LOS for Opening Year Cumulative (2021) With Project conditions are shown on Exhibit 6-6. The intersection operations analysis worksheets for Opening Year Cumulative (2021) With Project traffic conditions are included in Appendix 6.2 of this TIA.

6.5 TRAFFIC SIGNAL WARRANTS ANALYSIS

There are no additional intersections anticipated to meet traffic signal warrants for Opening Year Cumulative (2021) Without Project. The following intersection is anticipated to meet traffic signal warrants with the addition of Project traffic for Opening Year Cumulative (2021) With Project:

- US Highway 395 & Yucca Terrace Drive (#11)

A traffic signal will be constructed by the Project at the intersection of US Highway 395 & Yucca Terrace Drive as part of the site adjacent Project design features. For all Project design features, see Section 1.7 *Recommendations* of this report. Worksheets for Opening Year Cumulative (2021) Without and With Project traffic conditions signal warrants are provided in Appendices 6.3 and 6.4, respectively.

EXHIBIT 6-5: OPENING YEAR CUMULATIVE (2021) WITHOUT PROJECT SUMMARY OF LOS

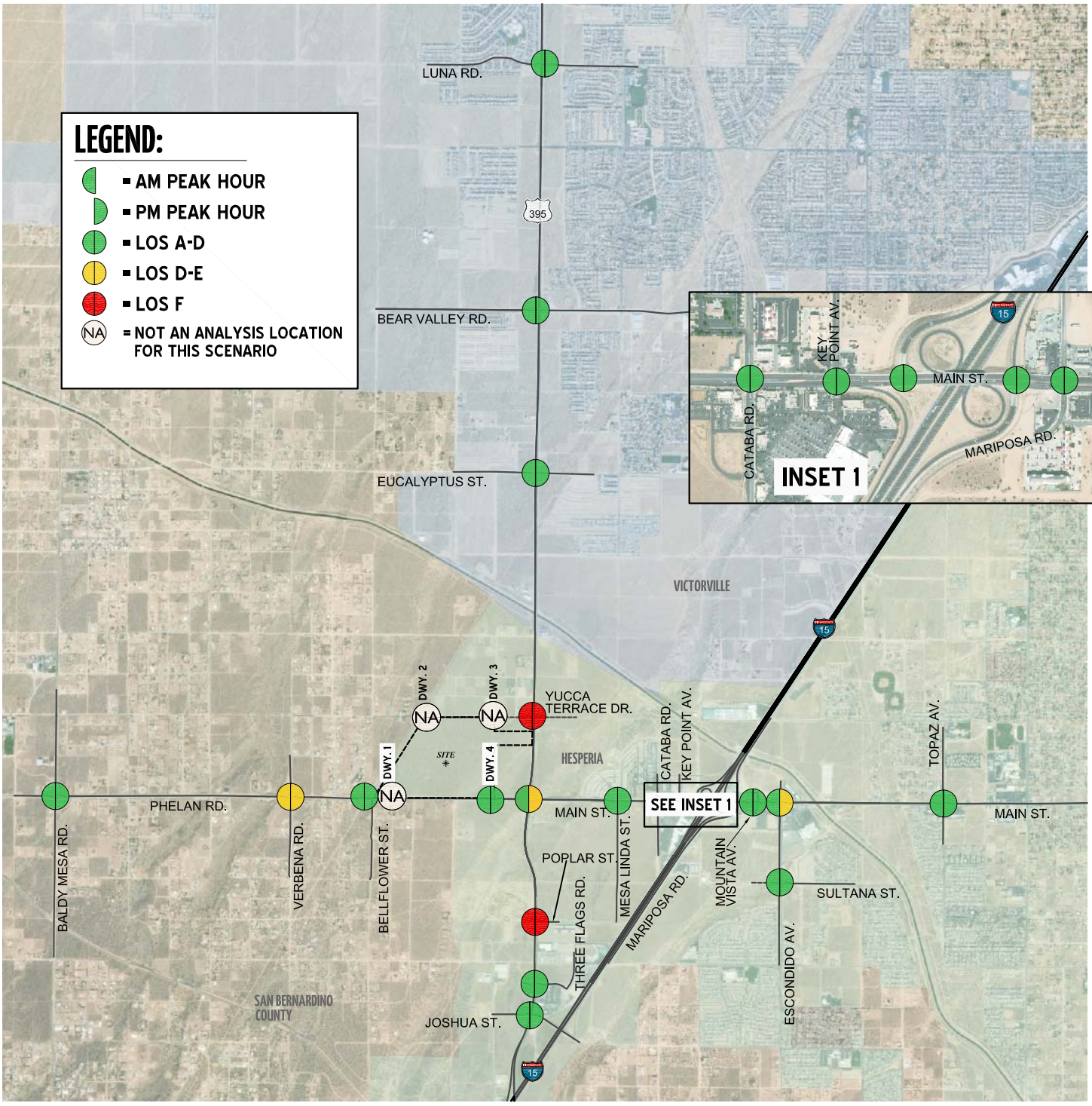
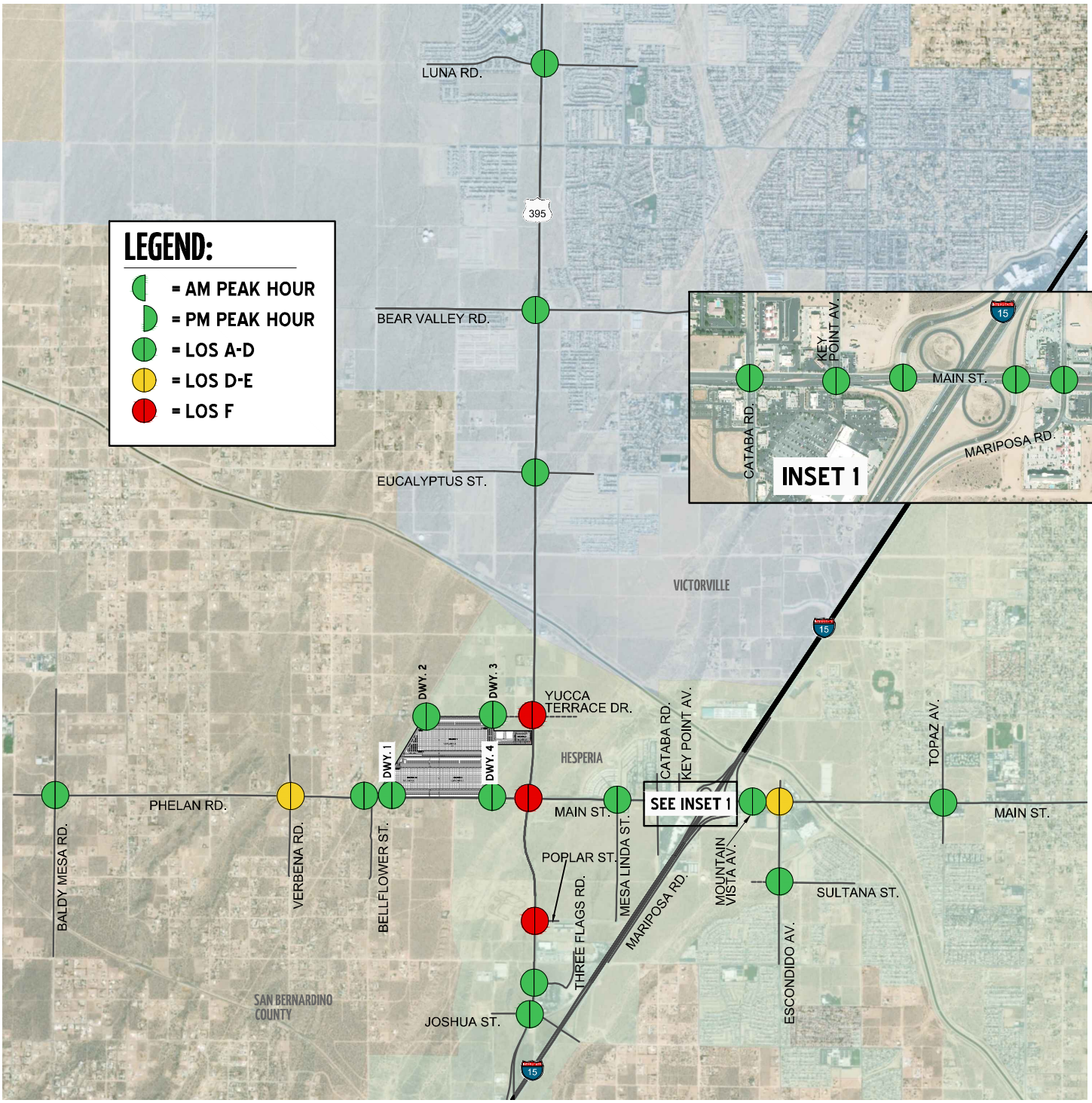


EXHIBIT 6-6: OPENING YEAR CUMULATIVE (2021) WITH PROJECT SUMMARY OF LOS



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6.6 QUEUING ANALYSIS

6.6.1 ARTERIAL ANALYSIS

A queuing analysis was performed for US Highway 395 from Luna Road to Joshua Street to assess vehicle queues along the roadways. Queuing analysis findings are presented in Table 6-2. It is important to note that the available stacking distances are consistent with the measured turn pocket lengths. As shown in Table 6-2, the following intersection turning movements are anticipated to experience periodic queuing issues during the peak hours based on the 95th percentile peak hour traffic flows for Opening Year Cumulative (2021) Without Project traffic conditions:

- US Highway 395 & Phelan Road/Main Street (#12) Southbound Left – AM and PM peak hours
- US Highway 395 & Three Flags Road (#14) Northbound Left – AM and PM peak hours

Worksheets for Opening Year Cumulative (2021) Without Project traffic conditions queuing analysis are provided in Appendix 6.5.

The following additional intersection turning movement is anticipated to experience queuing issues during the peak hours based on the 95th percentile peak hour traffic flows with the addition of Project traffic for Opening Year Cumulative (2021) With Project traffic conditions:

- US Highway 395 & Phelan Road/Main Street (#12) Northbound Left – AM and PM peak hours

Worksheets for Opening Year Cumulative (2021) With Project traffic conditions queuing analysis are provided in Appendix 6.6.

6.6.2 FREEWAY OFF-RAMP ANALYSIS

A queuing analysis was performed for the off-ramps at the I-15 Freeway and Main Street interchange to assess vehicle queues for the off ramps that may potentially result in deficient peak hour operations at the ramp-to-arterial intersections and may potentially "spill back" onto the I-15 Freeway mainline. Queuing analysis findings are presented in Table 6-2. It is important to note that off-ramp lengths are consistent with the measured distance between the intersection and the freeway mainline. As shown in Table 6-2 and consistent with Existing (2019) traffic conditions, there are no off-ramp movements that are anticipated to experience queuing issues during the weekday AM or weekday PM peak 95th percentile traffic flows under Opening Year Cumulative (2021) Without Project traffic conditions. Worksheets for Opening Year Cumulative (2021) Without Project traffic conditions off-ramp queuing analysis are provided in Appendix 6.5.

There are no off-ramp movements that are anticipated to experience queuing issues during the weekday AM or weekday PM peak 95th percentile traffic flows under Opening Year Cumulative (2021) With Project traffic conditions. Worksheets for Opening Year Cumulative (2021) With Project traffic conditions off-ramp queuing analysis are provided in Appendix 6.6.

Table 6-2

Peak Hour Queuing Summary for Opening Year Cumulative (2021) Conditions

Intersection	Movement	Available Stacking Distance (Feet)	2021 Without Project				2021 With Project			
			95th Percentile Queue (Feet)		Acceptable? [1]		95th Percentile Queue (Feet)		Acceptable? [1]	
			AM Peak Hour	PM Peak Hour	AM	PM	AM Peak Hour	PM Peak Hour	AM	PM
US Highway 395 & Luna Rd.	NBL	360	67	102	Yes	Yes	67	102 [3]	Yes	Yes
	NBR	455	6	34	Yes	Yes	6	36	Yes	Yes
	SBL	400	246	253	Yes	Yes	246	253	Yes	Yes
	SBR	400	24	28	Yes	Yes	24	28	Yes	Yes
US Highway 395 & Bear Valley Rd.	NBL	220	166 [2]	225 [2,3]	Yes	Yes	166 [2]	225 [2,3]	Yes	Yes
	SBL	230	236 [2,3]	235 [2,3]	Yes	Yes	236 [2,3]	235 [2,3]	Yes	Yes
US Highway 395 & Eucalyptus St.	NBL	475	23	25	Yes	Yes	25	39	Yes	Yes
	NBR	345	12	30	Yes	Yes	14	42	Yes	Yes
	SBL	440	15	32	Yes	Yes	15	32	Yes	Yes
	SBR	300	0	0	Yes	Yes	0	0	Yes	Yes
US Highway 95 & Phelan Rd./Main St.	NBL	280	207 [2]	293 [2,3]	Yes	Yes	**378** [2]	**330** [2]	**No**	**No**
	SBL	250	**382** [2]	**526** [2]	**No**	**No**	**492** [2]	**1,122** [2]	**No**	**No**
US Highway 395 & Poplar St.	SBL	375	3	3	Yes	Yes	3	3	Yes	Yes
US Highway 395 & Three Flags Rd.	NBL	190	**263**	**241**	**No**	**No**	**263**	**241**	**No**	**No**
	NBR	190	28	35	Yes	Yes	28	37	Yes	Yes
	SBL	225	46	66 [2]	Yes	Yes	46	66 [2]	Yes	Yes
	SBR	225	50	28	Yes	Yes	50	28	Yes	Yes

Table 6-2
Page 2 of 2

Peak Hour Queuing Summary for Opening Year Cumulative (2021) Conditions

Intersection	Movement	Available Stacking Distance (Feet)	2021 Without Project				2021 With Project			
			95th Percentile Queue (Feet)		Acceptable? [1]		95th Percentile Queue (Feet)		Acceptable? [1]	
			AM Peak Hour	PM Peak Hour	AM	PM	AM Peak Hour	PM Peak Hour	AM	PM
US Highway 395 & Joshua St.	NBL	190	32	53	Yes	Yes	32	53	Yes	Yes
	NBR	330	18	37	Yes	Yes	18	39	Yes	Yes
	SBL	220	230 [2,3]	207	Yes	Yes	235 [3]	235 [3]	Yes	Yes
I-15 SB Ramps & Main St.	SBL	1,750	71	175	Yes	Yes	109	184	Yes	Yes
	SBR	1,200	96	342	Yes	Yes	737 [2]	460	Yes	Yes
I-15 NB Ramps & Main St.	NBL	1,290	107	163	Yes	Yes	633 [2]	234	Yes	Yes
	NBT/R	1,200	129	394	Yes	Yes	143	394	Yes	Yes
	NBR	700	131	394	Yes	Yes	145	394	Yes	Yes

[1] Stacking Distance is acceptable if the required stacking distance is less than or equal to the stacking distance provided.

[2] 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles.

[3] An additional 15 feet of stacking which is assumed to be provided in the transition for turn pockets is reflected in the stacking distance shown on this table.

6.7 FREEWAY FACILITY ANALYSIS

Opening Year Cumulative (2021) Without Project mainline directional volumes for the AM and PM peak hours are provided on Exhibit 6-7. As shown in Table 6-3, the following study area freeway segments and merge/diverge ramp junctions analyzed for this study are anticipated to operate at an unacceptable LOS (i.e., LOS E or worse) during the peak hours for Opening Year Cumulative (2021) Without Project traffic conditions:

- I-15 Freeway Northbound, North of Main Street (#9) – LOS E PM peak hour only
- I-15 Freeway Northbound, Off-Ramp at Main Street (#12) – LOS E PM peak hour only
- I-15 Freeway Northbound, South of Main Street (#13) – LOS E PM peak hour only

Opening Year Cumulative (2021) Without Project freeway facility analysis worksheets are provided in Appendix 6.7.

Opening Year Cumulative (2021) With Project mainline directional volumes for the AM and PM peak hours are provided on Exhibit 6-8. The following additional study area ramp junction is anticipated to operate at an unacceptable LOS with the addition of Project traffic under Horizon Year (2040) With Project traffic conditions, resulting in a cumulative deficiency:

- I-15 Freeway Northbound, On-Ramp at Main Street (#10) – LOS E PM peak hour only

Opening Year Cumulative (2021) With Project freeway facility analysis worksheets are provided in Appendix 6.8.

6.8 RECOMMENDED IMPROVEMENTS

This section provides a summary of Opening Year Cumulative (2021) deficiencies and recommended improvements. Based on the deficiency criteria discussed in Section 2.7 *Minimum Acceptable Levels of Service (LOS) and Intersection Deficiency Criteria*, the following intersections were found to be deficient. Improvements necessary to improve traffic deficiencies back to acceptable levels are also discussed below.

6.8.1 RECOMMENDED IMPROVEMENTS TO ADDRESS DEFICIENCIES AT INTERSECTIONS

The effectiveness of the proposed recommended improvements is presented in Table 6-4 for Opening Year Cumulative (2021) traffic conditions. The intersection operations analysis worksheets for Opening Year Cumulative (2021) Without Project and With Project traffic conditions, with improvements, are included in Appendices 6.9 and 6.10, respectively.

EXHIBIT 6-7: OPENING YEAR CUMULATIVE (2021) WITHOUT PROJECT FREEWAY MAINLINE VOLUMES



EXHIBIT 6-8: OPENING YEAR CUMULATIVE (2021) WITH PROJECT FREEWAY MAINLINE VOLUMES



Table 6-3

Freeway Facility Analysis for Opening Year Cumulative (2021) Conditions

Freeway	Direction[1]	Mainline Segment	Lanes[2]	2021 Without Project				2021 With Project			
				Density[3]		LOS[4]		Density[3]		LOS[4]	
				AM	PM	AM	PM	AM	PM	AM	PM
I-15 Freeway	SB	North of Main St.	3	21.3	23.2	C	C	23.6	23.5	C	C
		Off-Ramp at Main St.	3	28.4	30.7	D	D	31.1	31.1	D	D
		Loop On-Ramp at Main St.	3	25.0	23.1	C	C	25.0	23.1	C	C
		On-Ramp at Main St.	3	23.4	22.5	C	C	23.9	25.5	C	C
		South of Main St.	3	22.0	20.9	C	C	22.6	22.9	C	C
		North of US Highway 395	3	17.7	18.8	B	C	18.2	21.1	C	C
		On-Ramp at US Highway 395	4	13.4	14.0	B	B	13.5	15.5	B	B
		South of US Highway 395	4	17.8	17.6	B	B	18.1	20.0	C	C
	NB	North of Main St.	3	19.2	**36.4**	C	**E**	19.5	**41.6**	C	**E**
		On-Ramp at Main St.	3	22.6	34.0	C	D	22.8	**36.0**	C	**E**
		Loop On-Ramp at Main St.	3	18.9	30.7	B	D	19.4	33.8	B	D
		Off-Ramp at Main St.	3	25.1	**39.2**	C	**E**	28.1	**39.6**	C	**E**
		South of Main St.	3	17.9	**41.2**	B	**E**	20.1	**42.1**	C	**E**
		North of US Highway 395	4	12.2	18.9	B	C	13.9	19.2	B	C
		Off-Ramp at US Highway 395	4	19.5	31.3	B	D	22.3	31.9	C	D
		South of US Highway 395	4	15.3	25.1	B	C	17.6	25.6	B	C

[1] NB = Northbound; SB = Southbound

[2] Number of lanes are in the specified direction and is based on existing conditions.

[3] Density is measured by passenger cars per mile per lane (pc/mi/ln).

[4] LOS = Level of Service

Table 6-4

Intersection Analysis for Opening Year Cumulative (2021) Conditions With Improvements

#	Intersection	Traffic Control[3]	Intersection Approach Lanes[1]												Delay[2] (secs.)		Level of Service	
			Northbound			Southbound			Eastbound			Westbound						
			L	T	R	L	T	R	L	T	R	L	T	R	AM	PM	AM	PM
11	US Highway 395 & Yucca Terrace Dr.																	
	- Without Project	CSS	0	**2**	0	0	**2**	0	0	1	0	0	1	0	15.5	21.0	B	C
	- With Project	**TS**	**1**	**2**	0	0	**2**	0	**1**	1	0	0	1	0	22.2	26.3	C	C
12	US Highway 395 & Phelan Rd./Main St.																	
	- Without Project	TS	**2**	2	0	**2**	2	0	1	**3**	0	1	**3**	**1>**	27.1	33.1	C	C
	- With Project	TS	**2**	2	0	**2**	2	0	1	**3**	0	1	**3**	**1>**	44.0	54.4	D	D
13	US Highway 395 & Poplar St.																	
	- Without Project	CSS	0	2	0	1	**2**	0	0	0	0	1	0	1	23.9	32.5	C	D
	- With Project	CSS	0	2	0	1	**2**	0	0	0	0	1	0	1	27.9	34.8	D	D
23	Escondido Av. & Main St.																	
	- Without Project	TS	2	1	1>	1	1	0	1	3	1>	2	**3**	1	47.6	51.7	D	D
	- With Project	TS	2	1	1>	1	1	0	1	3	1>	2	**3**	1	52.5	53.0	D	D

[1] When a right turn is designated, the lane can either be striped or unstriped. To function as a right turn lane there must be sufficient width for right turning vehicles to travel outside the through lanes.

L = Left; T = Through; R = Right; > = Right-Turn Overlap Phasing; **1** = Improvement

[2] Per the Highway Capacity Manual (6th Edition), overall average intersection delay and level of service are shown for intersections with a traffic signal or all way stop control. For intersections with cross street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown.

[3] CSS = Cross-street Stop; TS = Traffic Signal; **TS** = Improvement

Recommended Improvement – US Highway 395 & Yucca Terrace Drive (#11) – The following improvements are necessary to bring the LOS back to acceptable levels:

- Add a 2nd northbound through lane.
- Add a 2nd southbound through lane.

Recommended Improvement – US Highway 395 & Phelan Road/Main Street (#12) – The following improvements are necessary to bring the LOS back to acceptable levels:

- Add a 2nd northbound left turn lane.
- Add a 2nd southbound left turn lane.
- Add a 3rd eastbound through lane.
- Add a 3rd westbound through lane.
- Add a westbound right turn lane.
- Modify the traffic signal to implement overlap phasing for the westbound right turn lane.

Recommended Improvement – US Highway 395 & Poplar Street (#13) – The following improvement is necessary to bring the LOS back to acceptable levels:

- Add a 2nd southbound through lane.

Recommended Improvement – Escondido Avenue & Main Street (#23) – The following improvement is necessary to bring the LOS back to acceptable levels:

- Add a 3rd westbound through lane.

Although the intersection of Verbena Road and Phelan Road is anticipated to operate at an unacceptable LOS (i.e., LOS D or worse) during the peak hours for Opening Year Cumulative (2021) traffic conditions, the Project does not contribute 10 or more peak hour trips to the minor street and the addition of Project traffic does not cause the intersection to meet a traffic signal warrant. As such, according to the County of San Bernardino deficiency criteria, the deficiency at this location does not require improvements.

The following additional improvements are required for Opening Year Cumulative (2021) With Project traffic conditions:

Recommended Improvement – US Highway 395 & Yucca Terrace Drive (#11) – The following improvements are necessary to bring the LOS back to acceptable levels:

- Add a 2nd northbound through lane.
- Add a 2nd southbound through lane.
- Install a traffic signal (Project design feature).
- Add a northbound left turn lane (Project design feature).
- Add an eastbound left turn lane (Project design feature).

6.8.2 RECOMMENDED IMPROVEMENTS TO ADDRESS QUEUING DEFICIENCIES

As shown previously in Table 6-2, there are peak hour queuing issues at three intersection turning movements. Recommended improvements to address queuing issues for Opening Year Cumulative (2021) traffic conditions are shown in Table 6-5 and reflect the recommended improvements to address intersection deficiencies, as previously described in Section 6.8.1 *Recommended Improvements to Address Deficiencies at Intersections*. In order to accommodate the 95th percentile peak hour queues for Opening Year Cumulative (2021) traffic conditions, a 475-foot southbound left turn pocket is recommended at the intersection of US Highway 395 & Phelan Road/Main Street, and a 275-foot northbound left turn pocket is recommended at the intersection of US Highway 395 & Three Flags Road. The turn pocket recommendation at US Highway 395 & Three Flags Road only requires restriping of existing pavement. Opening Year Cumulative (2021) Without Project and With Project traffic conditions with improvements queuing analysis worksheets are provided in Appendices 6.11 and 6.12, respectively.

6.8.3 RECOMMENDED IMPROVEMENTS TO ADDRESS DEFICIENCIES ON FREEWAY FACILITIES

As shown previously in Table 6-3, there are study area freeway mainline segments and ramp junctions that are anticipated to operate at an unacceptable LOS for Opening Year Cumulative (2021) traffic conditions. At this time, Caltrans has no fee programs or other improvement programs in place to address the deficiencies caused by development projects in the City of Hesperia (or other neighboring jurisdictions) on the SHS roadway segments. As such, no improvements have been recommended to address the Opening Year Cumulative (2021) deficiencies on the SHS.

Table 6-5

Peak Hour Queuing Summary for Opening Year Cumulative (2021) Conditions With Improvements

Intersection	Movement	Available Stacking Distance (Feet)	2021 Without Project				2021 With Project			
			95th Percentile Queue (Feet)		Acceptable? [1]		95th Percentile Queue (Feet)		Acceptable? [1]	
			AM Peak Hour	PM Peak Hour	AM	PM	AM Peak Hour	PM Peak Hour	AM	PM
US Highway 95 & Phelan Rd./Main St.	NBL	280	80	132	Yes	Yes	163 [2]	142	Yes	Yes
	SBL	**475**	142	173	Yes	Yes	194	429 [2]	Yes	Yes
US Highway 395 & Three Flags Rd.	NBL	**275**	263	241	Yes	Yes	263	241	Yes	Yes
	NBR	190	28	35	Yes	Yes	28	37	Yes	Yes
	SBL	225	46	66 [2]	Yes	Yes	46	66 [2]	Yes	Yes
	SBR	225	50	28	Yes	Yes	50	28	Yes	Yes

[1] Stacking Distance is acceptable if the required stacking distance is less than or equal to the stacking distance provided.

[2] 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles.

[3] An additional 15 feet of stacking which is assumed to be provided in the transition for turn pockets is reflected in the stacking distance shown on this table.

[4] **100** = Improvement

7 HORIZON YEAR (2040) TRAFFIC ANALYSIS

This section discusses the methods used to develop Horizon Year (2040) Without and With Project traffic forecasts and the resulting peak hour intersection operations, traffic signal warrant, queuing, freeway facility operations analyses.

7.1 ROADWAY IMPROVEMENTS

The lane configurations and traffic controls assumed to be in place for Horizon Year (2040) conditions are consistent with those shown previously on Exhibit 3-1, with the exception of the following:

- Project driveways and those facilities assumed to be constructed by the Project to provide site access are also assumed to be in place for Horizon Year (2040) traffic conditions only (e.g., intersection and roadway improvements along the Project's frontage and driveways).
- Other parallel facilities, that although not evaluated for the purposes of this analysis, are anticipated to be in place for Horizon Year traffic conditions and would affect the travel patterns within the study area.
- The future I-15 Freeway and Muscatel interchange is assumed to be constructed. Although the interchange is not included as part of this analysis, the shift in traffic patterns due to the future Muscatel Interchange has been assumed.

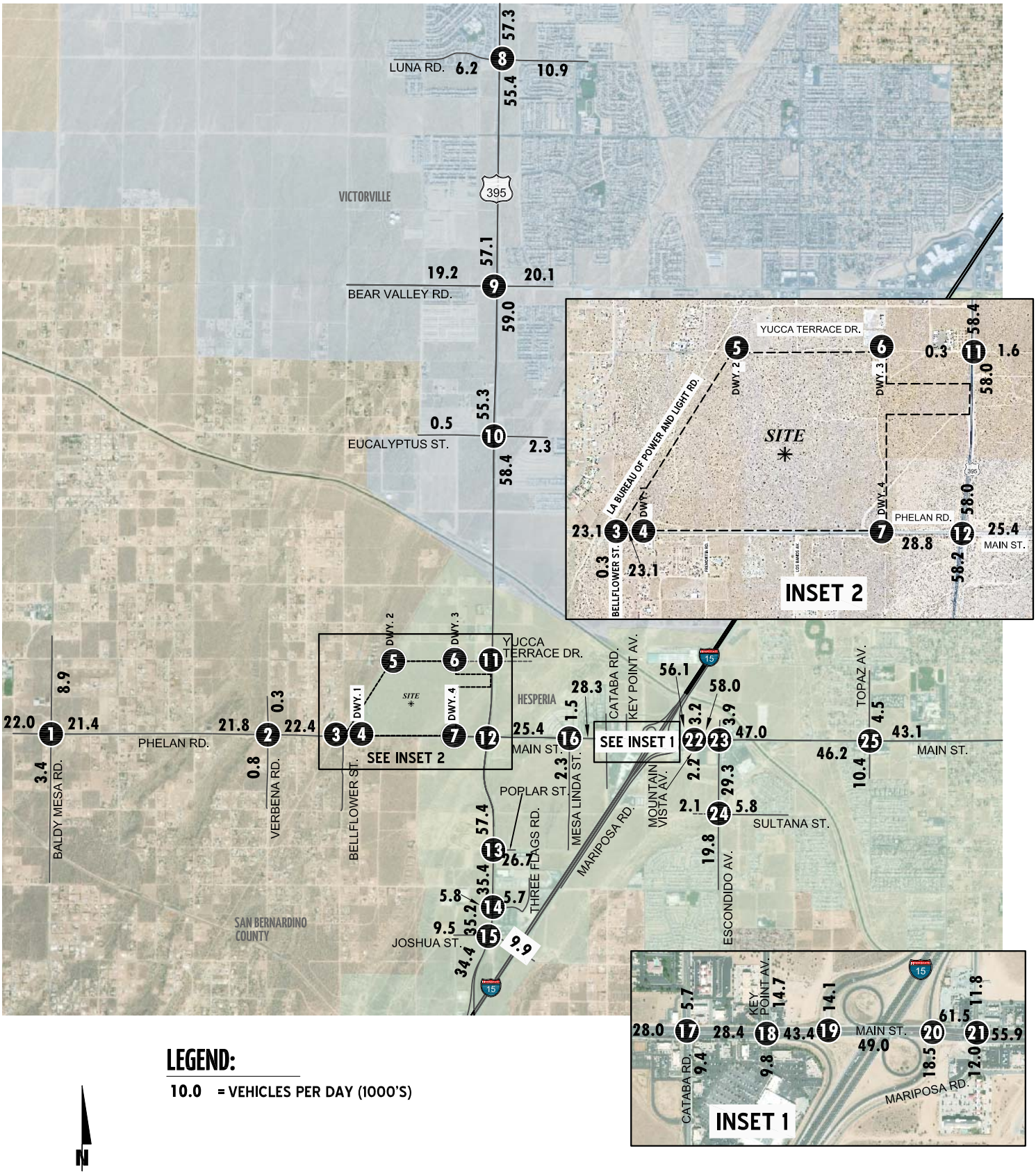
7.2 HORIZON YEAR (2040) WITHOUT PROJECT VOLUME FORECASTS

The Horizon Year (2040) Without Project analysis scenario includes the refined post-process volumes obtained from the SBTAM (see Section 4.9 *Horizon Year (2040) Conditions* of this TIA for a detailed discussion on the post-processing methodology). The weekday ADT and weekday AM and PM peak hour volumes which can be expected for Horizon Year (2040) Without Project traffic conditions are shown on Exhibits 7-1 and 7-2, respectively.

7.3 HORIZON YEAR (2040) WITH PROJECT VOLUME FORECASTS

The Horizon Year (2040) Without Project analysis scenario includes the refined post-process volumes obtained from the SBTAM, plus the traffic generated by the buildout of the proposed Project (see Section 4.9 *Horizon Year (2040) Conditions* of this TIA for a detailed discussion on the post-processing methodology). The weekday ADT and weekday AM and PM peak hour volumes which can be expected for Horizon Year (2040) With Project traffic conditions are shown on Exhibits 7-3 and 7-4, respectively.

EXHIBIT 7-1: HORIZON YEAR (2040) WITHOUT PROJECT AVERAGE DAILY TRAFFIC (ADT) (IN PCE)



LEGEND:

10.0 = VEHICLES PER DAY (1000'S)

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URBAN CROSSROADS

EXHIBIT 7-2: HORIZON YEAR (2040) WITHOUT PROJECT TRAFFIC VOLUMES (IN PCE)

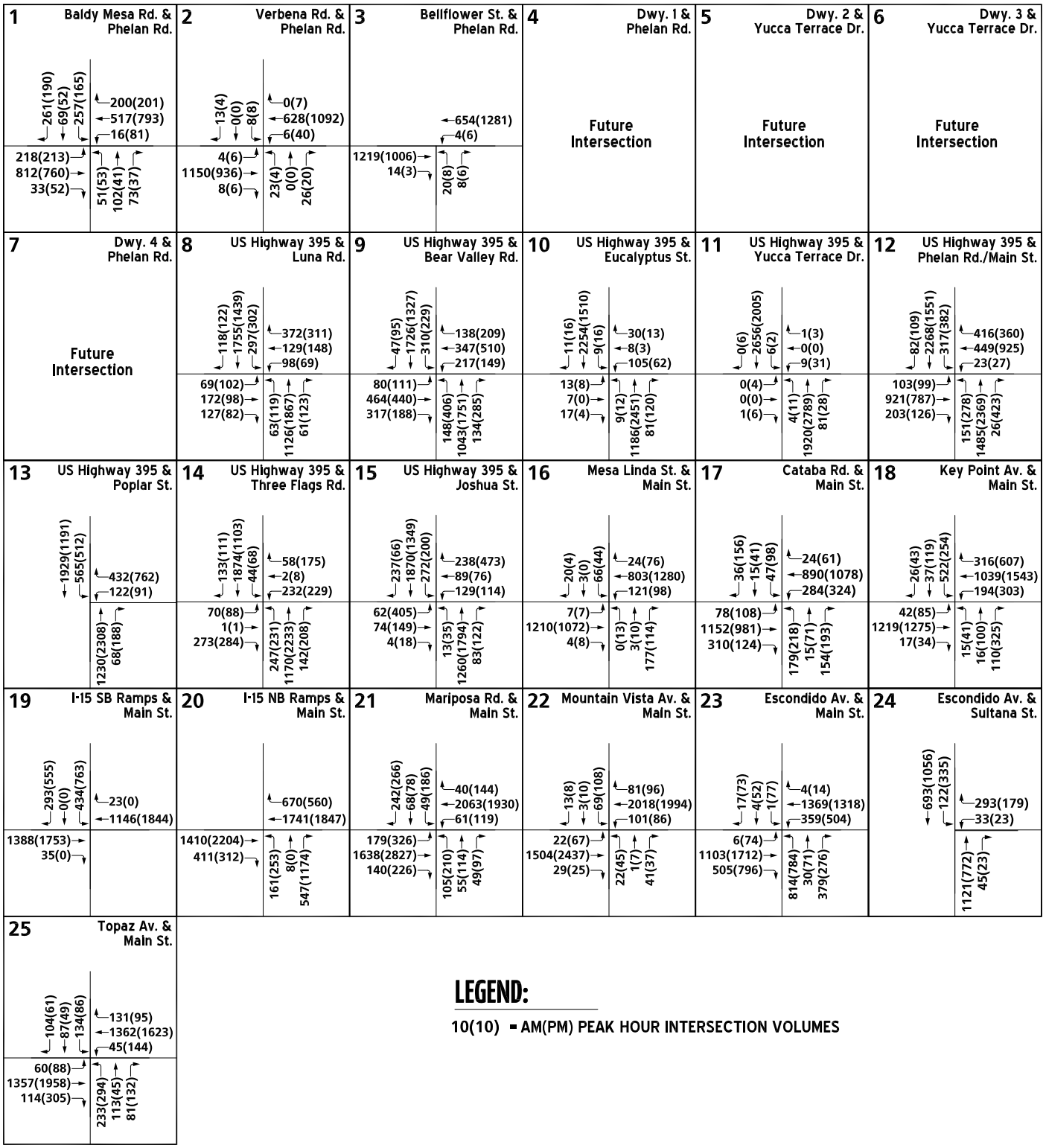


EXHIBIT 7-3: HORIZON YEAR (2040) WITH PROJECT AVERAGE DAILY TRAFFIC (ADT) (IN PCE)

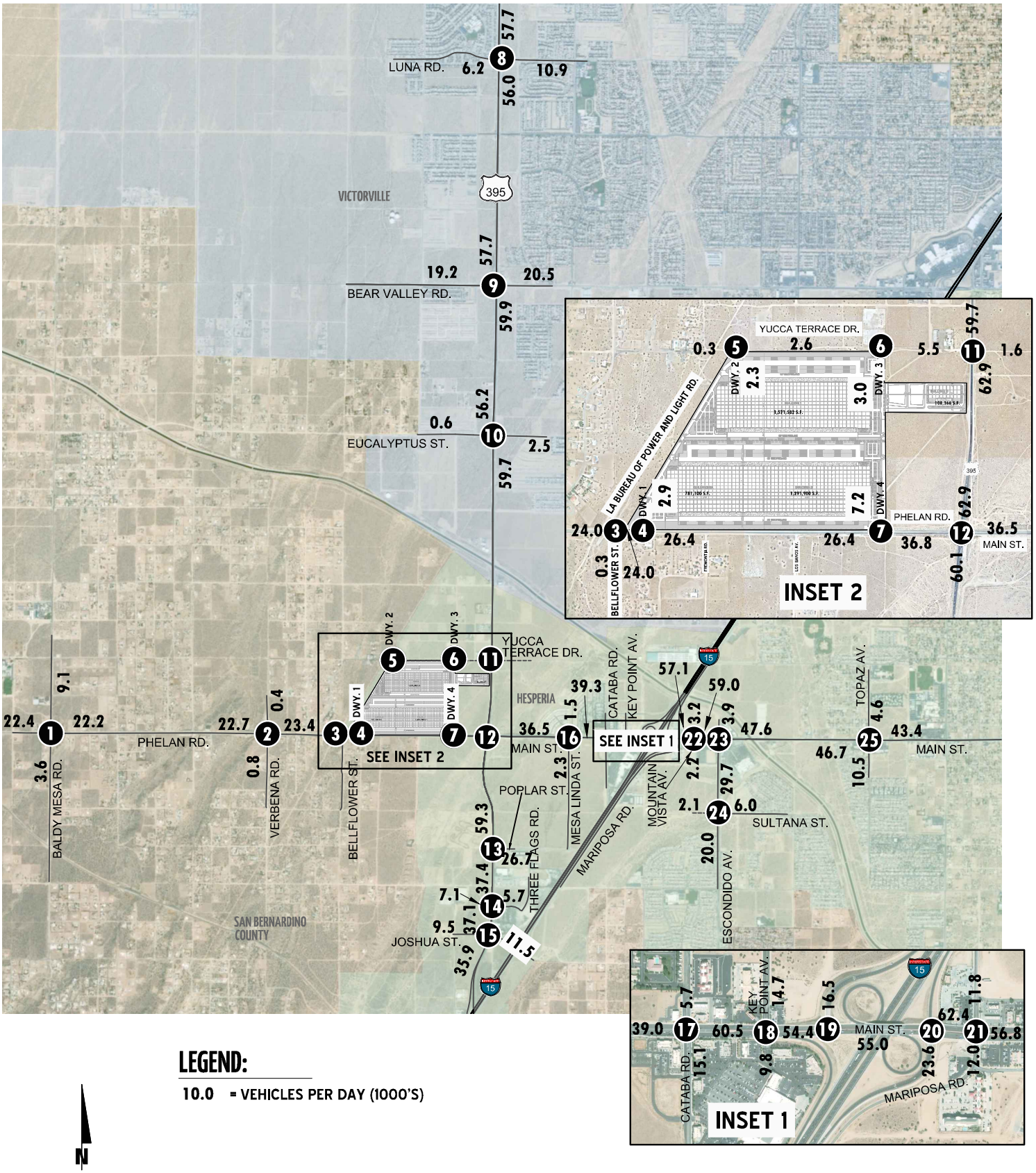
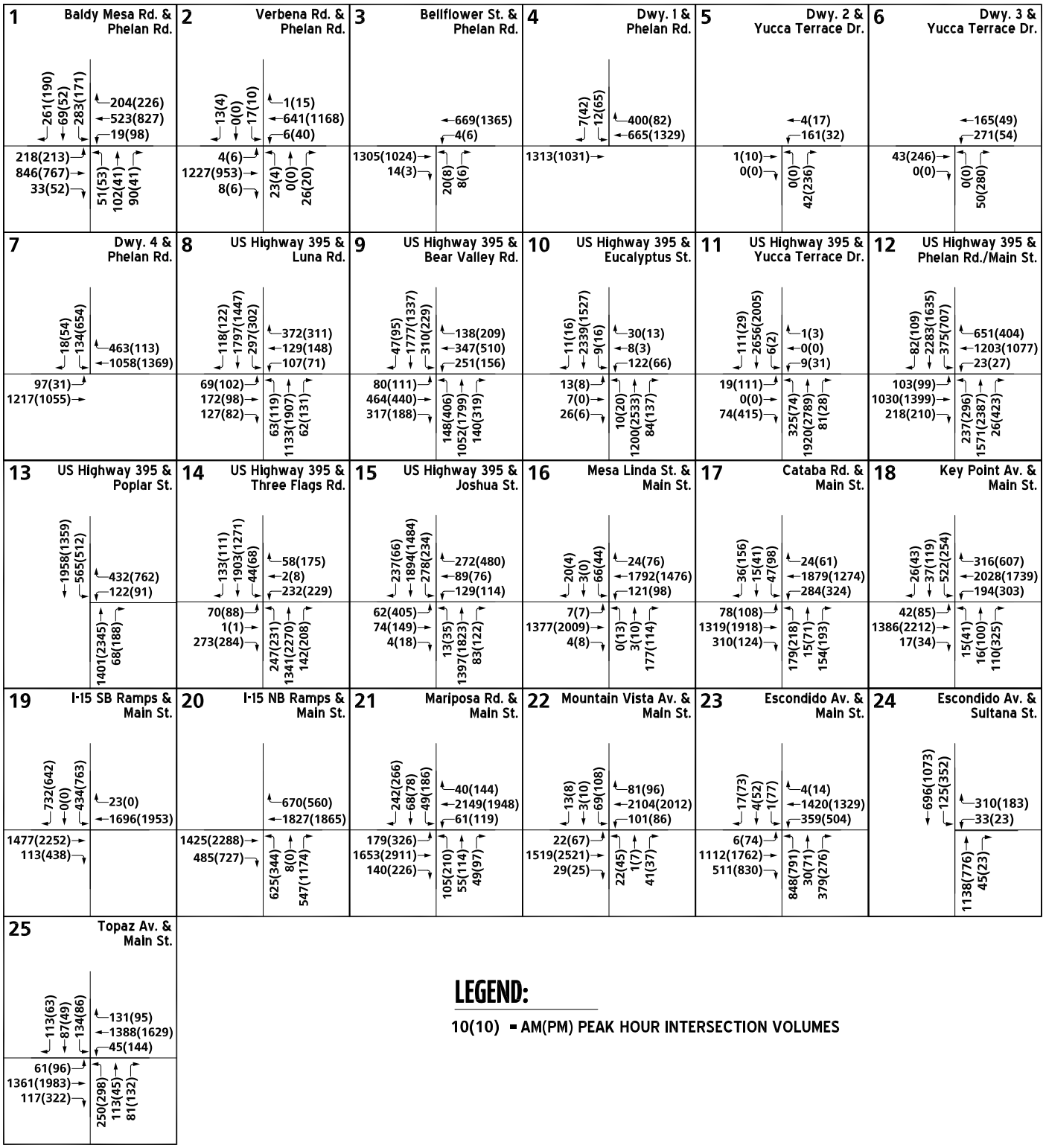


EXHIBIT 7-4: HORIZON YEAR (2040) WITH PROJECT TRAFFIC VOLUMES (IN PCE)



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7.4 INTERSECTION OPERATIONS ANALYSIS

Horizon Year (2040) Without and With Project peak hour traffic operations have been evaluated for the study area intersections based on the analysis methodologies presented in Section 2 *Methodologies* of this TIA. The intersection analysis results are summarized in Table 7-1 for both Horizon Year (2040) Without and With Project traffic conditions.

7.4.1 HORIZON YEAR (2040) WITHOUT PROJECT CONDITIONS

As shown in Table 7-1, the following study area intersections are anticipated to operate at an unacceptable LOS during the peak hours under Horizon Year (2040) Without Project conditions:

- Verbena Road & Phelan Road (#2) – LOS E AM peak hour; LOS D PM peak hour
- Bellflower Street & Phelan Road (#3) – LOS D AM and PM peak hours
- US Highway 395 & Luna Road (#8) – LOS E AM peak hour; LOS F PM peak hour
- US Highway 395 & Bear Valley Road (#9) – LOS E AM peak hour; LOS F PM peak hour
- US Highway 395 & Eucalyptus Road (#10) – LOS E AM and PM peak hours
- US Highway 395 & Yucca Terrace Drive (#11) – LOS F AM and PM peak hours
- US Highway 395 & Phelan Road/Main Street (#12) – LOS F AM and PM peak hours
- US Highway 395 & Poplar Street (#13) – LOS F AM and PM peak hours
- US Highway 395 & Three Flags Road (#14) – LOS F AM peak hour only
- US Highway 395 & Joshua Street (#15) – LOS F PM peak hour only
- Escondido Avenue & Main Street (#23) – LOS E AM and PM peak hours
- Escondido Avenue & Sultana Street (#24) – LOS E AM peak hour; LOS F PM peak hour
- Topaz Avenue & Main Street (#25) – LOS E PM peak hour only

A summary of the peak hour intersection LOS for Horizon Year Without Project conditions are shown on Exhibit 7-5. The intersection operations analysis worksheets for Horizon Year Without Project traffic conditions are included in Appendix 7.1 of this TIA.

7.4.2 HORIZON YEAR (2040) WITH PROJECT CONDITIONS

With the addition of Project traffic, there are no additional study area intersections that are anticipated to operate at an unacceptable LOS during the peak hours. A summary of the peak hour intersection LOS for Horizon Year With Project conditions are shown on Exhibit 7-6. The intersection operations analysis worksheets for Horizon Year (2040) With Project traffic conditions are included in Appendix 7.2 of this TIA.

Table 7-1

Intersection Analysis for Horizon Year (2040) Conditions

#	Intersection	Traffic Control[2]	2040 Without Project				2040 With Project				Acceptable LOS
			Delay[1] (secs.)		Level of Service		Delay[1] (secs.)		Level of Service		
			AM	PM	AM	PM	AM	PM	AM	PM	
1	Baldy Mesa Rd. & Phelan Rd.	TS	32.9	27.6	C	C	34.8	28.7	C	C	C
2	Verbena Rd. & Phelan Rd.	CSS	**35.6**	**33.7**	**E**	**D**	**39.0**	**38.2**	**E**	**E**	C
3	Bellflower St. & Phelan Rd.	CSS	**29.4**	**26.4**	**D**	**D**	**32.5**	**27.9**	**D**	**D**	C
4	Driveway 1 & Phelan Rd.	**CSS**	Future Intersection				20.0	32.5	C	D	D
5	Driveway 2 & Yucca Terrace Dr.	**CSS**	Future Intersection				8.4	9.4	A	A	D
6	Driveway 3 & Yucca Terrace Dr.	**CSS**	Future Intersection				8.7	12.6	A	B	D
7	Driveway 4 & Phelan Rd.	**CSS/TS[3]**	17.2	29.6	C	D	12.1	40.6	B	D	D
8	US Highway 395 & Luna Rd.	TS	**58.0**	**118.8**	**E**	**F**	**62.1**	**124.9**	**E**	**F**	D
9	US Highway 395 & Bear Valley Rd.	TS	**74.7**	**97.2**	**E**	**F**	**85.8**	**103.4**	**F**	**F**	D
10	US Highway 395 & Eucalyptus St.	TS	**77.0**	**63.8**	**E**	**E**	**97.8**	**74.7**	**F**	**E**	D
11	US Highway 395 & Yucca Terrace Dr.	CSS/**TS[3]**	**>100.0**	**>100.0**	**F**	**F**	**>200.0**	**>200.0**	**F**	**F**	D
12	US Highway 395 & Phelan Rd./Main St.	TS	**>200.0**	**>200.0**	**F**	**F**	**>200.0**	**>200.0**	**F**	**F**	D
13	US Highway 395 & Poplar St.	TS	**>100.0**	**>100.0**	**F**	**F**	**>100.0**	**>100.0**	**F**	**F**	D
14	US Highway 395 & Three Flags Rd.	TS	**87.5**	53.0	**F**	D	**88.8**	**55.3**	**F**	**E**	D
15	US Highway 395 & Joshua St.	TS	20.6	**87.5**	C	**F**	23.3	**101.6**	C	**F**	D
16	Mesa Linda St. & Main St.	TS	20.8	14.9	C	B	21.6	19.3	C	B	D
17	Cataba Rd. & Main St.	TS	36.9	48.4	D	D	39.5	52.3	D	D	D
18	Key Point Av. & Main St.	TS	35.9	33.5	D	C	45.0	53.2	D	D	D
19	I-15 SB Ramps & Main St.	TS	7.9	15.9	A	B	26.1	23.7	C	C	D
20	I-15 NB Ramps & Main St.	TS	7.2	22.4	A	C	22.9	23.5	C	C	D
21	Mariposa Rd. & Main St.	TS	24.9	52.4	C	D	25.3	53.4	C	D	D
22	Mountain Vista Av. & Main St.	TS	16.1	20.7	B	C	16.4	21.1	B	C	D
23	Escondido Av. & Main St.	TS	**63.3**	**77.7**	**E**	**E**	**70.5**	**79.4**	**E**	**E**	D
24	Escondido Av. & Sultana St.	CSS	**35.3**	**51.4**	**E**	**F**	**40.0**	**56.6**	**E**	**F**	D
25	Topaz Av. & Main St.	TS	30.8	**61.3**	C	**E**	34.8	**65.5**	C	**E**	D

[1] Per the Highway Capacity Manual (6th Edition), overall average intersection delay and level of service are shown for intersections with a traffic signal or all way stop control. For intersections with cross street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown. HCM delay reported in seconds.

[2] CSS = Cross-street Stop; TS = Traffic Signal; **CSS** = Improvement

EXHIBIT 7-5: HORIZON YEAR (2040) WITHOUT PROJECT SUMMARY OF LOS

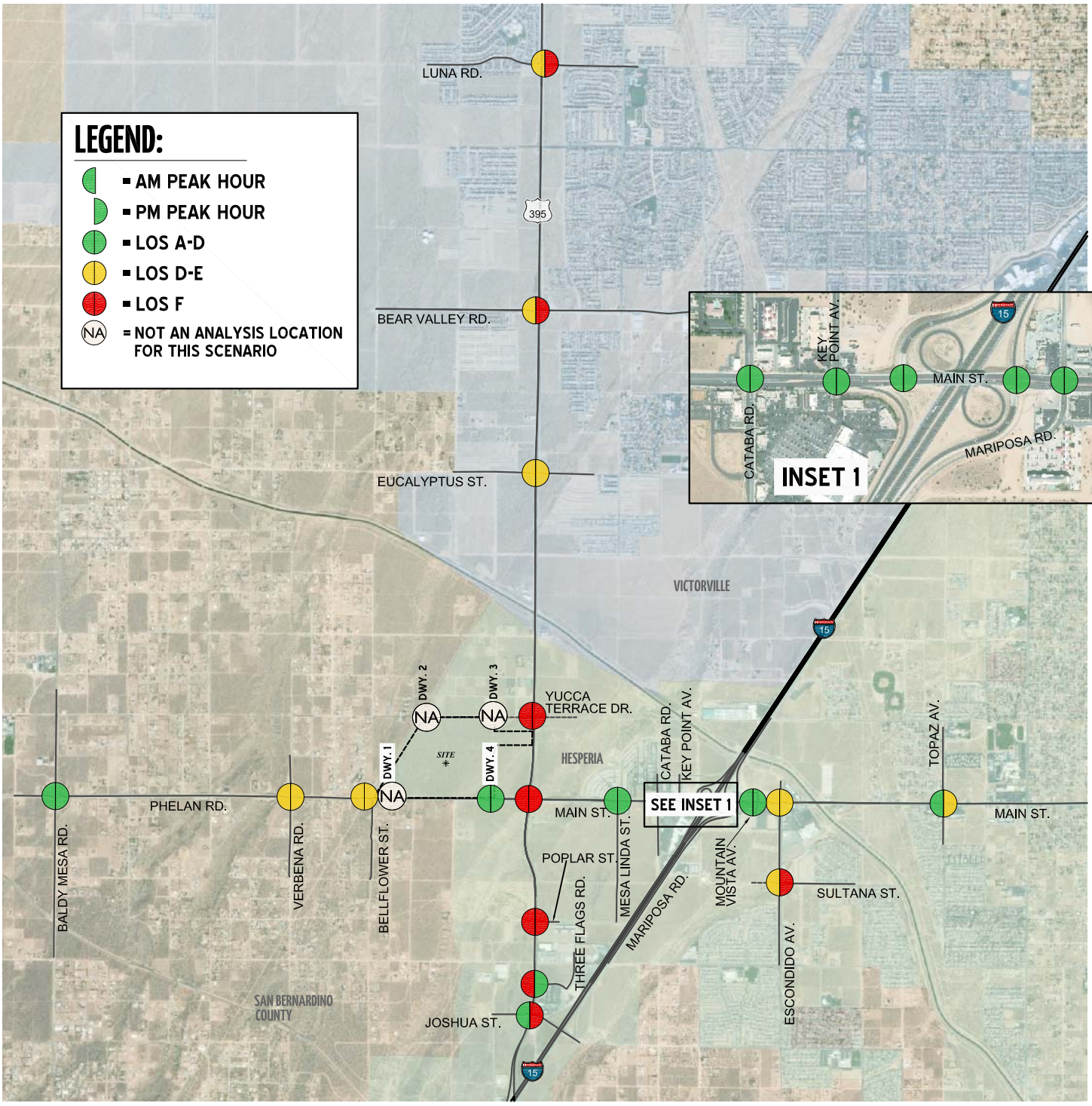
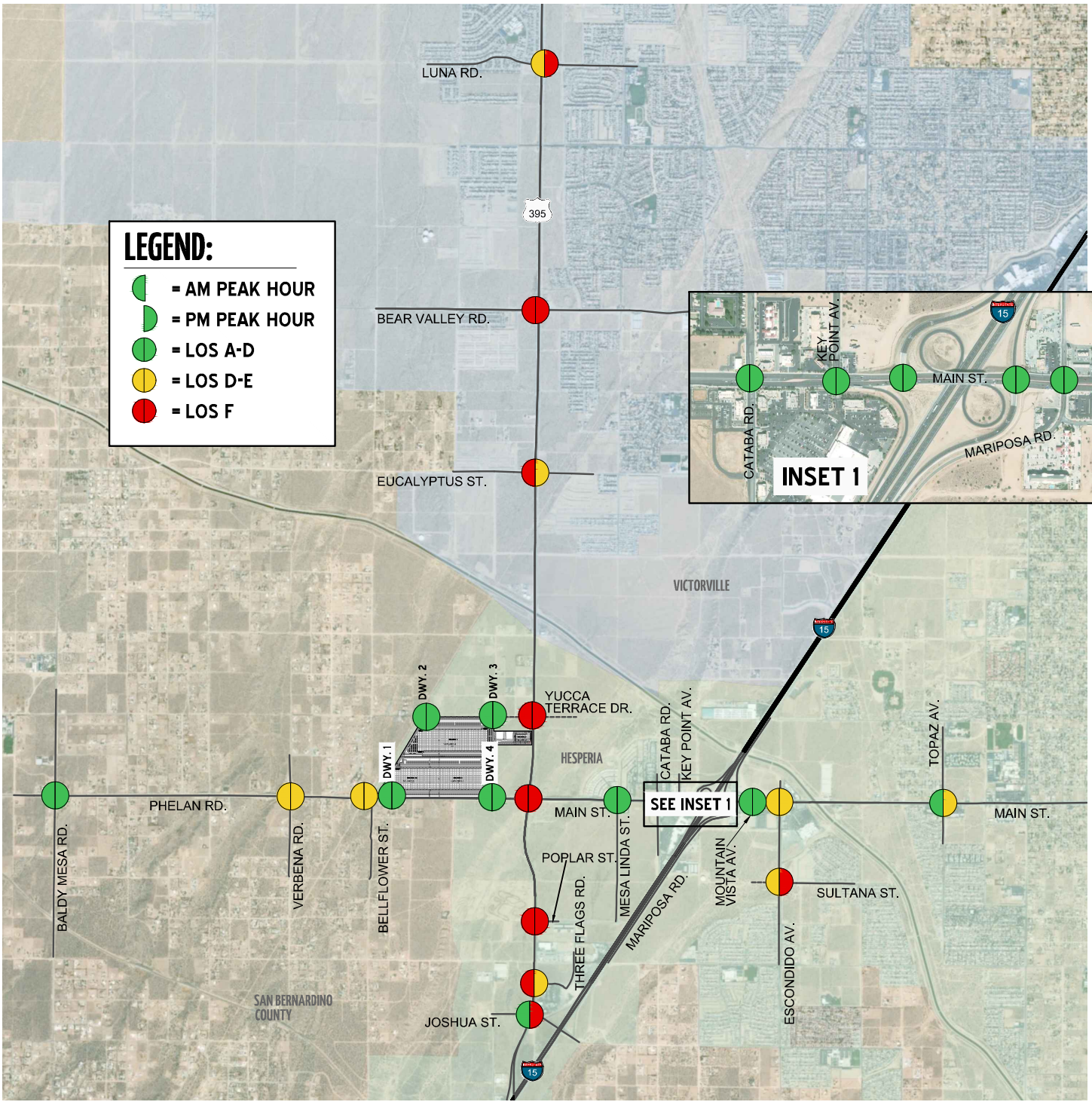


EXHIBIT 7-6: HORIZON YEAR (2040) WITH PROJECT SUMMARY OF LOS



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7.5 TRAFFIC SIGNAL WARRANTS ANALYSIS

In addition to the locations previously warranted under Existing (2019), E+P, and Opening Year Cumulative (2021) traffic conditions, the following study area intersection is anticipated to meet a traffic signal warrant for Horizon Year (2040) Without Project traffic conditions:

- US Highway 395 & Poplar Street (#13)

There are no additional study area intersections that are anticipated to meet a traffic signal warrant for Horizon Year (2040) With Project traffic conditions. Worksheets for Horizon Year (2040) Without and With Project traffic conditions signal warrants are provided in Appendices 7.3 and 7.4, respectively.

7.6 QUEUING ANALYSIS

7.6.1 ARTERIAL ANALYSIS

A queuing analysis was performed for US Highway 395 from Luna Road to Joshua Street to assess vehicle queues along the roadways. Queuing analysis findings are presented in Table 7-2. It is important to note that the available stacking distances are consistent with the measured turn pocket lengths. As shown in Table 7-2, the following intersection turning movements are anticipated to experience periodic queuing issues during the peak hours based on the 95th percentile peak hour traffic flows for Horizon Year (2040) Without Project traffic conditions:

- US Highway 395 & Bear Valley Road (#9) Northbound Left – AM and PM peak hours
- US Highway 395 & Bear Valley Road (#9) Southbound Left – AM and PM peak hours
- US Highway 395 & Phelan Road/Main Street (#12) Northbound Left – PM peak hour only
- US Highway 395 & Phelan Road/Main Street (#12) Southbound Left – AM and PM peak hours
- US Highway 395 & Poplar Street (#13) Southbound Left – AM and PM peak hours
- US Highway 395 & Three Flags Road (#14) Northbound Left – AM and PM peak hours
- US Highway 395 & Joshua Street (#15) Southbound Left – AM and PM peak hours

There are no additional intersection turning movements that are anticipated to experience queuing issues during the peak hours based on the 95th percentile peak hour traffic flows for Horizon Year (2040) With Project traffic conditions, in addition to the movements identified under Horizon Year (2040) Without Project traffic conditions.

Table 7-2

Peak Hour Queuing Summary for Horizon Year (2040) Conditions

Intersection	Movement	Available Stacking Distance (Feet)	2040 Without Project				2040 With Project			
			95th Percentile Queue (Feet)		Acceptable? [1]		95th Percentile Queue (Feet)		Acceptable? [1]	
			AM Peak Hour	PM Peak Hour	AM	PM	AM Peak Hour	PM Peak Hour	AM	PM
US Highway 395 & Luna Rd.	NBL	360	134 [2]	204 [2]	Yes	Yes	134 [2]	204 [2]	Yes	Yes
	NBR	455	18	49	Yes	Yes	19	52	Yes	Yes
	SBL	400	377 [2]	387 [2]	Yes	Yes	377 [2]	387 [2]	Yes	Yes
	SBR	400	31	32	Yes	Yes	32	32	Yes	Yes
US Highway 395 & Bear Valley Rd.	NBL	220	**250** [2]	**659** [2]	**No**	**No**	**250** [2]	**659** [2]	**No**	**No**
	SBL	230	**504** [2]	**359** [2]	**No**	**No**	**504** [2]	**359** [2]	**No**	**No**
US Highway 395 & Eucalyptus St.	NBL	475	26	32	Yes	Yes	29	44	Yes	Yes
	NBR	345	27	52	Yes	Yes	29	64	Yes	Yes
	SBL	440	26	38	Yes	Yes	26	38	Yes	Yes
	SBR	300	0	0	Yes	Yes	0	0	Yes	Yes
US Highway 95 & Phelan Rd./Main St.	NBL	280	234 [2]	**406** [2]	Yes	**No**	**407** [2]	**441** [2]	**No**	**No**
	SBL	250	**439** [2]	**640** [2]	**No**	**No**	**546** [2]	**1,230** [2]	**No**	**No**
US Highway 395 & Poplar St.	SBL	375	**590**	**1,183**	**No**	**No**	**765**	**1,200**	**No**	**No**
US Highway 395 & Three Flags Rd.	NBL	190	**482** [2]	**259**	**No**	**No**	**482** [2]	**259**	**No**	**No**
	NBR	190	32	51	Yes	Yes	38	51	Yes	Yes
	SBL	225	78 [2]	149 [2]	Yes	Yes	78	149 [2]	Yes	Yes
	SBR	225	61	31	Yes	Yes	61	31	Yes	Yes

Table 7-2

Peak Hour Queuing Summary for Horizon Year (2040) Conditions

Intersection	Movement	Available Stacking Distance (Feet)	2040 Without Project				2040 With Project			
			95th Percentile Queue (Feet)		Acceptable? [1]		95th Percentile Queue (Feet)		Acceptable? [1]	
			AM Peak Hour	PM Peak Hour	AM	PM	AM Peak Hour	PM Peak Hour	AM	PM
US Highway 395 & Joshua St.	NBL	190	33	70 [2]	Yes	Yes	33	70 [2]	Yes	Yes
	NBR	330	36	63	Yes	Yes	36	65	Yes	Yes
	SBL	220	**314**	**224**	**No**	**No**	**324** [2]	**254**	**No**	**No**
I-15 SB Ramps & Main St.	SBL	1,750	112	250	Yes	Yes	160	250	Yes	Yes
	SBR	1,200	155	467	Yes	Yes	923 [2]	597	Yes	Yes
I-15 NB Ramps & Main St.	NBL	1,290	155	187	Yes	Yes	802	261	Yes	Yes
	NBT/R	1,200	253	648 [2]	Yes	Yes	254	648 [2]	Yes	Yes
	NBR	700	258	648 [2]	Yes	Yes	258	648 [2]	Yes	Yes

[1] Stacking Distance is acceptable if the required stacking distance is less than or equal to the stacking distance provided.

[2] 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles.

[3] An additional 15 feet of stacking which is assumed to be provided in the transition for turn pockets is reflected in the stacking distance shown on this table.

7.6.2 FREEWAY OFF-RAMP ANALYSIS

A queuing analysis was performed for the off-ramps at the I-15 Freeway and Main Street interchange to assess vehicle queues for the off ramps that may potentially result in deficient peak hour operations at the ramp-to-arterial intersections and may potentially "spill back" onto the I-15 Freeway mainline. Queuing analysis findings are presented in Table 7-2. It is important to note that off-ramp lengths are consistent with the measured distance between the intersection and the freeway mainline. As shown in Table 7-2 and consistent with Existing (2019) traffic conditions, there are no off-ramp movements that are anticipated to experience queuing issues during the weekday AM or weekday PM peak 95th percentile traffic flows under Horizon Year (2040) Without Project traffic conditions. Worksheets for Horizon Year (2040) Without Project traffic conditions off-ramp queuing analysis are provided in Appendix 7.5.

There are no off-ramp movements that are anticipated to experience queuing issues during the weekday AM or weekday PM peak 95th percentile traffic flows with the addition of Project traffic under Horizon Year (2040) With Project traffic conditions. Worksheets for Horizon Year (2040) Without Project traffic conditions off-ramp queuing analysis are provided in Appendix 7.6.

7.7 FREEWAY FACILITY ANALYSIS

Horizon Year (2040) Without Project mainline directional volumes for the AM and PM peak hours are provided on Exhibit 7-7. As shown in Table 7-3, the following study area freeway segments and merge/diverge ramp junctions analyzed for this study are anticipated to operate at an unacceptable LOS (i.e., LOS E or worse) during the peak hours for Horizon Year (2040) Without Project traffic conditions:

- I-15 Freeway Southbound, North of Main Street (#1) – LOS E AM and PM peak hours
- I-15 Freeway Southbound, Off-Ramp at Main Street (#2) – LOS E AM and PM peak hours
- I-15 Freeway Southbound, South of Main Street (#5) – LOS E AM peak hour only
- I-15 Freeway Southbound, North of US Highway 395 (#6) – LOS F AM peak hour; LOS E PM peak hour
- I-15 Freeway Southbound, On-Ramp at US Highway 395 (#7) – LOS F AM peak hour only
- I-15 Freeway Southbound, South of US Highway 395 (#8) – LOS F AM peak hour; LOS E PM peak hour
- I-15 Freeway Northbound, North of Main Street (#9) – LOS F PM peak hour only
- I-15 Freeway Northbound, On-Ramp at Main Street (#10) – LOS F PM peak hour only
- I-15 Freeway Northbound, Off-Ramp at Main Street (#12) – LOS F PM peak hour only
- I-15 Freeway Northbound, South of Main Street (#13) – LOS F PM peak hour only
- I-15 Freeway Northbound, Off-Ramp at US Highway 395 (#15) – LOS F PM peak hour only
- I-15 Freeway Northbound, South of US Highway 395 (#16) – LOS F PM peak hour only

EXHIBIT 7-7: HORIZON YEAR (2040) WITHOUT PROJECT FREEWAY MAINLINE VOLUMES



Table 7-3

Freeway Facility Analysis for Horizon Year (2040) Conditions

Freeway	Direction[1]	Mainline Segment	Lanes[2]	2040 Without Project				2040 With Project			
				Density[3]		LOS[4]		Density[3]		LOS[4]	
				AM	PM	AM	PM	AM	PM	AM	PM
I-15 Freeway	SB	North of Main St.	3	**36.2**	**39.2**	**E**	**E**	**40.6**	**40.0**	**E**	**E**
		Off-Ramp at Main St.	3	**37.3**	**39.2**	**E**	**E**	**39.4**	**39.6**	**E**	**E**
		Loop On-Ramp at Main St.	3	34.5	29.7	D	D	34.5	29.7	D	D
		On-Ramp at Main St.	3	35.0	29.1	D	D	**35.5**	32.1	**E**	D
		South of Main St.	3	**40.4**	29.9	**E**	D	**41.2**	33.6	**E**	D
		North of US Highway 395	3	**45.0**	**42.8**	**F**	**E**	**45.0**	**45.0**	**F**	**F**
		On-Ramp at US Highway 395	4	**40.2**	26.8	**F**	D	**40.4**	**42.7**	**F**	**E**
		South of US Highway 395	4	**35.7**	**38.4**	**F**	**E**	**35.6**	**40.7**	**F**	**E**
	NB	North of Main St.	3	26.5	**36.3**	D	**F**	26.9	**39.9**	D	**F**
		On-Ramp at Main St.	3	29.0	**34.5**	D	**F**	29.3	**36.0**	D	**F**
		Loop On-Ramp at Main St.	3	24.1	30.3	C	D	24.6	**33.0**	C	**F**
		Off-Ramp at Main St.	3	30.7	**41.2**	D	**F**	33.7	**41.3**	D	**F**
		South of Main St.	3	23.9	**45.0**	C	**F**	27.1	**45.0**	D	**F**
		North of US Highway 395	4	19.2	27.4	C	D	21.1	27.3	C	D
		Off-Ramp at US Highway 395	4	33.6	**46.3**	D	**F**	**36.6**	**46.5**	**E**	**F**
		South of US Highway 395	4	26.7	**45.0**	D	**F**	30.0	**45.0**	D	**F**

[1] NB = Northbound; SB = Southbound

[2] Number of lanes are in the specified direction and is based on existing conditions.

[3] Density is measured by passenger cars per mile per lane (pc/mi/ln).

[4] LOS = Level of Service

Horizon Year (2040) Without Project freeway facility analysis worksheets are provided in Appendix 7.7.

Horizon Year (2040) With Project mainline directional volumes for the AM and PM peak hours are provided on Exhibit 7-8. The following additional study area ramp junctions are anticipated to operate at an unacceptable LOS with the addition of Project traffic under Horizon Year (2040) With Project traffic conditions, resulting in a cumulative deficiency:

- I-15 Freeway Southbound, On-Ramp at Main Street (#4) – LOS E AM peak hour only
- I-15 Freeway Northbound, Loop On-Ramp at Main Street (#11) – LOS E PM peak hour only

Horizon Year (2040) With Project freeway facility analysis worksheets are provided in Appendix 7.8.

7.8 RECOMMENDED IMPROVEMENTS

This section provides a summary of Horizon Year (2040) deficiencies and recommended improvements. Based on the City of Hesperia deficiency criteria discussed in Section 2.7 *Minimum Acceptable Levels of Service (LOS) and Intersection Deficiency Criteria*, the following intersections were found to be deficient. Improvements necessary to improve traffic deficiencies back to acceptable levels are also discussed below.

7.8.1 RECOMMENDED IMPROVEMENTS TO ADDRESS DEFICIENCIES AT INTERSECTIONS

The effectiveness of the proposed recommended improvements is presented in Table 7-4 for Horizon Year (2040) traffic conditions. The intersection operations analysis worksheets for Horizon Year (2040) Without Project and With Project traffic conditions, with improvements, are included in Appendices 7.9 and 7.10, respectively.

Recommended Improvement – US Highway 395 & Luna Road (#8) – The following improvements are necessary to bring the LOS back to acceptable levels:

- Add a 3rd northbound through lane.
- Restripe the southbound right turn lane to a 3rd southbound through lane.

Recommended Improvement – US Highway 395 & Bear Valley Road (#9) – The following improvements are necessary to bring the LOS back to acceptable levels:

- Add a 2nd northbound left turn lane.
- Add a 3rd northbound through lane.
- Add a northbound right turn lane.
- Add a 2nd southbound left turn lane.
- Add a 3rd southbound through lane.
- Add a southbound right turn lane.

EXHIBIT 7-8: HORIZON YEAR (2040) WITH PROJECT FREEWAY MAINLINE VOLUMES



Table 7-4

Intersection Analysis for Horizon Year (2040) Conditions With Improvements

#	Intersection	Traffic Control[3]	Intersection Approach Lanes[1]												Delay[2] (secs.)		Level of Service	
			Northbound			Southbound			Eastbound			Westbound						
			L	T	R	L	T	R	L	T	R	L	T	R	AM	PM	AM	PM
8	US Highway 395 & Luna Rd.																	
	- Without Project	TS	1	**3**	1	1	**3**	**0**	1	1	1	1	1	0	37.0	45.2	D	D
	- With Project	TS	1	**3**	1	1	**3**	**0**	1	1	1	1	1	0	37.3	47.4	D	D
9	US Highway 395 & Bear Valley Rd.																	
	- Without Project	TS	**2**	**3**	**1**	**2**	**3**	**1**	1	2	d	1	2	1	37.5	37.9	D	D
	- With Project	TS	**2**	**3**	**1**	**2**	**3**	**1**	1	2	d	1	2	1	43.1	38.9	D	D
10	US Highway 395 & Eucalyptus St.																	
	- Without Project	TS	1	**3**	1	1	**3**	1	1	1	0	1	1	0	16.5	12.9	B	B
	- With Project	TS	1	**3**	1	1	**3**	1	1	1	0	1	1	0	19.2	13.9	B	B
11	US Highway 395 & Yucca Terrace Dr.																	
	- Without Project	**TS**	**1**	**3**	0	0	**3**	0	**1**	1	0	0	1	0	3.0	3.7	A	A
	- With Project	**TS**	**1**	**3**	0	0	**3**	0	**1**	1	0	0	1	0	32.5	37.0	C	D
12	US Highway 395 & Phelan Rd./Main St.																	
	- Without Project	TS	**2**	**3**	**1**	**2**	**3**	**1**	1	**3**	**1**	1	**3**	**1>**	34.6	40.7	C	D
	- With Project	TS	**2**	**3**	**1**	**2**	**3**	**1**	1	**3**	**1**	1	**3**	**1>**	51.2	54.5	D	D
13	US Highway 395 & Poplar St.																	
	- Without Project	**TS**	0	**3**	**1**	**2**	**3**	0	0	0	0	1	0	1	28.6	50.0	C	D
	- With Project	**TS**	0	**3**	**1**	**2**	**3**	0	0	0	0	1	0	1	28.9	51.4	C	D
14	US Highway 395 & Three Flags Rd.																	
	- Without Project	TS	1	**3**	1	1	**3**	1	1	1	0	1	1	d	42.2	33.3	D	C
	- With Project	TS	1	**3**	1	1	**3**	1	1	1	0	1	1	d	43.1	34.2	D	C
15	US Highway 395 & Joshua St.																	
	- Without Project	TS	1	**3**	1	1	**3**	**1**	1	1	0	1	1	1	15.5	39.5	B	D
	- With Project	TS	1	**3**	1	1	**3**	**1**	1	1	0	1	1	1	16.6	42.3	B	D
23	Escondido Av. & Main St.																	
	- Without Project	TS	2	1	1>	1	1	0	1	3	1>	2	**3**	1	49.1	52.0	D	D
	- With Project	TS	2	1	1>	1	1	0	1	3	1>	2	**3**	1	53.4	53.4	D	D
24	Escondido Av. & Sultana St.																	
	- Without Project	**TS**	0	2	0	1	2	0	0	0	0	1	0	1	25.4	20.8	C	C
	- With Project	**TS**	0	2	0	1	2	0	0	0	0	1	0	1	27.2	21.7	C	C
25	Topaz Av. & Main St.																	
	- Without Project	TS	1	1	0	1	1	0	1	**3**	**0**	1	**3**	0	21.9	27.4	C	C
	- With Project	TS	1	1	0	1	1	0	1	**3**	**0**	1	**3**	0	23.3	28.3	C	C

[1] When a right turn is designated, the lane can either be striped or unstriped. To function as a right turn lane there must be sufficient width for right turning vehicles to travel outside the through lanes.

L = Left; T = Through; R = Right; > = Right-Turn Overlap Phasing; **1** = Improvement

[2] Per the Highway Capacity Manual (6th Edition), overall average intersection delay and level of service are shown for intersections with a traffic signal or all way stop control. For intersections with cross street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown.

[3] CSS = Cross-street Stop; TS = Traffic Signal; **TS** = Improvement

Recommended Improvement – US Highway 395 & Eucalyptus Street (#10) – The following improvements are necessary to bring the LOS back to acceptable levels:

- Add a 3rd northbound through lane.
- Add a 3rd southbound through lane.

Recommended Improvement – US Highway 395 & Yucca Terrace Drive (#11) – The following improvements are necessary to bring the LOS back to acceptable levels:

- Add a 2nd northbound through lane.
- Add a 2nd southbound through lane.
- Install a traffic signal (Project design feature).
- Add a northbound left turn lane (Project design feature).
- Add an eastbound left turn lane (Project design feature).
- Add a 3rd northbound through lane.
- Add a 3rd southbound through lane.

Recommended Improvement – US Highway 395 & Phelan Road/Main Street (#12) – The following improvements are necessary to bring the LOS back to acceptable levels:

- Add a 2nd northbound left turn lane.
- Add a 2nd southbound left turn lane.
- Add a 3rd eastbound through lane.
- Add a 3rd westbound through lane.
- Add a westbound right turn lane.
- Modify the traffic signal to implement overlap phasing for the westbound right turn lane.
- Add a 3rd northbound through lane.
- Add a northbound right turn lane.
- Add a 3rd southbound through lane.
- Add a southbound right turn lane.
- Add an eastbound right turn lane.

Recommended Improvement – US Highway 395 & Poplar Street (#13) – The following improvements are necessary to bring the LOS back to acceptable levels:

- Install a traffic signal.
- Add a 3rd northbound through lane.
- Add a northbound right turn lane.
- Add a 2nd southbound left turn lane.
- Add a 2nd southbound through lane.
- Add a 3rd southbound through lane.

Recommended Improvement – US Highway 395 & Three Flags Road (#14) – The following improvements are necessary to bring the LOS back to acceptable levels:

- Add a 3rd northbound through lane.
- Add a 3rd southbound through lane.

Recommended Improvement – US Highway 395 & Joshua Street (#15) – The following improvements are necessary to bring the LOS back to acceptable levels:

- Add a 3rd northbound through lane.
- Add a 3rd southbound through lane.
- Add a southbound right turn lane.

Recommended Improvement – Escondido Avenue & Main Street (#23) – The following improvement is necessary to bring the LOS back to acceptable levels:

- Add a 3rd westbound through lane.

Recommended Improvement – Escondido Avenue & Sultana Street (#24) – The following improvement is necessary to bring the LOS back to acceptable levels:

- Install a traffic signal.

Recommended Improvement – Topaz Avenue & Main Street (#25) – The following improvements are necessary to bring the LOS back to acceptable levels:

- Restripe the eastbound right turn lane to a 3rd eastbound through lane.
- Add a 3rd westbound through lane.

Although the intersections of Verbena Road at Phelan Road (#2) and Bellflower Street at Phelan Road (#3) are anticipated to operate at an unacceptable LOS (i.e., LOS D or worse) during the peak hours for Horizon Year (2040) traffic conditions, the Project does not contribute 10 or more peak hour trips to the minor street and the addition of Project traffic does not cause the intersection to meet a traffic signal warrant. As such, according to the County of San Bernardino deficiency criteria, the deficiency at this location does not require improvements.

7.8.2 RECOMMENDED IMPROVEMENTS TO ADDRESS QUEUING DEFICIENCIES

As shown previously in Table 7-2, there are peak hour queuing issues at seven intersection turning movements. Recommended improvements to address queuing issues for Horizon Year (2040) traffic conditions are shown in Table 7-5 and reflect the recommended improvements to address intersection deficiencies, as previously described in Section 7.8.1 *Recommended Improvements to Address Deficiencies at Intersections*.

In order to accommodate the 95th percentile peak hour queues for Horizon Year (2040) traffic conditions, the following improvements are necessary:

- US Highway 395 & Bear Valley Road (#9) – 150-foot northbound right turn pocket
- US Highway 395 & Bear Valley Road (#9) – 100-foot southbound right turn pocket
- US Highway 395 & Phelan Road/Main Street (#12) – 325-foot northbound right turn pocket
- US Highway 395 & Phelan Road/Main Street (#12) – 475-foot southbound left turn pocket
- US Highway 395 & Phelan Road/Main Street (#12) – 100-foot southbound right turn pocket
- US Highway 395 & Poplar Street (#13) – 100-foot northbound right turn pocket
- US Highway 395 & Three Flags Road (#14) – 275-foot northbound left turn pocket (restriping of existing pavement)
- US Highway 395 & Joshua Street (#15) – 300-foot southbound left turn pocket (restriping of existing pavement)
- US Highway 395 & Joshua Street (#15) – 100-foot southbound right turn pocket

Table 7-5

Peak Hour Queuing Summary for Horizon Year (2040) Conditions With Improvements

Intersection	Movement[4]	Available Stacking Distance (Feet)[5]	2040 Without Project				2040 With Project			
			95th Percentile Queue (Feet)		Acceptable?[1]		95th Percentile Queue (Feet)		Acceptable?[1]	
			AM Peak Hour	PM Peak Hour	AM	PM	AM Peak Hour	PM Peak Hour	AM	PM
US Highway 395 & Bear Valley Rd.	NBL	220	94	222 [3]	Yes	Yes	94	222 [3]	Yes	Yes
	NBR	**150**	46	105	Yes	Yes	46	137	Yes	Yes
	SBL	230	173	133	Yes	Yes	173	133	Yes	Yes
	SBR	**100**	4	44	Yes	Yes	4	44	Yes	Yes
US Highway 95 & Phelan Rd./Main St.	NBL	280	97	149	Yes	Yes	181 [2]	158	Yes	Yes
	NBR	**325**	0	303	Yes	Yes	0	323	Yes	Yes
	SBL	**475**	169	193	Yes	Yes	195	431 [2]	Yes	Yes
	SBR	**100**	21	25	Yes	Yes	21	25	Yes	Yes
US Highway 395 & Poplar St.	**NBR**	**100**	31	90	Yes	Yes	36	90	Yes	Yes
	SBL	375	286	345 [2]	Yes	Yes	287	345 [2]	Yes	Yes
US Highway 395 & Three Flags Rd.	NBL	**275**	274	259	Yes	Yes	274	259	Yes	Yes
	NBR	190	32	31	Yes	Yes	32	30	Yes	Yes
	SBL	225	78	149 [2]	Yes	Yes	78	149 [2]	Yes	Yes
	SBR	225	62	31	Yes	Yes	62	31	Yes	Yes
US Highway 395 & Joshua St.	NBL	190	31	70 [2]	Yes	Yes	31	70 [2]	Yes	Yes
	NBR	330	39	63	Yes	Yes	39	65	Yes	Yes
	SBL	**300**	284	224	Yes	Yes	289	254	Yes	Yes
	SBR	**100**	79	23	Yes	Yes	80	23	Yes	Yes

[1] Stacking Distance is acceptable if the required stacking distance is less than or equal to the stacking distance provided.

[2] 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles.

[3] An additional 15 feet of stacking which is assumed to be provided in the transition for turn pockets is reflected in the stacking distance shown on this table.

[4] **NBR** = Improvement

[5] **100** = Improvement

7.8.3 RECOMMENDED IMPROVEMENTS TO ADDRESS DEFICIENCIES ON FREEWAY FACILITIES

According to the Caltrans I-15 Transportation Concept Report (TCR), the I-15 Freeway is anticipated to be constructed to include the addition of a carpool or High Occupancy Vehicle (HOV) lane. (12) For the purposes of this TIA, this improvement has been analyzed. Caltrans typically assumes a reduction of 14 percent to the freeway mainline through volumes in this region to account for vehicles utilizing the HOV lanes. The reduction to the I-15 Freeway mainline volumes has been applied to account for the proposed HOV lanes. The analysis has been performed assuming the same on and off-ramp configurations as existing baseline conditions at the I-15 Freeway and Main Street interchange.

As shown in Table 7-6, the I-15 Freeway mainline segment operations are anticipated to improve operations with the proposed Caltrans HOV lanes. Although the freeway facilities are anticipated to improve operations with the improvements, the following freeway segments and merge/diverge ramp junctions are anticipated to continue to operate at an unacceptable LOS during the weekday AM or PM peak hours with the improvements to the I-15 Freeway:

- I-15 Freeway Southbound, Off-Ramp at Main Street (#2) – LOS E AM and PM peak hours
- I-15 Freeway Southbound, North of US Highway 395 (#6) – LOS E AM and PM peak hours
- I-15 Freeway Southbound, South of US Highway 395 (#8) – LOS E AM and PM peak hours
- I-15 Freeway Northbound, North of Main Street (#9) – LOS E PM peak hour only
- I-15 Freeway Northbound, On-Ramp at Main Street (#10) – LOS E PM peak hour only
- I-15 Freeway Northbound, Off-Ramp at Main Street (#12) – LOS F PM peak hour only
- I-15 Freeway Northbound, South of Main Street (#13) – LOS F PM peak hour only
- I-15 Freeway Northbound, Off-Ramp at US Highway 395 (#15) – LOS F PM peak hour only
- I-15 Freeway Northbound, South of US Highway 395 (#16) – LOS F PM peak hour only

The Project is anticipated to have a cumulative deficiency to the identified freeway mainline segments and merge/diverge ramp junctions; however, no improvements have been identified as no other improvements beyond those planned by the I-15 Freeway Project have been evaluated. Worksheets for Horizon Year (2040) With Project conditions freeway facility level of service analysis, with improvements, are provided in Appendix 7.13.

Neither Caltrans nor the State have adopted a fee program that can ensure that locally-contributed impact fees will be tied to improvements to freeway mainlines, and only Caltrans has the jurisdiction over mainline improvements. Because Caltrans has exclusive control over state highway improvements, ensuring that fair share contributions to mainline improvements are actually part of a program tied to implementation is within the jurisdiction of Caltrans.

Table 7-6

Freeway Facility Analysis for Horizon Year (2040) Conditions With Improvements

Freeway	Direction	Ramp or Segment	Lanes on Freeway[1]	2040 With Project			
				AM Peak Hour		PM Peak Hour	
				Density[2]	LOS[3]	Density[2]	LOS[3]
I-15	Southbound	North of Main St.	3	31.7	D	31.3	D
		Off-Ramp at Main St.	3	**36.2**	**E**	**36.5**	**E**
		Loop On-Ramp at Main St.	3	30.3	D	25.6	C
		On-Ramp at Main St.	3	27.9	D	27.9	D
		South of Main St.	3	32.2	D	26.5	D
		North of US Highway 395	3	**42.2**	**E**	**36.4**	**E**
		Southbound On-Ramp at US Highway 395	4	26.2	D	23.8	C
		South of US Highway 395	4	**43.5**	**E**	**35.4**	**E**
	Northbound	North of Main St.	3	22.4	C	**39.9**	**E**
		Northbound On-Ramp at Main St.	3	26.1	C	**36.0**	**E**
		Northbound Loop On-Ramp at Main St.	3	21.4	C	33.0	D
		Northbound Off-Ramp at Main St.	3	30.7	D	**41.3**	**F**
		South of Main St.	3	22.7	C	**45.0**	**F**
		North of US Highway 395	4	18.2	C	27.3	D
		Northbound Off-Ramp at US Highway 395	4	33.8	D	**46.5**	**F**
		South of US Highway 395	4	25.9	C	**45.0**	**F**

* **BOLD** = Unacceptable Level of Service

[1] Number of lanes are in the specified direction and is based on planned toll lanes (2 toll lanes in each direction).

[2] Density is measured by passenger cars per mile per lane (pc/mi/ln).

[3] LOS = Level of Service

8 LOCAL AND REGIONAL FUNDING MECHANISMS

Transportation improvements within the City of Hesperia are funded through a combination of construction of off-site improvements by the Project, development impact fee programs or fair share contributions, such as the City of Hesperia Development Impact Fee (DIF) program. Identification and timing of needed improvements is generally determined through local jurisdictions based upon a variety of factors.

8.1 MEASURE "I" FUNDS

In 2004, the voters of San Bernardino County approved the 30-year extension of Measure "I", a one-half of one percent sales tax on retail transactions, through the year 2040, for transportation projects including, but not limited to, infrastructure improvements, commuter rail, public transit, and other identified improvements. The Measure "I" extension requires that a regional traffic impact fee be created to ensure development is paying its fair share. A regional Nexus study was prepared by SBCTA and concluded that each jurisdiction should include a regional fee component in their local programs to meet the Measure "I" requirement. The regional component assigns specific facilities and cost sharing formulas to each jurisdiction and was most recently updated in September 2017. Revenues collected through these programs are used in tandem with Measure "I" funds to deliver projects identified in the Nexus Study.

While Measure "I" is a self-executing sales tax administered by SBCTA, it bears discussion here because the funds raised through Measure "I" have funded in the past, and will continue to fund, new transportation facilities in San Bernardino County, including within the City of Hesperia.

8.2 CITY OF HESPERIA DEVELOPMENT IMPACT FEE PROGRAM

The City of Hesperia has created its own local DIF program to impose and collect fees from new residential, commercial and industrial development for the purpose of funding roadways and intersections necessary to accommodate City growth as identified in the City's General Plan Circulation Element. The City's DIF includes a Regional Circulation System Fee to comply with Measure "I" and a Local Circulation System Fee to address transportation improvements which are locally noteworthy. The City of Hesperia DIF facilities list has been provided by City staff.

Under the City's DIF program, the City may grant to developers a credit against specific components of fees when those developers construct certain facilities and landscaped medians identified in the list of improvements funded by the DIF program. The timing to use the DIF fees is established through periodic capital improvement programs which are overseen by the City's Public Works Department. Periodic traffic counts, review of traffic accidents, and a review of traffic trends throughout the City are also periodically performed by City staff and consultants. The City uses this data to determine the timing of implementing the improvements listed in its facilities list. The City also uses this data to ensure that the improvements listed on the facilities list are constructed before the LOS falls below the LOS performance standards adopted by the City. In this way, the improvements are constructed before the LOS falls below the City's LOS performance thresholds.

The Project Applicant will be subject to the City's DIF fee program and will pay the requisite City DIF fees at the rates then in effect. The Project Applicant's payment of the requisite DIF fees at the rates then in effect pursuant to the DIF Program will reduce its deficiencies to DIF-funded facilities. After the City's DIF fees are collected, they are placed in a separate interest-bearing account pursuant to the requirements of Government Code § 66000 *et seq*. The timing to use the DIF fees is established through periodic capital improvement programs which are overseen by the City's Public Works Department.

8.3 FAIR SHARE CONTRIBUTION

Project improvements may include a combination of fee payments to established programs (e.g., DIF), construction of specific improvements, payment of a fair share contribution toward future improvements or a combination of these approaches. Improvements constructed by development may be eligible for a fee credit or reimbursement through the program where appropriate (to be determined at the City of Hesperia's discretion).

When off-site improvements are identified with a minor share of responsibility assigned to proposed development, the approving jurisdiction may elect to collect a fair share contribution or require the development to construct improvements. Detailed fair share calculations, for each peak hour, have been provided in Table 8-1 for the applicable deficient intersections shown previously in Table 1-3. Improvements included in a defined program and constructed by development may be eligible for a fee credit or reimbursement through the program where appropriate.

Table 8-1

Project Fair Share Calculations

#	Intersection		Existing	Project Only	Horizon Year (2040) With Project	Net New Traffic	Project % of New Traffic
9	US Highway 395 & Bear Valley Rd.						
		AM:	2,783	100	5,071	2,288	**4.37%**
		PM:	3,121	99	5,799	2,678	3.70%
11	US Highway 395 & Yucca Terrace Dr.						
		AM:	2,148	524	5,201	3,053	17.16%
		PM:	2,402	602	5,487	3,085	**19.51%**
12	US Highway 395 & Phelan Rd./Main St.						
		AM:	3,327	1,358	7,801	4,474	**30.35%**
		PM:	3,870	1,337	8,772	4,902	27.27%
13	US Highway 395 & Poplar St.						
		AM:	1,874	200	4,546	2,672	**7.49%**
		PM:	2,159	205	5,257	3,098	6.62%
14	US Highway 395 & Three Flags Rd.						
		AM:	2,213	200	4,448	2,235	**8.95%**
		PM:	2,496	205	4,945	2,449	8.37%
15	US Highway 395 & Joshua St.						
		AM:	2,255	201	4,532	2,277	**8.83%**
		PM:	2,602	205	5,007	2,405	8.52%
23	Escondido Av. & Main St.						
		AM:	3,389	100	4,691	1,302	7.68%
		PM:	4,563	102	5,855	1,292	**7.89%**
24	Escondido Av. & Sultana St.						
		AM:	1,631	40	2,485	854	**4.68%**
		PM:	1,680	42	2,640	960	4.38%
25	Topaz Av. & Main St.						
		AM:	2,698	60	3,882	1,184	**5.07%**
		PM:	3,454	62	4,943	1,489	4.16%

BOLD = Denotes highest fair share percentage.

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9 REFERENCES

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10. **Institute of Transportation Engineers.** *High Cube Warehouse Vehicle Trip Generation Analysis.* Washington, DC : ITE, October 2016.
11. **City of Fontana.** *Truck Trip Generation Study.* Fontana : s.n., August 2003.
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APPENDIX 1.1:

APPROVED TRAFFIC STUDY SCOPING AGREEMENT

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SCOPING AGREEMENT FOR TRAFFIC IMPACT STUDY

This letter acknowledges the City of Hesperia requirements for Traffic impact analysis of the following project. The analysis must follow either the Riverside County Transportation Department Traffic Study Guidelines dated **April 2008**; or San Bernardino County Transportation Authority (SBCTA) congestion management plan (CMP) guidelines as applicable.

Case No.

Related Cases-

SP No.

EIR No.

GPA No.

CZ No.

Project Name: Hesperia Commerce Center II

Project Address: northwest of U.S. Highway 395 and Main Street/Phelan Road in the City of Hesperia

Project Description: 2,361,648 square feet (sf) of High-Cube Fulfillment Center Warehouse use (65% total sf of buildings 1 and 2), 1,271,656 sf of General Light Industrial (35% total sf of buildings 1 and 2), and 112,125 sf of General Light Industrial (within building 3). The project will be evaluated in a single phase

	Consultant	Developer
Name:	Urban Crossroads - Charlene So	Covington Group
Address:	260 E. Baker St., Suite 200 Costa Mesa, CA 92626	14180 Dallas Parkway, Suite 730 Dallas, TX 75254
Telephone:	949-336-5982	
Fax:		

A. Trip Generation Source: High Cube Warehouse Trip Generation Study (WSP, January 29, 2019) and Institute of Transportation Engineers (ITE) Trip Generation Manual (10th Edition, 2017)

Current GP Land Use CIBP — Proposed Land Use CIBP

Current Zoning CIBP — Proposed Zoning CIBP

	Current Trip Generation			Proposed Trip Generation **(PCE)**		
	In	Out	Total	In	Out	Total
AM Trips	0	0	0	1,357	230	1,587
PM Trips	0	0	0	274	1,296	1,570

Internal Trip Allowance Yes **No** (__%Trip Discount)

Pass-By Trip Allowance Yes **No** (__%Trip Discount)

B. Trip Geographic Distribution: N____% S____% E____% W____% **(VARIES)**

(See attached exhibits for detailed assignment)

C. Background Traffic

Project Build-out Year 2021 — Annual Ambient Growth Rate: 2.0/year

Phase Year(s) 2021

Other area projects to be analyzed: List has been obtained from City of Hesperia and County of San Bernardino

Model/ Forecast methodology: San Bernardino County Transportation Analysis Model (SBTAM)

D. Study Intersections: (NOTE: Subject to revision after other projects, trip generation and distribution are determined, or comments from other agencies)

See attachment for all locations

E. Study Roadway Segments: (NOTE: Subject to revision after other projects, trip generation and distribution are determined, or comments from other agencies)

None

F. Other Jurisdictional Impacts

Is this project within a City's Sphere of Influence or one- mile radius of City boundaries? **Yes** No
If so, name of City Jurisdiction: Unincorporated County of San Bernardino, Caltrans, Victorville

G. Site Plan (Provide reduced copy) **See Exhibit 1**

H. Specific issues to be addressed in the Study (in addition to the standard analysis described in the Guideline) (To be filled out by local agency)

Per Attachment/memo

J. Existing Conditions

Traffic count data must be new or recent within one year. Provide traffic count dates if using other than new counts.
Date of counts Traffic counts to be conducted on a Tuesday, Wednesday, or Thursday when schools are in session and operating on normal bell schedules.

Recommended by:

Charlene So

Consultant's Representative

12/13/2019
Date

Scoping Agreement Submitted on 9/5/19
Revised on 12/13/19

Approved Scoping Agreement:

City Engineer

Date

D. Study Intersections: *(NOTE: Subject to revision after other projects, trip generation and distribution are determined, or comments form other agencies).* (See Exhibit 2)

1. Baldy Mesa Rd. & Phelan Rd.
2. Verbena Rd. & Phelan Rd.
3. Bellflower St. & Phelan Rd.
4. Driveway 1 & Phelan Rd.
5. Driveway 2 & Yucca Terrace Dr.
6. Driveway 3 & Yucca Terrace Dr.
7. Driveway 4 & Phelan Rd.
8. US Highway 395 & Luna Rd.
9. US Highway 395 & Bear Valley Rd.
10. US Highway 395 & Eucalyptus St.
11. US Highway 395 & Yucca Terrace Dr.
12. US Highway 395 & Driveway 5
13. US Highway 395 & Main St./Phelan Rd.
14. US Highway 395 & Poplar St.
15. US Highway 395 & Three Flags Rd.
16. US Highway 395 & Joshua St.
17. Mesa Linda St. & Main St.
18. Cataba Rd. & Main St.
19. Key Point Av. & Main St.
20. I-15 SB Ramps & Main St.
21. I-15 NB Ramps & Main St.
22. Mariposa Rd. & Main St.
23. Mountain Vista Av. & Main St.
24. Escondido Av. & Main St.
25. Escondido Av. & Sultana St.
26. Topaz Av. & Main St.

URBAN CROSSROADS

260 E. Baker St. | Suite 200 | Costa Mesa, CA 92626 | (949) 660-1994
urbanxroads.com

December 13, 2019

Mr. Mike Thornton
City of Hesperia
9700 Seventh Avenue
Hesperia, CA 92345

SUBJECT: HESPERIA COMMERCE CENTER II TRAFFIC IMPACT ANALYSIS SCOPING AGREEMENT (REVISED)

Dear Mr. Mike Thornton:

Urban Crossroads, Inc. is pleased to submit this scoping letter regarding the traffic impact analysis for Hesperia Commerce Center II ("Project"), which is located northwest of U.S. Highway 395 and Main Street/Phelan Road in the City of Hesperia. This letter describes the proposed Project trip generation, trip distribution, and analysis methodology, which have been used to establish the draft proposed Project study area and analysis locations.

PROJECT DESCRIPTION

A preliminary site use plan for the proposed Project is shown on Exhibit 1. Exhibit 2 depicts the location of the proposed project in relation to the existing roadway network. The Project is anticipated to have an Opening Year of 2021. Access to the Project site will be provided via 2 driveways on Phelan Road, 2 driveways on the future Yucca Terrace Drive, and 1 proposed driveway on US Highway 395. The access on US Highway 395 is subject to Caltrans approval and Driveway 1 on Phelan Road is subject to County of San Bernardino approval. Both Caltrans and the County have reviewed the proposed access as shown. Driveway 4 shall be a shared driveway that will provide reciprocal access to the parcel on the southwest corner of US Highway 395 and Phelan Road. Signal modification will be required and coordination with the adjacent development to accommodate the reciprocal access agreement. It is our understanding that the Project is to consist of 2,361,648 square feet (sf) of High-Cube Fulfillment Center Warehouse use (65% of the total sf of buildings 1 and 2), 1,271,656 sf of General Light Industrial use (35% of the total sf of buildings 1 and 2), and 112,125 sf of General Light Industrial use within building 3. The Project will be evaluated in a single phase.

TRIP GENERATION

Trip generation represents the amount of traffic that is attracted and produced by a development and is based upon the specific land uses planned for a given project. In order to develop the traffic characteristics of the proposed Project, trip-generation statistics published in the High-Cube Warehouse Trip Generation Study (WSP, January 29, 2019) for the High-Cube Fulfillment Center Warehouse use and in the Institute of Transportation Engineers (ITE) Trip Generation Manual (10th Edition, 2017) for the General Light Industrial use were utilized. Trip generation rates for the Project are shown in Table 1 for

both passenger car equivalent (PCE) and actual vehicles. The trip generation summary show in Table 2 indicates the daily and peak hour trip generation estimates for the proposed Project in actual vehicles and PCE. For purposes of this analysis, the following land use and vehicle mix has been utilized:

- High-Cube Fulfillment Center Warehouse has been used to derive site specific trip generation estimates for buildings 1 and 2 of the proposed Project. The Institute of Transportation Engineers Trip Generation Manual (10th Edition, 2017) has trip generation rates for high-cube fulfillment center use (ITE land use code 155), however, these rates are unreliable because they are based on limited data (i.e., one to two surveyed sites) and the ITE Trip Generation Manual recommends the use of local data sources where available. As such, the trip-generation statistics published in the High-Cube Warehouse Trip Generation Study (WSP, January 29, 2019) which was commissioned by the Western Riverside Council of Governments (WRCOG) in support of the Transportation Uniform Mitigation Fee (TUMF) update, has been utilized for the high-cube fulfillment center use. The WSP trip generation rates were published in January 2019 and are based on data collected at 11 local high-cube fulfillment center sites. However, the WSP study does not include a split for inbound and outbound vehicles, as such, the inbound and outbound splits per the ITE High-Cube Warehouse Vehicle Trip Generation Analysis (October 2016) have been utilized.
- General Light Industrial (ITE 110): A light industrial facility is a free-standing facility devoted to a single use. The facility has an emphasis on activities other than manufacturing and typically has minimal office space. The ITE Trip Generation Manual and the ITE Trip Generation Handbook does not provide a vehicle mix for the General Light Industrial (ITE land use code 110) land use. As such, the vehicle mix identified in the City of Fontana Truck Trip Generation Study has been utilized for the General Light Industrial land use.

Finally, PCE factors were applied to the trip generation rates to convert trips made by heavy trucks (large 2-axles, 3-axles, 4+-axles) to PCE values. PCEs allow the typical "real-world" mix of vehicle types to be represented as a single, standardized unit, such as the passenger car, to be used for the purposes of capacity and level of service analyses. The PCE factors are consistent with the recommended PCE factors in Appendix B of the San Bernardino County Congestion Management Program (CMP) (2016 Update).

As shown on Table 2, the proposed Project is anticipated to generate a total of 11,898 actual vehicle trip-ends per day with 1,258 AM peak hour trips and 1,261 PM peak hour trips. In comparison, the proposed Project is anticipated to generate a total of 15,152 PCE trip-ends per day, 1,587 PCE AM peak hour trips and 1,570 PCE PM peak hour trips (see Table 2).

TRIP DISTRIBUTION

The Project trip distribution represents the directional orientation of traffic to and from the Project site. Trip distribution is the process of identifying the probable destinations, directions or traffic routes that

will be utilized by Project traffic. The potential interaction between the planned land uses and surrounding regional access routes are considered to identify the route where the Project traffic would distribute. Truck distribution patterns will be based on truck routes, the site's proximity to the regional freeway system and likely distribution of traffic if a future tenant is known. Passenger car distribution patterns will be based on existing and planned land uses in the area along with the planned circulation system. Exhibit 3 illustrates the truck trip distribution patterns for the Project and Exhibit 4 illustrates the passenger car trip distribution patterns.

ANALYSIS SCENARIOS

Consistent with the County's TIA guidelines, intersection analysis will be provided for the following analysis scenarios:

- Existing (2019) Conditions
- Existing plus Project (E+P) Conditions
- Opening Year Cumulative (2021) Without Project Conditions
- Opening Year Cumulative (2021) With Project Conditions (Project Buildout)
- Horizon Year (2040) Without Project Conditions
- Horizon Year (2040) With Project Conditions (Project Buildout)

* Ambient growth assumptions are included for Opening Year Cumulative traffic conditions.

All study area intersections will be evaluated using the Highway Capacity Manual (HCM) 6th Edition analysis methodology. The following study intersections will be evaluated:

1. Baldy Mesa Rd. & Phelan Rd.
2. Verbena Rd. & Phelan Rd.
3. Bellflower St. & Phelan Rd.
4. Driveway 1 & Phelan Rd.
5. Driveway 2 & Yucca Terrace Dr.
6. Driveway 3 & Yucca Terrace Dr.
7. Driveway 4 & Phelan Rd.
8. US Highway 395 & Luna Rd.
9. US Highway 395 & Bear Valley Rd.
10. US Highway 395 & Eucalyptus St.
11. US Highway 395 & Yucca Terrace Dr.
12. US Highway 395 & Driveway 5
13. US Highway 395 & Main St./Phelan Rd.

14. US Highway 395 & Poplar St.
15. US Highway 395 & Three Flags Rd.
16. US Highway 395 & Joshua St.
17. Mesa Linda St. & Main St.
18. Catawba Rd. & Main St.
19. Key Point Av. & Main St.
20. I-15 SB Ramps & Main St.
21. I-15 NB Ramps & Main St.
22. Mariposa Rd. & Main St.
23. Mountain Vista Av. & Main St.
24. Escondido Av. & Main St.
25. Escondido Av. & Sultana St.
26. Topaz Av. & Main St.

Pursuant to discussions with County of San Bernardino staff, Driveway 1 on Phelan Road will be restricted to right-in/right-out access only. Note that Driveway 4 on Phelan Road is proposed to provide reciprocal access to the adjacent parcel. The access at Driveway 5 on US Highway 395 is subject to Caltrans District 8 approval.

CUMULATIVE PROJECTS

Exhibit 5 and Table 3 show the locations and list of proposed cumulative projects within the study area. These cumulative projects have been provided by the City of Hesperia and County of San Bernardino.

TRAFFIC COUNTS

Traffic counts are to be conducted once the scoping agreement has been approved. Counts will be conducted on a Tuesday, Wednesday, or Thursday when schools are in session and operating on normal bell schedules.

CALTRANS FACILITIES

The following Caltrans facilities will also be evaluated as part of the traffic study:

- Conduct freeway segment analysis for the following mainline freeway segments based on the currently accepted Highway Capacity Manual (HCM) Freeway Facilities Analysis methodology for each analysis scenario for the following freeway segments, in each direction of travel:
    - I-15 Freeway Southbound, north of Main Street
    - I-15 Freeway Southbound, south of US Highway 395
    - I-15 Freeway Northbound, south of Main Street
    - I-15 Freeway Northbound, south of US Highway 395
- Perform Merge/Diverge analysis for the following ramp junctions for each analysis scenario using the HCM Freeway Facilities Analysis methodology:
    - I-15 Freeway Southbound, Off-Ramp at Main Street
    - I-15 Freeway Southbound, On-Ramp at Main Street
    - I-15 Freeway Southbound, On-Ramp at US Highway 395
    - I-15 Freeway Northbound, Loop On-Ramp at Main Street
    - I-15 Freeway Northbound, Off-Ramp at Main Street
    - I-15 Freeway Northbound, Off-Ramp at US Highway 395
- Conduct queuing analysis to identify the storage necessary to accommodate 95th percentile queues during peak hour traffic flows for each analysis scenario, at the following locations:
    - US Highway 395 & Luna Road
    - US Highway 395 & Bear Valley Road
    - US Highway 395 & Eucalyptus Street
    - US Highway 395 & Main Street/Phelan Road
    - US Highway 395 & Poplar Street
    - US Highway 395 & Three Flags Road
    - US Highway 395 & Joshua Street
    - I-15 Southbound Off-Ramp & Main Street
    - I-15 Northbound Off-Ramp & Main Street

SPECIAL ISSUES

The following special issues will be addressed in the traffic study:

- Truck turning templates will be used to address how Project truck traffic (e.g., large trucks such as a WB-67) would enter and exit the Project site to determine radii at curb returns, radii of streets per Highway Design Manual, and widths/radii required for on-site maneuvering for two-way truck traffic.
- Traffic signal warrant analysis will be conducted for all unsignalized study area intersections, as applicable.
- "Fair-share" contributions for improvements within the City's DIF program and within in other jurisdictions will be included in the TIA. It is recommended that the City provide a list of facilities and improvements that are included in the City's DIF and/or CIP programs.
- Caltrans signal timing has been obtained from District 8 and will be utilized for Caltrans ramp locations. The scoping agreement has also been shared with Caltrans District 8 to obtain comments with respect to analysis methodology for Caltrans facilities and on the proposed driveway on US Highway 395.
- Review the initial estimates of the raw peak hour turning movement volumes for reasonableness, including the review of traffic flow conservation and peak-to-daily volume ratios.
- Adjust the initial raw model estimates to achieve flow conservation, reasonable growth, and plausible diversion between parallel routes through post-processing.
- Conduct a queuing analysis for all Project driveways and site adjacent intersections, including Driveway 4 on Phelan Road (planned shared driveway with the adjacent development).

CONCLUSION

Urban Crossroads, Inc. is pleased to submit this letter documenting the Project trip generation, trip distribution, and the recommended intersection analysis locations for the Hesperia Commerce Center II Traffic Impact Study. We will continue to move forward towards completing the traffic study after receiving jurisdiction approval or comments finalizing the study area.

If you have any questions, please contact me directly at (949) 336-5982.

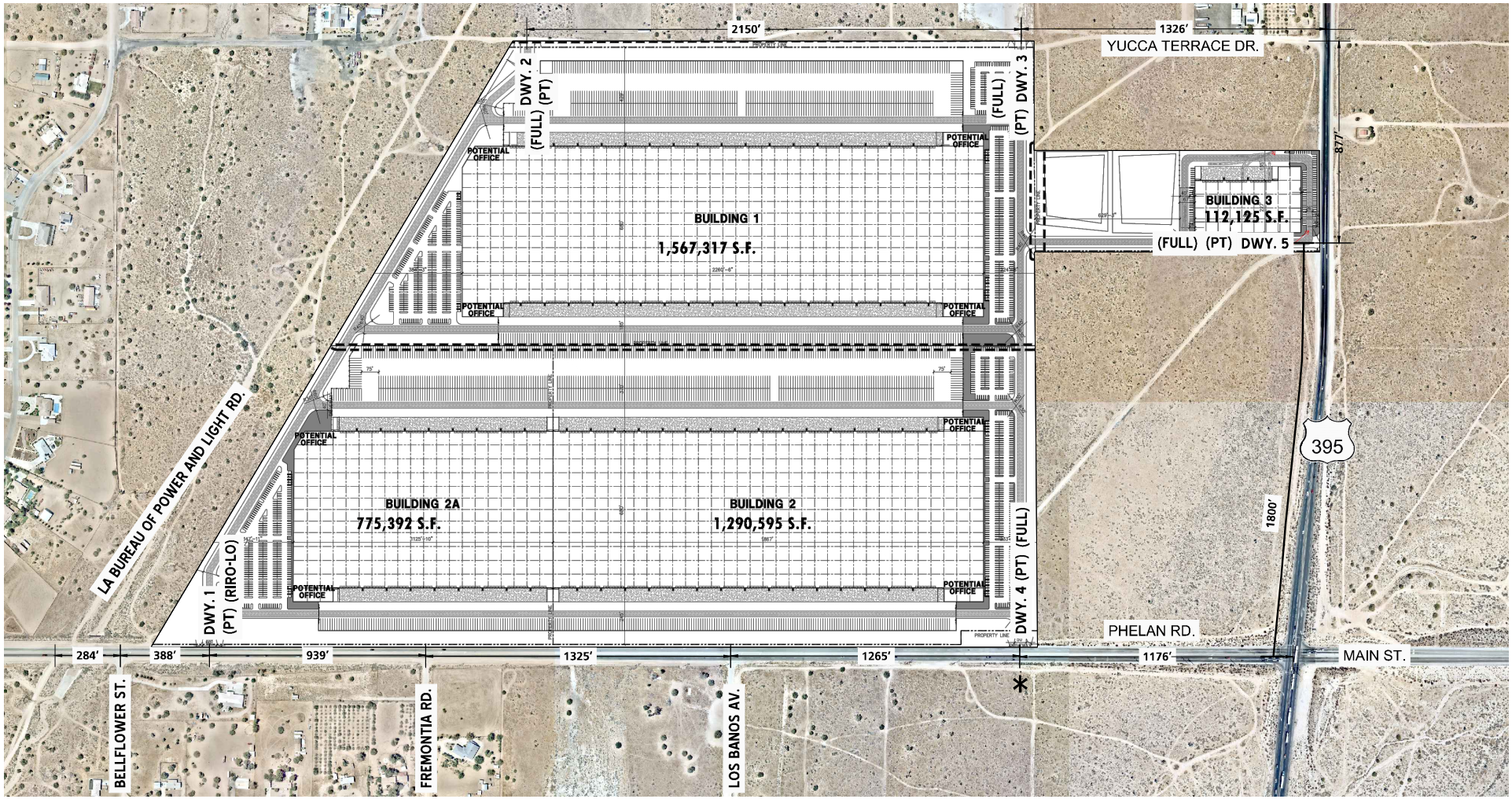
Respectfully submitted,

URBAN CROSSROADS, INC.

Charlene So

Charlene So, PE
Associate Principal

EXHIBIT 1: PRELIMINARY SITE PLAN



LEGEND:

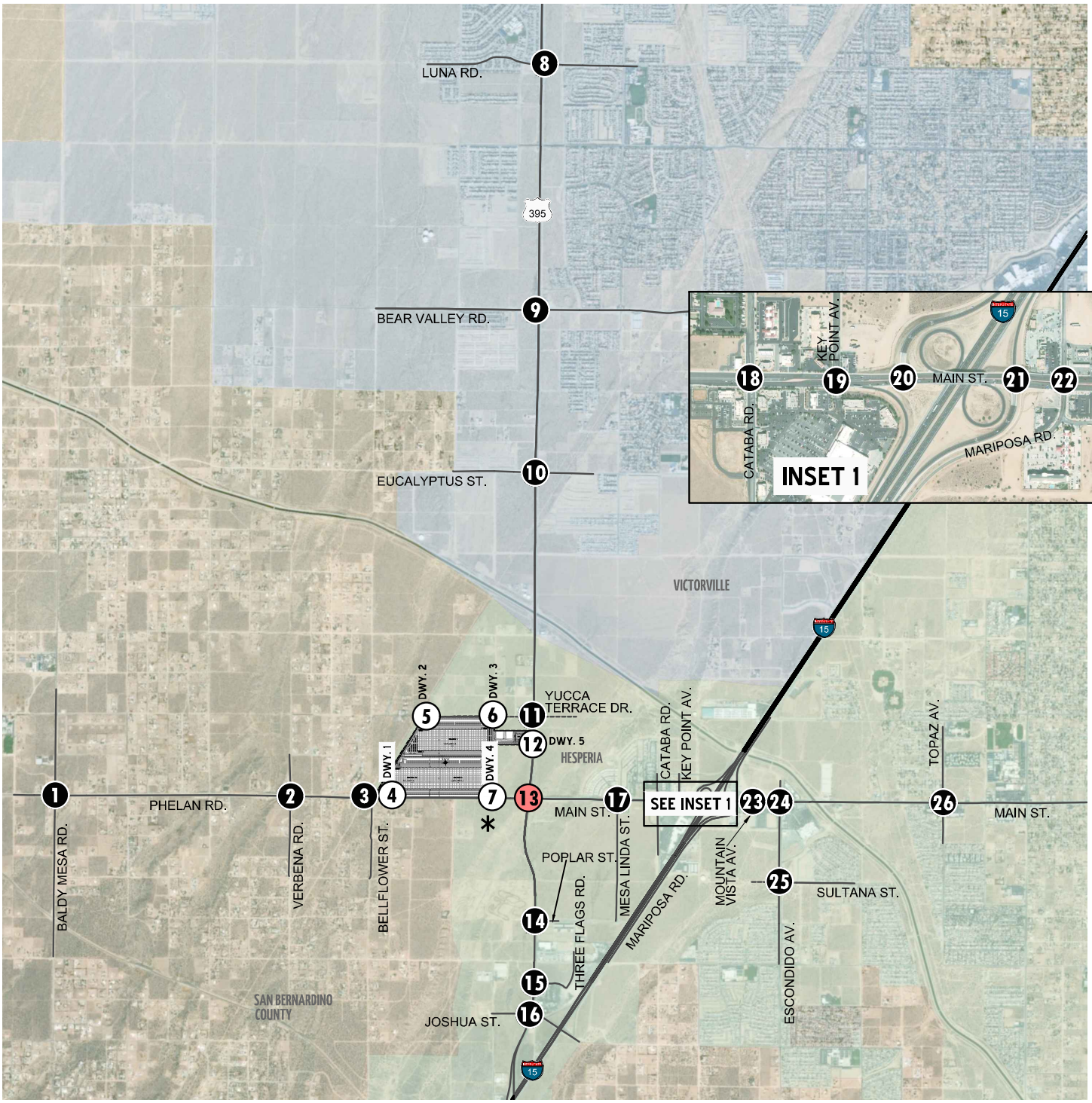
RIRO	= RIGHT-IN/RIGHT-OUT ONLY ACCESS
FULL	= FULL ACCESS
PT	= PASSENGER CARS AND TRUCKS
LO	= LEFT OUT

N

* NOTE: DRIVEWAY 4 IS A PROPOSED SIGNALIZED DRIVEWAY THAT WILL PROVIDE RECIPROCAL ACCESS WITH THE ADJACENT USE. A SIGNAL MODIFICATION WILL BE NECESSARY AT THIS LOCATION.

12778 - siteplan-b.dwg

EXHIBIT 2: LOCATION MAP



LEGEND:

- (0) = EXISTING INTERSECTION ANALYSIS LOCATION
- (0) = FUTURE INTERSECTION ANALYSIS LOCATION
- (0) = SBCTA INTERSECTION
- ---- = DIRT ROAD

N

* NOTE: DRIVEWAY 4 IS A PROPOSED SIGNALIZED DRIVEWAY THAT WILL PROVIDE RECIPROCAL ACCESS WITH THE ADJACENT USE.

12778 - locmap-c-1.dwg

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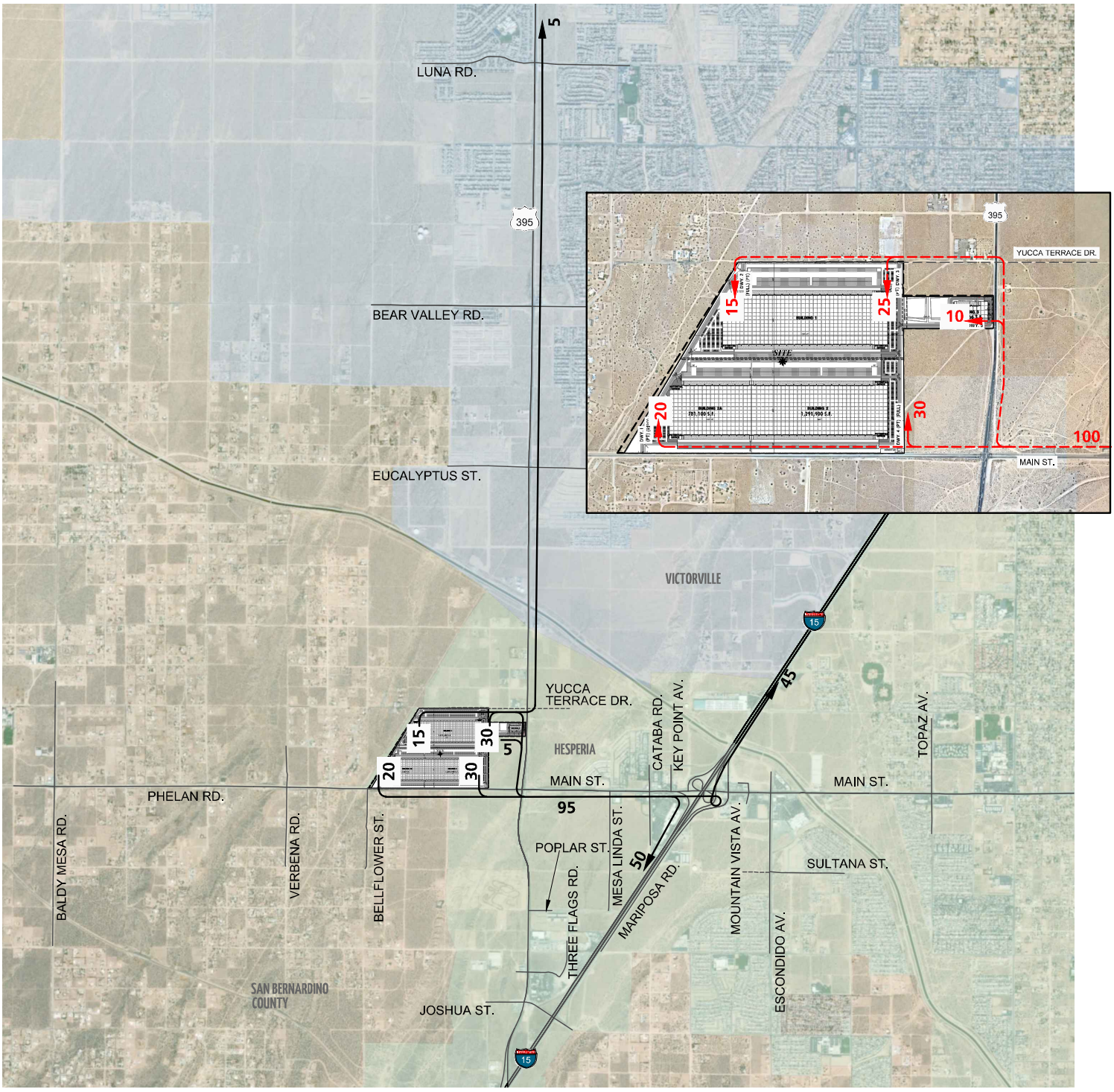
EXHIBIT 3: PROJECT (TRUCK) TRIP DISTRIBUTION



LEGEND:

10 = PERCENT TO/FROM PROJECT

◄—— = OUTBOUND

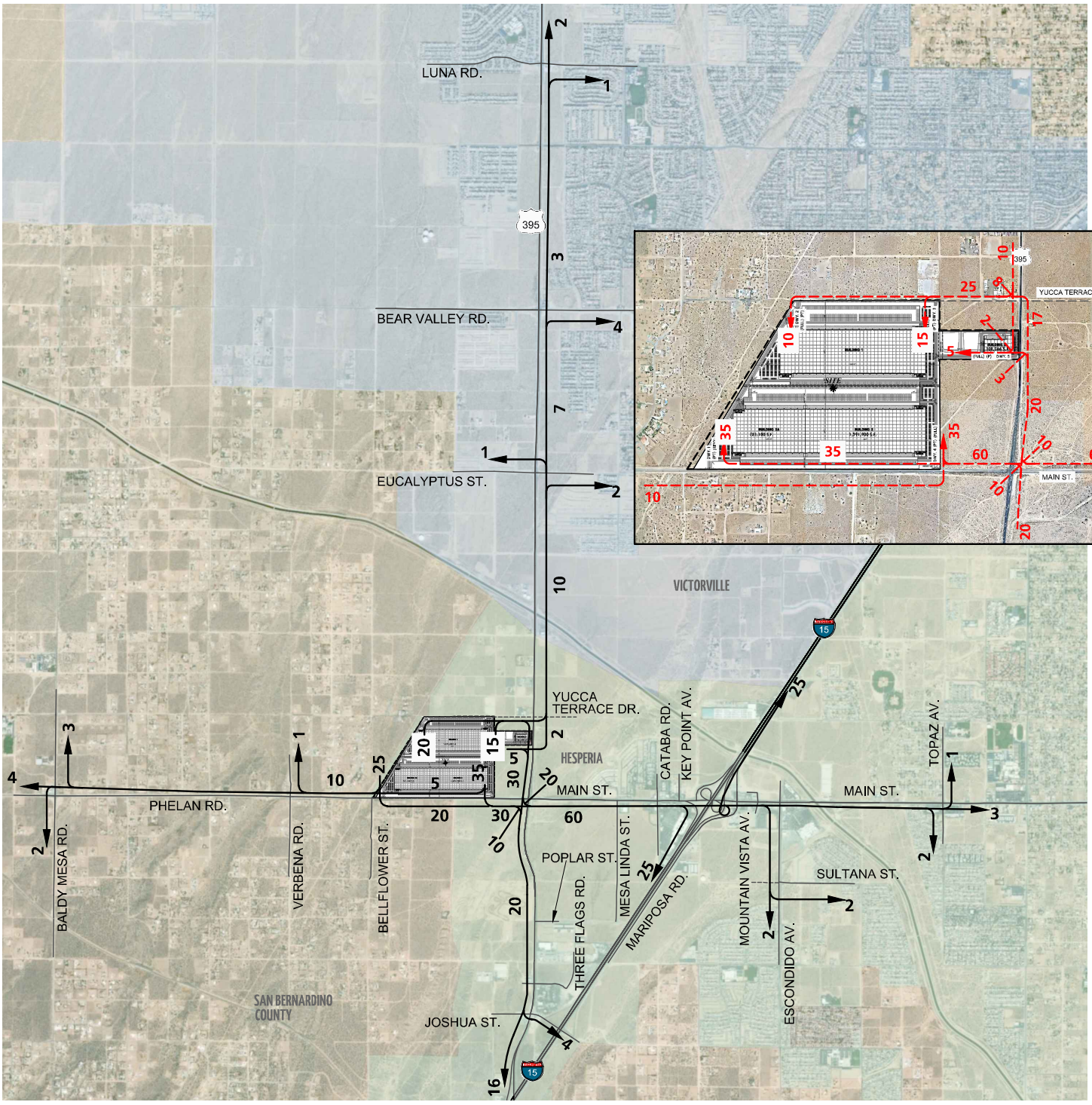
◄- - - = INBOUND

N

12778 - trip-b1.dwg

URBAN CROSSROADS

EXHIBIT 4: PROJECT (PASSENGER CAR) TRIP DISTRIBUTION



LEGEND:

10 = PERCENT TO/FROM PROJECT

= OUTBOUND

= INBOUND

N

12778 - trip-b1.dwg

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EXHIBIT 5: CUMULATIVE DEVELOPMENT LOCATION MAP

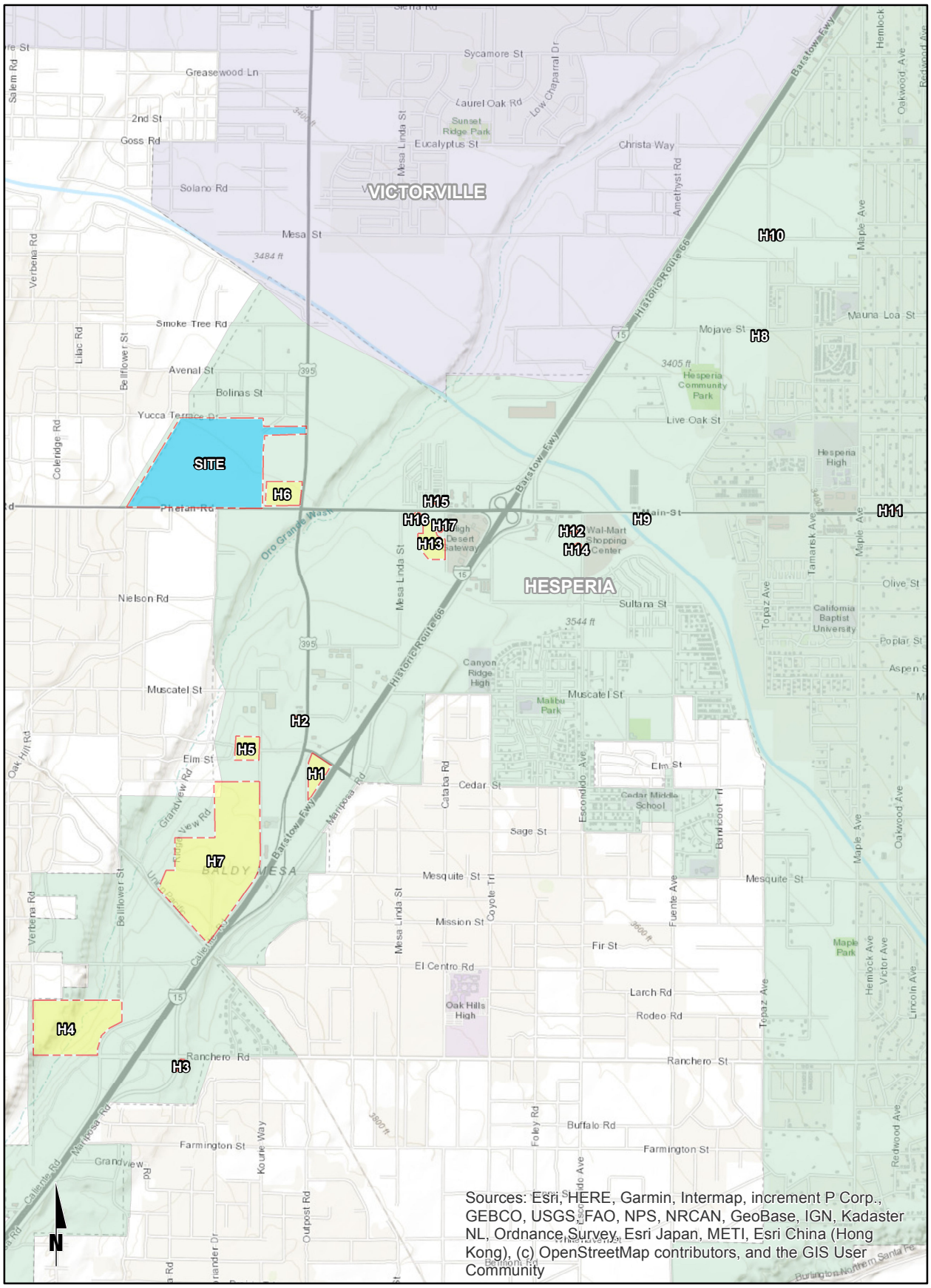

Table 1

Project Trip Generation Rates

Land Use[1]	Units[2]	ITE LU Code	AM Peak Hour			PM Peak Hour			Daily
			In	Out	Total	In	Out	Total	
Actual Vehicle Trip Generation Rates									
General Light Industrial[5]	TSF	110	0.616	0.084	0.700	0.082	0.548	0.630	4.960
Passenger Cars (78.6%)			0.484	0.066	0.550	0.064	0.431	0.495	3.899
2-Axle Trucks (8.0%)			0.049	0.007	0.056	0.007	0.044	0.050	0.397
3-Axle Trucks (3.9%)			0.024	0.003	0.027	0.003	0.021	0.025	0.193
4-Axle+ Trucks (9.5%)			0.059	0.008	0.067	0.008	0.052	0.060	0.471
High-Cube Fulfillment Center Warehouse[4]	TSF	--	0.094	0.028	0.122	0.046	0.119	0.165	2.129
Passenger Cars (AM-84.3%; PM-87.2%; Daily-82.2%)			0.079	0.024	0.103	0.040	0.104	0.144	1.750
2-4 Axle Trucks (AM-6.3%; PM-6.4%; Daily-7.6%)			0.006	0.002	0.008	0.003	0.008	0.011	0.162
5+-Axle Trucks (AM-9.4%; PM-6.4%; Daily-10.2%)			0.008	0.003	0.011	0.003	0.007	0.010	0.217
Passenger Car Equivalent (PCE) Trip Generation Rates[5]									
General Light Industrial[5]	TSF	110	0.616	0.084	0.700	0.082	0.548	0.630	4.960
Passenger Cars (78.6%)			0.484	0.066	0.550	0.064	0.431	0.495	3.899
2-Axle Trucks (8.0%) (PCE = 1.5)			0.074	0.010	0.084	0.010	0.066	0.076	0.595
3-Axle Trucks (3.9%) (PCE = 2.0)			0.048	0.007	0.055	0.006	0.043	0.049	0.387
4-Axle+ Trucks (9.5%) (PCE = 3.0)			0.176	0.024	0.200	0.023	0.156	0.180	1.414
High-Cube Fulfillment Center Warehouse[4]	TSF	--	0.094	0.028	0.122	0.046	0.119	0.165	2.129
Passenger Cars (AM-84.3%; PM-87.2%; Daily-82.2%)			0.079	0.024	0.103	0.040	0.104	0.144	1.750
2-4 Axle Trucks (AM-6.3%; PM-6.4%; Daily-7.6%) (PCE = 2.0)			0.012	0.004	0.016	0.006	0.016	0.022	0.324
5+-Axle Trucks (AM-9.4%; PM-6.4%; Daily-10.2%) (PCE = 3.0)			0.025	0.008	0.033	0.008	0.022	0.030	0.651

[1] Trip Generation Source: Institute of Transportation Engineers (ITE), Trip Generation Manual, Tenth Edition (2017).

[2] TSF = thousand square feet

[3] Vehicle mix source: ITE Trip Generation Handbook, 2017. Truck Mix Source: City of Fontana Truck Trip Generation Study (Land Use 150), August 2003.

[4] Vehicle Mix Source: High Cube Warehouse Trip Generation Study, WSP, January 29, 2019.
Inbound and outbound split source: High Cube Warehouse Vehicle Trip Generation Analysis, October 2016, ITE.

[5] Vehicle Mix Source: Truck mix (by axle type) source from City of Fontana Truck Trip Generation Study (August 2003). PCE rates are per SBCTA.

Table 2

Project Trip Generation Summary

Land Use	Quantity	Units[1]	AM Peak Hour In	AM Peak Hour Out	AM Peak Hour Total	PM Peak Hour In	PM Peak Hour Out	PM Peak Hour Total	Daily
Project Trip Generation Summary (Actual)									
High-Cube Fulfillment Center Warehouse (65% of Bldg. 1, 2)	2,361.648	TSF							
Passenger Cars:			187	56	243	95	245	340	4,134
Truck Trips:									
2-4 axle:			15	4	19	7	19	26	384
5+-axle:			20	6	26	7	17	24	512
- Net Truck Trips			35	10	45	14	36	50	896
FULFILLMENT CENTER TOTAL NET TRIPS (Actual Vehicles) [2]			**222**	**66**	**288**	**109**	**281**	**390**	**5,030**
General Light Industrial (35% of Bldg. 1, 2)	1,271.656	TSF							
Passenger Cars:			616	84	700	82	548	630	4,958
Truck Trips:									
2-axle:			63	9	72	8	56	64	506
3-axle:			31	4	35	4	27	31	246
4+-axle:			74	10	84	10	66	76	600
- Net Truck Trips			168	23	191	22	149	171	1,352
GENERAL LIGHT INDUSTRIAL TOTAL NET TRIPS (Actual Vehicles) [2]			**784**	**107**	**891**	**104**	**697**	**801**	**6,310**
General Light Industrial (Bldg. 3)	112.125	TSF							
Passenger Cars:			54	7	61	7	48	55	438
Truck Trips:									
2-axle:			6	1	7	1	5	6	44
3-axle:			3	0	3	0	2	2	22
4+-axle:			7	1	8	1	6	7	54
- Net Truck Trips			16	2	18	2	13	15	120
GENERAL LIGHT INDUSTRIAL TOTAL NET TRIPS (Actual Vehicles) [2]			**70**	**9**	**79**	**9**	**61**	**70**	**558**
Passenger Car Total			**857**	**147**	**1,004**	**184**	**841**	**1,025**	**9,530**
Truck Total (Actual Vehicles)			**219**	**35**	**254**	**38**	**198**	**236**	**2,368**
TOTAL PROPOSED PROJECT (Actual Vehicles)			**1,076**	**182**	**1,258**	**222**	**1,039**	**1,261**	**11,898**
Project Trip Generation Summary (PCE)									
High-Cube Fulfillment Center Warehouse (65% of Bldg. 1, 2)	2,361.648	TSF							
Passenger Cars:			187	56	243	95	245	340	4,134
Truck Trips:									
2-4 axle:			29	9	38	15	37	52	766
5+-axle:			60	18	78	20	51	71	1,538
- Net Truck Trips			89	27	116	35	88	123	2,304
FULFILLMENT CENTER TOTAL NET TRIPS (PCE) [2]			**276**	**83**	**359**	**130**	**333**	**463**	**6,438**
General Light Industrial (35% of Bldg. 1, 2)	1,271.656	TSF							
Passenger Cars:			616	84	700	82	548	630	4,958
Truck Trips:									
2-axle:			94	13	107	12	84	96	758
3-axle:			61	8	69	8	54	62	492
4+-axle:			223	30	253	30	199	229	1,798
- Net Truck Trips			378	51	429	50	337	387	3,048
GENERAL LIGHT INDUSTRIAL TOTAL NET TRIPS (PCE) [2]			**994**	**135**	**1,129**	**132**	**885**	**1,017**	**8,006**
General Light Industrial (Bldg. 3)	112.125	TSF							
Passenger Cars:			54	7	61	7	48	55	438
Truck Trips:									
2-axle:			8	1	9	1	7	8	68
3-axle:			5	1	6	1	5	6	44
4+-axle:			20	3	23	3	18	21	158
- Net Truck Trips			33	5	38	5	30	35	270
GENERAL LIGHT INDUSTRIAL TOTAL NET TRIPS (PCE) [2]			**87**	**12**	**99**	**12**	**78**	**90**	**708**
Passenger Car Total			**857**	**147**	**1,004**	**184**	**841**	**1,025**	**9,530**
Truck Total (PCE)			**500**	**83**	**583**	**90**	**455**	**545**	**5,622**
TOTAL PROPOSED PROJECT (PCE)			**1,357**	**230**	**1,587**	**274**	**1,296**	**1,570**	**15,152**

[1] TSF = thousand square feet

[2] TOTAL NET TRIPS = Passenger Cars + Net Truck Trips.

Table 3

Cumulative Development Land Use Summary

#	Case No.	Land Use	Quantity	Units[1]
H1	CUP12-10189: SEC of Outpost Rd. & Joshua St.	Travel Center	12.271	TSF
H2	CUP15-00009: SWC of US-395 & Three Flags Rd.	Gas Station w/ Convenience Market and Car Wash	12	VFP
		High-Turnover Sit-Down Restaurant	1.300	TSF
		Fast Food w/ Drive Thru	3.000	TSF
H3	CUP16-00007: SEC of Mariposa Rd. & Ranchero Rd.	Gas Station w/ Convenience Market and Car Wash	8	VFP
		Fast Food w/ Drive Thru	2.546	TSF
H4	CUPE16-00002: SEC of Verbena Rd. & Rodeo St.	Hotel	212	RM
		Quality Restaurant	11.600	TSF
		Golf Course	9	Holes
H5	SPR16-00016: south of Muscatel St., west of Caliente Rd.	Manufacturing	75.000	TSF
H6	CUP18-00003	Gas Station	9	VFP
		High-Turnover Sit-Down Restaurant	4.188	TSF
H7	Hesperia Commerce Center	High-Cube Fulfillment Center	4382.800	TSF
H8	TTE 19-00002 (TT 17916)	Single Family Detached Residential	177	DU
H9	TPM 19-00001	Shopping Center	13.0	Acres
H10	TTE 19-00001 (TT 17243)	Single Family Detached Residential	125	DU
H11	SPR 19-00005	Shopping Center	4.889	TSF
H12	Kaiser Medical Office	Medical Office	54.168	TSF
H13	Hesperia West	Shopping Center	34.675	TSF
		Department Store	40.400	TSF
		Furniture Store	38.000	TSF
		Walk in Bank	4.500	TSF
		High-Turnover Sit-Down Restaurant	5.926	TSF
		Fast Food w/ Drive Thru	3.260	TSF
H14	Hesperia Walmart	Gas Station w/ Convenience Market and Car Wash	12	VFP
		Home Improvement Store	141.038	TSF
		Fast Food w/ Drive Thru	2.500	TSF
H15	SPR 16-00011	Shopping Center	4.377	TSF
H16	CUP 16-00011	Shopping Center	5.423	TSF
H17	High Desert Gateway West I & II	Shopping Center	3.000	TSF
		Shopping Center	9.450	TSF

[1] TSF = Thousand Square Feet; VFP = Vehicle Fueling Positions; RM = Room; DU = Dwelling Units

APPENDIX 1.2:

SITE ADJACENT QUEUING WORKSHEETS

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Intersection: 4: Phelan Rd. & Driveway 1

Movement	SB
Directions Served	LR
Maximum Queue (ft)	47
Average Queue (ft)	16
95th Queue (ft)	44
Link Distance (ft)	460
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 5: Driveway 2 & Yucca Terrace Dr.

Movement	NB
Directions Served	LR
Maximum Queue (ft)	34
Average Queue (ft)	13
95th Queue (ft)	28
Link Distance (ft)	372
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 6: Driveway 3 & Yucca Terrace Dr.

Movement	WB	NB
Directions Served	L	LR
Maximum Queue (ft)	64	43
Average Queue (ft)	11	26
95th Queue (ft)	41	47
Link Distance (ft)		440
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)	100	
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 7: Phelan Rd. & Driveway 4

Movement	EB	EB	EB	WB	WB	WB	SB
Directions Served	L	T	T	T	T	TR	LR
Maximum Queue (ft)	141	171	150	200	160	239	183
Average Queue (ft)	71	55	73	97	74	102	94
95th Queue (ft)	123	132	135	164	143	193	157
Link Distance (ft)		3374	3374	564	564	564	666
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)	100						
Storage Blk Time (%)	8	1					
Queuing Penalty (veh)	46	1					

Intersection: 11: US-395 & Yucca Terrace Dr.

Movement	EB	EB	NB	NB	NB	NB	SB	SB	SB
Directions Served	L	R	L	T	T	T	T	T	TR
Maximum Queue (ft)	52	106	249	372	253	140	838	846	852
Average Queue (ft)	15	44	182	115	71	46	521	539	542
95th Queue (ft)	41	86	258	286	162	108	985	1001	995
Link Distance (ft)		1201		786	786	786	3924	3924	3924
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (ft)	100		200						
Storage Blk Time (%)		1	9	0					
Queuing Penalty (veh)		0	56	0					

Intersection: 12: US-395 & Driveway 5

Movement	EB	NB	SB	SB	SB
Directions Served	LR	L	T	T	TR
Maximum Queue (ft)	47	100	185	182	191
Average Queue (ft)	11	46	6	12	6
95th Queue (ft)	38	85	117	165	118
Link Distance (ft)	1207		786	786	786
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)		200			
Storage Blk Time (%)					
Queuing Penalty (veh)					

Network Summary

Network wide Queuing Penalty: 103

Intersection: 4: Phelan Rd. & Driveway 1

Movement	SB
Directions Served	LR
Maximum Queue (ft)	116
Average Queue (ft)	51
95th Queue (ft)	94
Link Distance (ft)	460
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 5: Driveway 2 & Yucca Terrace Dr.

Movement	NB
Directions Served	LR
Maximum Queue (ft)	64
Average Queue (ft)	31
95th Queue (ft)	55
Link Distance (ft)	372
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 6: Driveway 3 & Yucca Terrace Dr.

Movement	WB	NB
Directions Served	L	LR
Maximum Queue (ft)	32	152
Average Queue (ft)	8	57
95th Queue (ft)	31	96
Link Distance (ft)		440
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)	100	
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 7: Phelan Rd. & Driveway 4

Movement	EB	EB	EB	WB	WB	WB	SB
Directions Served	L	T	T	T	T	TR	LR
Maximum Queue (ft)	149	297	306	410	353	244	681
Average Queue (ft)	33	171	184	288	246	139	517
95th Queue (ft)	91	262	274	386	348	232	782
Link Distance (ft)		3374	3374	564	564	564	666
Upstream Blk Time (%)							8
Queuing Penalty (veh)							0
Storage Bay Dist (ft)	100						
Storage Blk Time (%)	0	20					
Queuing Penalty (veh)	2	6					

Intersection: 11: US-395 & Yucca Terrace Dr.

Movement	EB	EB	NB	NB	NB	NB	SB	SB	SB
Directions Served	L	R	L	T	T	T	T	T	TR
Maximum Queue (ft)	150	833	248	263	303	242	326	338	342
Average Queue (ft)	116	392	67	195	190	166	187	213	211
95th Queue (ft)	192	742	150	260	257	237	288	297	298
Link Distance (ft)		1201		786	786	786	10558	10558	10558
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (ft)	100		200						
Storage Blk Time (%)	4	63		4					
Queuing Penalty (veh)	17	59		3					

Intersection: 12: US-395 & Driveway 5

Movement	EB	NB
Directions Served	LR	L
Maximum Queue (ft)	1210	31
Average Queue (ft)	966	10
95th Queue (ft)	1361	31
Link Distance (ft)	1207	
Upstream Blk Time (%)	31	
Queuing Penalty (veh)	0	
Storage Bay Dist (ft)		200
Storage Blk Time (%)		
Queuing Penalty (veh)		

Network Summary

Network wide Queuing Penalty: 87

APPENDIX 3.1:

EXISTING TRAFFIC COUNTS – SEPTEMBER 2019 & JANUARY 2020

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INTERSECTION TURNING MOVEMENT COUNTS

T1218

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Hesperia	PROJECT #:	SC2468
Tue, Jan 7, 20	NORTH & SOUTH:	Baldy Mesa	LOCATION #:	1
	EAST & WEST:	Phelan	CONTROL:	SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

Add U-Turns to Left Turns

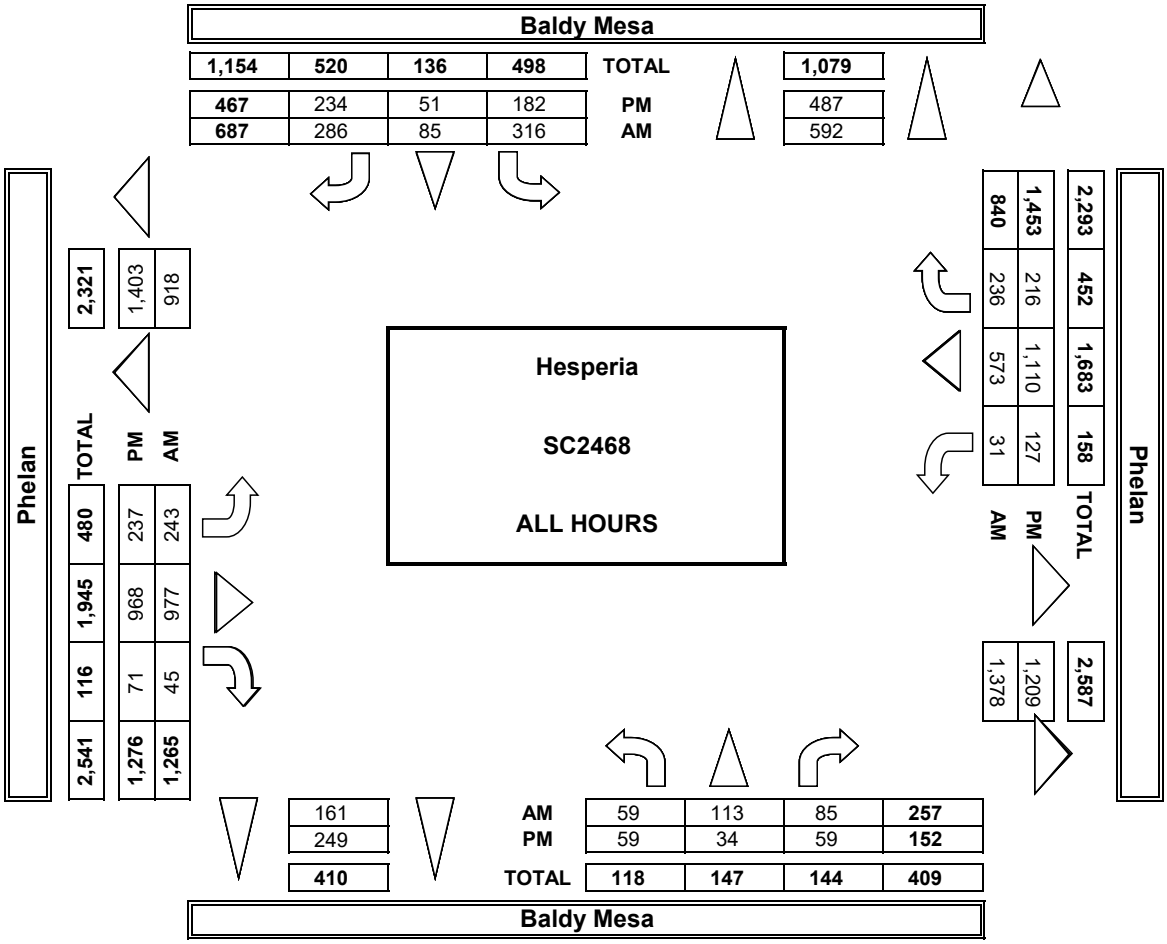
		NORTHBOUND (Baldy Mesa)			SOUTHBOUND (Baldy Mesa)			EASTBOUND (Phelan)			WESTBOUND (Phelan)			
	LANES:	NL 1	NT 1	NR 1	SL 1	ST 1	SR 1	EL 1	ET 1.5	ER 0.5	WL 1	WT 1.5	WR 0.5	TOTAL
AM	7:00 AM	6	8	11	23	5	24	37	105	9	5	53	9	295
	7:15 AM	4	12	12	26	3	35	24	123	1	3	75	23	341
	7:30 AM	11	24	14	36	8	58	51	142	4	1	75	46	470
	7:45 AM	11	29	11	63	13	46	44	119	6	3	98	53	496
	8:00 AM	8	2	11	55	24	41	33	136	11	4	53	18	396
	8:15 AM	4	10	8	25	7	19	21	104	7	4	62	20	291
	8:30 AM	5	13	8	31	8	35	15	128	5	5	70	43	366
	8:45 AM	10	15	10	57	17	28	18	120	2	6	87	24	394
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	59	113	85	316	85	286	243	977	45	31	573	236	3,049
	APPROACH %	23%	44%	33%	46%	12%	42%	19%	77%	4%	4%	68%	28%	
	APP/DEPART	257	/	592	687	/	161	1,265	/	1,378	840	/	918	0
	BEGIN PEAK HR		7:15 AM											
	VOLUMES	34	67	48	180	48	180	152	520	22	11	301	140	1,703
	APPROACH %	23%	45%	32%	44%	12%	44%	22%	75%	3%	2%	67%	31%	
	PEAK HR FACTOR		0.730			0.836			0.881			0.734		0.858
	APP/DEPART	149	/	359	408	/	81	694	/	748	452	/	515	0
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	12	9	3	49	13	32	34	136	6	16	113	26	449
	4:15 PM	10	4	8	26	10	42	34	120	10	14	146	23	447
	4:30 PM	8	5	7	23	8	36	36	155	8	15	145	31	477
	4:45 PM	7	7	7	19	6	23	40	101	11	11	129	32	393
	5:00 PM	4	4	4	26	3	20	30	113	5	27	129	26	391
	5:15 PM	6	2	13	13	5	29	19	125	12	13	162	24	423
	5:30 PM	7	1	7	15	4	26	21	111	12	14	172	24	414
	5:45 PM	5	2	10	11	2	26	23	107	7	17	114	30	354
	VOLUMES	59	34	59	182	51	234	237	968	71	127	1,110	216	3,348
	APPROACH %	39%	22%	39%	39%	11%	50%	19%	76%	6%	9%	76%	15%	
	APP/DEPART	152	/	487	467	/	249	1,276	/	1,209	1,453	/	1,403	0
	BEGIN PEAK HR		4:00 PM											
	VOLUMES	37	25	25	117	37	133	144	512	35	56	533	112	1,766
	APPROACH %	43%	29%	29%	41%	13%	46%	21%	74%	5%	8%	76%	16%	
	PEAK HR FACTOR		0.906			0.763			0.868			0.918		0.926
	APP/DEPART	87	/	281	287	/	128	691	/	654	701	/	703	0

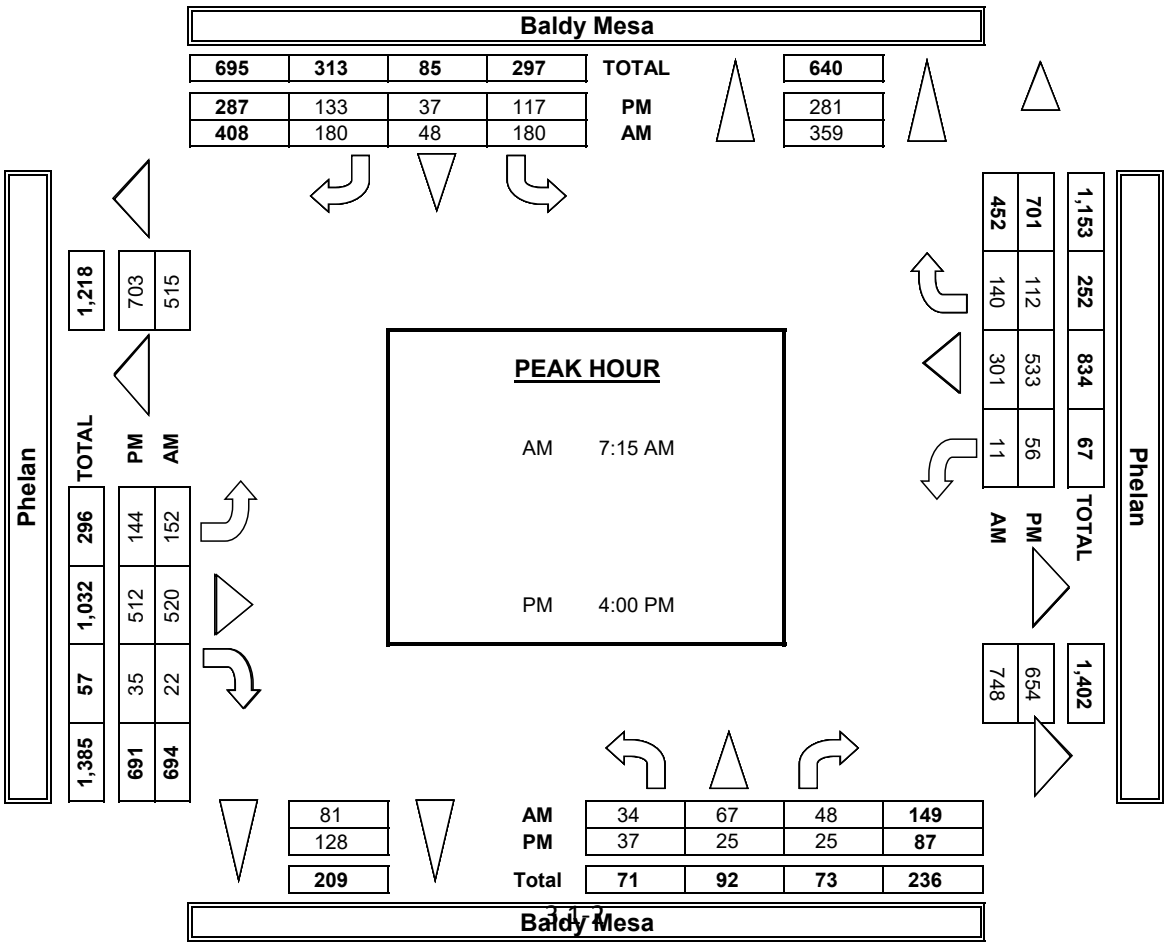
U-TURNS

NB	SB	EB	WB	TTL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

AimTD LLC

TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Hesperia	PROJECT #:	SC2468
1/7/20	NORTH & SOUTH:	Baldy Mesa	LOCATION #:	1
TUESDAY	EAST & WEST:	Phelan	CONTROL:	SIGNAL

CLASS 1: PASSENGER VEHICLES

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

	NORTHBOUND (Baldy Mesa)			SOUTHBOUND (Baldy Mesa)			EASTBOUND (Phelan)			WESTBOUND (Phelan)			
LANES:	NL 1	NT 1	NR 1	SL 1	ST 1	SR 1	EL 1	ET 1.5	ER 0.5	WL 1	WT 1.5	WR 0.5	TOTAL
7:00 AM	4	8	11	23	5	20	33	100	9	4	41	7	265
7:15 AM	4	8	10	26	3	31	20	113	0	2	66	22	305
7:30 AM	11	24	13	35	7	54	51	130	4	1	64	44	438
7:45 AM	11	29	11	62	13	45	42	110	6	3	85	50	467
8:00 AM	6	2	10	55	23	40	30	129	11	4	43	18	371
8:15 AM	3	9	8	24	5	19	17	97	5	3	57	20	267
8:30 AM	4	12	8	29	8	27	15	125	5	4	63	40	340
8:45 AM	9	14	9	56	16	18	14	107	1	5	80	24	353
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	52	106	80	310	80	254	222	911	41	26	499	225	2,806
APPROACH %	22%	45%	34%	48%	12%	39%	19%	78%	3%	3%	67%	30%	
APP/DEPART	238	/	553	644	/	147	1,174	/	1,301	750	/	805	0
BEGIN PEAK HR		7:15 AM											
VOLUMES	32	63	44	178	46	170	143	482	21	10	258	134	1,581
APPROACH %	23%	45%	32%	45%	12%	43%	22%	75%	3%	2%	64%	33%	
PEAK HR FACTOR		0.681			0.821			0.873			0.728		0.846
APP/DEPART	139	/	340	394	/	77	646	/	704	402	/	460	0
03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	9	7	3	48	13	31	33	128	6	15	106	23	422
4:15 PM	10	4	8	24	10	34	33	116	8	14	136	21	418
4:30 PM	8	5	7	23	8	36	36	146	8	15	137	27	456
4:45 PM	6	6	7	19	6	22	35	94	11	10	120	29	365
5:00 PM	4	4	3	26	3	18	29	108	4	26	124	23	372
5:15 PM	6	2	11	12	5	29	18	116	11	12	154	21	397
5:30 PM	7	1	7	15	4	26	18	107	12	14	168	22	401
5:45 PM	4	2	10	11	2	26	21	104	6	17	110	27	340
VOLUMES	54	31	56	178	51	222	223	919	66	123	1,055	193	3,171
APPROACH %	38%	22%	40%	39%	11%	49%	18%	76%	5%	9%	77%	14%	
APP/DEPART	141	/	447	451	/	240	1,208	/	1,153	1,371	/	1,331	0
BEGIN PEAK HR		4:00 PM											
VOLUMES	33	22	25	114	37	123	137	484	33	54	499	100	1,661
APPROACH %	41%	28%	31%	42%	14%	45%	21%	74%	5%	8%	76%	15%	
PEAK HR FACTOR		0.909			0.745			0.861			0.912		0.911
APP/DEPART	80	/	259	274	/	124	654	/	623	653	/	655	0

U-TURNS

NB	SB	EB	WB	TTL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
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0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

RTOR

NRR 0	SRR 0	ERR 0	WRR 0
5	8	2	1
3	13	0	2
3	25	2	16
8	19	3	24
9	30	4	4
2	14	0	6
4	15	2	11
4	10	1	10
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
38	134	14	74
23	87	9	46
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
1	15	3	9
2	15	1	5
3	14	2	10
4	12	1	11
2	7	1	10
8	20	3	5
4	16	2	7
7	19	1	10
31	118	14	67
10	56	7	35

Baldy Mesa — NORTH SIDE

Phelan — WEST SIDE — EAST SIDE — **Phelan**

SOUTH SIDE — **Baldy Mesa**

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Hesperia	PROJECT #:	SC2468
1/7/20	NORTH & SOUTH:	Baldy Mesa	LOCATION #:	1
TUESDAY	EAST & WEST:	Phelan	CONTROL:	SIGNAL

CLASS 2: 2-AXLE WORK VEHICLES/ TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

	NORTHBOUND Baldy Mesa			SOUTHBOUND Baldy Mesa			EASTBOUND Phelan			WESTBOUND Phelan			
LANES:	NL 1	NT 1	NR 1	SL 1	ST 1	SR 1	EL 1	ET 1.5	ER 0.5	WL 1	WT 1.5	WR 0.5	TOTAL
7:00 AM	0	0	0	0	0	1	2	3	0	1	6	2	15
7:15 AM	0	0	1	0	0	3	0	6	0	1	4	1	16
7:30 AM	0	0	1	1	1	0	0	5	0	0	6	1	15
7:45 AM	0	0	0	0	0	0	1	5	0	0	11	1	18
8:00 AM	0	0	1	0	0	1	0	3	0	0	8	0	13
8:15 AM	1	0	0	0	1	0	1	4	2	1	3	0	13
8:30 AM	1	1	0	2	0	2	0	2	0	0	2	0	10
8:45 AM	1	1	1	0	1	0	2	6	0	1	7	0	20
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	3	2	4	3	3	7	6	34	2	4	47	5	120
APPROACH %	33%	22%	44%	23%	23%	54%	14%	81%	5%	7%	84%	9%	
APP/DEPART	9	/	13	13	/	9	42	/	41	56	/	57	0
BEGIN PEAK HR		7:00 AM											
VOLUMES	0	0	2	1	1	4	3	19	0	2	27	5	64
APPROACH %	0%	0%	100%	17%	17%	67%	14%	86%	0%	6%	79%	15%	
PEAK HR FACTOR		0.500			0.500			0.917			0.708		0.889
APP/DEPART	2	/	8	6	/	3	22	/	22	34	/	31	0
03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	2	0	0	1	0	0	1	3	0	1	4	3	15
4:15 PM	0	0	0	2	0	1	0	2	1	0	6	1	13
4:30 PM	0	0	0	0	0	0	0	5	0	0	4	2	11
4:45 PM	1	0	0	0	0	1	3	6	0	1	2	3	17
5:00 PM	0	0	1	0	0	2	1	4	0	1	3	2	14
5:15 PM	0	0	1	0	0	0	1	4	0	1	5	2	14
5:30 PM	0	0	0	0	0	0	2	2	0	0	1	1	6
5:45 PM	1	0	0	0	0	0	1	2	0	0	2	2	8
VOLUMES	4	0	2	3	0	4	9	28	1	4	27	16	98
APPROACH %	67%	0%	33%	43%	0%	57%	24%	74%	3%	9%	57%	34%	
APP/DEPART	6	/	25	7	/	5	38	/	33	47	/	35	0
BEGIN PEAK HR		4:00 PM											
VOLUMES	1	0	2	0	0	3	5	19	0	3	14	9	56
APPROACH %	33%	0%	67%	0%	0%	100%	21%	79%	0%	12%	54%	35%	
PEAK HR FACTOR		0.375			0.250			0.667			0.813		0.824
APP/DEPART	3	/	14	3	/	3	24	/	21	26	/	18	0

U-TURNS

NB	SB	EB	WB	TTL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Hesperia	PROJECT #:	SC2468
1/7/20	NORTH & SOUTH:	Baldy Mesa	LOCATION #:	1
TUESDAY	EAST & WEST:	Phelan	CONTROL:	SIGNAL

CLASS 3: 3-AXLE TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

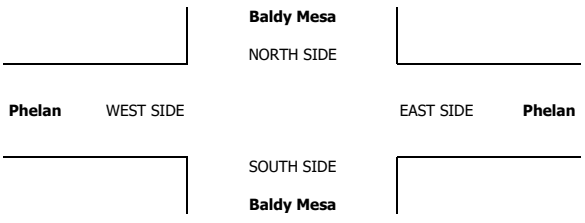
		NORTHBOUND (Baldy Mesa)			SOUTHBOUND (Baldy Mesa)			EASTBOUND (Phelan)			WESTBOUND (Phelan)			
	LANES:	NL 1	NT 1	NR 1	SL 1	ST 1	SR 1	EL 1	ET 1.5	ER 0.5	WL 1	WT 1.5	WR 0.5	TOTAL
AM	7:00 AM	1	0	0	0	0	2	0	2	0	0	2	0	7
	7:15 AM	0	1	0	0	0	0	0	0	1	0	1	0	3
	7:30 AM	0	0	0	0	0	1	0	2	0	0	2	0	5
	7:45 AM	0	0	0	1	0	0	0	0	0	0	1	0	2
	8:00 AM	0	0	0	0	0	0	0	2	0	0	1	0	3
	8:15 AM	0	0	0	0	1	0	0	0	0	0	1	0	2
	8:30 AM	0	0	0	0	0	0	0	0	0	0	1	0	1
	8:45 AM	0	0	0	0	0	2	1	3	0	0	0	0	6
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	1	1	0	1	1	5	1	9	1	0	9	0	29
	APPROACH %	50%	50%	0%	14%	14%	71%	9%	82%	9%	0%	100%	0%	
	APP/DEPART	2	/	2	7	/	2	11	/	10	9	/	15	0
	BEGIN PEAK HR		7:00 AM											
	VOLUMES	1	1	0	1	0	3	0	4	1	0	6	0	17
	APPROACH %	50%	50%	0%	25%	0%	75%	0%	80%	20%	0%	100%	0%	
	PEAK HR FACTOR		0.500			0.500			0.625			0.750		0.607
	APP/DEPART	2	/	1	4	/	1	5	/	5	6	/	10	0
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	2	0	0	0	0	0	1	0	0	2	0	5
	4:15 PM	0	0	0	0	0	0	1	0	0	0	2	1	4
	4:30 PM	0	0	0	0	0	0	0	2	0	0	1	2	5
	4:45 PM	0	0	0	0	0	0	1	1	0	0	2	0	4
	5:00 PM	0	0	0	0	0	0	0	0	0	0	2	1	3
	5:15 PM	0	0	1	0	0	0	0	1	1	0	1	1	5
	5:30 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
	5:45 PM	0	0	0	0	0	0	1	0	0	0	1	1	3
	VOLUMES	0	2	1	0	0	0	3	6	1	0	11	6	30
	APPROACH %	0%	67%	33%	0%	0%	0%	30%	60%	10%	0%	65%	35%	
	APP/DEPART	3	/	11	0	/	1	10	/	7	17	/	11	0
	BEGIN PEAK HR		4:00 PM											
	VOLUMES	0	2	0	0	0	0	2	4	0	0	7	3	18
	APPROACH %	0%	100%	0%	0%	0%	0%	33%	67%	0%	0%	70%	30%	
	PEAK HR FACTOR		0.250			0.000			0.750			0.833		0.900
	APP/DEPART	2	/	7	0	/	0	6	/	4	10	/	7	0

U-TURNS

NB	SB	EB	WB	TTL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

RTOR

NRR 0	SRR 0	ERR 0	WRR 0
0	1	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	2	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	3	0	0
0	1	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
1	0	0	0
0	0	0	0
0	0	0	0
1	0	0	0
0	0	0	0



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Hesperia	PROJECT #:	SC2468
1/7/20	NORTH & SOUTH:	Baldy Mesa	LOCATION #:	1
TUESDAY	EAST & WEST:	Phelan	CONTROL:	SIGNAL

CLASS 4: 4 OR MORE AXLE TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N ◄ W E ► S ▼

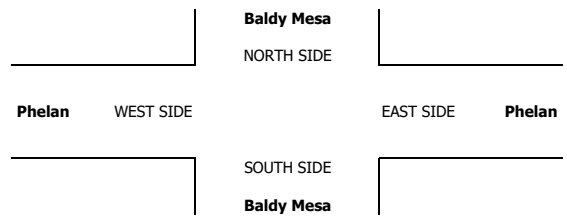
	NORTHBOUND Baldy Mesa			SOUTHBOUND Baldy Mesa			EASTBOUND Phelan			WESTBOUND Phelan			
LANES:	NL 1	NT 1	NR 1	SL 1	ST 1	SR 1	EL 1	ET 1.5	ER 0.5	WL 1	WT 1.5	WR 0.5	TOTAL
7:00 AM	1	0	0	0	0	1	0	0	0	0	4	0	6
7:15 AM	0	2	1	0	0	0	0	2	0	0	4	0	9
7:30 AM	0	0	0	0	0	1	0	4	0	0	1	0	6
7:45 AM	0	0	0	0	0	0	0	3	0	0	1	0	4
8:00 AM	1	0	0	0	0	0	1	1	0	0	1	0	4
8:15 AM	0	1	0	1	0	0	2	2	0	0	1	0	7
8:30 AM	0	0	0	0	0	0	0	1	0	1	4	0	6
8:45 AM	0	0	0	1	0	2	0	4	1	0	0	0	8
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	2	3	1	2	0	4	3	17	1	1	16	0	50
APPROACH %	33%	50%	17%	33%	0%	67%	14%	81%	5%	6%	94%	0%	
APP/DEPART	6	/	6	6	/	2	21	/	20	17	/	22	0
BEGIN PEAK HR		7:00 AM											
VOLUMES	1	2	1	0	0	2	0	9	0	0	10	0	25
APPROACH %	25%	50%	25%	0%	0%	100%	0%	100%	0%	0%	100%	0%	
PEAK HR FACTOR		0.333			0.500			0.563			0.625		0.694
APP/DEPART	4	/	2	2	/	0	9	/	10	10	/	13	0
03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	3	0	0	0	0	3
4:15 PM	0	0	0	0	0	0	0	2	1	0	1	0	4
4:30 PM	0	0	0	0	0	0	0	1	0	0	2	0	3
4:45 PM	0	1	0	0	0	0	1	0	0	0	4	0	6
5:00 PM	0	0	0	0	0	0	0	1	1	0	0	0	2
5:15 PM	0	0	0	1	0	0	0	4	0	0	2	0	7
5:30 PM	0	0	0	0	0	0	0	1	0	0	2	0	3
5:45 PM	0	0	0	0	0	0	0	1	1	0	1	0	3
VOLUMES	0	1	0	1	0	0	1	13	3	0	12	0	31
APPROACH %	0%	100%	0%	100%	0%	0%	6%	76%	18%	0%	100%	0%	
APP/DEPART	1	/	2	1	/	3	17	/	14	12	/	12	0
BEGIN PEAK HR		4:30 PM											
VOLUMES	0	1	0	1	0	0	1	6	1	0	8	0	18
APPROACH %	0%	100%	0%	100%	0%	0%	13%	75%	13%	0%	100%	0%	
PEAK HR FACTOR		0.250			0.250			0.500			0.500		0.643
APP/DEPART	1	/	2	1	/	1	8	/	7	8	/	8	0

U-TURNS

NB	SB	EB	WB	TTL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

RTOR

NRR	SRR	ERR	WRR
0	1	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	1	0	0
0	1	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	1	0
0	0	0	0



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Hesperia	PROJECT #:	SC2468
1/7/20	NORTH & SOUTH:	Baldy Mesa	LOCATION #:	1
TUESDAY	EAST & WEST:	Phelan	CONTROL:	SIGNAL

CLASS 5: RV

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND (Baldy Mesa)			SOUTHBOUND (Baldy Mesa)			EASTBOUND (Phelan)			WESTBOUND (Phelan)			
	LANES:	NL 1	NT 1	NR 1	SL 1	ST 1	SR 1	EL 1	ET 1.5	ER 0.5	WL 1	WT 1.5	WR 0.5	TOTAL
AM	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
	BEGIN PEAK HR		7:00 AM											
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	2	0	2
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	0%	
	APP/DEPART	0	/	0	0	/	0	0	/	0	2	/	2	0
	BEGIN PEAK HR		4:00 PM											
	VOLUMES	0	0	0	0	0	0	0	0	0	0	2	0	2
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	0%	
	PEAK HR FACTOR		0.000			0.000			0.000			0.500		0.500
	APP/DEPART	0	/	0	0	/	0	0	/	0	2	/	2	0

U-TURNS

NB	SB	EB	WB	TTL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Hesperia	PROJECT #:	SC2468
1/7/20	NORTH & SOUTH:	Baldy Mesa	LOCATION #:	1
TUESDAY	EAST & WEST:	Phelan	CONTROL:	SIGNAL

CLASS 6:	NOTES:
BUSES	

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

	NORTHBOUND (Baldy Mesa)			SOUTHBOUND (Baldy Mesa)			EASTBOUND (Phelan)			WESTBOUND (Phelan)			
LANES:	NL 1	NT 1	NR 1	SL 1	ST 1	SR 1	EL 1	ET 1.5	ER 0.5	WL 1	WT 1.5	WR 0.5	TOTAL
7:00 AM	0	0	0	0	0	0	2	0	0	0	0	0	2
7:15 AM	0	1	0	0	0	1	4	2	0	0	0	0	8
7:30 AM	0	0	0	0	0	2	0	1	0	0	2	1	6
7:45 AM	0	0	0	0	0	1	1	1	0	0	0	2	5
8:00 AM	1	0	0	0	1	0	2	1	0	0	0	0	5
8:15 AM	0	0	0	0	0	0	1	1	0	0	0	0	2
8:30 AM	0	0	0	0	0	6	0	0	0	0	0	3	9
8:45 AM	0	0	0	0	0	6	1	0	0	0	0	0	7
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	1	1	0	0	1	16	11	6	0	0	2	6	44
APPROACH %	50%	50%	0%	0%	6%	94%	65%	35%	0%	0%	25%	75%	
APP/DEPART	2	/	18	17	/	1	17	/	6	8	/	19	0
BEGIN PEAK HR		7:15 AM											
VOLUMES	1	1	0	0	1	4	7	5	0	0	2	3	24
APPROACH %	50%	50%	0%	0%	20%	80%	58%	42%	0%	0%	40%	60%	
PEAK HR FACTOR		0.500			0.625			0.500			0.417		0.750
APP/DEPART	2	/	11	5	/	1	12	/	5	5	/	7	0
03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	1	0	0	0	0	1	0	1	0	0	0	0	3
4:15 PM	0	0	0	0	0	7	0	0	0	0	1	0	8
4:30 PM	0	0	0	0	0	0	0	1	0	0	1	0	2
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	1	0	0	0	1	1	3
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	1	0	0	0	0	8	1	2	0	0	3	1	16
APPROACH %	100%	0%	0%	0%	0%	100%	33%	67%	0%	0%	75%	25%	
APP/DEPART	1	/	2	8	/	0	3	/	2	4	/	12	0
BEGIN PEAK HR		4:00 PM											
VOLUMES	1	0	0	0	0	8	0	2	0	0	2	0	13
APPROACH %	100%	0%	0%	0%	0%	100%	0%	100%	0%	0%	100%	0%	
PEAK HR FACTOR		0.250			0.286			0.500			0.500		0.406
APP/DEPART	1	/	0	8	/	0	2	/	2	2	/	11	0

U-TURNS

NB	SB	EB	WB	TTL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

NB	SB	EB	WB	TTL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

RTOR

NRR 0	SRR 0	ERR 0	WRR 0
0	0	0	0
0	1	0	0
0	0	0	0
0	0	0	1
0	0	0	0
0	0	0	0
0	2	0	0
0	1	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	4	0	1

NRR 0	SRR 0	ERR 0	WRR 0
0	1	0	1

NRR 0	SRR 0	ERR 0	WRR 0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	2	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	2	0	0

NRR 0	SRR 0	ERR 0	WRR 0
0	2	0	0

Baldy Mesa

NORTH SIDE

Phelan WEST SIDE EAST SIDE **Phelan**

SOUTH SIDE

Baldy Mesa

INTERSECTION TURNING MOVEMENT COUNTS

T1218

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Hesperia	PROJECT #:	SC2468
Tue, Jan 7, 20	NORTH & SOUTH:	Verbena	LOCATION #:	2
	EAST & WEST:	Phelan	CONTROL:	STOP N/S

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

Add U-Turns to Left Turns

		NORTHBOUND (Verbena)			SOUTHBOUND (Verbena)			EASTBOUND (Phelan)			WESTBOUND (Phelan)			
	LANES:	NL 0	NT 1	NR 0	SL 0	ST 1	SR 0	EL 1	ET 1	ER 1	WL 1	WT 1	WR 1	TOTAL
AM	7:00 AM	2	0	6	0	0	0	0	160	2	1	80	1	252
	7:15 AM	2	0	5	1	0	2	0	167	0	2	80	0	259
	7:30 AM	6	0	2	2	0	5	2	197	2	2	125	0	343
	7:45 AM	6	0	5	2	0	0	1	210	1	0	138	0	363
	8:00 AM	2	0	5	1	0	0	0	203	3	0	71	0	285
	8:15 AM	1	0	4	3	0	0	0	150	1	0	88	1	248
	8:30 AM	5	0	3	1	0	3	0	168	1	4	103	0	288
	8:45 AM	1	0	0	1	0	0	3	183	1	2	106	1	298
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	25	0	30	11	0	10	6	1,438	11	11	791	3	2,336
	APPROACH %	45%	0%	55%	52%	0%	48%	0%	99%	1%	1%	98%	0%	
	APP/DEPART	55	/	9	21	/	22	1,455	/	1,479	805	/	826	0
	BEGIN PEAK HR		7:15 AM											
	VOLUMES	16	0	17	6	0	7	3	777	6	4	414	0	1,250
	APPROACH %	48%	0%	52%	46%	0%	54%	0%	99%	1%	1%	99%	0%	
	PEAK HR FACTOR		0.750			0.464			0.927			0.757		0.861
	APP/DEPART	33	/	3	13	/	10	786	/	800	418	/	437	0
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	2	0	2	0	0	0	1	182	2	6	168	1	364
	4:15 PM	1	0	2	1	0	1	1	169	0	7	195	1	378
	4:30 PM	0	0	5	1	0	1	0	154	1	7	190	0	359
	4:45 PM	0	0	5	2	0	1	2	136	1	5	186	3	341
	5:00 PM	2	0	1	1	0	2	0	154	0	6	189	0	355
	5:15 PM	2	0	2	1	0	1	2	150	1	3	193	0	355
	5:30 PM	0	0	2	1	0	0	1	109	1	12	210	1	337
	5:45 PM	3	0	1	2	0	1	1	104	2	7	157	1	279
	VOLUMES	10	0	20	9	0	7	8	1,158	8	53	1,488	7	2,768
	APPROACH %	33%	0%	67%	56%	0%	44%	1%	99%	1%	3%	96%	0%	
	APP/DEPART	30	/	15	16	/	61	1,174	/	1,187	1,548	/	1,505	0
	BEGIN PEAK HR		4:00 PM											
	VOLUMES	3	0	14	4	0	3	4	641	4	25	739	5	1,442
	APPROACH %	18%	0%	82%	57%	0%	43%	1%	99%	1%	3%	96%	1%	
	PEAK HR FACTOR		0.850			0.583			0.877			0.947		0.954
	APP/DEPART	17	/	9	7	/	29	649	/	659	769	/	745	0

U-TURNS

NB 0	SB 0	EB 0	WB 0	TTL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

RTOR

NRR X	SRR X	ERR X	WRR X
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0

Verbena

NORTH SIDE

Phelan WEST SIDE EAST SIDE **Phelan**

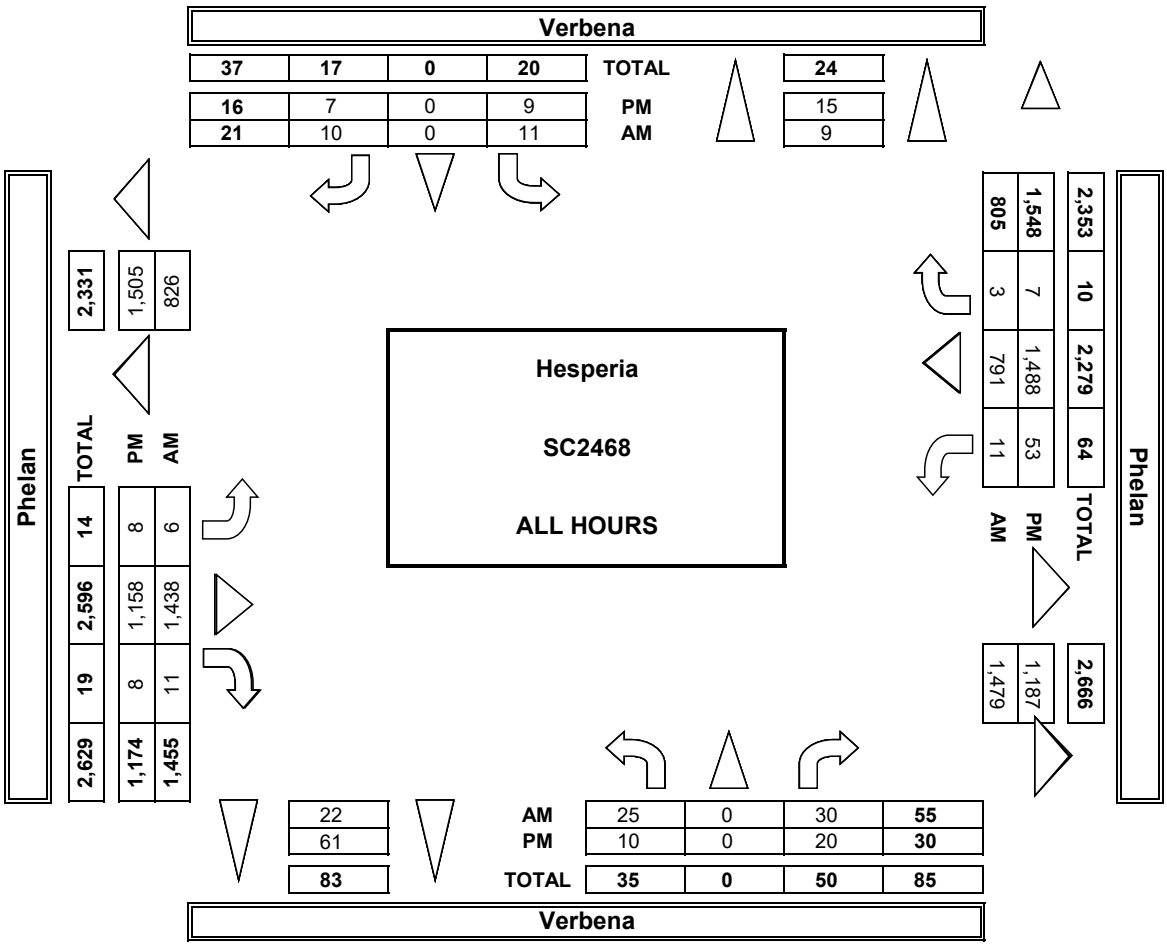
SOUTH SIDE

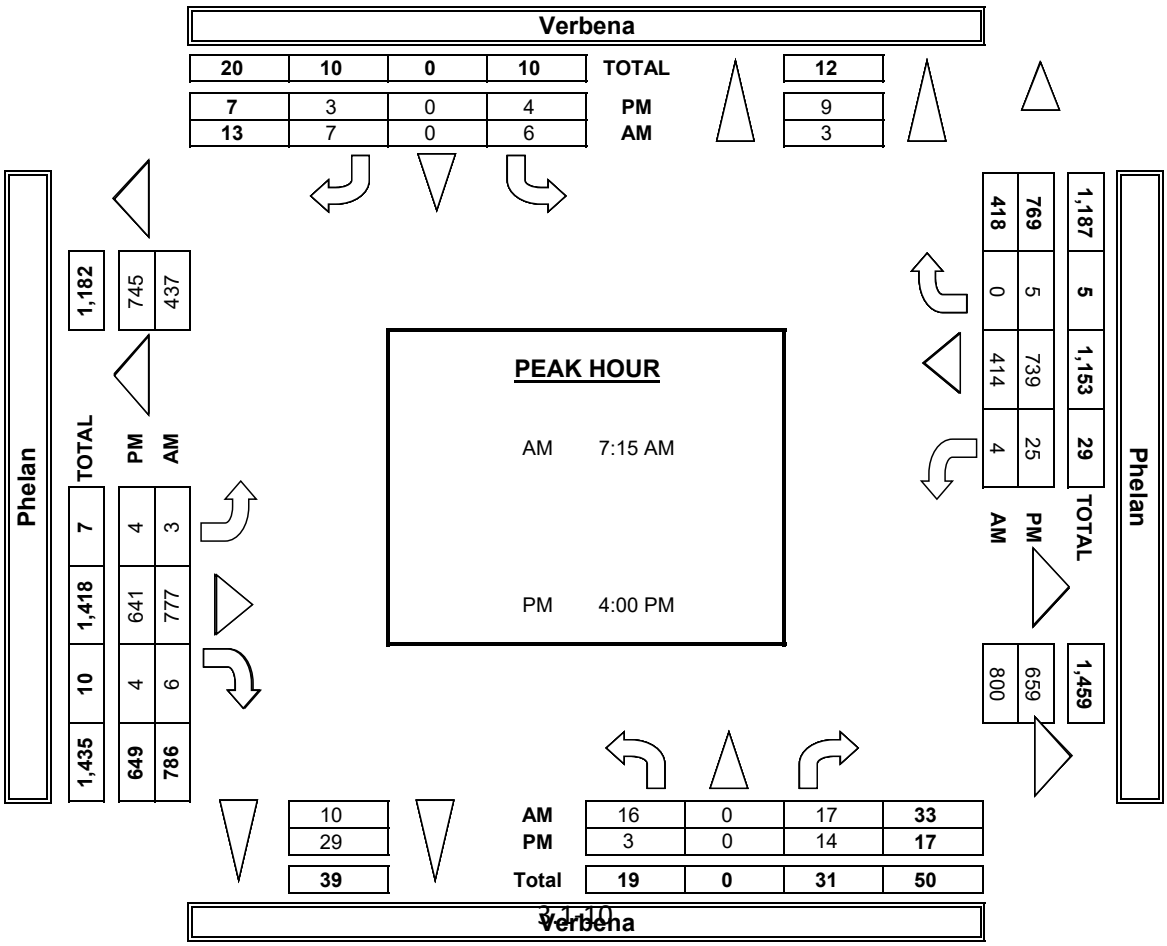
Verbena

		ALL PED AND BIKE					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS				
		E SIDE	W SIDE	S SIDE	N SIDE	TOTAL	E SIDE	W SIDE	S SIDE	N SIDE	TOTAL	ES	WS	SS	NS	TOTAL
AM	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	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
PM	3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	1	0	1	0	0	1	0	1	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	1	0	1	0	0	0	0	0	0	0	1	0	1
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	2	0	2	0	0	1	0	1	0	0	1	0	1

AimTD LLC

TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Hesperia	PROJECT #:	SC2468
1/7/20	NORTH & SOUTH:	Verbena	LOCATION #:	2
TUESDAY	EAST & WEST:	Phelan	CONTROL:	STOP N/S

CLASS 1:	NOTES:
PASSENGER VEHICLES	

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND (Verbena)			SOUTHBOUND (Verbena)			EASTBOUND (Phelan)			WESTBOUND (Phelan)			
	LANES:	NL 0	NT 1	NR 0	SL 0	ST 1	SR 0	EL 1	ET 1	ER 1	WL 1	WT 1	WR 1	TOTAL
AM	7:00 AM	2	0	6	0	0	0	0	153	2	1	66	1	231
	7:15 AM	2	0	4	1	0	1	0	161	0	2	69	0	240
	7:30 AM	6	0	1	2	0	5	2	182	2	1	113	0	314
	7:45 AM	6	0	5	2	0	0	1	200	1	0	124	0	339
	8:00 AM	2	0	5	1	0	0	0	195	3	0	65	0	271
	8:15 AM	1	0	4	3	0	0	0	143	1	0	78	1	231
	8:30 AM	5	0	3	1	0	3	0	161	1	3	92	0	269
	8:45 AM	1	0	0	1	0	0	3	173	1	2	103	1	285
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	25	0	28	11	0	9	6	1,368	11	9	710	3	2,180
	APPROACH %	47%	0%	53%	55%	0%	45%	0%	99%	1%	1%	98%	0%	
	APP/DEPART	53	/	9	20	/	20	1,385	/	1,407	722	/	744	0
	BEGIN PEAK HR		7:15 AM											
	VOLUMES	16	0	15	6	0	6	3	738	6	3	371	0	1,164
	APPROACH %	52%	0%	48%	50%	0%	50%	0%	99%	1%	1%	99%	0%	
	PEAK HR FACTOR		0.705			0.429			0.925			0.754		0.858
	APP/DEPART	31	/	3	12	/	9	747	/	759	374	/	393	0
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	2	0	2	0	0	0	1	174	2	6	158	1	346
	4:15 PM	1	0	2	0	0	1	1	161	0	7	183	1	357
	4:30 PM	0	0	5	1	0	1	0	145	1	6	180	0	339
	4:45 PM	0	0	4	2	0	1	2	130	1	3	175	3	321
	5:00 PM	1	0	1	1	0	2	0	150	0	5	180	0	340
	5:15 PM	2	0	2	0	0	1	1	141	1	3	185	0	336
	5:30 PM	0	0	2	1	0	0	1	105	1	12	203	1	326
	5:45 PM	3	0	1	2	0	1	1	101	2	7	155	1	274
	VOLUMES	9	0	19	7	0	7	7	1,107	8	49	1,419	7	2,639
	APPROACH %	32%	0%	68%	50%	0%	50%	1%	99%	1%	3%	96%	0%	
	APP/DEPART	28	/	14	14	/	57	1,122	/	1,133	1,475	/	1,435	0
	BEGIN PEAK HR		4:00 PM											
	VOLUMES	3	0	13	3	0	3	4	610	4	22	696	5	1,363
	APPROACH %	19%	0%	81%	50%	0%	50%	1%	99%	1%	3%	96%	1%	
	PEAK HR FACTOR		0.800			0.500			0.873			0.946		0.954
	APP/DEPART	16	/	9	6	/	26	618	/	626	723	/	702	0

U-TURNS					
	NB	SB	EB	WB	TTL
AM	0	0	0	0	0
PM	0	0	0	0	0
TOTAL	0	0	0	0	0

RTOR				
	NRR X	SRR X	ERR X	WRR X
AM	0	0	0	0
PM	0	0	0	0
TOTAL	0	0	0	0

Verbena

NORTH SIDE

Phelan WEST SIDE EAST SIDE **Phelan**

SOUTH SIDE

Verbena

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Hesperia	PROJECT #:	SC2468
1/7/20	NORTH & SOUTH:	Verbena	LOCATION #:	2
TUESDAY	EAST & WEST:	Phelan	CONTROL:	STOP N/S

CLASS 2: 2-AXLE WORK VEHICLES/ TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND (Verbena)			SOUTHBOUND (Verbena)			EASTBOUND (Phelan)			WESTBOUND (Phelan)			
	LANES:	NL 0	NT 1	NR 0	SL 0	ST 1	SR 0	EL 1	ET 1	ER 1	WL 1	WT 1	WR 1	TOTAL
AM	7:00 AM	0	0	0	0	0	0	0	4	0	0	8	0	12
	7:15 AM	0	0	0	0	0	0	0	3	0	0	6	0	9
	7:30 AM	0	0	1	0	0	0	0	8	0	1	7	0	17
	7:45 AM	0	0	0	0	0	0	0	4	0	0	10	0	14
	8:00 AM	0	0	0	0	0	0	0	4	0	0	4	0	8
	8:15 AM	0	0	0	0	0	0	0	2	0	0	6	0	8
	8:30 AM	0	0	0	0	0	0	0	5	0	0	5	0	10
	8:45 AM	0	0	0	0	0	0	0	5	0	0	3	0	8
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	1	0	0	0	0	35	0	1	49	0	86
	APPROACH %	0%	0%	100%	0%	0%	0%	0%	100%	0%	2%	98%	0%	
	APP/DEPART	1	/	0	0	/	1	35	/	36	50	/	49	0
	BEGIN PEAK HR		7:00 AM											
	VOLUMES	0	0	1	0	0	0	0	19	0	1	31	0	52
	APPROACH %	0%	0%	100%	0%	0%	0%	0%	100%	0%	3%	97%	0%	
	PEAK HR FACTOR		0.250			0.000			0.594			0.800		0.765
	APP/DEPART	1	/	0	0	/	1	19	/	20	32	/	31	0
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	4	0	0	5	0	9
	4:15 PM	0	0	0	0	0	0	0	5	0	0	7	0	12
	4:30 PM	0	0	0	0	0	0	0	5	0	1	7	0	13
	4:45 PM	0	0	1	0	0	0	0	4	0	0	4	0	9
	5:00 PM	0	0	0	0	0	0	0	3	0	1	5	0	9
	5:15 PM	0	0	0	0	0	0	0	3	0	0	5	0	8
	5:30 PM	0	0	0	0	0	0	0	2	0	0	3	0	5
	5:45 PM	0	0	0	0	0	0	0	2	0	0	1	0	3
	VOLUMES	0	0	1	0	0	0	0	28	0	2	37	0	68
	APPROACH %	0%	0%	100%	0%	0%	0%	0%	100%	0%	5%	95%	0%	
	APP/DEPART	1	/	0	0	/	2	28	/	29	39	/	37	0
	BEGIN PEAK HR		4:00 PM											
	VOLUMES	0	0	1	0	0	0	0	17	0	2	23	0	43
	APPROACH %	0%	0%	100%	0%	0%	0%	0%	100%	0%	8%	92%	0%	
	PEAK HR FACTOR		0.250			0.000			0.850			0.781		0.827
	APP/DEPART	1	/	0	0	/	2	17	/	18	25	/	23	0

U-TURNS

NB	SB	EB	WB	TTL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Hesperia	PROJECT #:	SC2468
1/7/20	NORTH & SOUTH:	Verbena	LOCATION #:	2
TUESDAY	EAST & WEST:	Phelan	CONTROL:	STOP N/S

CLASS 3: 3-AXLE TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND (Verbena)			SOUTHBOUND (Verbena)			EASTBOUND (Phelan)			WESTBOUND (Phelan)			
	LANES:	NL 0	NT 1	NR 0	SL 0	ST 1	SR 0	EL 1	ET 1	ER 1	WL 1	WT 1	WR 1	TOTAL
AM	7:00 AM	0	0	0	0	0	0	0	2	0	0	2	0	4
	7:15 AM	0	0	1	0	0	0	0	0	0	0	2	0	3
	7:30 AM	0	0	0	0	0	0	0	1	0	0	1	0	2
	7:45 AM	0	0	0	0	0	0	0	2	0	0	1	0	3
	8:00 AM	0	0	0	0	0	0	0	2	0	0	1	0	3
	8:15 AM	0	0	0	0	0	0	0	2	0	0	2	0	4
	8:30 AM	0	0	0	0	0	0	0	1	0	1	2	0	4
	8:45 AM	0	0	0	0	0	0	0	3	0	0	0	0	3
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	1	0	0	0	0	13	0	1	11	0	26
	APPROACH %	0%	0%	100%	0%	0%	0%	0%	100%	0%	8%	92%	0%	
	APP/DEPART	1	/	0	0	/	1	13	/	14	12	/	11	0
	BEGIN PEAK HR		7:45 AM											
	VOLUMES	0	0	0	0	0	0	0	8	0	1	5	0	14
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	100%	0%	17%	83%	0%	
	PEAK HR FACTOR		0.000			0.000			0.667			0.500		0.875
	APP/DEPART	0	/	0	0	/	1	8	/	8	6	/	5	0
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	2	0	0	2	0	4
	4:15 PM	0	0	0	0	0	0	0	1	0	0	4	0	5
	4:30 PM	0	0	0	0	0	0	0	2	0	0	1	0	3
	4:45 PM	0	0	0	0	0	0	0	2	0	2	3	0	7
	5:00 PM	1	0	0	0	0	0	0	1	0	0	3	0	5
	5:15 PM	0	0	0	0	0	0	0	2	0	0	3	0	5
	5:30 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	1	0	0	0	0	0	0	11	0	2	16	0	30
	APPROACH %	100%	0%	0%	0%	0%	0%	0%	100%	0%	11%	89%	0%	
	APP/DEPART	1	/	0	0	/	2	11	/	11	18	/	17	0
	BEGIN PEAK HR		4:15 PM											
	VOLUMES	1	0	0	0	0	0	0	6	0	2	11	0	20
	APPROACH %	100%	0%	0%	0%	0%	0%	0%	100%	0%	15%	85%	0%	
	PEAK HR FACTOR		0.250			0.000			0.750			0.650		0.714
	APP/DEPART	1	/	0	0	/	2	6	/	6	13	/	12	0

U-TURNS

NB	SB	EB	WB	TTL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

RTOR

NRR X	SRR X	ERR X	WRR X
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
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0	0	0	0
0	0	0	0
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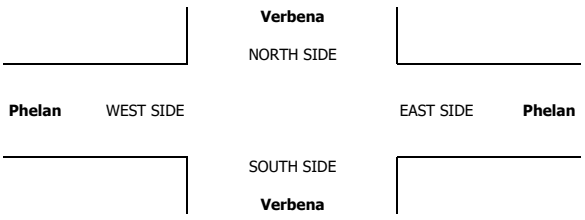
0	0	0	0
0	0	0	0



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Hesperia	PROJECT #:	SC2468
1/7/20	NORTH & SOUTH:	Verbena	LOCATION #:	2
TUESDAY	EAST & WEST:	Phelan	CONTROL:	STOP N/S

CLASS 4: 4 OR MORE AXLE TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N ◄ W E ► S ▼

		NORTHBOUND (Verbena)			SOUTHBOUND (Verbena)			EASTBOUND (Phelan)			WESTBOUND (Phelan)			
	LANES:	NL 0	NT 1	NR 0	SL 0	ST 1	SR 0	EL 1	ET 1	ER 1	WL 1	WT 1	WR 1	TOTAL
AM	7:00 AM	0	0	0	0	0	0	0	1	0	0	4	0	5
	7:15 AM	0	0	0	0	0	1	0	2	0	0	3	0	6
	7:30 AM	0	0	0	0	0	0	0	5	0	0	1	0	6
	7:45 AM	0	0	0	0	0	0	0	3	0	0	1	0	4
	8:00 AM	0	0	0	0	0	0	0	1	0	0	1	0	2
	8:15 AM	0	0	0	0	0	0	0	2	0	0	0	0	2
	8:30 AM	0	0	0	0	0	0	0	1	0	0	3	0	4
	8:45 AM	0	0	0	0	0	0	0	2	0	0	0	0	2
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	1	0	17	0	0	13	0	31
	APPROACH %	0%	0%	0%	0%	0%	100%	0%	100%	0%	0%	100%	0%	
	APP/DEPART	0	/	0	1	/	0	17	/	17	13	/	14	0
	BEGIN PEAK HR		7:00 AM											
	VOLUMES	0	0	0	0	0	1	0	11	0	0	9	0	21
	APPROACH %	0%	0%	0%	0%	0%	100%	0%	100%	0%	0%	100%	0%	
	PEAK HR FACTOR		0.000			0.250			0.550			0.563		0.875
	APP/DEPART	0	/	0	1	/	0	11	/	11	9	/	10	0
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	1	0	0	1	0	2
	4:15 PM	0	0	0	1	0	0	0	1	0	0	0	0	2
	4:30 PM	0	0	0	0	0	0	0	1	0	0	2	0	3
	4:45 PM	0	0	0	0	0	0	0	0	0	0	3	0	3
	5:00 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
	5:15 PM	0	0	0	1	0	0	1	4	0	0	0	0	6
	5:30 PM	0	0	0	0	0	0	0	1	0	0	2	0	3
	5:45 PM	0	0	0	0	0	0	0	1	0	0	1	0	2
	VOLUMES	0	0	0	2	0	0	1	9	0	0	10	0	22
	APPROACH %	0%	0%	0%	100%	0%	0%	10%	90%	0%	0%	100%	0%	
	APP/DEPART	0	/	1	2	/	0	10	/	11	10	/	10	0
	BEGIN PEAK HR		4:30 PM											
	VOLUMES	0	0	0	1	0	0	1	5	0	0	6	0	13
	APPROACH %	0%	0%	0%	100%	0%	0%	17%	83%	0%	0%	100%	0%	
	PEAK HR FACTOR		0.000			0.250			0.300			0.500		0.542
	APP/DEPART	0	/	1	1	/	0	6	/	6	6	/	6	0

U-TURNS

NB	SB	EB	WB	TTL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Hesperia	PROJECT #:	SC2468
1/7/20	NORTH & SOUTH:	Verbena	LOCATION #:	2
TUESDAY	EAST & WEST:	Phelan	CONTROL:	STOP N/S

CLASS 5: RV

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

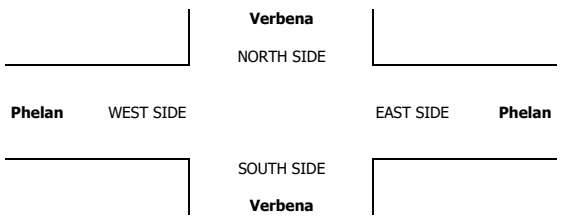
	NORTHBOUND (Verbena)			SOUTHBOUND (Verbena)			EASTBOUND (Phelan)			WESTBOUND (Phelan)			
LANES:	NL 0	NT 1	NR 0	SL 0	ST 1	SR 0	EL 1	ET 1	ER 1	WL 1	WT 1	WR 1	TOTAL
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
BEGIN PEAK HR		7:00 AM											
VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	0	0	0	0	0	0	0	0	0	0	2	0	2
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	0%	
APP/DEPART	0	/	0	0	/	0	0	/	0	2	/	2	0
BEGIN PEAK HR		4:00 PM											
VOLUMES	0	0	0	0	0	0	0	0	0	0	2	0	2
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	0%	
PEAK HR FACTOR		0.000			0.000			0.000			0.500		0.500
APP/DEPART	0	/	0	0	/	0	0	/	0	2	/	2	0

U-TURNS

NB	SB	EB	WB	TTL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

RTOR

NRR X	SRR X	ERR X	WRR X
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Hesperia	PROJECT #:	SC2468
1/7/20	NORTH & SOUTH:	Verbena	LOCATION #:	2
TUESDAY	EAST & WEST:	Phelan	CONTROL:	STOP N/S

CLASS 6:	NOTES:
BUSES	

AM / PM / MD / OTHER / OTHER — ▲ N ◄ W E ► S ▼

	NORTHBOUND Verbena			SOUTHBOUND Verbena			EASTBOUND Phelan			WESTBOUND Phelan			
LANES:	NL 0	NT 1	NR 0	SL 0	ST 1	SR 0	EL 1	ET 1	ER 1	WL 1	WT 1	WR 1	TOTAL
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	1	0	0	0	0	1
7:30 AM	0	0	0	0	0	0	0	1	0	0	3	0	4
7:45 AM	0	0	0	0	0	0	0	1	0	0	2	0	3
8:00 AM	0	0	0	0	0	0	0	1	0	0	0	0	1
8:15 AM	0	0	0	0	0	0	0	1	0	0	2	0	3
8:30 AM	0	0	0	0	0	0	0	0	0	0	1	0	1
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	0	0	0	0	0	0	0	5	0	0	8	0	13
APPROACH %	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	100%	0%	
APP/DEPART	0	/	0	0	/	0	5	/	5	8	/	8	0
BEGIN PEAK HR		7:30 AM											
VOLUMES	0	0	0	0	0	0	0	4	0	0	7	0	11
APPROACH %	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	100%	0%	
PEAK HR FACTOR		0.000			0.000			1.000			0.583		0.688
APP/DEPART	0	/	0	0	/	0	4	/	4	7	/	7	0
03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	1	0	0	1	0	2
4:15 PM	0	0	0	0	0	0	0	1	0	0	1	0	2
4:30 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	2	0	2
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	0	0	0	0	0	0	0	3	0	0	4	0	7
APPROACH %	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	100%	0%	
APP/DEPART	0	/	0	0	/	0	3	/	3	4	/	4	0
BEGIN PEAK HR		4:00 PM											
VOLUMES	0	0	0	0	0	0	0	3	0	0	2	0	5
APPROACH %	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	100%	0%	
PEAK HR FACTOR		0.000			0.000			0.750			0.500		0.625
APP/DEPART	0	/	0	0	/	0	3	/	3	2	/	2	0

U-TURNS

NB	SB	EB	WB	TTL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

RTOR

NRR X	SRR X	ERR X	WRR X
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
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0	0	0	0
0	0	0	0
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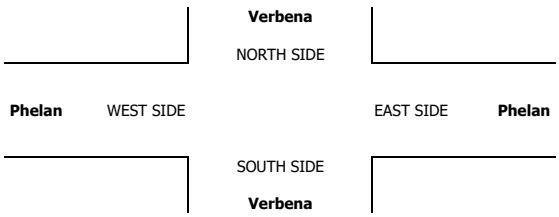
0	0	0	0
0	0	0	0



Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Hesperia
N/S: Bellflower Street
E/W: Phelan Road
Weather: Clear

File Name : 15_HES_Bellflower_Phelan AM
Site Code : 05119658
Start Date : 9/28/2019
Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Phelan Road Westbound			Bellflower Street Northbound			Phelan Road Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
07:00 AM	0	88	88	2	0	2	168	2	170	260
07:15 AM	0	101	101	2	1	3	194	0	194	298
07:30 AM	1	130	131	7	0	7	207	0	207	345
07:45 AM	1	97	98	4	1	5	193	3	196	299
Total	2	416	418	15	2	17	762	5	767	1202
08:00 AM	1	73	74	1	4	5	178	7	185	264
08:15 AM	0	85	85	1	1	2	188	1	189	276
08:30 AM	1	110	111	1	1	2	184	0	184	297
08:45 AM	1	78	79	1	0	1	171	3	174	254
Total	3	346	349	4	6	10	721	11	732	1091
Grand Total	5	762	767	19	8	27	1483	16	1499	2293
Apprch %	0.7	99.3		70.4	29.6		98.9	1.1		
Total %	0.2	33.2	33.4	0.8	0.3	1.2	64.7	0.7	65.4	
Passenger Vehicles	5	711	716	19	8	27	1443	16	1459	2202
% Passenger Vehicles	100	93.3	93.4	100	100	100	97.3	100	97.3	96
Large 2 Axle Vehicles	0	40	40	0	0	0	22	0	22	62
% Large 2 Axle Vehicles	0	5.2	5.2	0	0	0	1.5	0	1.5	2.7
3 Axle Vehicles	0	7	7	0	0	0	8	0	8	15
% 3 Axle Vehicles	0	0.9	0.9	0	0	0	0.5	0	0.5	0.7
4+ Axle Trucks	0	4	4	0	0	0	10	0	10	14
% 4+ Axle Trucks	0	0.5	0.5	0	0	0	0.7	0	0.7	0.6

	Phelan Road Westbound			Bellflower Street Northbound			Phelan Road Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:15 AM										
07:15 AM	0	101	101	2	1	3	194	0	194	298
07:30 AM	**1**	**130**	**131**	**7**	0	**7**	**207**	0	**207**	**345**
07:45 AM	1	97	98	4	1	5	193	3	196	299
08:00 AM	1	73	74	1	**4**	5	178	**7**	185	264
Total Volume	3	401	404	14	6	20	772	10	782	1206
% App. Total	0.7	99.3		70	30		98.7	1.3		
PHF	.750	.771	.771	.500	.375	.714	.932	.357	.944	.874

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City of Hesperia
N/S: Bellflower Street
E/W: Phelan Road
Weather: Clear

File Name : 15_HES_Bellflower_Phelan AM
Site Code : 05119658
Start Date : 9/28/2019
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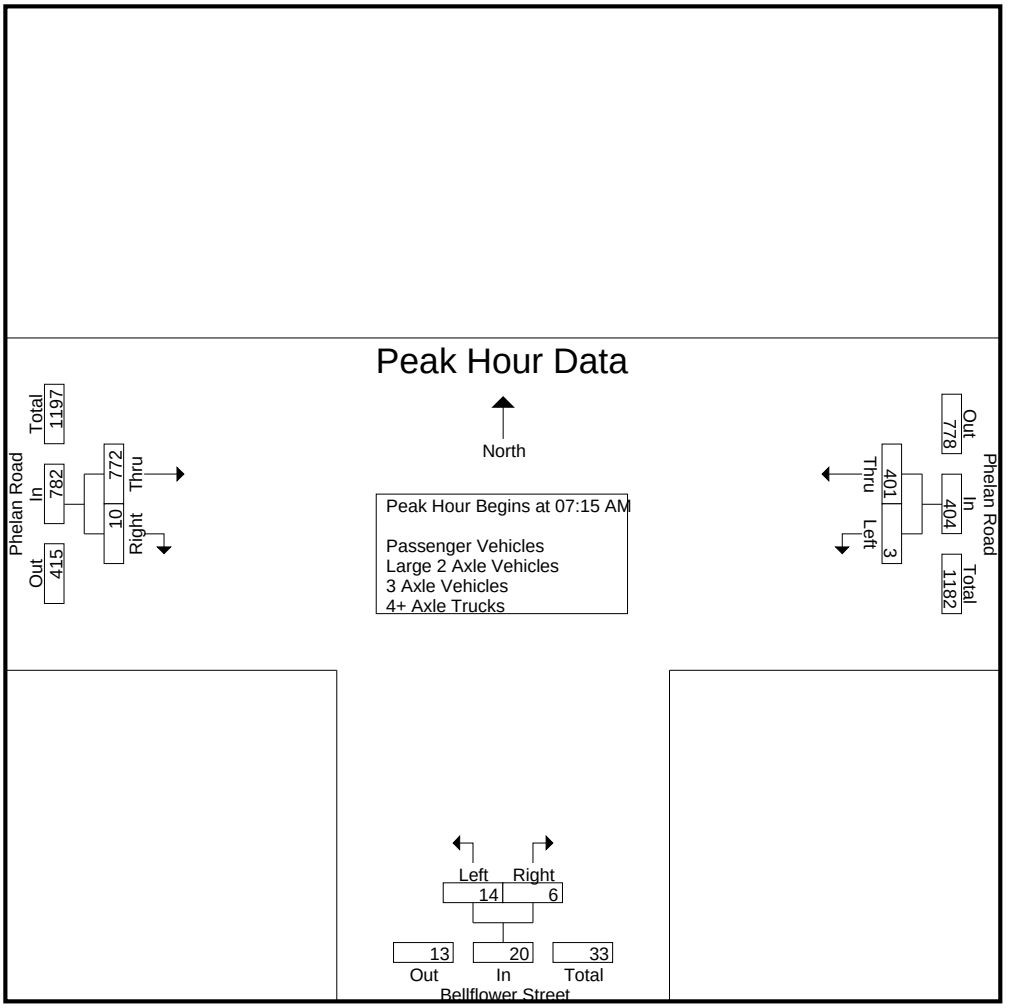

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM			07:15 AM			07:15 AM		
+0 mins.	0	88	88	2	1	3	194	0	194
+15 mins.	0	101	101	**7**	0	**7**	**207**	0	**207**
+30 mins.	**1**	**130**	**131**	4	1	5	193	3	196
+45 mins.	1	97	98	1	**4**	5	178	**7**	185
Total Volume	2	416	418	14	6	20	772	10	782
% App. Total	0.5	99.5		70	30		98.7	1.3	
PHF	.500	.800	.798	.500	.375	.714	.932	.357	.944

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City of Hesperia
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Site Code : 05119658
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Groups Printed- Passenger Vehicles

	Phelan Road Westbound			Bellflower Street Northbound			Phelan Road Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
07:00 AM	0	80	80	2	0	2	163	2	165	247
07:15 AM	0	95	95	2	1	3	190	0	190	288
07:30 AM	1	122	123	7	0	7	197	0	197	327
07:45 AM	1	90	91	4	1	5	188	3	191	287
Total	2	387	389	15	2	17	738	5	743	1149
08:00 AM	1	67	68	1	4	5	172	7	179	252
08:15 AM	0	79	79	1	1	2	184	1	185	266
08:30 AM	1	103	104	1	1	2	181	0	181	287
08:45 AM	1	75	76	1	0	1	168	3	171	248
Total	3	324	327	4	6	10	705	11	716	1053
Grand Total	5	711	716	19	8	27	1443	16	1459	2202
Apprch %	0.7	99.3		70.4	29.6		98.9	1.1		
Total %	0.2	32.3	32.5	0.9	0.4	1.2	65.5	0.7	66.3	

	Phelan Road Westbound			Bellflower Street Northbound			Phelan Road Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	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	95	95	2	1	3	190	0	190	288
07:30 AM	**1**	**122**	**123**	**7**	0	**7**	**197**	0	**197**	**327**
07:45 AM	1	90	91	4	1	5	188	3	191	287
08:00 AM	1	67	68	1	**4**	5	172	**7**	179	252
Total Volume	3	374	377	14	6	20	747	10	757	1154
% App. Total	0.8	99.2		70	30		98.7	1.3		
PHF	.750	.766	.766	.500	.375	.714	.948	.357	.961	.882

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City of Hesperia
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E/W: Phelan Road
Weather: Clear

File Name : 15_HES_Bellflower_Phelan AM
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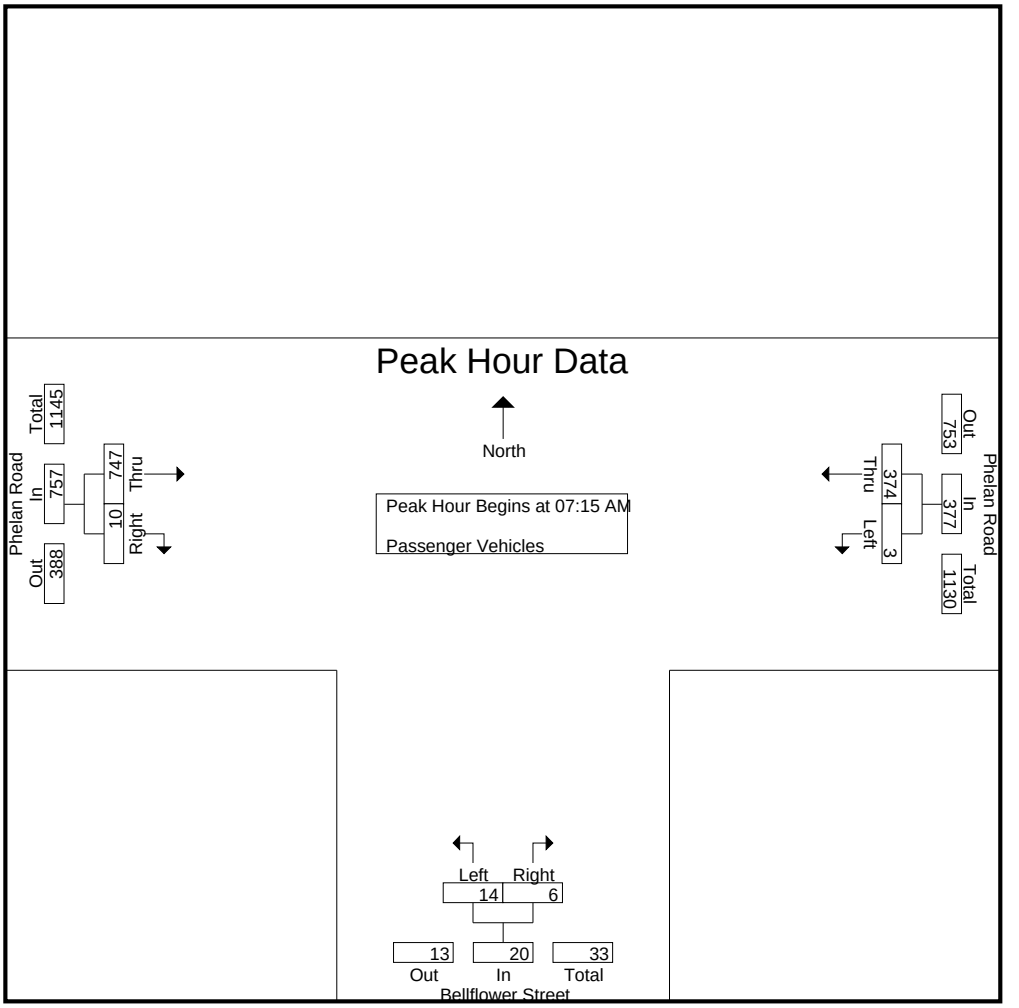

Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM			07:15 AM			07:15 AM		
+0 mins.	0	95	95	2	1	3	190	0	190
+15 mins.	**1**	**122**	**123**	**7**	0	**7**	**197**	0	**197**
+30 mins.	1	90	91	4	1	5	188	3	191
+45 mins.	1	67	68	1	**4**	5	172	**7**	179
Total Volume	3	374	377	14	6	20	747	10	757
% App. Total	0.8	99.2		70	30		98.7	1.3	
PHF	.750	.766	.766	.500	.375	.714	.948	.357	.961

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E/W: Phelan Road
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Groups Printed- Large 2 Axle Vehicles

	Phelan Road Westbound			Bellflower Street Northbound			Phelan Road Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
07:00 AM	0	8	8	0	0	0	2	0	2	10
07:15 AM	0	4	4	0	0	0	2	0	2	6
07:30 AM	0	6	6	0	0	0	4	0	4	10
07:45 AM	0	5	5	0	0	0	2	0	2	7
Total	0	23	23	0	0	0	10	0	10	33
08:00 AM	0	4	4	0	0	0	6	0	6	10
08:15 AM	0	5	5	0	0	0	2	0	2	7
08:30 AM	0	6	6	0	0	0	3	0	3	9
08:45 AM	0	2	2	0	0	0	1	0	1	3
Total	0	17	17	0	0	0	12	0	12	29
Grand Total	0	40	40	0	0	0	22	0	22	62
Apprch %	0	100		0	0		100	0		
Total %	0	64.5	64.5	0	0	0	35.5	0	35.5	

	Phelan Road Westbound			Bellflower Street Northbound			Phelan Road Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	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	4	4	0	0	0	2	0	2	6
07:30 AM	0	**6**	**6**	0	0	0	4	0	4	**10**
07:45 AM	0	5	5	0	0	0	2	0	2	7
08:00 AM	0	4	4	0	0	0	**6**	0	**6**	10
Total Volume	0	19	19	0	0	0	14	0	14	33
% App. Total	0	100		0	0		100	0		
PHF	.000	.792	.792	.000	.000	.000	.583	.000	.583	.825

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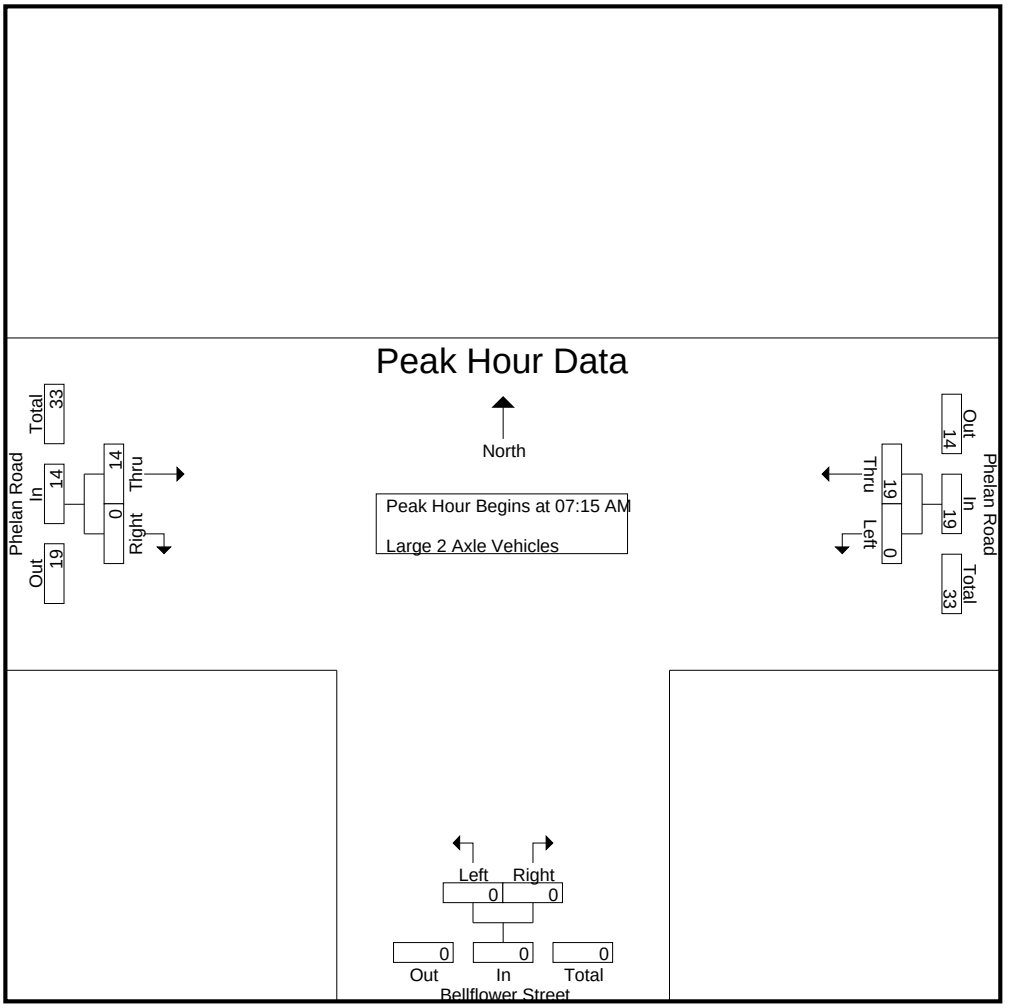

Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM			07:15 AM			07:15 AM		
+0 mins.	0	4	4	0	0	0	2	0	2
+15 mins.	0	**6**	**6**	0	0	0	4	0	4
+30 mins.	0	5	5	0	0	0	2	0	2
+45 mins.	0	4	4	0	0	0	**6**	0	**6**
Total Volume	0	19	19	0	0	0	14	0	14
% App. Total	0	100		0	0		100	0	
PHF	.000	.792	.792	.000	.000	.000	.583	.000	.583

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City of Hesperia
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Groups Printed- 3 Axle Vehicles

	Phelan Road Westbound			Bellflower Street Northbound			Phelan Road Eastbound			
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	2	0	2	2
07:15 AM	0	0	0	0	0	0	1	0	1	1
07:30 AM	0	2	2	0	0	0	2	0	2	4
07:45 AM	0	2	2	0	0	0	1	0	1	3
Total	0	4	4	0	0	0	6	0	6	10
08:00 AM	0	2	2	0	0	0	0	0	0	2
08:15 AM	0	0	0	0	0	0	1	0	1	1
08:30 AM	0	1	1	0	0	0	0	0	0	1
08:45 AM	0	0	0	0	0	0	1	0	1	1
Total	0	3	3	0	0	0	2	0	2	5
Grand Total	0	7	7	0	0	0	8	0	8	15
Apprch %	0	100		0	0		100	0		
Total %	0	46.7	46.7	0	0	0	53.3	0	53.3	

	Phelan Road Westbound			Bellflower Street Northbound			Phelan Road Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	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	0	1	1
07:30 AM	0	**2**	**2**	0	0	0	**2**	0	**2**	**4**
07:45 AM	0	2	2	0	0	0	1	0	1	3
08:00 AM	0	2	2	0	0	0	0	0	0	2
Total Volume	0	6	6	0	0	0	4	0	4	10
% App. Total	0	100		0	0		100	0		
PHF	.000	.750	.750	.000	.000	.000	.500	.000	.500	.625

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File Name : 15_HES_Bellflower_Phelan AM
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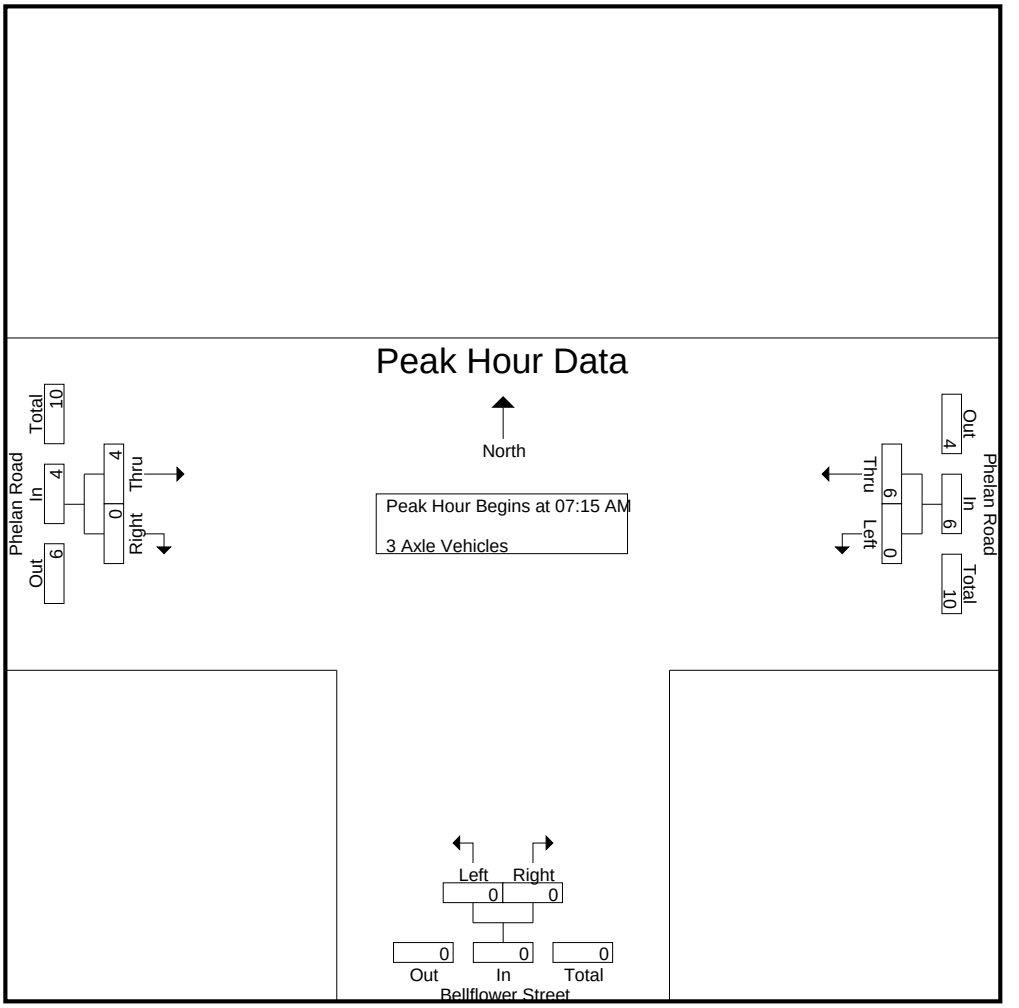

Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM			07:15 AM			07:15 AM		
+0 mins.	0	0	0	0	0	0	1	0	1
+15 mins.	0	**2**	**2**	0	0	0	**2**	0	**2**
+30 mins.	0	2	2	0	0	0	1	0	1
+45 mins.	0	2	2	0	0	0	0	0	0
Total Volume	0	6	6	0	0	0	4	0	4
% App. Total	0	100		0	0		100	0	
PHF	.000	.750	.750	.000	.000	.000	.500	.000	.500

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File Name : 15_HES_Bellflower_Phelan AM
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Groups Printed- 4+ Axle Trucks

	Phelan Road Westbound			Bellflower Street Northbound			Phelan Road Eastbound			
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	1	0	1	1
07:15 AM	0	2	2	0	0	0	1	0	1	3
07:30 AM	0	0	0	0	0	0	4	0	4	4
07:45 AM	0	0	0	0	0	0	2	0	2	2
Total	0	2	2	0	0	0	8	0	8	10
08:00 AM	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	1	1	0	0	0	1	0	1	2
08:30 AM	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	1	1	0	0	0	1	0	1	2
Total	0	2	2	0	0	0	2	0	2	4
Grand Total	0	4	4	0	0	0	10	0	10	14
Apprch %	0	100		0	0		100	0		
Total %	0	28.6	28.6	0	0	0	71.4	0	71.4	

	Phelan Road Westbound			Bellflower Street Northbound			Phelan Road Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:15 AM										
07:15 AM	0	**2**	**2**	0	0	0	1	0	1	3
07:30 AM	0	0	0	0	0	0	**4**	0	**4**	**4**
07:45 AM	0	0	0	0	0	0	2	0	2	2
08:00 AM	0	0	0	0	0	0	0	0	0	0
Total Volume	0	2	2	0	0	0	7	0	7	9
% App. Total	0	100		0	0		100	0		
PHF	.000	.250	.250	.000	.000	.000	.438	.000	.438	.563

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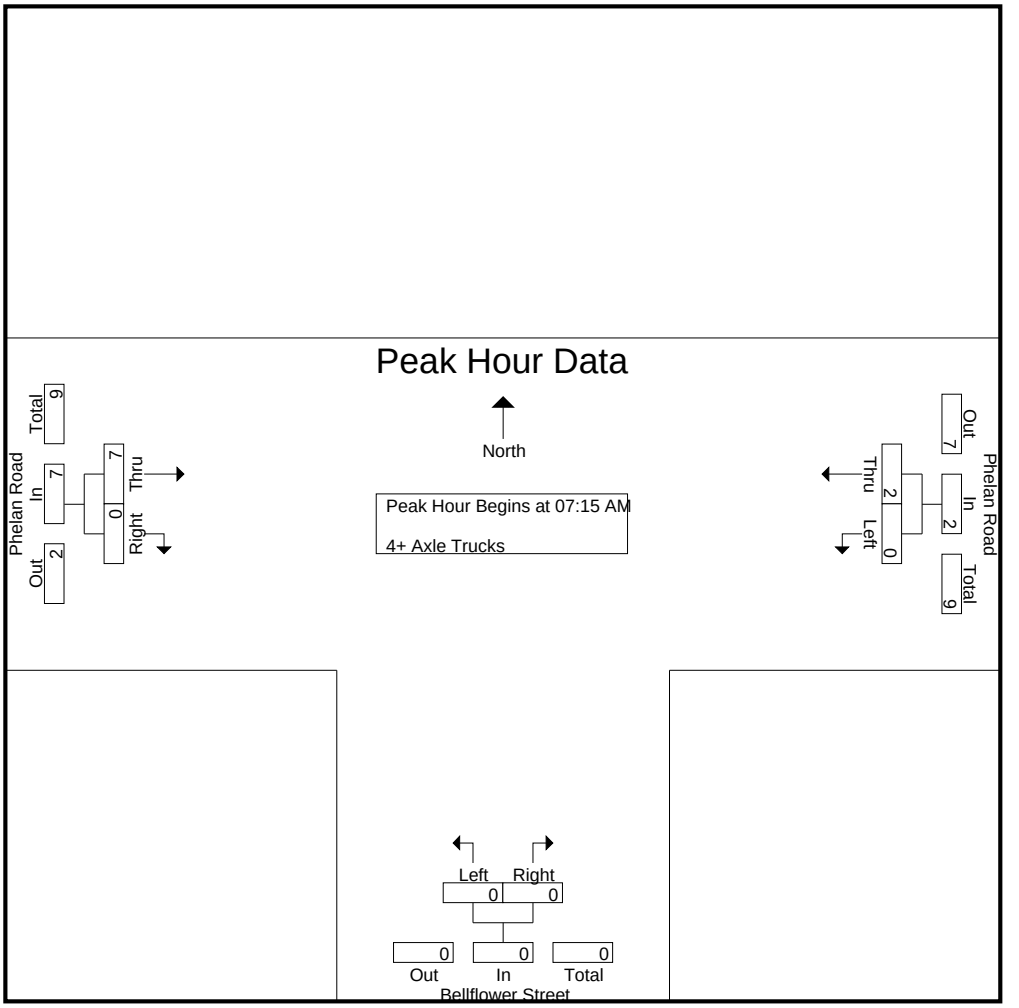

Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM			07:15 AM			07:15 AM		
+0 mins.	0	**2**	**2**	0	0	0	1	0	1
+15 mins.	0	0	0	0	0	0	**4**	0	**4**
+30 mins.	0	0	0	0	0	0	2	0	2
+45 mins.	0	0	0	0	0	0	0	0	0
Total Volume	0	2	2	0	0	0	7	0	7
% App. Total	0	100		0	0		100	0	
PHF	.000	.250	.250	.000	.000	.000	.438	.000	.438

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City of Hesperia
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Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Phelan Road Westbound			Bellflower Street Northbound			Phelan Road Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
04:00 PM	2	204	206	0	0	0	158	1	159	365
04:15 PM	3	225	228	0	1	1	151	1	152	381
04:30 PM	1	183	184	1	0	1	160	2	162	347
04:45 PM	1	220	221	3	1	4	163	0	163	388
Total	7	832	839	4	2	6	632	4	636	1481
05:00 PM	2	214	216	0	1	1	150	1	151	368
05:15 PM	1	171	172	2	2	4	175	1	176	352
05:30 PM	0	219	219	1	0	1	161	0	161	381
05:45 PM	0	156	156	1	2	3	127	1	128	287
Total	3	760	763	4	5	9	613	3	616	1388
Grand Total	10	1592	1602	8	7	15	1245	7	1252	2869
Apprch %	0.6	99.4		53.3	46.7		99.4	0.6		
Total %	0.3	55.5	55.8	0.3	0.2	0.5	43.4	0.2	43.6	
Passenger Vehicles	9	1564	1573	8	6	14	1206	7	1213	2800
% Passenger Vehicles	90	98.2	98.2	100	85.7	93.3	96.9	100	96.9	97.6
Large 2 Axle Vehicles	1	14	15	0	1	1	27	0	27	43
% Large 2 Axle Vehicles	10	0.9	0.9	0	14.3	6.7	2.2	0	2.2	1.5
3 Axle Vehicles	0	2	2	0	0	0	4	0	4	6
% 3 Axle Vehicles	0	0.1	0.1	0	0	0	0.3	0	0.3	0.2
4+ Axle Trucks	0	12	12	0	0	0	8	0	8	20
% 4+ Axle Trucks	0	0.8	0.7	0	0	0	0.6	0	0.6	0.7

	Phelan Road Westbound			Bellflower Street Northbound			Phelan Road Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:45 PM										
04:45 PM	1	**220**	**221**	**3**	1	**4**	163	0	163	**388**
05:00 PM	**2**	214	216	0	1	1	150	**1**	151	368
05:15 PM	1	171	172	2	**2**	4	**175**	1	**176**	352
05:30 PM	0	219	219	1	0	1	161	0	161	381
Total Volume	4	824	828	6	4	10	649	2	651	1489
% App. Total	0.5	99.5		60	40		99.7	0.3		
PHF	.500	.936	.937	.500	.500	.625	.927	.500	.925	.959

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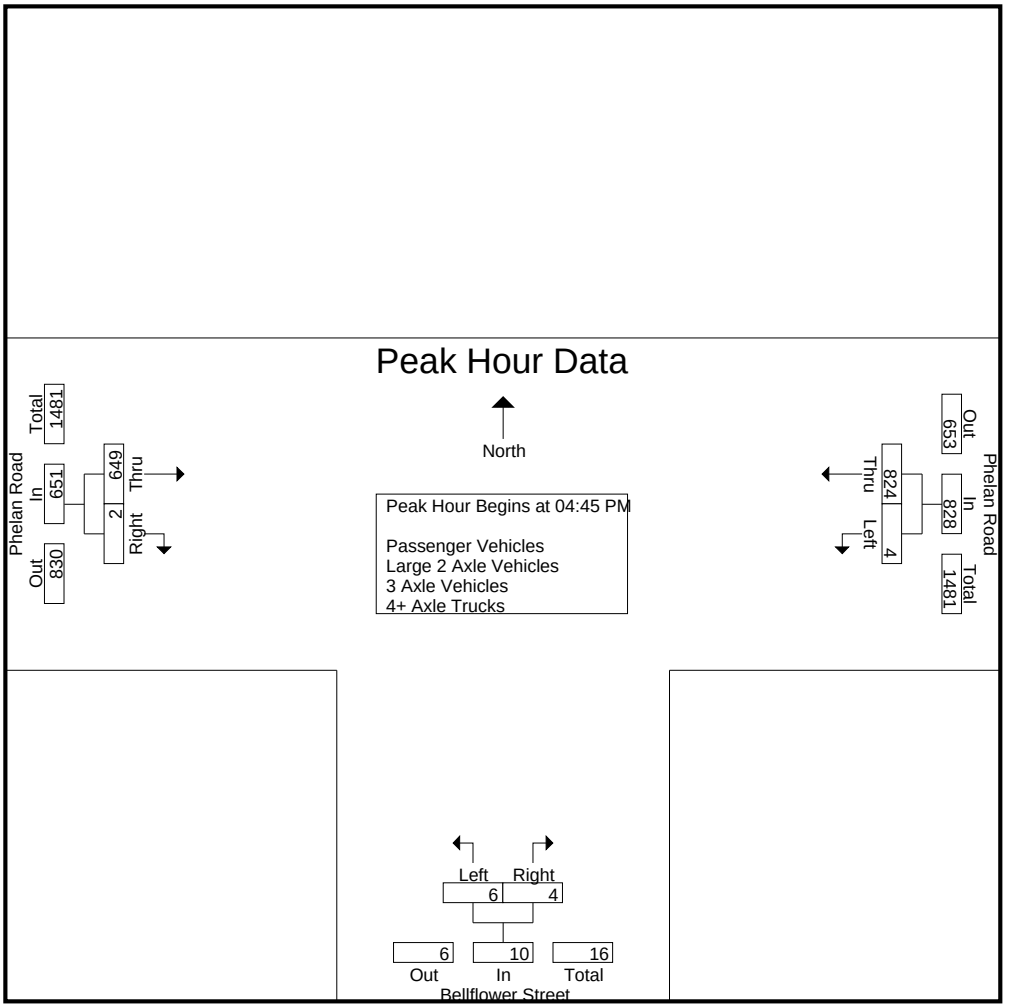

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:15 PM			04:30 PM			04:30 PM		
+0 mins.	**3**	**225**	**228**	1	0	1	160	**2**	162
+15 mins.	1	183	184	**3**	1	**4**	163	0	163
+30 mins.	1	220	221	0	1	1	150	1	151
+45 mins.	2	214	216	2	**2**	4	**175**	1	**176**
Total Volume	7	842	849	6	4	10	648	4	652
% App. Total	0.8	99.2		60	40		99.4	0.6	
PHF	.583	.936	.931	.500	.500	.625	.926	.500	.926

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File Name : 15_HES_Bellflower_Phelan PM
Site Code : 05119658
Start Date : 9/28/2019
Page No : 1

Groups Printed- Passenger Vehicles

	Phelan Road Westbound			Bellflower Street Northbound			Phelan Road Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
04:00 PM	2	198	200	0	0	0	158	1	159	359
04:15 PM	2	220	222	0	1	1	150	1	151	374
04:30 PM	1	180	181	1	0	1	149	2	151	333
04:45 PM	1	215	216	3	1	4	158	0	158	378
Total	6	813	819	4	2	6	615	4	619	1444
05:00 PM	2	210	212	0	1	1	144	1	145	358
05:15 PM	1	169	170	2	1	3	171	1	172	345
05:30 PM	0	218	218	1	0	1	156	0	156	375
05:45 PM	0	154	154	1	2	3	120	1	121	278
Total	3	751	754	4	4	8	591	3	594	1356
Grand Total	9	1564	1573	8	6	14	1206	7	1213	2800
Apprch %	0.6	99.4		57.1	42.9		99.4	0.6		
Total %	0.3	55.9	56.2	0.3	0.2	0.5	43.1	0.2	43.3	

	Phelan Road Westbound			Bellflower Street Northbound			Phelan Road Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:45 PM										
04:45 PM	1	215	216	**3**	**1**	**4**	158	0	158	**378**
05:00 PM	**2**	210	212	0	1	1	144	**1**	145	358
05:15 PM	1	169	170	2	1	3	**171**	1	**172**	345
05:30 PM	0	**218**	**218**	1	0	1	156	0	156	375
Total Volume	4	812	816	6	3	9	629	2	631	1456
% App. Total	0.5	99.5		66.7	33.3		99.7	0.3		
PHF	.500	.931	.936	.500	.750	.563	.920	.500	.917	.963

Counts Unlimited
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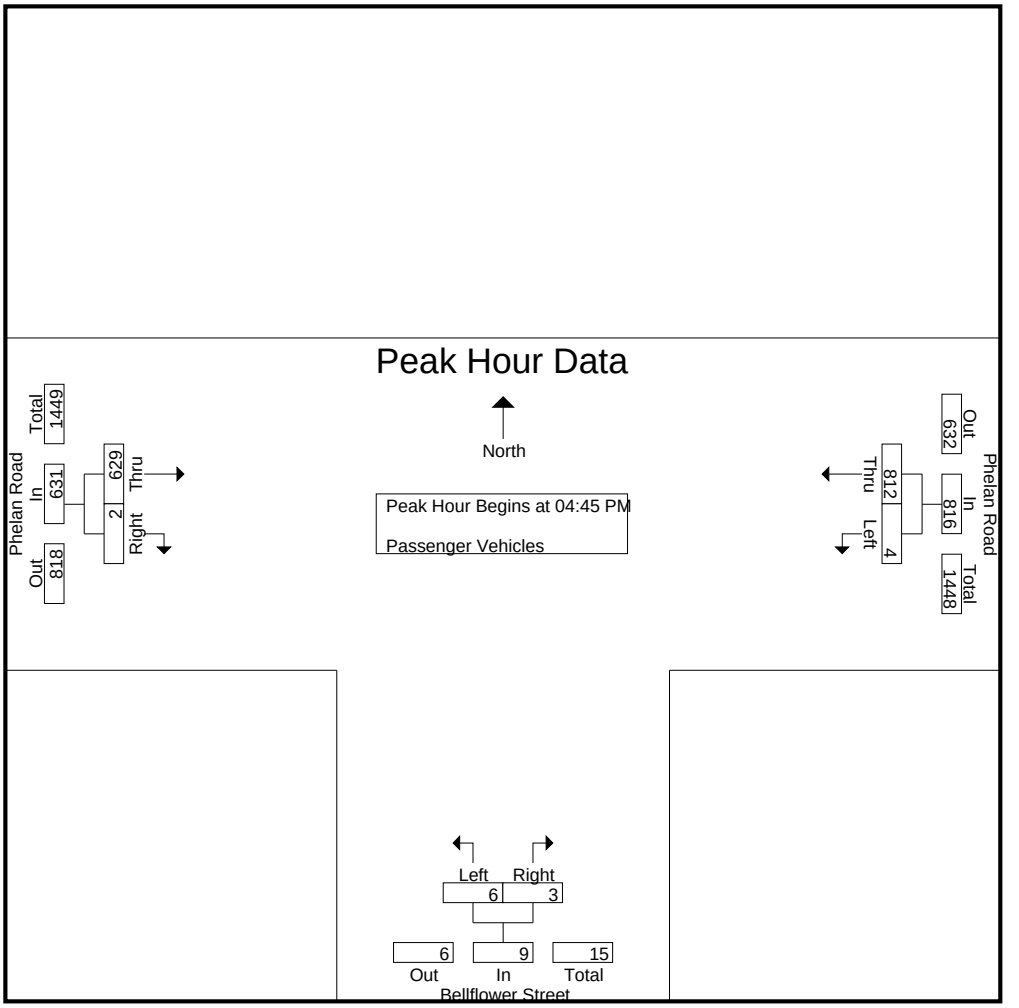
City of Hesperia
N/S: Bellflower Street
E/W: Phelan Road
Weather: Clear

File Name : 15_HES_Bellflower_Phelan PM
Site Code : 05119658
Start Date : 9/28/2019
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.	1	215	216	**3**	**1**	**4**	158	0	158
+15 mins.	**2**	210	212	0	1	1	144	**1**	145
+30 mins.	1	169	170	2	1	3	**171**	1	**172**
+45 mins.	0	**218**	**218**	1	0	1	156	0	156
Total Volume	4	812	816	6	3	9	629	2	631
% App. Total	0.5	99.5		66.7	33.3		99.7	0.3	
PHF	.500	.931	.936	.500	.750	.563	.920	.500	.917

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City of Hesperia
N/S: Bellflower Street
E/W: Phelan Road
Weather: Clear

File Name : 15_HES_Bellflower_Phelan PM
Site Code : 05119658
Start Date : 9/28/2019
Page No : 1

Groups Printed- Large 2 Axle Vehicles

	Phelan Road Westbound			Bellflower Street Northbound			Phelan Road Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
04:00 PM	0	4	4	0	0	0	0	0	0	4
04:15 PM	1	1	2	0	0	0	1	0	1	3
04:30 PM	0	3	3	0	0	0	8	0	8	11
04:45 PM	0	2	2	0	0	0	5	0	5	7
Total	1	10	11	0	0	0	14	0	14	25
05:00 PM	0	2	2	0	0	0	6	0	6	8
05:15 PM	0	0	0	0	1	1	0	0	0	1
05:30 PM	0	1	1	0	0	0	4	0	4	5
05:45 PM	0	1	1	0	0	0	3	0	3	4
Total	0	4	4	0	1	1	13	0	13	18
Grand Total	1	14	15	0	1	1	27	0	27	43
Apprch %	6.7	93.3		0	100		100	0		
Total %	2.3	32.6	34.9	0	2.3	2.3	62.8	0	62.8	

	Phelan Road Westbound			Bellflower Street Northbound			Phelan Road Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:45 PM										
04:45 PM	0	**2**	**2**	0	0	0	5	0	5	7
05:00 PM	0	2	2	0	0	0	**6**	0	**6**	**8**
05:15 PM	0	0	0	0	**1**	**1**	0	0	0	1
05:30 PM	0	1	1	0	0	0	4	0	4	5
Total Volume	0	5	5	0	1	1	15	0	15	21
% App. Total	0	100		0	100		100	0		
PHF	.000	.625	.625	.000	.250	.250	.625	.000	.625	.656

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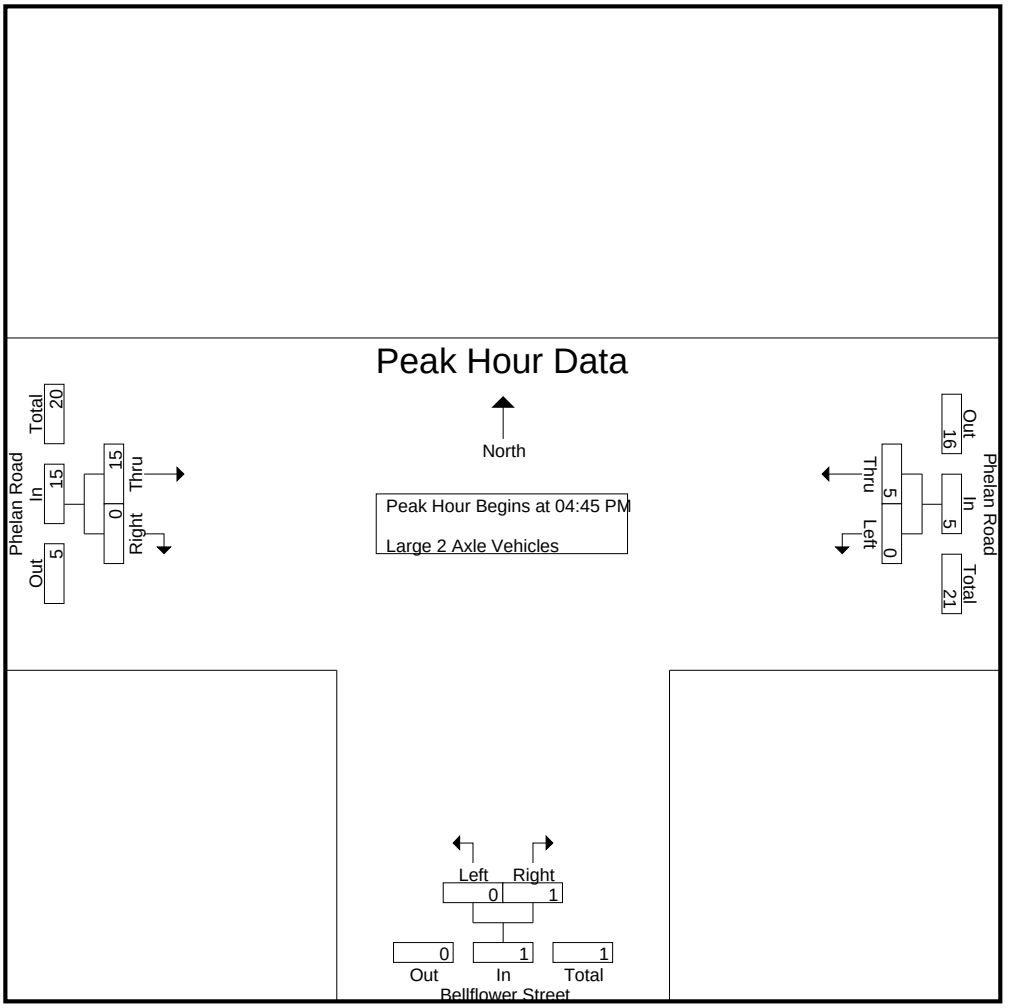
City of Hesperia
N/S: Bellflower Street
E/W: Phelan Road
Weather: Clear

File Name : 15_HES_Bellflower_Phelan PM
Site Code : 05119658
Start Date : 9/28/2019
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	**2**	**2**	0	0	0	5	0	5
+15 mins.	0	2	2	0	0	0	**6**	0	**6**
+30 mins.	0	0	0	0	**1**	**1**	0	0	0
+45 mins.	0	1	1	0	0	0	4	0	4
Total Volume	0	5	5	0	1	1	15	0	15
% App. Total	0	100		0	100		100	0	
PHF	.000	.625	.625	.000	.250	.250	.625	.000	.625

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City of Hesperia
N/S: Bellflower Street
E/W: Phelan Road
Weather: Clear

File Name : 15_HES_Bellflower_Phelan PM
Site Code : 05119658
Start Date : 9/28/2019
Page No : 1

Groups Printed- 3 Axle Vehicles

	Phelan Road Westbound			Bellflower Street Northbound			Phelan Road Eastbound			
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	0	0	0
04:15 PM	0	1	1	0	0	0	0	0	0	1
04:30 PM	0	0	0	0	0	0	1	0	1	1
04:45 PM	0	0	0	0	0	0	0	0	0	0
Total	0	1	1	0	0	0	1	0	1	2
05:00 PM	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	1	1	0	0	0	1	0	1	2
05:30 PM	0	0	0	0	0	0	1	0	1	1
05:45 PM	0	0	0	0	0	0	1	0	1	1
Total	0	1	1	0	0	0	3	0	3	4
Grand Total	0	2	2	0	0	0	4	0	4	6
Apprch %	0	100		0	0		100	0		
Total %	0	33.3	33.3	0	0	0	66.7	0	66.7	

	Phelan Road Westbound			Bellflower Street Northbound			Phelan Road Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:45 PM										
04:45 PM	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	**1**	**1**	0	0	0	**1**	0	**1**	**2**
05:30 PM	0	0	0	0	0	0	1	0	1	1
Total Volume	0	1	1	0	0	0	2	0	2	3
% App. Total	0	100		0	0		100	0		
PHF	.000	.250	.250	.000	.000	.000	.500	.000	.500	.375

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City of Hesperia
N/S: Bellflower Street
E/W: Phelan Road
Weather: Clear

File Name : 15_HES_Bellflower_Phelan PM
Site Code : 05119658
Start Date : 9/28/2019
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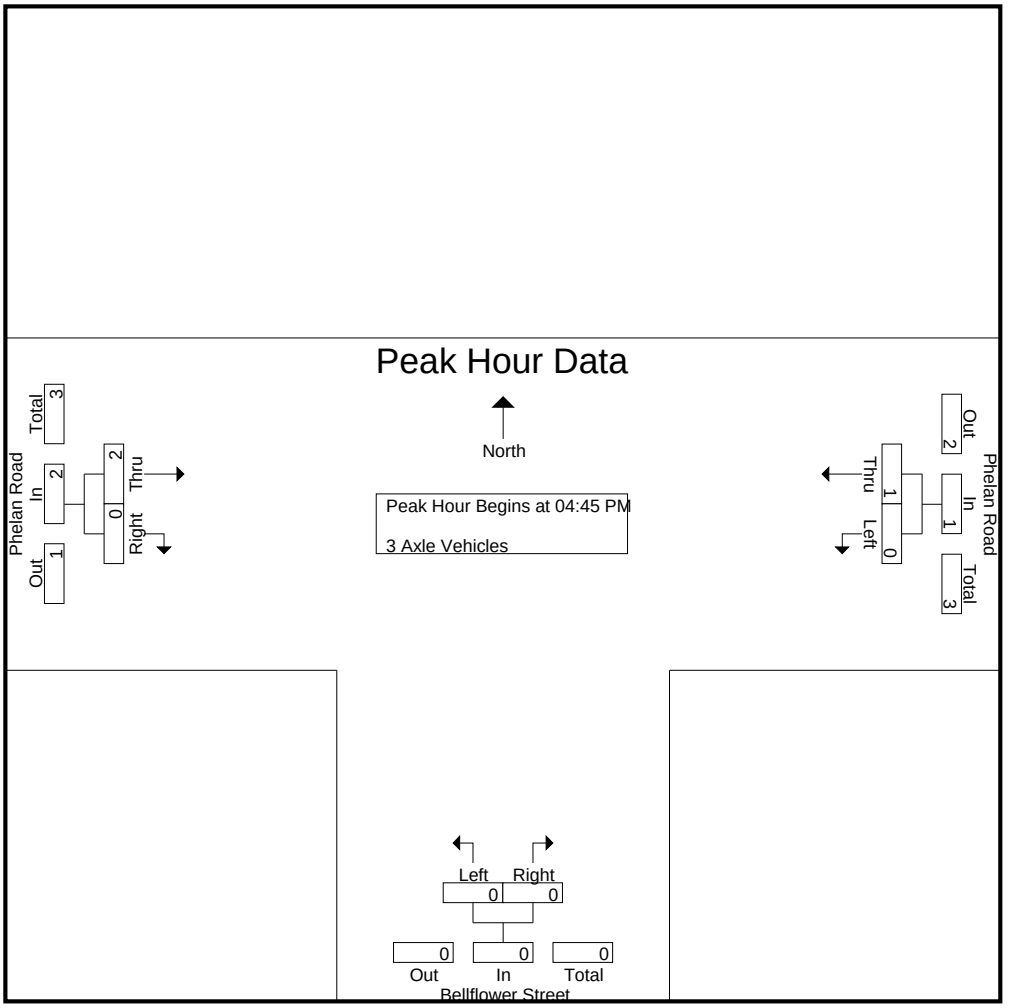

Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM			04:45 PM			04:45 PM		
+0 mins.	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0
+30 mins.	0	**1**	**1**	0	0	0	**1**	0	**1**
+45 mins.	0	0	0	0	0	0	1	0	1
Total Volume	0	1	1	0	0	0	2	0	2
% App. Total	0	100		0	0		100	0	
PHF	.000	.250	.250	.000	.000	.000	.500	.000	.500

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City of Hesperia
N/S: Bellflower Street
E/W: Phelan Road
Weather: Clear

File Name : 15_HES_Bellflower_Phelan PM
Site Code : 05119658
Start Date : 9/28/2019
Page No : 1

Groups Printed- 4+ Axle Trucks

	Phelan Road Westbound			Bellflower Street Northbound			Phelan Road Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
04:00 PM	0	2	2	0	0	0	0	0	0	2
04:15 PM	0	3	3	0	0	0	0	0	0	3
04:30 PM	0	0	0	0	0	0	2	0	2	2
04:45 PM	0	3	3	0	0	0	0	0	0	3
Total	0	8	8	0	0	0	2	0	2	10
05:00 PM	0	2	2	0	0	0	0	0	0	2
05:15 PM	0	1	1	0	0	0	3	0	3	4
05:30 PM	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	1	1	0	0	0	3	0	3	4
Total	0	4	4	0	0	0	6	0	6	10
Grand Total	0	12	12	0	0	0	8	0	8	20
Apprch %	0	100		0	0		100	0		
Total %	0	60	60	0	0	0	40	0	40	

	Phelan Road Westbound			Bellflower Street Northbound			Phelan Road Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:45 PM										
04:45 PM	0	**3**	**3**	0	0	0	0	0	0	3
05:00 PM	0	2	2	0	0	0	0	0	0	2
05:15 PM	0	1	1	0	0	0	**3**	0	**3**	**4**
05:30 PM	0	0	0	0	0	0	0	0	0	0
Total Volume	0	6	6	0	0	0	3	0	3	9
% App. Total	0	100		0	0		100	0		
PHF	.000	.500	.500	.000	.000	.000	.250	.000	.250	.563

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City of Hesperia
N/S: Bellflower Street
E/W: Phelan Road
Weather: Clear

File Name : 15_HES_Bellflower_Phelan PM
Site Code : 05119658
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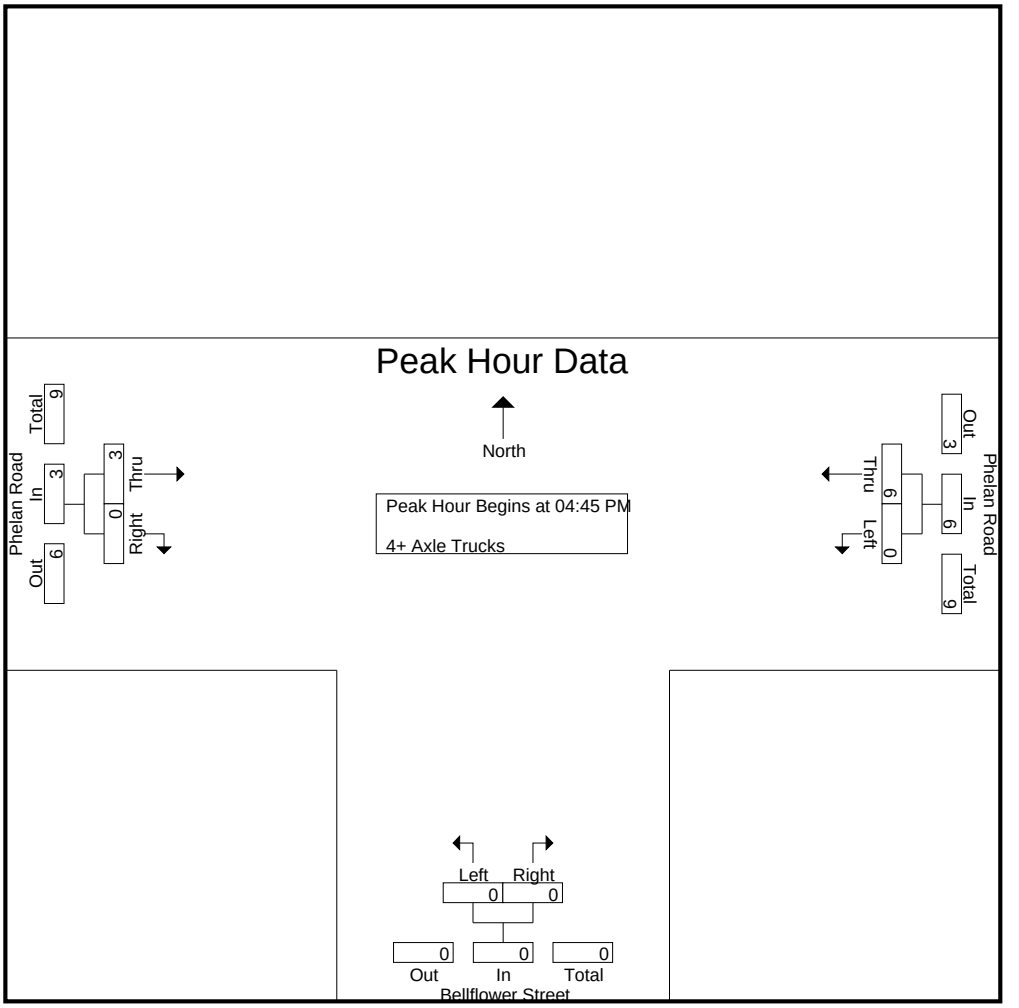

Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM			04:45 PM			04:45 PM		
+0 mins.	0	**3**	**3**	0	0	0	0	0	0
+15 mins.	0	2	2	0	0	0	0	0	0
+30 mins.	0	1	1	0	0	0	**3**	0	**3**
+45 mins.	0	0	0	0	0	0	0	0	0
Total Volume	0	6	6	0	0	0	3	0	3
% App. Total	0	100		0	0		100	0	
PHF	.000	.500	.500	.000	.000	.000	.250	.000	.250

Location: Hesperia
N/S: Bellflower Street
E/W: Phelan Road

Date: 9/28/2019
Day: Saturday

PEDESTRIANS

	North Leg Dead End	East Leg Phelan Road	South Leg Bellflower Street	West Leg Phelan Road	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0

	North Leg Dead End	East Leg Phelan Road	South Leg Bellflower Street	West Leg Phelan Road	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0

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Location: Hesperia
N/S: Bellflower Street
E/W: Phelan Road

Date: 9/28/2019
Day: Saturday

BICYCLES

	Southbound Dead End			Westbound Phelan Road			Northbound Bellflower Street			Eastbound Phelan Road			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	0	0	0	0	0	0	0	0

	Southbound Dead End			Westbound Phelan Road			Northbound Bellflower Street			Eastbound Phelan Road			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	0	0	0	0	0	0	0	0

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INTERSECTION TURNING MOVEMENT COUNTS

T1218

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Tue, Jan 7, 20

LOCATION: Hesperia
NORTH & SOUTH: SR-395
EAST & WEST: Luna

PROJECT #: SC2468
LOCATION #: 8
CONTROL: SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N / ◄ W / E ► / S ▼

Add U-Turns to Left Turns

		NORTHBOUND (SR-395)			SOUTHBOUND (SR-395)			EASTBOUND (Luna)			WESTBOUND (Luna)			
	LANES:	NL 1	NT 2	NR 1	SL 1	ST 2	SR 1	EL 1	ET 1	ER 1	WL 1	WT 0.5	WR 0.5	TOTAL
AM	7:00 AM	4	116	6	68	155	13	14	22	14	20	10	47	489
	7:15 AM	8	143	16	58	154	9	16	21	14	20	19	75	553
	7:30 AM	5	151	11	56	153	20	10	32	15	16	21	101	591
	7:45 AM	15	138	10	45	163	25	9	35	19	11	29	31	530
	8:00 AM	7	120	3	49	156	11	13	33	19	16	20	44	491
	8:15 AM	9	103	3	41	153	7	17	22	11	12	10	51	439
	8:30 AM	9	116	7	28	137	6	12	20	13	11	4	42	405
	8:45 AM	1	129	5	27	154	8	12	11	7	11	9	38	412
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	58	1,016	61	372	1,225	99	103	196	112	117	122	429	3,910
	APPROACH %	5%	90%	5%	22%	72%	6%	25%	48%	27%	18%	18%	64%	
	APP/DEPART	1,135	/	1,548	1,696	/	1,454	411	/	629	668	/	279	0
	BEGIN PEAK HR		7:15 AM											
	VOLUMES	35	552	40	208	626	65	48	121	67	63	89	251	2,165
	APPROACH %	6%	88%	6%	23%	70%	7%	20%	51%	28%	16%	22%	62%	
	PEAK HR FACTOR		0.939			0.965			0.908			0.730		0.916
	APP/DEPART	627	/	851	899	/	756	236	/	369	403	/	189	0
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	14	191	17	52	194	17	16	27	10	12	27	41	618
	4:15 PM	9	139	20	44	175	15	20	17	10	13	27	43	532
	4:30 PM	20	171	19	50	184	17	10	18	9	5	25	43	571
	4:45 PM	16	187	22	51	142	18	13	20	4	3	27	42	545
	5:00 PM	13	185	17	45	170	19	13	21	15	9	21	50	578
	5:15 PM	18	164	22	54	175	26	11	12	7	15	25	53	582
	5:30 PM	19	180	22	48	151	20	11	20	8	13	32	51	575
	5:45 PM	14	219	17	61	159	21	15	16	6	5	26	52	611
	VOLUMES	123	1,436	156	405	1,350	153	109	151	69	75	210	375	4,612
	APPROACH %	7%	84%	9%	21%	71%	8%	33%	46%	21%	11%	32%	57%	
	APP/DEPART	1,715	/	1,920	1,908	/	1,494	329	/	712	660	/	486	0
	BEGIN PEAK HR		5:00 PM											
	VOLUMES	64	748	78	208	655	86	50	69	36	42	104	206	2,346
	APPROACH %	7%	84%	9%	22%	69%	9%	32%	45%	23%	12%	30%	59%	
	PEAK HR FACTOR		0.890			0.930			0.791			0.917		0.960
	APP/DEPART	890	/	1,004	949	/	733	155	/	355	352	/	254	0

U-TURNS

NB	SB	EB	WB	TTL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

RTOR

NRR	SRR	ERR	WRR
0	0	0	0
2	0	9	15
4	5	10	21
6	6	9	15
3	2	6	8
2	4	5	17
0	2	8	27
1	2	10	22
1	1	2	12
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
19	22	59	137
15	17	30	61
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
3	2	2	12
2	2	5	23
5	6	6	9
5	2	2	16
6	3	8	19
6	3	4	8
7	10	2	14
5	2	4	19
39	30	33	120
24	18	18	60

SR-395
NORTH SIDE

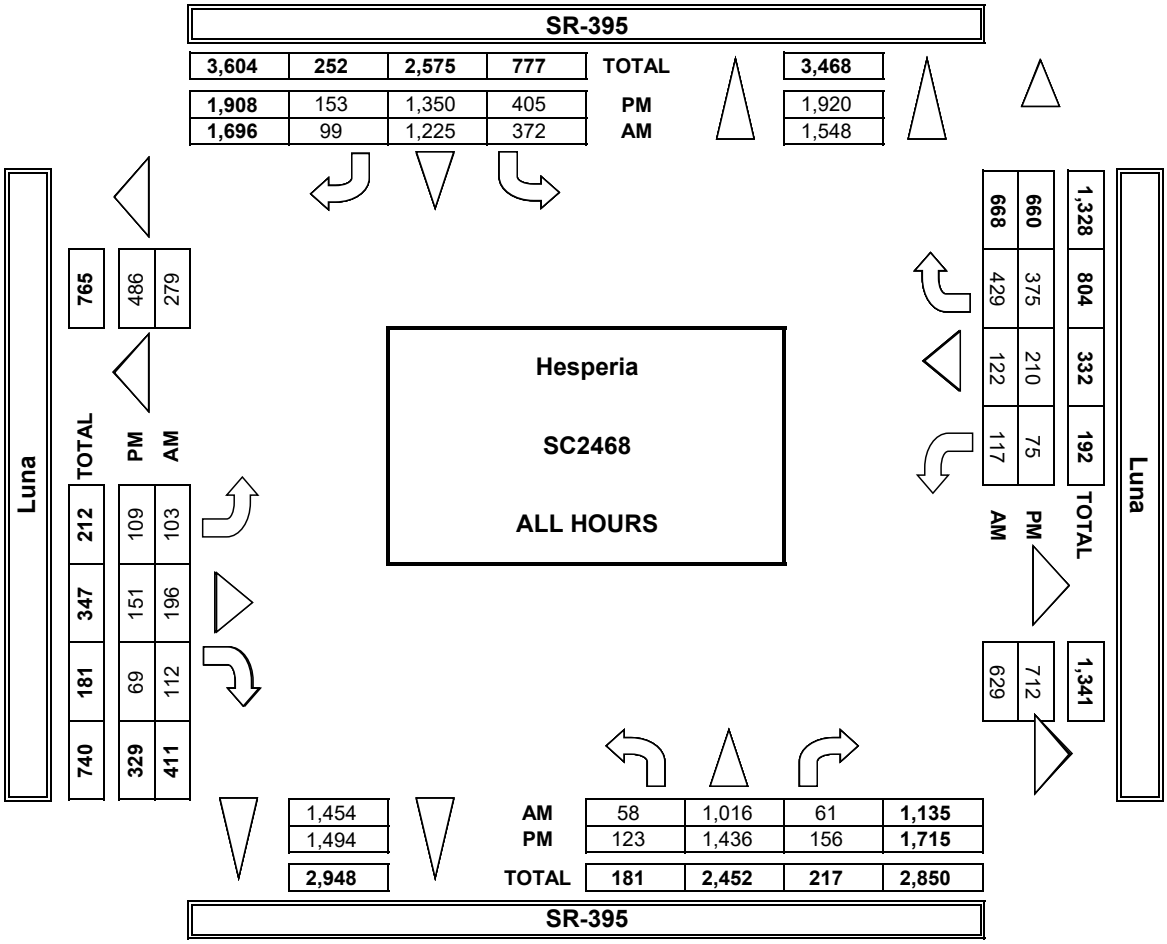
Luna WEST SIDE — EAST SIDE **Luna**

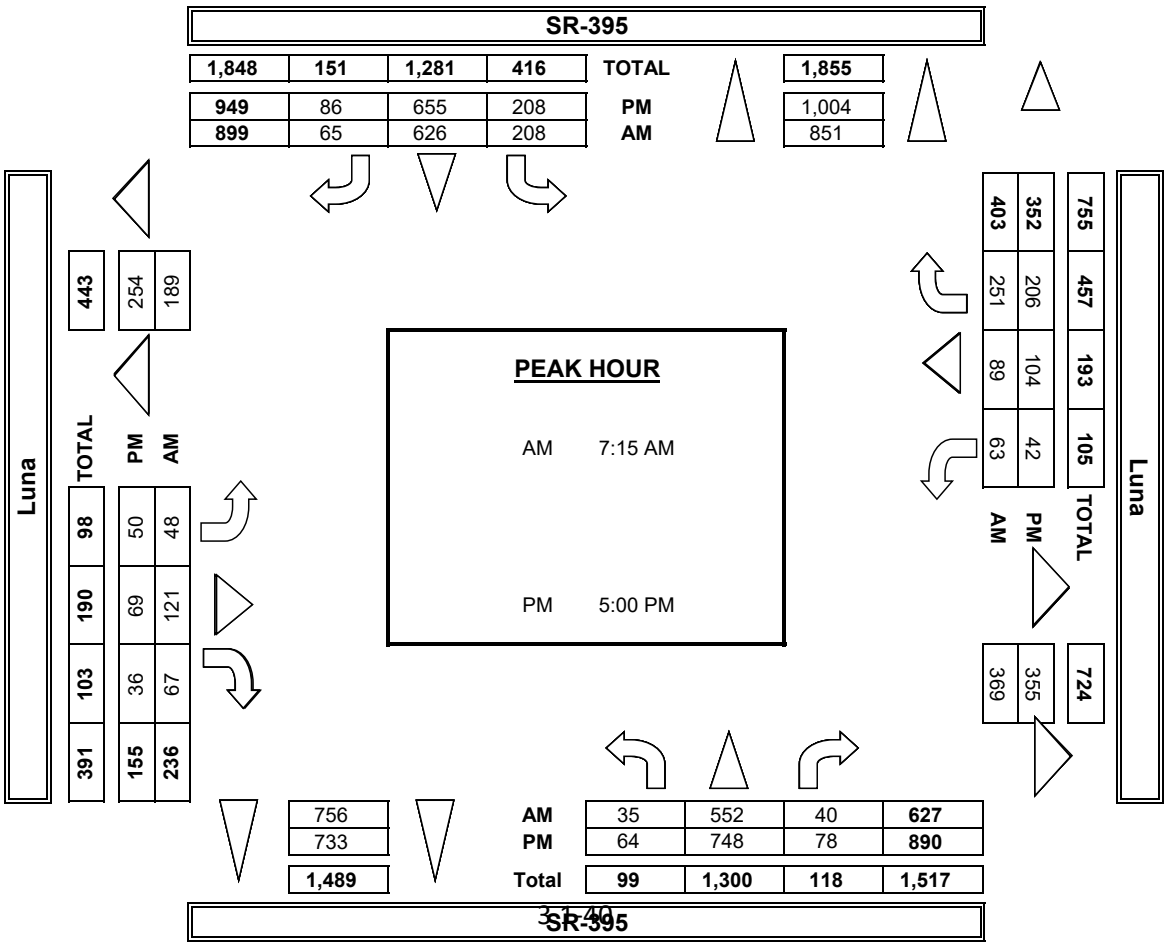
SOUTH SIDE
SR-395

		ALL PED AND BIKE					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS				
		E SIDE	W SIDE	S SIDE	N SIDE	TOTAL	E SIDE	W SIDE	S SIDE	N SIDE	TOTAL	ES	WS	SS	NS	TOTAL
AM	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	1	0	0	0	1	1	0	0	0	1	0	0	0	0	0
	7:30 AM	1	0	0	1	2	1	0	0	1	2	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	1	0	0	1	2	1	0	0	1	2	0	0	0	0	0
	8:15 AM	1	0	0	0	1	0	0	0	0	0	1	0	0	0	1
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:45 AM	1	0	0	1	2	1	0	0	1	2	0	0	0	0	0
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	5	0	0	3	8	4	0	0	3	7	1	0	0	0	1
PM	3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	1	0	0	2	3	1	0	0	2	3	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	1	1	0	0	0	1	1	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	1	0	0	3	4	1	0	0	3	4	0	0	0	0	0

AimTD LLC

TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Hesperia	PROJECT #:	SC2468
1/7/20	NORTH & SOUTH:	SR-395	LOCATION #:	8
TUESDAY	EAST & WEST:	Luna	CONTROL:	SIGNAL

CLASS 1: PASSENGER VEHICLES

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

	NORTHBOUND SR-395			SOUTHBOUND SR-395			EASTBOUND Luna			WESTBOUND Luna			
LANES:	NL 1	NT 2	NR 1	SL 1	ST 2	SR 1	EL 1	ET 1	ER 1	WL 1	WT 0.5	WR 0.5	TOTAL
7:00 AM	4	102	4	63	140	13	14	22	13	19	10	45	449
7:15 AM	7	119	14	54	135	8	15	21	13	19	19	67	491
7:30 AM	5	124	11	55	128	17	10	30	15	16	20	97	528
7:45 AM	15	115	10	43	136	24	9	35	19	11	29	29	475
8:00 AM	7	92	2	47	129	9	12	33	19	15	19	40	424
8:15 AM	9	84	3	39	127	7	17	21	9	12	9	49	386
8:30 AM	8	93	5	28	115	5	10	20	13	11	4	37	349
8:45 AM	1	92	5	26	129	8	11	9	6	11	8	34	340
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	56	821	54	355	1,039	91	98	191	107	114	118	398	3,442
APPROACH %	6%	88%	6%	24%	70%	6%	25%	48%	27%	18%	19%	63%	
APP/DEPART	931	/	1,317	1,485	/	1,260	396	/	600	630	/	265	0
BEGIN PEAK HR		7:00 AM											
VOLUMES	31	460	39	215	539	62	48	108	60	65	78	238	1,943
APPROACH %	6%	87%	7%	26%	66%	8%	22%	50%	28%	17%	20%	62%	
PEAK HR FACTOR		0.946			0.944			0.857			0.716		0.920
APP/DEPART	530	/	746	816	/	664	216	/	362	381	/	171	0
03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	13	174	16	49	160	16	16	27	9	12	27	41	560
4:15 PM	9	127	20	44	151	15	20	16	10	12	27	42	493
4:30 PM	20	160	17	48	164	16	10	18	8	5	23	42	531
4:45 PM	16	166	20	51	122	18	13	19	4	3	27	40	499
5:00 PM	13	171	17	44	143	19	13	21	15	9	21	49	535
5:15 PM	18	142	21	53	154	26	11	12	7	15	25	52	536
5:30 PM	19	166	21	45	126	19	10	20	7	12	31	51	527
5:45 PM	14	205	16	60	123	21	14	15	6	4	25	52	555
VOLUMES	122	1,311	148	394	1,143	150	107	148	66	72	206	369	4,236
APPROACH %	8%	83%	9%	23%	68%	9%	33%	46%	21%	11%	32%	57%	
APP/DEPART	1,581	/	1,787	1,687	/	1,281	321	/	690	647	/	478	0
BEGIN PEAK HR		5:00 PM											
VOLUMES	64	684	75	202	546	85	48	68	35	40	102	204	2,153
APPROACH %	8%	83%	9%	24%	66%	10%	32%	45%	23%	12%	29%	59%	
PEAK HR FACTOR		0.876			0.894			0.770			0.920		0.970
APP/DEPART	823	/	936	833	/	621	151	/	345	346	/	251	0

U-TURNS

NB	SB	EB	WB	TTL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
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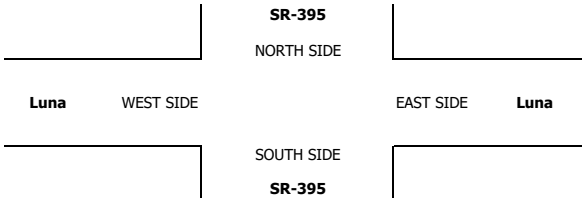
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

RTOR

NRR 0	SRR 0	ERR 0	WRR 0
2	0	9	14
4	4	9	20
6	6	9	15
3	2	6	6
1	4	5	14
0	2	7	26
1	2	10	21
1	1	1	9
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
18	21	56	125
15	12	33	55
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
3	2	2	12
2	2	5	23
5	5	5	9
4	2	2	16
6	3	8	19
6	3	4	8
6	10	1	14
5	2	4	19
37	29	31	120
23	18	17	60



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Hesperia	PROJECT #:	SC2468
1/7/20	NORTH & SOUTH:	SR-395	LOCATION #:	8
TUESDAY	EAST & WEST:	Luna	CONTROL:	SIGNAL

CLASS 2: 2-AXLE WORK VEHICLES/ TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND SR-395			SOUTHBOUND SR-395			EASTBOUND Luna			WESTBOUND Luna			
	LANES:	NL 1	NT 2	NR 1	SL 1	ST 2	SR 1	EL 1	ET 1	ER 1	WL 1	WT 0.5	WR 0.5	TOTAL
AM	7:00 AM	0	3	1	1	3	0	0	0	0	1	0	2	11
	7:15 AM	1	4	2	0	3	0	1	0	1	1	0	2	15
	7:30 AM	0	7	0	1	3	0	0	1	0	0	1	1	14
	7:45 AM	0	5	0	0	5	0	0	0	0	0	0	0	10
	8:00 AM	0	7	0	1	6	2	0	0	0	1	0	2	19
	8:15 AM	0	7	0	1	6	0	0	0	1	0	0	0	15
	8:30 AM	0	3	0	0	4	0	1	0	0	0	0	5	13
	8:45 AM	0	10	0	0	6	0	0	1	0	0	0	3	20
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	1	46	3	4	36	2	2	2	2	3	1	15	117
	APPROACH %	2%	92%	6%	10%	86%	5%	33%	33%	33%	16%	5%	79%	
	APP/DEPART	50	/	63	42	/	41	6	/	9	19	/	4	0
	BEGIN PEAK HR		8:00 AM											
	VOLUMES	0	27	0	2	22	2	1	1	1	1	0	10	67
	APPROACH %	0%	100%	0%	8%	85%	8%	33%	33%	33%	9%	0%	91%	
	PEAK HR FACTOR		0.675			0.722			0.750			0.550		0.838
	APP/DEPART	27	/	38	26	/	24	3	/	3	11	/	2	0
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	1	3	1	2	9	1	0	0	0	0	0	0	17
	4:15 PM	0	2	0	0	3	0	0	1	0	1	0	0	7
	4:30 PM	0	2	1	1	4	0	0	0	1	0	2	0	11
	4:45 PM	0	4	0	0	3	0	0	1	0	0	0	2	10
	5:00 PM	0	3	0	1	6	0	0	0	0	0	0	1	11
	5:15 PM	0	6	0	0	2	0	0	0	0	0	0	0	8
	5:30 PM	0	4	0	2	4	0	0	0	0	0	0	0	10
	5:45 PM	0	5	1	1	6	0	0	1	0	1	1	0	16
	VOLUMES	1	29	3	7	37	1	0	3	1	2	3	3	90
	APPROACH %	3%	88%	9%	16%	82%	2%	0%	75%	25%	25%	38%	38%	
	APP/DEPART	33	/	32	45	/	40	4	/	13	8	/	5	0
	BEGIN PEAK HR		4:00 PM											
	VOLUMES	0	18	1	4	18	0	0	1	0	1	1	1	45
	APPROACH %	0%	95%	5%	18%	82%	0%	0%	100%	0%	33%	33%	33%	
	PEAK HR FACTOR		0.792			0.458			0.250			0.375		0.662
	APP/DEPART	19	/	19	22	/	19	1	/	6	3	/	1	0

U-TURNS

NB	SB	EB	WB	TTL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Hesperia	PROJECT #:	SC2468
1/7/20	NORTH & SOUTH:	SR-395	LOCATION #:	8
TUESDAY	EAST & WEST:	Luna	CONTROL:	SIGNAL

CLASS 3: 3-AXLE TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND SR-395			SOUTHBOUND SR-395			EASTBOUND Luna			WESTBOUND Luna			
	LANES:	NL 1	NT 2	NR 1	SL 1	ST 2	SR 1	EL 1	ET 1	ER 1	WL 1	WT 0.5	WR 0.5	TOTAL
AM	7:00 AM	0	2	0	0	1	0	0	0	0	0	0	0	3
	7:15 AM	0	3	0	0	1	0	0	0	0	0	0	0	4
	7:30 AM	0	2	0	0	1	0	0	0	0	0	0	1	4
	7:45 AM	0	0	0	1	4	0	0	0	0	0	0	1	6
	8:00 AM	0	0	0	0	3	0	0	0	0	0	0	0	3
	8:15 AM	0	2	0	1	3	0	0	0	0	0	0	0	6
	8:30 AM	1	1	1	0	4	0	0	0	0	0	0	0	7
	8:45 AM	0	4	0	0	2	0	0	0	1	0	0	1	8
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	1	14	1	2	19	0	0	0	1	0	0	3	41
	APPROACH %	6%	88%	6%	10%	90%	0%	0%	0%	100%	0%	0%	100%	
	APP/DEPART	16	/	17	21	/	20	1	/	3	3	/	1	0
	BEGIN PEAK HR		8:00 AM											
	VOLUMES	1	7	1	1	12	0	0	0	1	0	0	1	24
	APPROACH %	11%	78%	11%	8%	92%	0%	0%	0%	100%	0%	0%	100%	
	PEAK HR FACTOR		0.563			0.813			0.250			0.250		0.750
	APP/DEPART	9	/	8	13	/	13	1	/	2	1	/	1	0
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	1	0	1	1	0	0	0	0	0	0	0	3
	4:15 PM	0	0	0	0	3	0	0	0	0	0	0	0	3
	4:30 PM	0	0	0	0	3	0	0	0	0	0	0	0	3
	4:45 PM	0	1	2	0	3	0	0	0	0	0	0	0	6
	5:00 PM	0	1	0	0	2	0	0	0	0	0	0	0	3
	5:15 PM	0	0	0	0	3	0	0	0	0	0	0	0	3
	5:30 PM	0	1	1	0	1	0	0	0	0	1	0	0	4
	5:45 PM	0	0	0	0	2	0	0	0	0	0	0	0	2
	VOLUMES	0	4	3	1	18	0	0	0	0	1	0	0	27
	APPROACH %	0%	57%	43%	5%	95%	0%	0%	0%	0%	100%	0%	0%	
	APP/DEPART	7	/	4	19	/	19	0	/	4	1	/	0	0
	BEGIN PEAK HR		4:45 PM											
	VOLUMES	0	3	3	0	9	0	0	0	0	1	0	0	16
	APPROACH %	0%	50%	50%	0%	100%	0%	0%	0%	0%	100%	0%	0%	
	PEAK HR FACTOR		0.500			0.750			0.000			0.250		0.667
	APP/DEPART	6	/	3	9	/	10	0	/	3	1	/	0	0

U-TURNS

NB	SB	EB	WB	TTL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

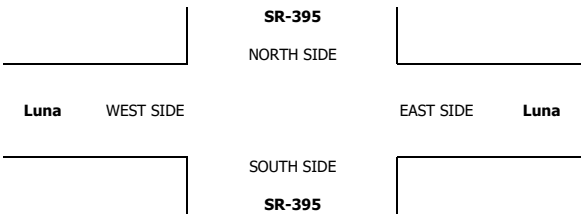
RTOR

NRR 0	SRR 0	ERR 0	WRR 0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	1
0	0	0	0
0	0	0	0
0	0	0	0
0	0	1	1
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	1	2

0	0	1	1

0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
1	0	0	0
0	0	0	0
0	0	0	0
1	0	0	0
0	0	0	0
2	0	0	0

2	0	0	0



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Hesperia	PROJECT #:	SC2468
1/7/20	NORTH & SOUTH:	SR-395	LOCATION #:	8
TUESDAY	EAST & WEST:	Luna	CONTROL:	SIGNAL

CLASS 4: 4 OR MORE AXLE TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N ◄ W E ► S ▼

		NORTHBOUND SR-395			SOUTHBOUND SR-395			EASTBOUND Luna			WESTBOUND Luna			
	LANES:	NL 1	NT 2	NR 1	SL 1	ST 2	SR 1	EL 1	ET 1	ER 1	WL 1	WT 0.5	WR 0.5	TOTAL
AM	7:00 AM	0	9	0	0	11	0	0	0	0	0	0	0	20
	7:15 AM	0	15	0	0	15	0	0	0	0	0	0	0	30
	7:30 AM	0	18	0	0	21	1	0	0	0	0	0	1	41
	7:45 AM	0	18	0	0	18	0	0	0	0	0	0	1	37
	8:00 AM	0	20	1	0	18	0	0	0	0	0	1	2	42
	8:15 AM	0	10	0	0	17	0	0	0	0	0	0	1	28
	8:30 AM	0	18	1	0	12	0	0	0	0	0	0	0	31
	8:45 AM	0	22	0	0	17	0	1	1	0	0	1	0	42
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	130	2	0	129	1	1	1	0	0	2	5	271
	APPROACH %	0%	98%	2%	0%	99%	1%	50%	50%	0%	0%	29%	71%	
	APP/DEPART	132	/	136	130	/	129	2	/	3	7	/	3	0
	BEGIN PEAK HR		7:15 AM											
	VOLUMES	0	71	1	0	72	1	0	0	0	0	1	4	150
	APPROACH %	0%	99%	1%	0%	99%	1%	0%	0%	0%	0%	20%	80%	
	PEAK HR FACTOR		0.857			0.830			0.000			0.417		0.893
	APP/DEPART	72	/	75	73	/	72	0	/	1	5	/	2	0
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	13	0	0	23	0	0	0	1	0	0	0	37
	4:15 PM	0	9	0	0	17	0	0	0	0	0	0	0	26
	4:30 PM	0	9	1	0	12	0	0	0	0	0	0	1	23
	4:45 PM	0	16	0	0	14	0	0	0	0	0	0	0	30
	5:00 PM	0	10	0	0	18	0	0	0	0	0	0	0	28
	5:15 PM	0	16	1	1	15	0	0	0	0	0	0	0	33
	5:30 PM	0	9	0	1	20	0	0	0	1	0	0	0	31
	5:45 PM	0	9	0	0	28	0	0	0	0	0	0	0	37
	VOLUMES	0	91	2	2	147	0	0	0	2	0	0	1	245
	APPROACH %	0%	98%	2%	1%	99%	0%	0%	0%	100%	0%	0%	100%	
	APP/DEPART	93	/	92	149	/	149	2	/	4	1	/	0	0
	BEGIN PEAK HR		5:00 PM											
	VOLUMES	0	44	1	2	81	0	0	0	1	0	0	0	129
	APPROACH %	0%	98%	2%	2%	98%	0%	0%	0%	100%	0%	0%	0%	
	PEAK HR FACTOR		0.662			0.741			0.250			0.000		0.872
	APP/DEPART	45	/	44	83	/	82	1	/	3	0	/	0	0

U-TURNS

NB	SB	EB	WB	TTL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Hesperia	PROJECT #:	SC2468
1/7/20	NORTH & SOUTH:	SR-395	LOCATION #:	8
TUESDAY	EAST & WEST:	Luna	CONTROL:	SIGNAL

CLASS 5:	NOTES:
RV	

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND SR-395			SOUTHBOUND SR-395			EASTBOUND Luna			WESTBOUND Luna			
	LANES:	NL 1	NT 2	NR 1	SL 1	ST 2	SR 1	EL 1	ET 1	ER 1	WL 1	WT 0.5	WR 0.5	TOTAL
AM	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:45 AM	0	1	0	0	0	0	0	0	0	0	0	0	1
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	1	0	0	0	0	0	0	0	0	0	0	1
	APPROACH %	0%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	APP/DEPART	1	/	1	0	/	0	0	/	0	0	/	0	0
	BEGIN PEAK HR		8:00 AM											
	VOLUMES	0	1	0	0	0	0	0	0	0	0	0	0	1
	APPROACH %	0%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	PEAK HR FACTOR		0.250			0.000			0.000			0.000		0.250
	APP/DEPART	1	/	1	0	/	0	0	/	0	0	/	0	0
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	1	0	0	0	0	0	1
	VOLUMES	0	0	0	0	1	0	1	0	0	0	0	0	2
	APPROACH %	0%	0%	0%	0%	100%	0%	100%	0%	0%	0%	0%	0%	
	APP/DEPART	0	/	1	1	/	1	1	/	0	0	/	0	0
	BEGIN PEAK HR		5:00 PM											
	VOLUMES	0	0	0	0	1	0	1	0	0	0	0	0	2
	APPROACH %	0%	0%	0%	0%	100%	0%	100%	0%	0%	0%	0%	0%	
	PEAK HR FACTOR		0.000			0.250			0.250			0.000		0.500
	APP/DEPART	0	/	1	1	/	1	1	/	0	0	/	0	0

U-TURNS

NB	SB	EB	WB	TTL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

INTERSECTION TURNING MOVEMENT COUNTS

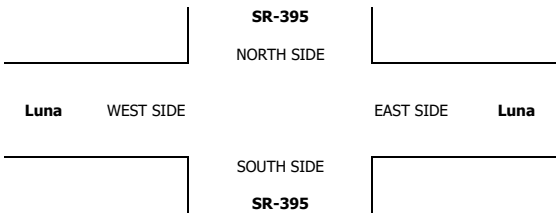
PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Hesperia	PROJECT #:	SC2468
1/7/20	NORTH & SOUTH:	SR-395	LOCATION #:	8
TUESDAY	EAST & WEST:	Luna	CONTROL:	SIGNAL

CLASS 6:	NOTES:
BUSES	

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND SR-395			SOUTHBOUND SR-395			EASTBOUND Luna			WESTBOUND Luna				U-TURNS					RTOR			
	LANES:	NL 1	NT 2	NR 1	SL 1	ST 2	SR 1	EL 1	ET 1	ER 1	WL 1	WT 0.5	WR 0.5	TOTAL	NB	SB	EB	WB	TTL	NRR 0	SRR 0	ERR 0	WRR 0
AM	7:00 AM	0	0	1	4	0	0	0	0	1	0	0	0	6	0	0	0	0	0	0	0	0	0
	7:15 AM	0	2	0	4	0	1	0	0	0	0	0	6	13	0	0	0	0	0	0	1	0	1
	7:30 AM	0	0	0	0	0	2	0	1	0	0	0	1	4	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	1	0	1	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0
	8:00 AM	0	1	0	1	0	0	1	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	1	1	0	1	1	4	0	0	0	0	0	0	0	0	1
	8:30 AM	0	1	0	0	2	1	1	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0
	8:45 AM	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	4	1	11	2	5	2	2	2	0	1	8	38	0	0	0	0	0	0	1	0	2
	APPROACH %	0%	80%	20%	61%	11%	28%	33%	33%	33%	0%	11%	89%										
	APP/DEPART	5	/	14	18	/	4	6	/	14	9	/	6	0									
	BEGIN PEAK HR		7:00 AM																				
	VOLUMES	0	2	1	9	0	4	0	1	1	0	0	7	25						0	1	0	1
	APPROACH %	0%	67%	33%	69%	0%	31%	0%	50%	50%	0%	0%	100%										
	PEAK HR FACTOR		0.375			0.650			0.500			0.292		0.481									
	APP/DEPART	3	/	9	13	/	1	2	/	11	7	/	4	0									
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
	4:15 PM	0	1	0	0	1	0	0	0	0	0	0	1	3	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	1	1	1	0	0	0	0	0	0	3	0	0	0	0	0	0	1	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	1	1	0	0	0	1	0	3	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	1	0	1	4	2	1	0	0	0	1	2	12	0	0	0	0	0	0	1	0	0
	APPROACH %	0%	100%	0%	14%	57%	29%	100%	0%	0%	0%	33%	67%										
	APP/DEPART	1	/	4	7	/	4	1	/	1	3	/	3	0									
	BEGIN PEAK HR		4:00 PM																				
	VOLUMES	0	1	0	1	3	1	0	0	0	0	0	1	7						0	1	0	0
	APPROACH %	0%	100%	0%	20%	60%	20%	0%	0%	0%	0%	0%	100%										
	PEAK HR FACTOR		0.250			0.417			0.000			0.250		0.583									
	APP/DEPART	1	/	2	5	/	3	0	/	1	1	/	1	0									



INTERSECTION TURNING MOVEMENT COUNTS

T1218

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Tue, Jan 7, 20

LOCATION: Hesperia
NORTH & SOUTH: SR-395
EAST & WEST: Bear Valley

PROJECT #: SC2468
LOCATION #: 9
CONTROL: SIGNAL

NOTES:

AM PM MD OTHER OTHER

▲ N
◄ W E ►
S ▼

Add U-Turns to Left Turns

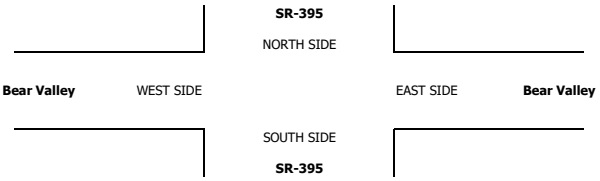
		NORTHBOUND SR-395			SOUTHBOUND SR-395			EASTBOUND Bear Valley			WESTBOUND Bear Valley			
	LANES:	NL 1	NT 2	NR 0	SL 1	ST 2	SR 0	EL 1	ET 2	ER 0	WL 1	WT 2	WR 1	TOTAL
AM	7:00 AM	19	118	21	32	159	5	8	57	41	41	32	13	546
	7:15 AM	35	143	32	36	151	3	6	59	36	36	55	24	616
	7:30 AM	27	133	22	32	131	6	11	68	38	43	81	21	613
	7:45 AM	26	133	19	47	142	8	10	92	38	28	53	21	617
	8:00 AM	12	110	17	38	155	5	11	66	50	40	39	14	557
	8:15 AM	8	89	14	28	129	8	8	59	29	33	53	21	479
	8:30 AM	15	110	12	42	105	5	9	53	29	27	39	21	467
	8:45 AM	16	110	13	48	138	2	6	65	22	33	35	18	506
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	158	946	150	303	1,110	42	69	519	283	281	387	153	4,401
	APPROACH %	13%	75%	12%	21%	76%	3%	8%	60%	32%	34%	47%	19%	
	APP/DEPART	1,254	/	1,169	1,455	/	1,675	871	/	971	821	/	586	0
	BEGIN PEAK HR		7:15 AM											
	VOLUMES	100	519	90	153	579	22	38	285	162	147	228	80	2,403
	APPROACH %	14%	73%	13%	20%	77%	3%	8%	59%	33%	32%	50%	18%	
	PEAK HR FACTOR		0.844			0.952			0.866			0.784		0.974
	APP/DEPART	709	/	638	754	/	888	485	/	527	455	/	350	0
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	34	171	53	29	166	8	15	80	41	32	78	35	742
	4:15 PM	44	145	57	44	161	8	11	86	43	22	77	27	725
	4:30 PM	42	167	42	39	142	13	11	58	20	20	72	36	662
	4:45 PM	45	189	46	33	114	5	14	78	21	28	73	32	678
	5:00 PM	48	172	45	40	131	9	11	58	21	27	97	28	687
	5:15 PM	30	183	56	29	154	7	6	58	27	29	83	36	698
	5:30 PM	54	180	46	38	132	9	10	74	22	34	70	30	699
	5:45 PM	43	201	61	32	141	7	4	75	18	23	68	40	713
	VOLUMES	340	1,408	406	284	1,141	66	82	567	213	215	618	264	5,604
	APPROACH %	16%	65%	19%	19%	77%	4%	10%	66%	25%	20%	56%	24%	
	APP/DEPART	2,154	/	1,754	1,491	/	1,569	862	/	1,257	1,097	/	1,024	0
	BEGIN PEAK HR		4:00 PM											
	VOLUMES	165	672	198	145	583	34	51	302	125	102	300	130	2,807
	APPROACH %	16%	65%	19%	19%	77%	4%	11%	63%	26%	19%	56%	24%	
	PEAK HR FACTOR		0.924			0.894			0.854			0.917		0.946
	APP/DEPART	1,035	/	853	762	/	810	478	/	645	532	/	499	0

U-TURNS

NB	SB	EB	WB	TTL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	1	0	0	1
1	0	0	0	1
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
1	1	0	0	2
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

RTOR

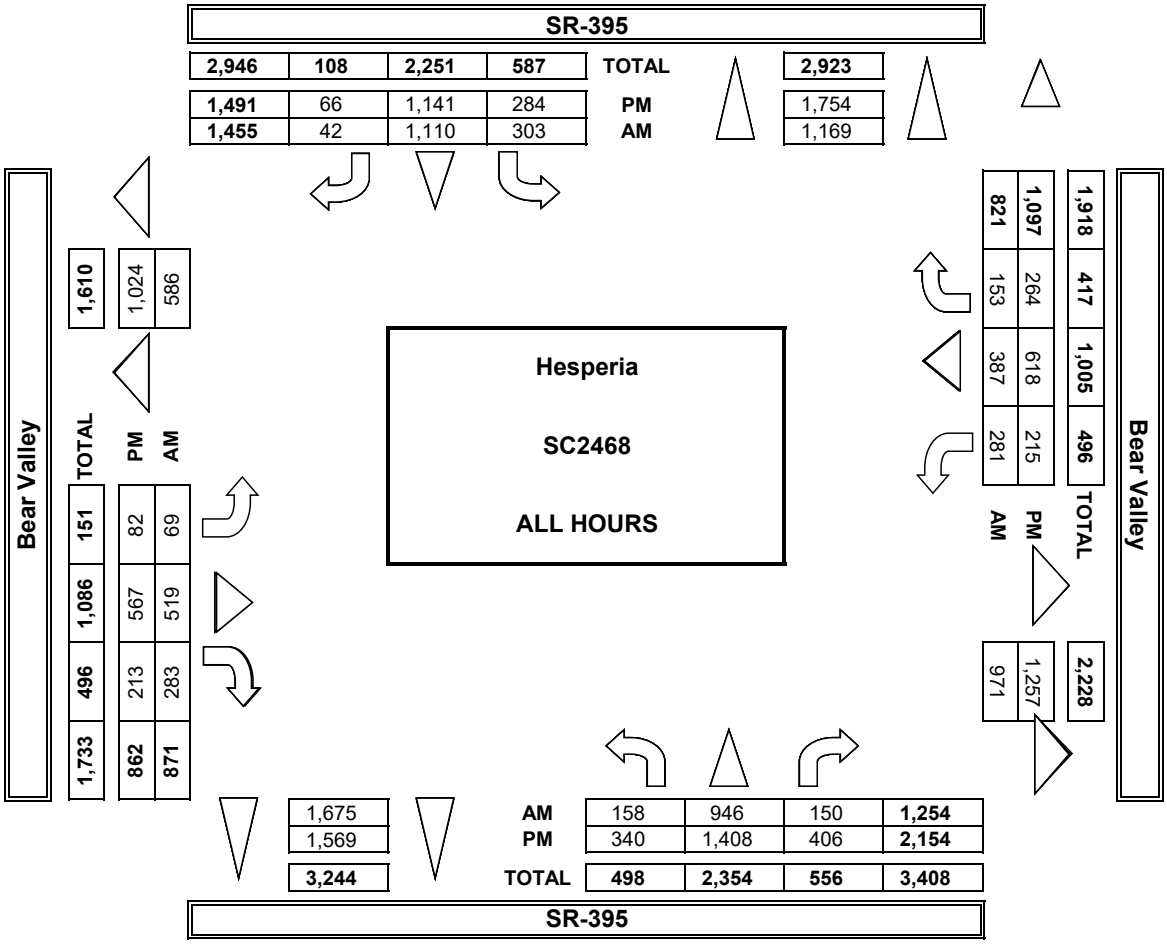
NRR	SRR	ERR	WRR
0	0	0	0
9	1	20	7
10	1	20	12
8	3	22	7
7	1	15	11
1	1	22	3
6	2	14	13
6	0	21	6
1	0	10	12
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
48	9	144	71
26	6	79	33
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
13	4	22	18
12	3	25	16
17	3	16	17
16	2	15	15
12	4	12	18
13	3	22	16
13	3	14	19
10	2	10	19
106	24	136	138
58	12	78	66

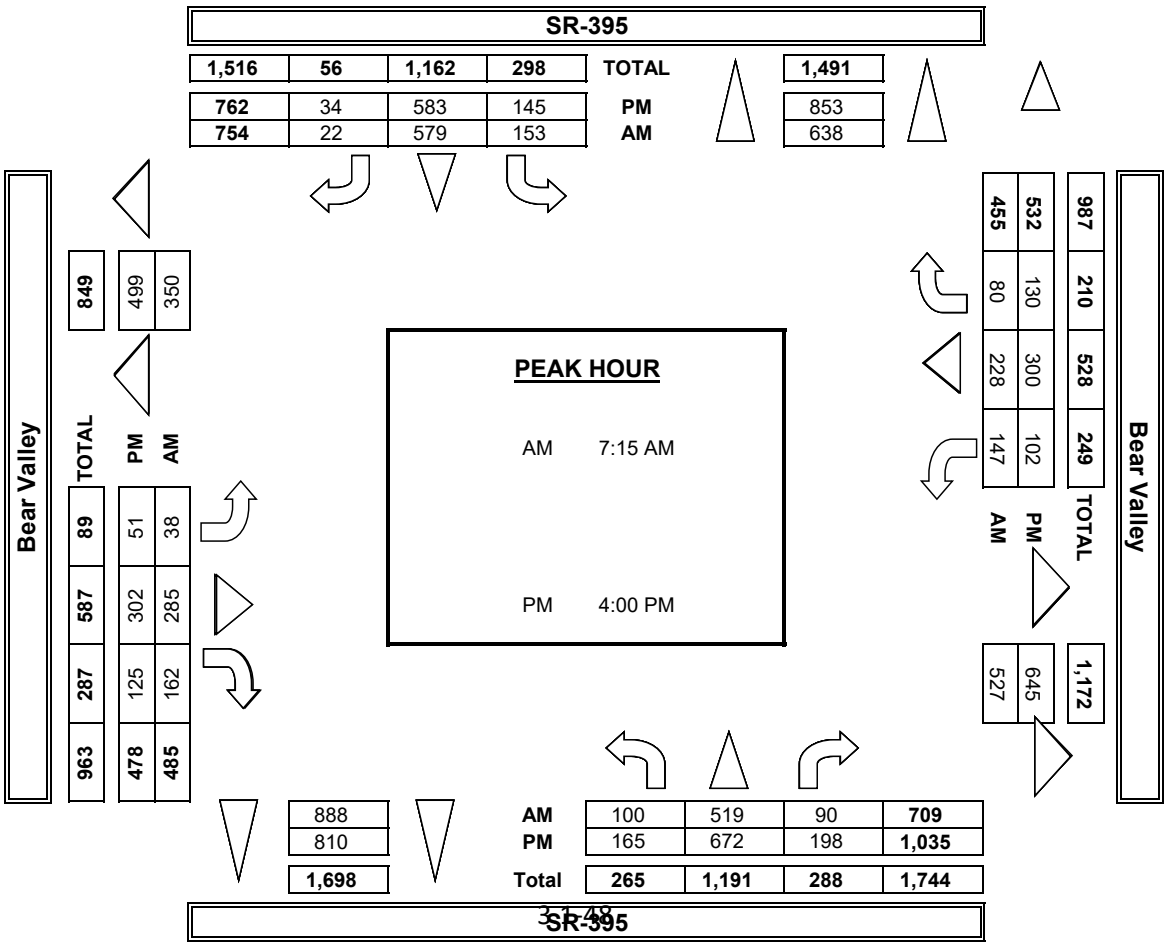


		ALL PED AND BIKE					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS				
		E SIDE	W SIDE	S SIDE	N SIDE	TOTAL	E SIDE	W SIDE	S SIDE	N SIDE	TOTAL	ES	WS	SS	NS	TOTAL
AM	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	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
PM	3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	1	0	2	3	0	1	0	2	3	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	1	0	2	3	0	1	0	2	3	0	0	0	0	0

AimTD LLC

TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: 1/7/20 TUESDAY	LOCATION:	Hesperia	PROJECT #:	SC2468
	NORTH & SOUTH:	SR-395	LOCATION #:	9
	EAST & WEST:	Bear Valley	CONTROL:	SIGNAL

CLASS 1: PASSENGER VEHICLES

NOTES:

AM PM MD OTHER OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND SR-395			SOUTHBOUND SR-395			EASTBOUND Bear Valley			WESTBOUND Bear Valley			
	LANES:	NL 1	NT 2	NR 0	SL 1	ST 2	SR 0	EL 1	ET 2	ER 0	WL 1	WT 2	WR 1	TOTAL
AM	7:00 AM	16	102	19	32	141	5	7	55	39	40	28	11	495
	7:15 AM	33	112	29	35	128	3	6	56	33	34	49	22	540
	7:30 AM	27	116	21	30	109	6	10	61	35	41	77	17	550
	7:45 AM	23	110	17	44	117	8	10	88	36	27	49	19	548
	8:00 AM	10	81	17	37	130	5	10	63	50	38	36	13	490
	8:15 AM	8	72	14	25	107	7	8	56	28	33	45	18	421
	8:30 AM	14	89	12	40	87	4	9	51	29	26	37	18	416
	8:45 AM	13	76	10	47	114	2	6	63	22	31	33	14	431
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	144	758	139	290	933	40	66	493	272	270	354	132	3,891
	APPROACH %	14%	73%	13%	23%	74%	3%	8%	59%	33%	36%	47%	17%	
	APP/DEPART	1,041	/	957	1,263	/	1,476	831	/	921	756	/	537	0
	BEGIN PEAK HR		7:00 AM											
	VOLUMES	99	440	86	140	495	22	33	260	143	142	203	69	2,133
	APPROACH %	16%	70%	14%	21%	75%	3%	8%	60%	33%	34%	49%	17%	
	PEAK HR FACTOR		0.898			0.924			0.813			0.767		0.970
	APP/DEPART	625	/	543	658	/	780	436	/	486	414	/	324	0
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	30	153	51	26	132	8	15	77	39	30	76	35	672
	4:15 PM	40	132	56	44	134	7	11	81	38	20	73	27	663
	4:30 PM	42	151	40	38	121	12	10	55	17	20	71	36	613
	4:45 PM	45	163	46	33	102	5	11	73	21	28	71	32	630
	5:00 PM	48	160	41	38	105	9	10	57	21	24	95	28	636
	5:15 PM	30	160	53	29	130	7	6	55	26	29	80	35	640
	5:30 PM	52	161	42	37	105	9	10	73	22	33	68	30	642
	5:45 PM	39	189	61	32	111	7	4	70	17	23	63	39	655
	VOLUMES	326	1,269	390	277	940	64	77	541	201	207	597	262	5,151
	APPROACH %	16%	64%	20%	22%	73%	5%	9%	66%	25%	19%	56%	25%	
	APP/DEPART	1,985	/	1,608	1,281	/	1,348	819	/	1,208	1,066	/	987	0
	BEGIN PEAK HR		4:00 PM											
	VOLUMES	157	599	193	141	489	32	47	286	115	98	291	130	2,578
	APPROACH %	17%	63%	20%	21%	74%	5%	10%	64%	26%	19%	56%	25%	
	PEAK HR FACTOR		0.934			0.895			0.855			0.920		0.959
	APP/DEPART	949	/	776	662	/	702	448	/	620	519	/	480	0

U-TURNS

NB	SB	EB	WB	TTL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	1	0	0	1
0	0	0	0	0
1	0	0	0	1
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
1	1	0	0	2
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

RTOR

NRR 0	SRR 0	ERR 0	WRR 0
9	1	19	7
10	1	18	10
8	3	21	7
7	1	14	11
1	1	22	3
6	1	13	11
6	0	21	5
1	0	10	10
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
48	8	138	64
34	6	72	35
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
12	4	21	18
12	3	22	16
17	3	13	17
16	2	15	15
11	4	12	18
12	3	21	15
11	3	14	19
10	2	9	19
101	24	127	137
57	12	71	66

SR-395
NORTH SIDE

Bear Valley WEST SIDE EAST SIDE **Bear Valley**

SOUTH SIDE
SR-395

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Hesperia	PROJECT #:	SC2468
1/7/20	NORTH & SOUTH:	SR-395	LOCATION #:	9
TUESDAY	EAST & WEST:	Bear Valley	CONTROL:	SIGNAL

CLASS 2: 2-AXLE WORK VEHICLES/ TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND SR-395			SOUTHBOUND SR-395			EASTBOUND Bear Valley			WESTBOUND Bear Valley			
	LANES:	NL 1	NT 2	NR 0	SL 1	ST 2	SR 0	EL 1	ET 2	ER 0	WL 1	WT 2	WR 1	TOTAL
AM	7:00 AM	2	8	2	0	4	0	1	0	1	0	1	1	20
	7:15 AM	2	8	3	0	6	0	0	1	2	2	4	1	29
	7:30 AM	0	3	1	1	2	0	1	4	3	2	2	1	20
	7:45 AM	2	4	1	1	6	0	0	2	1	1	2	1	21
	8:00 AM	2	8	0	1	4	0	0	1	0	0	1	0	17
	8:15 AM	0	2	0	2	3	1	0	1	1	0	4	2	16
	8:30 AM	1	1	0	0	2	0	0	2	0	0	0	0	6
	8:45 AM	0	12	3	1	5	0	0	2	0	1	0	2	26
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	9	46	10	6	32	1	2	13	8	6	14	8	155
	APPROACH %	14%	71%	15%	15%	82%	3%	9%	57%	35%	21%	50%	29%	
	APP/DEPART	65	/	56	39	/	46	23	/	29	28	/	24	0
	BEGIN PEAK HR		7:00 AM											
	VOLUMES	6	23	7	2	18	0	2	7	7	5	9	4	90
	APPROACH %	17%	64%	19%	10%	90%	0%	13%	44%	44%	28%	50%	22%	
	PEAK HR FACTOR		0.692			0.714			0.500			0.643		0.776
	APP/DEPART	36	/	29	20	/	30	16	/	16	18	/	15	0
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	2	4	2	2	7	0	0	0	1	1	1	0	20
	4:15 PM	1	3	0	0	5	0	0	3	3	2	2	0	19
	4:30 PM	0	5	2	0	4	1	1	3	2	0	1	0	19
	4:45 PM	0	5	0	0	1	0	2	4	0	0	2	0	14
	5:00 PM	0	3	4	1	5	0	0	1	0	1	2	0	17
	5:15 PM	0	6	3	0	4	0	0	2	0	0	1	1	17
	5:30 PM	1	8	4	0	3	0	0	1	0	0	2	0	19
	5:45 PM	4	4	0	0	6	0	0	5	1	0	4	0	24
	VOLUMES	8	38	15	3	35	1	3	19	7	4	15	1	149
	APPROACH %	13%	62%	25%	8%	90%	3%	10%	66%	24%	20%	75%	5%	
	APP/DEPART	61	/	42	39	/	46	29	/	37	20	/	24	0
	BEGIN PEAK HR		5:00 PM											
	VOLUMES	5	21	11	1	18	0	0	9	1	1	9	1	77
	APPROACH %	14%	57%	30%	5%	95%	0%	0%	90%	10%	9%	82%	9%	
	PEAK HR FACTOR		0.712			0.792			0.417			0.688		0.802
	APP/DEPART	37	/	22	19	/	20	10	/	21	11	/	14	0

U-TURNS

NB	SB	EB	WB	TTL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Hesperia	PROJECT #:	SC2468
1/7/20	NORTH & SOUTH:	SR-395	LOCATION #:	9
TUESDAY	EAST & WEST:	Bear Valley	CONTROL:	SIGNAL

CLASS 3: 3-AXLE TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND SR-395			SOUTHBOUND SR-395			EASTBOUND Bear Valley			WESTBOUND Bear Valley			
	LANES:	NL 1	NT 2	NR 0	SL 1	ST 2	SR 0	EL 1	ET 2	ER 0	WL 1	WT 2	WR 1	TOTAL
AM	7:00 AM	0	1	0	0	2	0	0	2	0	0	1	0	6
	7:15 AM	0	2	0	0	1	0	0	0	0	0	1	0	4
	7:30 AM	0	2	0	0	1	0	0	2	0	0	0	1	6
	7:45 AM	0	0	0	0	3	0	0	0	0	0	0	0	3
	8:00 AM	0	1	0	0	3	0	0	1	0	0	0	0	5
	8:15 AM	0	1	0	0	3	0	0	1	0	0	0	0	5
	8:30 AM	0	4	0	0	4	0	0	0	0	1	0	2	11
	8:45 AM	0	0	0	0	4	0	0	0	0	0	0	0	4
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	11	0	0	21	0	0	6	0	1	2	3	44
	APPROACH %	0%	100%	0%	0%	100%	0%	0%	100%	0%	17%	33%	50%	
	APP/DEPART	11	/	14	21	/	22	6	/	6	6	/	2	0
	BEGIN PEAK HR		8:00 AM											
	VOLUMES	0	6	0	0	14	0	0	2	0	1	0	2	25
	APPROACH %	0%	100%	0%	0%	100%	0%	0%	100%	0%	33%	0%	67%	
	PEAK HR FACTOR		0.375			0.875			0.500			0.250		0.568
	APP/DEPART	6	/	8	14	/	15	2	/	2	3	/	0	0
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	1	0	0	1	0	0	2	0	1	0	0	5
	4:15 PM	1	0	0	0	2	0	0	2	1	0	1	0	7
	4:30 PM	0	0	0	0	4	0	0	0	0	0	0	0	4
	4:45 PM	0	3	0	0	2	0	1	0	0	0	0	0	6
	5:00 PM	0	1	0	0	2	0	0	0	0	2	0	0	5
	5:15 PM	0	0	0	0	3	0	0	0	0	0	1	0	4
	5:30 PM	1	2	0	0	2	0	0	0	0	0	0	0	5
	5:45 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
	VOLUMES	2	7	0	0	17	0	1	4	1	3	2	0	37
	APPROACH %	22%	78%	0%	0%	100%	0%	17%	67%	17%	60%	40%	0%	
	APP/DEPART	9	/	8	17	/	21	6	/	4	5	/	4	0
	BEGIN PEAK HR		4:00 PM											
	VOLUMES	1	4	0	0	10	0	1	2	1	2	1	0	22
	APPROACH %	20%	80%	0%	0%	100%	0%	25%	50%	25%	67%	33%	0%	
	PEAK HR FACTOR		0.417			0.625			0.333			0.375		0.786
	APP/DEPART	5	/	5	10	/	13	4	/	2	3	/	2	0

U-TURNS

NB	SB	EB	WB	TTL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Hesperia	PROJECT #:	SC2468
1/7/20	NORTH & SOUTH:	SR-395	LOCATION #:	9
TUESDAY	EAST & WEST:	Bear Valley	CONTROL:	SIGNAL

CLASS 4: 4 OR MORE AXLE TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N ◄ W E ► S ▼

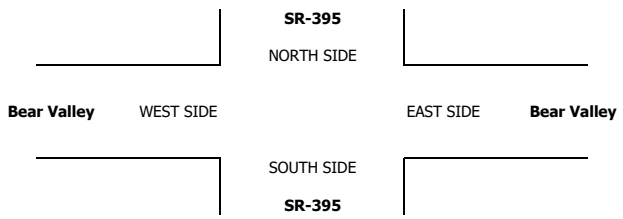
		NORTHBOUND SR-395			SOUTHBOUND SR-395			EASTBOUND Bear Valley			WESTBOUND Bear Valley			
	LANES:	NL 1	NT 2	NR 0	SL 1	ST 2	SR 0	EL 1	ET 2	ER 0	WL 1	WT 2	WR 1	TOTAL
AM	7:00 AM	1	7	0	0	11	0	0	0	0	1	1	0	21
	7:15 AM	0	19	0	1	16	0	0	2	0	0	1	1	40
	7:30 AM	0	12	0	1	19	0	0	0	0	0	2	2	36
	7:45 AM	1	19	1	2	16	0	0	0	0	0	1	1	41
	8:00 AM	0	19	0	0	18	0	1	1	0	0	2	1	42
	8:15 AM	0	14	0	1	15	0	0	1	0	0	3	1	35
	8:30 AM	0	15	0	2	11	0	0	0	0	0	2	1	31
	8:45 AM	2	21	0	0	15	0	0	0	0	1	2	2	43
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	4	126	1	7	121	0	1	4	0	2	14	9	289
	APPROACH %	3%	96%	1%	5%	95%	0%	20%	80%	0%	8%	56%	36%	
	APP/DEPART	131	/	136	128	/	123	5	/	12	25	/	18	0
	BEGIN PEAK HR		7:15 AM											
	VOLUMES	1	69	1	4	69	0	1	3	0	0	6	5	159
	APPROACH %	1%	97%	1%	5%	95%	0%	25%	75%	0%	0%	55%	45%	
	PEAK HR FACTOR		0.845			0.913			0.500			0.688		0.946
	APP/DEPART	71	/	75	73	/	69	4	/	8	11	/	7	0
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	2	13	0	1	26	0	0	0	0	0	0	0	42
	4:15 PM	2	9	1	0	19	0	0	0	1	0	1	0	33
	4:30 PM	0	11	0	1	12	0	0	0	1	0	0	0	25
	4:45 PM	0	18	0	0	9	0	0	1	0	0	0	0	28
	5:00 PM	0	8	0	1	18	0	1	0	0	0	0	0	28
	5:15 PM	0	17	0	0	16	0	0	1	1	0	0	0	35
	5:30 PM	0	9	0	1	22	0	0	0	0	1	0	0	33
	5:45 PM	0	8	0	0	23	0	0	0	0	0	1	1	33
	VOLUMES	4	93	1	4	145	0	1	2	3	1	2	1	257
	APPROACH %	4%	95%	1%	3%	97%	0%	17%	33%	50%	25%	50%	25%	
	APP/DEPART	98	/	95	149	/	149	6	/	7	4	/	6	0
	BEGIN PEAK HR		5:00 PM											
	VOLUMES	0	42	0	2	79	0	1	1	1	1	1	1	129
	APPROACH %	0%	100%	0%	2%	98%	0%	33%	33%	33%	33%	33%	33%	
	PEAK HR FACTOR		0.618			0.880			0.375			0.375		0.921
	APP/DEPART	42	/	44	81	/	81	3	/	3	3	/	1	0

U-TURNS

NB	SB	EB	WB	TTL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

RTOR

NRR	SRR	ERR	WRR
0	0	0	0
0	0	0	1
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	1
0	0	0	1
0	0	0	1
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	4
0	0	0	1
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	1	0
0	0	3	0
0	0	1	0



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Hesperia	PROJECT #:	SC2468
1/7/20	NORTH & SOUTH:	SR-395	LOCATION #:	9
TUESDAY	EAST & WEST:	Bear Valley	CONTROL:	SIGNAL

CLASS 5: RV

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND SR-395			SOUTHBOUND SR-395			EASTBOUND Bear Valley			WESTBOUND Bear Valley			
	LANES:	NL 1	NT 2	NR 0	SL 1	ST 2	SR 0	EL 1	ET 2	ER 0	WL 1	WT 2	WR 1	TOTAL
AM	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:45 AM	0	1	0	0	0	0	0	0	0	0	0	0	1
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	1	0	0	0	0	0	0	0	0	0	0	1
	APPROACH %	0%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	APP/DEPART	1	/	1	0	/	0	0	/	0	0	/	0	0
	BEGIN PEAK HR		8:00 AM											
	VOLUMES	0	1	0	0	0	0	0	0	0	0	0	0	1
	APPROACH %	0%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	PEAK HR FACTOR		0.250			0.000			0.000			0.000		0.250
	APP/DEPART	1	/	1	0	/	0	0	/	0	0	/	0	0
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	1	0	0	0	0	0	0	0	1
	APPROACH %	0%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	
	APP/DEPART	0	/	0	1	/	1	0	/	0	0	/	0	0
	BEGIN PEAK HR		4:30 PM											
	VOLUMES	0	0	0	0	1	0	0	0	0	0	0	0	1
	APPROACH %	0%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	
	PEAK HR FACTOR		0.000			0.250			0.000			0.000		0.250
	APP/DEPART	0	/	0	1	/	1	0	/	0	0	/	0	0

U-TURNS

NB	SB	EB	WB	TTL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

RTOR

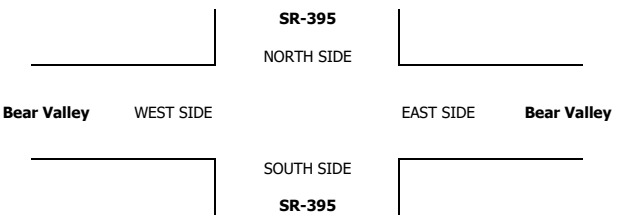
NRR	SRR	ERR	WRR
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0

NRR	SRR	ERR	WRR
0	0	0	0

NB	SB	EB	WB	TTL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

NRR	SRR	ERR	WRR
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0

NRR	SRR	ERR	WRR
0	0	0	0



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Hesperia	PROJECT #:	SC2468
1/7/20	NORTH & SOUTH:	SR-395	LOCATION #:	9
TUESDAY	EAST & WEST:	Bear Valley	CONTROL:	SIGNAL

CLASS 6:	NOTES:
BUSES	

AM / PM / MD / OTHER / OTHER — ▲ N ◄ W E ► S ▼

		NORTHBOUND SR-395			SOUTHBOUND SR-395			EASTBOUND Bear Valley			WESTBOUND Bear Valley				U-TURNS					RTOR			
	LANES:	NL 1	NT 2	NR 0	SL 1	ST 2	SR 0	EL 1	ET 2	ER 0	WL 1	WT 2	WR 1	TOTAL	NB	SB	EB	WB	TTL	NRR 0	SRR 0	ERR 0	WRR 0
AM	7:00 AM	0	0	0	0	1	0	0	0	1	0	1	1	4	0	0	0	0	0	0	0	0	0
	7:15 AM	0	2	0	0	0	0	0	0	1	0	0	0	3	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	2	1	0	1	0	4	0	0	0	0	0	0	0	0	0
	8:00 AM	0	1	0	0	0	0	0	0	0	2	0	0	3	0	0	0	0	0	0	0	0	0
	8:15 AM	0	0	0	0	1	0	0	0	0	0	1	0	2	0	0	0	0	0	0	0	0	0
	8:30 AM	0	1	0	0	1	1	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0
	8:45 AM	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	1	4	0	0	3	1	0	3	3	2	3	1	21	0	0	0	0	0	0	0	0	0
	APPROACH %	20%	80%	0%	0%	75%	25%	0%	50%	50%	33%	50%	17%										
	APP/DEPART	5	/	5	4	/	8	6	/	3	6	/	5	0									
	BEGIN PEAK HR		7:00 AM																				
	VOLUMES	0	2	0	0	1	0	0	3	3	0	2	1	12						0	0	0	0
	APPROACH %	0%	100%	0%	0%	100%	0%	0%	50%	50%	0%	67%	33%										
	PEAK HR FACTOR		0.250			0.250			0.500			0.375		0.750									
	APP/DEPART	2	/	3	1	/	4	6	/	3	3	/	2	0									
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	1	1	0	1	0	3	0	0	0	0	0	0	0	0	0
	4:15 PM	0	1	0	0	1	1	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	1	0	0	3	1	0	1	1	0	2	0	9	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	100%	0%	0%	75%	25%	0%	50%	50%	0%	100%	0%										
	APP/DEPART	1	/	1	4	/	4	2	/	1	2	/	3	0									
	BEGIN PEAK HR		4:00 PM																				
	VOLUMES	0	1	0	0	2	1	0	1	1	0	1	0	7						0	0	0	0
	APPROACH %	0%	100%	0%	0%	67%	33%	0%	50%	50%	0%	100%	0%										
	PEAK HR FACTOR		0.250			0.375			0.250			0.250		0.583									
	APP/DEPART	1	/	1	3	/	3	2	/	1	1	/	2	0									

SR-395

NORTH SIDE

Bear Valley WEST SIDE EAST SIDE **Bear Valley**

SOUTH SIDE

SR-395

INTERSECTION TURNING MOVEMENT COUNTS

T1218

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Hesperia	PROJECT #:	SC2468
Tue, Jan 7, 20	NORTH & SOUTH:	SR-395	LOCATION #:	10
	EAST & WEST:	Eucalyptus	CONTROL:	SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

Add U-Turns to Left Turns

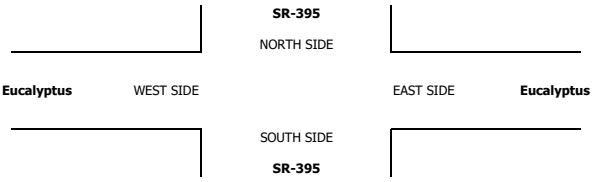
		NORTHBOUND (SR-395)			SOUTHBOUND (SR-395)			EASTBOUND (Eucalyptus)			WESTBOUND (Eucalyptus)			
	LANES:	NL 1	NT 2	NR 1	SL 1	ST 2	SR 1	EL 1	ET 0.5	ER 0.5	WL 1	WT 1	WR 0	TOTAL
AM	7:00 AM	2	141	18	0	245	0	1	2	1	26	0	3	439
	7:15 AM	2	199	20	0	231	1	2	0	3	12	1	4	475
	7:30 AM	1	178	18	3	202	0	1	0	4	14	0	3	424
	7:45 AM	1	158	9	1	226	4	2	0	1	18	0	5	425
	8:00 AM	2	138	10	0	244	3	4	5	4	26	5	4	445
	8:15 AM	1	111	6	1	195	0	0	0	2	14	0	3	333
	8:30 AM	0	136	7	2	162	0	0	1	3	15	2	2	330
	8:45 AM	1	134	4	0	200	3	1	1	0	10	0	1	355
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	10	1,195	92	7	1,705	11	11	9	18	135	8	25	3,226
	APPROACH %	1%	92%	7%	0%	99%	1%	29%	24%	47%	80%	5%	15%	
	APP/DEPART	1,297	/	1,231	1,723	/	1,859	38	/	108	168	/	28	0
	BEGIN PEAK HR		7:15 AM											
	VOLUMES	6	673	57	4	903	8	9	5	12	70	6	16	1,769
	APPROACH %	1%	91%	8%	0%	99%	1%	35%	19%	46%	76%	7%	17%	
	PEAK HR FACTOR		0.833			0.926			0.500			0.657		0.931
	APP/DEPART	736	/	698	915	/	985	26	/	66	92	/	20	0
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	1	243	28	3	217	6	4	2	1	7	2	4	518
	4:15 PM	1	233	22	2	193	3	1	1	1	16	0	3	476
	4:30 PM	5	276	13	1	194	1	1	1	4	17	1	4	518
	4:45 PM	2	283	18	4	155	2	1	0	1	9	0	2	477
	5:00 PM	4	252	23	2	178	2	1	0	0	7	0	3	472
	5:15 PM	1	269	21	3	189	2	0	0	1	15	1	2	504
	5:30 PM	1	296	18	5	185	2	2	0	1	12	0	3	525
	5:45 PM	2	272	22	1	174	4	2	0	1	9	1	1	489
	VOLUMES	17	2,124	165	21	1,485	22	12	4	10	92	5	22	3,979
	APPROACH %	1%	92%	7%	1%	97%	1%	46%	15%	38%	77%	4%	18%	
	APP/DEPART	2,306	/	2,158	1,528	/	1,588	26	/	190	119	/	43	0
	BEGIN PEAK HR		5:00 PM											
	VOLUMES	8	1,089	84	11	726	10	5	0	3	43	2	9	1,990
	APPROACH %	1%	92%	7%	1%	97%	1%	63%	0%	38%	80%	4%	17%	
	PEAK HR FACTOR		0.937			0.963			0.667			0.750		0.948
	APP/DEPART	1,181	/	1,103	747	/	773	8	/	95	54	/	19	0

U-TURNS

NB	SB	EB	WB	TTL
0	0	0	0	
1	0	0	0	1
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
1	0	0	0	1
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
1	0	0	0	1

RTOR

NRR	SRR	ERR	WRR
0	0	0	0
2	0	1	2
0	0	1	3
1	0	4	1
0	0	1	5
3	1	1	1
2	0	2	3
2	0	3	2
0	0	0	1
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
10	1	13	18
4	1	7	10
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
3	0	0	2
2	0	1	0
1	0	3	4
1	0	0	2
0	0	0	3
1	0	1	2
0	0	1	2
2	1	1	1
10	1	7	16
3	1	3	8



ALL PED AND BIKE

	E SIDE	W SIDE	S SIDE	N SIDE	TOTAL
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	1	1
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
9:00 AM	0	0	0	0	0
9:15 AM	0	0	0	0	0
9:30 AM	0	0	0	0	0
9:45 AM	0	0	0	0	0
TOTAL	0	0	0	1	1
3:00 PM	0	0	0	0	0
3:15 PM	0	0	0	0	0
3:30 PM	0	0	0	0	0
3:45 PM	0	0	0	0	0
4:00 PM	1	0	0	5	6
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
TOTAL	1	0	0	5	6

PEDESTRIAN CROSSINGS

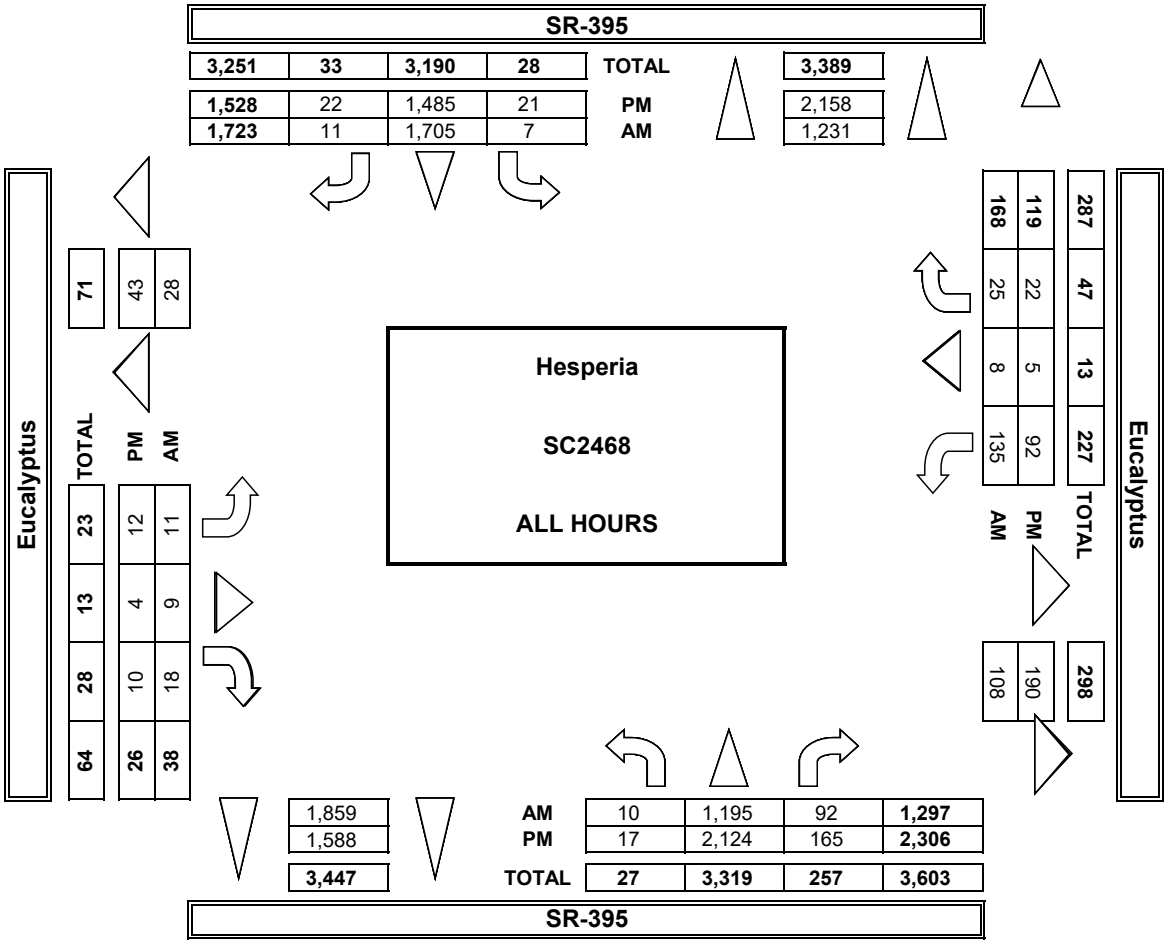
E SIDE	W SIDE	S SIDE	N SIDE	TOTAL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	1	1
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	1	1
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
1	0	0	5	6
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
1	0	0	5	6

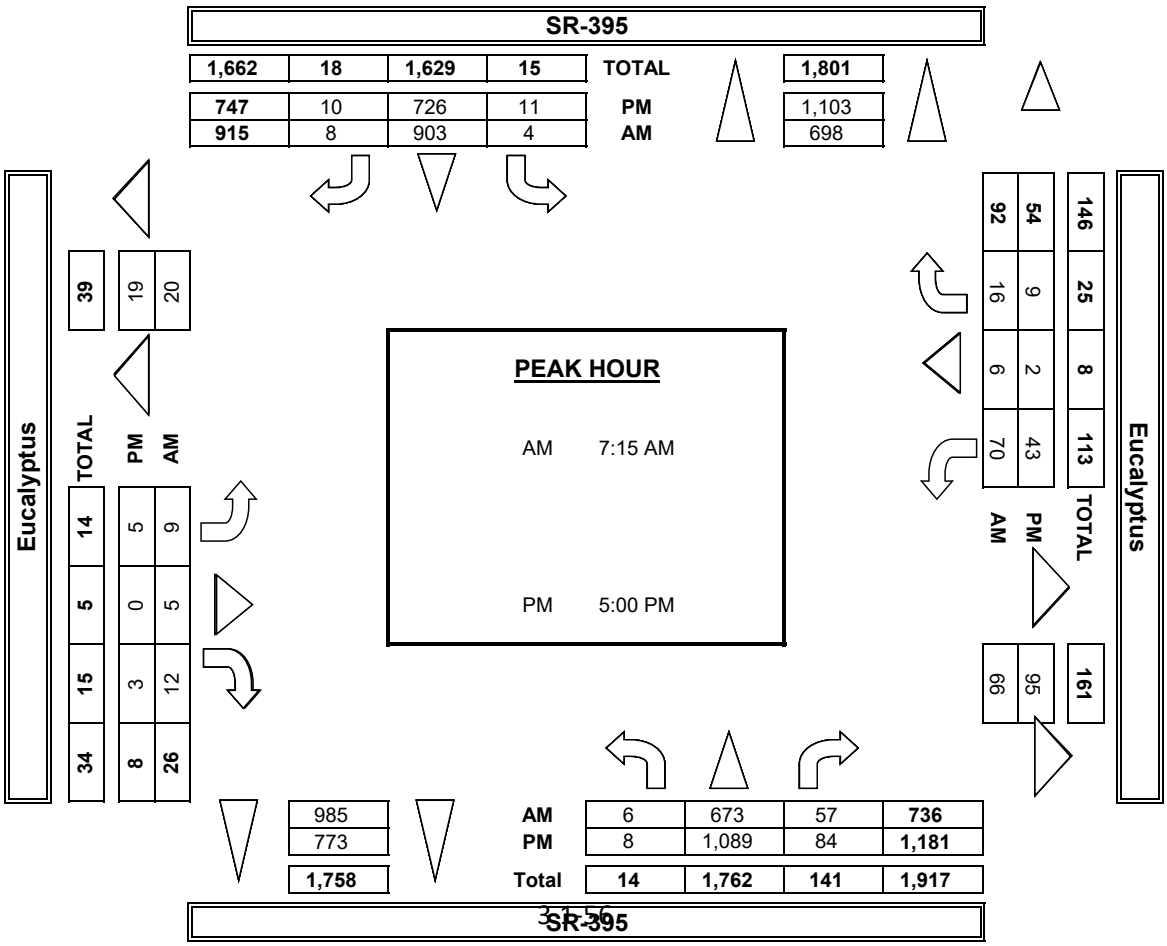
BICYCLE CROSSINGS

ES	WS	SS	NS	TOTAL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

AimTD LLC

TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Hesperia	PROJECT #:	SC2468
1/7/20	NORTH & SOUTH:	SR-395	LOCATION #:	10
TUESDAY	EAST & WEST:	Eucalyptus	CONTROL:	SIGNAL

CLASS 1: PASSENGER VEHICLES

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

	NORTHBOUND SR-395			SOUTHBOUND SR-395			EASTBOUND Eucalyptus			WESTBOUND Eucalyptus			
LANES:	NL 1	NT 2	NR 1	SL 1	ST 2	SR 1	EL 1	ET 0.5	ER 0.5	WL 1	WT 1	WR 0	TOTAL
7:00 AM	0	125	17	0	225	0	1	2	1	24	0	3	398
7:15 AM	1	166	20	0	203	1	2	0	2	11	1	2	409
7:30 AM	1	159	18	3	179	0	1	0	4	12	0	3	380
7:45 AM	1	134	9	1	190	4	2	0	1	18	0	5	365
8:00 AM	1	108	9	0	216	2	4	5	3	25	5	2	380
8:15 AM	1	93	5	0	177	0	0	0	2	13	0	3	294
8:30 AM	0	115	7	2	142	0	0	0	3	14	2	2	287
8:45 AM	1	99	3	0	173	3	1	1	0	10	0	1	292
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	6	999	88	6	1,505	10	11	8	16	127	8	21	2,805
APPROACH %	1%	91%	8%	0%	99%	1%	31%	23%	46%	81%	5%	13%	
APP/DEPART	1,093	/	1,031	1,521	/	1,648	35	/	102	156	/	24	0
BEGIN PEAK HR		7:00 AM											
VOLUMES	3	584	64	4	797	5	6	2	8	65	1	13	1,552
APPROACH %	0%	90%	10%	0%	99%	1%	38%	13%	50%	82%	1%	16%	
PEAK HR FACTOR		0.870			0.896			0.800			0.731		0.949
APP/DEPART	651	/	603	806	/	870	16	/	70	79	/	9	0
03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	1	221	27	3	182	5	4	2	0	7	2	4	458
4:15 PM	1	217	22	2	161	2	1	1	1	15	0	3	426
4:30 PM	5	255	10	1	172	1	1	0	3	17	1	4	470
4:45 PM	1	260	18	3	140	2	1	0	1	9	0	2	437
5:00 PM	3	235	23	2	148	2	1	0	0	5	0	3	422
5:15 PM	1	251	21	3	166	1	0	0	1	15	1	2	462
5:30 PM	1	272	17	5	153	2	1	0	1	12	0	3	467
5:45 PM	2	256	22	1	143	4	2	0	1	9	1	1	442
VOLUMES	15	1,967	160	20	1,265	19	11	3	8	89	5	22	3,584
APPROACH %	1%	92%	7%	2%	97%	1%	50%	14%	36%	77%	4%	19%	
APP/DEPART	2,142	/	2,000	1,304	/	1,363	22	/	183	116	/	38	0
BEGIN PEAK HR		5:00 PM											
VOLUMES	6	1,014	83	11	610	9	4	0	3	41	2	9	1,793
APPROACH %	1%	92%	8%	2%	97%	1%	57%	0%	43%	79%	4%	17%	
PEAK HR FACTOR		0.952			0.926			0.583			0.722		0.960
APP/DEPART	1,104	/	1,027	630	/	655	7	/	94	52	/	17	0

U-TURNS

NB	SB	EB	WB	TTL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Hesperia	PROJECT #:	SC2468
1/7/20	NORTH & SOUTH:	SR-395	LOCATION #:	10
TUESDAY	EAST & WEST:	Eucalyptus	CONTROL:	SIGNAL

CLASS 2: 2-AXLE WORK VEHICLES/ TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

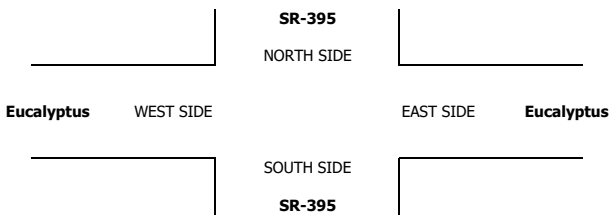
		NORTHBOUND SR-395			SOUTHBOUND SR-395			EASTBOUND Eucalyptus			WESTBOUND Eucalyptus			
	LANES:	NL 1	NT 2	NR 1	SL 1	ST 2	SR 1	EL 1	ET 0.5	ER 0.5	WL 1	WT 1	WR 0	TOTAL
AM	7:00 AM	2	6	1	0	7	0	0	0	0	1	0	0	17
	7:15 AM	0	12	0	0	10	0	0	0	0	1	0	1	24
	7:30 AM	0	3	0	0	6	0	0	0	0	0	0	0	9
	7:45 AM	0	5	0	0	11	0	0	0	0	0	0	0	16
	8:00 AM	1	9	1	0	6	0	0	0	0	0	0	2	19
	8:15 AM	0	2	0	0	4	0	0	0	0	1	0	0	7
	8:30 AM	0	1	0	0	3	0	0	1	0	0	0	0	5
	8:45 AM	0	12	1	0	6	0	0	0	0	0	0	0	19
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	3	50	3	0	53	0	0	1	0	3	0	3	116
	APPROACH %	5%	89%	5%	0%	100%	0%	0%	100%	0%	50%	0%	50%	
	APP/DEPART	56	/	53	53	/	57	1	/	4	6	/	2	0
	BEGIN PEAK HR		7:15 AM											
	VOLUMES	1	29	1	0	33	0	0	0	0	1	0	3	68
	APPROACH %	3%	94%	3%	0%	100%	0%	0%	0%	0%	25%	0%	75%	
	PEAK HR FACTOR		0.646			0.750			0.000			0.500		0.708
	APP/DEPART	31	/	32	33	/	34	0	/	1	4	/	1	0
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	7	1	0	7	0	0	0	0	0	0	0	15
	4:15 PM	0	3	0	0	9	1	0	0	0	1	0	0	14
	4:30 PM	0	5	2	0	6	0	0	1	1	0	0	0	15
	4:45 PM	1	6	0	0	4	0	0	0	0	0	0	0	11
	5:00 PM	1	6	0	0	6	0	0	0	0	2	0	0	15
	5:15 PM	0	3	0	0	5	0	0	0	0	0	0	0	8
	5:30 PM	0	12	0	0	3	0	1	0	0	0	0	0	16
	5:45 PM	0	9	0	0	7	0	0	0	0	0	0	0	16
	VOLUMES	2	51	3	0	47	1	1	1	1	3	0	0	110
	APPROACH %	4%	91%	5%	0%	98%	2%	33%	33%	33%	100%	0%	0%	
	APP/DEPART	56	/	52	48	/	51	3	/	4	3	/	3	0
	BEGIN PEAK HR		4:00 PM											
	VOLUMES	1	30	0	0	21	0	1	0	0	2	0	0	55
	APPROACH %	3%	97%	0%	0%	100%	0%	100%	0%	0%	100%	0%	0%	
	PEAK HR FACTOR		0.646			0.525			0.125			0.250		0.859
	APP/DEPART	31	/	31	21	/	23	1	/	0	2	/	1	0

U-TURNS

NB	SB	EB	WB	TTL
1	0	0	0	1
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
1	0	0	0	1
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
1	0	1	0	2
0	0	0	0	0

RTOR

NRR	SRR	ERR	WRR
0	0	0	0
0	0	0	1
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	1
0	0	0	1
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
1	0	1	0
0	0	0	0



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Hesperia	PROJECT #:	SC2468
1/7/20	NORTH & SOUTH:	SR-395	LOCATION #:	10
TUESDAY	EAST & WEST:	Eucalyptus	CONTROL:	SIGNAL

CLASS 3: 3-AXLE TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND SR-395			SOUTHBOUND SR-395			EASTBOUND Eucalyptus			WESTBOUND Eucalyptus			
	LANES:	NL 1	NT 2	NR 1	SL 1	ST 2	SR 1	EL 1	ET 0.5	ER 0.5	WL 1	WT 1	WR 0	TOTAL
AM	7:00 AM	0	1	0	0	1	0	0	0	0	1	0	0	3
	7:15 AM	0	2	0	0	2	0	0	0	0	0	0	0	4
	7:30 AM	0	2	0	0	1	0	0	0	0	1	0	0	4
	7:45 AM	0	0	0	0	4	0	0	0	0	0	0	0	4
	8:00 AM	0	2	0	0	3	0	0	0	0	1	0	0	6
	8:15 AM	0	1	1	1	1	0	0	0	0	0	0	0	4
	8:30 AM	0	4	0	0	3	0	0	0	0	1	0	0	8
	8:45 AM	0	2	0	0	4	0	0	0	0	0	0	0	6
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	14	1	1	19	0	0	0	0	4	0	0	39
	APPROACH %	0%	93%	7%	5%	95%	0%	0%	0%	0%	100%	0%	0%	
	APP/DEPART	15	/	14	20	/	23	0	/	2	4	/	0	0
	BEGIN PEAK HR		8:00 AM											
	VOLUMES	0	9	1	1	11	0	0	0	0	2	0	0	24
	APPROACH %	0%	90%	10%	8%	92%	0%	0%	0%	0%	100%	0%	0%	
	PEAK HR FACTOR		0.625			0.750			0.000			0.500		0.750
	APP/DEPART	10	/	9	12	/	13	0	/	2	2	/	0	0
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	2	0	0	2	0	0	0	0	0	0	0	4
	4:15 PM	0	1	0	0	3	0	0	0	0	0	0	0	4
	4:30 PM	0	1	0	0	2	0	0	0	0	0	0	0	3
	4:45 PM	0	3	0	0	4	0	0	0	0	0	0	0	7
	5:00 PM	0	0	0	0	4	0	0	0	0	0	0	0	4
	5:15 PM	0	0	0	0	3	1	0	0	0	0	0	0	4
	5:30 PM	0	4	1	0	4	0	0	0	0	0	0	0	9
	5:45 PM	0	1	0	0	2	0	0	0	0	0	0	0	3
	VOLUMES	0	12	1	0	24	1	0	0	0	0	0	0	38
	APPROACH %	0%	92%	8%	0%	96%	4%	0%	0%	0%	0%	0%	0%	
	APP/DEPART	13	/	12	25	/	24	0	/	1	0	/	1	0
	BEGIN PEAK HR		4:45 PM											
	VOLUMES	0	7	1	0	15	1	0	0	0	0	0	0	24
	APPROACH %	0%	88%	13%	0%	94%	6%	0%	0%	0%	0%	0%	0%	
	PEAK HR FACTOR		0.400			1.000			0.000			0.000		0.667
	APP/DEPART	8	/	7	16	/	15	0	/	1	0	/	1	0

U-TURNS

NB	SB	EB	WB	TTL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

RTOR

NRR	SRR	ERR	WRR
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0

SR-395

NORTH SIDE

Eucalyptus WEST SIDE EAST SIDE **Eucalyptus**

SOUTH SIDE

SR-395

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Hesperia	PROJECT #:	SC2468
1/7/20	NORTH & SOUTH:	SR-395	LOCATION #:	10
TUESDAY	EAST & WEST:	Eucalyptus	CONTROL:	SIGNAL

CLASS 4: 4 OR MORE AXLE TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N ◄ W E ► S ▼

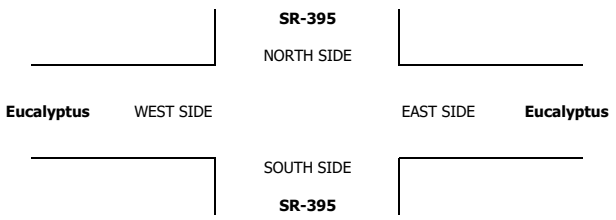
	NORTHBOUND SR-395			SOUTHBOUND SR-395			EASTBOUND Eucalyptus			WESTBOUND Eucalyptus			
LANES:	NL 1	NT 2	NR 1	SL 1	ST 2	SR 1	EL 1	ET 0.5	ER 0.5	WL 1	WT 1	WR 0	TOTAL
7:00 AM	0	8	0	0	12	0	0	0	0	0	0	0	20
7:15 AM	0	18	0	0	14	0	0	0	0	0	0	1	33
7:30 AM	0	14	0	0	16	0	0	0	0	1	0	0	31
7:45 AM	0	19	0	0	21	0	0	0	0	0	0	0	40
8:00 AM	0	19	0	0	17	0	0	0	0	0	0	0	36
8:15 AM	0	15	0	0	12	0	0	0	0	0	0	0	27
8:30 AM	0	15	0	0	14	0	0	0	0	0	0	0	29
8:45 AM	0	20	0	0	16	0	0	0	0	0	0	0	36
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	0	128	0	0	122	0	0	0	0	1	0	1	252
APPROACH %	0%	100%	0%	0%	100%	0%	0%	0%	0%	50%	0%	50%	
APP/DEPART	128	/	129	122	/	123	0	/	0	2	/	0	0
BEGIN PEAK HR		7:15 AM											
VOLUMES	0	70	0	0	68	0	0	0	0	1	0	1	140
APPROACH %	0%	100%	0%	0%	100%	0%	0%	0%	0%	50%	0%	50%	
PEAK HR FACTOR		0.921			0.810			0.000			0.500		0.875
APP/DEPART	70	/	71	68	/	69	0	/	0	2	/	0	0
03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	13	0	0	26	0	0	0	0	0	0	0	39
4:15 PM	0	11	0	0	19	0	0	0	0	0	0	0	30
4:30 PM	0	15	1	0	13	0	0	0	0	0	0	0	29
4:45 PM	0	14	0	1	7	0	0	0	0	0	0	0	22
5:00 PM	0	11	0	0	19	0	0	0	0	0	0	0	30
5:15 PM	0	15	0	0	14	0	0	0	0	0	0	0	29
5:30 PM	0	8	0	0	25	0	0	0	0	0	0	0	33
5:45 PM	0	6	0	0	22	0	0	0	0	0	0	0	28
VOLUMES	0	93	1	1	145	0	0	0	0	0	0	0	240
APPROACH %	0%	99%	1%	1%	99%	0%	0%	0%	0%	0%	0%	0%	
APP/DEPART	94	/	93	146	/	145	0	/	2	0	/	0	0
BEGIN PEAK HR		4:00 PM											
VOLUMES	0	40	0	0	80	0	0	0	0	0	0	0	120
APPROACH %	0%	100%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	
PEAK HR FACTOR		0.625			0.769			0.000			0.000		0.769
APP/DEPART	40	/	40	80	/	80	0	/	0	0	/	0	0

U-TURNS

NB	SB	EB	WB	TTL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

RTOR

NRR	SRR	ERR	WRR
0	0	0	0
0	0	0	1
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	1
0	0	0	1
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Hesperia	PROJECT #:	SC2468
1/7/20	NORTH & SOUTH:	SR-395	LOCATION #:	10
TUESDAY	EAST & WEST:	Eucalyptus	CONTROL:	SIGNAL

CLASS 5: RV

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

	NORTHBOUND SR-395			SOUTHBOUND SR-395			EASTBOUND Eucalyptus			WESTBOUND Eucalyptus			
LANES:	NL 1	NT 2	NR 1	SL 1	ST 2	SR 1	EL 1	ET 0.5	ER 0.5	WL 1	WT 1	WR 0	TOTAL
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
BEGIN PEAK HR		7:00 AM											
VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	0	0	0	0	1	0	0	0	0	0	0	0	1
APPROACH %	0%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	
APP/DEPART	0	/	0	1	/	1	0	/	0	0	/	0	0
BEGIN PEAK HR		4:30 PM											
VOLUMES	0	0	0	0	1	0	0	0	0	0	0	0	1
APPROACH %	0%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	
PEAK HR FACTOR		0.000			0.250			0.000			0.000		0.250
APP/DEPART	0	/	0	1	/	1	0	/	0	0	/	0	0

U-TURNS

NB	SB	EB	WB	TTL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

RTOR

NRR	SRR	ERR	WRR
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0

SR-395

NORTH SIDE

Eucalyptus WEST SIDE EAST SIDE **Eucalyptus**

SOUTH SIDE

SR-395

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Hesperia	PROJECT #:	SC2468
1/7/20	NORTH & SOUTH:	SR-395	LOCATION #:	10
TUESDAY	EAST & WEST:	Eucalyptus	CONTROL:	SIGNAL

CLASS 6:	NOTES:
BUSES	

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

	NORTHBOUND SR-395			SOUTHBOUND SR-395			EASTBOUND Eucalyptus			WESTBOUND Eucalyptus				U-TURNS					RTOR			
LANES:	NL 1	NT 2	NR 1	SL 1	ST 2	SR 1	EL 1	ET 0.5	ER 0.5	WL 1	WT 1	WR 0	TOTAL	NB	SB	EB	WB	TTL	NRR 0	SRR 0	ERR 0	WRR 0
AM 7:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
7:15 AM	1	1	0	0	2	0	0	0	1	0	0	0	5	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	2	1	0	0	1	0	0	0	4	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
8:30 AM	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
8:45 AM	0	1	0	0	1	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	1	4	0	0	6	1	0	0	2	0	0	0	14	0	0	0	0	0	0	0	0	0
APPROACH %	20%	80%	0%	0%	86%	14%	0%	0%	100%	0%	0%	0%										
APP/DEPART	5	/	4	7	/	8	2	/	0	0	/	2	0									
BEGIN PEAK HR		7:15 AM																				
VOLUMES	1	1	0	0	4	1	0	0	2	0	0	0	9						0	0	0	0
APPROACH %	50%	50%	0%	0%	80%	20%	0%	0%	100%	0%	0%	0%										
PEAK HR FACTOR		0.250			0.417			0.500			0.000		0.450									
APP/DEPART	2	/	1	5	/	6	2	/	0	0	/	2	0									
PM 03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	1	0	0	1	0	0	0	2	0	0	0	0	0	0	0	0	0
4:15 PM	0	1	0	0	1	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	0	1	0	0	3	1	0	0	1	0	0	0	6	0	0	0	0	0	0	0	0	0
APPROACH %	0%	100%	0%	0%	75%	25%	0%	0%	100%	0%	0%	0%										
APP/DEPART	1	/	1	4	/	4	1	/	0	0	/	1	0									
BEGIN PEAK HR		4:00 PM																				
VOLUMES	0	1	0	0	2	1	0	0	1	0	0	0	5						0	0	0	0
APPROACH %	0%	100%	0%	0%	67%	33%	0%	0%	100%	0%	0%	0%										
PEAK HR FACTOR		0.250			0.750			0.250			0.000		0.625									
APP/DEPART	1	/	1	3	/	3	1	/	0	0	/	1	0									

SR-395

NORTH SIDE

Eucalyptus WEST SIDE EAST SIDE **Eucalyptus**

SOUTH SIDE

SR-395

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Hesperia
N/S: US-395
E/W: Yucca Terrace Drive
Weather: Clear

File Name : 06_HES_US-395_Yucca Terrace AM
Site Code : 05119658
Start Date : 9/28/2019
Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

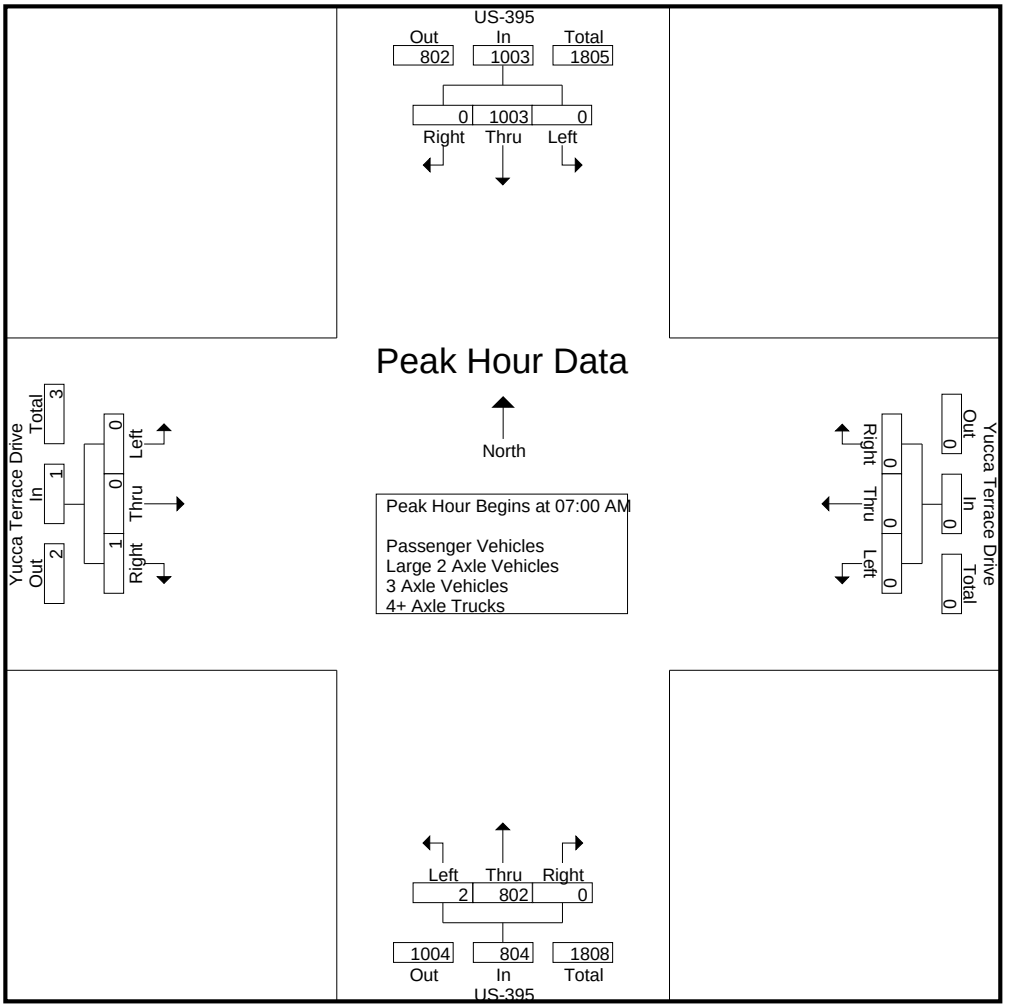
	US-395 Southbound				Yucca Terrace Drive Westbound				US-395 Northbound				Yucca Terrace Drive Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	287	0	287	0	0	0	0	0	213	0	213	0	0	0	0	500
07:15 AM	0	251	0	251	0	0	0	0	0	203	0	203	0	0	0	0	454
07:30 AM	0	226	0	226	0	0	0	0	1	233	0	234	0	0	0	0	460
07:45 AM	0	239	0	239	0	0	0	0	1	153	0	154	0	0	1	1	394
Total	0	1003	0	1003	0	0	0	0	2	802	0	804	0	0	1	1	1808
08:00 AM	0	217	0	217	0	0	0	0	0	136	0	136	0	0	0	0	353
08:15 AM	0	217	0	217	0	0	0	0	1	167	0	168	0	0	0	0	385
08:30 AM	0	220	0	220	0	0	0	0	0	174	0	174	0	0	1	1	395
08:45 AM	0	195	1	196	0	0	0	0	1	151	0	152	1	0	0	1	349
Total	0	849	1	850	0	0	0	0	2	628	0	630	1	0	1	2	1482
Grand Total	0	1852	1	1853	0	0	0	0	4	1430	0	1434	1	0	2	3	3290
Apprch %	0	99.9	0.1		0	0	0		0.3	99.7	0		33.3	0	66.7		
Total %	0	56.3	0	56.3	0	0	0	0	0.1	43.5	0	43.6	0	0	0.1	0.1	
Passenger Vehicles	0	1691	1	1692	0	0	0	0	3	1273	0	1276	1	0	2	3	2971
% Passenger Vehicles	0	91.3	100	91.3	0	0	0	0	75	89	0	89	100	0	100	100	90.3
Large 2 Axle Vehicles	0	35	0	35	0	0	0	0	1	55	0	56	0	0	0	0	91
% Large 2 Axle Vehicles	0	1.9	0	1.9	0	0	0	0	25	3.8	0	3.9	0	0	0	0	2.8
3 Axle Vehicles	0	10	0	10	0	0	0	0	0	9	0	9	0	0	0	0	19
% 3 Axle Vehicles	0	0.5	0	0.5	0	0	0	0	0	0.6	0	0.6	0	0	0	0	0.6
4+ Axle Trucks	0	116	0	116	0	0	0	0	0	93	0	93	0	0	0	0	209
% 4+ Axle Trucks	0	6.3	0	6.3	0	0	0	0	0	6.5	0	6.5	0	0	0	0	6.4

	US-395 Southbound				Yucca Terrace Drive Westbound				US-395 Northbound				Yucca Terrace 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 07:00 AM																	
07:00 AM	0	**287**	0	**287**	0	0	0	0	0	213	0	213	0	0	0	0	**500**
07:15 AM	0	251	0	251	0	0	0	0	0	203	0	203	0	0	0	0	454
07:30 AM	0	226	0	226	0	0	0	0	**1**	**233**	0	**234**	0	0	0	0	460
07:45 AM	0	239	0	239	0	0	0	0	1	153	0	154	0	0	**1**	**1**	394
Total Volume	0	1003	0	1003	0	0	0	0	2	802	0	804	0	0	1	1	1808
% App. Total	0	100	0		0	0	0		0.2	99.8	0		0	0	100		
PHF	.000	.874	.000	.874	.000	.000	.000	.000	.500	.861	.000	.859	.000	.000	.250	.250	.904

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Hesperia
N/S: US-395
E/W: Yucca Terrace Drive
Weather: Clear

File Name : 06_HES_US-395_Yucca Terrace AM
Site Code : 05119658
Start Date : 9/28/2019
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				07:00 AM				07:45 AM			
+0 mins.	0	**287**	0	**287**	0	0	0	0	0	213	0	213	0	0	**1**	**1**
+15 mins.	0	251	0	251	0	0	0	0	0	203	0	203	0	0	0	0
+30 mins.	0	226	0	226	0	0	0	0	**1**	**233**	0	**234**	0	0	0	0
+45 mins.	0	239	0	239	0	0	0	0	1	153	0	154	0	0	1	1
Total Volume	0	1003	0	1003	0	0	0	0	2	802	0	804	0	0	2	2
% App. Total	0	100	0		0	0	0		0.2	99.8	0		0	0	100	
PHF	.000	.874	.000	.874	.000	.000	.000	.000	.500	.861	.000	.859	.000	.000	.500	.500

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Hesperia
N/S: US-395
E/W: Yucca Terrace Drive
Weather: Clear

File Name : 06_HES_US-395_Yucca Terrace AM
Site Code : 05119658
Start Date : 9/28/2019
Page No : 1

Groups Printed- Passenger Vehicles

	US-395 Southbound				Yucca Terrace Drive Westbound				US-395 Northbound				Yucca Terrace 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	260	0	260	0	0	0	0	0	190	0	190	0	0	0	0	450
07:15 AM	0	233	0	233	0	0	0	0	0	180	0	180	0	0	0	0	413
07:30 AM	0	204	0	204	0	0	0	0	1	208	0	209	0	0	0	0	413
07:45 AM	0	216	0	216	0	0	0	0	0	136	0	136	0	0	1	1	353
Total	0	913	0	913	0	0	0	0	1	714	0	715	0	0	1	1	1629
08:00 AM	0	198	0	198	0	0	0	0	0	121	0	121	0	0	0	0	319
08:15 AM	0	217	0	217	0	0	0	0	1	167	0	168	0	0	0	0	385
08:30 AM	0	188	0	188	0	0	0	0	0	151	0	151	0	0	1	1	340
08:45 AM	0	175	1	176	0	0	0	0	1	120	0	121	1	0	0	1	298
Total	0	778	1	779	0	0	0	0	2	559	0	561	1	0	1	2	1342
Grand Total	0	1691	1	1692	0	0	0	0	3	1273	0	1276	1	0	2	3	2971
Apprch %	0	99.9	0.1		0	0	0		0.2	99.8	0		33.3	0	66.7		
Total %	0	56.9	0	57	0	0	0	0	0.1	42.8	0	42.9	0	0	0.1	0.1	

	US-395 Southbound				Yucca Terrace Drive Westbound				US-395 Northbound				Yucca Terrace 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 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	**260**	0	**260**	0	0	0	0	0	190	0	190	0	0	0	0	**450**
07:15 AM	0	233	0	233	0	0	0	0	0	180	0	180	0	0	0	0	413
07:30 AM	0	204	0	204	0	0	0	0	**1**	**208**	0	**209**	0	0	0	0	413
07:45 AM	0	216	0	216	0	0	0	0	0	136	0	136	0	0	**1**	**1**	353
Total Volume	0	913	0	913	0	0	0	0	1	714	0	715	0	0	1	1	1629
% App. Total	0	100	0		0	0	0		0.1	99.9	0		0	0	100		
PHF	.000	.878	.000	.878	.000	.000	.000	.000	.250	.858	.000	.855	.000	.000	.250	.250	.905

Counts Unlimited
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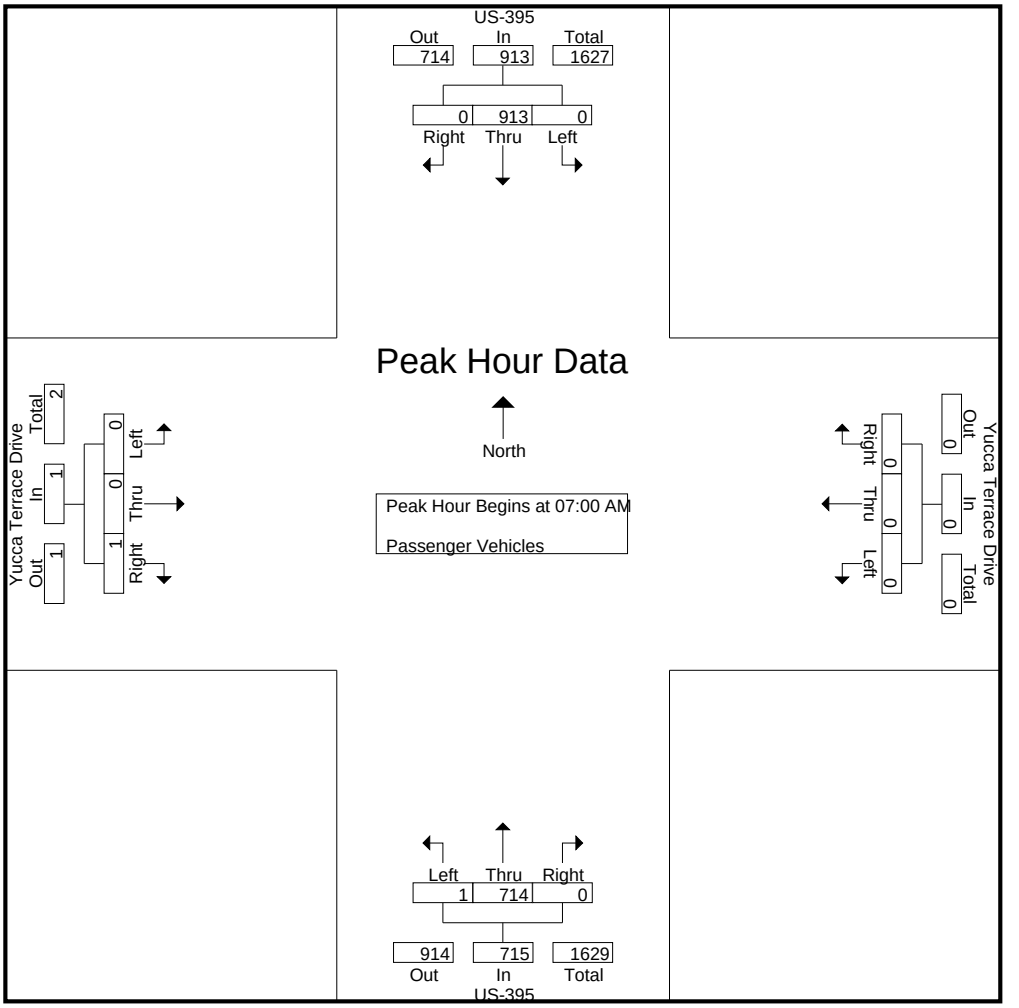
City of Hesperia
N/S: US-395
E/W: Yucca Terrace Drive
Weather: Clear

File Name : 06_HES_US-395_Yucca Terrace AM
Site Code : 05119658
Start Date : 9/28/2019
Page No : 2



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				07:00 AM			
+0 mins.	0	**260**	0	**260**	0	0	0	0	0	190	0	190	0	0	0	0
+15 mins.	0	233	0	233	0	0	0	0	0	180	0	180	0	0	0	0
+30 mins.	0	204	0	204	0	0	0	0	**1**	**208**	0	**209**	0	0	0	0
+45 mins.	0	216	0	216	0	0	0	0	0	136	0	136	0	0	**1**	**1**
Total Volume	0	913	0	913	0	0	0	0	1	714	0	715	0	0	1	1
% App. Total	0	100	0		0	0	0		0.1	99.9	0		0	0	100	
PHF	.000	.878	.000	.878	.000	.000	.000	.000	.250	.858	.000	.855	.000	.000	.250	.250

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City of Hesperia
N/S: US-395
E/W: Yucca Terrace Drive
Weather: Clear

File Name : 06_HES_US-395_Yucca Terrace AM
Site Code : 05119658
Start Date : 9/28/2019
Page No : 1

Groups Printed- Large 2 Axle Vehicles

	US-395 Southbound				Yucca Terrace Drive Westbound				US-395 Northbound				Yucca Terrace 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	6	0	6	0	0	0	0	0	6	0	6	0	0	0	0	12
07:15 AM	0	4	0	4	0	0	0	0	0	10	0	10	0	0	0	0	14
07:30 AM	0	4	0	4	0	0	0	0	0	7	0	7	0	0	0	0	11
07:45 AM	0	4	0	4	0	0	0	0	1	4	0	5	0	0	0	0	9
Total	0	18	0	18	0	0	0	0	1	27	0	28	0	0	0	0	46
08:00 AM	0	3	0	3	0	0	0	0	0	3	0	3	0	0	0	0	6
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	7	0	7	0	0	0	0	0	9	0	9	0	0	0	0	16
08:45 AM	0	7	0	7	0	0	0	0	0	16	0	16	0	0	0	0	23
Total	0	17	0	17	0	0	0	0	0	28	0	28	0	0	0	0	45
Grand Total	0	35	0	35	0	0	0	0	1	55	0	56	0	0	0	0	91
Apprch %	0	100	0		0	0	0		1.8	98.2	0		0	0	0		
Total %	0	38.5	0	38.5	0	0	0	0	1.1	60.4	0	61.5	0	0	0	0	

	US-395 Southbound				Yucca Terrace Drive Westbound				US-395 Northbound				Yucca Terrace 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 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	**6**	0	**6**	0	0	0	0	0	6	0	6	0	0	0	0	12
07:15 AM	0	4	0	4	0	0	0	0	0	**10**	0	**10**	0	0	0	0	**14**
07:30 AM	0	4	0	4	0	0	0	0	0	7	0	7	0	0	0	0	11
07:45 AM	0	4	0	4	0	0	0	0	**1**	4	0	5	0	0	0	0	9
Total Volume	0	18	0	18	0	0	0	0	1	27	0	28	0	0	0	0	46
% App. Total	0	100	0		0	0	0		3.6	96.4	0		0	0	0		
PHF	.000	.750	.000	.750	.000	.000	.000	.000	.250	.675	.000	.700	.000	.000	.000	.000	.821

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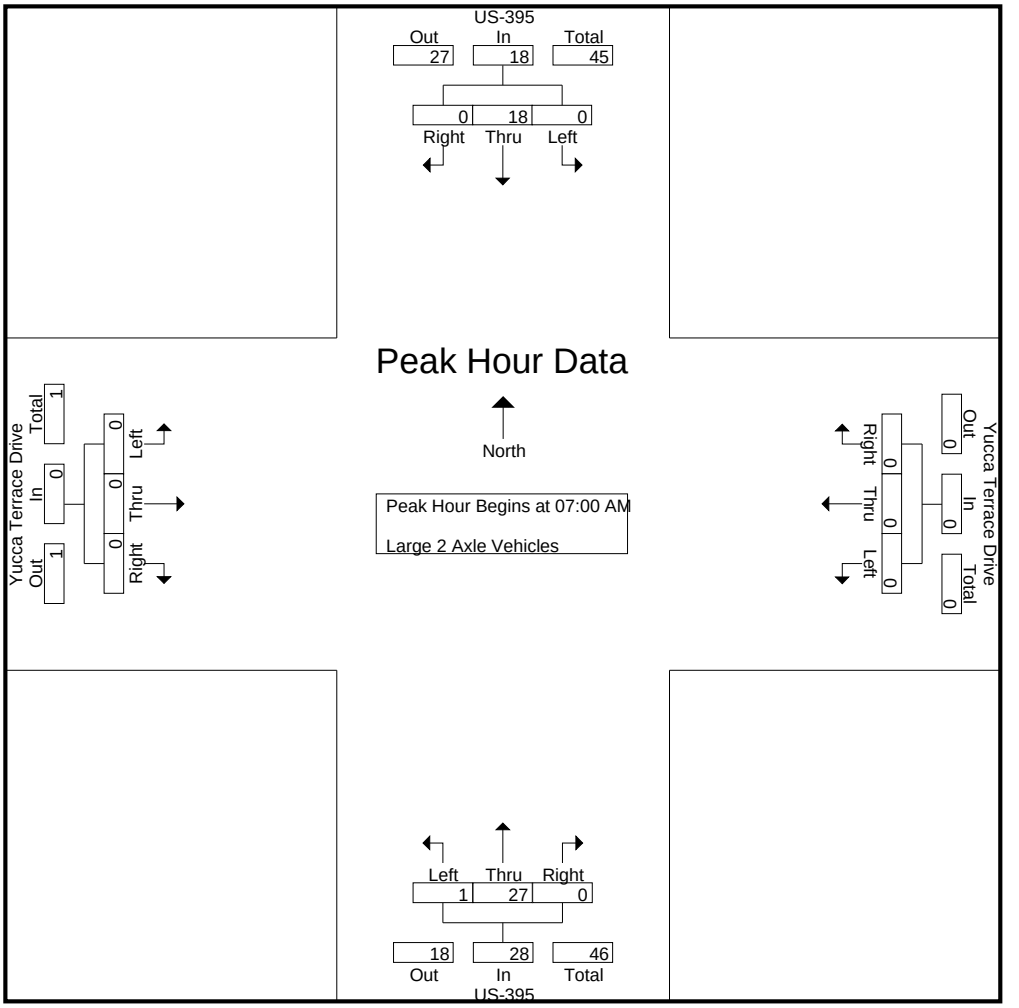
City of Hesperia
N/S: US-395
E/W: Yucca Terrace Drive
Weather: Clear

File Name : 06_HES_US-395_Yucca Terrace AM
Site Code : 05119658
Start Date : 9/28/2019
Page No : 2



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				07:00 AM			
+0 mins.	0	**6**	0	**6**	0	0	0	0	0	6	0	6	0	0	0	0
+15 mins.	0	4	0	4	0	0	0	0	0	**10**	0	**10**	0	0	0	0
+30 mins.	0	4	0	4	0	0	0	0	0	7	0	7	0	0	0	0
+45 mins.	0	4	0	4	0	0	0	0	**1**	4	0	5	0	0	0	0
Total Volume	0	18	0	18	0	0	0	0	1	27	0	28	0	0	0	0
% App. Total	0	100	0		0	0	0		3.6	96.4	0		0	0	0	
PHF	.000	.750	.000	.750	.000	.000	.000	.000	.250	.675	.000	.700	.000	.000	.000	.000

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City of Hesperia
N/S: US-395
E/W: Yucca Terrace Drive
Weather: Clear

File Name : 06_HES_US-395_Yucca Terrace AM
Site Code : 05119658
Start Date : 9/28/2019
Page No : 1

Groups Printed- 3 Axle Vehicles

	US-395 Southbound				Yucca Terrace Drive Westbound				US-395 Northbound				Yucca Terrace 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	3	0	3	0	0	0	0	0	1	0	1	0	0	0	0	4
07:15 AM	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	2
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	2
Total	0	4	0	4	0	0	0	0	0	4	0	4	0	0	0	0	8
08:00 AM	0	2	0	2	0	0	0	0	0	1	0	1	0	0	0	0	3
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	4	0	4	0	0	0	0	0	3	0	3	0	0	0	0	7
08:45 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
Total	0	6	0	6	0	0	0	0	0	5	0	5	0	0	0	0	11
Grand Total	0	10	0	10	0	0	0	0	0	9	0	9	0	0	0	0	19
Apprch %	0	100	0		0	0	0		0	100	0		0	0	0		
Total %	0	52.6	0	52.6	0	0	0	0	0	47.4	0	47.4	0	0	0	0	

	US-395 Southbound				Yucca Terrace Drive Westbound				US-395 Northbound				Yucca Terrace 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 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	**3**	0	**3**	0	0	0	0	0	1	0	1	0	0	0	0	**4**
07:15 AM	0	0	0	0	0	0	0	0	0	**2**	0	**2**	0	0	0	0	2
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	2
Total Volume	0	4	0	4	0	0	0	0	0	4	0	4	0	0	0	0	8
% App. Total	0	100	0		0	0	0		0	100	0		0	0	0		
PHF	.000	.333	.000	.333	.000	.000	.000	.000	.000	.500	.000	.500	.000	.000	.000	.000	.500

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City of Hesperia
N/S: US-395
E/W: Yucca Terrace Drive
Weather: Clear

File Name : 06_HES_US-395_Yucca Terrace AM
Site Code : 05119658
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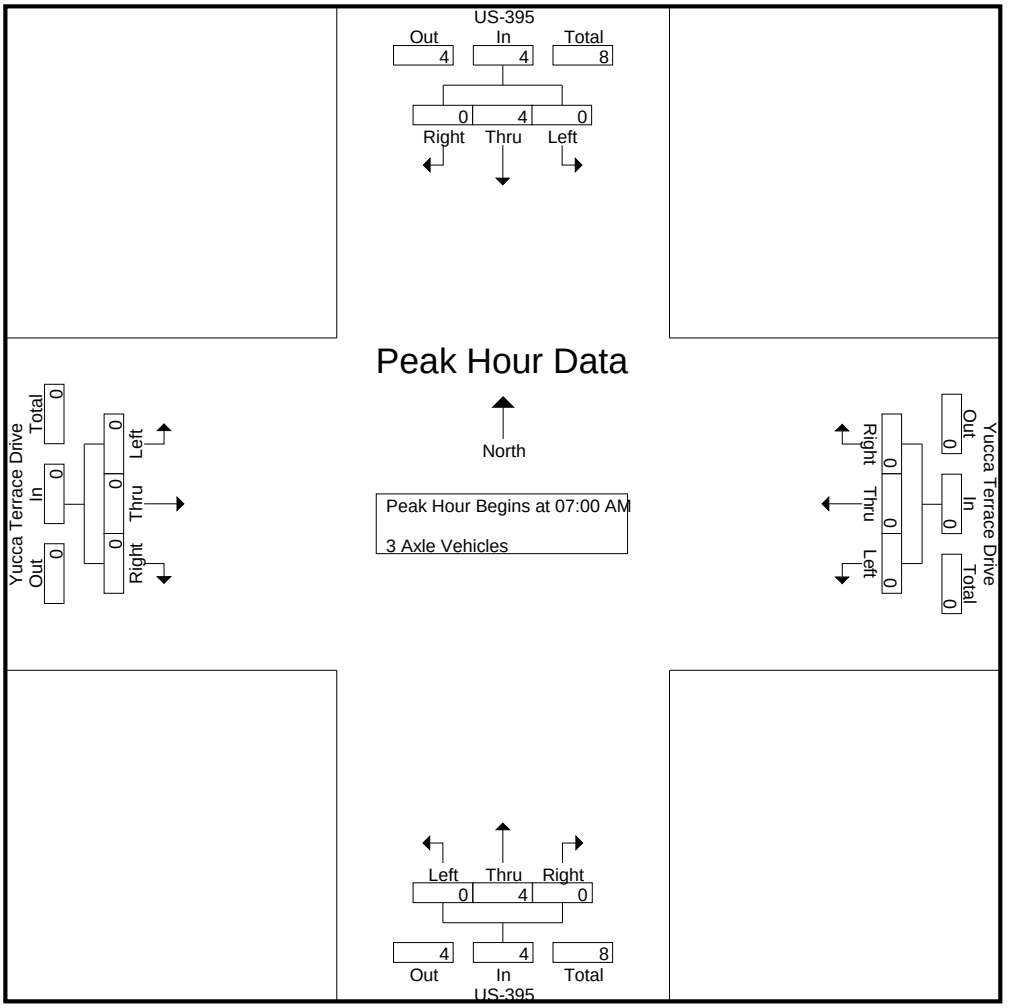

Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM				07:00 AM				07:00 AM				07:00 AM			
+0 mins.	0	**3**	0	**3**	0	0	0	0	0	1	0	1	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	**2**	0	**2**	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0
Total Volume	0	4	0	4	0	0	0	0	0	4	0	4	0	0	0	0
% App. Total	0	100	0		0	0	0		0	100	0		0	0	0	
PHF	.000	.333	.000	.333	.000	.000	.000	.000	.000	.500	.000	.500	.000	.000	.000	.000

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City of Hesperia
N/S: US-395
E/W: Yucca Terrace Drive
Weather: Clear

File Name : 06_HES_US-395_Yucca Terrace AM
Site Code : 05119658
Start Date : 9/28/2019
Page No : 1

Groups Printed- 4+ Axle Trucks

	US-395 Southbound				Yucca Terrace Drive Westbound				US-395 Northbound				Yucca Terrace 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	18	0	18	0	0	0	0	0	16	0	16	0	0	0	0	34
07:15 AM	0	14	0	14	0	0	0	0	0	11	0	11	0	0	0	0	25
07:30 AM	0	18	0	18	0	0	0	0	0	18	0	18	0	0	0	0	36
07:45 AM	0	18	0	18	0	0	0	0	0	12	0	12	0	0	0	0	30
Total	0	68	0	68	0	0	0	0	0	57	0	57	0	0	0	0	125
08:00 AM	0	14	0	14	0	0	0	0	0	11	0	11	0	0	0	0	25
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	21	0	21	0	0	0	0	0	11	0	11	0	0	0	0	32
08:45 AM	0	13	0	13	0	0	0	0	0	14	0	14	0	0	0	0	27
Total	0	48	0	48	0	0	0	0	0	36	0	36	0	0	0	0	84
Grand Total	0	116	0	116	0	0	0	0	0	93	0	93	0	0	0	0	209
Apprch %	0	100	0		0	0	0		0	100	0		0	0	0		
Total %	0	55.5	0	55.5	0	0	0	0	0	44.5	0	44.5	0	0	0	0	

	US-395 Southbound				Yucca Terrace Drive Westbound				US-395 Northbound				Yucca Terrace 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 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	**18**	0	**18**	0	0	0	0	0	16	0	16	0	0	0	0	34
07:15 AM	0	14	0	14	0	0	0	0	0	11	0	11	0	0	0	0	25
07:30 AM	0	18	0	18	0	0	0	0	0	**18**	0	**18**	0	0	0	0	**36**
07:45 AM	0	18	0	18	0	0	0	0	0	12	0	12	0	0	0	0	30
Total Volume	0	68	0	68	0	0	0	0	0	57	0	57	0	0	0	0	125
% App. Total	0	100	0		0	0	0		0	100	0		0	0	0		
PHF	.000	.944	.000	.944	.000	.000	.000	.000	.000	.792	.000	.792	.000	.000	.000	.000	.868

Counts Unlimited
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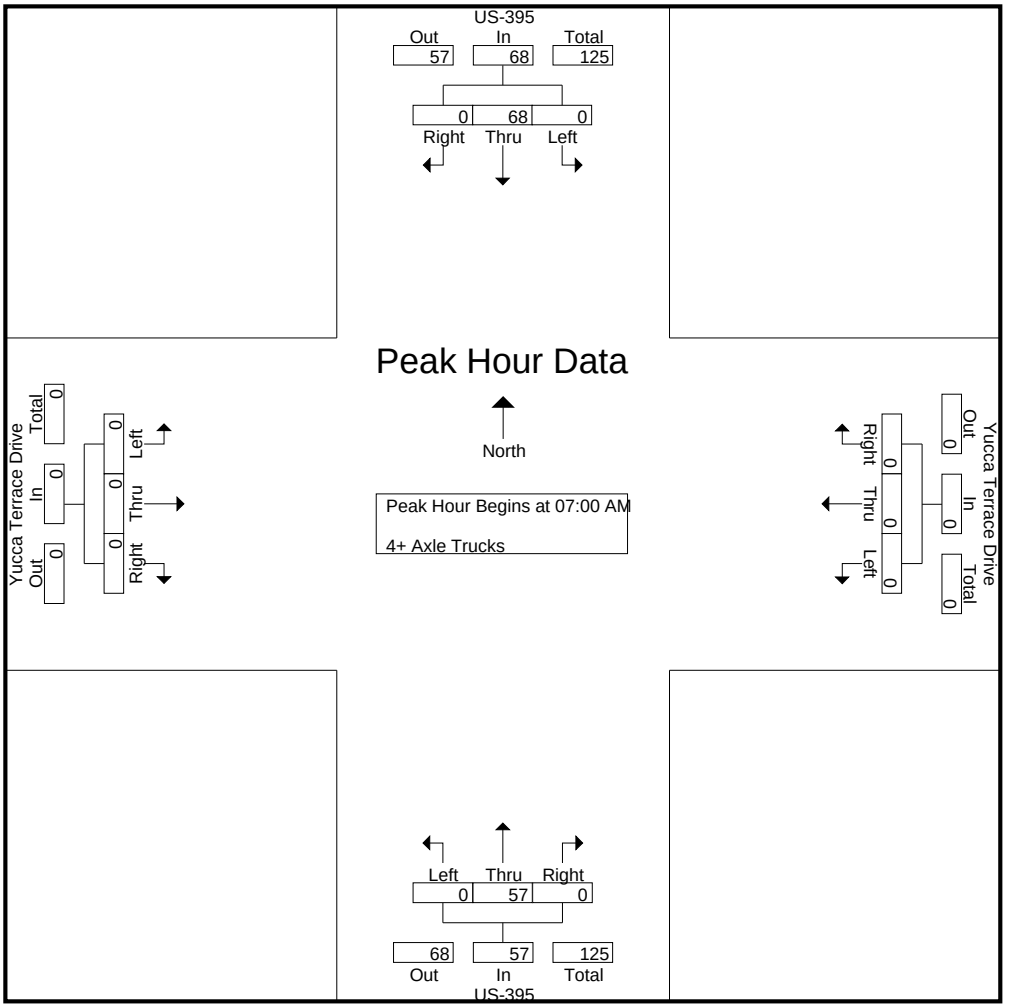
City of Hesperia
N/S: US-395
E/W: Yucca Terrace Drive
Weather: Clear

File Name : 06_HES_US-395_Yucca Terrace AM
Site Code : 05119658
Start Date : 9/28/2019
Page No : 2



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				07:00 AM			
+0 mins.	0	**18**	0	**18**	0	0	0	0	0	16	0	16	0	0	0	0
+15 mins.	0	14	0	14	0	0	0	0	0	11	0	11	0	0	0	0
+30 mins.	0	18	0	18	0	0	0	0	0	**18**	0	**18**	0	0	0	0
+45 mins.	0	18	0	18	0	0	0	0	0	12	0	12	0	0	0	0
Total Volume	0	68	0	68	0	0	0	0	0	57	0	57	0	0	0	0
% App. Total	0	100	0		0	0	0		0	100	0		0	0	0	
PHF	.000	.944	.000	.944	.000	.000	.000	.000	.000	.792	.000	.792	.000	.000	.000	.000

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City of Hesperia
N/S: US-395
E/W: Yucca Terrace Drive
Weather: Clear

File Name : 06_HES_US-395_Yucca Terrace PM
Site Code : 05119658
Start Date : 9/28/2019
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Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	US-395 Southbound				Yucca Terrace Drive Westbound				US-395 Northbound				Yucca Terrace 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	205	0	205	0	0	0	0	0	274	0	274	0	0	0	0	479
04:15 PM	0	180	0	180	0	0	0	0	0	315	0	315	0	0	0	0	495
04:30 PM	0	197	2	199	0	0	0	0	1	298	0	299	0	0	0	0	498
04:45 PM	0	175	0	175	0	0	0	0	2	318	0	320	0	0	1	1	496
Total	0	757	2	759	0	0	0	0	3	1205	0	1208	0	0	1	1	1968
05:00 PM	0	192	0	192	0	0	0	0	1	273	0	274	0	0	1	1	467
05:15 PM	0	181	1	182	0	0	0	0	0	310	0	310	0	0	1	1	493
05:30 PM	0	178	0	178	0	0	0	0	1	336	0	337	0	0	0	0	515
05:45 PM	0	175	1	176	0	0	0	0	0	318	0	318	1	0	2	3	497
Total	0	726	2	728	0	0	0	0	2	1237	0	1239	1	0	4	5	1972
Grand Total	0	1483	4	1487	0	0	0	0	5	2442	0	2447	1	0	5	6	3940
Apprch %	0	99.7	0.3		0	0	0		0.2	99.8	0		16.7	0	83.3		
Total %	0	37.6	0.1	37.7	0	0	0	0	0.1	62	0	62.1	0	0	0.1	0.2	
Passenger Vehicles	0	1309	2	1311	0	0	0	0	2	2312	0	2314	0	0	5	5	3630
% Passenger Vehicles	0	88.3	50	88.2	0	0	0	0	40	94.7	0	94.6	0	0	100	83.3	92.1
Large 2 Axle Vehicles	0	35	0	35	0	0	0	0	1	40	0	41	0	0	0	0	76
% Large 2 Axle Vehicles	0	2.4	0	2.4	0	0	0	0	20	1.6	0	1.7	0	0	0	0	1.9
3 Axle Vehicles	0	6	0	6	0	0	0	0	0	13	0	13	0	0	0	0	19
% 3 Axle Vehicles	0	0.4	0	0.4	0	0	0	0	0	0.5	0	0.5	0	0	0	0	0.5
4+ Axle Trucks	0	133	2	135	0	0	0	0	2	77	0	79	1	0	0	1	215
% 4+ Axle Trucks	0	9	50	9.1	0	0	0	0	40	3.2	0	3.2	100	0	0	16.7	5.5

	US-395 Southbound				Yucca Terrace Drive Westbound				US-395 Northbound				Yucca Terrace 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 05:00 PM																	
05:00 PM	0	**192**	0	**192**	0	0	0	0	**1**	273	0	274	0	0	1	1	467
05:15 PM	0	181	**1**	182	0	0	0	0	0	310	0	310	0	0	1	1	493
05:30 PM	0	178	0	178	0	0	0	0	1	**336**	0	**337**	0	0	0	0	**515**
05:45 PM	0	175	1	176	0	0	0	0	0	318	0	318	**1**	0	**2**	**3**	497
Total Volume	0	726	2	728	0	0	0	0	2	1237	0	1239	1	0	4	5	1972
% App. Total	0	99.7	0.3		0	0	0		0.2	99.8	0		20	0	80		
PHF	.000	.945	.500	.948	.000	.000	.000	.000	.500	.920	.000	.919	.250	.000	.500	.417	.957

Counts Unlimited
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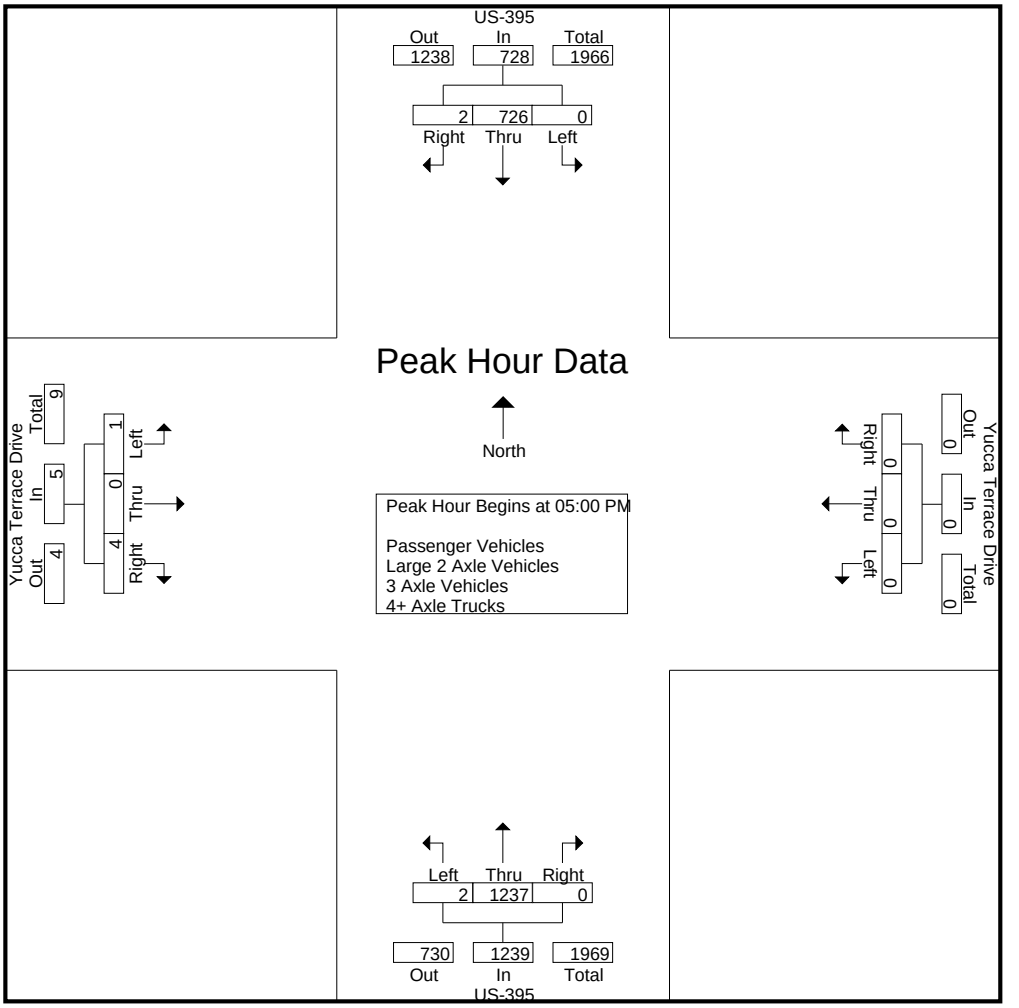
City of Hesperia
N/S: US-395
E/W: Yucca Terrace Drive
Weather: Clear

File Name : 06_HES_US-395_Yucca Terrace PM
Site Code : 05119658
Start Date : 9/28/2019
Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:00 PM				04:00 PM				04:45 PM				05:00 PM			
+0 mins.	0	**205**	0	**205**	0	0	0	0	**2**	318	0	320	0	0	1	1
+15 mins.	0	180	0	180	0	0	0	0	1	273	0	274	0	0	1	1
+30 mins.	0	197	**2**	199	0	0	0	0	0	310	0	310	0	0	0	0
+45 mins.	0	175	0	175	0	0	0	0	1	**336**	0	**337**	**1**	0	**2**	**3**
Total Volume	0	757	2	759	0	0	0	0	4	1237	0	1241	1	0	4	5
% App. Total	0	99.7	0.3		0	0	0		0.3	99.7	0		20	0	80	
PHF	.000	.923	.250	.926	.000	.000	.000	.000	.500	.920	.000	.921	.250	.000	.500	.417

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City of Hesperia
N/S: US-395
E/W: Yucca Terrace Drive
Weather: Clear

File Name : 06_HES_US-395_Yucca Terrace PM
Site Code : 05119658
Start Date : 9/28/2019
Page No : 1

Groups Printed- Passenger Vehicles

	US-395 Southbound				Yucca Terrace Drive Westbound				US-395 Northbound				Yucca Terrace 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	180	0	180	0	0	0	0	0	256	0	256	0	0	0	0	436
04:15 PM	0	159	0	159	0	0	0	0	0	290	0	290	0	0	0	0	449
04:30 PM	0	173	1	174	0	0	0	0	1	277	0	278	0	0	0	0	452
04:45 PM	0	156	0	156	0	0	0	0	1	310	0	311	0	0	1	1	468
Total	0	668	1	669	0	0	0	0	2	1133	0	1135	0	0	1	1	1805
05:00 PM	0	167	0	167	0	0	0	0	0	258	0	258	0	0	1	1	426
05:15 PM	0	162	0	162	0	0	0	0	0	302	0	302	0	0	1	1	465
05:30 PM	0	156	0	156	0	0	0	0	0	312	0	312	0	0	0	0	468
05:45 PM	0	156	1	157	0	0	0	0	0	307	0	307	0	0	2	2	466
Total	0	641	1	642	0	0	0	0	0	1179	0	1179	0	0	4	4	1825
Grand Total	0	1309	2	1311	0	0	0	0	2	2312	0	2314	0	0	5	5	3630
Apprch %	0	99.8	0.2		0	0	0		0.1	99.9	0		0	0	100		
Total %	0	36.1	0.1	36.1	0	0	0	0	0.1	63.7	0	63.7	0	0	0.1	0.1	

	US-395 Southbound				Yucca Terrace Drive Westbound				US-395 Northbound				Yucca Terrace 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 05:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	0	**167**	0	**167**	0	0	0	0	0	258	0	258	0	0	1	1	426
05:15 PM	0	162	0	162	0	0	0	0	0	302	0	302	0	0	1	1	465
05:30 PM	0	156	0	156	0	0	0	0	0	**312**	0	**312**	0	0	0	0	**468**
05:45 PM	0	156	**1**	157	0	0	0	0	0	307	0	307	0	0	**2**	**2**	466
Total Volume	0	641	1	642	0	0	0	0	0	1179	0	1179	0	0	4	4	1825
% App. Total	0	99.8	0.2		0	0	0		0	100	0		0	0	100		
PHF	.000	.960	.250	.961	.000	.000	.000	.000	.000	.945	.000	.945	.000	.000	.500	.500	.975

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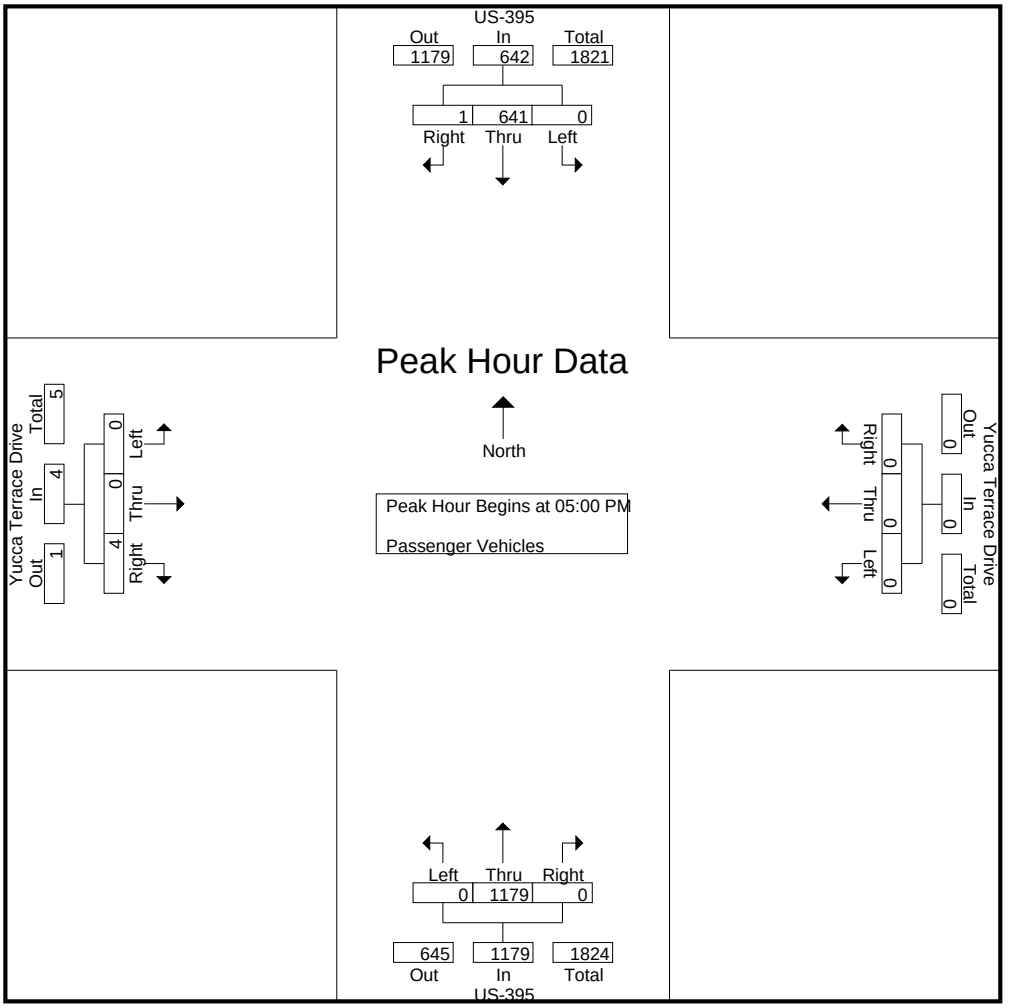
City of Hesperia
N/S: US-395
E/W: Yucca Terrace Drive
Weather: Clear

File Name : 06_HES_US-395_Yucca Terrace PM
Site Code : 05119658
Start Date : 9/28/2019
Page No : 2



Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	05:00 PM				05:00 PM				05:00 PM				05:00 PM			
+0 mins.	0	**167**	0	**167**	0	0	0	0	0	258	0	258	0	0	1	1
+15 mins.	0	162	0	162	0	0	0	0	0	302	0	302	0	0	1	1
+30 mins.	0	156	0	156	0	0	0	0	0	**312**	0	**312**	0	0	0	0
+45 mins.	0	156	**1**	157	0	0	0	0	0	307	0	307	0	0	**2**	**2**
Total Volume	0	641	1	642	0	0	0	0	0	1179	0	1179	0	0	4	4
% App. Total	0	99.8	0.2		0	0	0		0	100	0		0	0	100	
PHF	.000	.960	.250	.961	.000	.000	.000	.000	.000	.945	.000	.945	.000	.000	.500	.500

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City of Hesperia
N/S: US-395
E/W: Yucca Terrace Drive
Weather: Clear

File Name : 06_HES_US-395_Yucca Terrace PM
Site Code : 05119658
Start Date : 9/28/2019
Page No : 1

Groups Printed- Large 2 Axle Vehicles

	US-395 Southbound				Yucca Terrace Drive Westbound				US-395 Northbound				Yucca Terrace 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	3	0	3	0	0	0	0	0	6	0	6	0	0	0	0	9
04:15 PM	0	5	0	5	0	0	0	0	0	7	0	7	0	0	0	0	12
04:30 PM	0	8	0	8	0	0	0	0	0	5	0	5	0	0	0	0	13
04:45 PM	0	4	0	4	0	0	0	0	1	2	0	3	0	0	0	0	7
Total	0	20	0	20	0	0	0	0	1	20	0	21	0	0	0	0	41
05:00 PM	0	7	0	7	0	0	0	0	0	5	0	5	0	0	0	0	12
05:15 PM	0	2	0	2	0	0	0	0	0	1	0	1	0	0	0	0	3
05:30 PM	0	3	0	3	0	0	0	0	0	10	0	10	0	0	0	0	13
05:45 PM	0	3	0	3	0	0	0	0	0	4	0	4	0	0	0	0	7
Total	0	15	0	15	0	0	0	0	0	20	0	20	0	0	0	0	35
Grand Total	0	35	0	35	0	0	0	0	1	40	0	41	0	0	0	0	76
Apprch %	0	100	0		0	0	0		2.4	97.6	0		0	0	0		
Total %	0	46.1	0	46.1	0	0	0	0	1.3	52.6	0	53.9	0	0	0	0	

	US-395 Southbound				Yucca Terrace Drive Westbound				US-395 Northbound				Yucca Terrace 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 05:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	0	**7**	0	**7**	0	0	0	0	0	5	0	5	0	0	0	0	12
05:15 PM	0	2	0	2	0	0	0	0	0	1	0	1	0	0	0	0	3
05:30 PM	0	3	0	3	0	0	0	0	0	**10**	0	**10**	0	0	0	0	**13**
05:45 PM	0	3	0	3	0	0	0	0	0	4	0	4	0	0	0	0	7
Total Volume	0	15	0	15	0	0	0	0	0	20	0	20	0	0	0	0	35
% App. Total	0	100	0		0	0	0		0	100	0		0	0	0		
PHF	.000	.536	.000	.536	.000	.000	.000	.000	.000	.500	.000	.500	.000	.000	.000	.000	.673

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City of Hesperia
N/S: US-395
E/W: Yucca Terrace Drive
Weather: Clear

File Name : 06_HES_US-395_Yucca Terrace PM
Site Code : 05119658
Start Date : 9/28/2019
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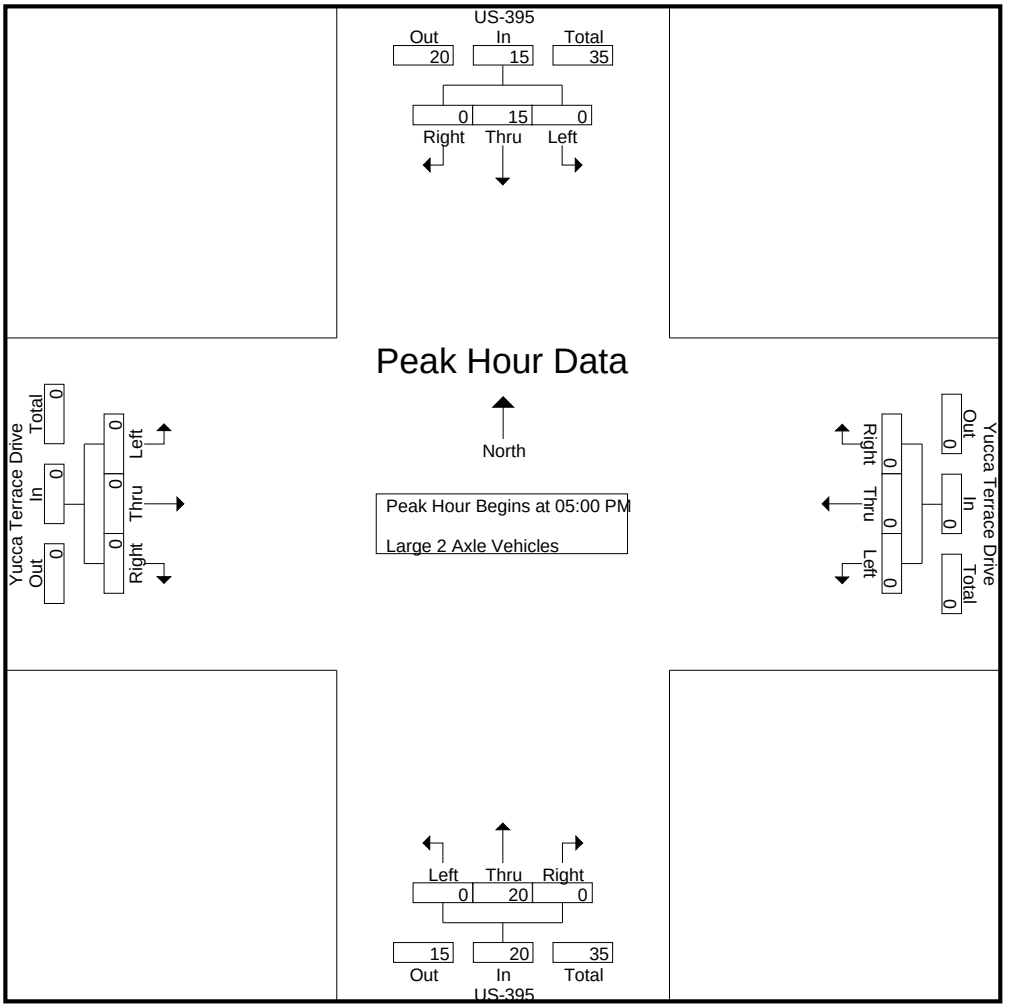

Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	05:00 PM				05:00 PM				05:00 PM				05:00 PM			
+0 mins.	0	**7**	0	**7**	0	0	0	0	0	5	0	5	0	0	0	0
+15 mins.	0	2	0	2	0	0	0	0	0	1	0	1	0	0	0	0
+30 mins.	0	3	0	3	0	0	0	0	0	**10**	0	**10**	0	0	0	0
+45 mins.	0	3	0	3	0	0	0	0	0	4	0	4	0	0	0	0
Total Volume	0	15	0	15	0	0	0	0	0	20	0	20	0	0	0	0
% App. Total	0	100	0		0	0	0		0	100	0		0	0	0	
PHF	.000	.536	.000	.536	.000	.000	.000	.000	.000	.500	.000	.500	.000	.000	.000	.000

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City of Hesperia
N/S: US-395
E/W: Yucca Terrace Drive
Weather: Clear

File Name : 06_HES_US-395_Yucca Terrace PM
Site Code : 05119658
Start Date : 9/28/2019
Page No : 1

Groups Printed- 3 Axle Vehicles

	US-395 Southbound				Yucca Terrace Drive Westbound				US-395 Northbound				Yucca Terrace 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	2	0	2	0	0	0	0	0	1	0	1	0	0	0	0	3
04:15 PM	0	0	0	0	0	0	0	0	0	3	0	3	0	0	0	0	3
04:30 PM	0	1	0	1	0	0	0	0	0	3	0	3	0	0	0	0	4
04:45 PM	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	2
Total	0	3	0	3	0	0	0	0	0	9	0	9	0	0	0	0	12
05:00 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
05:15 PM	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	2
05:30 PM	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	2
05:45 PM	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	2
Total	0	3	0	3	0	0	0	0	0	4	0	4	0	0	0	0	7
Grand Total	0	6	0	6	0	0	0	0	0	13	0	13	0	0	0	0	19
Apprch %	0	100	0		0	0	0		0	100	0		0	0	0		
Total %	0	31.6	0	31.6	0	0	0	0	0	68.4	0	68.4	0	0	0	0	

	US-395 Southbound				Yucca Terrace Drive Westbound				US-395 Northbound				Yucca Terrace 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 05:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	0	**1**	0	**1**	0	0	0	0	0	0	0	0	0	0	0	0	1
05:15 PM	0	0	0	0	0	0	0	0	0	**2**	0	**2**	0	0	0	0	**2**
05:30 PM	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	2
05:45 PM	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	2
Total Volume	0	3	0	3	0	0	0	0	0	4	0	4	0	0	0	0	7
% App. Total	0	100	0		0	0	0		0	100	0		0	0	0		
PHF	.000	.750	.000	.750	.000	.000	.000	.000	.000	.500	.000	.500	.000	.000	.000	.000	.875

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City of Hesperia
N/S: US-395
E/W: Yucca Terrace Drive
Weather: Clear

File Name : 06_HES_US-395_Yucca Terrace PM
Site Code : 05119658
Start Date : 9/28/2019
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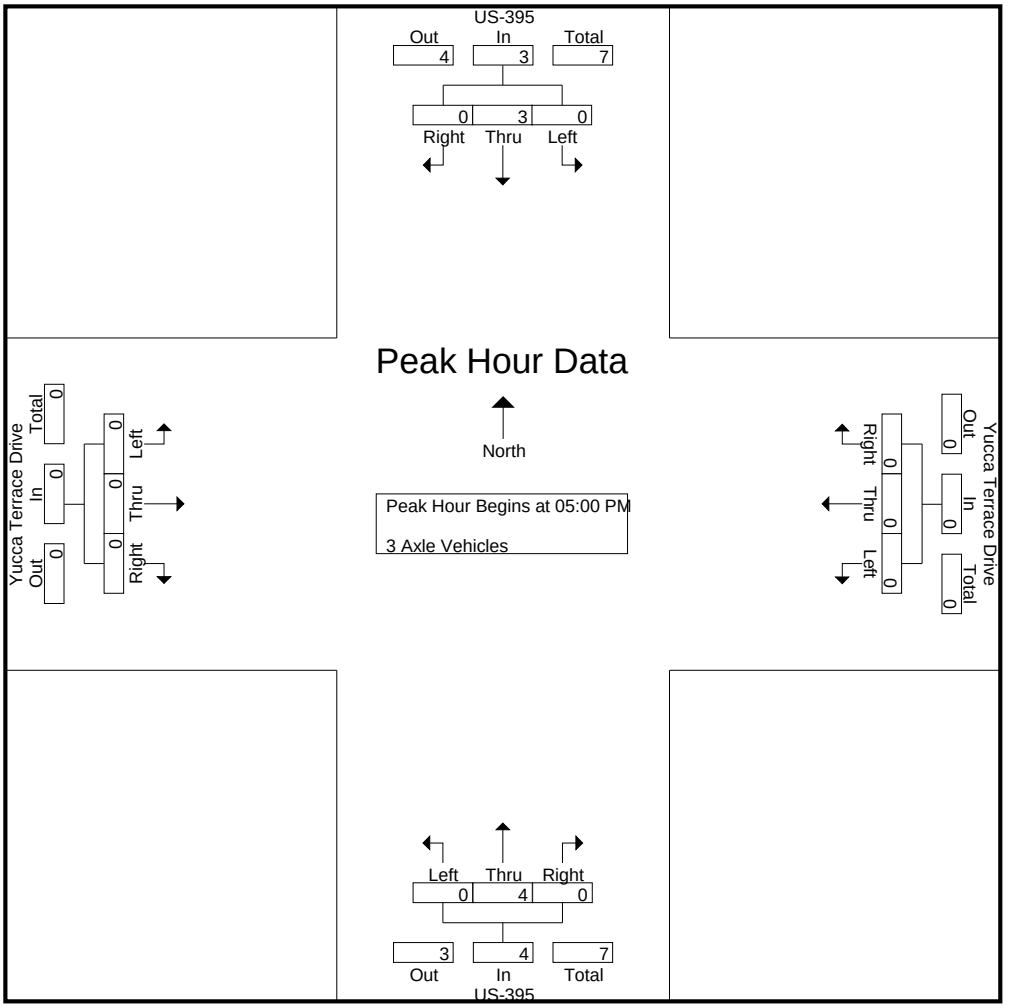

Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	05:00 PM				05:00 PM				05:00 PM				05:00 PM			
+0 mins.	0	**1**	0	**1**	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	**2**	0	**2**	0	0	0	0
+30 mins.	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0
+45 mins.	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0
Total Volume	0	3	0	3	0	0	0	0	0	4	0	4	0	0	0	0
% App. Total	0	100	0		0	0	0		0	100	0		0	0	0	
PHF	.000	.750	.000	.750	.000	.000	.000	.000	.000	.500	.000	.500	.000	.000	.000	.000

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City of Hesperia
N/S: US-395
E/W: Yucca Terrace Drive
Weather: Clear

File Name : 06_HES_US-395_Yucca Terrace PM
Site Code : 05119658
Start Date : 9/28/2019
Page No : 1

Groups Printed- 4+ Axle Trucks

	US-395 Southbound				Yucca Terrace Drive Westbound				US-395 Northbound				Yucca Terrace 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	20	0	20	0	0	0	0	0	11	0	11	0	0	0	0	31
04:15 PM	0	16	0	16	0	0	0	0	0	15	0	15	0	0	0	0	31
04:30 PM	0	15	1	16	0	0	0	0	0	13	0	13	0	0	0	0	29
04:45 PM	0	15	0	15	0	0	0	0	0	4	0	4	0	0	0	0	19
Total	0	66	1	67	0	0	0	0	0	43	0	43	0	0	0	0	110
05:00 PM	0	17	0	17	0	0	0	0	1	10	0	11	0	0	0	0	28
05:15 PM	0	17	1	18	0	0	0	0	0	5	0	5	0	0	0	0	23
05:30 PM	0	18	0	18	0	0	0	0	1	13	0	14	0	0	0	0	32
05:45 PM	0	15	0	15	0	0	0	0	0	6	0	6	1	0	0	1	22
Total	0	67	1	68	0	0	0	0	2	34	0	36	1	0	0	1	105
Grand Total	0	133	2	135	0	0	0	0	2	77	0	79	1	0	0	1	215
Apprch %	0	98.5	1.5		0	0	0		2.5	97.5	0		100	0	0		
Total %	0	61.9	0.9	62.8	0	0	0	0	0.9	35.8	0	36.7	0.5	0	0	0.5	

	US-395 Southbound				Yucca Terrace Drive Westbound				US-395 Northbound				Yucca Terrace 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 05:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	0	17	0	17	0	0	0	0	**1**	10	0	11	0	0	0	0	28
05:15 PM	0	17	**1**	**18**	0	0	0	0	0	5	0	5	0	0	0	0	23
05:30 PM	0	**18**	0	18	0	0	0	0	1	**13**	0	**14**	0	0	0	0	**32**
05:45 PM	0	15	0	15	0	0	0	0	0	6	0	6	**1**	0	0	**1**	22
Total Volume	0	67	1	68	0	0	0	0	2	34	0	36	1	0	0	1	105
% App. Total	0	98.5	1.5		0	0	0		5.6	94.4	0		100	0	0		
PHF	.000	.931	.250	.944	.000	.000	.000	.000	.500	.654	.000	.643	.250	.000	.000	.250	.820

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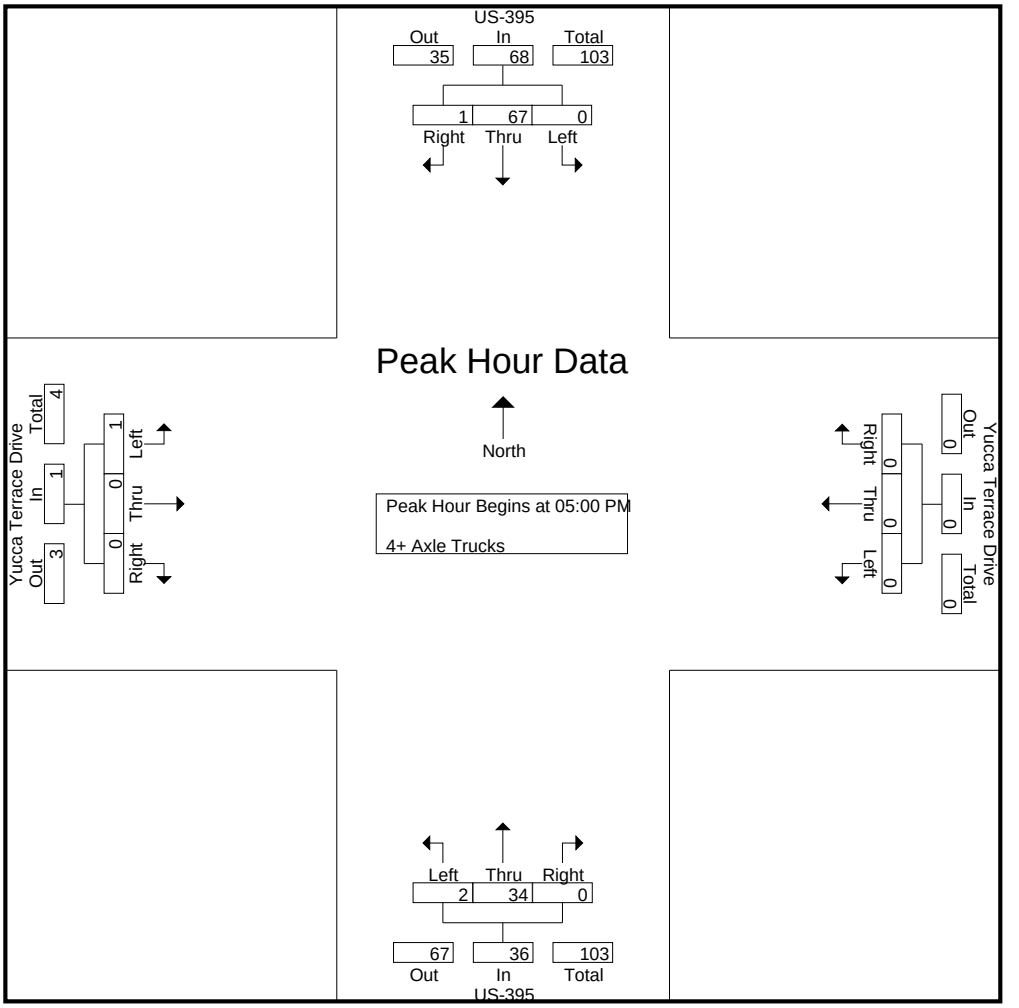
City of Hesperia
N/S: US-395
E/W: Yucca Terrace Drive
Weather: Clear

File Name : 06_HES_US-395_Yucca Terrace PM
Site Code : 05119658
Start Date : 9/28/2019
Page No : 2



Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	05:00 PM				05:00 PM				05:00 PM				05:00 PM			
+0 mins.	0	17	0	17	0	0	0	0	**1**	10	0	11	0	0	0	0
+15 mins.	0	17	**1**	**18**	0	0	0	0	0	5	0	5	0	0	0	0
+30 mins.	0	**18**	0	18	0	0	0	0	1	**13**	0	**14**	0	0	0	0
+45 mins.	0	15	0	15	0	0	0	0	0	6	0	6	**1**	0	0	**1**
Total Volume	0	67	1	68	0	0	0	0	2	34	0	36	1	0	0	1
% App. Total	0	98.5	1.5		0	0	0		5.6	94.4	0		100	0	0	
PHF	.000	.931	.250	.944	.000	.000	.000	.000	.500	.654	.000	.643	.250	.000	.000	.250

Location: Hesperia
N/S: US-395
E/W: Yucca Terrace Drive

Date: 9/28/2019
Day: Saturday

PEDESTRIANS

	North Leg US-395	East Leg Yucca Terrace Drive	South Leg US-395	West Leg Yucca Terrace Drive	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0

	North Leg US-395	East Leg Yucca Terrace Drive	South Leg US-395	West Leg Yucca Terrace Drive	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	1	0	0	1
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
TOTAL VOLUMES:	0	1	0	0	1

Counts Unlimited, Inc.
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Corona, CA 92878
951-268-6268

Location: Hesperia
N/S: US-395
E/W: Yucca Terrace Drive

Date: 9/28/2019
Day: Saturday

BICYCLES

	Southbound US-395			Westbound Yucca Terrace Drive			Northbound US-395			Eastbound Yucca Terrace Drive			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	0	0	0	0	0	0	0	0

	Southbound US-395			Westbound Yucca Terrace Drive			Northbound US-395			Eastbound Yucca Terrace Drive			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	0	0	0	0	0	0	0	0

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City of Hesperia
N/S: US-395
E/W: Phelan Road/Main Street
Weather: Clear

File Name : 08_HES_US-395_Main AM
Site Code : 05119658
Start Date : 9/28/2019
Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	US-395 Southbound					Main Street Westbound					US-395 Northbound					Phelan Road Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	68	219	5	0	292	2	76	53	19	131	15	137	1	0	153	12	134	25	15	171	34	747	781
07:15 AM	45	190	11	2	246	1	67	54	24	122	22	133	3	0	158	11	149	34	12	194	38	720	758
07:30 AM	39	172	8	2	219	1	88	66	21	155	27	153	1	0	181	12	174	15	6	201	29	756	785
07:45 AM	47	188	6	0	241	0	72	33	13	105	21	119	2	0	142	12	169	27	10	208	23	696	719
Total	199	769	30	4	998	4	303	206	77	513	85	542	7	0	634	47	626	101	43	774	124	2919	3043
08:00 AM	31	176	5	1	212	1	71	35	14	107	13	85	1	0	99	7	153	34	6	194	21	612	633
08:15 AM	44	182	9	2	235	1	57	31	16	89	13	136	1	0	150	14	141	27	14	182	32	656	688
08:30 AM	35	170	9	2	214	2	87	37	16	126	20	129	3	0	152	12	158	22	8	192	26	684	710
08:45 AM	33	158	10	1	201	1	53	29	22	83	15	105	4	1	124	11	130	17	4	158	28	566	594
Total	143	686	33	6	862	5	268	132	68	405	61	455	9	1	525	44	582	100	32	726	107	2518	2625
Grand Total	342	1455	63	10	1860	9	571	338	145	918	146	997	16	1	1159	91	1208	201	75	1500	231	5437	5668
Apprch %	18.4	78.2	3.4			1	62.2	36.8			12.6	86	1.4			6.1	80.5	13.4					
Total %	6.3	26.8	1.2		34.2	0.2	10.5	6.2		16.9	2.7	18.3	0.3		21.3	1.7	22.2	3.7		27.6	4.1	95.9	
Passenger Vehicles	330	1295	58		1693	9	537	325		1010	130	846	12		989	90	1178	191		1534	0	0	5226
% Passenger Vehicles	96.5	89	92.1	100	90.5	100	94	96.2	95.9	95	89	84.9	75	100	85.3	98.9	97.5	95	100	97.4	0	0	92.2
Large 2 Axle Vehicles	6	23	5		34	0	25	5		34	11	40	2		53	0	16	7		23	0	0	144
% Large 2 Axle Vehicles	1.8	1.6	7.9	0	1.8	0	4.4	1.5	2.8	3.2	7.5	4	12.5	0	4.6	0	1.3	3.5	0	1.5	0	0	2.5
3 Axle Vehicles	3	8	0		11	0	6	3		10	2	10	0		12	0	7	0		7	0	0	40
% 3 Axle Vehicles	0.9	0.5	0	0	0.6	0	1.1	0.9	0.7	0.9	1.4	1	0	0	1	0	0.6	0	0	0.4	0	0	0.7
4+ Axle Trucks	3	129	0		132	0	3	5		9	3	101	2		106	1	7	3		11	0	0	258
% 4+ Axle Trucks	0.9	8.9	0	0	7.1	0	0.5	1.5	0.7	0.8	2.1	10.1	12.5	0	9.1	1.1	0.6	1.5	0	0.7	0	0	4.6

	US-395 Southbound				Main Street Westbound				US-395 Northbound				Phelan Road Eastbound				
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 07:00 AM																	
07:00 AM	**68**	**219**	5	**292**	**2**	76	53	131	15	137	1	153	**12**	134	25	171	747
07:15 AM	45	190	**11**	246	1	67	54	122	22	133	**3**	158	11	149	**34**	194	720
07:30 AM	39	172	8	219	1	**88**	**66**	**155**	**27**	**153**	1	**181**	12	**174**	15	201	**756**
07:45 AM	47	188	6	241	0	72	33	105	21	119	2	142	12	169	27	**208**	696
Total Volume	199	769	30	998	4	303	206	513	85	542	7	634	47	626	101	774	2919
% App. Total	19.9	77.1	3		0.8	59.1	40.2		13.4	85.5	1.1		6.1	80.9	13		
PHF	.732	.878	.682	.854	.500	.861	.780	.827	.787	.886	.583	.876	.979	.899	.743	.930	.965

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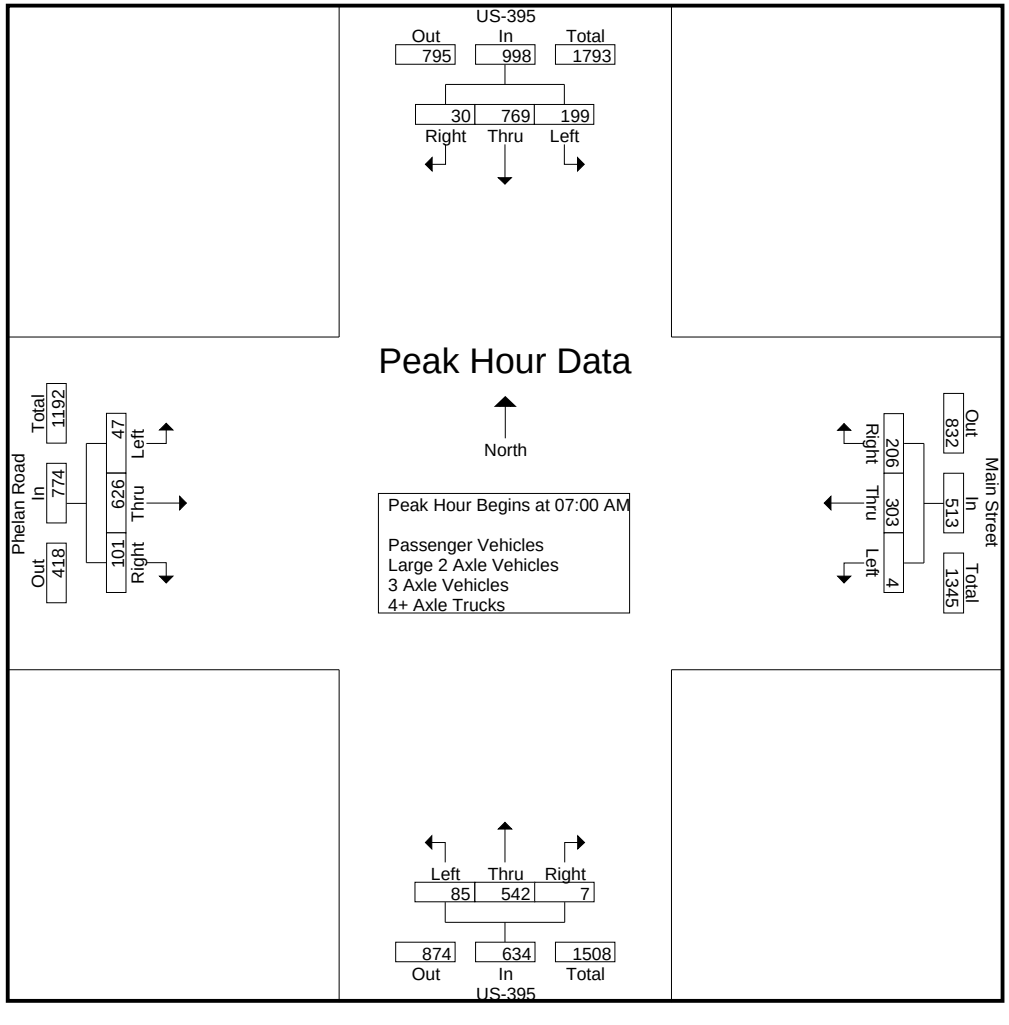
City of Hesperia
N/S: US-395
E/W: Phelan Road/Main Street
Weather: Clear

File Name : 08_HES_US-395_Main AM
Site Code : 05119658
Start Date : 9/28/2019
Page No : 2



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City of Hesperia
N/S: US-395
E/W: Phelan Road/Main Street
Weather: Clear

File Name : 08_HES_US-395_Main AM
Site Code : 05119658
Start Date : 9/28/2019

	US-395 Southbound				Main Street Westbound				US-395 Northbound				Phelan Road Eastbound				
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 Each Approach Begins at:																	
	07:00 AM				07:00 AM				07:00 AM				07:15 AM				
+0 mins.	**68**	**219**	5	**292**	**2**	76	53	131	15	137	1	153	11	149	**34**	194	
+15 mins.	45	190	**11**	246	1	67	54	122	22	133	**3**	158	**12**	**174**	15	201	
+30 mins.	39	172	8	219	1	**88**	**66**	**155**	**27**	**153**	1	**181**	12	169	27	**208**	
+45 mins.	47	188	6	241	0	72	33	105	21	119	2	142	7	153	34	194	
Total Volume	199	769	30	998	4	303	206	513	85	542	7	634	42	645	110	797	
% App. Total	19.9	77.1	3		0.8	59.1	40.2		13.4	85.5	1.1		5.3	80.9	13.8		
PHF	.732	.878	.682	.854	.500	.861	.780	.827	.787	.886	.583	.876	.875	.927	.809	.958	

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City of Hesperia
N/S: US-395
E/W: Phelan Road/Main Street
Weather: Clear

File Name : 08_HES_US-395_Main AM
Site Code : 05119658
Start Date : 9/28/2019
Page No : 1

Groups Printed- Passenger Vehicles

	US-395 Southbound					Main Street Westbound					US-395 Northbound					Phelan Road Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	64	199	4	0	267	2	69	50	19	121	15	120	1	0	136	12	130	24	15	166	34	690	724
07:15 AM	44	173	10	2	227	1	63	52	24	116	20	112	3	0	135	11	146	34	12	191	38	669	707
07:30 AM	39	150	8	2	197	1	84	64	20	149	23	134	1	0	158	12	170	14	6	196	28	700	728
07:45 AM	46	169	6	0	221	0	68	32	13	100	18	100	1	0	119	12	161	26	10	199	23	639	662
Total	193	691	28	4	912	4	284	198	76	486	76	466	6	0	548	47	607	98	43	752	123	2698	2821
08:00 AM	27	162	5	1	194	1	66	33	12	100	11	72	0	0	83	7	150	28	6	185	19	562	581
08:15 AM	44	161	9	2	214	1	54	31	16	86	12	117	1	0	130	14	138	27	14	179	32	609	641
08:30 AM	33	143	8	2	184	2	82	35	14	119	17	109	2	0	128	11	155	21	8	187	24	618	642
08:45 AM	33	138	8	1	179	1	51	28	21	80	14	82	3	1	99	11	128	17	4	156	27	514	541
Total	137	604	30	6	771	5	253	127	63	385	54	380	6	1	440	43	571	93	32	707	102	2303	2405
Grand Total	330	1295	58	10	1683	9	537	325	139	871	130	846	12	1	988	90	1178	191	75	1459	225	5001	5226
Apprch %	19.6	76.9	3.4			1	61.7	37.3			13.2	85.6	1.2			6.2	80.7	13.1					
Total %	6.6	25.9	1.2		33.7	0.2	10.7	6.5		17.4	2.6	16.9	0.2		19.8	1.8	23.6	3.8		29.2	4.3	95.7	

	US-395 Southbound				Main Street Westbound				US-395 Northbound				Phelan Road Eastbound				
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 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	**64**	**199**	4	**267**	**2**	69	50	121	15	120	1	136	**12**	130	24	166	690
07:15 AM	44	173	**10**	227	1	63	52	116	20	112	**3**	135	11	146	**34**	191	669
07:30 AM	39	150	8	197	1	**84**	**64**	**149**	**23**	**134**	1	**158**	12	**170**	14	196	**700**
07:45 AM	46	169	6	221	0	68	32	100	18	100	1	119	12	161	26	**199**	639
Total Volume	193	691	28	912	4	284	198	486	76	466	6	548	47	607	98	752	2698
% App. Total	21.2	75.8	3.1		0.8	58.4	40.7		13.9	85	1.1		6.2	80.7	13		
PHF	.754	.868	.700	.854	.500	.845	.773	.815	.826	.869	.500	.867	.979	.893	.721	.945	.964

Counts Unlimited
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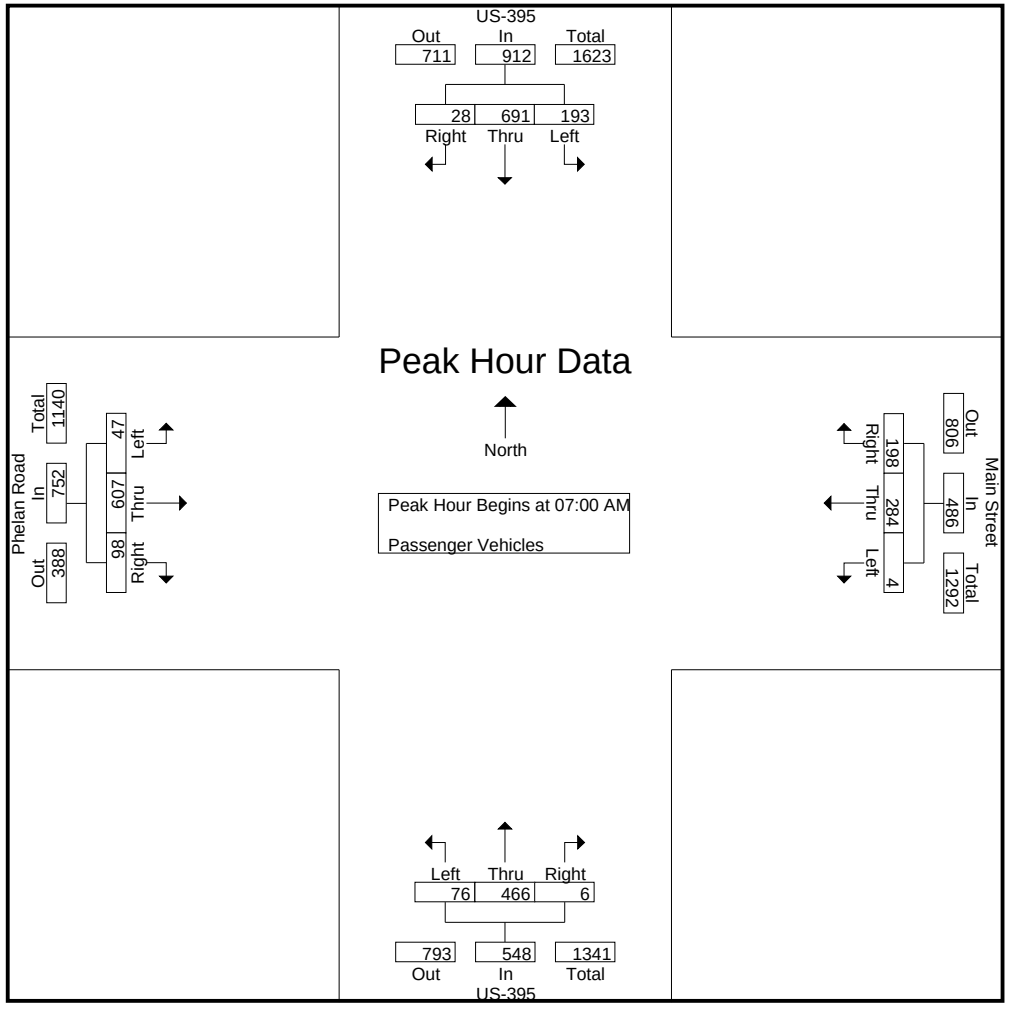
City of Hesperia
N/S: US-395
E/W: Phelan Road/Main Street
Weather: Clear

File Name : 08_HES_US-395_Main AM
Site Code : 05119658
Start Date : 9/28/2019
Page No : 2



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City of Hesperia
N/S: US-395
E/W: Phelan Road/Main Street
Weather: Clear

File Name : 08_HES_US-395_Main AM
Site Code : 05119658
Start Date : 9/28/2019
Page No : 3

	US-395 Southbound				Main Street Westbound				US-395 Northbound				Phelan Road Eastbound				
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 07:45 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:00 AM				07:00 AM				07:00 AM				07:00 AM				
+0 mins.	**64**	**199**	4	**267**	**2**	69	50	121	15	120	1	136	**12**	130	24	166	
+15 mins.	44	173	**10**	227	1	63	52	116	20	112	**3**	135	11	146	**34**	191	
+30 mins.	39	150	8	197	1	**84**	**64**	**149**	**23**	**134**	1	**158**	12	**170**	14	196	
+45 mins.	46	169	6	221	0	68	32	100	18	100	1	119	12	161	26	**199**	
Total Volume	193	691	28	912	4	284	198	486	76	466	6	548	47	607	98	752	
% App. Total	21.2	75.8	3.1		0.8	58.4	40.7		13.9	85	1.1		6.2	80.7	13		
PHF	.754	.868	.700	.854	.500	.845	.773	.815	.826	.869	.500	.867	.979	.893	.721	.945	

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City of Hesperia
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E/W: Phelan Road/Main Street
Weather: Clear

File Name : 08_HES_US-395_Main AM
Site Code : 05119658
Start Date : 9/28/2019
Page No : 1

Groups Printed- Large 2 Axle Vehicles

	US-395 Southbound					Main Street Westbound					US-395 Northbound					Phelan Road Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	1	3	1	0	5	0	7	1	0	8	0	3	0	0	3	0	2	0	0	2	0	18	18
07:15 AM	1	2	1	0	4	0	3	0	0	3	1	8	0	0	9	0	2	0	0	2	0	18	18
07:30 AM	0	4	0	0	4	0	2	1	1	3	4	5	0	0	9	0	1	1	0	2	1	18	19
07:45 AM	1	0	0	0	1	0	3	0	0	3	2	4	0	0	6	0	4	0	0	4	0	14	14
Total	3	9	2	0	14	0	15	2	1	17	7	20	0	0	27	0	9	1	0	10	1	68	69
08:00 AM	1	2	0	0	3	0	4	1	1	5	1	1	1	0	3	0	2	5	0	7	1	18	19
08:15 AM	0	5	0	0	5	0	2	0	0	2	0	4	0	0	4	0	1	0	0	1	0	12	12
08:30 AM	2	4	1	0	7	0	3	1	1	4	3	4	0	0	7	0	3	1	0	4	1	22	23
08:45 AM	0	3	2	0	5	0	1	1	1	2	0	11	1	0	12	0	1	0	0	1	1	20	21
Total	3	14	3	0	20	0	10	3	3	13	4	20	2	0	26	0	7	6	0	13	3	72	75
Grand Total	6	23	5	0	34	0	25	5	4	30	11	40	2	0	53	0	16	7	0	23	4	140	144
Apprch %	17.6	67.6	14.7			0	83.3	16.7			20.8	75.5	3.8			0	69.6	30.4					
Total %	4.3	16.4	3.6		24.3	0	17.9	3.6		21.4	7.9	28.6	1.4		37.9	0	11.4	5		16.4	2.8	97.2	

	US-395 Southbound				Main Street Westbound				US-395 Northbound				Phelan Road Eastbound				
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 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	**1**	3	**1**	**5**	0	**7**	**1**	**8**	0	3	0	3	0	2	0	2	**18**
07:15 AM	1	2	1	4	0	3	0	3	1	**8**	0	**9**	0	2	0	2	18
07:30 AM	0	**4**	0	4	0	2	1	3	**4**	5	0	9	0	1	**1**	2	18
07:45 AM	1	0	0	1	0	3	0	3	2	4	0	6	0	**4**	0	**4**	14
Total Volume	3	9	2	14	0	15	2	17	7	20	0	27	0	9	1	10	68
% App. Total	21.4	64.3	14.3		0	88.2	11.8		25.9	74.1	0		0	90	10		
PHF	.750	.563	.500	.700	.000	.536	.500	.531	.438	.625	.000	.750	.000	.563	.250	.625	.944

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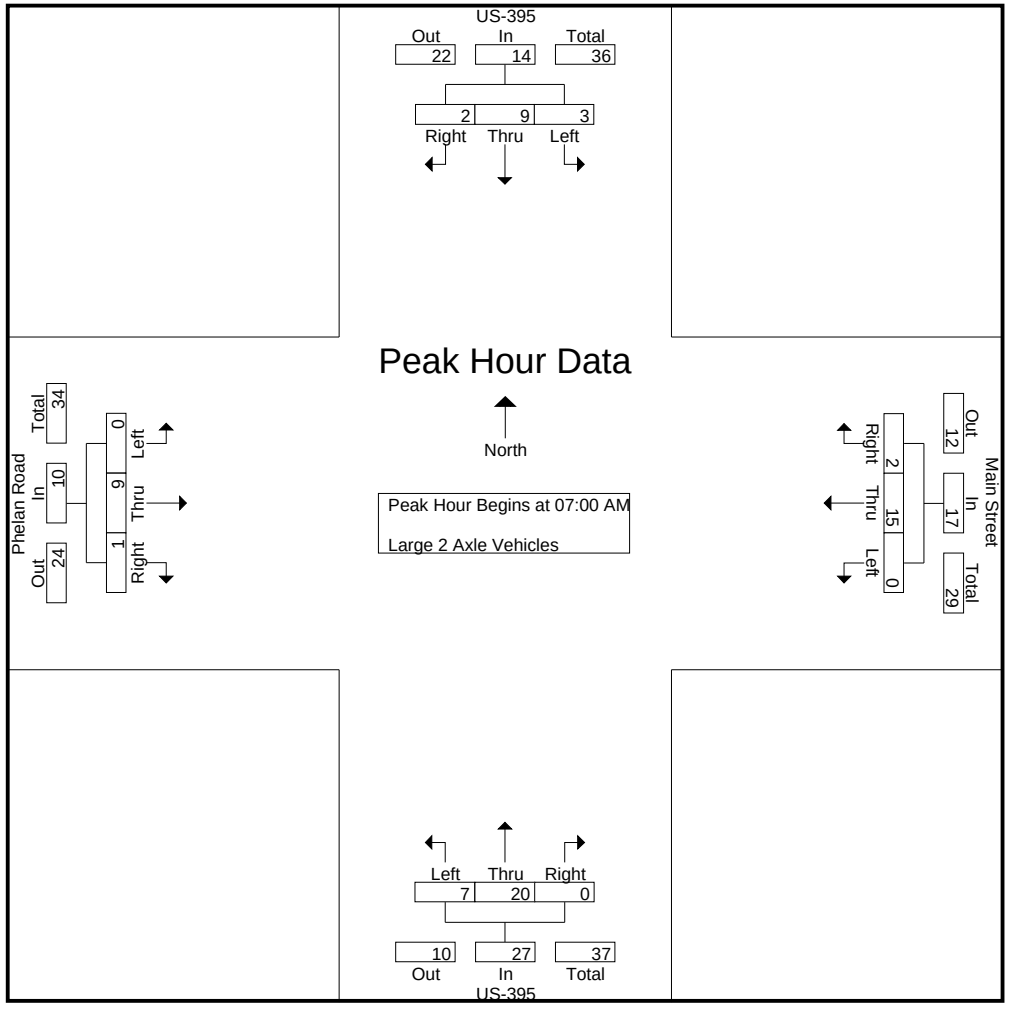
City of Hesperia
N/S: US-395
E/W: Phelan Road/Main Street
Weather: Clear

File Name : 08_HES_US-395_Main AM
Site Code : 05119658
Start Date : 9/28/2019
Page No : 2



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City of Hesperia
N/S: US-395
E/W: Phelan Road/Main Street
Weather: Clear

File Name : 08_HES_US-395_Main AM
Site Code : 05119658
Start Date : 9/28/2019

	US-395 Southbound				Main Street Westbound				US-395 Northbound				Phelan Road Eastbound				
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 07:45 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:00 AM				07:00 AM				07:00 AM				07:00 AM				
+0 mins.	**1**	3	**1**	**5**	0	**7**	**1**	**8**	0	3	0	3	0	2	0	2	
+15 mins.	1	2	1	4	0	3	0	3	1	**8**	0	**9**	0	2	0	2	
+30 mins.	0	**4**	0	4	0	2	1	3	**4**	5	0	9	0	1	**1**	2	
+45 mins.	1	0	0	1	0	3	0	3	2	4	0	6	0	**4**	0	**4**	
Total Volume	3	9	2	14	0	15	2	17	7	20	0	27	0	9	1	10	
% App. Total	21.4	64.3	14.3		0	88.2	11.8		25.9	74.1	0		0	90	10		
PHF	.750	.563	.500	.700	.000	.536	.500	.531	.438	.625	.000	.750	.000	.563	.250	.625	

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City of Hesperia
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File Name : 08_HES_US-395_Main AM
Site Code : 05119658
Start Date : 9/28/2019
Page No : 1

Groups Printed- 3 Axle Vehicles

	US-395 Southbound					Main Street Westbound					US-395 Northbound					Phelan Road Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	1	2	0	0	3	0	0	1	0	1	0	1	0	0	1	0	1	0	0	1	0	6	6
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	1	0	0	1	0	2	2
07:30 AM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	0	3	3
07:45 AM	0	1	0	0	1	0	1	1	0	2	1	1	0	0	2	0	2	0	0	2	0	7	7
Total	1	3	0	0	4	0	3	2	0	5	1	3	0	0	4	0	5	0	0	5	0	18	18
08:00 AM	2	1	0	0	3	0	1	0	0	1	1	1	0	0	2	0	0	0	0	0	0	6	6
08:15 AM	0	0	0	0	0	0	1	0	0	1	0	4	0	0	4	0	1	0	0	1	0	6	6
08:30 AM	0	3	0	0	3	0	1	1	1	2	0	2	0	0	2	0	0	0	0	0	1	7	8
08:45 AM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	2	2
Total	2	5	0	0	7	0	3	1	1	4	1	7	0	0	8	0	2	0	0	2	1	21	22
Grand Total	3	8	0	0	11	0	6	3	1	9	2	10	0	0	12	0	7	0	0	7	1	39	40
Apprch %	27.3	72.7	0			0	66.7	33.3			16.7	83.3	0			0	100	0					
Total %	7.7	20.5	0		28.2	0	15.4	7.7		23.1	5.1	25.6	0		30.8	0	17.9	0		17.9	2.5	97.5	

	US-395 Southbound				Main Street Westbound				US-395 Northbound				Phelan Road Eastbound				
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 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	**1**	**2**	0	**3**	0	0	**1**	1	0	**1**	0	1	0	1	0	1	6
07:15 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	1	0	1	2
07:30 AM	0	0	0	0	0	**2**	0	**2**	0	0	0	0	0	1	0	1	3
07:45 AM	0	1	0	1	0	1	1	2	**1**	1	0	**2**	0	**2**	0	**2**	**7**
Total Volume	1	3	0	4	0	3	2	5	1	3	0	4	0	5	0	5	18
% App. Total	25	75	0		0	60	40		25	75	0		0	100	0		
PHF	.250	.375	.000	.333	.000	.375	.500	.625	.250	.750	.000	.500	.000	.625	.000	.625	.643

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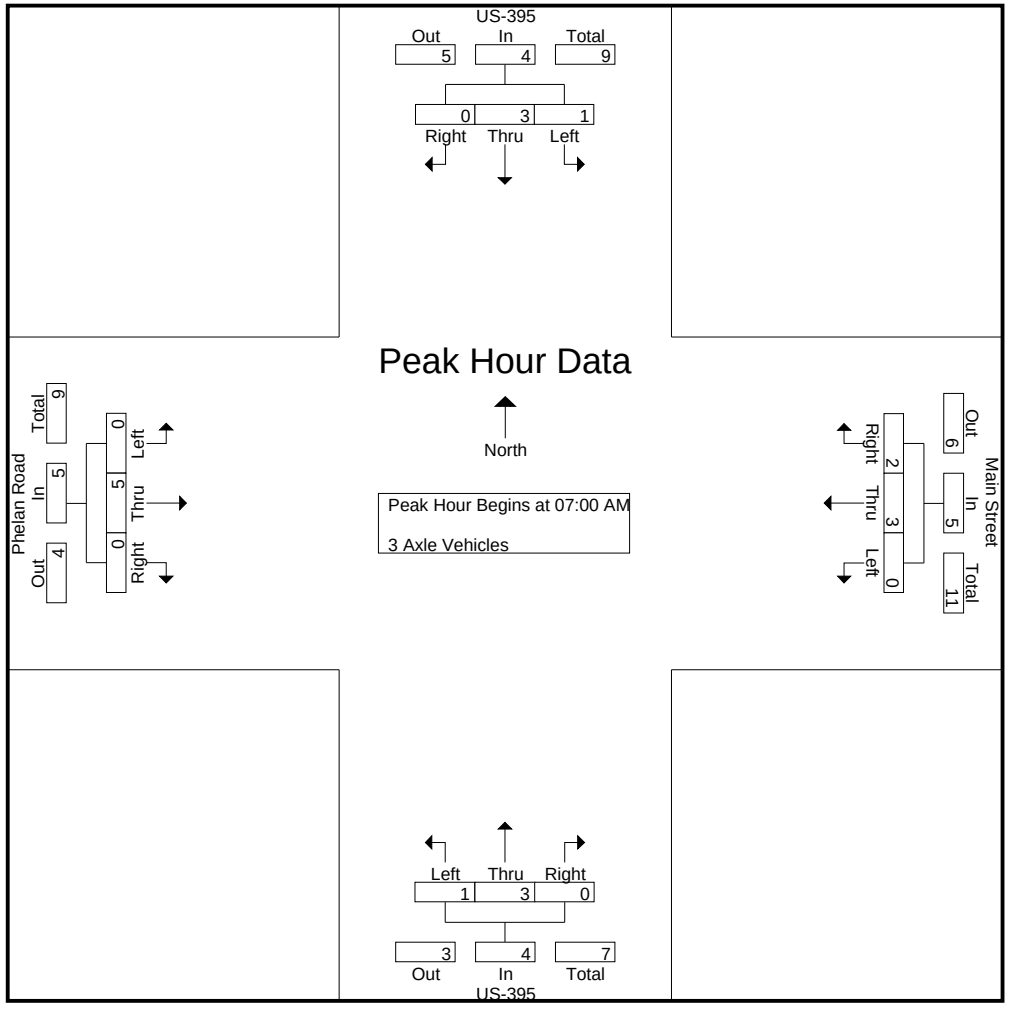
City of Hesperia
N/S: US-395
E/W: Phelan Road/Main Street
Weather: Clear

File Name : 08_HES_US-395_Main AM
Site Code : 05119658
Start Date : 9/28/2019
Page No : 2



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City of Hesperia
N/S: US-395
E/W: Phelan Road/Main Street
Weather: Clear

File Name : 08_HES_US-395_Main AM
Site Code : 05119658
Start Date : 9/28/2019

	US-395 Southbound				Main Street Westbound				US-395 Northbound				Phelan Road Eastbound				
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 07:45 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:00 AM				07:00 AM				07:00 AM				07:00 AM				
+0 mins.	**1**	**2**	0	**3**	0	0	**1**	1	0	**1**	0	1	0	1	0	1	
+15 mins.	0	0	0	0	0	0	0	0	0	1	0	1	0	1	0	1	
+30 mins.	0	0	0	0	0	**2**	0	**2**	0	0	0	0	0	1	0	1	
+45 mins.	0	1	0	1	0	1	1	2	**1**	1	0	**2**	0	**2**	0	**2**	
Total Volume	1	3	0	4	0	3	2	5	1	3	0	4	0	5	0	5	
% App. Total	25	75	0		0	60	40		25	75	0		0	100	0		
PHF	.250	.375	.000	.333	.000	.375	.500	.625	.250	.750	.000	.500	.000	.625	.000	.625	

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City of Hesperia
N/S: US-395
E/W: Phelan Road/Main Street
Weather: Clear

File Name : 08_HES_US-395_Main AM
Site Code : 05119658
Start Date : 9/28/2019
Page No : 1

Groups Printed- 4+ Axle Trucks

	US-395 Southbound					Main Street Westbound					US-395 Northbound					Phelan Road Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	2	15	0	0	17	0	0	1	0	1	0	13	0	0	13	0	1	1	0	2	0	33	33
07:15 AM	0	15	0	0	15	0	1	2	0	3	1	12	0	0	13	0	0	0	0	0	0	31	31
07:30 AM	0	18	0	0	18	0	0	1	0	1	0	14	0	0	14	0	2	0	0	2	0	35	35
07:45 AM	0	18	0	0	18	0	0	0	0	0	0	14	1	0	15	0	2	1	0	3	0	36	36
Total	2	66	0	0	68	0	1	4	0	5	1	53	1	0	55	0	5	2	0	7	0	135	135
08:00 AM	1	11	0	0	12	0	0	1	1	1	0	11	0	0	11	0	1	1	0	2	1	26	27
08:15 AM	0	16	0	0	16	0	0	0	0	0	1	11	0	0	12	0	1	0	0	1	0	29	29
08:30 AM	0	20	0	0	20	0	1	0	0	1	0	14	1	0	15	1	0	0	0	1	0	37	37
08:45 AM	0	16	0	0	16	0	1	0	0	1	1	12	0	0	13	0	0	0	0	0	0	30	30
Total	1	63	0	0	64	0	2	1	1	3	2	48	1	0	51	1	2	1	0	4	1	122	123
Grand Total	3	129	0	0	132	0	3	5	1	8	3	101	2	0	106	1	7	3	0	11	1	257	258
Apprch %	2.3	97.7	0			0	37.5	62.5			2.8	95.3	1.9			9.1	63.6	27.3					
Total %	1.2	50.2	0		51.4	0	1.2	1.9		3.1	1.2	39.3	0.8		41.2	0.4	2.7	1.2		4.3	0.4	99.6	

	US-395 Southbound				Main Street Westbound				US-395 Northbound				Phelan Road Eastbound				
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 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	**2**	15	0	17	0	0	1	1	0	13	0	13	0	1	**1**	2	33
07:15 AM	0	15	0	15	0	**1**	**2**	**3**	**1**	12	0	13	0	0	0	0	31
07:30 AM	0	**18**	0	**18**	0	0	1	1	0	**14**	0	14	0	**2**	0	2	35
07:45 AM	0	18	0	18	0	0	0	0	0	14	**1**	**15**	0	2	1	**3**	**36**
Total Volume	2	66	0	68	0	1	4	5	1	53	1	55	0	5	2	7	135
% App. Total	2.9	97.1	0		0	20	80		1.8	96.4	1.8		0	71.4	28.6		
PHF	.250	.917	.000	.944	.000	.250	.500	.417	.250	.946	.250	.917	.000	.625	.500	.583	.938

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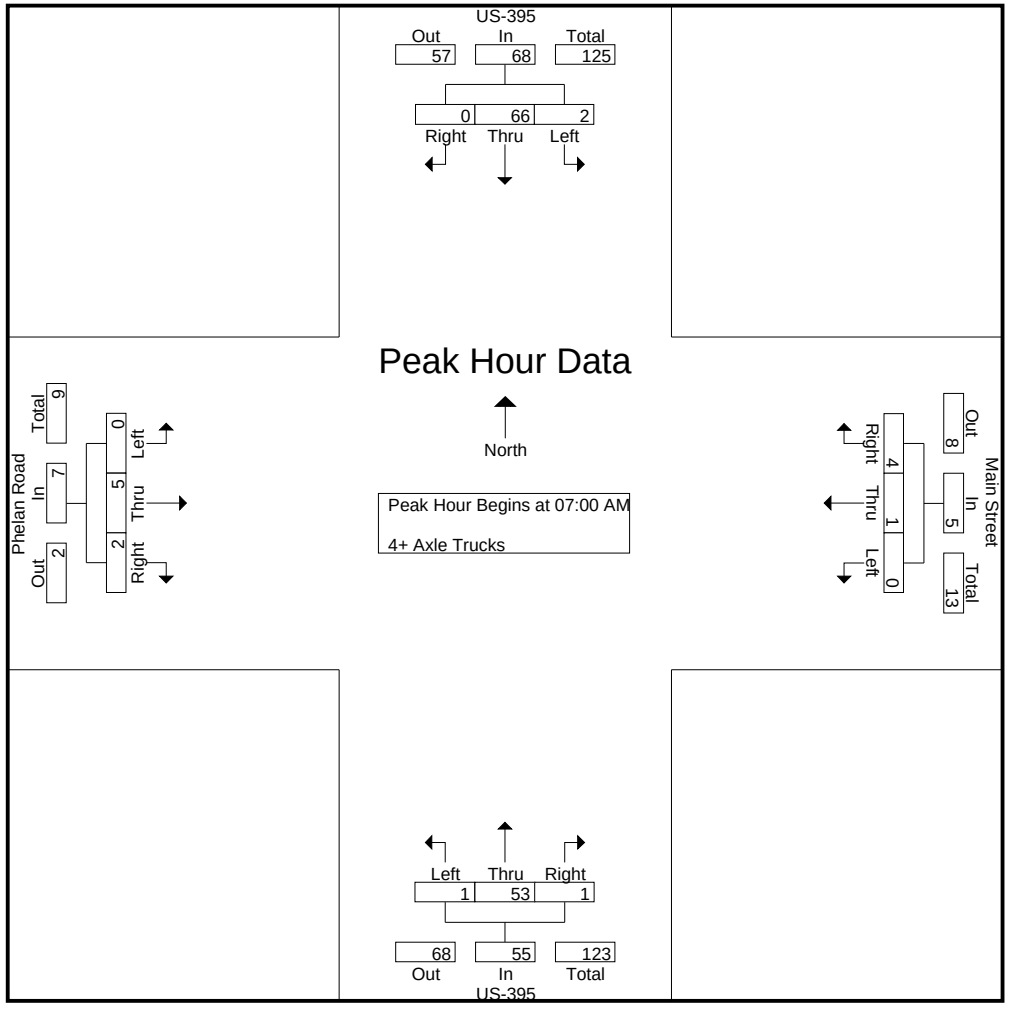
City of Hesperia
N/S: US-395
E/W: Phelan Road/Main Street
Weather: Clear

File Name : 08_HES_US-395_Main AM
Site Code : 05119658
Start Date : 9/28/2019
Page No : 2



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City of Hesperia
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Weather: Clear

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Site Code : 05119658
Start Date : 9/28/2019

	US-395 Southbound				Main Street Westbound				US-395 Northbound				Phelan Road Eastbound				
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 07:45 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:00 AM				07:00 AM				07:00 AM				07:00 AM				
+0 mins.	**2**	15	0	17	0	0	1	1	0	13	0	13	0	1	**1**	2	
+15 mins.	0	15	0	15	0	**1**	**2**	**3**	**1**	12	0	13	0	0	0	0	
+30 mins.	0	**18**	0	**18**	0	0	1	1	0	**14**	0	14	0	**2**	0	2	
+45 mins.	0	18	0	18	0	0	0	0	0	14	**1**	**15**	0	2	1	**3**	
Total Volume	2	66	0	68	0	1	4	5	1	53	1	55	0	5	2	7	
% App. Total	2.9	97.1	0		0	20	80		1.8	96.4	1.8		0	71.4	28.6		
PHF	.250	.917	.000	.944	.000	.250	.500	.417	.250	.946	.250	.917	.000	.625	.500	.583	

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City of Hesperia
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File Name : 08_HES_US-395_Main PM
Site Code : 05119658
Start Date : 9/28/2019
Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	US-395 Southbound					Main Street Westbound					US-395 Northbound					Phelan Road Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	47	144	11	5	202	1	164	52	19	217	31	209	10	2	250	8	137	22	11	167	37	836	873
04:15 PM	46	132	9	4	187	3	180	68	25	251	47	230	6	0	283	9	140	12	5	161	34	882	916
04:30 PM	42	142	6	1	190	1	144	57	16	202	38	225	2	2	265	15	138	19	8	172	27	829	856
04:45 PM	45	117	11	4	173	4	158	50	20	212	37	252	5	3	294	11	114	11	3	136	30	815	845
Total	180	535	37	14	752	9	646	227	80	882	153	916	23	7	1092	43	529	64	27	636	128	3362	3490
05:00 PM	43	145	9	0	197	3	176	54	20	233	24	204	6	2	234	7	139	12	3	158	25	822	847
05:15 PM	49	126	9	2	184	0	128	60	25	188	39	229	7	0	275	16	152	21	9	189	36	836	872
05:30 PM	36	135	6	5	177	3	170	66	15	239	45	245	7	0	297	14	134	21	7	169	27	882	909
05:45 PM	39	134	4	2	177	3	137	54	16	194	28	259	8	3	295	6	104	26	13	136	34	802	836
Total	167	540	28	9	735	9	611	234	76	854	136	937	28	5	1101	43	529	80	32	652	122	3342	3464
Grand Total	347	1075	65	23	1487	18	1257	461	156	1736	289	1853	51	12	2193	86	1058	144	59	1288	250	6704	6954
Apprch %	23.3	72.3	4.4			1	72.4	26.6			13.2	84.5	2.3			6.7	82.1	11.2					
Total %	5.2	16	1		22.2	0.3	18.8	6.9		25.9	4.3	27.6	0.8		32.7	1.3	15.8	2.1		19.2	3.6	96.4	
Passenger Vehicles	338	922	59		1342	18	1241	449		1861	275	1744	47		2077	84	1026	139		1306	0	0	6586
% Passenger Vehicles	97.4	85.8	90.8	100	88.9	100	98.7	97.4	98.1	98.4	95.2	94.1	92.2	91.7	94.2	97.7	97	96.5	96.6	97	0	0	94.7
Large 2 Axle Vehicles	4	19	2		25	0	9	7		16	9	18	1		28	2	25	1		28	0	0	97
% Large 2 Axle Vehicles	1.2	1.8	3.1	0	1.7	0	0.7	1.5	0	0.8	3.1	1	2	0	1.3	2.3	2.4	0.7	0	2.1	0	0	1.4
3 Axle Vehicles	0	6	0		6	0	2	0		2	0	11	0		11	0	0	3		5	0	0	24
% 3 Axle Vehicles	0	0.6	0	0	0.4	0	0.2	0	0	0.1	0	0.6	0	0	0.5	0	0	2.1	3.4	0.4	0	0	0.3
4+ Axle Trucks	5	128	4		137	0	5	5		13	5	80	3		89	0	7	1		8	0	0	247
% 4+ Axle Trucks	1.4	11.9	6.2	0	9.1	0	0.4	1.1	1.9	0.7	1.7	4.3	5.9	8.3	4	0	0.7	0.7	0	0.6	0	0	3.6

	US-395 Southbound				Main Street Westbound				US-395 Northbound				Phelan Road Eastbound				
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	**47**	**144**	**11**	**202**	1	164	52	217	31	209	**10**	250	8	137	**22**	167	836
04:15 PM	46	132	9	187	3	**180**	**68**	**251**	**47**	230	6	283	9	**140**	12	161	**882**
04:30 PM	42	142	6	190	1	144	57	202	38	225	2	265	**15**	138	19	**172**	829
04:45 PM	45	117	11	173	**4**	158	50	212	37	**252**	5	**294**	11	114	11	136	815
Total Volume	180	535	37	752	9	646	227	882	153	916	23	1092	43	529	64	636	3362
% App. Total	23.9	71.1	4.9		1	73.2	25.7		14	83.9	2.1		6.8	83.2	10.1		
PHF	.957	.929	.841	.931	.563	.897	.835	.878	.814	.909	.575	.929	.717	.945	.727	.924	.953

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City of Hesperia
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File Name : 08_HES_US-395_Main PM
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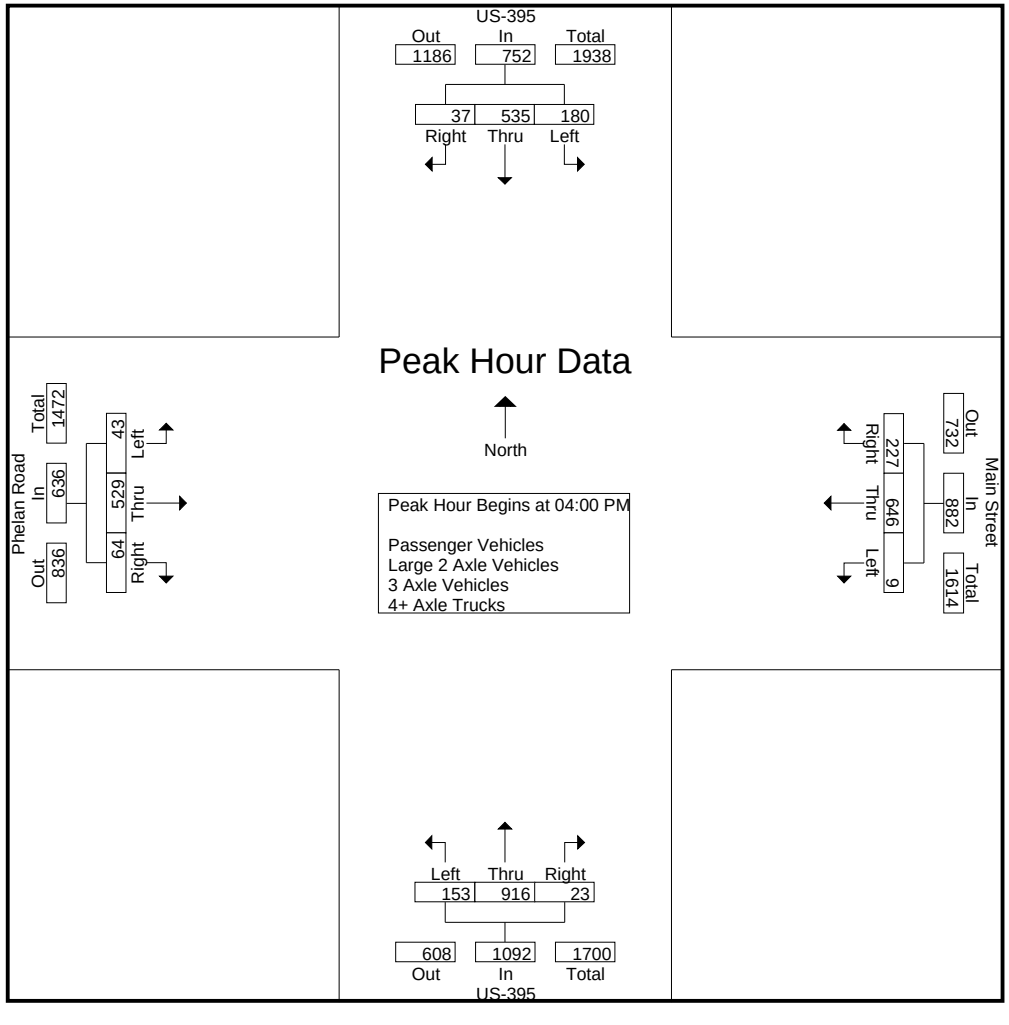

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File Name : 08_HES_US-395_Main PM
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Page No : 3

	US-395 Southbound				Main Street Westbound				US-395 Northbound				Phelan Road Eastbound				
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 Each Approach Begins at:																	
	04:00 PM				04:15 PM				05:00 PM				04:30 PM				
+0 mins.	**47**	**144**	**11**	**202**	3	**180**	**68**	**251**	24	204	6	234	15	138	19	172	
+15 mins.	46	132	9	187	1	144	57	202	39	229	7	275	11	114	11	136	
+30 mins.	42	142	6	190	**4**	158	50	212	**45**	245	7	**297**	7	139	12	158	
+45 mins.	45	117	11	173	3	176	54	233	28	**259**	**8**	295	**16**	**152**	**21**	**189**	
Total Volume	180	535	37	752	11	658	229	898	136	937	28	1101	49	543	63	655	
% App. Total	23.9	71.1	4.9		1.2	73.3	25.5		12.4	85.1	2.5		7.5	82.9	9.6		
PHF	.957	.929	.841	.931	.688	.914	.842	.894	.756	.904	.875	.927	.766	.893	.750	.866	

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City of Hesperia
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Weather: Clear

File Name : 08_HES_US-395_Main PM
Site Code : 05119658
Start Date : 9/28/2019
Page No : 1

Groups Printed- Passenger Vehicles

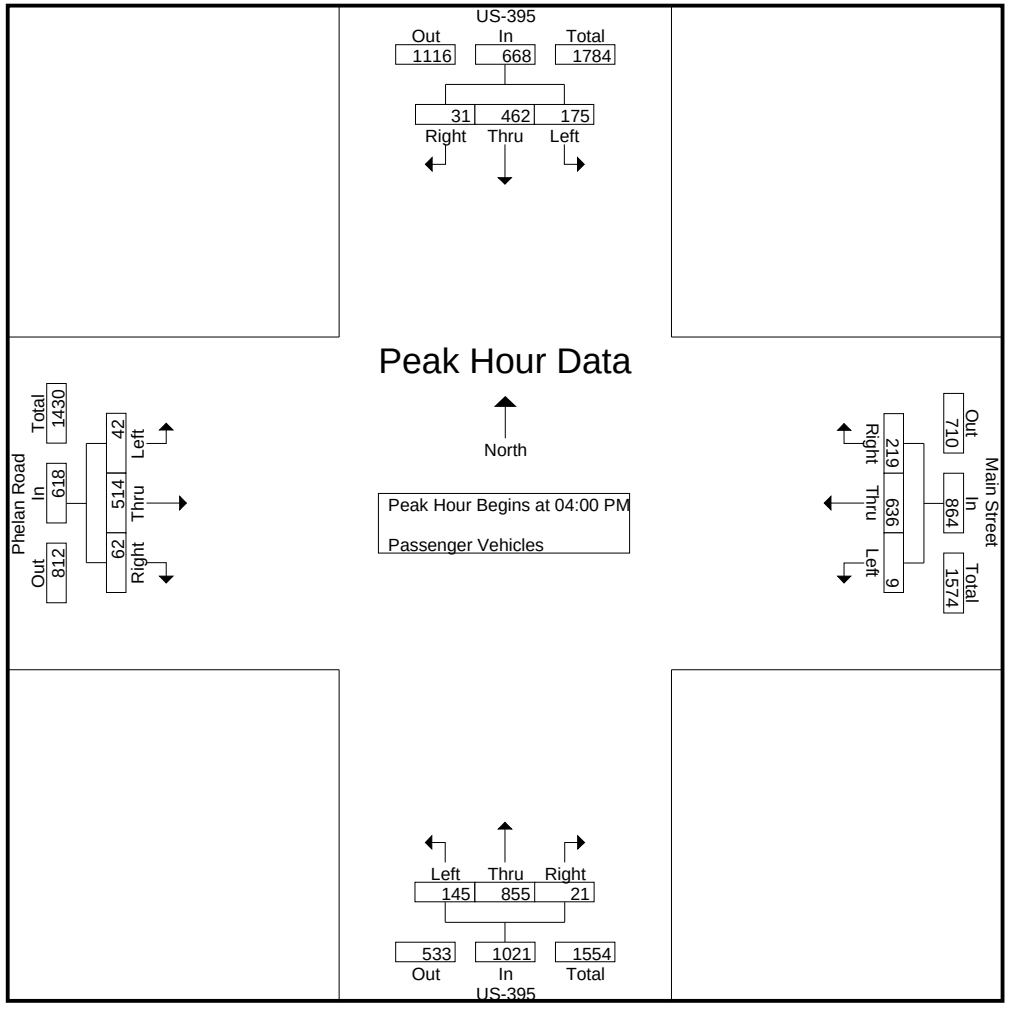
	US-395 Southbound					Main Street Westbound					US-395 Northbound					Phelan Road Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	44	124	9	5	177	1	161	50	18	212	29	194	9	2	232	8	136	22	11	166	36	787	823
04:15 PM	45	116	7	4	168	3	177	65	25	245	46	209	5	0	260	9	139	12	5	160	34	833	867
04:30 PM	41	124	4	1	169	1	142	55	16	198	36	208	2	2	246	14	130	17	8	161	27	774	801
04:45 PM	45	98	11	4	154	4	156	49	19	209	34	244	5	3	283	11	109	11	3	131	29	777	806
Total	175	462	31	14	668	9	636	219	78	864	145	855	21	7	1021	42	514	62	27	618	126	3171	3297
05:00 PM	42	122	9	0	173	3	172	53	20	228	24	193	6	2	223	7	134	12	3	153	25	777	802
05:15 PM	48	107	9	2	164	0	126	59	24	185	39	220	7	0	266	16	148	20	9	184	35	799	834
05:30 PM	35	115	6	5	156	3	170	66	15	239	44	225	7	0	276	13	130	20	6	163	26	834	860
05:45 PM	38	116	4	2	158	3	137	52	16	192	23	251	6	2	280	6	100	25	12	131	32	761	793
Total	163	460	28	9	651	9	605	230	75	844	130	889	26	4	1045	42	512	77	30	631	118	3171	3289
Grand Total	338	922	59	23	1319	18	1241	449	153	1708	275	1744	47	11	2066	84	1026	139	57	1249	244	6342	6586
Apprch %	25.6	69.9	4.5			1.1	72.7	26.3			13.3	84.4	2.3			6.7	82.1	11.1					
Total %	5.3	14.5	0.9		20.8	0.3	19.6	7.1		26.9	4.3	27.5	0.7		32.6	1.3	16.2	2.2		19.7	3.7	96.3	

	US-395 Southbound				Main Street Westbound				US-395 Northbound				Phelan Road Eastbound				
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	44	**124**	9	**177**	1	161	50	212	29	194	**9**	232	8	136	**22**	**166**	787
04:15 PM	**45**	116	7	168	3	**177**	**65**	**245**	**46**	209	5	260	9	**139**	12	160	**833**
04:30 PM	41	124	4	169	1	142	55	198	36	208	2	246	**14**	130	17	161	774
04:45 PM	45	98	**11**	154	**4**	156	49	209	34	**244**	5	**283**	11	109	11	131	777
Total Volume	175	462	31	668	9	636	219	864	145	855	21	1021	42	514	62	618	3171
% App. Total	26.2	69.2	4.6		1	73.6	25.3		14.2	83.7	2.1		6.8	83.2	10		
PHF	.972	.931	.705	.944	.563	.898	.842	.882	.788	.876	.583	.902	.750	.924	.705	.931	.952

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Hesperia
N/S: US-395
E/W: Phelan Road/Main Street
Weather: Clear

File Name : 08_HES_US-395_Main PM
Site Code : 05119658
Start Date : 9/28/2019
Page No : 2



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Corona, CA 92878
(951) 268-6268

City of Hesperia
N/S: US-395
E/W: Phelan Road/Main Street
Weather: Clear

File Name : 08_HES_US-395_Main PM
Site Code : 05119658
Start Date : 9/28/2019

	US-395 Southbound				Main Street Westbound				US-395 Northbound				Phelan Road Eastbound				
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 Each Approach Begins at:																	
	04:00 PM				04:00 PM				04:00 PM				04:00 PM				
+0 mins.	44	**124**	9	**177**	1	161	50	212	29	194	**9**	232	8	136	**22**	**166**	
+15 mins.	**45**	116	7	168	3	**177**	**65**	**245**	**46**	209	5	260	9	**139**	12	160	
+30 mins.	41	124	4	169	1	142	55	198	36	208	2	246	**14**	130	17	161	
+45 mins.	45	98	**11**	154	**4**	156	49	209	34	**244**	5	**283**	11	109	11	131	
Total Volume	175	462	31	668	9	636	219	864	145	855	21	1021	42	514	62	618	
% App. Total	26.2	69.2	4.6		1	73.6	25.3		14.2	83.7	2.1		6.8	83.2	10		
PHF	.972	.931	.705	.944	.563	.898	.842	.882	.788	.876	.583	.902	.750	.924	.705	.931	

Counts Unlimited
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City of Hesperia
N/S: US-395
E/W: Phelan Road/Main Street
Weather: Clear

File Name : 08_HES_US-395_Main PM
Site Code : 05119658
Start Date : 9/28/2019
Page No : 1

Groups Printed- Large 2 Axle Vehicles

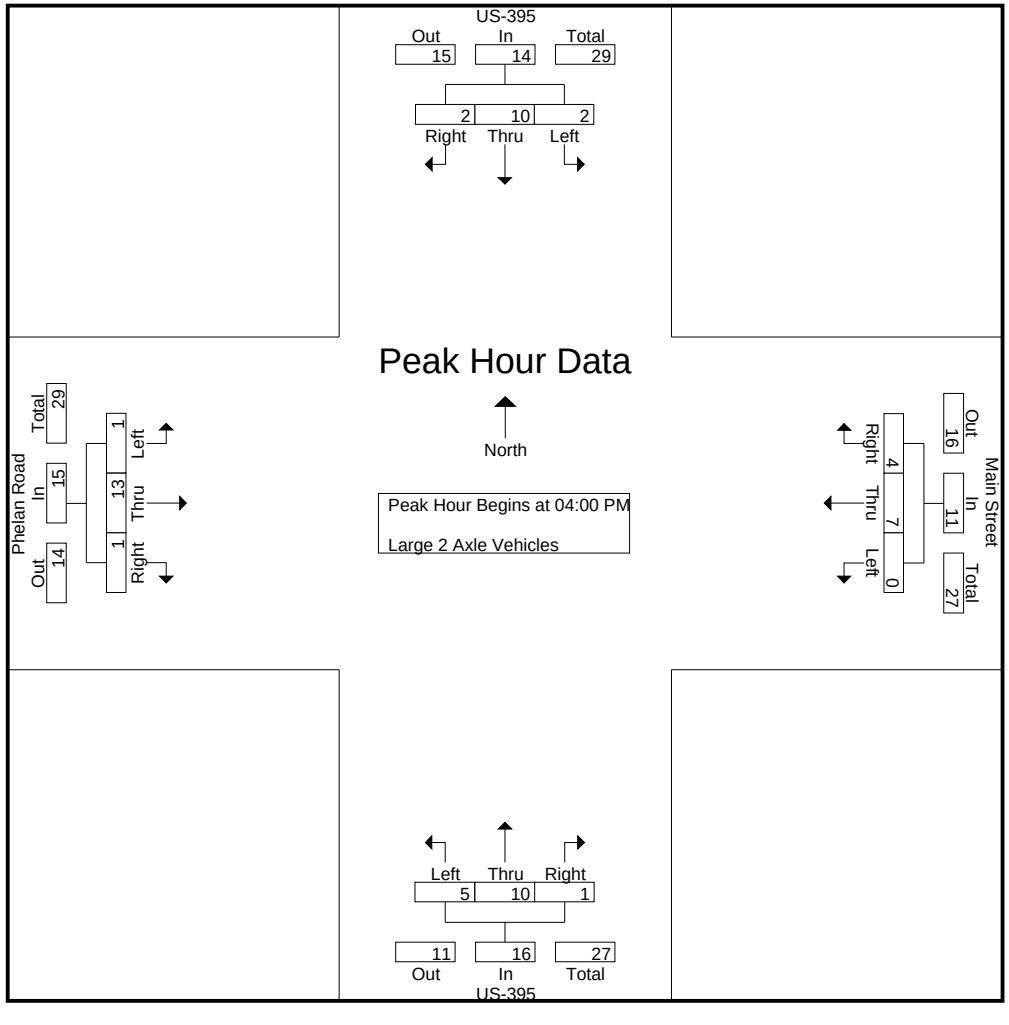
	US-395 Southbound					Main Street Westbound					US-395 Northbound					Phelan Road Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	0	3	1	0	4	0	2	1	0	3	1	3	1	0	5	0	1	0	0	1	0	13	13
04:15 PM	1	2	0	0	3	0	2	2	0	4	1	4	0	0	5	0	1	0	0	1	0	13	13
04:30 PM	1	0	1	0	2	0	2	1	0	3	2	2	0	0	4	1	6	1	0	8	0	17	17
04:45 PM	0	5	0	0	5	0	1	0	0	1	1	1	0	0	2	0	5	0	0	5	0	13	13
Total	2	10	2	0	14	0	7	4	0	11	5	10	1	0	16	1	13	1	0	15	0	56	56
05:00 PM	0	4	0	0	4	0	2	1	0	3	0	2	0	0	2	0	5	0	0	5	0	14	14
05:15 PM	1	0	0	0	1	0	0	0	0	0	0	2	0	0	2	0	2	0	0	2	0	5	5
05:30 PM	1	3	0	0	4	0	0	0	0	0	1	4	0	0	5	1	4	0	0	5	0	14	14
05:45 PM	0	2	0	0	2	0	0	2	0	2	3	0	0	0	3	0	1	0	0	1	0	8	8
Total	2	9	0	0	11	0	2	3	0	5	4	8	0	0	12	1	12	0	0	13	0	41	41
Grand Total	4	19	2	0	25	0	9	7	0	16	9	18	1	0	28	2	25	1	0	28	0	97	97
Apprch %	16	76	8			0	56.2	43.8			32.1	64.3	3.6			7.1	89.3	3.6					
Total %	4.1	19.6	2.1		25.8	0	9.3	7.2		16.5	9.3	18.6	1		28.9	2.1	25.8	1		28.9	0	100	

	US-395 Southbound				Main Street Westbound				US-395 Northbound				Phelan Road Eastbound				
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	3	**1**	4	0	**2**	1	3	1	3	**1**	**5**	0	1	0	1	13
04:15 PM	**1**	2	0	3	0	2	**2**	**4**	1	**4**	0	5	0	1	0	1	13
04:30 PM	1	0	1	2	0	2	1	3	**2**	2	0	4	**1**	**6**	**1**	**8**	**17**
04:45 PM	0	**5**	0	**5**	0	1	0	1	1	1	0	2	0	5	0	5	13
Total Volume	2	10	2	14	0	7	4	11	5	10	1	16	1	13	1	15	56
% App. Total	14.3	71.4	14.3		0	63.6	36.4		31.2	62.5	6.2		6.7	86.7	6.7		
PHF	.500	.500	.500	.700	.000	.875	.500	.688	.625	.625	.250	.800	.250	.542	.250	.469	.824

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Hesperia
N/S: US-395
E/W: Phelan Road/Main Street
Weather: Clear

File Name : 08_HES_US-395_Main PM
Site Code : 05119658
Start Date : 9/28/2019
Page No : 2



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City of Hesperia
N/S: US-395
E/W: Phelan Road/Main Street
Weather: Clear

File Name : 08_HES_US-395_Main PM
Site Code : 05119658
Start Date : 9/28/2019

	US-395 Southbound				Main Street Westbound				US-395 Northbound				Phelan Road Eastbound				
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 Each Approach Begins at:																	
	04:00 PM				04:00 PM				04:00 PM				04:00 PM				
+0 mins.	0	3	**1**	4	0	**2**	1	3	1	3	**1**	**5**	0	1	0	1	
+15 mins.	**1**	2	0	3	0	2	**2**	**4**	1	**4**	0	5	0	1	0	1	
+30 mins.	1	0	1	2	0	2	1	3	**2**	2	0	4	**1**	**6**	**1**	**8**	
+45 mins.	0	**5**	0	**5**	0	1	0	1	1	1	0	2	0	5	0	5	
Total Volume	2	10	2	14	0	7	4	11	5	10	1	16	1	13	1	15	
% App. Total	14.3	71.4	14.3		0	63.6	36.4		31.2	62.5	6.2		6.7	86.7	6.7		
PHF	.500	.500	.500	.700	.000	.875	.500	.688	.625	.625	.250	.800	.250	.542	.250	.469	

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City of Hesperia
N/S: US-395
E/W: Phelan Road/Main Street
Weather: Clear

File Name : 08_HES_US-395_Main PM
Site Code : 05119658
Start Date : 9/28/2019
Page No : 1

Groups Printed- 3 Axle Vehicles

	US-395 Southbound					Main Street Westbound					US-395 Northbound					Phelan Road Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	3	3
04:15 PM	0	0	0	0	0	0	1	0	0	1	0	4	0	0	4	0	0	0	0	0	0	5	5
04:30 PM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	1	0	1	0	3	3
04:45 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
Total	0	3	0	0	3	0	1	0	0	1	0	7	0	0	7	0	0	1	0	1	0	12	12
05:00 PM	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2
05:15 PM	0	0	0	0	0	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0	0	2	2
05:30 PM	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	0	0	1	1	1	1	4	5
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	1	1	1	1	2	3
Total	0	3	0	0	3	0	1	0	0	1	0	4	0	0	4	0	0	2	2	2	2	10	12
Grand Total	0	6	0	0	6	0	2	0	0	2	0	11	0	0	11	0	0	3	2	3	2	22	24
Apprch %	0	100	0			0	100	0			0	100	0			0	0	100					
Total %	0	27.3	0		27.3	0	9.1	0		9.1	0	50	0		50	0	0	13.6		13.6	8.3	91.7	

	US-395 Southbound				Main Street Westbound				US-395 Northbound				Phelan Road Eastbound				
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	**1**	0	**1**	0	0	0	0	0	2	0	2	0	0	0	0	3
04:15 PM	0	0	0	0	0	**1**	0	**1**	0	**4**	0	**4**	0	0	0	0	**5**
04:30 PM	0	1	0	1	0	0	0	0	0	1	0	1	0	0	**1**	**1**	3
04:45 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Total Volume	0	3	0	3	0	1	0	1	0	7	0	7	0	0	1	1	12
% App. Total	0	100	0		0	100	0		0	100	0		0	0	100		
PHF	.000	.750	.000	.750	.000	.250	.000	.250	.000	.438	.000	.438	.000	.000	.250	.250	.600

Counts Unlimited
PO Box 1178
Corona, CA 92878
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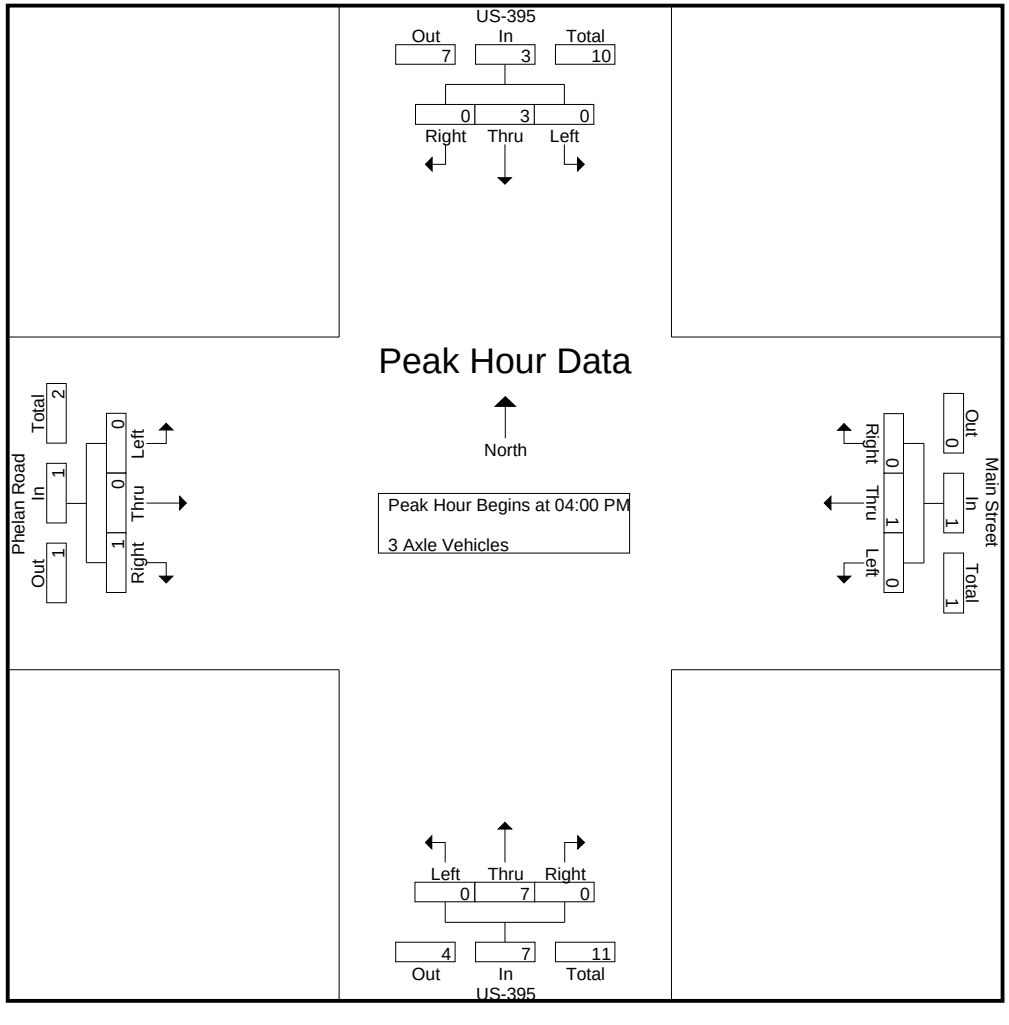
City of Hesperia
N/S: US-395
E/W: Phelan Road/Main Street
Weather: Clear

File Name : 08_HES_US-395_Main PM
Site Code : 05119658
Start Date : 9/28/2019
Page No : 2



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City of Hesperia
N/S: US-395
E/W: Phelan Road/Main Street
Weather: Clear

File Name : 08_HES_US-395_Main PM
Site Code : 05119658
Start Date : 9/28/2019
Page No : 3

	US-395 Southbound				Main Street Westbound				US-395 Northbound				Phelan Road Eastbound				
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 Each Approach Begins at:																	
	04:00 PM				04:00 PM				04:00 PM				04:00 PM				
+0 mins.	0	**1**	0	**1**	0	0	0	0	0	2	0	2	0	0	0	0	
+15 mins.	0	0	0	0	0	**1**	0	**1**	0	**4**	0	**4**	0	0	0	0	
+30 mins.	0	1	0	1	0	0	0	0	0	1	0	1	0	0	**1**	**1**	
+45 mins.	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	
Total Volume	0	3	0	3	0	1	0	1	0	7	0	7	0	0	1	1	
% App. Total	0	100	0		0	100	0		0	100	0		0	0	100		
PHF	.000	.750	.000	.750	.000	.250	.000	.250	.000	.438	.000	.438	.000	.000	.250	.250	

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City of Hesperia
N/S: US-395
E/W: Phelan Road/Main Street
Weather: Clear

File Name : 08_HES_US-395_Main PM
Site Code : 05119658
Start Date : 9/28/2019
Page No : 1

Groups Printed- 4+ Axle Trucks

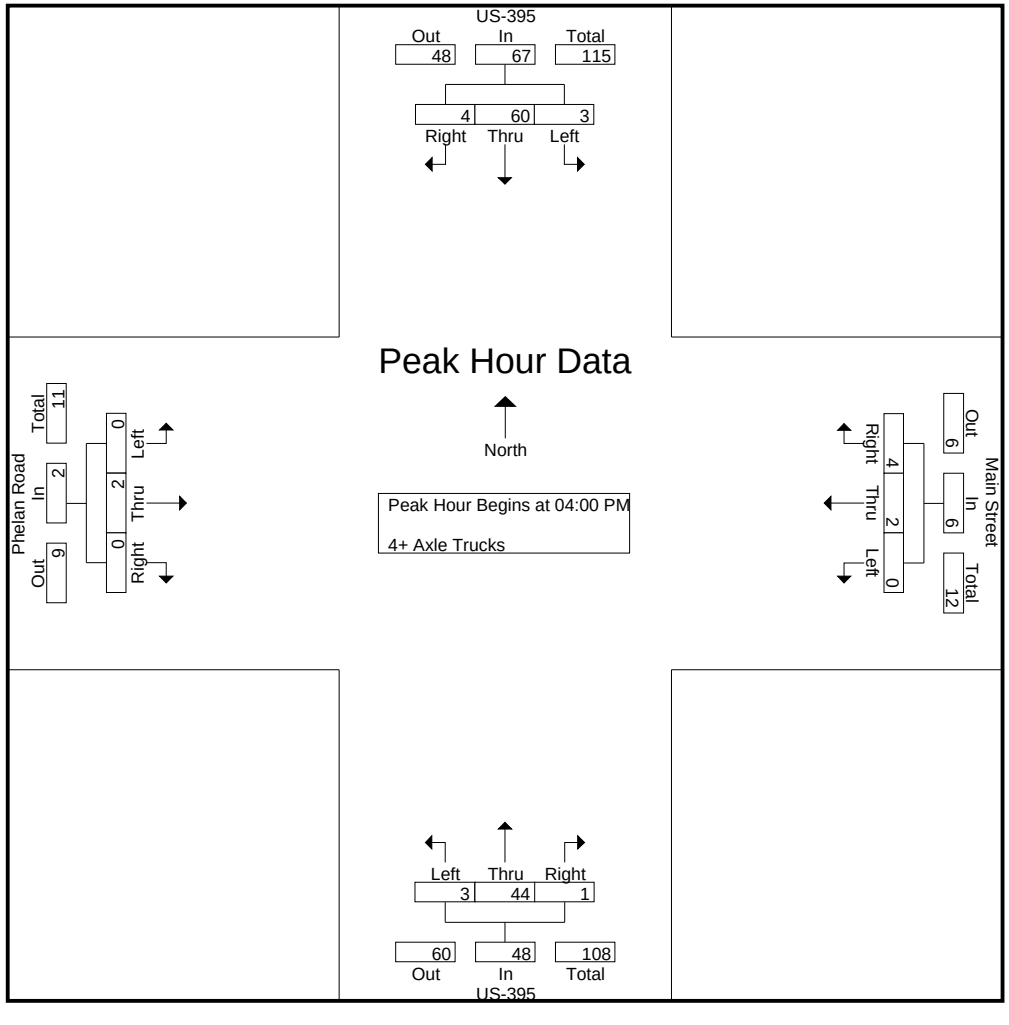
	US-395 Southbound					Main Street Westbound					US-395 Northbound					Phelan Road Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	3	16	1	0	20	0	1	1	1	2	1	10	0	0	11	0	0	0	0	0	1	33	34
04:15 PM	0	14	2	0	16	0	0	1	0	1	0	13	1	0	14	0	0	0	0	0	0	31	31
04:30 PM	0	17	1	0	18	0	0	1	0	1	0	14	0	0	14	0	2	0	0	2	0	35	35
04:45 PM	0	13	0	0	13	0	1	1	1	2	2	7	0	0	9	0	0	0	0	0	1	24	25
Total	3	60	4	0	67	0	2	4	2	6	3	44	1	0	48	0	2	0	0	2	2	123	125
05:00 PM	1	17	0	0	18	0	2	0	0	2	0	9	0	0	9	0	0	0	0	0	0	29	29
05:15 PM	0	19	0	0	19	0	1	1	1	2	0	6	0	0	6	0	2	1	0	3	1	30	31
05:30 PM	0	16	0	0	16	0	0	0	0	0	0	14	0	0	14	0	0	0	0	0	0	30	30
05:45 PM	1	16	0	0	17	0	0	0	0	0	2	7	2	1	11	0	3	0	0	3	1	31	32
Total	2	68	0	0	70	0	3	1	1	4	2	36	2	1	40	0	5	1	0	6	2	120	122
Grand Total	5	128	4	0	137	0	5	5	3	10	5	80	3	1	88	0	7	1	0	8	4	243	247
Apprch %	3.6	93.4	2.9			0	50	50			5.7	90.9	3.4			0	87.5	12.5					
Total %	2.1	52.7	1.6		56.4	0	2.1	2.1		4.1	2.1	32.9	1.2		36.2	0	2.9	0.4		3.3	1.6	98.4	

	US-395 Southbound				Main Street Westbound				US-395 Northbound				Phelan Road Eastbound				
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**	16	1	**20**	0	**1**	**1**	**2**	1	10	0	11	0	0	0	0	33
04:15 PM	0	14	**2**	16	0	0	1	1	0	13	**1**	**14**	0	0	0	0	31
04:30 PM	0	**17**	1	18	0	0	1	1	0	**14**	0	14	0	**2**	0	**2**	**35**
04:45 PM	0	13	0	13	0	1	1	2	**2**	7	0	9	0	0	0	0	24
Total Volume	3	60	4	67	0	2	4	6	3	44	1	48	0	2	0	2	123
% App. Total	4.5	89.6	6		0	33.3	66.7		6.2	91.7	2.1		0	100	0		
PHF	.250	.882	.500	.838	.000	.500	1.00	.750	.375	.786	.250	.857	.000	.250	.000	.250	.879

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Hesperia
N/S: US-395
E/W: Phelan Road/Main Street
Weather: Clear

File Name : 08_HES_US-395_Main PM
Site Code : 05119658
Start Date : 9/28/2019
Page No : 2



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City of Hesperia
N/S: US-395
E/W: Phelan Road/Main Street
Weather: Clear

File Name : 08_HES_US-395_Main PM
Site Code : 05119658
Start Date : 9/28/2019

	US-395 Southbound				Main Street Westbound				US-395 Northbound				Phelan Road Eastbound				
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 Each Approach Begins at:																	
	04:00 PM				04:00 PM				04:00 PM				04:00 PM				
+0 mins.	**3**	16	1	**20**	0	**1**	**1**	**2**	1	10	0	11	0	0	0	0	
+15 mins.	0	14	**2**	16	0	0	1	1	0	13	**1**	**14**	0	0	0	0	
+30 mins.	0	**17**	1	18	0	0	1	1	0	**14**	0	14	0	**2**	0	**2**	
+45 mins.	0	13	0	13	0	1	1	2	**2**	7	0	9	0	0	0	0	
Total Volume	3	60	4	67	0	2	4	6	3	44	1	48	0	2	0	2	
% App. Total	4.5	89.6	6		0	33.3	66.7		6.2	91.7	2.1		0	100	0		
PHF	.250	.882	.500	.838	.000	.500	1.000	.750	.375	.786	.250	.857	.000	.250	.000	.250	

Location: Hesperia
N/S: US-395
E/W: Phelan Road/Main Street

Date: 9/28/2019
Day: Saturday

PEDESTRIANS

	North Leg US-395	East Leg Phelan Road/Main Street	South Leg US-395	West Leg Phelan Road/Main Street	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0

	North Leg US-395	East Leg Phelan Road/Main Street	South Leg US-395	West Leg Phelan Road/Main Street	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
5:00 PM	0	1	0	0	1
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
TOTAL VOLUMES:	0	1	0	0	1

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
951-268-6268

Location: Hesperia
N/S: US-395
E/W: Phelan Road/Main Street

Date: 9/28/2019
Day: Saturday

BICYCLES

	Southbound US-395			Westbound Phelan Road/Main Street			Northbound US-395			Eastbound Phelan Road/Main Street			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	0	0	0	0	0	0	0	0

	Southbound US-395			Westbound Phelan Road/Main Street			Northbound US-395			Eastbound Phelan Road/Main Street			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	1	1
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	0	0	0	0	0	1	1	2

INTERSECTION TURNING MOVEMENT COUNTS

T1218

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Hesperia	PROJECT #:	SC2468
Tue, Jan 7, 20	NORTH & SOUTH:	SR-395	LOCATION #:	14
	EAST & WEST:	Poplar	CONTROL:	STOP W

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

Add U-Turns to Left Turns

		NORTHBOUND (SR-395)			SOUTHBOUND (SR-395)			EASTBOUND (Poplar)			WESTBOUND (Poplar)			
	LANES:	NL X	NT 2	NR 0	SL 1	ST 1	SR X	EL X	ET X	ER X	WL 1	WT X	WR 1	TOTAL
AM	7:00 AM	0	142	3	7	245	0	0	0	0	0	0	1	398
	7:15 AM	0	166	4	3	231	0	0	0	0	1	0	1	406
	7:30 AM	0	174	3	2	195	0	0	0	0	0	0	3	377
	7:45 AM	0	136	0	10	180	0	0	0	0	1	0	3	330
	8:00 AM	0	94	3	5	207	0	0	0	0	1	0	2	312
	8:15 AM	0	104	6	14	228	0	0	0	0	1	0	7	360
	8:30 AM	0	126	2	6	172	0	0	0	0	0	0	2	308
	8:45 AM	0	110	6	6	165	0	0	0	0	2	0	4	293
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	1,052	27	53	1,623	0	0	0	0	6	0	23	2,784
	APPROACH %	0%	97%	3%	3%	97%	0%	0%	0%	0%	21%	0%	79%	
	APP/DEPART	1,079	/	1,075	1,676	/	1,629	0	/	80	29	/	0	0
	BEGIN PEAK HR		7:00 AM											
	VOLUMES	0	618	10	22	851	0	0	0	0	2	0	8	1,511
	APPROACH %	0%	98%	2%	3%	97%	0%	0%	0%	0%	20%	0%	80%	
	PEAK HR FACTOR		0.887			0.866			0.000			0.625		0.930
	APP/DEPART	628	/	626	873	/	853	0	/	32	10	/	0	0
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	261	7	1	163	0	0	0	0	2	0	6	440
	4:15 PM	0	243	7	3	191	0	0	0	0	1	0	3	448
	4:30 PM	0	250	4	1	172	0	0	0	0	1	0	4	432
	4:45 PM	0	273	7	1	144	0	0	0	0	1	0	6	432
	5:00 PM	0	250	8	3	143	0	0	0	0	3	0	11	418
	5:15 PM	0	255	7	3	163	0	0	0	0	1	0	1	430
	5:30 PM	0	256	6	1	132	0	0	0	0	0	0	6	401
	5:45 PM	0	284	7	2	161	0	0	0	0	0	0	3	457
	VOLUMES	0	2,072	53	15	1,269	0	0	0	0	9	0	40	3,458
	APPROACH %	0%	98%	2%	1%	99%	0%	0%	0%	0%	18%	0%	82%	
	APP/DEPART	2,125	/	2,112	1,284	/	1,278	0	/	68	49	/	0	0
	BEGIN PEAK HR		4:00 PM											
	VOLUMES	0	1,027	25	6	670	0	0	0	0	5	0	19	1,752
	APPROACH %	0%	98%	2%	1%	99%	0%	0%	0%	0%	21%	0%	79%	
	PEAK HR FACTOR		0.939			0.871			0.000			0.750		0.978
	APP/DEPART	1,052	/	1,046	676	/	675	0	/	31	24	/	0	0

U-TURNS

NB	SB	EB	WB	TTL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
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0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

RTOR

NRR	SRR	ERR	WRR
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
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0	0	0	0
0	0	0	0
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0	0	0	0
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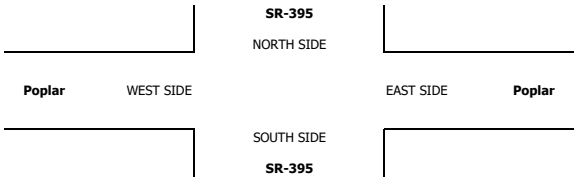
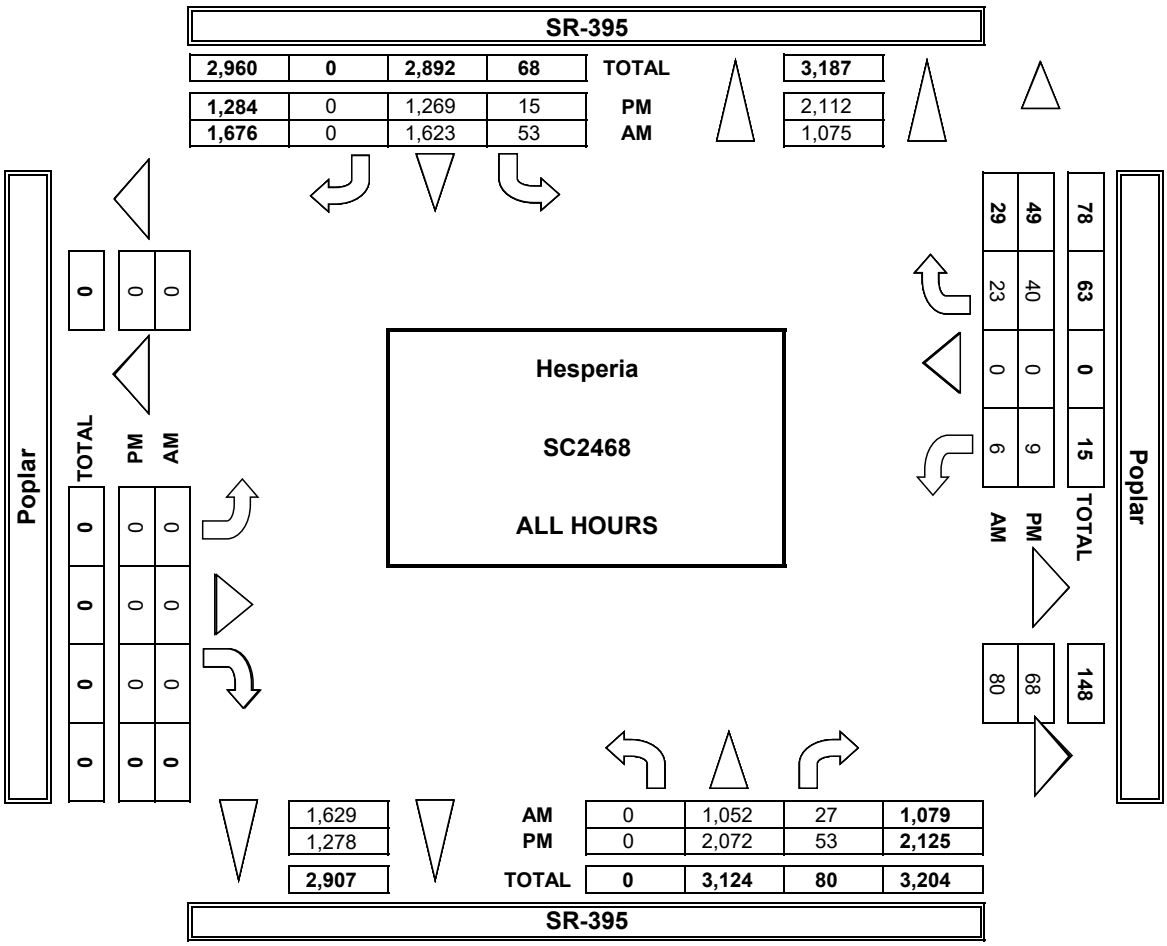
0	0	0	0
0	0	0	0

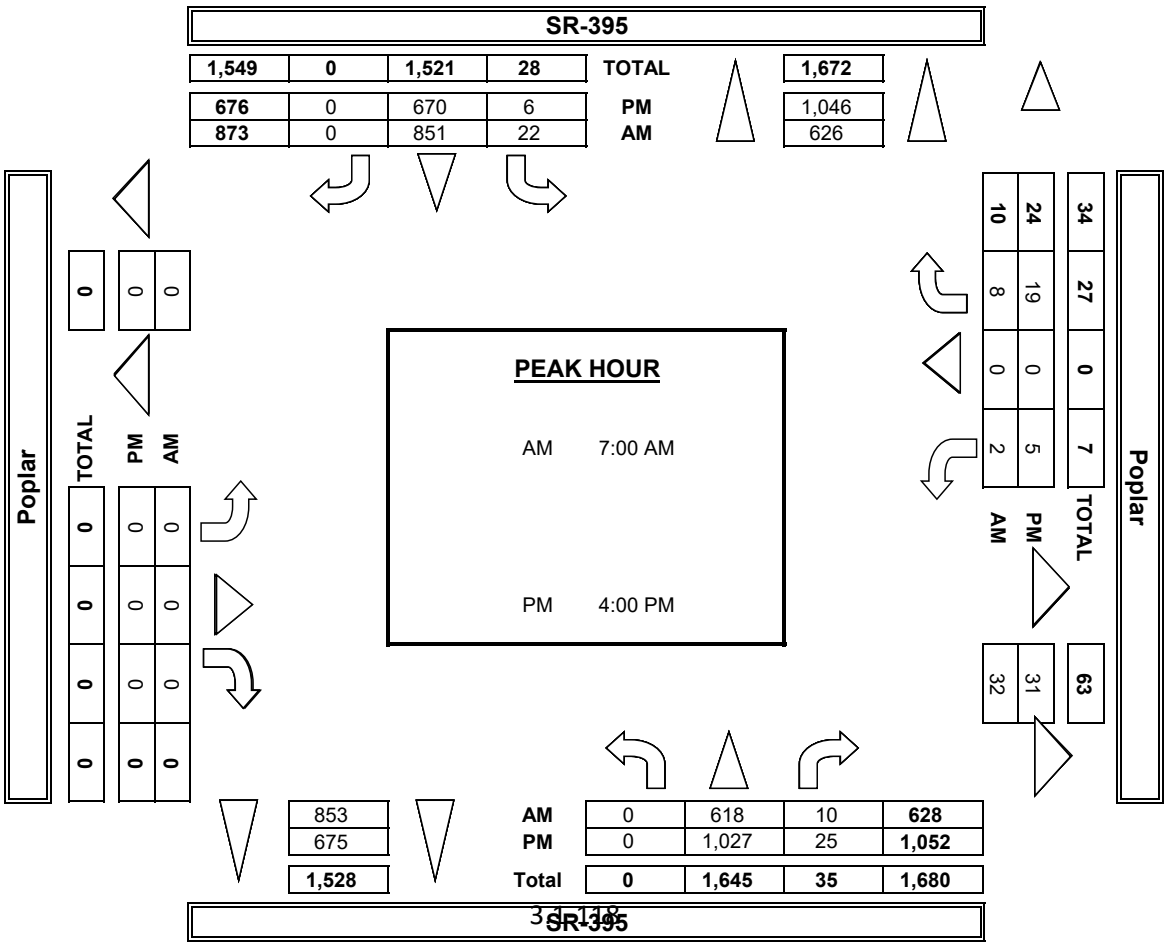


		ALL PED AND BIKE					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS				
		E SIDE	W SIDE	S SIDE	N SIDE	TOTAL	E SIDE	W SIDE	S SIDE	N SIDE	TOTAL	ES	WS	SS	NS	TOTAL
AM	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	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
PM	3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

AimTD LLC

TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Hesperia	PROJECT #:	SC2468
1/7/20	NORTH & SOUTH:	SR-395	LOCATION #:	14
TUESDAY	EAST & WEST:	Poplar	CONTROL:	STOP W

CLASS 1:	NOTES:
PASSENGER VEHICLES	

AM / PM / MD / OTHER / OTHER — ▲ N ◄ W E ► S ▼

		NORTHBOUND SR-395			SOUTHBOUND SR-395			EASTBOUND Poplar			WESTBOUND Poplar			
	LANES:	NL X	NT 2	NR 0	SL 1	ST 1	SR X	EL X	ET X	ER X	WL 1	WT X	WR 1	TOTAL
AM	7:00 AM	0	113	2	7	223	0	0	0	0	0	0	1	346
	7:15 AM	0	129	3	3	205	0	0	0	0	0	0	1	341
	7:30 AM	0	143	3	2	166	0	0	0	0	0	0	2	316
	7:45 AM	0	101	0	7	149	0	0	0	0	0	0	3	260
	8:00 AM	0	66	3	5	175	0	0	0	0	1	0	2	252
	8:15 AM	0	82	4	12	204	0	0	0	0	1	0	3	306
	8:30 AM	0	93	2	6	147	0	0	0	0	0	0	2	250
	8:45 AM	0	74	5	4	142	0	0	0	0	2	0	0	227
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	801	22	46	1,411	0	0	0	0	4	0	14	2,298
	APPROACH %	0%	97%	3%	3%	97%	0%	0%	0%	0%	22%	0%	78%	
	APP/DEPART	823	/	815	1,457	/	1,415	0	/	68	18	/	0	0
	BEGIN PEAK HR		7:00 AM											
	VOLUMES	0	486	8	19	743	0	0	0	0	0	0	7	1,263
	APPROACH %	0%	98%	2%	2%	98%	0%	0%	0%	0%	0%	0%	100%	
	PEAK HR FACTOR		0.846			0.828			0.000			0.583		0.913
	APP/DEPART	494	/	493	762	/	743	0	/	27	7	/	0	0
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	226	7	1	130	0	0	0	0	1	0	5	370
	4:15 PM	0	219	6	1	155	0	0	0	0	1	0	3	385
	4:30 PM	0	227	4	1	147	0	0	0	0	1	0	3	383
	4:45 PM	0	241	6	0	122	0	0	0	0	1	0	2	372
	5:00 PM	0	227	8	3	118	0	0	0	0	3	0	9	368
	5:15 PM	0	234	7	3	141	0	0	0	0	1	0	0	386
	5:30 PM	0	240	5	0	108	0	0	0	0	0	0	6	359
	5:45 PM	0	271	6	2	130	0	0	0	0	0	0	2	411
	VOLUMES	0	1,885	49	11	1,051	0	0	0	0	8	0	30	3,034
	APPROACH %	0%	97%	3%	1%	99%	0%	0%	0%	0%	21%	0%	79%	
	APP/DEPART	1,934	/	1,915	1,062	/	1,059	0	/	60	38	/	0	0
	BEGIN PEAK HR		5:00 PM											
	VOLUMES	0	972	26	8	497	0	0	0	0	4	0	17	1,524
	APPROACH %	0%	97%	3%	2%	98%	0%	0%	0%	0%	19%	0%	81%	
	PEAK HR FACTOR		0.901			0.877			0.000			0.438		0.927
	APP/DEPART	998	/	989	505	/	501	0	/	34	21	/	0	0

U-TURNS

NB	SB	EB	WB	TTL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
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0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

RTOR

NRR X	SRR X	ERR X	WRR X
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
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0	0	0	0
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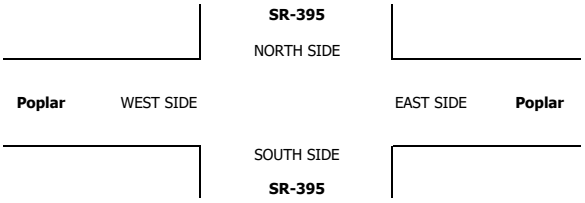
0	0	0	0
0	0	0	0



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Hesperia	PROJECT #:	SC2468
1/7/20	NORTH & SOUTH:	SR-395	LOCATION #:	14
TUESDAY	EAST & WEST:	Poplar	CONTROL:	STOP W

CLASS 2: 2-AXLE WORK VEHICLES/ TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND SR-395			SOUTHBOUND SR-395			EASTBOUND Poplar			WESTBOUND Poplar			
	LANES:	NL X	NT 2	NR 0	SL 1	ST 1	SR X	EL X	ET X	ER X	WL 1	WT X	WR 1	TOTAL
AM	7:00 AM	0	18	0	0	11	0	0	0	0	0	0	0	29
	7:15 AM	0	17	1	0	12	0	0	0	0	1	0	0	31
	7:30 AM	0	13	0	0	11	0	0	0	0	0	0	1	25
	7:45 AM	0	17	0	2	10	0	0	0	0	0	0	0	29
	8:00 AM	0	13	0	0	12	0	0	0	0	0	0	0	25
	8:15 AM	0	8	2	1	7	0	0	0	0	0	0	1	19
	8:30 AM	0	9	0	0	5	0	0	0	0	0	0	0	14
	8:45 AM	0	15	1	0	10	0	0	0	0	0	0	1	27
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	110	4	3	78	0	0	0	0	1	0	3	199
	APPROACH %	0%	96%	4%	4%	96%	0%	0%	0%	0%	25%	0%	75%	
	APP/DEPART	114	/	113	81	/	79	0	/	7	4	/	0	0
	BEGIN PEAK HR		7:00 AM											
	VOLUMES	0	65	1	2	44	0	0	0	0	1	0	1	114
	APPROACH %	0%	98%	2%	4%	96%	0%	0%	0%	0%	50%	0%	50%	
	PEAK HR FACTOR		0.917			0.958			0.000			0.500		0.919
	APP/DEPART	66	/	66	46	/	45	0	/	3	2	/	0	0
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	18	0	0	9	0	0	0	0	0	0	1	28
	4:15 PM	0	12	1	0	11	0	0	0	0	0	0	0	24
	4:30 PM	0	11	0	0	6	0	0	0	0	0	0	0	17
	4:45 PM	0	14	1	1	8	0	0	0	0	0	0	4	28
	5:00 PM	0	7	0	0	7	0	0	0	0	0	0	2	16
	5:15 PM	0	7	0	0	4	0	0	0	0	0	0	0	11
	5:30 PM	0	7	1	0	3	0	0	0	0	0	0	0	11
	5:45 PM	0	6	0	0	4	0	0	0	0	0	0	0	10
	VOLUMES	0	82	3	1	52	0	0	0	0	0	0	7	145
	APPROACH %	0%	96%	4%	2%	98%	0%	0%	0%	0%	0%	0%	100%	
	APP/DEPART	85	/	89	53	/	52	0	/	4	7	/	0	0
	BEGIN PEAK HR		4:00 PM											
	VOLUMES	0	55	2	1	34	0	0	0	0	0	0	5	97
	APPROACH %	0%	96%	4%	3%	97%	0%	0%	0%	0%	0%	0%	100%	
	PEAK HR FACTOR		0.792			0.795			0.000			0.313		0.866
	APP/DEPART	57	/	60	35	/	34	0	/	3	5	/	0	0

U-TURNS

NB	SB	EB	WB	TTL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

RTOR

NRR X	SRR X	ERR X	WRR X
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
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0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
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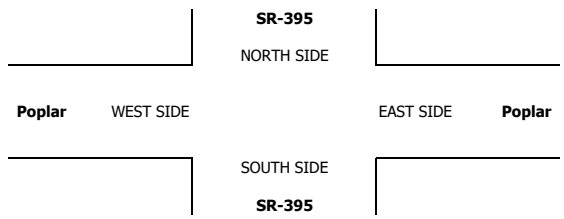
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Hesperia	PROJECT #:	SC2468
1/7/20	NORTH & SOUTH:	SR-395	LOCATION #:	14
TUESDAY	EAST & WEST:	Poplar	CONTROL:	STOP W

CLASS 3: 3-AXLE TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND SR-395			SOUTHBOUND SR-395			EASTBOUND Poplar			WESTBOUND Poplar			
	LANES:	NL X	NT 2	NR 0	SL 1	ST 1	SR X	EL X	ET X	ER X	WL 1	WT X	WR 1	TOTAL
AM	7:00 AM	0	0	0	0	1	0	0	0	0	0	0	0	1
	7:15 AM	0	1	0	0	1	0	0	0	0	0	0	0	2
	7:30 AM	0	0	0	0	1	0	0	0	0	0	0	0	1
	7:45 AM	0	0	0	1	3	0	0	0	0	0	0	0	4
	8:00 AM	0	0	0	0	1	0	0	0	0	0	0	0	1
	8:15 AM	0	1	0	0	3	0	0	0	0	0	0	0	4
	8:30 AM	0	3	0	0	5	0	0	0	0	0	0	0	8
	8:45 AM	0	0	0	1	1	0	0	0	0	0	0	0	2
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	5	0	2	16	0	0	0	0	0	0	0	23
	APPROACH %	0%	100%	0%	11%	89%	0%	0%	0%	0%	0%	0%	0%	
	APP/DEPART	5	/	5	18	/	16	0	/	2	0	/	0	0
	BEGIN PEAK HR		7:45 AM											
	VOLUMES	0	4	0	1	12	0	0	0	0	0	0	0	17
	APPROACH %	0%	100%	0%	8%	92%	0%	0%	0%	0%	0%	0%	0%	
	PEAK HR FACTOR		0.333			0.650			0.000			0.000		0.531
	APP/DEPART	4	/	4	13	/	12	0	/	1	0	/	0	0
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	2	0	0	3	0	0	0	0	0	0	0	5
	4:15 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
	4:30 PM	0	0	0	0	2	0	0	0	0	0	0	0	2
	4:45 PM	0	2	0	0	1	0	0	0	0	0	0	0	3
	5:00 PM	0	0	0	0	3	0	0	0	0	0	0	0	3
	5:15 PM	0	3	0	0	2	0	0	0	0	0	0	0	5
	5:30 PM	0	2	0	0	4	0	0	0	0	0	0	0	6
	5:45 PM	0	1	0	0	2	0	0	0	0	0	0	0	3
	VOLUMES	0	10	0	0	18	0	0	0	0	0	0	0	28
	APPROACH %	0%	100%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	
	APP/DEPART	10	/	10	18	/	18	0	/	0	0	/	0	0
	BEGIN PEAK HR		4:45 PM											
	VOLUMES	0	7	0	0	10	0	0	0	0	0	0	0	17
	APPROACH %	0%	100%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	
	PEAK HR FACTOR		0.583			0.625			0.000			0.000		0.708
	APP/DEPART	7	/	7	10	/	10	0	/	0	0	/	0	0

U-TURNS

NB	SB	EB	WB	TTL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Hesperia	PROJECT #:	SC2468
1/7/20	NORTH & SOUTH:	SR-395	LOCATION #:	14
TUESDAY	EAST & WEST:	Poplar	CONTROL:	STOP W

CLASS 4: 4 OR MORE AXLE TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N ◄ W E ► S ▼

		NORTHBOUND SR-395			SOUTHBOUND SR-395			EASTBOUND Poplar			WESTBOUND Poplar			
	LANES:	NL X	NT 2	NR 0	SL 1	ST 1	SR X	EL X	ET X	ER X	WL 1	WT X	WR 1	TOTAL
AM	7:00 AM	0	11	1	0	10	0	0	0	0	0	0	0	22
	7:15 AM	0	18	0	0	12	0	0	0	0	0	0	0	30
	7:30 AM	0	17	0	0	17	0	0	0	0	0	0	0	34
	7:45 AM	0	18	0	0	18	0	0	0	0	1	0	0	37
	8:00 AM	0	15	0	0	19	0	0	0	0	0	0	0	34
	8:15 AM	0	12	0	0	13	0	0	0	0	0	0	3	28
	8:30 AM	0	20	0	0	15	0	0	0	0	0	0	0	35
	8:45 AM	0	20	0	0	12	0	0	0	0	0	0	2	34
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	131	1	0	116	0	0	0	0	1	0	5	254
	APPROACH %	0%	99%	1%	0%	100%	0%	0%	0%	0%	17%	0%	83%	
	APP/DEPART	132	/	136	116	/	117	0	/	1	6	/	0	0
	BEGIN PEAK HR		7:15 AM											
	VOLUMES	0	68	0	0	66	0	0	0	0	1	0	0	135
	APPROACH %	0%	100%	0%	0%	100%	0%	0%	0%	0%	100%	0%	0%	
	PEAK HR FACTOR		0.944			0.868			0.000			0.250		0.912
	APP/DEPART	68	/	68	66	/	67	0	/	0	1	/	0	0
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	15	0	0	21	0	0	0	0	1	0	0	37
	4:15 PM	0	12	0	2	23	0	0	0	0	0	0	0	37
	4:30 PM	0	11	0	0	16	0	0	0	0	0	0	1	28
	4:45 PM	0	15	0	0	13	0	0	0	0	0	0	0	28
	5:00 PM	0	16	0	0	15	0	0	0	0	0	0	0	31
	5:15 PM	0	11	0	0	15	0	0	0	0	0	0	1	27
	5:30 PM	0	7	0	1	17	0	0	0	0	0	0	0	25
	5:45 PM	0	6	1	0	23	0	0	0	0	0	0	1	31
	VOLUMES	0	93	1	3	143	0	0	0	0	1	0	3	244
	APPROACH %	0%	99%	1%	2%	98%	0%	0%	0%	0%	25%	0%	75%	
	APP/DEPART	94	/	96	146	/	144	0	/	4	4	/	0	0
	BEGIN PEAK HR		4:00 PM											
	VOLUMES	0	53	0	2	73	0	0	0	0	1	0	1	130
	APPROACH %	0%	100%	0%	3%	97%	0%	0%	0%	0%	50%	0%	50%	
	PEAK HR FACTOR		0.883			0.750			0.000			0.500		0.878
	APP/DEPART	53	/	54	75	/	74	0	/	2	2	/	0	0

U-TURNS

NB	SB	EB	WB	TTL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Hesperia	PROJECT #:	SC2468
1/7/20	NORTH & SOUTH:	SR-395	LOCATION #:	14
TUESDAY	EAST & WEST:	Poplar	CONTROL:	STOP W

CLASS 5: RV

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

	NORTHBOUND SR-395			SOUTHBOUND SR-395			EASTBOUND Poplar			WESTBOUND Poplar			
LANES:	NL X	NT 2	NR 0	SL 1	ST 1	SR X	EL X	ET X	ER X	WL 1	WT X	WR 1	TOTAL
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	1	0	0	0	0	0	0	0	0	0	0	1
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	0	1	0	0	0	0	0	0	0	0	0	0	1
APPROACH %	0%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
APP/DEPART	1	/	1	0	/	0	0	/	0	0	/	0	0
BEGIN PEAK HR		8:00 AM											
VOLUMES	0	1	0	0	0	0	0	0	0	0	0	0	1
APPROACH %	0%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
PEAK HR FACTOR		0.250			0.000			0.000			0.000		0.250
APP/DEPART	1	/	1	0	/	0	0	/	0	0	/	0	0
03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	1	0	0	0	0	0	0	0	0	0	0	1
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	2	0	0	0	0	0	0	0	2
VOLUMES	0	1	0	0	3	0	0	0	0	0	0	0	4
APPROACH %	0%	100%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	
APP/DEPART	1	/	1	3	/	3	0	/	0	0	/	0	0
BEGIN PEAK HR		5:00 PM											
VOLUMES	0	0	0	0	3	0	0	0	0	0	0	0	3
APPROACH %	0%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	
PEAK HR FACTOR		0.000			0.375			0.000			0.000		0.375
APP/DEPART	0	/	0	3	/	3	0	/	0	0	/	0	0

U-TURNS

NB	SB	EB	WB	TTL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
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0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

RTOR

NRR X	SRR X	ERR X	WRR X
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
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0	0	0	0
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0	0	0	0
0	0	0	0
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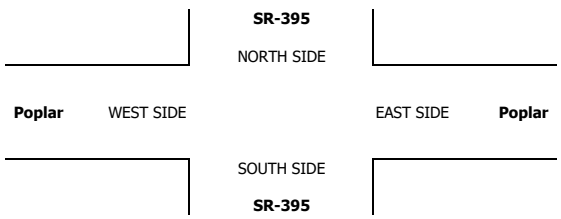
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Hesperia	PROJECT #:	SC2468
1/7/20	NORTH & SOUTH:	SR-395	LOCATION #:	14
TUESDAY	EAST & WEST:	Poplar	CONTROL:	STOP W

CLASS 6:	NOTES:
BUSES	

AM / PM / MD / OTHER / OTHER — ▲ N ◄ W E ► S ▼

	NORTHBOUND SR-395			SOUTHBOUND SR-395			EASTBOUND Poplar			WESTBOUND Poplar			
LANES:	NL X	NT 2	NR 0	SL 1	ST 1	SR X	EL X	ET X	ER X	WL 1	WT X	WR 1	TOTAL
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	1	0	0	1	0	0	0	0	0	0	0	2
7:30 AM	0	1	0	0	0	0	0	0	0	0	0	0	1
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	1	0	1	1	0	0	0	0	0	0	0	3
8:30 AM	0	1	0	0	0	0	0	0	0	0	0	0	1
8:45 AM	0	0	0	1	0	0	0	0	0	0	0	1	2
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	0	4	0	2	2	0	0	0	0	0	0	1	9
APPROACH %	0%	100%	0%	50%	50%	0%	0%	0%	0%	0%	0%	100%	
APP/DEPART	4	/	5	4	/	2	0	/	2	1	/	0	0
BEGIN PEAK HR		8:00 AM											
VOLUMES	0	2	0	2	1	0	0	0	0	0	0	1	6
APPROACH %	0%	100%	0%	67%	33%	0%	0%	0%	0%	0%	0%	100%	
PEAK HR FACTOR		0.500			0.375			0.000			0.250		0.500
APP/DEPART	2	/	3	3	/	1	0	/	2	1	/	0	0
03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
4:30 PM	0	1	0	0	1	0	0	0	0	0	0	0	2
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	0	1	0	0	2	0	0	0	0	0	0	0	3
APPROACH %	0%	100%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	
APP/DEPART	1	/	1	2	/	2	0	/	0	0	/	0	0
BEGIN PEAK HR		3:45 PM											
VOLUMES	0	1	0	0	2	0	0	0	0	0	0	0	3
APPROACH %	0%	100%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	
PEAK HR FACTOR		0.250			0.500			0.000			0.000		0.375
APP/DEPART	1	/	1	2	/	2	0	/	0	0	/	0	0

U-TURNS

NB	SB	EB	WB	TTL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

RTOR

NRR X	SRR X	ERR X	WRR X
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
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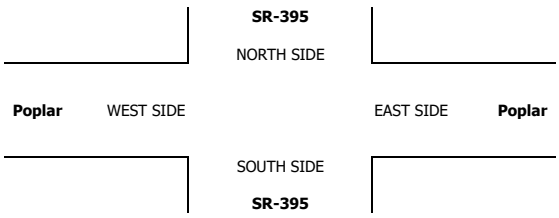
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0



INTERSECTION TURNING MOVEMENT COUNTS

T1218

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Hesperia	PROJECT #:	SC2468
Tue, Jan 7, 20	NORTH & SOUTH:	SR-395	LOCATION #:	15
	EAST & WEST:	Three Flags	CONTROL:	SIGNAL

NOTES:

AM PM MD OTHER OTHER — ▲ N, ◄ W, E ►, S ▼

Add U-Turns to Left Turns

		NORTHBOUND SR-395			SOUTHBOUND SR-395			EASTBOUND Three Flags			WESTBOUND Three Flags			
	LANES:	NL 1	NT 2	NR 1	SL 1	ST 2	SR 1	EL 1	ET 1	ER 0	WL 1	WT 1	WR 0	TOTAL
AM	7:00 AM	5	145	9	0	225	16	5	0	23	17	0	6	451
	7:15 AM	3	158	10	0	208	17	1	0	16	12	1	5	431
	7:30 AM	2	168	9	5	169	22	4	1	21	18	0	4	423
	7:45 AM	6	129	15	4	153	17	5	0	16	10	0	2	357
	8:00 AM	3	85	15	5	182	28	8	1	23	17	1	4	372
	8:15 AM	3	108	13	6	196	20	5	1	27	17	1	4	401
	8:30 AM	5	113	10	0	153	20	5	0	16	13	1	4	340
	8:45 AM	1	104	16	0	148	17	2	1	20	13	1	5	328
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	28	1,010	97	20	1,434	157	35	4	162	117	5	34	3,103
	APPROACH %	2%	89%	9%	1%	89%	10%	17%	2%	81%	75%	3%	22%	
	APP/DEPART	1,135	/	1,078	1,611	/	1,713	201	/	121	156	/	191	0
	BEGIN PEAK HR		7:00 AM											
	VOLUMES	16	600	43	9	755	72	15	1	76	57	1	17	1,662
	APPROACH %	2%	91%	7%	1%	90%	9%	16%	1%	83%	76%	1%	23%	
	PEAK HR FACTOR		0.920			0.867			0.821			0.815		0.921
	APP/DEPART	659	/	632	836	/	888	92	/	53	75	/	89	0
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	7	271	16	4	148	11	5	0	13	14	0	2	491
	4:15 PM	6	230	14	3	167	9	11	0	11	11	2	0	464
	4:30 PM	11	244	16	3	164	15	6	1	11	13	0	3	487
	4:45 PM	8	263	15	2	122	19	11	0	20	18	2	7	487
	5:00 PM	8	251	11	2	136	9	6	1	11	8	2	2	447
	5:15 PM	5	248	10	5	146	12	5	1	10	13	0	5	460
	5:30 PM	8	282	7	3	118	10	9	0	11	5	1	3	457
	5:45 PM	6	254	6	2	144	9	8	1	11	9	0	3	453
	VOLUMES	59	2,043	95	24	1,145	94	61	4	98	91	7	25	3,746
	APPROACH %	3%	93%	4%	2%	91%	7%	37%	2%	60%	74%	6%	20%	
	APP/DEPART	2,197	/	2,129	1,263	/	1,334	163	/	123	123	/	160	0
	BEGIN PEAK HR		4:00 PM											
	VOLUMES	32	1,008	61	12	601	54	33	1	55	56	4	12	1,929
	APPROACH %	3%	92%	6%	2%	90%	8%	37%	1%	62%	78%	6%	17%	
	PEAK HR FACTOR		0.936			0.916			0.718			0.667		0.982
	APP/DEPART	1,101	/	1,053	667	/	712	89	/	74	72	/	90	0

U-TURNS

NB	SB	EB	WB	TTL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	1	0	1
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	1	0	1
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
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0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

RTOR

NRR	SRR	ERR	WRR
0	0	0	0
1	5	8	3
2	4	10	2
2	8	9	2
6	2	7	1
3	11	10	2
3	4	11	0
1	3	11	4
4	2	10	3
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
22	39	76	17
11	19	34	8
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
1	0	9	2
0	2	7	0
1	9	9	2
4	6	15	2
1	1	5	0
2	0	8	4
0	0	8	1
1	2	7	1
10	20	68	12
6	17	40	6

SR-395

NORTH SIDE

Three Flags WEST SIDE EAST SIDE **Three Flags**

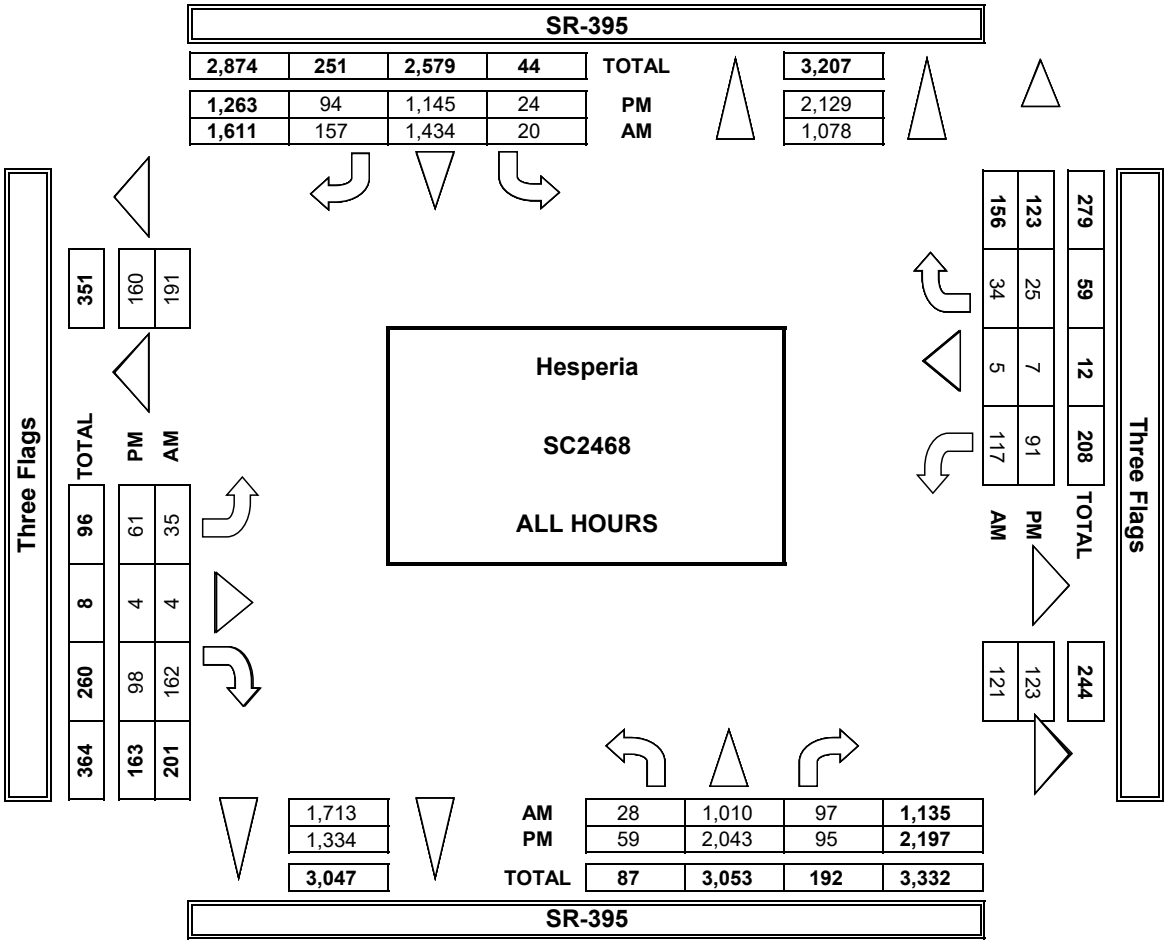
SOUTH SIDE

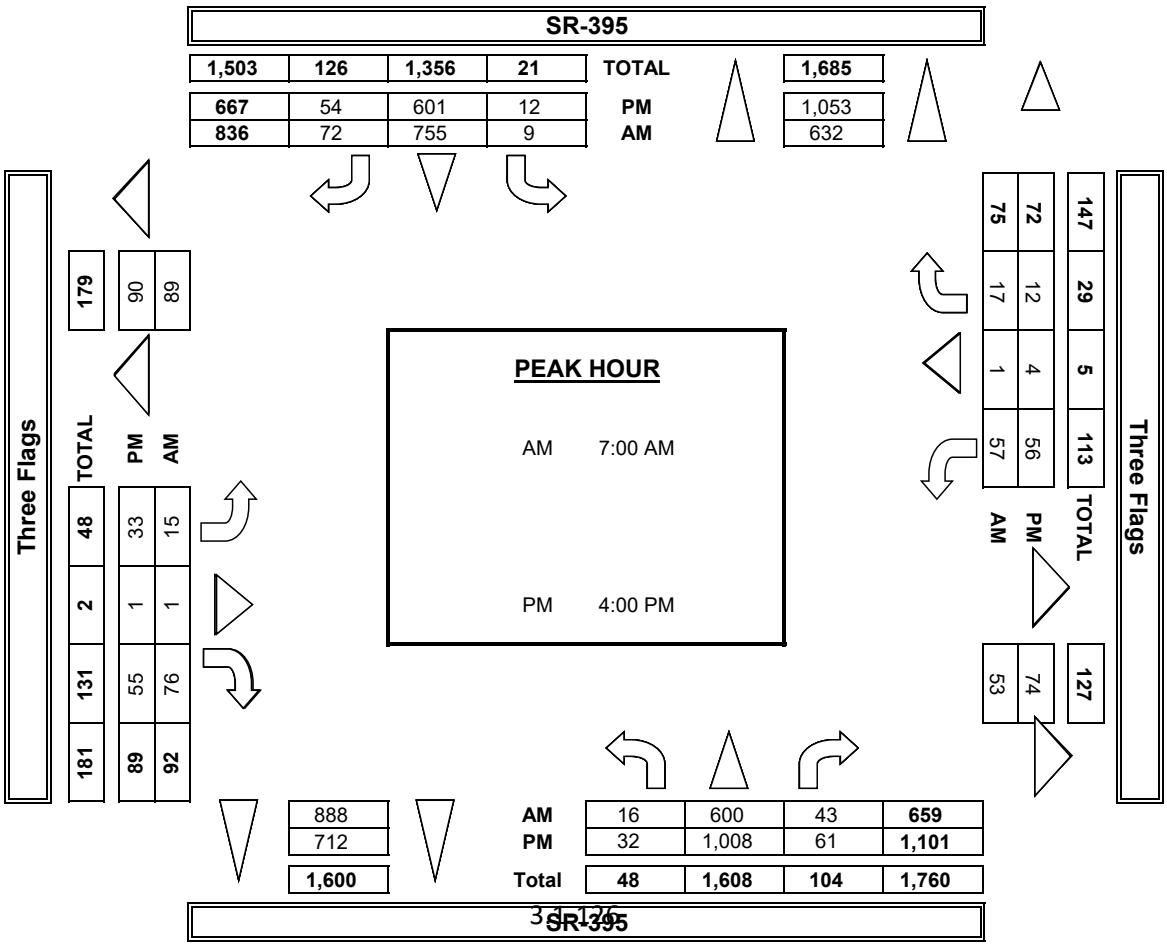
SR-395

		ALL PED AND BIKE					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS				
		E SIDE	W SIDE	S SIDE	N SIDE	TOTAL	E SIDE	W SIDE	S SIDE	N SIDE	TOTAL	ES	WS	SS	NS	TOTAL
AM	7:00 AM	0	0	0	1	1	0	0	0	1	1	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	1	0	0	1	2	1	0	0	1	2	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:15 AM	1	0	0	0	1	1	0	0	0	1	0	0	0	0	0
	8:30 AM	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	2	1	0	2	5	2	1	0	2	5	0	0	0	0	0
PM	3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	1	0	0	0	1	1	0	0	0	1	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	1	0	0	0	1	1	0	0	0	1	0	0	0	0	0

AimTD LLC

TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Hesperia	PROJECT #:	SC2468
1/7/20	NORTH & SOUTH:	SR-395	LOCATION #:	15
TUESDAY	EAST & WEST:	Three Flags	CONTROL:	SIGNAL

CLASS 1: PASSENGER VEHICLES

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND SR-395			SOUTHBOUND SR-395			EASTBOUND Three Flags			WESTBOUND Three Flags			
	LANES:	NL 1	NT 2	NR 1	SL 1	ST 2	SR 1	EL 1	ET 1	ER 0	WL 1	WT 1	WR 0	TOTAL
AM	7:00 AM	3	121	3	0	202	16	3	0	22	1	0	0	371
	7:15 AM	1	124	2	0	178	17	1	0	14	1	0	1	339
	7:30 AM	0	149	1	3	143	20	0	1	19	0	0	2	338
	7:45 AM	4	101	6	0	125	17	2	0	15	0	0	1	271
	8:00 AM	3	66	4	2	158	24	5	0	19	0	1	0	282
	8:15 AM	3	88	5	2	175	20	4	1	25	2	1	1	327
	8:30 AM	5	86	3	0	129	18	4	0	15	2	1	1	264
	8:45 AM	1	73	2	0	128	13	2	1	17	3	1	0	241
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	20	808	26	7	1,238	145	21	3	146	9	4	6	2,433
	APPROACH %	2%	95%	3%	1%	89%	10%	12%	2%	86%	47%	21%	32%	
	APP/DEPART	854	/	834	1,390	/	1,393	170	/	36	19	/	170	0
	BEGIN PEAK HR		7:00 AM											
	VOLUMES	8	495	12	3	648	70	6	1	70	2	0	4	1,319
	APPROACH %	2%	96%	2%	0%	90%	10%	8%	1%	91%	33%	0%	67%	
	PEAK HR FACTOR		0.858			0.827			0.770			0.750		0.889
	APP/DEPART	515	/	505	721	/	720	77	/	16	6	/	78	0
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	6	241	5	1	120	11	4	0	11	6	0	0	405
	4:15 PM	5	204	5	0	130	9	10	0	11	1	2	0	377
	4:30 PM	11	219	3	0	141	15	6	1	11	7	0	0	414
	4:45 PM	8	242	3	0	105	16	10	0	18	3	2	0	407
	5:00 PM	7	228	2	0	111	9	6	1	11	5	1	0	381
	5:15 PM	5	225	2	0	122	12	4	0	10	4	0	2	386
	5:30 PM	8	260	1	0	96	10	8	0	11	3	0	0	397
	5:45 PM	6	237	2	0	114	9	8	1	10	1	0	1	389
	VOLUMES	56	1,856	23	1	939	91	56	3	93	30	5	3	3,156
	APPROACH %	3%	96%	1%	0%	91%	9%	37%	2%	61%	79%	13%	8%	
	APP/DEPART	1,935	/	1,915	1,031	/	1,062	152	/	27	38	/	152	0
	BEGIN PEAK HR		4:00 PM											
	VOLUMES	30	906	16	1	496	51	30	1	51	17	4	0	1,603
	APPROACH %	3%	95%	2%	0%	91%	9%	37%	1%	62%	81%	19%	0%	
	PEAK HR FACTOR		0.941			0.878			0.732			0.750		0.968
	APP/DEPART	952	/	936	548	/	564	82	/	18	21	/	85	0

U-TURNS

NB	SB	EB	WB	TTL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	1	0	1
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	1	0	1
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

RTOR

NRR	SRR	ERR	WRR
0	0	0	0
1	5	8	0
1	4	9	0
1	7	8	1
2	2	7	1
0	11	9	0
1	4	11	0
1	3	11	1
0	2	10	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
7	38	73	3
5	18	32	2
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
1	0	8	0
0	2	7	0
1	9	9	0
1	5	14	0
0	1	5	0
0	0	8	1
0	0	8	0
0	2	6	1
3	19	65	2
3	16	38	0

SR-395

NORTH SIDE

Three Flags WEST SIDE EAST SIDE **Three Flags**

SOUTH SIDE

SR-395

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Hesperia	PROJECT #:	SC2468
1/7/20	NORTH & SOUTH:	SR-395	LOCATION #:	15
TUESDAY	EAST & WEST:	Three Flags	CONTROL:	SIGNAL

CLASS 2: 2-AXLE WORK VEHICLES/ TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND SR-395			SOUTHBOUND SR-395			EASTBOUND Three Flags			WESTBOUND Three Flags			
	LANES:	NL 1	NT 2	NR 1	SL 1	ST 2	SR 1	EL 1	ET 1	ER 0	WL 1	WT 1	WR 0	TOTAL
AM	7:00 AM	1	16	0	0	12	0	2	0	0	0	0	0	31
	7:15 AM	1	21	0	0	17	0	0	0	2	0	1	0	42
	7:30 AM	2	5	1	0	9	2	3	0	1	1	0	0	24
	7:45 AM	2	13	0	0	11	0	1	0	1	0	0	0	28
	8:00 AM	0	7	0	0	7	3	3	0	3	1	0	0	24
	8:15 AM	0	6	1	0	7	0	1	0	1	0	0	0	16
	8:30 AM	0	10	1	0	5	1	0	0	0	0	0	0	17
	8:45 AM	0	13	0	0	9	2	0	0	2	1	0	1	28
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	6	91	3	0	77	8	10	0	10	3	1	1	210
	APPROACH %	6%	91%	3%	0%	91%	9%	50%	0%	50%	60%	20%	20%	
	APP/DEPART	100	/	102	85	/	90	20	/	3	5	/	15	0
	BEGIN PEAK HR		7:00 AM											
	VOLUMES	6	55	1	0	49	2	6	0	4	1	1	0	125
	APPROACH %	10%	89%	2%	0%	96%	4%	60%	0%	40%	50%	50%	0%	
	PEAK HR FACTOR		0.705			0.750			0.625			0.500		0.744
	APP/DEPART	62	/	61	51	/	54	10	/	1	2	/	9	0
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	1	16	0	0	8	0	1	0	2	0	0	0	28
	4:15 PM	1	14	0	0	17	0	1	0	0	0	0	0	33
	4:30 PM	0	13	0	0	3	0	0	0	0	1	0	0	17
	4:45 PM	0	10	2	0	6	2	1	0	1	1	0	2	25
	5:00 PM	0	8	1	0	10	0	0	0	0	0	0	1	20
	5:15 PM	0	13	1	0	10	0	0	0	0	0	0	0	24
	5:30 PM	0	15	0	0	3	0	1	0	0	0	0	0	19
	5:45 PM	0	12	0	0	5	0	0	0	1	1	0	0	19
	VOLUMES	2	101	4	0	62	2	4	0	4	3	0	3	185
	APPROACH %	2%	94%	4%	0%	97%	3%	50%	0%	50%	50%	0%	50%	
	APP/DEPART	107	/	108	64	/	69	8	/	4	6	/	4	0
	BEGIN PEAK HR		4:00 PM											
	VOLUMES	2	53	2	0	34	2	3	0	3	2	0	2	103
	APPROACH %	4%	93%	4%	0%	94%	6%	50%	0%	50%	50%	0%	50%	
	PEAK HR FACTOR		0.838			0.529			0.500			0.333		0.780
	APP/DEPART	57	/	58	36	/	39	6	/	2	4	/	4	0

U-TURNS

NB	SB	EB	WB	TTL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

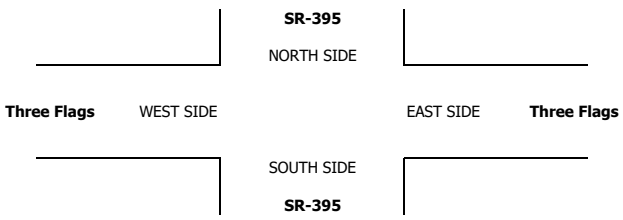
RTOR

NRR	SRR	ERR	WRR
0	0	0	0
0	0	1	0
0	1	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	1	1	0

0	1	1	0

0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	1	0
0	0	0	0
0	0	0	0
1	1	1	2
0	0	0	0
0	0	0	0
0	0	0	0
0	0	1	0
1	1	3	2

1	1	2	2



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Hesperia	PROJECT #:	SC2468
1/7/20	NORTH & SOUTH:	SR-395	LOCATION #:	15
TUESDAY	EAST & WEST:	Three Flags	CONTROL:	SIGNAL

CLASS 3: 3-AXLE TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND SR-395			SOUTHBOUND SR-395			EASTBOUND Three Flags			WESTBOUND Three Flags			
	LANES:	NL 1	NT 2	NR 1	SL 1	ST 2	SR 1	EL 1	ET 1	ER 0	WL 1	WT 1	WR 0	TOTAL
AM	7:00 AM	0	1	0	0	1	0	0	0	0	0	0	0	2
	7:15 AM	0	1	0	0	0	0	0	0	0	0	0	0	1
	7:30 AM	0	0	0	1	1	0	0	0	1	0	0	0	3
	7:45 AM	0	0	1	0	3	0	0	0	0	1	0	0	5
	8:00 AM	0	0	1	1	0	0	0	0	0	0	0	0	2
	8:15 AM	0	3	0	1	2	0	0	0	0	2	0	0	8
	8:30 AM	0	1	0	0	4	1	0	0	1	1	0	0	8
	8:45 AM	0	1	2	0	1	0	0	0	0	2	0	0	6
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	7	4	3	12	1	0	0	2	6	0	0	35
	APPROACH %	0%	64%	36%	19%	75%	6%	0%	0%	100%	100%	0%	0%	
	APP/DEPART	11	/	7	16	/	20	2	/	7	6	/	1	0
	BEGIN PEAK HR		8:00 AM											
	VOLUMES	0	5	3	2	7	1	0	0	1	5	0	0	24
	APPROACH %	0%	63%	38%	20%	70%	10%	0%	0%	100%	100%	0%	0%	
	PEAK HR FACTOR		0.667			0.500			0.250			0.625		0.750
	APP/DEPART	8	/	5	10	/	13	1	/	5	5	/	1	0
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	2	0	0	2	0	0	0	0	0	0	0	4
	4:15 PM	0	0	0	0	0	0	0	0	0	1	0	0	1
	4:30 PM	0	0	1	1	2	0	0	0	0	0	0	0	4
	4:45 PM	0	2	0	0	1	0	0	0	0	1	0	1	5
	5:00 PM	1	0	0	0	4	0	0	0	0	0	1	0	6
	5:15 PM	0	3	0	0	2	0	1	1	0	0	0	0	7
	5:30 PM	0	2	0	0	5	0	0	0	0	0	1	0	8
	5:45 PM	0	1	0	0	1	0	0	0	0	0	0	0	2
	VOLUMES	1	10	1	1	17	0	1	1	0	2	2	1	37
	APPROACH %	8%	83%	8%	6%	94%	0%	50%	50%	0%	40%	40%	20%	
	APP/DEPART	12	/	12	18	/	19	2	/	3	5	/	3	0
	BEGIN PEAK HR		4:45 PM											
	VOLUMES	1	7	0	0	12	0	1	1	0	1	2	1	26
	APPROACH %	13%	88%	0%	0%	100%	0%	50%	50%	0%	25%	50%	25%	
	PEAK HR FACTOR		0.667			0.600			0.250			0.500		0.813
	APP/DEPART	8	/	9	12	/	13	2	/	1	4	/	3	0

U-TURNS

NB	SB	EB	WB	TTL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

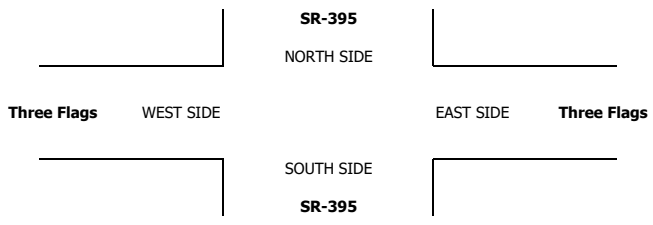
RTOR

NRR 0	SRR 0	ERR 0	WRR 0
0	0	0	0
0	0	0	0
0	0	1	0
0	0	0	0
1	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
1	0	1	0

NRR 0	SRR 0	ERR 0	WRR 0
1	0	0	0

NRR 0	SRR 0	ERR 0	WRR 0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0

NRR 0	SRR 0	ERR 0	WRR 0
0	0	0	0



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Hesperia	PROJECT #:	SC2468
1/7/20	NORTH & SOUTH:	SR-395	LOCATION #:	15
TUESDAY	EAST & WEST:	Three Flags	CONTROL:	SIGNAL

CLASS 4: 4 OR MORE AXLE TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N ◄ W E ► S ▼

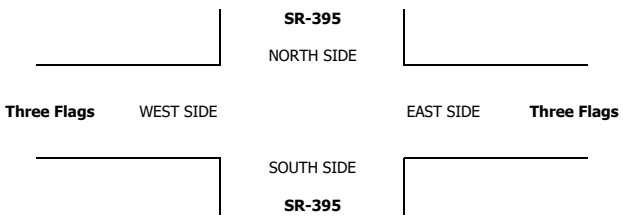
		NORTHBOUND SR-395			SOUTHBOUND SR-395			EASTBOUND Three Flags			WESTBOUND Three Flags			
	LANES:	NL 1	NT 2	NR 1	SL 1	ST 2	SR 1	EL 1	ET 1	ER 0	WL 1	WT 1	WR 0	TOTAL
AM	7:00 AM	1	7	5	0	10	0	0	0	1	16	0	6	46
	7:15 AM	1	12	8	0	12	0	0	0	0	11	0	3	47
	7:30 AM	0	13	7	1	16	0	1	0	0	17	0	2	57
	7:45 AM	0	15	8	4	14	0	2	0	0	9	0	1	53
	8:00 AM	0	12	10	2	17	1	0	1	1	16	0	4	64
	8:15 AM	0	9	7	3	11	0	0	0	1	13	0	3	47
	8:30 AM	0	16	6	0	15	0	1	0	0	10	0	3	51
	8:45 AM	0	16	12	0	10	2	0	0	1	7	0	4	52
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	2	100	63	10	105	3	4	1	4	99	0	26	417
	APPROACH %	1%	61%	38%	8%	89%	3%	44%	11%	44%	79%	0%	21%	
	APP/DEPART	165	/	130	118	/	208	9	/	74	125	/	5	0
	BEGIN PEAK HR		7:15 AM											
	VOLUMES	1	52	33	7	59	1	3	1	1	53	0	10	221
	APPROACH %	1%	60%	38%	10%	88%	1%	60%	20%	20%	84%	0%	16%	
	PEAK HR FACTOR		0.935			0.838			0.625			0.788		0.863
	APP/DEPART	86	/	65	67	/	113	5	/	41	63	/	2	0
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	12	11	3	18	0	0	0	0	8	0	2	54
	4:15 PM	0	12	9	3	19	0	0	0	0	9	0	0	52
	4:30 PM	0	11	12	2	17	0	0	0	0	4	0	3	49
	4:45 PM	0	8	10	2	10	1	0	0	1	13	0	4	49
	5:00 PM	0	15	8	2	11	0	0	0	0	3	0	1	40
	5:15 PM	0	7	7	5	11	0	0	0	0	9	0	3	42
	5:30 PM	0	5	6	3	14	0	0	0	0	2	0	3	33
	5:45 PM	0	4	4	2	22	0	0	0	0	7	0	2	41
	VOLUMES	0	74	67	22	122	1	0	0	1	55	0	18	360
	APPROACH %	0%	52%	48%	15%	84%	1%	0%	0%	100%	75%	0%	25%	
	APP/DEPART	141	/	92	145	/	178	1	/	89	73	/	1	0
	BEGIN PEAK HR		4:00 PM											
	VOLUMES	0	43	42	10	64	1	0	0	1	34	0	9	204
	APPROACH %	0%	51%	49%	13%	85%	1%	0%	0%	100%	79%	0%	21%	
	PEAK HR FACTOR		0.924			0.852			0.250			0.632		0.944
	APP/DEPART	85	/	52	75	/	99	1	/	52	43	/	1	0

U-TURNS

NB	SB	EB	WB	TTL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

RTOR

NRR	SRR	ERR	WRR
0	0	0	3
1	0	0	1
1	0	0	1
4	0	0	0
2	0	1	2
2	0	0	0
0	0	0	3
4	0	0	3
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
14	0	1	13
8	0	1	4
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	2
0	0	0	0
0	0	0	2
2	0	0	0
1	0	0	0
2	0	0	3
0	0	0	1
1	0	0	0
6	0	0	8
2	0	0	4



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Hesperia	PROJECT #:	SC2468
1/7/20	NORTH & SOUTH:	SR-395	LOCATION #:	15
TUESDAY	EAST & WEST:	Three Flags	CONTROL:	SIGNAL

CLASS 5: RV

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND SR-395			SOUTHBOUND SR-395			EASTBOUND Three Flags			WESTBOUND Three Flags			
	LANES:	NL 1	NT 2	NR 1	SL 1	ST 2	SR 1	EL 1	ET 1	ER 0	WL 1	WT 1	WR 0	TOTAL
AM	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:45 AM	0	1	0	0	0	0	0	0	0	0	0	0	1
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	1	0	0	0	0	0	0	0	0	0	0	1
	APPROACH %	0%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	APP/DEPART	1	/	1	0	/	0	0	/	0	0	/	0	0
	BEGIN PEAK HR		8:00 AM											
	VOLUMES	0	1	0	0	0	0	0	0	0	0	0	0	1
	APPROACH %	0%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	PEAK HR FACTOR		0.250			0.000			0.000			0.000		0.250
	APP/DEPART	1	/	1	0	/	0	0	/	0	0	/	0	0
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	1	0	0	1
	4:45 PM	0	1	0	0	0	0	0	0	0	0	0	0	1
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	2	0	0	0	0	0	0	0	2
	VOLUMES	0	1	0	0	3	0	0	0	0	1	0	0	5
	APPROACH %	0%	100%	0%	0%	100%	0%	0%	0%	0%	100%	0%	0%	
	APP/DEPART	1	/	1	3	/	4	0	/	0	1	/	0	0
	BEGIN PEAK HR		5:00 PM											
	VOLUMES	0	0	0	0	3	0	0	0	0	0	0	0	3
	APPROACH %	0%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	
	PEAK HR FACTOR		0.000			0.375			0.000			0.000		0.375
	APP/DEPART	0	/	0	3	/	3	0	/	0	0	/	0	0

U-TURNS

NB	SB	EB	WB	TTL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Hesperia	PROJECT #:	SC2468
1/7/20	NORTH & SOUTH:	SR-395	LOCATION #:	15
TUESDAY	EAST & WEST:	Three Flags	CONTROL:	SIGNAL

CLASS 6:	NOTES:
BUSES	

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND SR-395			SOUTHBOUND SR-395			EASTBOUND Three Flags			WESTBOUND Three Flags			
	LANES:	NL 1	NT 2	NR 1	SL 1	ST 2	SR 1	EL 1	ET 1	ER 0	WL 1	WT 1	WR 0	TOTAL
AM	7:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	1
	7:15 AM	0	0	0	0	1	0	0	0	0	0	0	1	2
	7:30 AM	0	1	0	0	0	0	0	0	0	0	0	0	1
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:15 AM	0	2	0	0	1	0	0	0	0	0	0	0	3
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	3	1	0	2	0	0	0	0	0	0	1	7
	APPROACH %	0%	75%	25%	0%	100%	0%	0%	0%	0%	0%	0%	100%	
	APP/DEPART	4	/	4	2	/	2	0	/	1	1	/	0	0
	BEGIN PEAK HR		7:00 AM											
	VOLUMES	0	3	0	0	1	0	0	0	0	0	0	0	4
	APPROACH %	0%	100%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	
	PEAK HR FACTOR		0.375			0.250			0.000			0.000		0.333
	APP/DEPART	3	/	3	1	/	1	0	/	0	0	/	0	0
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
	4:30 PM	0	1	0	0	1	0	0	0	0	0	0	0	2
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	1	0	0	2	0	0	0	0	0	0	0	3
	APPROACH %	0%	100%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	
	APP/DEPART	1	/	1	2	/	2	0	/	0	0	/	0	0
	BEGIN PEAK HR		3:45 PM											
	VOLUMES	0	1	0	0	2	0	0	0	0	0	0	0	3
	APPROACH %	0%	100%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	
	PEAK HR FACTOR		0.250			0.500			0.000			0.000		0.375
	APP/DEPART	1	/	1	2	/	2	0	/	0	0	/	0	0

U-TURNS

NB	SB	EB	WB	TTL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

INTERSECTION TURNING MOVEMENT COUNTS

T1218

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Hesperia	PROJECT #:	SC2468
Tue, Jan 7, 20	NORTH & SOUTH:	SR-395	LOCATION #:	16
	EAST & WEST:	Joshua	CONTROL:	SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

Add U-Turns to Left Turns

		NORTHBOUND SR-395			SOUTHBOUND SR-395			EASTBOUND Joshua			WESTBOUND Joshua			
	LANES:	NL 1	NT 2	NR 1	SL 1	ST 2	SR 1	EL 1	ET 0.5	ER 0.5	WL 1	WT 1	WR 1	TOTAL
AM	7:00 AM	2	141	9	15	241	9	3	6	0	15	3	15	459
	7:15 AM	1	145	9	17	214	5	10	3	1	14	3	16	438
	7:30 AM	2	154	15	18	180	10	6	8	1	17	3	19	433
	7:45 AM	0	126	4	12	170	2	3	8	1	17	2	20	365
	8:00 AM	0	89	7	17	203	2	1	4	0	12	7	13	355
	8:15 AM	1	102	9	14	219	7	5	7	1	25	6	17	413
	8:30 AM	0	105	11	14	165	3	6	4	2	25	4	17	356
	8:45 AM	0	100	3	11	167	3	1	3	3	17	5	18	331
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	6	962	67	118	1,559	41	35	43	9	142	33	135	3,150
	APPROACH %	1%	93%	6%	7%	91%	2%	40%	49%	10%	46%	11%	44%	
	APP/DEPART	1,035	/	1,133	1,718	/	1,710	87	/	227	310	/	80	0
	BEGIN PEAK HR		7:00 AM											
	VOLUMES	5	566	37	62	805	26	22	25	3	63	11	70	1,695
	APPROACH %	1%	93%	6%	7%	90%	3%	44%	50%	6%	44%	8%	49%	
	PEAK HR FACTOR		0.889			0.842			0.833			0.923		0.923
	APP/DEPART	608	/	659	893	/	871	50	/	123	144	/	42	0
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	7	253	14	16	153	6	13	16	1	15	4	28	526
	4:15 PM	3	217	21	10	177	2	11	5	4	17	2	24	493
	4:30 PM	7	245	15	8	174	6	8	16	1	10	2	18	510
	4:45 PM	5	251	16	13	140	7	18	8	2	17	11	17	505
	5:00 PM	7	234	16	16	136	3	14	9	1	15	4	22	477
	5:15 PM	9	232	15	15	151	3	13	21	0	10	2	18	489
	5:30 PM	10	261	10	13	119	2	19	21	3	11	3	17	489
	5:45 PM	6	220	22	13	148	3	23	18	2	7	5	23	490
	VOLUMES	54	1,913	129	104	1,198	32	119	114	14	102	33	167	3,979
	APPROACH %	3%	91%	6%	8%	90%	2%	48%	46%	6%	34%	11%	55%	
	APP/DEPART	2,096	/	2,199	1,334	/	1,314	247	/	347	302	/	119	0
	BEGIN PEAK HR		4:00 PM											
	VOLUMES	22	966	66	47	644	21	50	45	8	59	19	87	2,034
	APPROACH %	2%	92%	6%	7%	90%	3%	49%	44%	8%	36%	12%	53%	
	PEAK HR FACTOR		0.962			0.942			0.858			0.878		0.967
	APP/DEPART	1,054	/	1,103	712	/	711	103	/	158	165	/	62	0

U-TURNS

NB	SB	EB	WB	TTL
0	0	0	0	
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	1	0	0	1
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	1	0	0	1
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

RTOR

NRR	SRR	ERR	WRR
0	0	0	0
1	3	0	12
6	1	1	8
4	1	1	13
2	0	1	17
1	1	0	10
1	0	0	9
3	1	1	12
0	0	0	11
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
18	7	4	92
13	5	3	50
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
2	2	0	14
3	1	1	19
2	2	1	10
5	2	1	13
7	1	1	12
0	2	0	6
2	1	1	8
6	2	0	6
27	13	5	88
12	7	3	56

SR-395

NORTH SIDE

Joshua WEST SIDE EAST SIDE **Joshua**

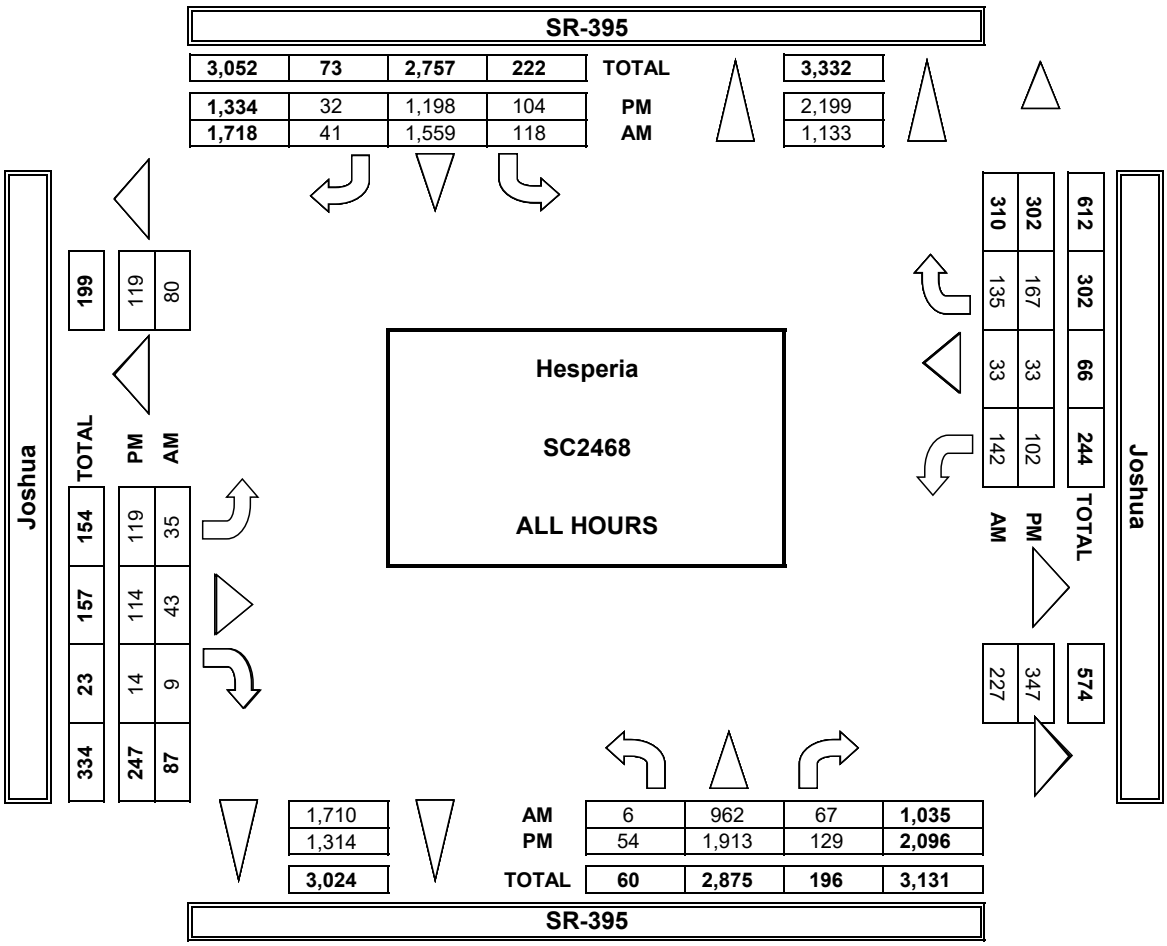
SOUTH SIDE

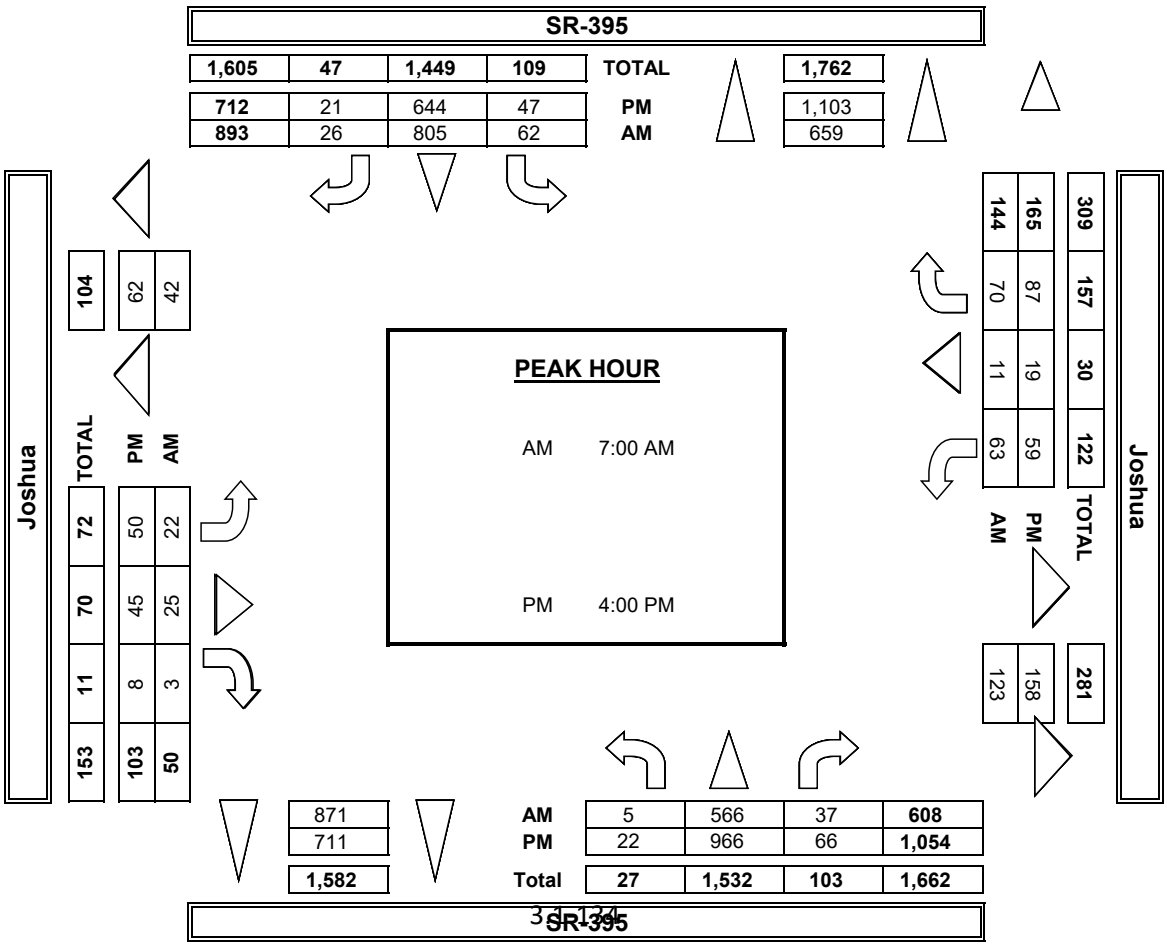
SR-395

		ALL PED AND BIKE					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS				
		E SIDE	W SIDE	S SIDE	N SIDE	TOTAL	E SIDE	W SIDE	S SIDE	N SIDE	TOTAL	ES	WS	SS	NS	TOTAL
AM	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	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
PM	3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	1	0	0	0	1	1	0	0	0	1	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	1	0	0	0	1	1	0	0	0	1	0	0	0	0	0

AimTD LLC

TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Hesperia	PROJECT #:	SC2468
1/7/20	NORTH & SOUTH:	SR-395	LOCATION #:	16
TUESDAY	EAST & WEST:	Joshua	CONTROL:	SIGNAL

CLASS 1: PASSENGER VEHICLES

NOTES:

AM / PM / MD / OTHER / OTHER — N ▲ / ◄ W / E ► / S ▼

		NORTHBOUND SR-395			SOUTHBOUND SR-395			EASTBOUND Joshua			WESTBOUND Joshua			
	LANES:	NL 1	NT 2	NR 1	SL 1	ST 2	SR 1	EL 1	ET 0.5	ER 0.5	WL 1	WT 1	WR 1	TOTAL
AM	7:00 AM	1	113	5	9	209	7	3	4	0	11	3	11	376
	7:15 AM	0	109	5	13	177	3	8	2	1	11	2	10	341
	7:30 AM	2	130	9	10	144	8	4	8	1	12	3	16	347
	7:45 AM	0	98	2	9	134	2	2	7	1	12	2	10	279
	8:00 AM	0	66	4	12	163	2	1	3	0	11	7	6	275
	8:15 AM	1	81	5	10	186	6	3	5	1	16	6	12	332
	8:30 AM	0	78	7	12	131	3	4	2	1	16	3	12	269
	8:45 AM	0	63	3	9	136	3	0	3	2	12	4	11	246
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	4	738	40	84	1,280	34	25	34	7	101	30	88	2,465
	APPROACH %	1%	94%	5%	6%	92%	2%	38%	52%	11%	46%	14%	40%	
	APP/DEPART	782	/	852	1,398	/	1,388	66	/	157	219	/	68	0
	BEGIN PEAK HR		7:00 AM											
	VOLUMES	3	450	21	40	664	20	17	21	3	46	10	47	1,343
	APPROACH %	1%	95%	4%	6%	92%	3%	41%	51%	7%	45%	10%	46%	
	PEAK HR FACTOR		0.840			0.806			0.788			0.831		0.893
	APP/DEPART	474	/	515	725	/	713	41	/	82	103	/	33	0
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	7	218	11	13	118	6	12	15	1	10	4	22	437
	4:15 PM	3	184	15	5	136	1	11	4	3	12	2	21	397
	4:30 PM	5	209	12	6	147	6	8	15	1	5	2	16	432
	4:45 PM	5	223	15	10	109	7	17	8	2	14	11	13	434
	5:00 PM	7	208	11	13	111	3	11	9	1	12	4	18	408
	5:15 PM	9	206	9	9	124	3	13	21	0	8	2	13	417
	5:30 PM	10	237	7	10	98	2	19	21	3	8	3	13	431
	5:45 PM	6	203	15	10	113	2	23	18	1	6	5	19	421
	VOLUMES	52	1,688	95	76	956	30	114	111	12	75	33	135	3,377
	APPROACH %	3%	92%	5%	7%	90%	3%	48%	47%	5%	31%	14%	56%	
	APP/DEPART	1,835	/	1,937	1,062	/	1,043	237	/	282	243	/	115	0
	BEGIN PEAK HR		4:00 PM											
	VOLUMES	20	834	53	34	510	20	48	42	7	41	19	72	1,700
	APPROACH %	2%	92%	6%	6%	90%	4%	49%	43%	7%	31%	14%	55%	
	PEAK HR FACTOR		0.933			0.887			0.866			0.868		0.973
	APP/DEPART	907	/	954	564	/	558	97	/	129	132	/	59	0

U-TURNS

NB	SB	EB	WB	TTL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	1	0	0	1
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	1	0	0	1
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

RTOR

NRR	SRR	ERR	WRR
1	3	0	8
3	1	1	5
3	1	1	11
1	0	1	9
1	1	0	4
1	0	0	7
2	1	1	8
0	0	0	7
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
12	7	4	59
8	5	3	33
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
2	2	0	11
2	1	1	18
2	2	1	10
5	2	1	10
5	1	1	10
0	2	0	5
2	1	1	6
6	1	0	6
24	12	5	76
11	7	3	49

SR-395

NORTH SIDE

Joshua WEST SIDE EAST SIDE **Joshua**

SOUTH SIDE

SR-395

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Hesperia	PROJECT #:	SC2468
1/7/20	NORTH & SOUTH:	SR-395	LOCATION #:	16
TUESDAY	EAST & WEST:	Joshua	CONTROL:	SIGNAL

CLASS 2: 2-AXLE WORK VEHICLES/ TRUCKS	NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND SR-395			SOUTHBOUND SR-395			EASTBOUND Joshua			WESTBOUND Joshua			
	LANES:	NL 1	NT 2	NR 1	SL 1	ST 2	SR 1	EL 1	ET 0.5	ER 0.5	WL 1	WT 1	WR 1	TOTAL
AM	7:00 AM	0	15	2	1	10	1	0	2	0	1	0	2	34
	7:15 AM	1	19	1	0	19	0	2	0	0	0	1	1	44
	7:30 AM	0	6	2	0	10	1	1	0	0	1	0	1	22
	7:45 AM	0	11	2	0	12	0	0	0	0	1	0	4	30
	8:00 AM	0	6	1	2	9	0	0	0	0	1	0	1	20
	8:15 AM	0	4	0	1	7	0	1	1	0	5	0	2	21
	8:30 AM	0	8	0	0	5	0	0	2	0	2	1	3	21
	8:45 AM	0	12	0	0	12	0	1	0	0	2	0	0	27
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	1	81	8	4	84	2	5	5	0	13	2	14	219
	APPROACH %	1%	90%	9%	4%	93%	2%	50%	50%	0%	45%	7%	48%	
	APP/DEPART	90	/	100	90	/	97	10	/	17	29	/	5	0
	BEGIN PEAK HR		7:00 AM											
	VOLUMES	1	51	7	1	51	2	3	2	0	3	1	8	130
	APPROACH %	2%	86%	12%	2%	94%	4%	60%	40%	0%	25%	8%	67%	
	PEAK HR FACTOR		0.702			0.711			0.625			0.600		0.739
	APP/DEPART	59	/	62	54	/	54	5	/	10	12	/	4	0
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	17	1	0	10	0	0	1	0	4	0	0	33
	4:15 PM	0	15	1	1	16	0	0	1	0	1	0	0	35
	4:30 PM	1	13	0	0	4	0	0	1	0	3	0	0	22
	4:45 PM	0	11	1	0	8	0	1	0	0	0	0	0	21
	5:00 PM	0	6	1	1	9	0	2	0	0	1	0	1	21
	5:15 PM	0	13	0	0	10	0	0	0	0	1	0	1	25
	5:30 PM	0	14	0	1	2	0	0	0	0	1	0	1	19
	5:45 PM	0	12	3	0	7	0	0	0	0	0	0	0	22
	VOLUMES	1	101	7	3	66	0	3	3	0	11	0	3	198
	APPROACH %	1%	93%	6%	4%	96%	0%	50%	50%	0%	79%	0%	21%	
	APP/DEPART	109	/	107	69	/	77	6	/	13	14	/	1	0
	BEGIN PEAK HR		4:00 PM											
	VOLUMES	1	56	3	1	38	0	1	3	0	8	0	0	111
	APPROACH %	2%	93%	5%	3%	97%	0%	25%	75%	0%	100%	0%	0%	
	PEAK HR FACTOR		0.833			0.574			1.000			0.500		0.793
	APP/DEPART	60	/	57	39	/	46	4	/	7	8	/	1	0

U-TURNS

NB	SB	EB	WB	TTL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Hesperia	PROJECT #:	SC2468
1/7/20	NORTH & SOUTH:	SR-395	LOCATION #:	16
TUESDAY	EAST & WEST:	Joshua	CONTROL:	SIGNAL

CLASS 3: 3-AXLE TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND SR-395			SOUTHBOUND SR-395			EASTBOUND Joshua			WESTBOUND Joshua			
	LANES:	NL 1	NT 2	NR 1	SL 1	ST 2	SR 1	EL 1	ET 0.5	ER 0.5	WL 1	WT 1	WR 1	TOTAL
AM	7:00 AM	0	1	0	1	0	0	0	0	0	1	0	0	3
	7:15 AM	0	1	0	0	0	0	0	0	0	0	0	0	1
	7:30 AM	0	0	0	1	1	0	0	0	0	0	0	0	2
	7:45 AM	0	0	0	0	4	0	0	0	0	0	0	1	5
	8:00 AM	0	0	1	0	0	0	0	0	0	0	0	1	2
	8:15 AM	0	1	0	0	4	0	1	0	0	2	0	1	9
	8:30 AM	0	1	0	0	6	0	0	0	0	0	0	0	7
	8:45 AM	0	3	0	0	3	0	0	0	0	0	0	0	6
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	7	1	2	18	0	1	0	0	3	0	3	35
	APPROACH %	0%	88%	13%	10%	90%	0%	100%	0%	0%	50%	0%	50%	
	APP/DEPART	8	/	11	20	/	21	1	/	3	6	/	0	0
	BEGIN PEAK HR		8:00 AM											
	VOLUMES	0	5	1	0	13	0	1	0	0	2	0	2	24
	APPROACH %	0%	83%	17%	0%	100%	0%	100%	0%	0%	50%	0%	50%	
	PEAK HR FACTOR		0.500			0.542			0.250			0.333		0.667
	APP/DEPART	6	/	8	13	/	15	1	/	1	4	/	0	0
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	1	0	0	2	0	0	0	0	0	0	1	4
	4:15 PM	0	0	1	1	0	0	0	0	0	1	0	0	3
	4:30 PM	0	1	0	0	2	0	0	0	0	1	0	0	4
	4:45 PM	0	2	0	1	1	0	0	0	0	0	0	0	4
	5:00 PM	0	0	1	0	4	0	1	0	0	0	0	0	6
	5:15 PM	0	3	0	0	2	0	0	0	0	0	0	0	5
	5:30 PM	0	2	0	0	5	0	0	0	0	1	0	0	8
	5:45 PM	0	1	0	0	1	0	0	0	0	0	0	0	2
	VOLUMES	0	10	2	2	17	0	1	0	0	3	0	1	36
	APPROACH %	0%	83%	17%	11%	89%	0%	100%	0%	0%	75%	0%	25%	
	APP/DEPART	12	/	12	19	/	20	1	/	4	4	/	0	0
	BEGIN PEAK HR		4:45 PM											
	VOLUMES	0	7	1	1	12	0	1	0	0	1	0	0	23
	APPROACH %	0%	88%	13%	8%	92%	0%	100%	0%	0%	100%	0%	0%	
	PEAK HR FACTOR		0.667			0.650			0.250			0.250		0.719
	APP/DEPART	8	/	8	13	/	13	1	/	2	1	/	0	0

U-TURNS

NB	SB	EB	WB	TTL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

RTOR

NRR	SRR	ERR	WRR
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	1
0	0	0	1
0	0	0	1
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	3

0	0	0	2

0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	1
0	0	0	0
0	0	0	0
0	0	0	0
1	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
1	0	0	1

1	0	0	0

SR-395

NORTH SIDE

Joshua WEST SIDE EAST SIDE **Joshua**

SOUTH SIDE

SR-395

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Hesperia	PROJECT #:	SC2468
1/7/20	NORTH & SOUTH:	SR-395	LOCATION #:	16
TUESDAY	EAST & WEST:	Joshua	CONTROL:	SIGNAL

CLASS 4: 4 OR MORE AXLE TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N ◄ W E ► S ▼

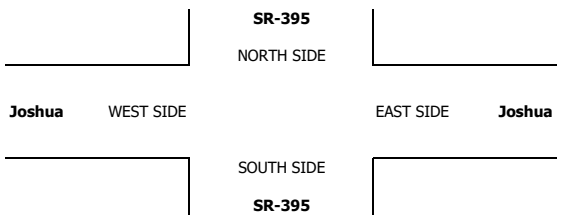
	NORTHBOUND SR-395			SOUTHBOUND SR-395			EASTBOUND Joshua			WESTBOUND Joshua			
LANES:	NL 1	NT 2	NR 1	SL 1	ST 2	SR 1	EL 1	ET 0.5	ER 0.5	WL 1	WT 1	WR 1	TOTAL
7:00 AM	1	11	2	4	22	1	0	0	0	2	0	2	45
7:15 AM	0	16	3	4	18	1	0	1	0	3	0	5	51
7:30 AM	0	18	4	7	25	1	0	0	0	4	0	2	61
7:45 AM	0	17	0	3	20	0	1	1	0	4	0	5	51
8:00 AM	0	17	1	3	31	0	0	1	0	0	0	5	58
8:15 AM	0	14	4	3	22	0	0	1	0	2	0	2	48
8:30 AM	0	18	4	2	23	0	2	0	0	7	0	2	58
8:45 AM	0	21	0	2	16	0	0	0	1	3	1	7	51
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	1	132	18	28	177	3	3	4	1	25	1	30	423
APPROACH %	1%	87%	12%	13%	85%	1%	38%	50%	13%	45%	2%	54%	
APP/DEPART	151	/	165	208	/	203	8	/	50	56	/	5	0
BEGIN PEAK HR		7:15 AM											
VOLUMES	0	68	8	17	94	2	1	3	0	11	0	17	221
APPROACH %	0%	89%	11%	15%	83%	2%	25%	75%	0%	39%	0%	61%	
PEAK HR FACTOR		0.864			0.831			0.500			0.778		0.906
APP/DEPART	76	/	86	113	/	105	4	/	28	28	/	2	0
03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	17	2	3	23	0	1	0	0	1	0	5	52
4:15 PM	0	18	4	3	25	0	0	0	1	3	0	3	57
4:30 PM	1	21	3	1	20	0	0	0	0	1	0	2	49
4:45 PM	0	15	0	2	22	0	0	0	0	3	0	3	45
5:00 PM	0	20	3	2	12	0	0	0	0	2	0	3	42
5:15 PM	0	10	6	6	14	0	0	0	0	1	0	4	41
5:30 PM	0	8	3	2	14	0	0	0	0	1	0	3	31
5:45 PM	0	4	4	2	27	0	0	0	0	1	0	4	42
VOLUMES	1	113	25	21	157	0	1	0	1	13	0	27	359
APPROACH %	1%	81%	18%	12%	88%	0%	50%	0%	50%	33%	0%	68%	
APP/DEPART	139	/	141	178	/	171	2	/	46	40	/	1	0
BEGIN PEAK HR		4:00 PM											
VOLUMES	1	71	9	9	90	0	1	0	1	8	0	13	203
APPROACH %	1%	88%	11%	9%	91%	0%	50%	0%	50%	38%	0%	62%	
PEAK HR FACTOR		0.810			0.884			0.500			0.875		0.890
APP/DEPART	81	/	85	99	/	99	2	/	18	21	/	1	0

U-TURNS

NB	SB	EB	WB	TTL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

RTOR

NRR	SRR	ERR	WRR
0	0	0	2
2	0	0	2
1	0	0	1
0	0	0	4
0	0	0	4
0	0	0	0
1	0	0	2
0	0	0	4
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
4	0	0	19
3	0	0	11
0	0	0	0
0	0	0	0
0	0	0	2
1	0	0	1
0	0	0	0
0	0	0	2
0	0	0	2
0	0	0	1
0	0	0	2
0	0	0	0
1	0	0	10
1	0	0	5



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Hesperia	PROJECT #:	SC2468
1/7/20	NORTH & SOUTH:	SR-395	LOCATION #:	16
TUESDAY	EAST & WEST:	Joshua	CONTROL:	SIGNAL

CLASS 5:	NOTES:
RV	

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND SR-395			SOUTHBOUND SR-395			EASTBOUND Joshua			WESTBOUND Joshua			
	LANES:	NL 1	NT 2	NR 1	SL 1	ST 2	SR 1	EL 1	ET 0.5	ER 0.5	WL 1	WT 1	WR 1	TOTAL
AM	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:45 AM	0	1	0	0	0	0	0	0	0	0	0	0	1
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	1	0	0	0	0	0	0	0	0	0	0	1
	APPROACH %	0%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	APP/DEPART	1	/	1	0	/	0	0	/	0	0	/	0	0
	BEGIN PEAK HR		8:00 AM											
	VOLUMES	0	1	0	0	0	0	0	0	0	0	0	0	1
	APPROACH %	0%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	PEAK HR FACTOR		0.250			0.000			0.000			0.000		0.250
	APP/DEPART	1	/	1	0	/	0	0	/	0	0	/	0	0
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	1	0	0	0	0	0	0	0	0	1
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	1	1
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	1	0	1	0	0	1	0	0	0	3
	VOLUMES	0	0	0	2	1	1	0	0	1	0	0	1	6
	APPROACH %	0%	0%	0%	50%	25%	25%	0%	0%	100%	0%	0%	100%	
	APP/DEPART	0	/	1	4	/	2	1	/	2	1	/	1	0
	BEGIN PEAK HR		5:00 PM											
	VOLUMES	0	0	0	1	1	1	0	0	1	0	0	0	4
	APPROACH %	0%	0%	0%	33%	33%	33%	0%	0%	100%	0%	0%	0%	
	PEAK HR FACTOR		0.000			0.375			0.250			0.000		0.333
	APP/DEPART	0	/	0	3	/	2	1	/	1	0	/	1	0

U-TURNS

NB	SB	EB	WB	TTL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Hesperia	PROJECT #:	SC2468
1/7/20	NORTH & SOUTH:	SR-395	LOCATION #:	16
TUESDAY	EAST & WEST:	Joshua	CONTROL:	SIGNAL

CLASS 6:	NOTES:
BUSES	

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

	NORTHBOUND SR-395			SOUTHBOUND SR-395			EASTBOUND Joshua			WESTBOUND Joshua			
LANES:	NL 1	NT 2	NR 1	SL 1	ST 2	SR 1	EL 1	ET 0.5	ER 0.5	WL 1	WT 1	WR 1	TOTAL
AM 7:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	1
7:15 AM	0	0	0	0	0	1	0	0	0	0	0	0	1
7:30 AM	0	0	0	0	0	0	1	0	0	0	0	0	1
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	2	0	0	0	1	0	0	0	0	0	0	3
8:30 AM	0	0	0	0	0	0	0	0	1	0	0	0	1
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	0	3	0	0	0	2	1	0	1	0	0	0	7
APPROACH %	0%	100%	0%	0%	0%	100%	50%	0%	50%	0%	0%	0%	
APP/DEPART	3	/	4	2	/	1	2	/	0	0	/	2	0
BEGIN PEAK HR		7:30 AM											
VOLUMES	0	2	0	0	0	1	0	0	1	0	0	0	4
APPROACH %	0%	100%	0%	0%	0%	100%	0%	0%	100%	0%	0%	0%	
PEAK HR FACTOR		0.250			0.250			0.250			0.000		0.333
APP/DEPART	2	/	2	1	/	1	1	/	0	0	/	1	0
PM 03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	1	0	0	0	0	0	0	1
4:30 PM	0	1	0	0	1	0	0	0	0	0	0	0	2
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	0	1	0	0	1	1	0	0	0	0	0	0	3
APPROACH %	0%	100%	0%	0%	50%	50%	0%	0%	0%	0%	0%	0%	
APP/DEPART	1	/	1	2	/	1	0	/	0	0	/	1	0
BEGIN PEAK HR		3:45 PM											
VOLUMES	0	1	0	0	1	1	0	0	0	0	0	0	3
APPROACH %	0%	100%	0%	0%	50%	50%	0%	0%	0%	0%	0%	0%	
PEAK HR FACTOR		0.250			0.500			0.000			0.000		0.375
APP/DEPART	1	/	1	2	/	1	0	/	0	0	/	1	0

U-TURNS

NB	SB	EB	WB	TTL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

RTOR

NRR	SRR	ERR	WRR
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
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0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0

SR-395

NORTH SIDE

Joshua WEST SIDE EAST SIDE **Joshua**

SOUTH SIDE

SR-395

Counts Unlimited
PO Box 1178
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(951) 268-6268

City of Hesperia
N/S: Mesa Linda Street
E/W: Main Street
Weather: Clear

File Name : 09_HES_Mesa Linda_Main AM
Site Code : 05119658
Start Date : 9/28/2019
Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Mesa Linda Street Southbound					Main Street Westbound					Mesa Linda Street Northbound					Main Street Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	16	0	3	3	19	5	113	3	2	121	0	0	4	3	4	2	205	0	0	207	8	351	359
07:15 AM	12	0	4	2	16	7	116	4	3	127	0	1	5	4	6	1	182	1	0	184	9	333	342
07:30 AM	9	1	3	3	13	10	172	6	2	188	0	1	7	6	8	1	226	0	0	227	11	436	447
07:45 AM	10	1	4	4	15	23	94	4	0	121	0	0	5	5	5	1	217	1	0	219	9	360	369
Total	47	2	14	12	63	45	495	17	7	557	0	2	21	18	23	5	830	2	0	837	37	1480	1517
08:00 AM	8	0	0	0	8	11	97	7	0	115	1	0	8	6	9	0	170	1	0	171	6	303	309
08:15 AM	8	0	0	0	8	18	102	8	5	128	0	0	12	9	12	2	174	2	0	178	14	326	340
08:30 AM	14	0	2	1	16	12	111	3	1	126	1	0	9	8	10	0	203	2	0	205	10	357	367
08:45 AM	3	0	1	1	4	7	88	3	2	98	2	0	8	8	10	1	165	1	0	167	11	279	290
Total	33	0	3	2	36	48	398	21	8	467	4	0	37	31	41	3	712	6	0	721	41	1265	1306
Grand Total	80	2	17	14	99	93	893	38	15	1024	4	2	58	49	64	8	1542	8	0	1558	78	2745	2823
Apprch %	80.8	2	17.2			9.1	87.2	3.7			6.2	3.1	90.6			0.5	99	0.5					
Total %	2.9	0.1	0.6		3.6	3.4	32.5	1.4		37.3	0.1	0.1	2.1		2.3	0.3	56.2	0.3		56.8	2.8	97.2	
Passenger Vehicles	79	2	17		112	85	851	36		986	4	2	50		99	8	1502	7		1517	0	0	2714
% Passenger Vehicles	98.8	100	100	100	99.1	91.4	95.3	94.7	93.3	94.9	100	100	86.2	87.8	87.6	100	97.4	87.5	0	97.4	0	0	96.1
Large 2 Axle Vehicles	0	0	0		0	4	27	1		33	0	0	4		8	0	19	1		20	0	0	61
% Large 2 Axle Vehicles	0	0	0	0	0	4.3	3	2.6	6.7	3.2	0	0	6.9	8.2	7.1	0	1.2	12.5	0	1.3	0	0	2.2
3 Axle Vehicles	1	0	0		1	1	7	1		9	0	0	1		2	0	9	0		9	0	0	21
% 3 Axle Vehicles	1.2	0	0	0	0.9	1.1	0.8	2.6	0	0.9	0	0	1.7	2	1.8	0	0.6	0	0	0.6	0	0	0.7
4+ Axle Trucks	0	0	0		0	3	8	0		11	0	0	3		4	0	12	0		12	0	0	27
% 4+ Axle Trucks	0	0	0	0	0	3.2	0.9	0	0	1.1	0	0	5.2	2	3.5	0	0.8	0	0	0.8	0	0	1

	Mesa Linda Street Southbound				Main Street Westbound				Mesa Linda Street Northbound				Main Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	**16**	0	3	**19**	5	113	3	121	0	0	4	4	**2**	205	0	207	351
07:15 AM	12	0	**4**	16	7	116	4	127	0	**1**	5	6	1	182	**1**	184	333
07:30 AM	9	**1**	3	13	10	**172**	**6**	**188**	0	1	**7**	**8**	1	**226**	0	**227**	**436**
07:45 AM	10	1	4	15	**23**	94	4	121	0	0	5	5	1	217	1	219	360
Total Volume	47	2	14	63	45	495	17	557	0	2	21	23	5	830	2	837	1480
% App. Total	74.6	3.2	22.2		8.1	88.9	3.1		0	8.7	91.3		0.6	99.2	0.2		
PHF	.734	.500	.875	.829	.489	.719	.708	.741	.000	.500	.750	.719	.625	.918	.500	.922	.849

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City of Hesperia
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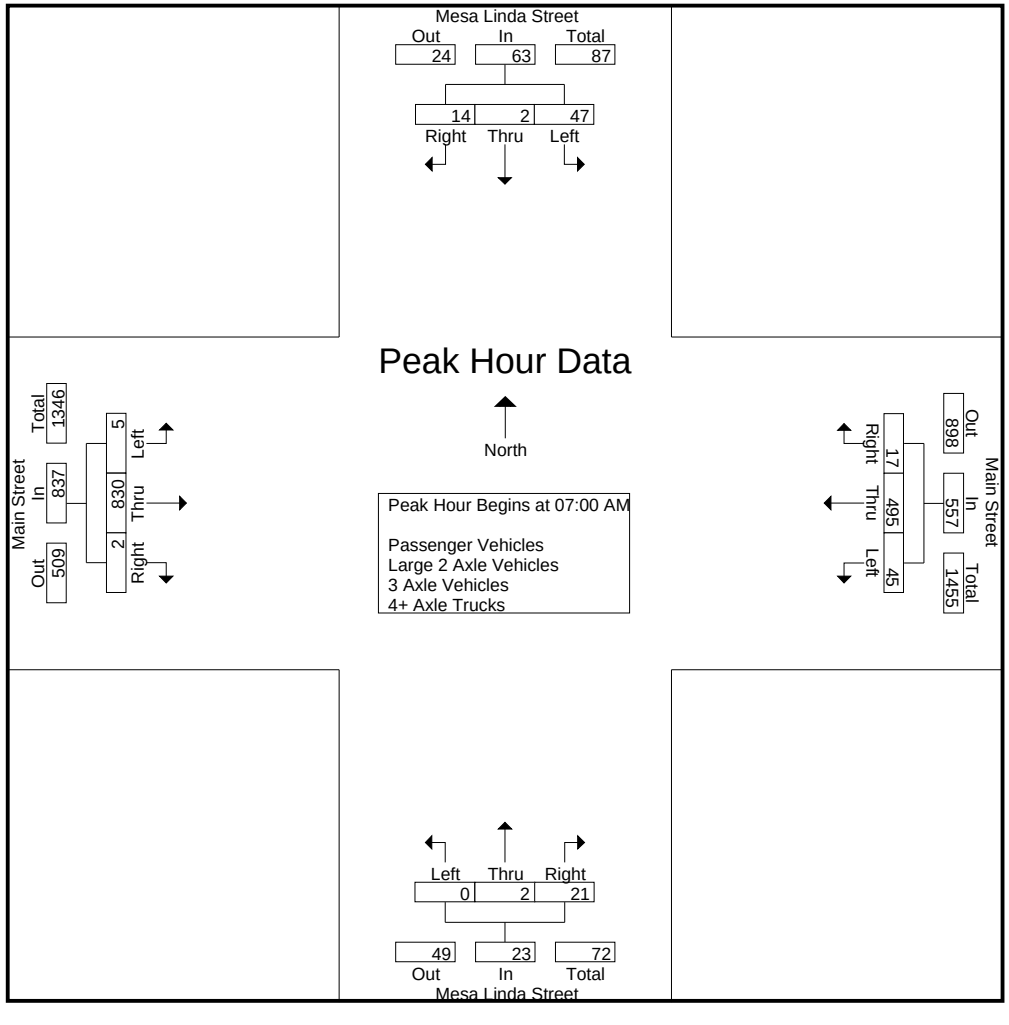
Weather: Clear

File Name : 09_HES_Mesa Linda_Main AM
Site Code : 05119658
Start Date : 9/28/2019
Page No : 2



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Start Date : 9/28/2019

	Mesa Linda Street Southbound				Main Street Westbound				Mesa Linda Street Northbound				Main Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:00 AM				07:00 AM				08:00 AM				07:00 AM				
+0 mins.	**16**	0	3	**19**	5	113	3	121	1	0	8	9	**2**	205	0	207	
+15 mins.	12	0	**4**	16	7	116	4	127	0	0	**12**	**12**	1	182	**1**	184	
+30 mins.	9	**1**	3	13	10	**172**	**6**	**188**	1	0	9	10	1	**226**	0	**227**	
+45 mins.	10	1	4	15	**23**	94	4	121	**2**	0	8	10	1	217	1	219	
Total Volume	47	2	14	63	45	495	17	557	4	0	37	41	5	830	2	837	
% App. Total	74.6	3.2	22.2		8.1	88.9	3.1		9.8	0	90.2		0.6	99.2	0.2		
PHF	.734	.500	.875	.829	.489	.719	.708	.741	.500	.000	.771	.854	.625	.918	.500	.922	

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Site Code : 05119658
Start Date : 9/28/2019
Page No : 1

Groups Printed- Passenger Vehicles

	Mesa Linda Street Southbound					Main Street Westbound					Mesa Linda Street Northbound					Main Street Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	16	0	3	3	19	5	109	3	2	117	0	0	3	3	3	2	199	0	0	201	8	340	348
07:15 AM	12	0	4	2	16	7	111	4	3	122	0	1	3	3	4	1	178	1	0	180	8	322	330
07:30 AM	9	1	3	3	13	8	164	6	2	178	0	1	6	5	7	1	222	0	0	223	10	421	431
07:45 AM	10	1	4	4	15	22	89	4	0	115	0	0	5	5	5	1	209	0	0	210	9	345	354
Total	47	2	14	12	63	42	473	17	7	532	0	2	17	16	19	5	808	1	0	814	35	1428	1463
08:00 AM	7	0	0	0	7	11	93	6	0	110	1	0	7	5	8	0	163	1	0	164	5	289	294
08:15 AM	8	0	0	0	8	17	96	7	4	120	0	0	12	9	12	2	173	2	0	177	13	317	330
08:30 AM	14	0	2	1	16	10	105	3	1	118	1	0	8	7	9	0	196	2	0	198	9	341	350
08:45 AM	3	0	1	1	4	5	84	3	2	92	2	0	6	6	8	1	162	1	0	164	9	268	277
Total	32	0	3	2	35	43	378	19	7	440	4	0	33	27	37	3	694	6	0	703	36	1215	1251
Grand Total	79	2	17	14	98	85	851	36	14	972	4	2	50	43	56	8	1502	7	0	1517	71	2643	2714
Apprch %	80.6	2	17.3			8.7	87.6	3.7			7.1	3.6	89.3			0.5	99	0.5					
Total %	3	0.1	0.6		3.7	3.2	32.2	1.4		36.8	0.2	0.1	1.9		2.1	0.3	56.8	0.3		57.4	2.6	97.4	

	Mesa Linda Street Southbound				Main Street Westbound				Mesa Linda Street Northbound				Main Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	**16**	0	3	**19**	5	109	3	117	0	0	3	3	**2**	199	0	201	340
07:15 AM	12	0	**4**	16	7	111	4	122	0	**1**	3	4	1	178	**1**	180	322
07:30 AM	9	**1**	3	13	8	**164**	**6**	**178**	0	1	**6**	**7**	1	**222**	0	**223**	**421**
07:45 AM	10	1	4	15	**22**	89	4	115	0	0	5	5	1	209	0	210	345
Total Volume	47	2	14	63	42	473	17	532	0	2	17	19	5	808	1	814	1428
% App. Total	74.6	3.2	22.2		7.9	88.9	3.2		0	10.5	89.5		0.6	99.3	0.1		
PHF	.734	.500	.875	.829	.477	.721	.708	.747	.000	.500	.708	.679	.625	.910	.250	.913	.848

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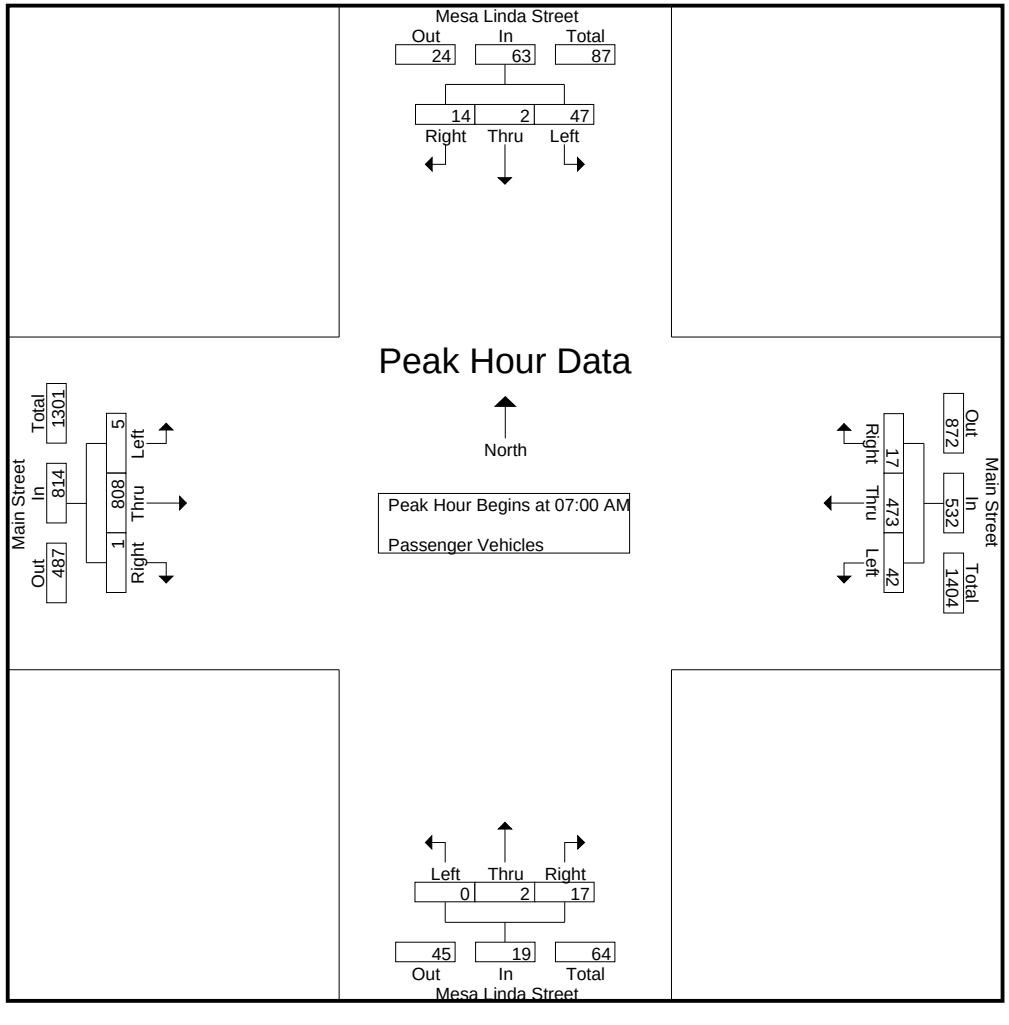
City of Hesperia
N/S: Mesa Linda Street
E/W: Main Street
Weather: Clear

File Name : 09_HES_Mesa Linda_Main AM
Site Code : 05119658
Start Date : 9/28/2019
Page No : 2



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City of Hesperia
N/S: Mesa Linda Street
E/W: Main Street
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File Name : 09_HES_Mesa Linda_Main AM
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Start Date : 9/28/2019

	Mesa Linda Street Southbound				Main Street Westbound				Mesa Linda Street Northbound				Main Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:00 AM				07:00 AM				07:00 AM				07:00 AM				
+0 mins.	**16**	0	3	**19**	5	109	3	117	0	0	3	3	**2**	199	0	201	
+15 mins.	12	0	**4**	16	7	111	4	122	0	**1**	3	4	1	178	**1**	180	
+30 mins.	9	**1**	3	13	8	**164**	**6**	**178**	0	1	**6**	**7**	1	**222**	0	**223**	
+45 mins.	10	1	4	15	**22**	89	4	115	0	0	5	5	1	209	0	210	
Total Volume	47	2	14	63	42	473	17	532	0	2	17	19	5	808	1	814	
% App. Total	74.6	3.2	22.2		7.9	88.9	3.2		0	10.5	89.5		0.6	99.3	0.1		
PHF	.734	.500	.875	.829	.477	.721	.708	.747	.000	.500	.708	.679	.625	.910	.250	.913	

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Page No : 1

Groups Printed- Large 2 Axle Vehicles

	Mesa Linda Street Southbound					Main Street Westbound					Mesa Linda Street Northbound					Main Street Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	1	0	0	1	0	5	5
07:15 AM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	3	0	0	3	0	5	5
07:30 AM	0	0	0	0	0	0	5	0	0	5	0	0	1	1	1	0	1	0	0	1	1	7	8
07:45 AM	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	3	1	0	4	0	8	8
Total	0	0	0	0	0	0	15	0	0	15	0	0	1	1	1	0	8	1	0	9	1	25	26
08:00 AM	0	0	0	0	0	0	2	0	0	2	0	0	1	1	1	0	4	0	0	4	1	7	8
08:15 AM	0	0	0	0	0	1	4	1	1	6	0	0	0	0	0	0	0	0	0	0	1	6	7
08:30 AM	0	0	0	0	0	1	4	0	0	5	0	0	1	1	1	0	5	0	0	5	1	11	12
08:45 AM	0	0	0	0	0	2	2	0	0	4	0	0	1	1	1	0	2	0	0	2	1	7	8
Total	0	0	0	0	0	4	12	1	1	17	0	0	3	3	3	0	11	0	0	11	4	31	35
Grand Total	0	0	0	0	0	4	27	1	1	32	0	0	4	4	4	0	19	1	0	20	5	56	61
Apprch %	0	0	0			12.5	84.4	3.1			0	0	100			0	95	5					
Total %	0	0	0		0	7.1	48.2	1.8		57.1	0	0	7.1		7.1	0	33.9	1.8		35.7	8.2	91.8	

	Mesa Linda Street Southbound				Main Street Westbound				Mesa Linda Street Northbound				Main Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	0	0	0	0	4	0	4	0	0	0	0	0	1	0	1	5
07:15 AM	0	0	0	0	0	2	0	2	0	0	0	0	0	**3**	0	3	5
07:30 AM	0	0	0	0	0	**5**	0	**5**	0	0	**1**	**1**	0	1	0	1	7
07:45 AM	0	0	0	0	0	4	0	4	0	0	0	0	0	3	**1**	**4**	**8**
Total Volume	0	0	0	0	0	15	0	15	0	0	1	1	0	8	1	9	25
% App. Total	0	0	0		0	100	0		0	0	100		0	88.9	11.1		
PHF	.000	.000	.000	.000	.000	.750	.000	.750	.000	.000	.250	.250	.000	.667	.250	.563	.781

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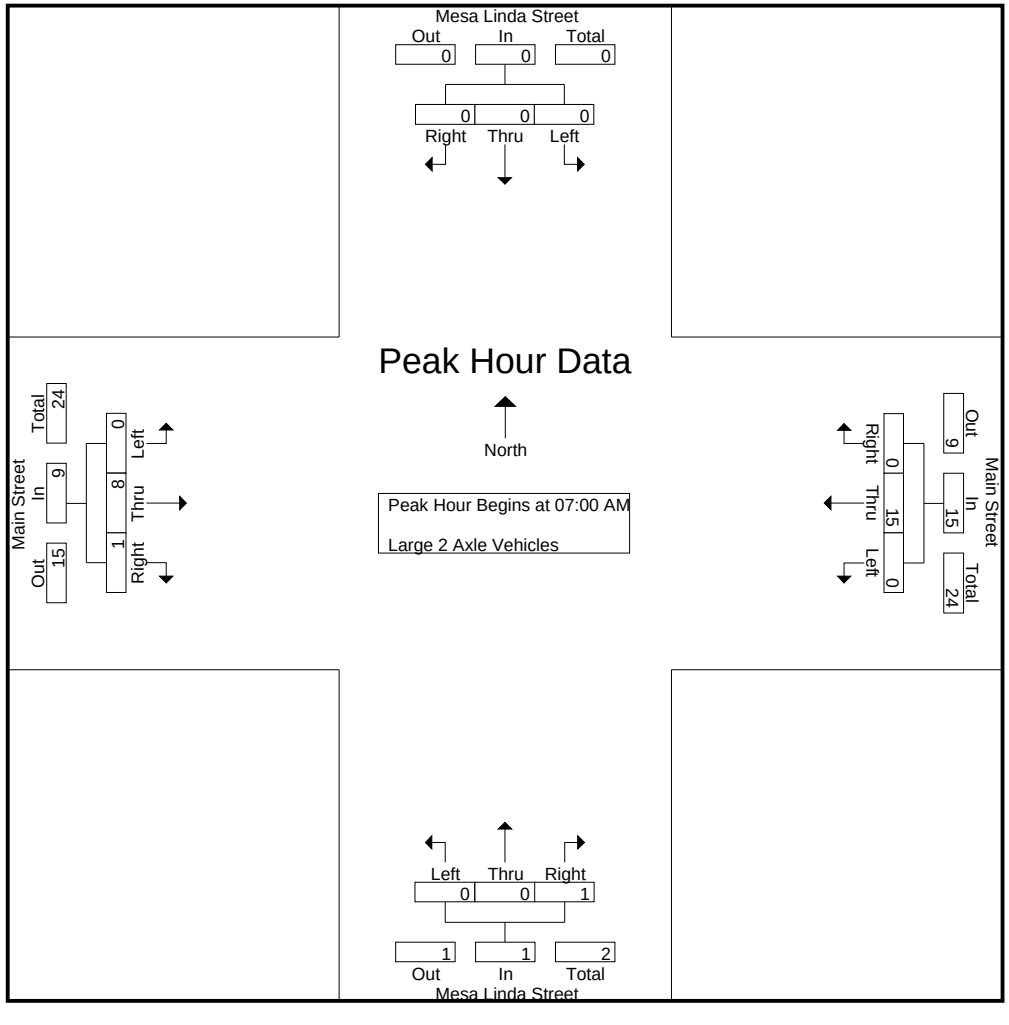

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	Mesa Linda Street Southbound				Main Street Westbound				Mesa Linda Street Northbound				Main Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:00 AM				07:00 AM				07:00 AM				07:00 AM				
+0 mins.	0	0	0	0	0	4	0	4	0	0	0	0	0	1	0	1	
+15 mins.	0	0	0	0	0	2	0	2	0	0	0	0	0	**3**	0	3	
+30 mins.	0	0	0	0	0	**5**	0	**5**	0	0	**1**	**1**	0	1	0	1	
+45 mins.	0	0	0	0	0	4	0	4	0	0	0	0	0	3	**1**	**4**	
Total Volume	0	0	0	0	0	15	0	15	0	0	1	1	0	8	1	9	
% App. Total	0	0	0		0	100	0		0	0	100		0	88.9	11.1		
PHF	.000	.000	.000	.000	.000	.750	.000	.750	.000	.000	.250	.250	.000	.667	.250	.563	

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Groups Printed- 3 Axle Vehicles

	Mesa Linda Street Southbound					Main Street Westbound					Mesa Linda Street Northbound					Main Street Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	2	2
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	1	0	0	1	1	2	3
07:30 AM	0	0	0	0	0	1	2	0	0	3	0	0	0	0	0	0	1	0	0	1	0	4	4
07:45 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	0	3	3
Total	0	0	0	0	0	1	3	0	0	4	0	0	1	1	1	0	6	0	0	6	1	11	12
08:00 AM	1	0	0	0	1	0	1	1	0	2	0	0	0	0	0	0	1	0	0	1	0	4	4
08:15 AM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	2	2
08:30 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	2	2
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	1	1
Total	1	0	0	0	1	0	4	1	0	5	0	0	0	0	0	0	3	0	0	3	0	9	9
Grand Total	1	0	0	0	1	1	7	1	0	9	0	0	1	1	1	0	9	0	0	9	1	20	21
Apprch %	100	0	0			11.1	77.8	11.1			0	0	100			0	100	0					
Total %	5	0	0		5	5	35	5		45	0	0	5		5	0	45	0		45	4.8	95.2	

	Mesa Linda Street Southbound				Main Street Westbound				Mesa Linda Street Northbound				Main Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**2**	0	**2**	2
07:15 AM	0	0	0	0	0	0	0	0	0	0	**1**	**1**	0	1	0	1	2
07:30 AM	0	0	0	0	**1**	**2**	0	**3**	0	0	0	0	0	1	0	1	**4**
07:45 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	2	0	2	3
Total Volume	0	0	0	0	1	3	0	4	0	0	1	1	0	6	0	6	11
% App. Total	0	0	0		25	75	0		0	0	100		0	100	0		
PHF	.000	.000	.000	.000	.250	.375	.000	.333	.000	.000	.250	.250	.000	.750	.000	.750	.688

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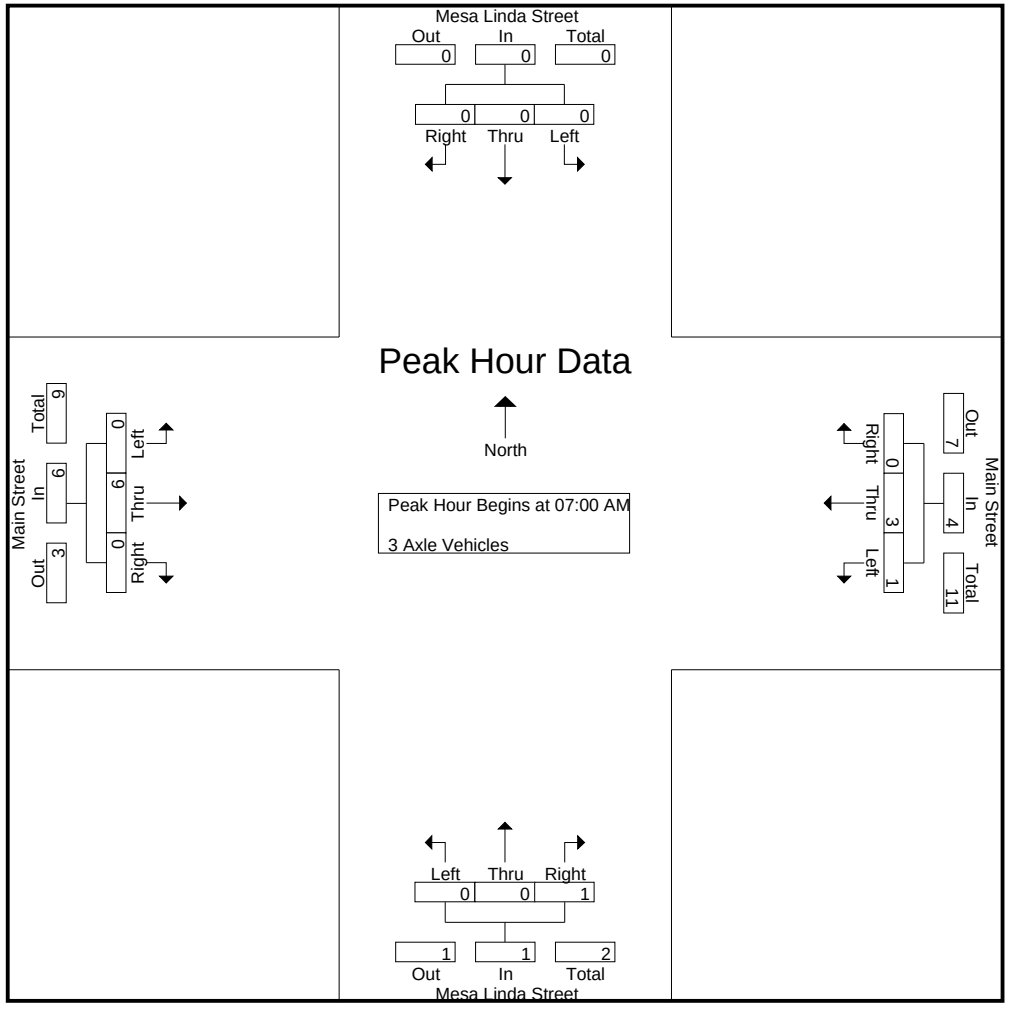
E/W: Main Street
Weather: Clear

File Name : 09_HES_Mesa Linda_Main AM
Site Code : 05119658
Start Date : 9/28/2019
Page No : 2



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File Name : 09_HES_Mesa Linda_Main AM
Site Code : 05119658
Start Date : 9/28/2019

	Mesa Linda Street Southbound				Main Street Westbound				Mesa Linda Street Northbound				Main Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:00 AM				07:00 AM				07:00 AM				07:00 AM				
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	**2**	0	**2**	
+15 mins.	0	0	0	0	0	0	0	0	0	0	**1**	**1**	0	1	0	1	
+30 mins.	0	0	0	0	**1**	**2**	0	**3**	0	0	0	0	0	1	0	1	
+45 mins.	0	0	0	0	0	1	0	1	0	0	0	0	0	2	0	2	
Total Volume	0	0	0	0	1	3	0	4	0	0	1	1	0	6	0	6	
% App. Total	0	0	0		25	75	0		0	0	100		0	100	0		
PHF	.000	.000	.000	.000	.250	.375	.000	.333	.000	.000	.250	.250	.000	.750	.000	.750	

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Site Code : 05119658
Start Date : 9/28/2019
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Groups Printed- 4+ Axle Trucks

	Mesa Linda Street Southbound					Main Street Westbound					Mesa Linda Street Northbound					Main Street Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	3	0	0	3	0	4	4
07:15 AM	0	0	0	0	0	0	3	0	0	3	0	0	1	0	1	0	0	0	0	0	0	4	4
07:30 AM	0	0	0	0	0	1	1	0	0	2	0	0	0	0	0	0	2	0	0	2	0	4	4
07:45 AM	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	3	0	0	3	0	4	4
Total	0	0	0	0	0	2	4	0	0	6	0	0	2	0	2	0	8	0	0	8	0	16	16
08:00 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	0	3	3
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	1	1
08:30 AM	0	0	0	0	0	1	1	0	0	2	0	0	0	0	0	0	1	0	0	1	0	3	3
08:45 AM	0	0	0	0	0	0	2	0	0	2	0	0	1	1	1	0	0	0	0	0	1	3	4
Total	0	0	0	0	0	1	4	0	0	5	0	0	1	1	1	0	4	0	0	4	1	10	11
Grand Total	0	0	0	0	0	3	8	0	0	11	0	0	3	1	3	0	12	0	0	12	1	26	27
Apprch %	0	0	0			27.3	72.7	0			0	0	100			0	100	0					
Total %	0	0	0		0	11.5	30.8	0		42.3	0	0	11.5		11.5	0	46.2	0		46.2	3.7	96.3	

	Mesa Linda Street Southbound				Main Street Westbound				Mesa Linda Street Northbound				Main Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	0	0	0	0	0	0	0	0	0	**1**	**1**	0	**3**	0	**3**	**4**
07:15 AM	0	0	0	0	0	**3**	0	**3**	0	0	1	1	0	0	0	0	4
07:30 AM	0	0	0	0	**1**	1	0	2	0	0	0	0	0	2	0	2	4
07:45 AM	0	0	0	0	1	0	0	1	0	0	0	0	0	3	0	3	4
Total Volume	0	0	0	0	2	4	0	6	0	0	2	2	0	8	0	8	16
% App. Total	0	0	0		33.3	66.7	0		0	0	100		0	100	0		
PHF	.000	.000	.000	.000	.500	.333	.000	.500	.000	.000	.500	.500	.000	.667	.000	.667	1.00

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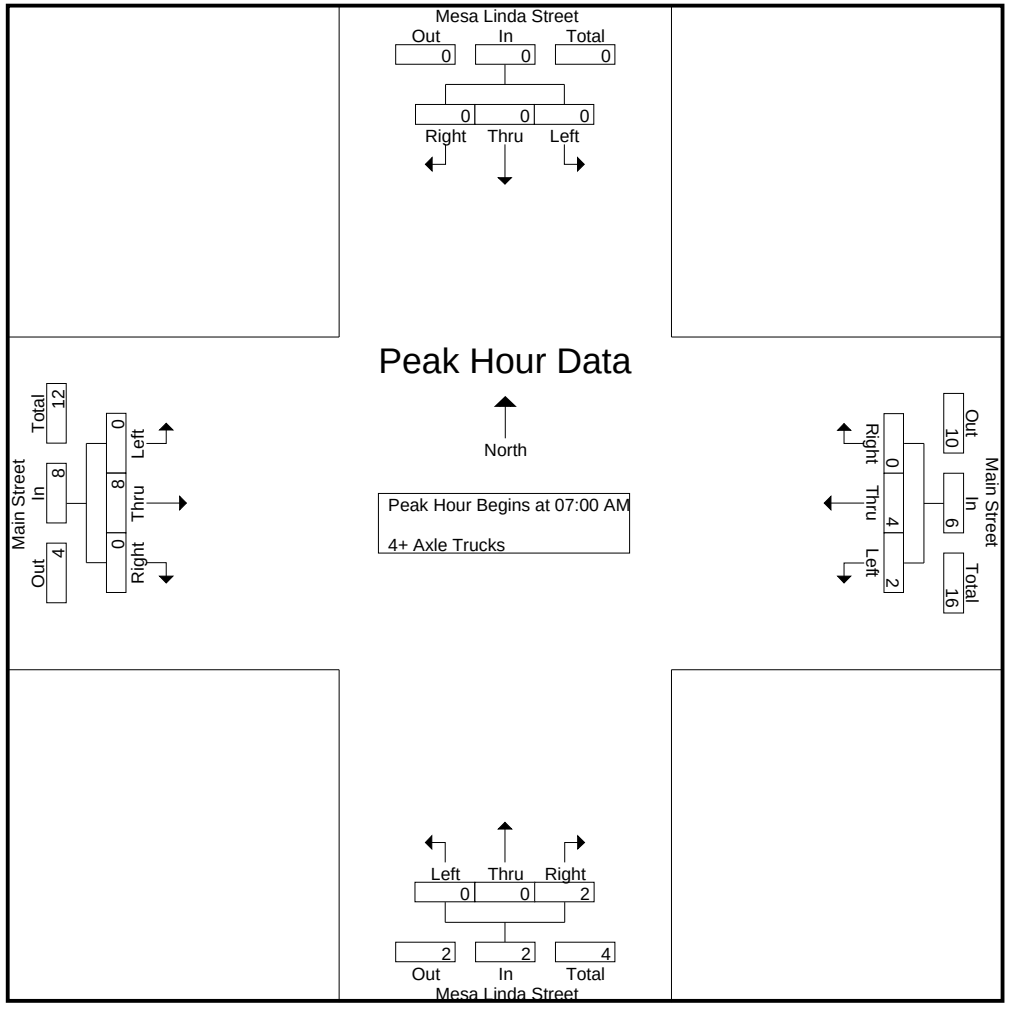

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Start Date : 9/28/2019

	Mesa Linda Street Southbound				Main Street Westbound				Mesa Linda Street Northbound				Main Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:00 AM				07:00 AM				07:00 AM				07:00 AM				
+0 mins.	0	0	0	0	0	0	0	0	0	0	**1**	**1**	0	**3**	0	**3**	
+15 mins.	0	0	0	0	0	**3**	0	**3**	0	0	1	1	0	0	0	0	
+30 mins.	0	0	0	0	**1**	1	0	2	0	0	0	0	0	2	0	2	
+45 mins.	0	0	0	0	1	0	0	1	0	0	0	0	0	3	0	3	
Total Volume	0	0	0	0	2	4	0	6	0	0	2	2	0	8	0	8	
% App. Total	0	0	0		33.3	66.7	0		0	0	100		0	100	0		
PHF	.000	.000	.000	.000	.500	.333	.000	.500	.000	.000	.500	.500	.000	.667	.000	.667	

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Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Mesa Linda Street Southbound					Main Street Westbound					Mesa Linda Street Northbound					Main Street Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	5	0	0	0	5	10	221	19	3	250	4	2	15	10	21	1	194	0	0	195	13	471	484
04:15 PM	8	0	2	2	10	9	232	10	1	251	0	0	14	13	14	2	177	2	0	181	16	456	472
04:30 PM	8	0	0	0	8	10	188	14	2	212	2	5	28	22	35	0	173	3	0	176	24	431	455
04:45 PM	10	0	1	0	11	12	232	10	2	254	3	0	14	12	17	2	169	1	1	172	15	454	469
Total	31	0	3	2	34	41	873	53	8	967	9	7	71	57	87	5	713	6	1	724	68	1812	1880
05:00 PM	7	0	3	3	10	7	226	11	2	244	6	0	15	11	21	2	181	2	0	185	16	460	476
05:15 PM	6	1	2	1	9	14	211	10	1	235	1	1	14	13	16	2	199	3	0	204	15	464	479
05:30 PM	3	0	0	0	3	7	219	10	0	236	1	2	23	20	26	1	159	4	0	164	20	429	449
05:45 PM	6	0	1	1	7	5	202	11	1	218	3	1	11	10	15	2	147	1	0	150	12	390	402
Total	22	1	6	5	29	33	858	42	4	933	11	4	63	54	78	7	686	10	0	703	63	1743	1806
Grand Total	53	1	9	7	63	74	1731	95	12	1900	20	11	134	111	165	12	1399	16	1	1427	131	3555	3686
Apprch %	84.1	1.6	14.3			3.9	91.1	5			12.1	6.7	81.2			0.8	98	1.1					
Total %	1.5	0	0.3		1.8	2.1	48.7	2.7		53.4	0.6	0.3	3.8		4.6	0.3	39.4	0.5		40.1	3.6	96.4	
Passenger Vehicles	53	1	9		70	68	1704	94		1878	19	11	126		261	12	1353	16		1382	0	0	3591
% Passenger Vehicles	100	100	100	100	100	91.9	98.4	98.9	100	98.2	95	100	94	94.6	94.6	100	96.7	100	100	96.8	0	0	97.4
Large 2 Axle Vehicles	0	0	0		0	1	14	1		16	1	0	1		3	0	31	0		31	0	0	50
% Large 2 Axle Vehicles	0	0	0	0	0	1.4	0.8	1.1	0	0.8	5	0	0.7	0.9	1.1	0	2.2	0	0	2.2	0	0	1.4
3 Axle Vehicles	0	0	0		0	2	3	0		5	0	0	2		4	0	0	0		0	0	0	9
% 3 Axle Vehicles	0	0	0	0	0	2.7	0.2	0	0	0.3	0	0	1.5	1.8	1.4	0	0	0	0	0	0	0	0.2
4+ Axle Trucks	0	0	0		0	3	10	0		13	0	0	5		8	0	15	0		15	0	0	36
% 4+ Axle Trucks	0	0	0	0	0	4.1	0.6	0	0	0.7	0	0	3.7	2.7	2.9	0	1.1	0	0	1.1	0	0	1

	Mesa Linda Street Southbound				Main Street Westbound				Mesa Linda Street Northbound				Main Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	5	0	0	5	10	221	**19**	250	**4**	2	15	21	1	**194**	0	**195**	**471**
04:15 PM	8	0	**2**	10	9	**232**	10	251	0	0	14	14	**2**	177	2	181	456
04:30 PM	8	0	0	8	10	188	14	212	2	**5**	**28**	**35**	0	173	**3**	176	431
04:45 PM	**10**	0	1	**11**	**12**	232	10	**254**	3	0	14	17	2	169	1	172	454
Total Volume	31	0	3	34	41	873	53	967	9	7	71	87	5	713	6	724	1812
% App. Total	91.2	0	8.8		4.2	90.3	5.5		10.3	8	81.6		0.7	98.5	0.8		
PHF	.775	.000	.375	.773	.854	.941	.697	.952	.563	.350	.634	.621	.625	.919	.500	.928	.962

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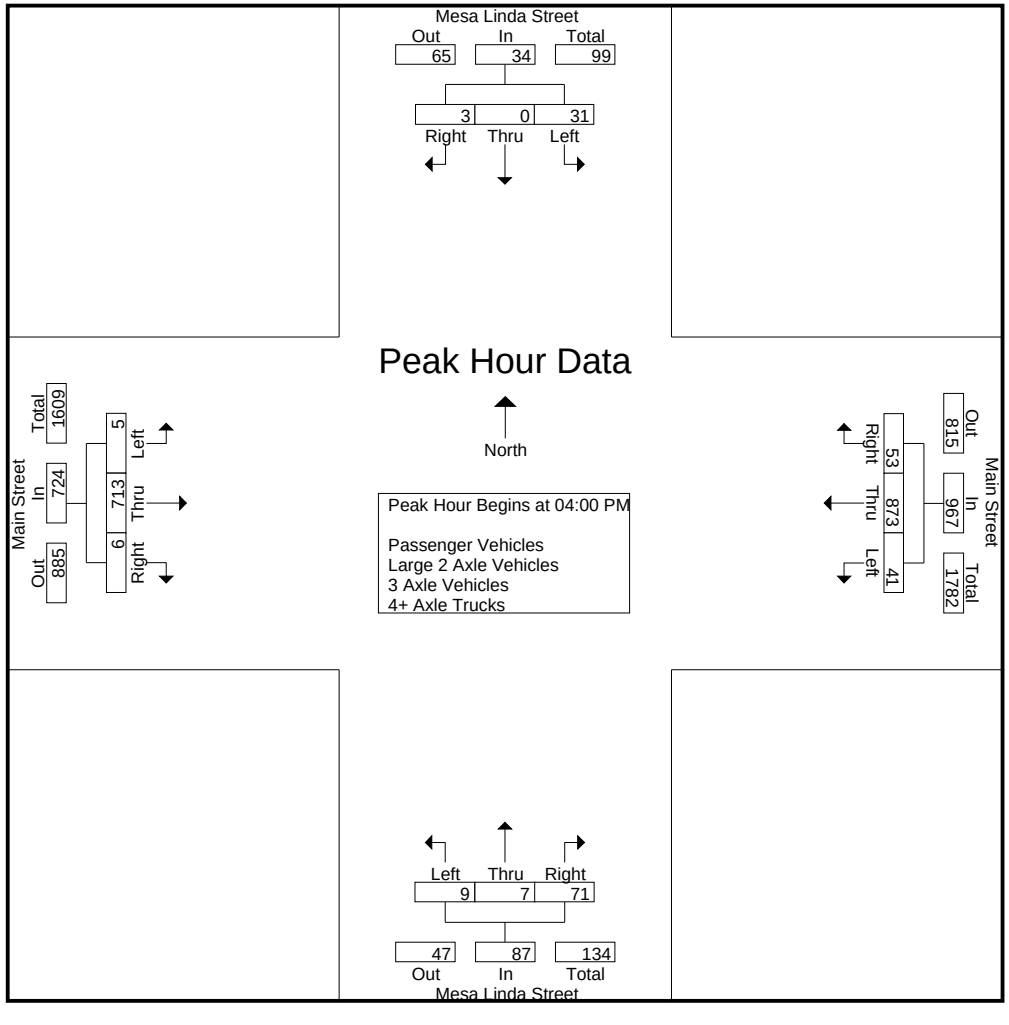

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	Mesa Linda Street Southbound				Main Street Westbound				Mesa Linda Street Northbound				Main Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	04:15 PM				04:45 PM				04:30 PM				04:30 PM				
+0 mins.	8	0	2	10	12	**232**	10	**254**	2	**5**	**28**	**35**	0	173	**3**	176	
+15 mins.	8	0	0	8	7	226	**11**	244	3	0	14	17	**2**	169	1	172	
+30 mins.	**10**	0	1	**11**	**14**	211	10	235	**6**	0	15	21	2	181	2	185	
+45 mins.	7	0	**3**	10	7	219	10	236	1	1	14	16	2	**199**	3	**204**	
Total Volume	33	0	6	39	40	888	41	969	12	6	71	89	6	722	9	737	
% App. Total	84.6	0	15.4		4.1	91.6	4.2		13.5	6.7	79.8		0.8	98	1.2		
PHF	.825	.000	.500	.886	.714	.957	.932	.954	.500	.300	.634	.636	.750	.907	.750	.903	

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Groups Printed- Passenger Vehicles

	Mesa Linda Street Southbound					Main Street Westbound					Mesa Linda Street Northbound					Main Street Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	5	0	0	0	5	9	218	19	3	246	3	2	12	7	17	1	189	0	0	190	10	458	468
04:15 PM	8	0	2	2	10	7	226	10	1	243	0	0	12	11	12	2	173	2	0	177	14	442	456
04:30 PM	8	0	0	0	8	9	183	14	2	206	2	5	28	22	35	0	165	3	0	168	24	417	441
04:45 PM	10	0	1	0	11	12	228	10	2	250	3	0	13	12	16	2	164	1	1	167	15	444	459
Total	31	0	3	2	34	37	855	53	8	945	8	7	65	52	80	5	691	6	1	702	63	1761	1824
05:00 PM	7	0	3	3	10	6	222	10	2	238	6	0	15	11	21	2	174	2	0	178	16	447	463
05:15 PM	6	1	2	1	9	13	208	10	1	231	1	1	14	13	16	2	194	3	0	199	15	455	470
05:30 PM	3	0	0	0	3	7	219	10	0	236	1	2	21	19	24	1	154	4	0	159	19	422	441
05:45 PM	6	0	1	1	7	5	200	11	1	216	3	1	11	10	15	2	140	1	0	143	12	381	393
Total	22	1	6	5	29	31	849	41	4	921	11	4	61	53	76	7	662	10	0	679	62	1705	1767
Grand Total	53	1	9	7	63	68	1704	94	12	1866	19	11	126	105	156	12	1353	16	1	1381	125	3466	3591
Apprch %	84.1	1.6	14.3			3.6	91.3	5			12.2	7.1	80.8			0.9	98	1.2					
Total %	1.5	0	0.3		1.8	2	49.2	2.7		53.8	0.5	0.3	3.6		4.5	0.3	39	0.5		39.8	3.5	96.5	

	Mesa Linda Street Southbound				Main Street Westbound				Mesa Linda Street Northbound				Main Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	5	0	0	5	9	218	**19**	246	**3**	2	12	17	1	**189**	0	**190**	**458**
04:15 PM	8	0	**2**	10	7	226	10	243	0	0	12	12	**2**	173	2	177	442
04:30 PM	8	0	0	8	9	183	14	206	2	**5**	**28**	**35**	0	165	**3**	168	417
04:45 PM	**10**	0	1	**11**	**12**	**228**	10	**250**	3	0	13	16	2	164	1	167	444
Total Volume	31	0	3	34	37	855	53	945	8	7	65	80	5	691	6	702	1761
% App. Total	91.2	0	8.8		3.9	90.5	5.6		10	8.8	81.2		0.7	98.4	0.9		
PHF	.775	.000	.375	.773	.771	.938	.697	.945	.667	.350	.580	.571	.625	.914	.500	.924	.961

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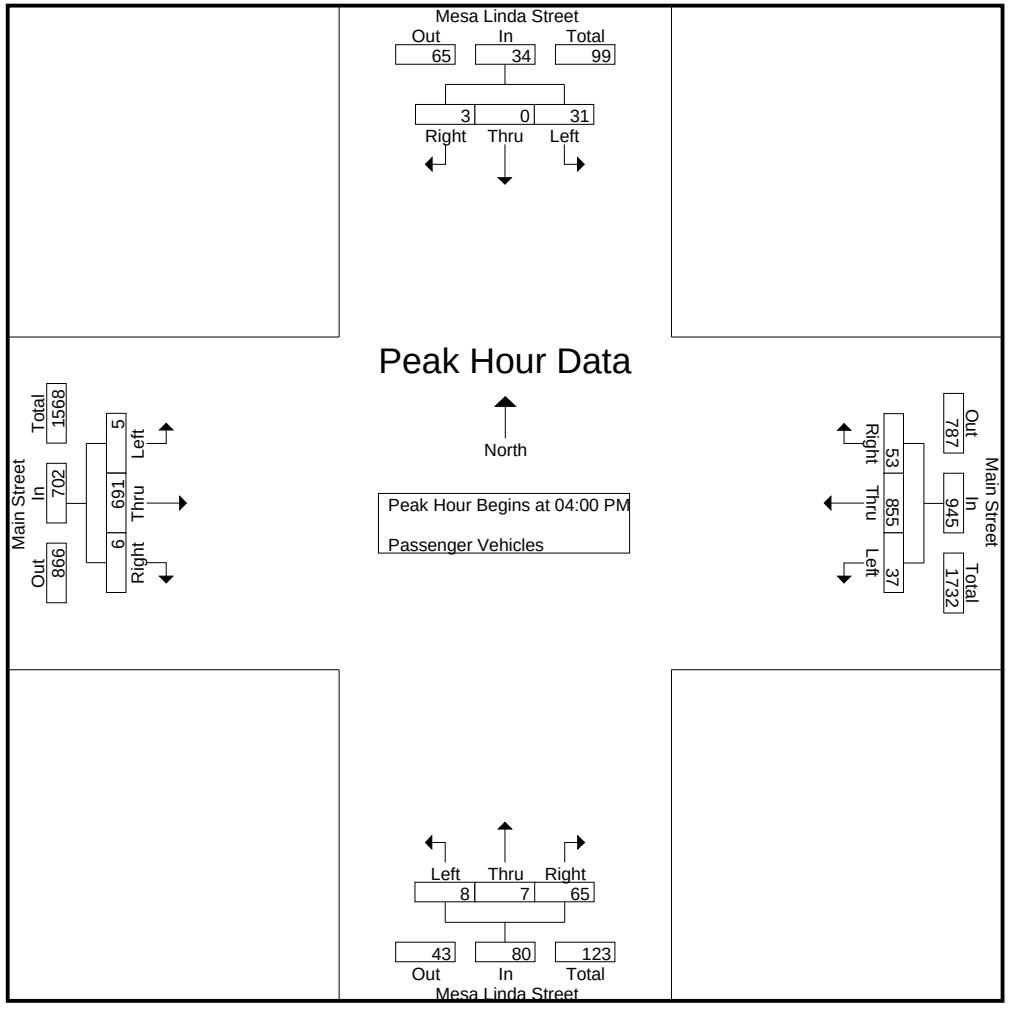

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	Mesa Linda Street Southbound				Main Street Westbound				Mesa Linda Street Northbound				Main Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 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.	5	0	0	5	9	218	**19**	246	**3**	2	12	17	1	**189**	0	**190**	
+15 mins.	8	0	**2**	10	7	226	10	243	0	0	12	12	**2**	173	2	177	
+30 mins.	8	0	0	8	9	183	14	206	2	**5**	**28**	**35**	0	165	**3**	168	
+45 mins.	**10**	0	1	**11**	**12**	**228**	10	**250**	3	0	13	16	2	164	1	167	
Total Volume	31	0	3	34	37	855	53	945	8	7	65	80	5	691	6	702	
% App. Total	91.2	0	8.8		3.9	90.5	5.6		10	8.8	81.2		0.7	98.4	0.9		
PHF	.775	.000	.375	.773	.771	.938	.697	.945	.667	.350	.580	.571	.625	.914	.500	.924	

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City of Hesperia
N/S: Mesa Linda Street
E/W: Main Street
Weather: Clear

File Name : 09_HES_Mesa Linda_Main PM
Site Code : 05119658
Start Date : 9/28/2019
Page No : 1

Groups Printed- Large 2 Axle Vehicles

	Mesa Linda Street Southbound					Main Street Westbound					Mesa Linda Street Northbound					Main Street Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	0	0	0	0	0	0	1	0	0	1	1	0	0	0	1	0	2	0	0	2	0	4	4
04:15 PM	0	0	0	0	0	0	4	0	0	4	0	0	1	1	1	0	3	0	0	3	1	8	9
04:30 PM	0	0	0	0	0	1	4	0	0	5	0	0	0	0	0	0	6	0	0	6	0	11	11
04:45 PM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	5	0	0	5	0	7	7
Total	0	0	0	0	0	1	11	0	0	12	1	0	1	1	2	0	16	0	0	16	1	30	31
05:00 PM	0	0	0	0	0	0	2	1	0	3	0	0	0	0	0	0	6	0	0	6	0	9	9
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	0	3	3
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	5	0	5	5
05:45 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	2	2
Total	0	0	0	0	0	0	3	1	0	4	0	0	0	0	0	0	15	0	0	15	0	19	19
Grand Total	0	0	0	0	0	1	14	1	0	16	1	0	1	1	2	0	31	0	0	31	1	49	50
Apprch %	0	0	0			6.2	87.5	6.2			50	0	50			0	100	0					
Total %	0	0	0		0	2	28.6	2		32.7	2	0	2		4.1	0	63.3	0		63.3	2	98	

	Mesa Linda Street Southbound				Main Street Westbound				Mesa Linda Street Northbound				Main Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 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	1	0	1	**1**	0	0	**1**	0	2	0	2	4
04:15 PM	0	0	0	0	0	**4**	0	4	0	0	**1**	1	0	3	0	3	8
04:30 PM	0	0	0	0	**1**	4	0	**5**	0	0	0	0	0	**6**	0	**6**	**11**
04:45 PM	0	0	0	0	0	2	0	2	0	0	0	0	0	5	0	5	7
Total Volume	0	0	0	0	1	11	0	12	1	0	1	2	0	16	0	16	30
% App. Total	0	0	0		8.3	91.7	0		50	0	50		0	100	0		
PHF	.000	.000	.000	.000	.250	.688	.000	.600	.250	.000	.250	.500	.000	.667	.000	.667	.682

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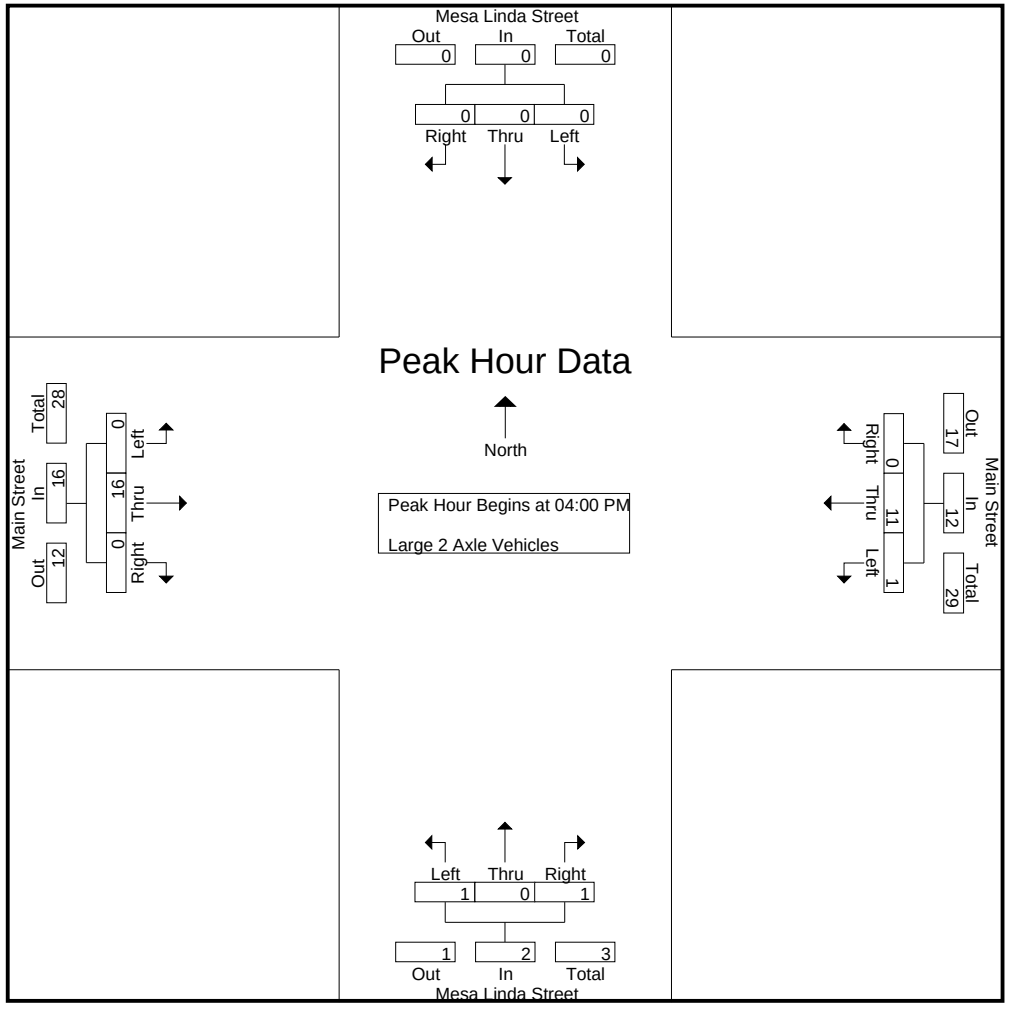
City of Hesperia
N/S: Mesa Linda Street
E/W: Main Street
Weather: Clear

File Name : 09_HES_Mesa Linda_Main PM
Site Code : 05119658
Start Date : 9/28/2019
Page No : 2



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(951) 268-6268

City of Hesperia
N/S: Mesa Linda Street
E/W: Main Street
Weather: Clear

File Name : 09_HES_Mesa Linda_Main PM
Site Code : 05119658
Start Date : 9/28/2019

	Mesa Linda Street Southbound				Main Street Westbound				Mesa Linda Street Northbound				Main Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 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	1	0	1	**1**	0	0	**1**	0	2	0	2	
+15 mins.	0	0	0	0	0	**4**	0	4	0	0	**1**	1	0	3	0	3	
+30 mins.	0	0	0	0	**1**	4	0	**5**	0	0	0	0	0	**6**	0	**6**	
+45 mins.	0	0	0	0	0	2	0	2	0	0	0	0	0	5	0	5	
Total Volume	0	0	0	0	1	11	0	12	1	0	1	2	0	16	0	16	
% App. Total	0	0	0		8.3	91.7	0		50	0	50		0	100	0		
PHF	.000	.000	.000	.000	.250	.688	.000	.600	.250	.000	.250	.500	.000	.667	.000	.667	

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City of Hesperia
N/S: Mesa Linda Street
E/W: Main Street
Weather: Clear

File Name : 09_HES_Mesa Linda_Main PM
Site Code : 05119658
Start Date : 9/28/2019
Page No : 1

Groups Printed- 3 Axle Vehicles

	Mesa Linda Street Southbound					Main Street Westbound					Mesa Linda Street Northbound					Main Street Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	1	1	2
04:15 PM	0	0	0	0	0	1	1	0	0	2	0	0	0	0	0	0	0	0	0	0	0	2	2
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	1	1	0	0	2	0	0	1	1	1	0	0	0	0	0	1	3	4
05:00 PM	0	0	0	0	0	0	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	1	2	0	0	3	0	0	0	0	0	0	0	0	0	0	0	3	3
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	1	1	2
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	1	2	0	0	3	0	0	1	1	1	0	0	0	0	0	1	4	5
Grand Total	0	0	0	0	0	2	3	0	0	5	0	0	2	2	2	0	0	0	0	0	2	7	9
Apprch %	0	0	0			40	60	0			0	0	100			0	0	0					
Total %	0	0	0		0	28.6	42.9	0		71.4	0	0	28.6		28.6	0	0	0		0	22.2	77.8	

	Mesa Linda Street Southbound				Main Street Westbound				Mesa Linda Street Northbound				Main Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	0	0	0	0	0	0	0	0	0	0	**1**	**1**	0	0	0	0	1
04:15 PM	0	0	0	0	**1**	**1**	0	**2**	0	0	0	0	0	0	0	0	**2**
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	1	1	0	2	0	0	1	1	0	0	0	0	3
% App. Total	0	0	0		50	50	0		0	0	100		0	0	0		
PHF	.000	.000	.000	.000	.250	.250	.000	.250	.000	.000	.250	.250	.000	.000	.000	.000	.375

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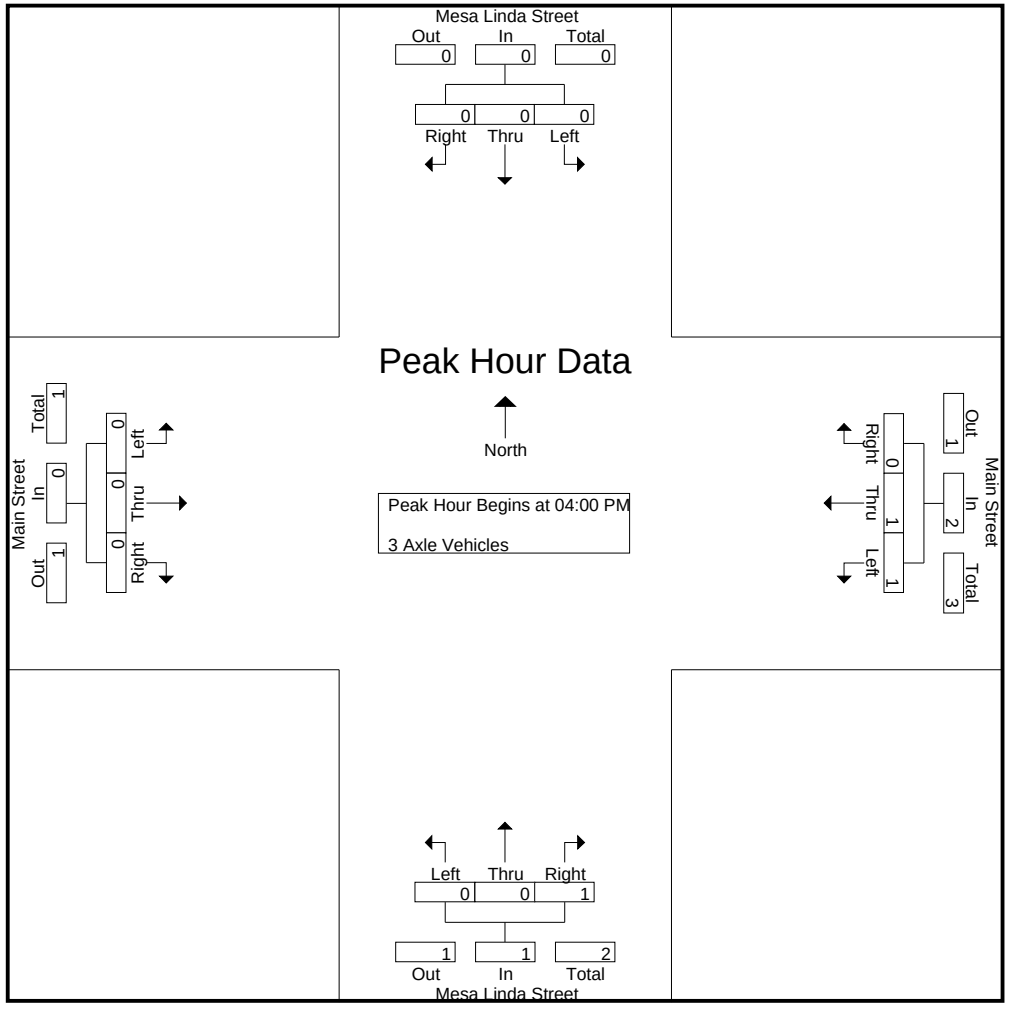
City of Hesperia
N/S: Mesa Linda Street
E/W: Main Street
Weather: Clear

File Name : 09_HES_Mesa Linda_Main PM
Site Code : 05119658
Start Date : 9/28/2019
Page No : 2



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City of Hesperia
N/S: Mesa Linda Street
E/W: Main Street
Weather: Clear

File Name : 09_HES_Mesa Linda_Main PM
Site Code : 05119658
Start Date : 9/28/2019

	Mesa Linda Street Southbound				Main Street Westbound				Mesa Linda Street Northbound				Main Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	04:00 PM				04:00 PM				04:00 PM				04:00 PM				
+0 mins.	0	0	0	0	0	0	0	0	0	0	**1**	**1**	0	0	0	0	
+15 mins.	0	0	0	0	**1**	**1**	0	**2**	0	0	0	0	0	0	0	0	
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total Volume	0	0	0	0	1	1	0	2	0	0	1	1	0	0	0	0	
% App. Total	0	0	0		50	50	0		0	0	100		0	0	0		
PHF	.000	.000	.000	.000	.250	.250	.000	.250	.000	.000	.250	.250	.000	.000	.000	.000	

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City of Hesperia
N/S: Mesa Linda Street
E/W: Main Street
Weather: Clear

File Name : 09_HES_Mesa Linda_Main PM
Site Code : 05119658
Start Date : 9/28/2019
Page No : 1

Groups Printed- 4+ Axle Trucks

	Mesa Linda Street Southbound					Main Street Westbound					Mesa Linda Street Northbound					Main Street Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	0	0	0	0	0	1	2	0	0	3	0	0	2	2	2	0	3	0	0	3	2	8	10
04:15 PM	0	0	0	0	0	1	1	0	0	2	0	0	1	1	1	0	1	0	0	1	1	4	5
04:30 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	0	3	3
04:45 PM	0	0	0	0	0	0	2	0	0	2	0	0	1	0	1	0	0	0	0	0	0	3	3
Total	0	0	0	0	0	2	6	0	0	8	0	0	4	3	4	0	6	0	0	6	3	18	21
05:00 PM	0	0	0	0	0	1	2	0	0	3	0	0	0	0	0	0	1	0	0	1	0	4	4
05:15 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	0	3	3
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1	1
05:45 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	6	0	0	6	0	7	7
Total	0	0	0	0	0	1	4	0	0	5	0	0	1	0	1	0	9	0	0	9	0	15	15
Grand Total	0	0	0	0	0	3	10	0	0	13	0	0	5	3	5	0	15	0	0	15	3	33	36
Apprch %	0	0	0			23.1	76.9	0			0	0	100			0	100	0					
Total %	0	0	0		0	9.1	30.3	0		39.4	0	0	15.2		15.2	0	45.5	0		45.5	8.3	91.7	

	Mesa Linda Street Southbound				Main Street Westbound				Mesa Linda Street Northbound				Main Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	0	0	0	0	**1**	**2**	0	**3**	0	0	**2**	**2**	0	**3**	0	**3**	**8**
04:15 PM	0	0	0	0	1	1	0	2	0	0	1	1	0	1	0	1	4
04:30 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	2	0	2	3
04:45 PM	0	0	0	0	0	2	0	2	0	0	1	1	0	0	0	0	3
Total Volume	0	0	0	0	2	6	0	8	0	0	4	4	0	6	0	6	18
% App. Total	0	0	0		25	75	0		0	0	100		0	100	0		
PHF	.000	.000	.000	.000	.500	.750	.000	.667	.000	.000	.500	.500	.000	.500	.000	.500	.563

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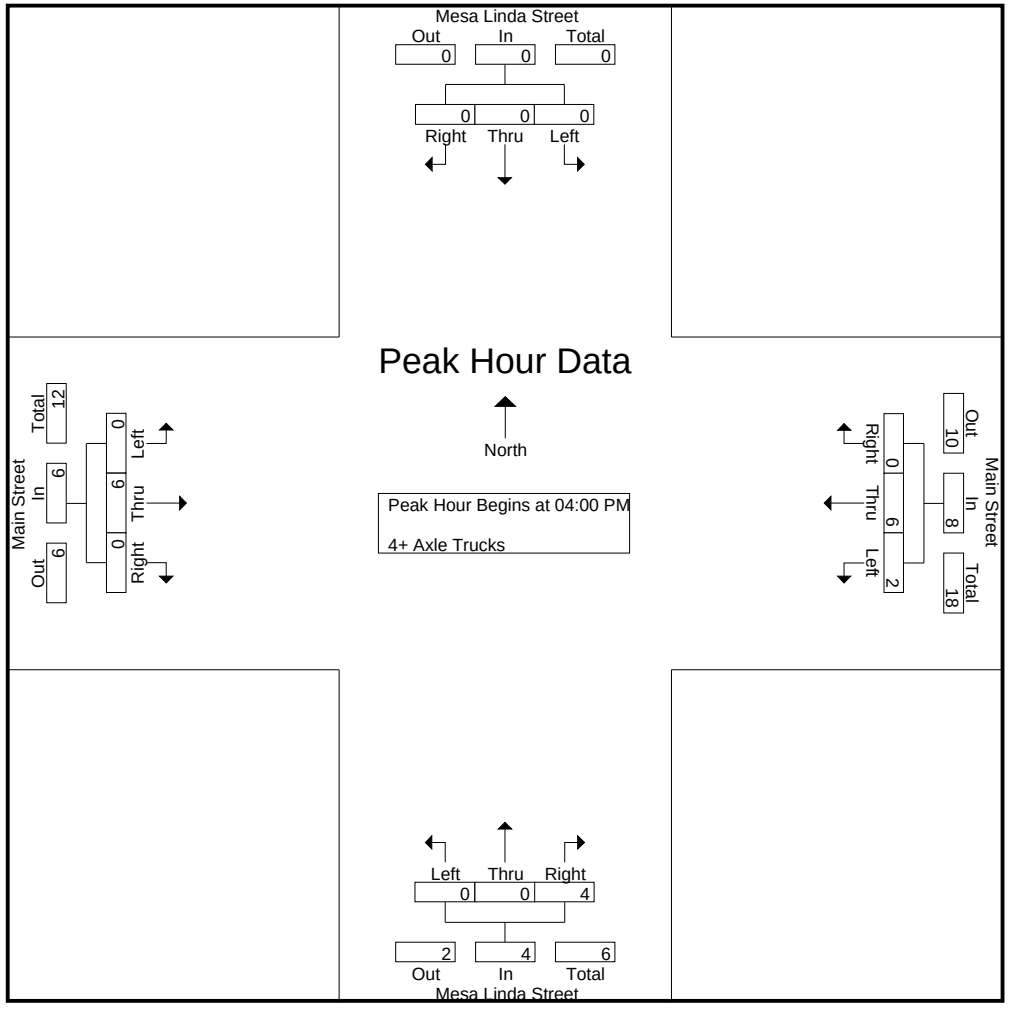
City of Hesperia
N/S: Mesa Linda Street
E/W: Main Street
Weather: Clear

File Name : 09_HES_Mesa Linda_Main PM
Site Code : 05119658
Start Date : 9/28/2019
Page No : 2



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City of Hesperia
N/S: Mesa Linda Street
E/W: Main Street
Weather: Clear

File Name : 09_HES_Mesa Linda_Main PM
Site Code : 05119658
Start Date : 9/28/2019
Page No : 3

	Mesa Linda Street Southbound				Main Street Westbound				Mesa Linda Street Northbound				Main Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 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	**1**	**2**	0	**3**	0	0	**2**	**2**	0	**3**	0	**3**	
+15 mins.	0	0	0	0	1	1	0	2	0	0	1	1	0	1	0	1	
+30 mins.	0	0	0	0	0	1	0	1	0	0	0	0	0	2	0	2	
+45 mins.	0	0	0	0	0	2	0	2	0	0	1	1	0	0	0	0	
Total Volume	0	0	0	0	2	6	0	8	0	0	4	4	0	6	0	6	
% App. Total	0	0	0		25	75	0		0	0	100		0	100	0		
PHF	.000	.000	.000	.000	.500	.750	.000	.667	.000	.000	.500	.500	.000	.500	.000	.500	

Location: Hesperia
N/S: Mesa Linda Street
E/W: Main Street

Date: 9/28/2019
Day: Saturday

PEDESTRIANS

	North Leg Mesa Linda Street	East Leg Main Street	South Leg Mesa Linda Street	West Leg Main Street	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	1	0	0	1
8:30 AM	0	0	0	0	0
8:45 AM	0	1	1	0	2
TOTAL VOLUMES:	0	2	1	0	3

	North Leg Mesa Linda Street	East Leg Main Street	South Leg Mesa Linda Street	West Leg Main Street	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0

Location: Hesperia
N/S: Mesa Linda Street
E/W: Main Street

Date: 9/28/2019
Day: Saturday

BICYCLES

	Southbound Mesa Linda Street			Westbound Main Street			Northbound Mesa Linda Street			Eastbound Main Street			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	0	0	0	0	0	0	0	0

	Southbound Mesa Linda Street			Westbound Main Street			Northbound Mesa Linda Street			Eastbound Main Street			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	0	0	0	0	0	0	0	0

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City of Hesperia
N/S: Cataba Road
E/W: Main Street
Weather: Clear

File Name : 10_HES_Cataba_Main AM
Site Code : 05119658
Start Date : 9/28/2019
Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Cataba Road Southbound					Main Street Westbound					Cataba Road Northbound					Main Street Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	6	3	7	4	16	14	108	1	0	123	9	2	11	11	22	8	189	8	2	205	17	366	383
07:15 AM	4	0	6	5	10	15	123	8	4	146	6	2	8	6	16	13	180	7	0	200	15	372	387
07:30 AM	6	0	6	4	12	18	160	2	1	180	5	1	10	9	16	8	220	9	2	237	16	445	461
07:45 AM	13	3	6	5	22	20	106	3	1	129	10	2	13	9	25	17	195	12	2	224	17	400	417
Total	29	6	25	18	60	67	497	14	6	578	30	7	42	35	79	46	784	36	6	866	65	1583	1648
08:00 AM	10	0	2	2	12	19	106	2	1	127	5	2	15	13	22	6	154	23	3	183	19	344	363
08:15 AM	9	3	15	12	27	20	95	5	1	120	8	2	15	6	25	17	151	20	5	188	24	360	384
08:30 AM	20	3	10	7	33	20	106	5	1	131	11	2	18	15	31	15	187	13	2	215	25	410	435
08:45 AM	8	4	12	9	24	26	84	4	1	114	8	2	15	8	25	9	148	22	12	179	30	342	372
Total	47	10	39	30	96	85	391	16	4	492	32	8	63	42	103	47	640	78	22	765	98	1456	1554
Grand Total	76	16	64	48	156	152	888	30	10	1070	62	15	105	77	182	93	1424	114	28	1631	163	3039	3202
Apprch %	48.7	10.3	41			14.2	83	2.8			34.1	8.2	57.7			5.7	87.3	7					
Total %	2.5	0.5	2.1		5.1	5	29.2	1		35.2	2	0.5	3.5		6	3.1	46.9	3.8		53.7	5.1	94.9	
Passenger Vehicles	64	16	61		187	148	829	26		1012	61	15	96		244	88	1377	114		1607	0	0	3050
% Passenger Vehicles	84.2	100	95.3	95.8	91.7	97.4	93.4	86.7	90	93.7	98.4	100	91.4	93.5	94.2	94.6	96.7	100	100	96.9	0	0	95.3
Large 2 Axle Vehicles	11	0	3		16	3	38	3		45	1	0	3		5	2	25	0		27	0	0	93
% Large 2 Axle Vehicles	14.5	0	4.7	4.2	7.8	2	4.3	10	10	4.2	1.6	0	2.9	1.3	1.9	2.2	1.8	0	0	1.6	0	0	2.9
3 Axle Vehicles	1	0	0		1	0	8	0		8	0	0	2		3	2	7	0		9	0	0	21
% 3 Axle Vehicles	1.3	0	0	0	0.5	0	0.9	0	0	0.7	0	0	1.9	1.3	1.2	2.2	0.5	0	0	0.5	0	0	0.7
4+ Axle Trucks	0	0	0		0	1	13	1		15	0	0	4		7	1	15	0		16	0	0	38
% 4+ Axle Trucks	0	0	0	0	0	0.7	1.5	3.3	0	1.4	0	0	3.8	3.9	2.7	1.1	1.1	0	0	1	0	0	1.2

	Cataba Road Southbound				Main Street Westbound				Cataba Road Northbound				Main Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	6	**3**	**7**	16	14	108	1	123	9	**2**	11	22	8	189	8	205	366
07:15 AM	4	0	6	10	15	123	**8**	146	6	2	8	16	13	180	7	200	372
07:30 AM	6	0	6	12	18	**160**	2	**180**	5	1	10	16	8	**220**	9	**237**	**445**
07:45 AM	**13**	3	6	**22**	**20**	106	3	129	**10**	2	**13**	**25**	**17**	195	**12**	224	400
Total Volume	29	6	25	60	67	497	14	578	30	7	42	79	46	784	36	866	1583
% App. Total	48.3	10	41.7		11.6	86	2.4		38	8.9	53.2		5.3	90.5	4.2		
PHF	.558	.500	.893	.682	.838	.777	.438	.803	.750	.875	.808	.790	.676	.891	.750	.914	.889

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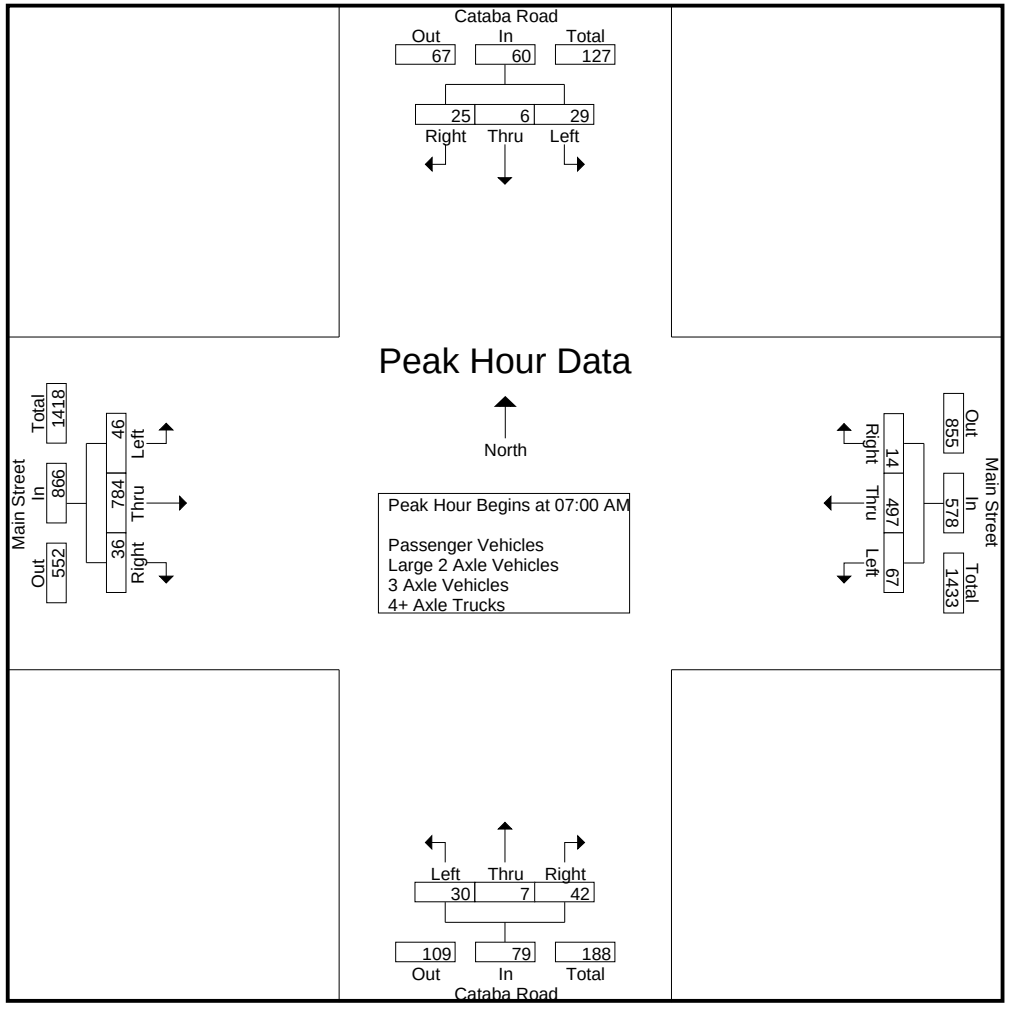
City of Hesperia
N/S: Cataba Road
E/W: Main Street
Weather: Clear

File Name : 10_HES_Cataba_Main AM
Site Code : 05119658
Start Date : 9/28/2019
Page No : 2



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City of Hesperia
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File Name : 10_HES_Cataba_Main AM
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Start Date : 9/28/2019

	Cataba Road Southbound				Main Street Westbound				Cataba Road Northbound				Main Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	08:00 AM				07:15 AM				07:45 AM				07:00 AM				
+0 mins.	10	0	2	12	15	123	**8**	146	10	**2**	13	25	8	189	8	205	
+15 mins.	9	3	**15**	27	18	**160**	2	**180**	5	2	15	22	13	180	7	200	
+30 mins.	**20**	3	10	**33**	**20**	106	3	129	8	2	15	25	8	**220**	9	**237**	
+45 mins.	8	**4**	12	24	19	106	2	127	**11**	2	**18**	**31**	**17**	195	**12**	224	
Total Volume	47	10	39	96	72	495	15	582	34	8	61	103	46	784	36	866	
% App. Total	49	10.4	40.6		12.4	85.1	2.6		33	7.8	59.2		5.3	90.5	4.2		
PHF	.588	.625	.650	.727	.900	.773	.469	.808	.773	1.000	.847	.831	.676	.891	.750	.914	

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City of Hesperia
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Weather: Clear

File Name : 10_HES_Cataba_Main AM
Site Code : 05119658
Start Date : 9/28/2019
Page No : 1

Groups Printed- Passenger Vehicles

	Cataba Road Southbound					Main Street Westbound					Cataba Road Northbound					Main Street Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	3	3	6	3	12	12	101	0	0	113	9	2	10	10	21	8	182	8	2	198	15	344	359
07:15 AM	4	0	6	5	10	15	117	6	3	138	6	2	8	6	16	13	173	7	0	193	14	357	371
07:30 AM	5	0	6	4	11	17	149	2	1	168	5	1	8	7	14	8	215	9	2	232	14	425	439
07:45 AM	9	3	6	5	18	20	100	3	1	123	9	2	12	8	23	14	190	12	2	216	16	380	396
Total	21	6	24	17	51	64	467	11	5	542	29	7	38	31	74	43	760	36	6	839	59	1506	1565
08:00 AM	9	0	2	2	11	19	101	2	1	122	5	2	14	13	21	5	145	23	3	173	19	327	346
08:15 AM	8	3	14	11	25	20	89	5	1	114	8	2	13	6	23	17	149	20	5	186	23	348	371
08:30 AM	20	3	10	7	33	19	98	4	1	121	11	2	16	14	29	14	179	13	2	206	24	389	413
08:45 AM	6	4	11	9	21	26	74	4	1	104	8	2	15	8	25	9	144	22	12	175	30	325	355
Total	43	10	37	29	90	84	362	15	4	461	32	8	58	41	98	45	617	78	22	740	96	1389	1485
Grand Total	64	16	61	46	141	148	829	26	9	1003	61	15	96	72	172	88	1377	114	28	1579	155	2895	3050
Apprch %	45.4	11.3	43.3			14.8	82.7	2.6			35.5	8.7	55.8			5.6	87.2	7.2					
Total %	2.2	0.6	2.1		4.9	5.1	28.6	0.9		34.6	2.1	0.5	3.3		5.9	3	47.6	3.9		54.5	5.1	94.9	

	Cataba Road Southbound				Main Street Westbound				Cataba Road Northbound				Main Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	3	**3**	**6**	12	12	101	0	113	**9**	**2**	10	21	8	182	8	198	344
07:15 AM	4	0	6	10	15	117	**6**	138	6	2	8	16	13	173	7	193	357
07:30 AM	5	0	6	11	17	**149**	2	**168**	5	1	8	14	8	**215**	9	**232**	**425**
07:45 AM	**9**	3	6	**18**	**20**	100	3	123	9	2	**12**	**23**	**14**	190	**12**	216	380
Total Volume	21	6	24	51	64	467	11	542	29	7	38	74	43	760	36	839	1506
% App. Total	41.2	11.8	47.1		11.8	86.2	2		39.2	9.5	51.4		5.1	90.6	4.3		
PHF	.583	.500	1.00	.708	.800	.784	.458	.807	.806	.875	.792	.804	.768	.884	.750	.904	.886

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City of Hesperia
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Weather: Clear

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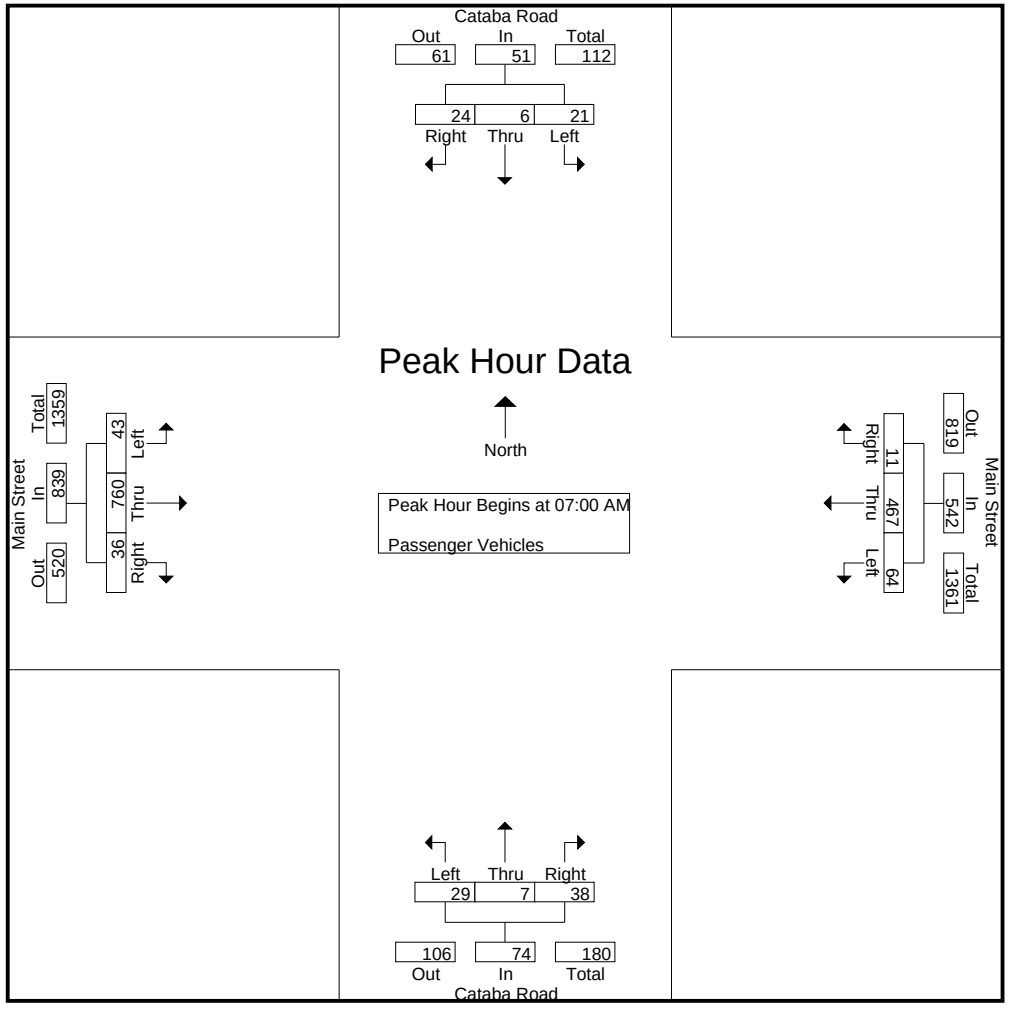
Site Code : 05119658
Start Date : 9/28/2019
Page No : 2



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City of Hesperia
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Weather: Clear

File Name : 10_HES_Cataba_Main AM
Site Code : 05119658
Start Date : 9/28/2019

	Cataba Road Southbound				Main Street Westbound				Cataba Road Northbound				Main Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:00 AM				07:00 AM				07:00 AM				07:00 AM				
+0 mins.	3	**3**	**6**	12	12	101	0	113	**9**	**2**	10	21	8	182	8	198	
+15 mins.	4	0	6	10	15	117	**6**	138	6	2	8	16	13	173	7	193	
+30 mins.	5	0	6	11	17	**149**	2	**168**	5	1	8	14	8	**215**	9	**232**	
+45 mins.	**9**	3	6	**18**	**20**	100	3	123	9	2	**12**	**23**	**14**	190	**12**	216	
Total Volume	21	6	24	51	64	467	11	542	29	7	38	74	43	760	36	839	
% App. Total	41.2	11.8	47.1		11.8	86.2	2		39.2	9.5	51.4		5.1	90.6	4.3		
PHF	.583	.500	1.000	.708	.800	.784	.458	.807	.806	.875	.792	.804	.768	.884	.750	.904	

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City of Hesperia
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File Name : 10_HES_Cataba_Main AM
Site Code : 05119658
Start Date : 9/28/2019
Page No : 1

Groups Printed- Large 2 Axle Vehicles

	Cataba Road Southbound					Main Street Westbound					Cataba Road Northbound					Main Street Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	3	0	1	1	4	1	5	1	0	7	0	0	0	0	0	0	2	0	0	2	1	13	14
07:15 AM	0	0	0	0	0	0	3	1	1	4	0	0	0	0	0	0	3	0	0	3	1	7	8
07:30 AM	1	0	0	0	1	1	6	0	0	7	0	0	0	0	0	0	2	0	0	2	0	10	10
07:45 AM	3	0	0	0	3	0	4	0	0	4	1	0	1	1	2	1	1	0	0	2	1	11	12
Total	7	0	1	1	8	2	18	2	1	22	1	0	1	1	2	1	8	0	0	9	3	41	44
08:00 AM	1	0	0	0	1	0	2	0	0	2	0	0	1	0	1	1	6	0	0	7	0	11	11
08:15 AM	1	0	1	1	2	0	4	0	0	4	0	0	0	0	0	0	1	0	0	1	1	7	8
08:30 AM	0	0	0	0	0	1	6	1	0	8	0	0	1	0	1	0	7	0	0	7	0	16	16
08:45 AM	2	0	1	0	3	0	8	0	0	8	0	0	0	0	0	0	3	0	0	3	0	14	14
Total	4	0	2	1	6	1	20	1	0	22	0	0	2	0	2	1	17	0	0	18	1	48	49
Grand Total	11	0	3	2	14	3	38	3	1	44	1	0	3	1	4	2	25	0	0	27	4	89	93
Apprch %	78.6	0	21.4			6.8	86.4	6.8			25	0	75			7.4	92.6	0					
Total %	12.4	0	3.4		15.7	3.4	42.7	3.4		49.4	1.1	0	3.4		4.5	2.2	28.1	0		30.3	4.3	95.7	

	Cataba Road Southbound				Main Street Westbound				Cataba Road Northbound				Main Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	**3**	0	**1**	**4**	**1**	5	**1**	**7**	0	0	0	0	0	2	0	2	**13**
07:15 AM	0	0	0	0	0	3	1	4	0	0	0	0	0	**3**	0	**3**	7
07:30 AM	1	0	0	1	1	**6**	0	7	0	0	0	0	0	2	0	2	10
07:45 AM	3	0	0	3	0	4	0	4	**1**	0	**1**	**2**	**1**	1	0	2	11
Total Volume	7	0	1	8	2	18	2	22	1	0	1	2	1	8	0	9	41
% App. Total	87.5	0	12.5		9.1	81.8	9.1		50	0	50		11.1	88.9	0		
PHF	.583	.000	.250	.500	.500	.750	.500	.786	.250	.000	.250	.250	.250	.667	.000	.750	.788

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File Name : 10_HES_Cataba_Main AM
Site Code : 05119658
Start Date : 9/28/2019
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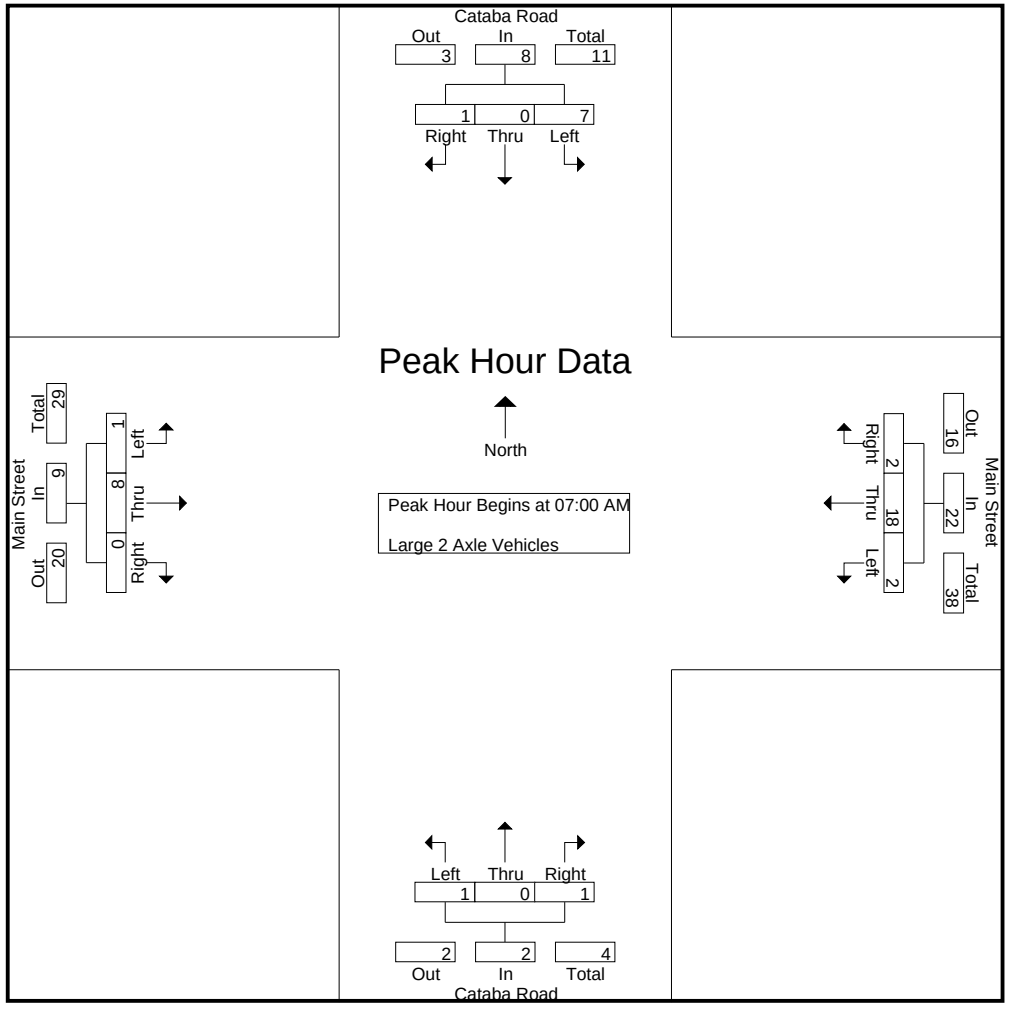

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City of Hesperia
N/S: Cataba Road
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Weather: Clear

File Name : 10_HES_Cataba_Main AM
Site Code : 05119658
Start Date : 9/28/2019

	Cataba Road Southbound				Main Street Westbound				Cataba Road Northbound				Main Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:00 AM				07:00 AM				07:00 AM				07:00 AM				
+0 mins.	**3**	0	**1**	**4**	**1**	5	**1**	**7**	0	0	0	0	0	2	0	2	
+15 mins.	0	0	0	0	0	3	1	4	0	0	0	0	0	**3**	0	**3**	
+30 mins.	1	0	0	1	1	**6**	0	7	0	0	0	0	0	2	0	2	
+45 mins.	3	0	0	3	0	4	0	4	**1**	0	**1**	**2**	**1**	1	0	2	
Total Volume	7	0	1	8	2	18	2	22	1	0	1	2	1	8	0	9	
% App. Total	87.5	0	12.5		9.1	81.8	9.1		50	0	50		11.1	88.9	0		
PHF	.583	.000	.250	.500	.500	.750	.500	.786	.250	.000	.250	.250	.250	.667	.000	.750	

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File Name : 10_HES_Cataba_Main AM
Site Code : 05119658
Start Date : 9/28/2019
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Groups Printed- 3 Axle Vehicles

	Cataba Road Southbound					Main Street Westbound					Cataba Road Northbound					Main Street Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	1	1	2
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	0	3	3
07:30 AM	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	1	0	0	1	0	4	4
07:45 AM	1	0	0	0	1	0	1	0	0	1	0	0	0	0	0	1	1	0	0	2	0	4	4
Total	1	0	0	0	1	0	4	0	0	4	0	0	1	1	1	1	5	0	0	6	1	12	13
08:00 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	2	2
08:15 AM	0	0	0	0	0	0	2	0	0	2	0	0	1	0	1	0	0	0	0	0	0	3	3
08:30 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1	0	0	0	1	0	2	2
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	1	1
Total	0	0	0	0	0	0	4	0	0	4	0	0	1	0	1	1	2	0	0	3	0	8	8
Grand Total	1	0	0	0	1	0	8	0	0	8	0	0	2	1	2	2	7	0	0	9	1	20	21
Apprch %	100	0	0			0	100	0			0	0	100			22.2	77.8	0					
Total %	5	0	0		5	0	40	0		40	0	0	10		10	10	35	0		45	4.8	95.2	

	Cataba Road Southbound				Main Street Westbound				Cataba Road Northbound				Main Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	0	0	0	0	0	0	0	0	0	**1**	**1**	0	0	0	0	1
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**3**	0	**3**	3
07:30 AM	0	0	0	0	0	**3**	0	**3**	0	0	0	0	0	1	0	1	**4**
07:45 AM	**1**	0	0	**1**	0	1	0	1	0	0	0	0	**1**	1	0	2	4
Total Volume	1	0	0	1	0	4	0	4	0	0	1	1	1	5	0	6	12
% App. Total	100	0	0		0	100	0		0	0	100		16.7	83.3	0		
PHF	.250	.000	.000	.250	.000	.333	.000	.333	.000	.000	.250	.250	.250	.417	.000	.500	.750

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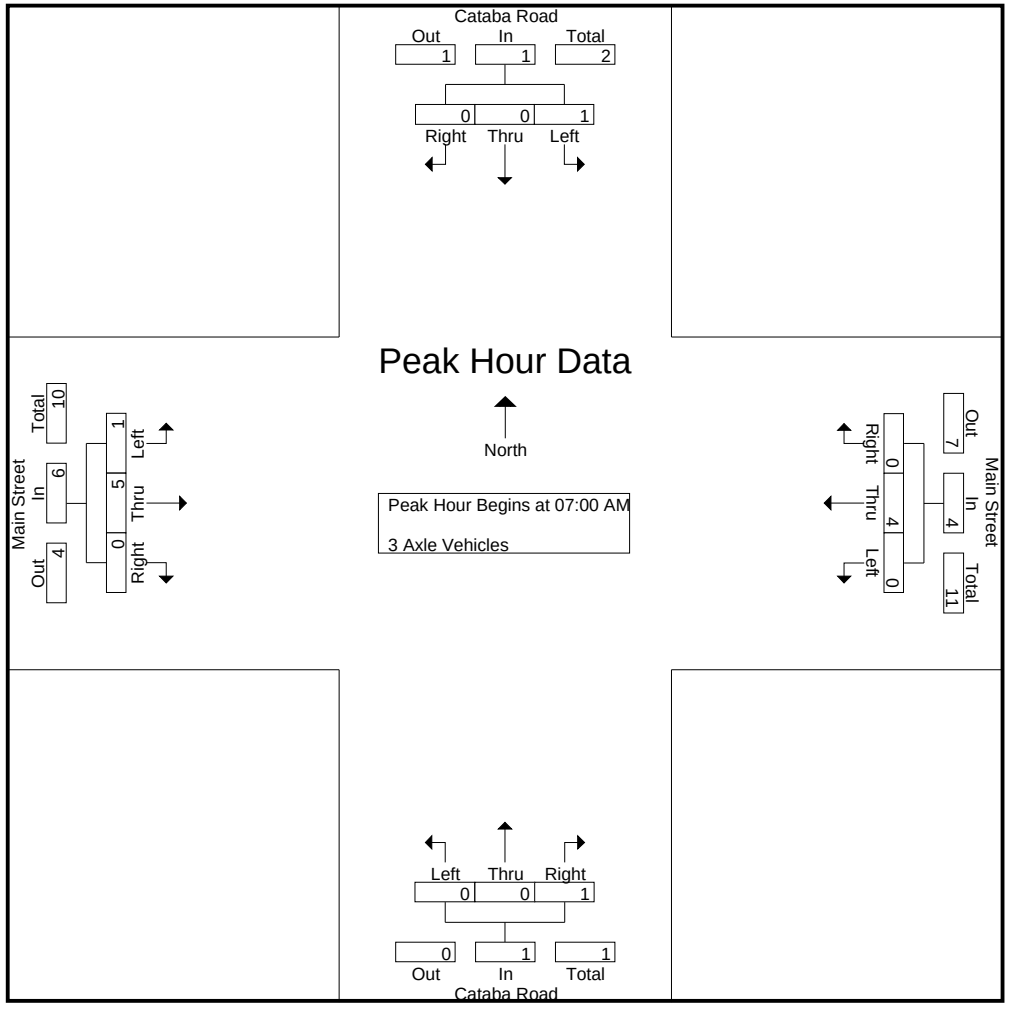
Weather: Clear

File Name : 10_HES_Cataba_Main AM
Site Code : 05119658
Start Date : 9/28/2019
Page No : 2



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City of Hesperia
N/S: Cataba Road
E/W: Main Street
Weather: Clear

File Name : 10_HES_Cataba_Main AM
Site Code : 05119658
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	Cataba Road Southbound				Main Street Westbound				Cataba Road Northbound				Main Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:00 AM				07:00 AM				07:00 AM				07:00 AM				
+0 mins.	0	0	0	0	0	0	0	0	0	0	**1**	**1**	0	0	0	0	
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	**3**	0	**3**	
+30 mins.	0	0	0	0	0	**3**	0	**3**	0	0	0	0	0	1	0	1	
+45 mins.	**1**	0	0	**1**	0	1	0	1	0	0	0	0	**1**	1	0	2	
Total Volume	1	0	0	1	0	4	0	4	0	0	1	1	1	5	0	6	
% App. Total	100	0	0		0	100	0		0	0	100		16.7	83.3	0		
PHF	.250	.000	.000	.250	.000	.333	.000	.333	.000	.000	.250	.250	.250	.417	.000	.500	

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City of Hesperia
N/S: Cataba Road
E/W: Main Street
Weather: Clear

File Name : 10_HES_Cataba_Main AM
Site Code : 05119658
Start Date : 9/28/2019
Page No : 1

Groups Printed- 4+ Axle Trucks

	Cataba Road Southbound					Main Street Westbound					Cataba Road Northbound					Main Street Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	0	0	0	0	0	1	2	0	0	3	0	0	0	0	0	0	5	0	0	5	0	8	8
07:15 AM	0	0	0	0	0	0	3	1	0	4	0	0	0	0	0	0	1	0	0	1	0	5	5
07:30 AM	0	0	0	0	0	0	2	0	0	2	0	0	2	2	2	0	2	0	0	2	2	6	8
07:45 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1	3	0	0	4	0	5	5
Total	0	0	0	0	0	1	8	1	0	10	0	0	2	2	2	1	11	0	0	12	2	24	26
08:00 AM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	2	0	0	2	0	4	4
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	1	0	0	1	0	2	2
08:30 AM	0	0	0	0	0	0	1	0	0	1	0	0	1	1	1	0	1	0	0	1	1	3	4
08:45 AM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	2	2
Total	0	0	0	0	0	0	5	0	0	5	0	0	2	1	2	0	4	0	0	4	1	11	12
Grand Total	0	0	0	0	0	1	13	1	0	15	0	0	4	3	4	1	15	0	0	16	3	35	38
Apprch %	0	0	0			6.7	86.7	6.7			0	0	100			6.2	93.8	0					
Total %	0	0	0		0	2.9	37.1	2.9		42.9	0	0	11.4		11.4	2.9	42.9	0		45.7	7.9	92.1	

	Cataba Road Southbound				Main Street Westbound				Cataba Road Northbound				Main Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	0	0	0	**1**	2	0	3	0	0	0	0	0	**5**	0	**5**	**8**
07:15 AM	0	0	0	0	0	**3**	**1**	**4**	0	0	0	0	0	1	0	1	5
07:30 AM	0	0	0	0	0	2	0	2	0	0	**2**	**2**	0	2	0	2	6
07:45 AM	0	0	0	0	0	1	0	1	0	0	0	0	**1**	3	0	4	5
Total Volume	0	0	0	0	1	8	1	10	0	0	2	2	1	11	0	12	24
% App. Total	0	0	0		10	80	10		0	0	100		8.3	91.7	0		
PHF	.000	.000	.000	.000	.250	.667	.250	.625	.000	.000	.250	.250	.250	.550	.000	.600	.750

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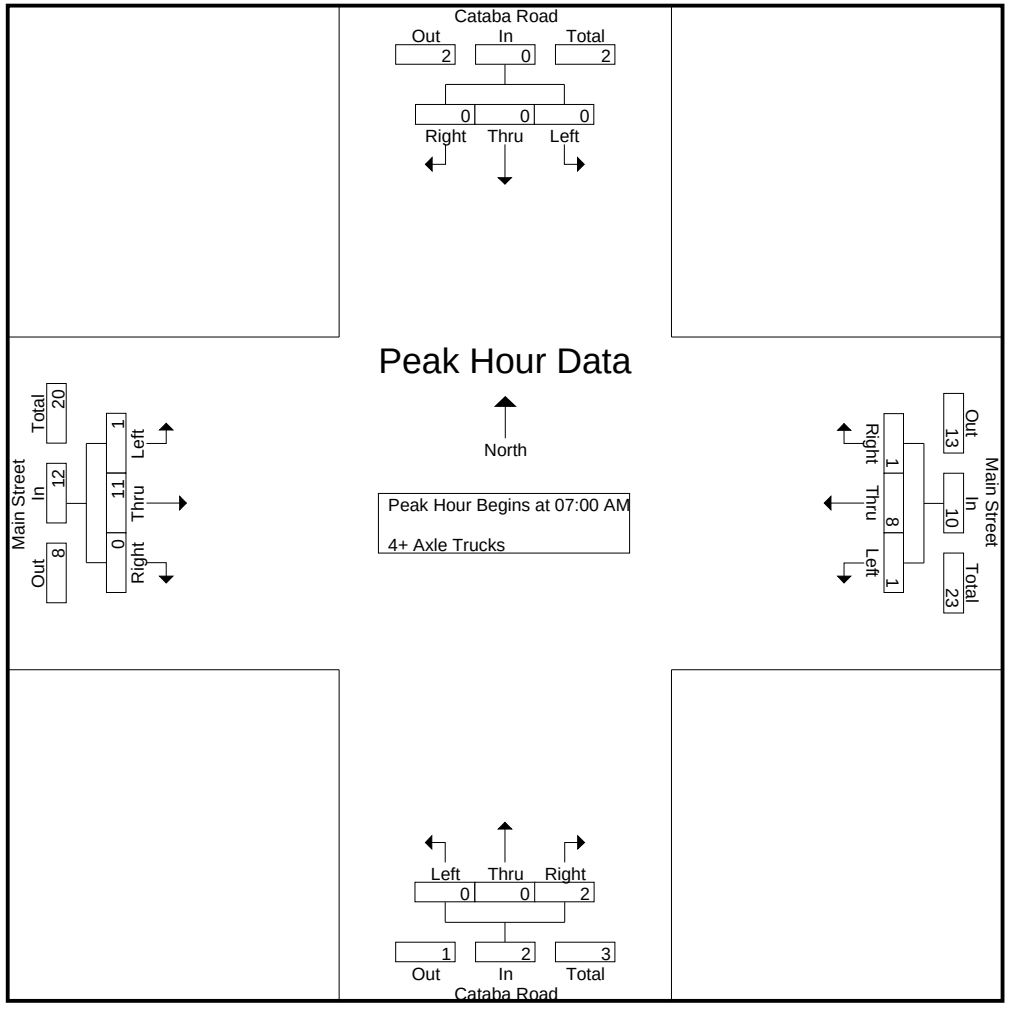

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City of Hesperia
N/S: Cataba Road
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File Name : 10_HES_Cataba_Main AM
Site Code : 05119658
Start Date : 9/28/2019

	Cataba Road Southbound				Main Street Westbound				Cataba Road Northbound				Main Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:00 AM				07:00 AM				07:00 AM				07:00 AM				
+0 mins.	0	0	0	0	**1**	2	0	3	0	0	0	0	0	**5**	0	**5**	
+15 mins.	0	0	0	0	0	**3**	**1**	**4**	0	0	0	0	0	1	0	1	
+30 mins.	0	0	0	0	0	2	0	2	0	0	**2**	**2**	0	2	0	2	
+45 mins.	0	0	0	0	0	1	0	1	0	0	0	0	**1**	3	0	4	
Total Volume	0	0	0	0	1	8	1	10	0	0	2	2	1	11	0	12	
% App. Total	0	0	0		10	80	10		0	0	100		8.3	91.7	0		
PHF	.000	.000	.000	.000	.250	.667	.250	.625	.000	.000	.250	.250	.250	.550	.000	.600	

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City of Hesperia
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File Name : 10_HES_Cataba_Main PM
Site Code : 05119658
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Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Cataba Road Southbound					Main Street Westbound					Cataba Road Northbound					Main Street Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	10	9	26	20	45	39	189	5	2	233	30	5	31	24	66	29	161	26	11	216	57	560	617
04:15 PM	13	5	28	22	46	36	190	7	4	233	40	9	36	29	85	19	172	22	8	213	63	577	640
04:30 PM	19	10	29	28	58	37	174	10	2	221	27	18	36	23	81	18	164	29	12	211	65	571	636
04:45 PM	16	6	23	18	45	59	187	14	4	260	34	11	29	25	74	19	157	15	7	191	54	570	624
Total	58	30	106	88	194	171	740	36	12	947	131	43	132	101	306	85	654	92	38	831	239	2278	2517
05:00 PM	19	7	30	13	56	56	189	10	3	255	33	10	33	26	76	18	162	22	13	202	55	589	644
05:15 PM	10	6	19	11	35	35	171	10	2	216	32	11	35	25	78	25	165	26	6	216	44	545	589
05:30 PM	14	10	21	15	45	35	192	10	2	237	35	9	28	25	72	13	162	25	14	200	56	554	610
05:45 PM	13	8	25	23	46	26	186	11	4	223	21	9	34	30	64	16	136	28	12	180	69	513	582
Total	56	31	95	62	182	152	738	41	11	931	121	39	130	106	290	72	625	101	45	798	224	2201	2425
Grand Total	114	61	201	150	376	323	1478	77	23	1878	252	82	262	207	596	157	1279	193	83	1629	463	4479	4942
Apprch %	30.3	16.2	53.5			17.2	78.7	4.1			42.3	13.8	44			9.6	78.5	11.8					
Total %	2.5	1.4	4.5		8.4	7.2	33	1.7		41.9	5.6	1.8	5.8		13.3	3.5	28.6	4.3		36.4	9.4	90.6	
Passenger Vehicles	106	59	199		513	323	1445	75		1866	251	80	260		797	151	1231	192		1656	0	0	4832
% Passenger Vehicles	93	96.7	99	99.3	97.5	100	97.8	97.4	100	98.2	99.6	97.6	99.2	99.5	99.3	96.2	96.2	99.5	98.8	96.7	0	0	97.8
Large 2 Axle Vehicles	7	2	1		10	0	17	1		18	1	1	1		4	4	24	0		28	0	0	60
% Large 2 Axle Vehicles	6.1	3.3	0.5	0	1.9	0	1.2	1.3	0	0.9	0.4	1.2	0.4	0.5	0.5	2.5	1.9	0	0	1.6	0	0	1.2
3 Axle Vehicles	0	0	0		0	0	5	0		5	0	0	0		0	0	2	0		2	0	0	7
% 3 Axle Vehicles	0	0	0	0	0	0	0.3	0	0	0.3	0	0	0	0	0	0	0.2	0	0	0.1	0	0	0.1
4+ Axle Trucks	1	0	1		3	0	11	1		12	0	1	1		2	2	22	1		26	0	0	43
% 4+ Axle Trucks	0.9	0	0.5	0.7	0.6	0	0.7	1.3	0	0.6	0	1.2	0.4	0	0.2	1.3	1.7	0.5	1.2	1.5	0	0	0.9

	Cataba Road Southbound				Main Street Westbound				Cataba Road Northbound				Main Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:15 PM																	
04:15 PM	13	5	28	46	36	**190**	7	233	**40**	9	**36**	**85**	**19**	**172**	22	**213**	577
04:30 PM	**19**	**10**	29	**58**	37	174	10	221	27	**18**	36	81	18	164	**29**	211	571
04:45 PM	16	6	23	45	**59**	187	**14**	**260**	34	11	29	74	19	157	15	191	570
05:00 PM	19	7	**30**	56	56	189	10	255	33	10	33	76	18	162	22	202	**589**
Total Volume	67	28	110	205	188	740	41	969	134	48	134	316	74	655	88	817	2307
% App. Total	32.7	13.7	53.7		19.4	76.4	4.2		42.4	15.2	42.4		9.1	80.2	10.8		
PHF	.882	.700	.917	.884	.797	.974	.732	.932	.838	.667	.931	.929	.974	.952	.759	.959	.979

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City of Hesperia
N/S: Cataba Road
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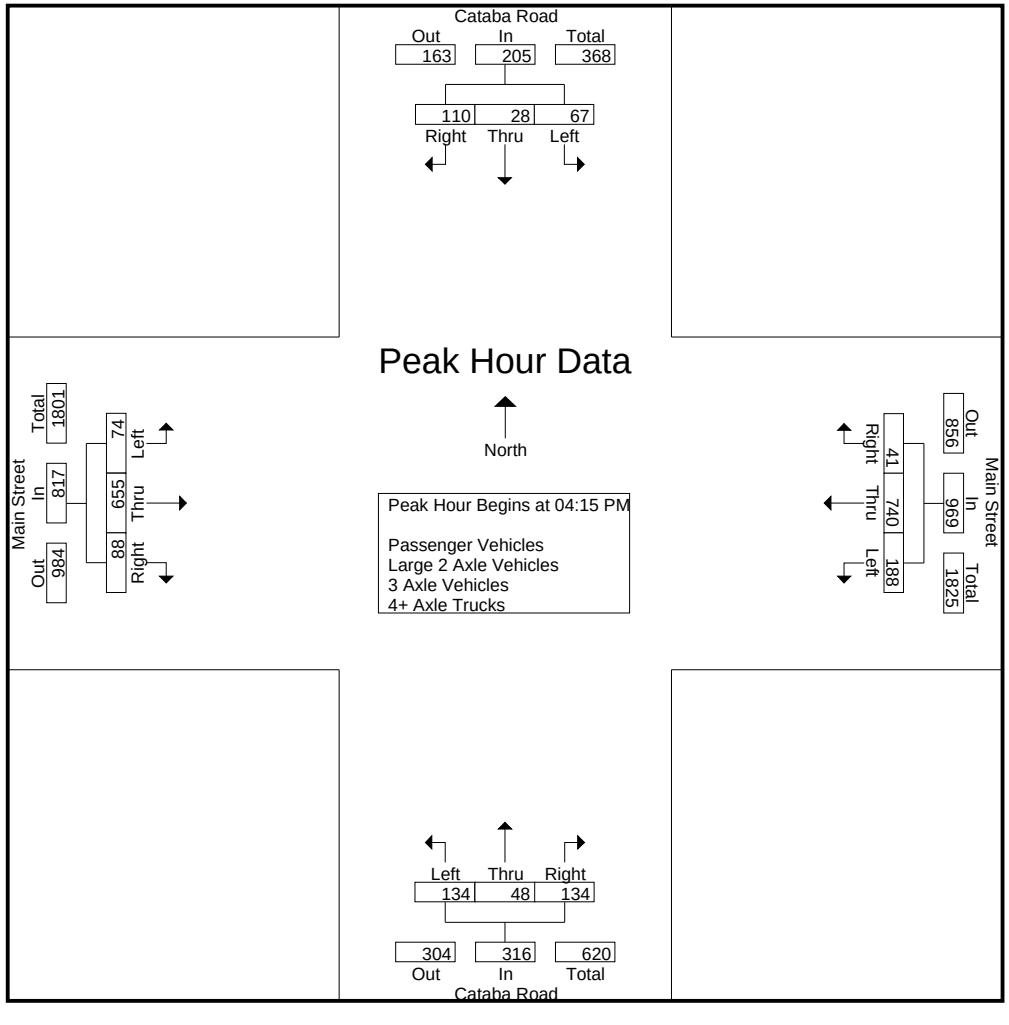

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	Cataba Road Southbound				Main Street Westbound				Cataba Road Northbound				Main Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	04:15 PM				04:15 PM				04:15 PM				04:00 PM				
+0 mins.	13	5	28	46	36	**190**	7	233	**40**	9	**36**	**85**	**29**	161	26	**216**	
+15 mins.	**19**	**10**	29	**58**	37	174	10	221	27	**18**	36	81	19	**172**	22	213	
+30 mins.	16	6	23	45	**59**	187	**14**	**260**	34	11	29	74	18	164	**29**	211	
+45 mins.	19	7	**30**	56	56	189	10	255	33	10	33	76	19	157	15	191	
Total Volume	67	28	110	205	188	740	41	969	134	48	134	316	85	654	92	831	
% App. Total	32.7	13.7	53.7		19.4	76.4	4.2		42.4	15.2	42.4		10.2	78.7	11.1		
PHF	.882	.700	.917	.884	.797	.974	.732	.932	.838	.667	.931	.929	.733	.951	.793	.962	

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Groups Printed- Passenger Vehicles

	Cataba Road Southbound					Main Street Westbound					Cataba Road Northbound					Main Street Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	9	9	25	19	43	39	184	5	2	228	30	5	31	24	66	27	154	26	11	207	56	544	600
04:15 PM	12	3	27	22	42	36	181	7	4	224	40	8	34	28	82	19	165	22	8	206	62	554	616
04:30 PM	18	10	29	28	57	37	170	10	2	217	27	17	36	23	80	18	154	29	12	201	65	555	620
04:45 PM	15	6	23	18	44	59	184	14	4	257	33	11	29	25	73	18	153	15	7	186	54	560	614
Total	54	28	104	87	186	171	719	36	12	926	130	41	130	100	301	82	626	92	38	800	237	2213	2450
05:00 PM	18	7	30	13	55	56	183	8	3	247	33	10	33	26	76	17	157	22	13	196	55	574	629
05:15 PM	10	6	19	11	35	35	167	10	2	212	32	11	35	25	78	24	161	26	6	211	44	536	580
05:30 PM	11	10	21	15	42	35	192	10	2	237	35	9	28	25	72	12	157	24	13	193	55	544	599
05:45 PM	13	8	25	23	46	26	184	11	4	221	21	9	34	30	64	16	130	28	12	174	69	505	574
Total	52	31	95	62	178	152	726	39	11	917	121	39	130	106	290	69	605	100	44	774	223	2159	2382
Grand Total	106	59	199	149	364	323	1445	75	23	1843	251	80	260	206	591	151	1231	192	82	1574	460	4372	4832
Apprch %	29.1	16.2	54.7			17.5	78.4	4.1			42.5	13.5	44			9.6	78.2	12.2					
Total %	2.4	1.3	4.6		8.3	7.4	33.1	1.7		42.2	5.7	1.8	5.9		13.5	3.5	28.2	4.4		36	9.5	90.5	

	Cataba Road Southbound				Main Street Westbound				Cataba Road Northbound				Main Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:15 PM																	
04:15 PM	12	3	27	42	36	181	7	224	**40**	8	34	**82**	**19**	**165**	22	**206**	554
04:30 PM	**18**	**10**	29	**57**	37	170	10	217	27	**17**	**36**	80	18	154	**29**	201	555
04:45 PM	15	6	23	44	**59**	**184**	**14**	**257**	33	11	29	73	18	153	15	186	560
05:00 PM	18	7	**30**	55	56	183	8	247	33	10	33	76	17	157	22	196	**574**
Total Volume	63	26	109	198	188	718	39	945	133	46	132	311	72	629	88	789	2243
% App. Total	31.8	13.1	55.1		19.9	76	4.1		42.8	14.8	42.4		9.1	79.7	11.2		
PHF	.875	.650	.908	.868	.797	.976	.696	.919	.831	.676	.917	.948	.947	.953	.759	.958	.977

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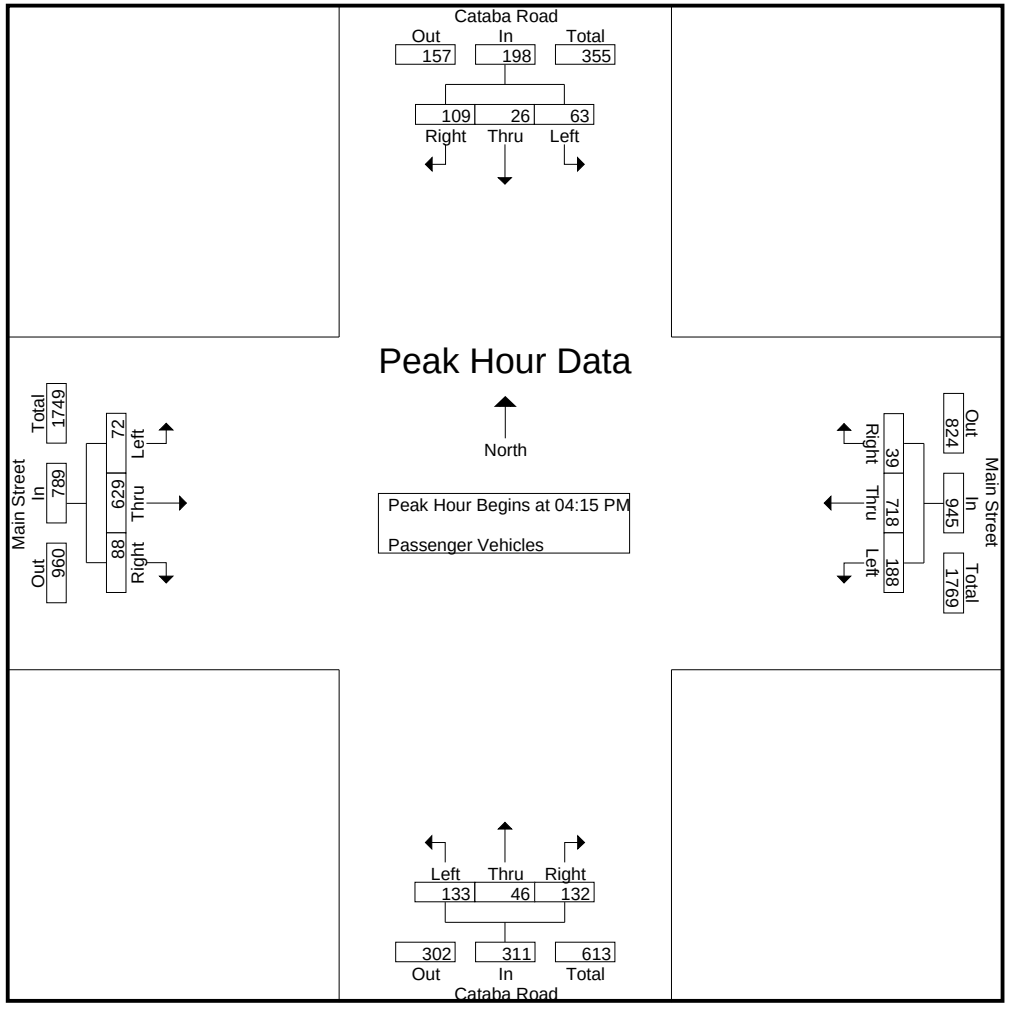

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	Cataba Road Southbound				Main Street Westbound				Cataba Road Northbound				Main Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:15 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.	12	3	27	42	36	181	7	224	**40**	8	34	**82**	**19**	**165**	22	**206**	
+15 mins.	**18**	**10**	29	**57**	37	170	10	217	27	**17**	**36**	80	18	154	**29**	201	
+30 mins.	15	6	23	44	**59**	**184**	**14**	**257**	33	11	29	73	18	153	15	186	
+45 mins.	18	7	**30**	55	56	183	8	247	33	10	33	76	17	157	22	196	
Total Volume	63	26	109	198	188	718	39	945	133	46	132	311	72	629	88	789	
% App. Total	31.8	13.1	55.1		19.9	76	4.1		42.8	14.8	42.4		9.1	79.7	11.2		
PHF	.875	.650	.908	.868	.797	.976	.696	.919	.831	.676	.917	.948	.947	.953	.759	.958	

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Groups Printed- Large 2 Axle Vehicles

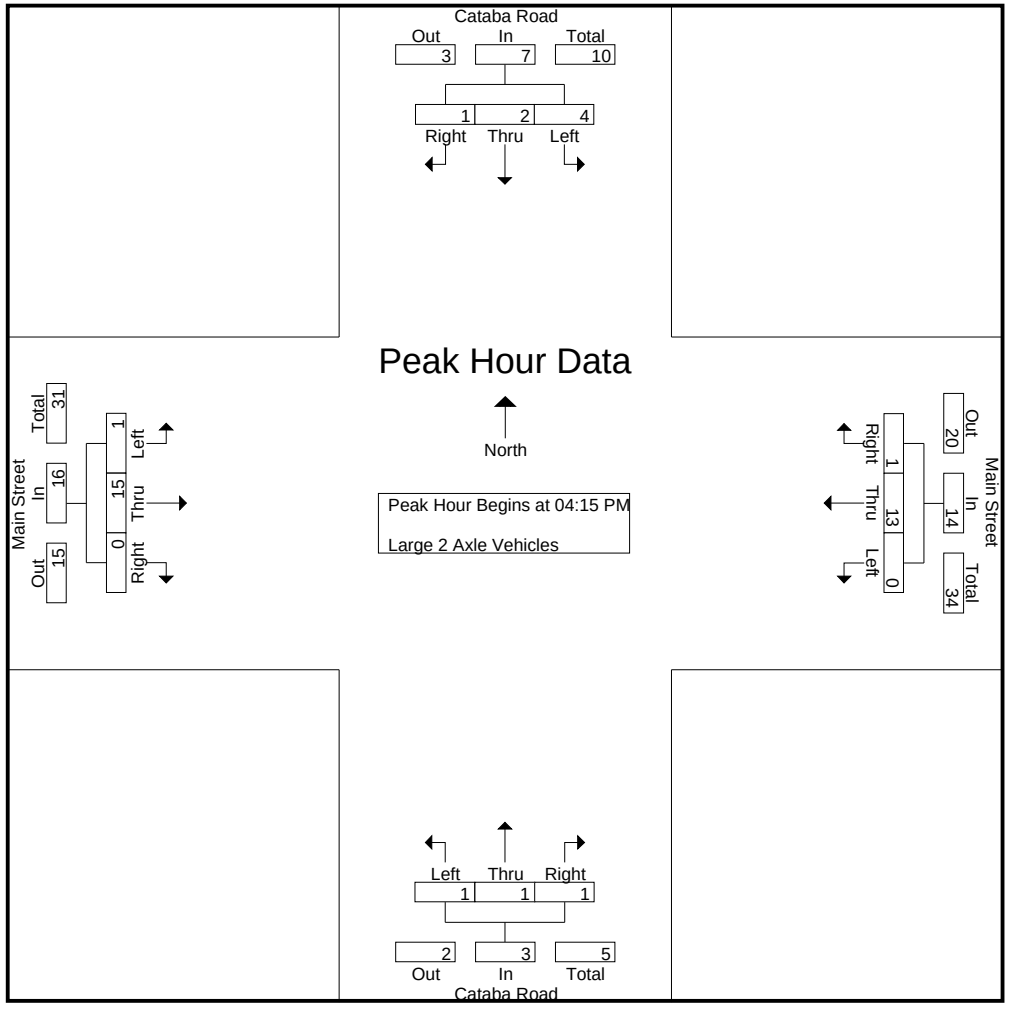
	Cataba Road Southbound					Main Street Westbound					Cataba Road Northbound					Main Street Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	1	0	0	0	1	0	2	0	0	2	0	0	0	0	0	1	3	0	0	4	0	7	7
04:15 PM	1	2	1	0	4	0	4	0	0	4	0	0	1	1	1	0	2	0	0	2	1	11	12
04:30 PM	1	0	0	0	1	0	3	0	0	3	0	1	0	0	1	0	7	0	0	7	0	12	12
04:45 PM	1	0	0	0	1	0	2	0	0	2	1	0	0	0	1	1	2	0	0	3	0	7	7
Total	4	2	1	0	7	0	11	0	0	11	1	1	1	1	3	2	14	0	0	16	1	37	38
05:00 PM	1	0	0	0	1	0	4	1	0	5	0	0	0	0	0	0	4	0	0	4	0	10	10
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	0	0	3	0	3	3
05:30 PM	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	1	3	0	0	4	0	6	6
05:45 PM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	0	3	3
Total	3	0	0	0	3	0	6	1	0	7	0	0	0	0	0	2	10	0	0	12	0	22	22
Grand Total	7	2	1	0	10	0	17	1	0	18	1	1	1	1	3	4	24	0	0	28	1	59	60
Apprch %	70	20	10			0	94.4	5.6			33.3	33.3	33.3			14.3	85.7	0					
Total %	11.9	3.4	1.7		16.9	0	28.8	1.7		30.5	1.7	1.7	1.7		5.1	6.8	40.7	0		47.5	1.7	98.3	

	Cataba Road Southbound				Main Street Westbound				Cataba Road Northbound				Main Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:15 PM																	
04:15 PM	**1**	**2**	**1**	**4**	0	**4**	0	4	0	0	**1**	**1**	0	2	0	2	11
04:30 PM	1	0	0	1	0	3	0	3	0	**1**	0	1	0	**7**	0	**7**	**12**
04:45 PM	1	0	0	1	0	2	0	2	**1**	0	0	1	**1**	2	0	3	7
05:00 PM	1	0	0	1	0	4	**1**	**5**	0	0	0	0	0	4	0	4	10
Total Volume	4	2	1	7	0	13	1	14	1	1	1	3	1	15	0	16	40
% App. Total	57.1	28.6	14.3		0	92.9	7.1		33.3	33.3	33.3		6.2	93.8	0		
PHF	1.00	.250	.250	.438	.000	.813	.250	.700	.250	.250	.250	.750	.250	.536	.000	.571	.833

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Hesperia
N/S: Cataba Road
E/W: Main Street
Weather: Clear

File Name : 10_HES_Cataba_Main PM
Site Code : 05119658
Start Date : 9/28/2019
Page No : 2



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Corona, CA 92878
(951) 268-6268

City of Hesperia
N/S: Cataba Road
E/W: Main Street
Weather: Clear

File Name : 10_HES_Cataba_Main PM
Site Code : 05119658
Start Date : 9/28/2019

	Cataba Road Southbound				Main Street Westbound				Cataba Road Northbound				Main Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:15 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.	**1**	**2**	**1**	**4**	0	**4**	0	4	0	0	**1**	**1**	0	2	0	2	
+15 mins.	1	0	0	1	0	3	0	3	0	**1**	0	1	0	**7**	0	**7**	
+30 mins.	1	0	0	1	0	2	0	2	**1**	0	0	1	**1**	2	0	3	
+45 mins.	1	0	0	1	0	4	**1**	**5**	0	0	0	0	0	4	0	4	
Total Volume	4	2	1	7	0	13	1	14	1	1	1	3	1	15	0	16	
% App. Total	57.1	28.6	14.3		0	92.9	7.1		33.3	33.3	33.3		6.2	93.8	0		
PHF	1.000	.250	.250	.438	.000	.813	.250	.700	.250	.250	.250	.750	.250	.536	.000	.571	

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City of Hesperia
N/S: Cataba Road
E/W: Main Street
Weather: Clear

File Name : 10_HES_Cataba_Main PM
Site Code : 05119658
Start Date : 9/28/2019
Page No : 1

Groups Printed- 3 Axle Vehicles

	Cataba Road Southbound					Main Street Westbound					Cataba Road Northbound					Main Street Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	1	1
04:15 PM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	2	2
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	0	3	3
05:00 PM	0	0	0	0	0	0	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	3	0	0	3	0	0	0	0	0	0	0	0	0	0	0	3	3
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	1	1
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	1	0	0	1	0	4	4
Grand Total	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	0	2	0	0	2	0	7	7
Apprch %	0	0	0			0	100	0			0	0	0			0	100	0					
Total %	0	0	0		0	0	71.4	0		71.4	0	0	0		0	0	28.6	0		28.6	0	100	

	Cataba Road Southbound				Main Street Westbound				Cataba Road Northbound				Main Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:15 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	**2**	0	**2**	0	0	0	0	0	0	0	0	**2**
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	2
% App. Total	0	0	0		0	100	0		0	0	0		0	0	0		
PHF	.000	.000	.000	.000	.000	.250	.000	.250	.000	.000	.000	.000	.000	.000	.000	.000	.250

Counts Unlimited
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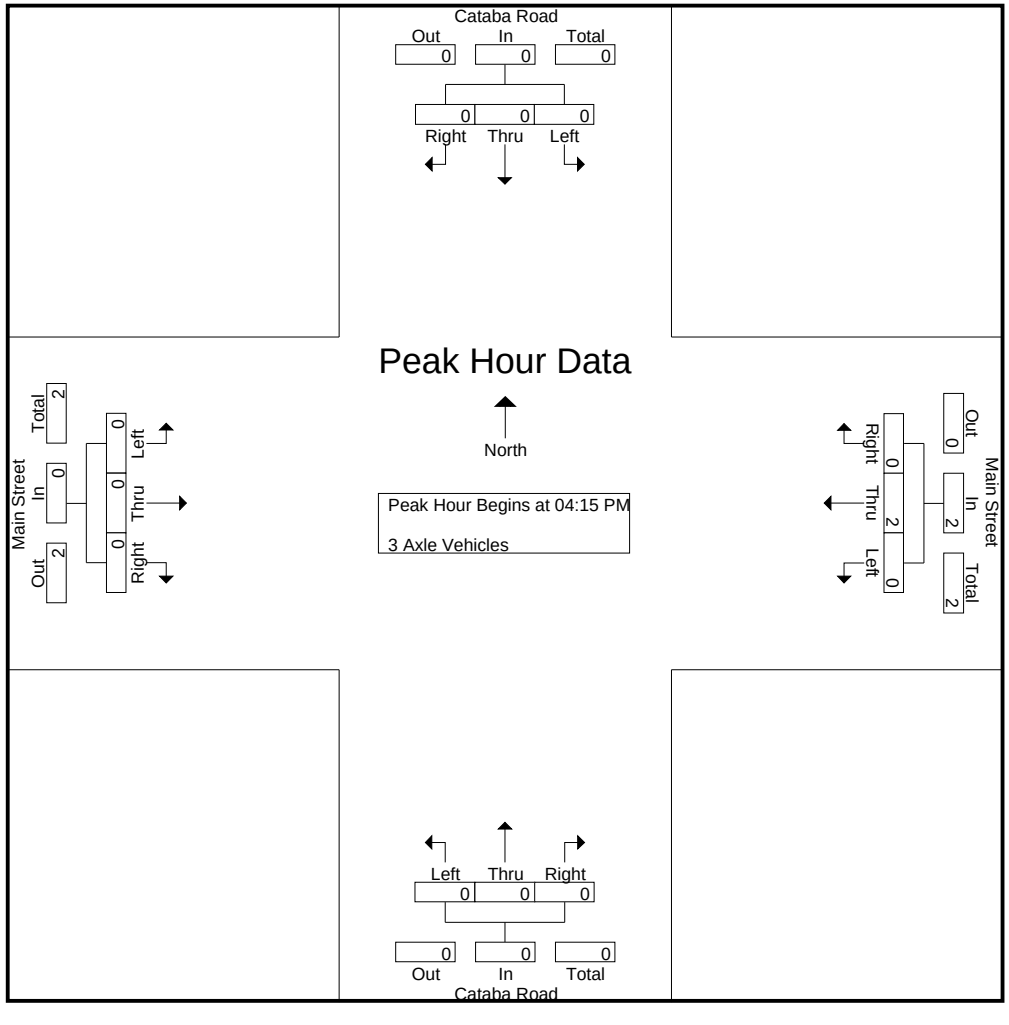
City of Hesperia
N/S: Cataba Road
E/W: Main Street
Weather: Clear

File Name : 10_HES_Cataba_Main PM
Site Code : 05119658
Start Date : 9/28/2019
Page No : 2



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City of Hesperia
N/S: Cataba Road
E/W: Main Street
Weather: Clear

File Name : 10_HES_Cataba_Main PM
Site Code : 05119658
Start Date : 9/28/2019
Page No : 3

	Cataba Road Southbound				Main Street Westbound				Cataba Road Northbound				Main Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:15 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	**2**	0	**2**	0	0	0	0	0	0	0	0	
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total Volume	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	
% App. Total	0	0	0		0	100	0		0	0	0		0	0	0		
PHF	.000	.000	.000	.000	.000	.250	.000	.250	.000	.000	.000	.000	.000	.000	.000	.000	

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City of Hesperia
N/S: Cataba Road
E/W: Main Street
Weather: Clear

File Name : 10_HES_Cataba_Main PM
Site Code : 05119658
Start Date : 9/28/2019
Page No : 1

Groups Printed- 4+ Axle Trucks

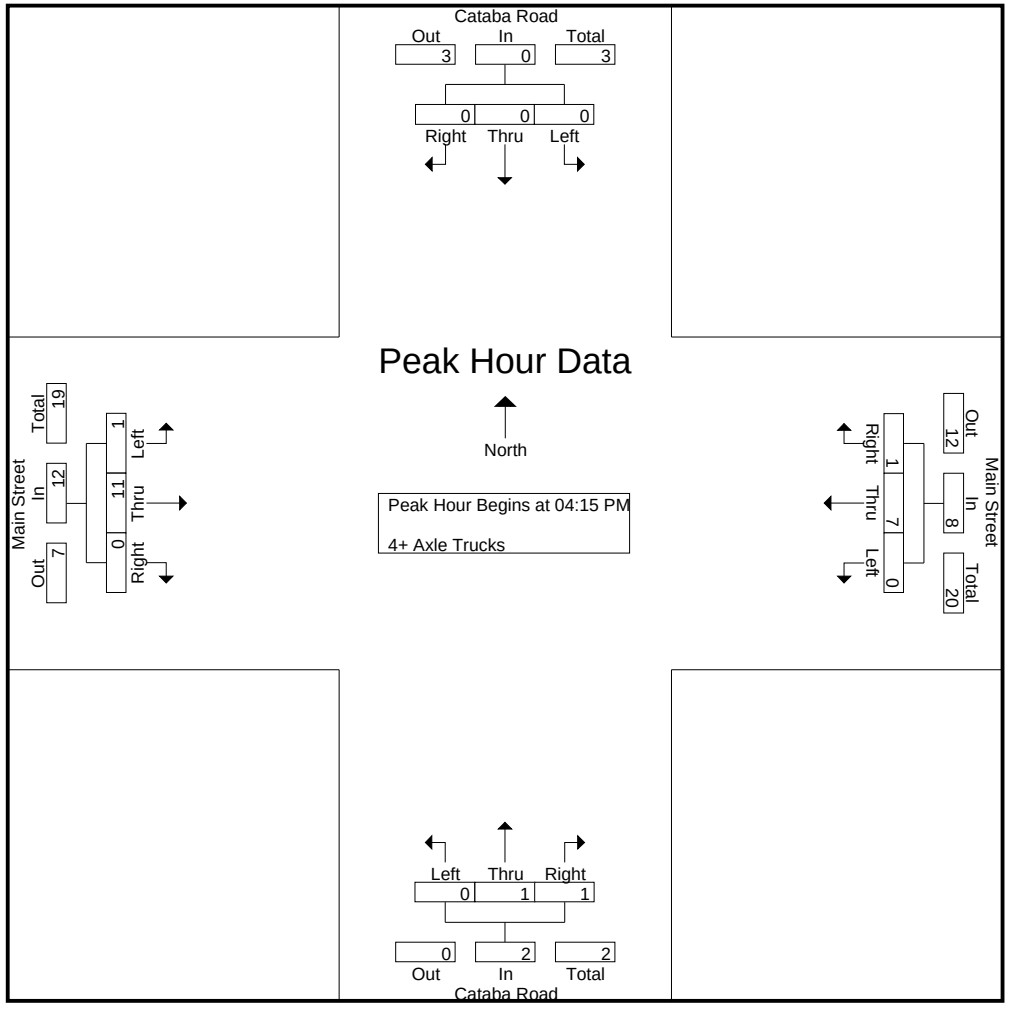
	Cataba Road Southbound					Main Street Westbound					Cataba Road Northbound					Main Street Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	0	0	1	1	1	0	3	0	0	3	0	0	0	0	0	1	3	0	0	4	1	8	9
04:15 PM	0	0	0	0	0	0	3	0	0	3	0	1	1	0	2	0	5	0	0	5	0	10	10
04:30 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	3	0	0	3	0	4	4
04:45 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	0	3	3
Total	0	0	1	1	1	0	8	0	0	8	0	1	1	0	2	1	13	0	0	14	1	25	26
05:00 PM	0	0	0	0	0	0	2	1	0	3	0	0	0	0	0	1	1	0	0	2	0	5	5
05:15 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	0	3	3
05:30 PM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	1	1	2	1	3	4
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	5	0	5	5
Total	1	0	0	0	1	0	3	1	0	4	0	0	0	0	0	1	9	1	1	11	1	16	17
Grand Total	1	0	1	1	2	0	11	1	0	12	0	1	1	0	2	2	22	1	1	25	2	41	43
Apprch %	50	0	50			0	91.7	8.3			0	50	50			8	88	4					
Total %	2.4	0	2.4		4.9	0	26.8	2.4		29.3	0	2.4	2.4		4.9	4.9	53.7	2.4		61	4.7	95.3	

	Cataba Road Southbound				Main Street Westbound				Cataba Road Northbound				Main Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:15 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	**3**	0	**3**	0	**1**	**1**	**2**	0	**5**	0	**5**	**10**
04:30 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	3	0	3	4
04:45 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	2	0	2	3
05:00 PM	0	0	0	0	0	2	**1**	3	0	0	0	0	**1**	1	0	2	5
Total Volume	0	0	0	0	0	7	1	8	0	1	1	2	1	11	0	12	22
% App. Total	0	0	0		0	87.5	12.5		0	50	50		8.3	91.7	0		
PHF	.000	.000	.000	.000	.000	.583	.250	.667	.000	.250	.250	.250	.250	.550	.000	.600	.550

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Hesperia
N/S: Cataba Road
E/W: Main Street
Weather: Clear

File Name : 10_HES_Cataba_Main PM
Site Code : 05119658
Start Date : 9/28/2019
Page No : 2



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City of Hesperia
N/S: Cataba Road
E/W: Main Street
Weather: Clear

File Name : 10_HES_Cataba_Main PM
Site Code : 05119658
Start Date : 9/28/2019

	Cataba Road Southbound				Main Street Westbound				Cataba Road Northbound				Main Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:15 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	**3**	0	**3**	0	**1**	**1**	**2**	0	**5**	0	**5**	
+15 mins.	0	0	0	0	0	1	0	1	0	0	0	0	0	3	0	3	
+30 mins.	0	0	0	0	0	1	0	1	0	0	0	0	0	2	0	2	
+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	7	1	8	0	1	1	2	1	11	0	12	
% App. Total	0	0	0		0	87.5	12.5		0	50	50		8.3	91.7	0		
PHF	.000	.000	.000	.000	.000	.583	.250	.667	.000	.250	.250	.250	.250	.550	.000	.600	

Location: Hesperia
N/S: Cataba Road
E/W: Main Street

Date: 9/28/2019
Day: Saturday

PEDESTRIANS

	North Leg Cataba Road Pedestrians	East Leg Main Street Pedestrians	South Leg Cataba Road Pedestrians	West Leg Main Street Pedestrians	
7:00 AM	0	0	0	1	1
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	2	0	0	2
8:00 AM	0	0	1	0	1
8:15 AM	0	0	1	0	1
8:30 AM	0	0	0	0	0
8:45 AM	0	2	0	0	2
TOTAL VOLUMES:	0	4	2	1	7

	North Leg Cataba Road Pedestrians	East Leg Main Street Pedestrians	South Leg Cataba Road Pedestrians	West Leg Main Street Pedestrians	
4:00 PM	0	0	0	0	0
4:15 PM	0	1	0	0	1
4:30 PM	2	4	0	0	6
4:45 PM	0	0	0	0	0
5:00 PM	0	3	0	0	3
5:15 PM	5	4	0	0	9
5:30 PM	0	4	0	0	4
5:45 PM	0	2	1	0	3
TOTAL VOLUMES:	7	18	1	0	26

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PO Box 1178
Corona, CA 92878
951-268-0268

Location: Hesperia
N/S: Cataba Road
E/W: Main Street

Date: 9/28/2019
Day: Saturday

BICYCLES

	Southbound Cataba Road			Westbound Main Street			Northbound Cataba Road			Eastbound Main Street			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	1	0	0	0	0	0	0	0	1
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	1	0	0	0	0	0	0	0	1

	Southbound Cataba Road			Westbound Main Street			Northbound Cataba Road			Eastbound Main Street			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	0	0	0	0	0	0	0	0

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City of Hesperia
N/S: Key Pointe Avenue
E/W: Main Street
Weather: Clear

File Name : 11_HES_Key Pointe_Main AM
Site Code : 05119658
Start Date : 9/28/2019
Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Key Pointe Avenue Southbound					Main Street Westbound					Key Pointe Avenue Northbound					Main Street Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	41	2	0	0	43	26	101	30	9	157	2	2	14	9	18	6	223	0	0	229	18	447	465
07:15 AM	30	5	4	2	39	24	169	23	6	216	2	0	9	8	11	5	221	0	0	226	16	492	508
07:30 AM	34	5	5	1	44	35	180	28	12	243	0	3	24	24	27	5	183	2	2	190	39	504	543
07:45 AM	30	8	4	1	42	36	148	31	11	215	3	5	16	7	24	4	224	3	0	231	19	512	531
Total	135	20	13	4	168	121	598	112	38	831	7	10	63	48	80	20	851	5	2	876	92	1955	2047
08:00 AM	35	8	1	1	44	42	125	17	4	184	5	3	29	20	37	13	208	6	1	227	26	492	518
08:15 AM	34	5	4	4	43	35	151	25	5	211	5	4	27	16	36	15	165	3	0	183	25	473	498
08:30 AM	22	15	4	2	41	30	133	28	11	191	5	7	21	14	33	9	215	7	3	231	30	496	526
08:45 AM	39	18	5	4	62	55	130	22	7	207	6	10	24	15	40	8	184	3	1	195	27	504	531
Total	130	46	14	11	190	162	539	92	27	793	21	24	101	65	146	45	772	19	5	836	108	1965	2073
Grand Total	265	66	27	15	358	283	1137	204	65	1624	28	34	164	113	226	65	1623	24	7	1712	200	3920	4120
Apprch %	74	18.4	7.5			17.4	70	12.6			12.4	15	72.6			3.8	94.8	1.4					
Total %	6.8	1.7	0.7		9.1	7.2	29	5.2		41.4	0.7	0.9	4.2		5.8	1.7	41.4	0.6		43.7	4.9	95.1	
Passenger Vehicles	241	64	26		346	279	1067	186		1594	26	31	163		332	61	1568	22		1658	0	0	3930
% Passenger Vehicles	90.9	97	96.3	100	92.8	98.6	93.8	91.2	95.4	94.4	92.9	91.2	99.4	99.1	97.9	93.8	96.6	91.7	100	96.5	0	0	95.4
Large 2 Axle Vehicles	13	2	1		16	3	47	10		62	2	2	0		4	3	32	2		37	0	0	119
% Large 2 Axle Vehicles	4.9	3	3.7	0	4.3	1.1	4.1	4.9	3.1	3.7	7.1	5.9	0	0	1.2	4.6	2	8.3	0	2.2	0	0	2.9
3 Axle Vehicles	1	0	0		1	0	8	1		9	0	0	0		0	0	4	0		4	0	0	14
% 3 Axle Vehicles	0.4	0	0	0	0.3	0	0.7	0.5	0	0.5	0	0	0	0	0	0	0.2	0	0	0.2	0	0	0.3
4+ Axle Trucks	10	0	0		10	1	15	7		24	0	1	1		3	1	19	0		20	0	0	57
% 4+ Axle Trucks	3.8	0	0	0	2.7	0.4	1.3	3.4	1.5	1.4	0	2.9	0.6	0.9	0.9	1.5	1.2	0	0	1.2	0	0	1.4

	Key Pointe Avenue Southbound				Main Street Westbound				Key Pointe Avenue Northbound				Main Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	30	5	4	39	24	169	23	216	2	0	9	11	5	221	0	226	492
07:30 AM	34	5	**5**	**44**	35	**180**	28	**243**	0	3	24	27	5	183	2	190	504
07:45 AM	30	**8**	4	42	36	148	**31**	215	3	**5**	16	24	4	**224**	3	**231**	**512**
08:00 AM	**35**	8	1	44	**42**	125	17	184	**5**	3	**29**	**37**	**13**	208	**6**	227	492
Total Volume	129	26	14	169	137	622	99	858	10	11	78	99	27	836	11	874	2000
% App. Total	76.3	15.4	8.3		16	72.5	11.5		10.1	11.1	78.8		3.1	95.7	1.3		
PHF	.921	.813	.700	.960	.815	.864	.798	.883	.500	.550	.672	.669	.519	.933	.458	.946	.977

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Site Code : 05119658
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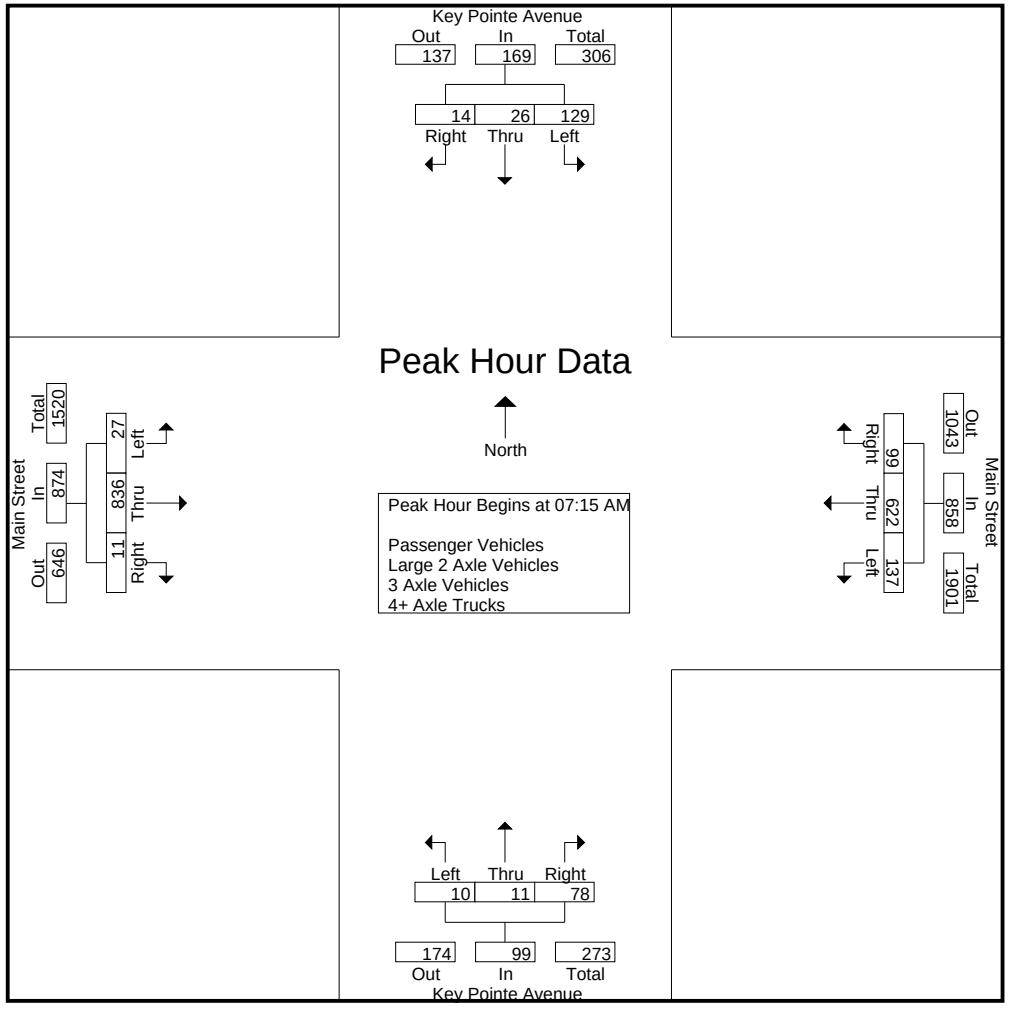

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	Key Pointe Avenue Southbound				Main Street Westbound				Key Pointe Avenue Northbound				Main Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	08:00 AM				07:15 AM				08:00 AM				07:00 AM				
+0 mins.	35	8	1	44	24	169	23	216	5	3	**29**	37	**6**	223	0	229	
+15 mins.	34	5	4	43	35	**180**	28	**243**	5	4	27	36	5	221	0	226	
+30 mins.	22	15	4	41	36	148	**31**	215	5	7	21	33	5	183	2	190	
+45 mins.	**39**	**18**	**5**	**62**	**42**	125	17	184	**6**	**10**	24	**40**	4	**224**	**3**	**231**	
Total Volume	130	46	14	190	137	622	99	858	21	24	101	146	20	851	5	876	
% App. Total	68.4	24.2	7.4		16	72.5	11.5		14.4	16.4	69.2		2.3	97.1	0.6		
PHF	.833	.639	.700	.766	.815	.864	.798	.883	.875	.600	.871	.913	.833	.950	.417	.948	

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Groups Printed- Passenger Vehicles

	Key Pointe Avenue Southbound					Main Street Westbound					Key Pointe Avenue Northbound					Main Street Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	38	2	0	0	40	25	95	23	9	143	2	2	14	9	18	6	213	0	0	219	18	420	438
07:15 AM	26	5	4	2	35	24	158	21	6	203	2	0	9	8	11	5	218	0	0	223	16	472	488
07:30 AM	31	5	4	1	40	35	172	26	11	233	0	3	24	24	27	4	177	2	2	183	38	483	521
07:45 AM	25	8	4	1	37	36	137	30	11	203	2	5	16	7	23	4	217	2	0	223	19	486	505
Total	120	20	12	4	152	120	562	100	37	782	6	10	63	48	79	19	825	4	2	848	91	1861	1952
08:00 AM	35	8	1	1	44	41	117	15	4	173	5	3	29	20	37	12	198	5	1	215	26	469	495
08:15 AM	32	5	4	4	41	34	141	24	4	199	4	3	27	16	34	15	155	3	0	173	24	447	471
08:30 AM	18	15	4	2	37	30	123	27	11	180	5	6	21	14	32	8	210	7	3	225	30	474	504
08:45 AM	36	16	5	4	57	54	124	20	6	198	6	9	23	14	38	7	180	3	1	190	25	483	508
Total	121	44	14	11	179	159	505	86	25	750	20	21	100	64	141	42	743	18	5	803	105	1873	1978
Grand Total	241	64	26	15	331	279	1067	186	62	1532	26	31	163	112	220	61	1568	22	7	1651	196	3734	3930
Apprch %	72.8	19.3	7.9			18.2	69.6	12.1			11.8	14.1	74.1			3.7	95	1.3					
Total %	6.5	1.7	0.7		8.9	7.5	28.6	5		41	0.7	0.8	4.4		5.9	1.6	42	0.6		44.2	5	95	

	Key Pointe Avenue Southbound				Main Street Westbound				Key Pointe Avenue Northbound				Main Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	26	5	**4**	35	24	158	21	203	2	0	9	11	5	**218**	0	**223**	472
07:30 AM	31	5	4	40	35	**172**	26	**233**	0	3	24	27	4	177	2	183	483
07:45 AM	25	**8**	4	37	36	137	**30**	203	2	**5**	16	23	4	217	2	223	**486**
08:00 AM	**35**	8	1	**44**	**41**	117	15	173	**5**	3	**29**	**37**	**12**	198	**5**	215	469
Total Volume	117	26	13	156	136	584	92	812	9	11	78	98	25	810	9	844	1910
% App. Total	75	16.7	8.3		16.7	71.9	11.3		9.2	11.2	79.6		3	96	1.1		
PHF	.836	.813	.813	.886	.829	.849	.767	.871	.450	.550	.672	.662	.521	.929	.450	.946	.983

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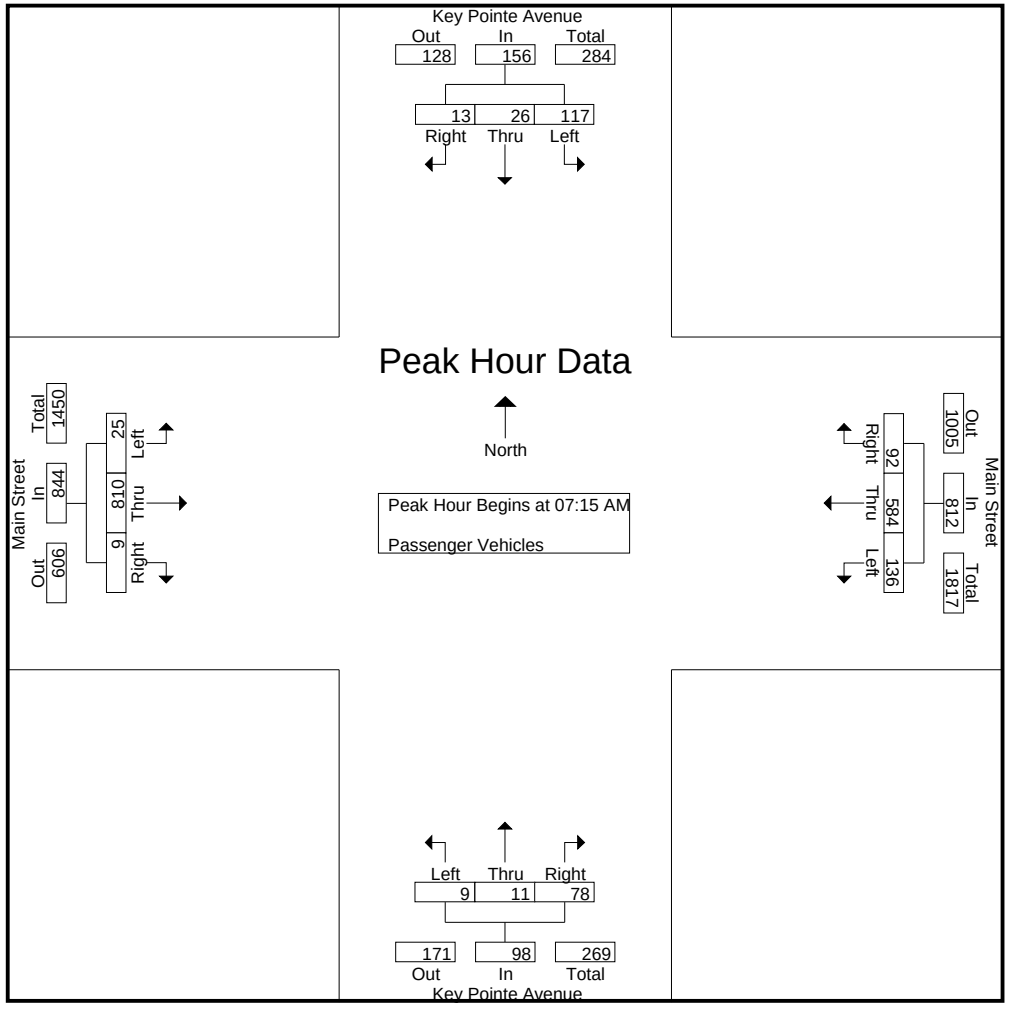

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	Key Pointe Avenue Southbound				Main Street Westbound				Key Pointe Avenue Northbound				Main Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 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.	26	5	**4**	35	24	158	21	203	2	0	9	11	5	**218**	0	**223**	
+15 mins.	31	5	4	40	35	**172**	26	**233**	0	3	24	27	4	177	2	183	
+30 mins.	25	**8**	4	37	36	137	**30**	203	2	**5**	16	23	4	217	2	223	
+45 mins.	**35**	8	1	**44**	**41**	117	15	173	**5**	3	**29**	**37**	**12**	198	**5**	215	
Total Volume	117	26	13	156	136	584	92	812	9	11	78	98	25	810	9	844	
% App. Total	75	16.7	8.3		16.7	71.9	11.3		9.2	11.2	79.6		3	96	1.1		
PHF	.836	.813	.813	.886	.829	.849	.767	.871	.450	.550	.672	.662	.521	.929	.450	.946	

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Groups Printed- Large 2 Axle Vehicles

	Key Pointe Avenue Southbound					Main Street Westbound					Key Pointe Avenue Northbound					Main Street Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	3	0	0	0	3	1	5	3	0	9	0	0	0	0	0	0	5	0	0	5	0	17	17
07:15 AM	2	0	0	0	2	0	9	0	0	9	0	0	0	0	0	0	2	0	0	2	0	13	13
07:30 AM	2	0	1	0	3	0	4	2	1	6	0	0	0	0	0	0	5	0	0	5	1	14	15
07:45 AM	2	0	0	0	2	0	8	1	0	9	1	0	0	0	1	0	3	1	0	4	0	16	16
Total	9	0	1	0	10	1	26	6	1	33	1	0	0	0	1	0	15	1	0	16	1	60	61
08:00 AM	0	0	0	0	0	1	7	1	0	9	0	0	0	0	0	1	5	1	0	7	0	16	16
08:15 AM	0	0	0	0	0	0	3	0	0	3	1	0	0	0	1	0	6	0	0	6	0	10	10
08:30 AM	3	0	0	0	3	0	6	1	0	7	0	1	0	0	1	1	3	0	0	4	0	15	15
08:45 AM	1	2	0	0	3	1	5	2	1	8	0	1	0	0	1	1	3	0	0	4	1	16	17
Total	4	2	0	0	6	2	21	4	1	27	1	2	0	0	3	3	17	1	0	21	1	57	58
Grand Total	13	2	1	0	16	3	47	10	2	60	2	2	0	0	4	3	32	2	0	37	2	117	119
Apprch %	81.2	12.5	6.2			5	78.3	16.7			50	50	0			8.1	86.5	5.4					
Total %	11.1	1.7	0.9		13.7	2.6	40.2	8.5		51.3	1.7	1.7	0		3.4	2.6	27.4	1.7		31.6	1.7	98.3	

	Key Pointe Avenue Southbound				Main Street Westbound				Key Pointe Avenue Northbound				Main Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	**2**	0	0	2	0	**9**	0	**9**	0	0	0	0	0	2	0	2	13
07:30 AM	2	0	**1**	**3**	0	4	**2**	6	0	0	0	0	0	**5**	0	5	14
07:45 AM	2	0	0	2	0	8	1	9	**1**	0	0	**1**	0	3	**1**	4	**16**
08:00 AM	0	0	0	0	**1**	7	1	9	0	0	0	0	**1**	5	1	**7**	16
Total Volume	6	0	1	7	1	28	4	33	1	0	0	1	1	15	2	18	59
% App. Total	85.7	0	14.3		3	84.8	12.1		100	0	0		5.6	83.3	11.1		
PHF	.750	.000	.250	.583	.250	.778	.500	.917	.250	.000	.000	.250	.250	.750	.500	.643	.922

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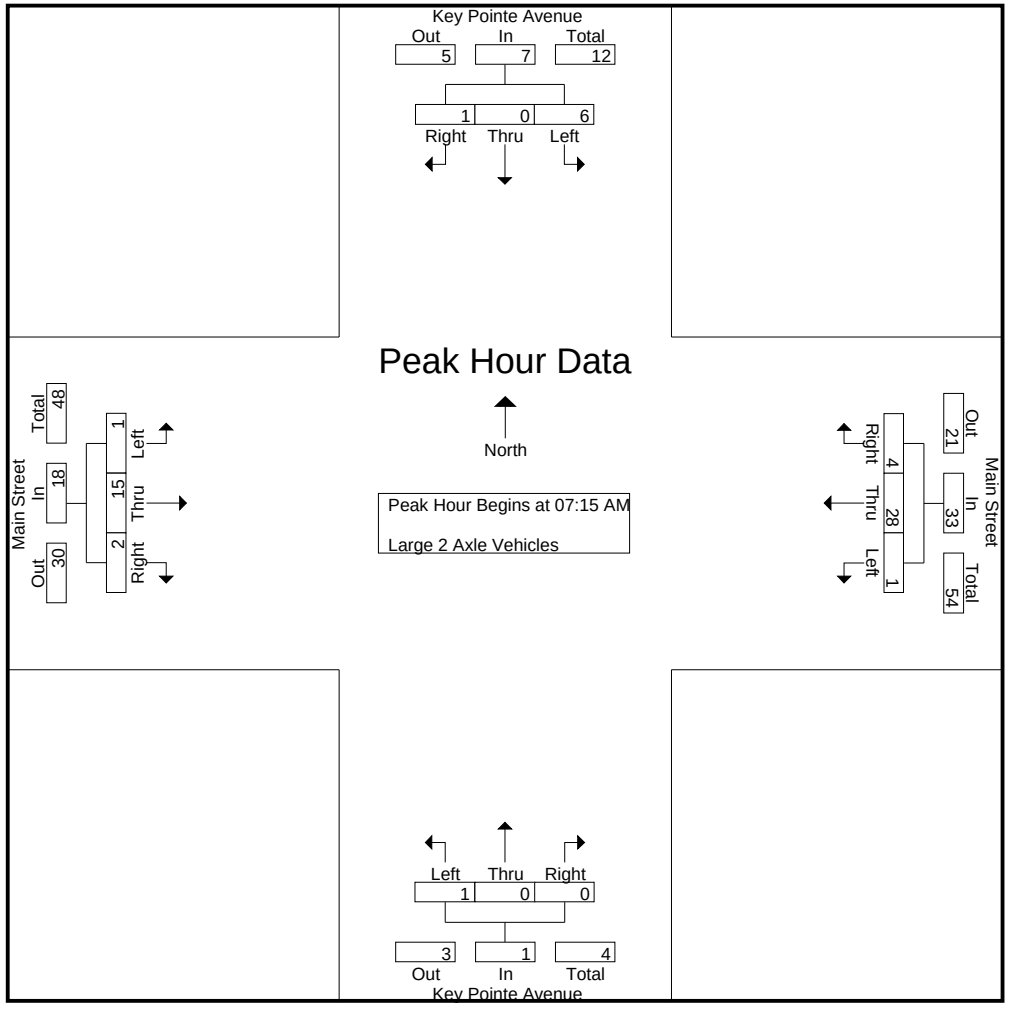

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	Key Pointe Avenue Southbound				Main Street Westbound				Key Pointe Avenue Northbound				Main Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 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.	**2**	0	0	2	0	**9**	0	**9**	0	0	0	0	0	2	0	2	
+15 mins.	2	0	**1**	**3**	0	4	**2**	6	0	0	0	0	0	**5**	0	5	
+30 mins.	2	0	0	2	0	8	1	9	**1**	0	0	**1**	0	3	**1**	4	
+45 mins.	0	0	0	0	**1**	7	1	9	0	0	0	0	**1**	5	1	**7**	
Total Volume	6	0	1	7	1	28	4	33	1	0	0	1	1	15	2	18	
% App. Total	85.7	0	14.3		3	84.8	12.1		100	0	0		5.6	83.3	11.1		
PHF	.750	.000	.250	.583	.250	.778	.500	.917	.250	.000	.000	.250	.250	.750	.500	.643	

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Groups Printed- 3 Axle Vehicles

	Key Pointe Avenue Southbound					Main Street Westbound					Key Pointe Avenue Northbound					Main Street Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1	0	0	1	0	2	2
07:15 AM	1	0	0	0	1	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	3	3
07:30 AM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	2	2
07:45 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	2	2
Total	1	0	0	0	1	0	5	1	0	6	0	0	0	0	0	0	2	0	0	2	0	9	9
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	2	2
08:15 AM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	2	2
08:30 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	1
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	2	0	0	2	0	5	5
Grand Total	1	0	0	0	1	0	8	1	0	9	0	0	0	0	0	0	4	0	0	4	0	14	14
Apprch %	100	0	0			0	88.9	11.1			0	0	0			0	100	0					
Total %	7.1	0	0		7.1	0	57.1	7.1		64.3	0	0	0		0	0	28.6	0		28.6	0	100	

	Key Pointe Avenue Southbound				Main Street Westbound				Key Pointe Avenue Northbound				Main Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 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	**2**	0	**2**	0	0	0	0	0	0	0	0	**3**
07:30 AM	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	2
07:45 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**2**	0	**2**	2
Total Volume	1	0	0	1	0	5	0	5	0	0	0	0	0	3	0	3	9
% App. Total	100	0	0		0	100	0		0	0	0		0	100	0		
PHF	.250	.000	.000	.250	.000	.625	.000	.625	.000	.000	.000	.000	.000	.375	.000	.375	.750

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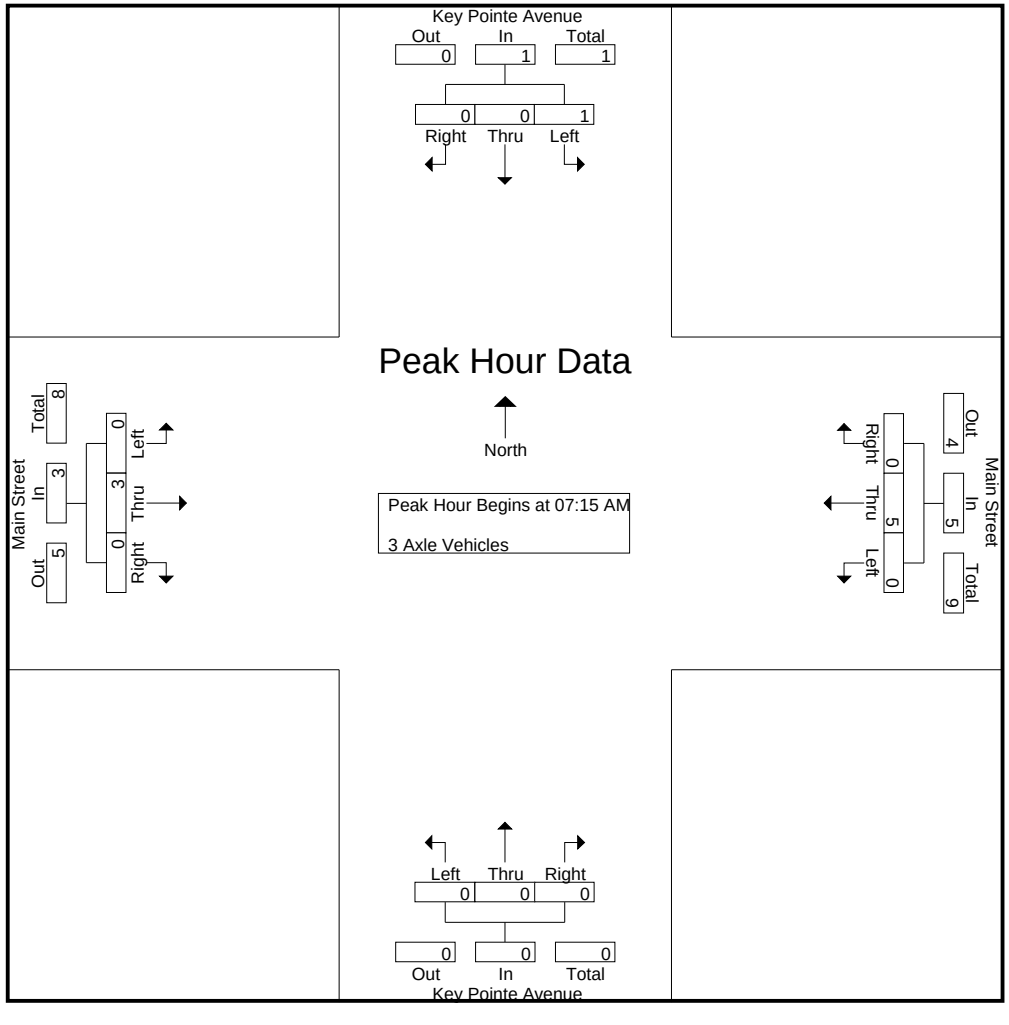

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	Key Pointe Avenue Southbound				Main Street Westbound				Key Pointe Avenue Northbound				Main Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 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	**2**	0	**2**	0	0	0	0	0	0	0	0	
+15 mins.	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	
+30 mins.	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	**2**	0	**2**	
Total Volume	1	0	0	1	0	5	0	5	0	0	0	0	0	3	0	3	
% App. Total	100	0	0		0	100	0		0	0	0		0	100	0		
PHF	.250	.000	.000	.250	.000	.625	.000	.625	.000	.000	.000	.000	.000	.375	.000	.375	

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City of Hesperia
N/S: Key Pointe Avenue
E/W: Main Street
Weather: Clear

File Name : 11_HES_Key Pointe_Main AM
Site Code : 05119658
Start Date : 9/28/2019
Page No : 1

Groups Printed- 4+ Axle Trucks

	Key Pointe Avenue Southbound					Main Street Westbound					Key Pointe Avenue Northbound					Main Street Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	0	0	0	0	0	0	1	3	0	4	0	0	0	0	0	0	4	0	0	4	0	8	8
07:15 AM	1	0	0	0	1	0	0	2	0	2	0	0	0	0	0	0	1	0	0	1	0	4	4
07:30 AM	1	0	0	0	1	0	2	0	0	2	0	0	0	0	0	1	1	0	0	2	0	5	5
07:45 AM	3	0	0	0	3	0	2	0	0	2	0	0	0	0	0	0	3	0	0	3	0	8	8
Total	5	0	0	0	5	0	5	5	0	10	0	0	0	0	0	1	9	0	0	10	0	25	25
08:00 AM	0	0	0	0	0	0	1	1	0	2	0	0	0	0	0	0	3	0	0	3	0	5	5
08:15 AM	2	0	0	0	2	1	5	1	1	7	0	1	0	0	1	0	4	0	0	4	1	14	15
08:30 AM	1	0	0	0	1	0	3	0	0	3	0	0	0	0	0	0	2	0	0	2	0	6	6
08:45 AM	2	0	0	0	2	0	1	0	0	1	0	0	1	1	1	0	1	0	0	1	1	5	6
Total	5	0	0	0	5	1	10	2	1	13	0	1	1	1	2	0	10	0	0	10	2	30	32
Grand Total	10	0	0	0	10	1	15	7	1	23	0	1	1	1	2	1	19	0	0	20	2	55	57
Apprch %	100	0	0			4.3	65.2	30.4			0	50	50			5	95	0					
Total %	18.2	0	0		18.2	1.8	27.3	12.7		41.8	0	1.8	1.8		3.6	1.8	34.5	0		36.4	3.5	96.5	

	Key Pointe Avenue Southbound				Main Street Westbound				Key Pointe Avenue Northbound				Main Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 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	**2**	**2**	0	0	0	0	0	1	0	1	4
07:30 AM	1	0	0	1	0	**2**	0	2	0	0	0	0	**1**	1	0	2	5
07:45 AM	**3**	0	0	**3**	0	2	0	2	0	0	0	0	0	**3**	0	**3**	**8**
08:00 AM	0	0	0	0	0	1	1	2	0	0	0	0	0	3	0	3	5
Total Volume	5	0	0	5	0	5	3	8	0	0	0	0	1	8	0	9	22
% App. Total	100	0	0		0	62.5	37.5		0	0	0		11.1	88.9	0		
PHF	.417	.000	.000	.417	.000	.625	.375	1.00	.000	.000	.000	.000	.250	.667	.000	.750	.688

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City of Hesperia
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Weather: Clear

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Site Code : 05119658
Start Date : 9/28/2019
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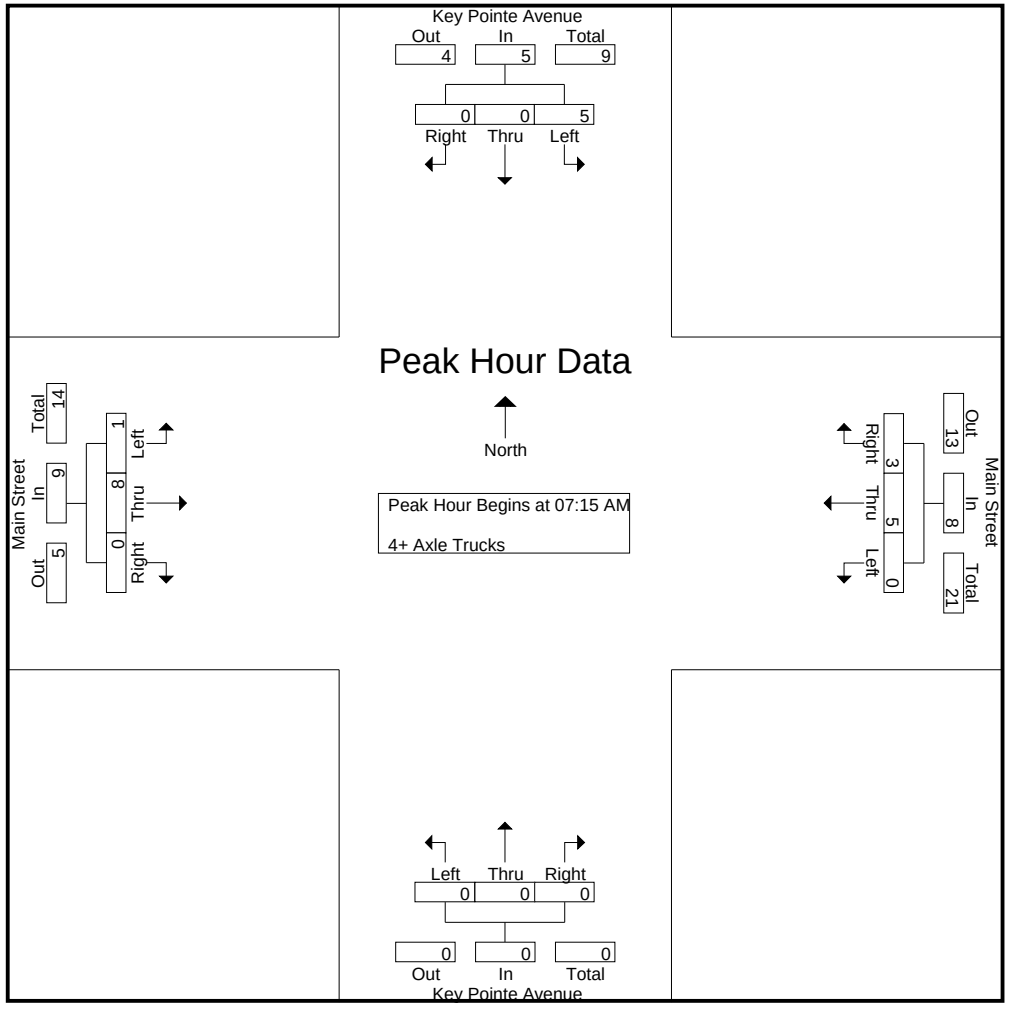

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City of Hesperia
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Site Code : 05119658
Start Date : 9/28/2019

	Key Pointe Avenue Southbound				Main Street Westbound				Key Pointe Avenue Northbound				Main Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 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	**2**	**2**	0	0	0	0	0	1	0	1	
+15 mins.	1	0	0	1	0	**2**	0	2	0	0	0	0	**1**	1	0	2	
+30 mins.	**3**	0	0	**3**	0	2	0	2	0	0	0	0	0	**3**	0	**3**	
+45 mins.	0	0	0	0	0	1	1	2	0	0	0	0	0	3	0	3	
Total Volume	5	0	0	5	0	5	3	8	0	0	0	0	1	8	0	9	
% App. Total	100	0	0		0	62.5	37.5		0	0	0		11.1	88.9	0		
PHF	.417	.000	.000	.417	.000	.625	.375	1.000	.000	.000	.000	.000	.250	.667	.000	.750	

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City of Hesperia
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File Name : 11_HES_Key Pointe_Main PM
Site Code : 05119658
Start Date : 9/28/2019
Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Key Pointe Avenue Southbound					Main Street Westbound					Key Pointe Avenue Northbound					Main Street Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	54	30	1	0	85	66	201	38	7	305	10	19	49	31	78	14	240	3	1	257	39	725	764
04:15 PM	58	19	8	7	85	72	239	44	22	355	6	8	67	37	81	6	221	1	0	228	66	749	815
04:30 PM	53	24	6	4	83	67	249	43	12	359	5	17	71	34	93	15	225	3	2	243	52	778	830
04:45 PM	46	22	5	4	73	51	265	47	15	363	11	22	55	30	88	12	231	10	0	253	49	777	826
Total	211	95	20	15	326	256	954	172	56	1382	32	66	242	132	340	47	917	17	3	981	206	3029	3235
05:00 PM	57	15	9	7	81	44	264	52	13	360	7	18	57	41	82	16	215	4	1	235	62	758	820
05:15 PM	63	19	9	4	91	63	261	54	16	378	5	16	55	28	76	12	210	4	1	226	49	771	820
05:30 PM	52	28	7	6	87	56	275	58	30	389	6	15	63	39	84	12	210	6	2	228	77	788	865
05:45 PM	62	19	5	1	86	76	242	55	10	373	11	14	57	30	82	14	205	5	1	224	42	765	807
Total	234	81	30	18	345	239	1042	219	69	1500	29	63	232	138	324	54	840	19	5	913	230	3082	3312
Grand Total	445	176	50	33	671	495	1996	391	125	2882	61	129	474	270	664	101	1757	36	8	1894	436	6111	6547
Apprch %	66.3	26.2	7.5			17.2	69.3	13.6			9.2	19.4	71.4			5.3	92.8	1.9					
Total %	7.3	2.9	0.8		11	8.1	32.7	6.4		47.2	1	2.1	7.8		10.9	1.7	28.8	0.6		31	6.7	93.3	
Passenger Vehicles	437	176	49		695	493	1948	378		2942	61	128	471		929	97	1688	35		1828	0	0	6394
% Passenger Vehicles	98.2	100	98	100	98.7	99.6	97.6	96.7	98.4	97.8	100	99.2	99.4	99.6	99.5	96	96.1	97.2	100	96.1	0	0	97.7
Large 2 Axle Vehicles	3	0	1		4	2	21	9		34	0	1	3		5	3	43	1		47	0	0	90
% Large 2 Axle Vehicles	0.7	0	2	0	0.6	0.4	1.1	2.3	1.6	1.1	0	0.8	0.6	0.4	0.5	3	2.4	2.8	0	2.5	0	0	1.4
3 Axle Vehicles	2	0	0		2	0	4	1		5	0	0	0		0	0	7	0		7	0	0	14
% 3 Axle Vehicles	0.4	0	0	0	0.3	0	0.2	0.3	0	0.2	0	0	0	0	0	0	0.4	0	0	0.4	0	0	0.2
4+ Axle Trucks	3	0	0		3	0	23	3		26	0	0	0		0	1	19	0		20	0	0	49
% 4+ Axle Trucks	0.7	0	0	0	0.4	0	1.2	0.8	0	0.9	0	0	0	0	0	1	1.1	0	0	1.1	0	0	0.7

	Key Pointe Avenue Southbound				Main Street Westbound				Key Pointe Avenue Northbound				Main Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	46	22	5	73	51	265	47	363	**11**	**22**	55	**88**	12	**231**	**10**	**253**	777
05:00 PM	57	15	**9**	81	44	264	52	360	7	18	57	82	**16**	215	4	235	758
05:15 PM	**63**	19	9	**91**	**63**	261	54	378	5	16	55	76	12	210	4	226	771
05:30 PM	52	**28**	7	87	56	**275**	**58**	**389**	6	15	**63**	84	12	210	6	228	**788**
Total Volume	218	84	30	332	214	1065	211	1490	29	71	230	330	52	866	24	942	3094
% App. Total	65.7	25.3	9		14.4	71.5	14.2		8.8	21.5	69.7		5.5	91.9	2.5		
PHF	.865	.750	.833	.912	.849	.968	.909	.958	.659	.807	.913	.938	.813	.937	.600	.931	.982

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City of Hesperia
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Start Date : 9/28/2019
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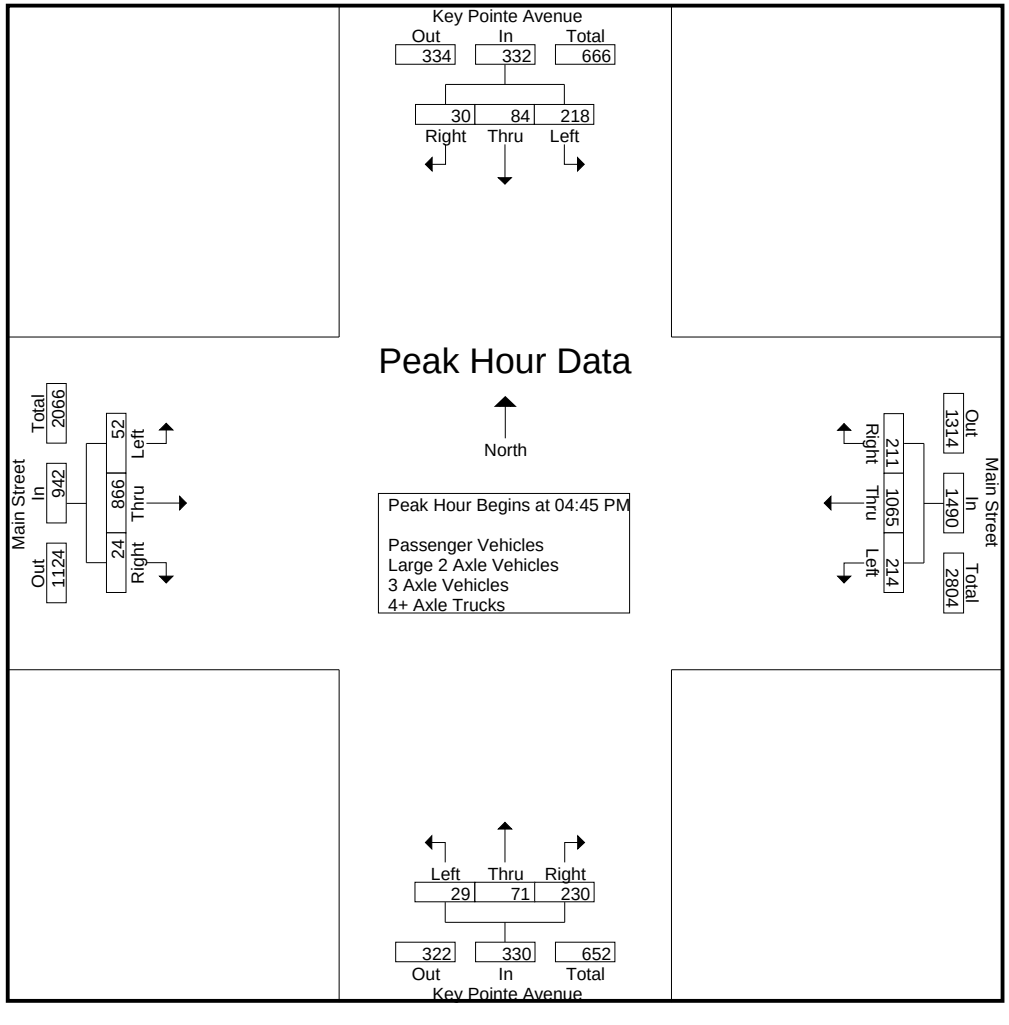

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Site Code : 05119658
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	Key Pointe Avenue Southbound				Main Street Westbound				Key Pointe Avenue Northbound				Main Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	05:00 PM				05:00 PM				04:15 PM				04:00 PM				
+0 mins.	57	15	**9**	81	44	264	52	360	6	8	67	81	14	**240**	3	**257**	
+15 mins.	**63**	19	9	**91**	63	261	54	378	5	17	**71**	**93**	6	221	1	228	
+30 mins.	52	**28**	7	87	56	**275**	**58**	**389**	**11**	**22**	55	88	**15**	225	3	243	
+45 mins.	62	19	5	86	**76**	242	55	373	7	18	57	82	12	231	**10**	253	
Total Volume	234	81	30	345	239	1042	219	1500	29	65	250	344	47	917	17	981	
% App. Total	67.8	23.5	8.7		15.9	69.5	14.6		8.4	18.9	72.7		4.8	93.5	1.7		
PHF	.929	.723	.833	.948	.786	.947	.944	.964	.659	.739	.880	.925	.783	.955	.425	.954	

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Groups Printed- Passenger Vehicles

	Key Pointe Avenue Southbound					Main Street Westbound					Key Pointe Avenue Northbound					Main Street Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	52	30	1	0	83	65	196	34	6	295	10	18	49	31	77	14	226	2	1	242	38	697	735
04:15 PM	57	19	8	7	84	72	230	44	22	346	6	8	65	37	79	6	211	1	0	218	66	727	793
04:30 PM	52	24	6	4	82	67	243	41	12	351	5	17	70	33	92	15	218	3	2	236	51	761	812
04:45 PM	45	22	5	4	72	51	262	46	15	359	11	22	55	30	88	12	222	10	0	244	49	763	812
Total	206	95	20	15	321	255	931	165	55	1351	32	65	239	131	336	47	877	16	3	940	204	2948	3152
05:00 PM	55	15	9	7	79	44	261	52	13	357	7	18	57	41	82	14	207	4	1	225	62	743	805
05:15 PM	62	19	8	4	89	63	253	52	16	368	5	16	55	28	76	12	201	4	1	217	49	750	799
05:30 PM	52	28	7	6	87	55	267	58	30	380	6	15	63	39	84	12	202	6	2	220	77	771	848
05:45 PM	62	19	5	1	86	76	236	51	9	363	11	14	57	30	82	12	201	5	1	218	41	749	790
Total	231	81	29	18	341	238	1017	213	68	1468	29	63	232	138	324	50	811	19	5	880	229	3013	3242
Grand Total	437	176	49	33	662	493	1948	378	123	2819	61	128	471	269	660	97	1688	35	8	1820	433	5961	6394
Apprch %	66	26.6	7.4			17.5	69.1	13.4			9.2	19.4	71.4			5.3	92.7	1.9					
Total %	7.3	3	0.8		11.1	8.3	32.7	6.3		47.3	1	2.1	7.9		11.1	1.6	28.3	0.6		30.5	6.8	93.2	

	Key Pointe Avenue Southbound				Main Street Westbound				Key Pointe Avenue Northbound				Main Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	45	22	5	72	51	262	46	359	**11**	**22**	55	**88**	12	**222**	**10**	**244**	763
05:00 PM	55	15	**9**	79	44	261	52	357	7	18	57	82	**14**	207	4	225	743
05:15 PM	**62**	19	8	**89**	**63**	253	52	368	5	16	55	76	12	201	4	217	750
05:30 PM	52	**28**	7	87	55	**267**	**58**	**380**	6	15	**63**	84	12	202	6	220	**771**
Total Volume	214	84	29	327	213	1043	208	1464	29	71	230	330	50	832	24	906	3027
% App. Total	65.4	25.7	8.9		14.5	71.2	14.2		8.8	21.5	69.7		5.5	91.8	2.6		
PHF	.863	.750	.806	.919	.845	.977	.897	.963	.659	.807	.913	.938	.893	.937	.600	.928	.982

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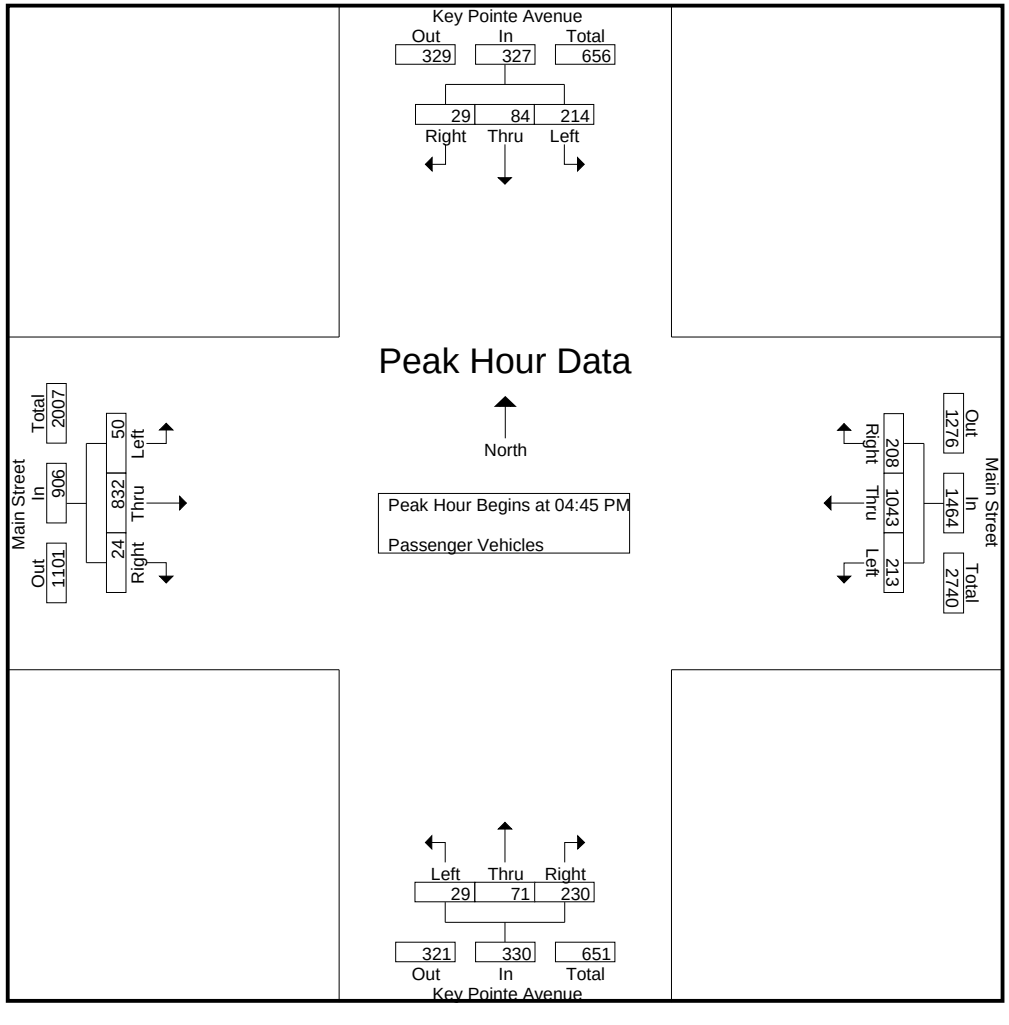

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	Key Pointe Avenue Southbound				Main Street Westbound				Key Pointe Avenue Northbound				Main Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	04:45 PM				04:45 PM				04:45 PM				04:45 PM				
+0 mins.	45	22	5	72	51	262	46	359	**11**	**22**	55	**88**	12	**222**	**10**	**244**	
+15 mins.	55	15	**9**	79	44	261	52	357	7	18	57	82	**14**	207	4	225	
+30 mins.	**62**	19	8	**89**	**63**	253	52	368	5	16	55	76	12	201	4	217	
+45 mins.	52	**28**	7	87	55	**267**	**58**	**380**	6	15	**63**	84	12	202	6	220	
Total Volume	214	84	29	327	213	1043	208	1464	29	71	230	330	50	832	24	906	
% App. Total	65.4	25.7	8.9		14.5	71.2	14.2		8.8	21.5	69.7		5.5	91.8	2.6		
PHF	.863	.750	.806	.919	.845	.977	.897	.963	.659	.807	.913	.938	.893	.937	.600	.928	

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Groups Printed- Large 2 Axle Vehicles

	Key Pointe Avenue Southbound					Main Street Westbound					Key Pointe Avenue Northbound					Main Street Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	1	0	0	0	1	1	2	3	1	6	0	1	0	0	1	0	11	1	0	12	1	20	21
04:15 PM	0	0	0	0	0	0	3	0	0	3	0	0	2	0	2	0	6	0	0	6	0	11	11
04:30 PM	0	0	0	0	0	0	2	1	0	3	0	0	1	1	1	0	5	0	0	5	1	9	10
04:45 PM	0	0	0	0	0	0	1	1	0	2	0	0	0	0	0	0	5	0	0	5	0	7	7
Total	1	0	0	0	1	1	8	5	1	14	0	1	3	1	4	0	27	1	0	28	2	47	49
05:00 PM	2	0	0	0	2	0	2	0	0	2	0	0	0	0	0	1	3	0	0	4	0	8	8
05:15 PM	0	0	1	0	1	0	3	2	0	5	0	0	0	0	0	0	5	0	0	5	0	11	11
05:30 PM	0	0	0	0	0	1	5	0	0	6	0	0	0	0	0	0	5	0	0	5	0	11	11
05:45 PM	0	0	0	0	0	0	3	2	1	5	0	0	0	0	0	2	3	0	0	5	1	10	11
Total	2	0	1	0	3	1	13	4	1	18	0	0	0	0	0	3	16	0	0	19	1	40	41
Grand Total	3	0	1	0	4	2	21	9	2	32	0	1	3	1	4	3	43	1	0	47	3	87	90
Apprch %	75	0	25			6.2	65.6	28.1			0	25	75			6.4	91.5	2.1					
Total %	3.4	0	1.1		4.6	2.3	24.1	10.3		36.8	0	1.1	3.4		4.6	3.4	49.4	1.1		54	3.3	96.7	

	Key Pointe Avenue Southbound				Main Street Westbound				Key Pointe Avenue Northbound				Main Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	0	0	0	0	1	1	2	0	0	0	0	0	**5**	0	**5**	7
05:00 PM	**2**	0	0	**2**	0	2	0	2	0	0	0	0	**1**	3	0	4	8
05:15 PM	0	0	**1**	1	0	3	**2**	5	0	0	0	0	0	5	0	5	**11**
05:30 PM	0	0	0	0	**1**	**5**	0	**6**	0	0	0	0	0	5	0	5	11
Total Volume	2	0	1	3	1	11	3	15	0	0	0	0	1	18	0	19	37
% App. Total	66.7	0	33.3		6.7	73.3	20		0	0	0		5.3	94.7	0		
PHF	.250	.000	.250	.375	.250	.550	.375	.625	.000	.000	.000	.000	.250	.900	.000	.950	.841

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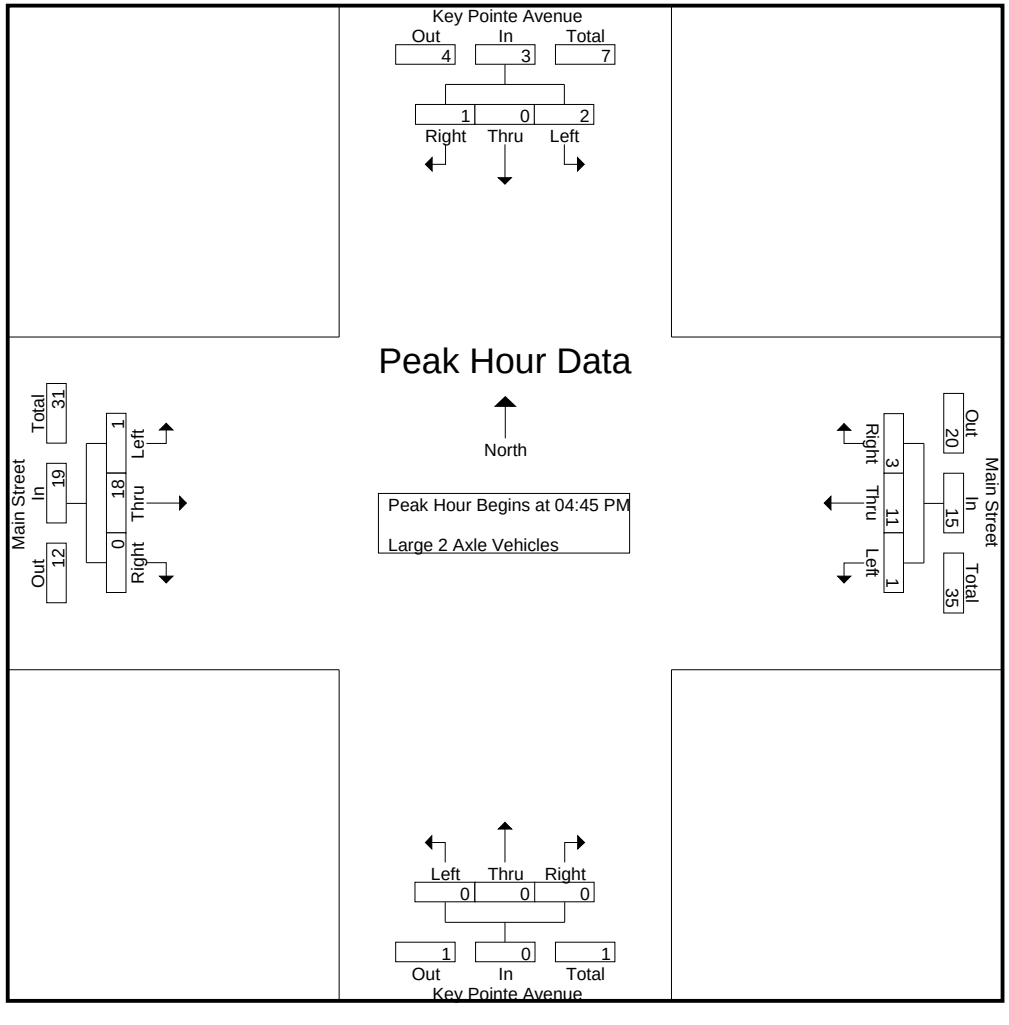
City of Hesperia
N/S: Key Pointe Avenue
E/W: Main Street
Weather: Clear

File Name : 11_HES_Key Pointe_Main PM
Site Code : 05119658
Start Date : 9/28/2019
Page No : 2



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(951) 268-6268

City of Hesperia
N/S: Key Pointe Avenue
E/W: Main Street
Weather: Clear

File Name : 11_HES_Key Pointe_Main PM
Site Code : 05119658
Start Date : 9/28/2019

	Key Pointe Avenue Southbound				Main Street Westbound				Key Pointe Avenue Northbound				Main Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	04:45 PM				04:45 PM				04:45 PM				04:45 PM				
+0 mins.	0	0	0	0	0	1	1	2	0	0	0	0	0	**5**	0	**5**	
+15 mins.	**2**	0	0	**2**	0	2	0	2	0	0	0	0	**1**	3	0	4	
+30 mins.	0	0	**1**	1	0	3	**2**	5	0	0	0	0	0	5	0	5	
+45 mins.	0	0	0	0	**1**	**5**	0	**6**	0	0	0	0	0	5	0	5	
Total Volume	2	0	1	3	1	11	3	15	0	0	0	0	1	18	0	19	
% App. Total	66.7	0	33.3		6.7	73.3	20		0	0	0		5.3	94.7	0		
PHF	.250	.000	.250	.375	.250	.550	.375	.625	.000	.000	.000	.000	.250	.900	.000	.950	

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City of Hesperia
N/S: Key Pointe Avenue
E/W: Main Street
Weather: Clear

File Name : 11_HES_Key Pointe_Main PM
Site Code : 05119658
Start Date : 9/28/2019
Page No : 1

Groups Printed- 3 Axle Vehicles

	Key Pointe Avenue Southbound					Main Street Westbound					Key Pointe Avenue Northbound					Main Street Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	1	1
04:15 PM	1	0	0	0	1	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	0	4	4
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	2	2
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	1	1
Total	1	0	0	0	1	0	3	1	0	4	0	0	0	0	0	0	3	0	0	3	0	8	8
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	2	2
05:15 PM	1	0	0	0	1	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	3	3
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	1	1
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	1	0	0	0	1	0	1	0	0	1	0	0	0	0	0	0	4	0	0	4	0	6	6
Grand Total	2	0	0	0	2	0	4	1	0	5	0	0	0	0	0	0	7	0	0	7	0	14	14
Apprch %	100	0	0			0	80	20			0	0	0			0	100	0					
Total %	14.3	0	0		14.3	0	28.6	7.1		35.7	0	0	0		0	0	50	0		50	0	100	

	Key Pointe Avenue Southbound				Main Street Westbound				Key Pointe Avenue Northbound				Main Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	**2**	0	**2**	2
05:15 PM	**1**	0	0	**1**	0	**1**	0	**1**	0	0	0	0	0	1	0	1	**3**
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
Total Volume	1	0	0	1	0	1	0	1	0	0	0	0	0	5	0	5	7
% App. Total	100	0	0		0	100	0		0	0	0		0	100	0		
PHF	.250	.000	.000	.250	.000	.250	.000	.250	.000	.000	.000	.000	.000	.625	.000	.625	.583

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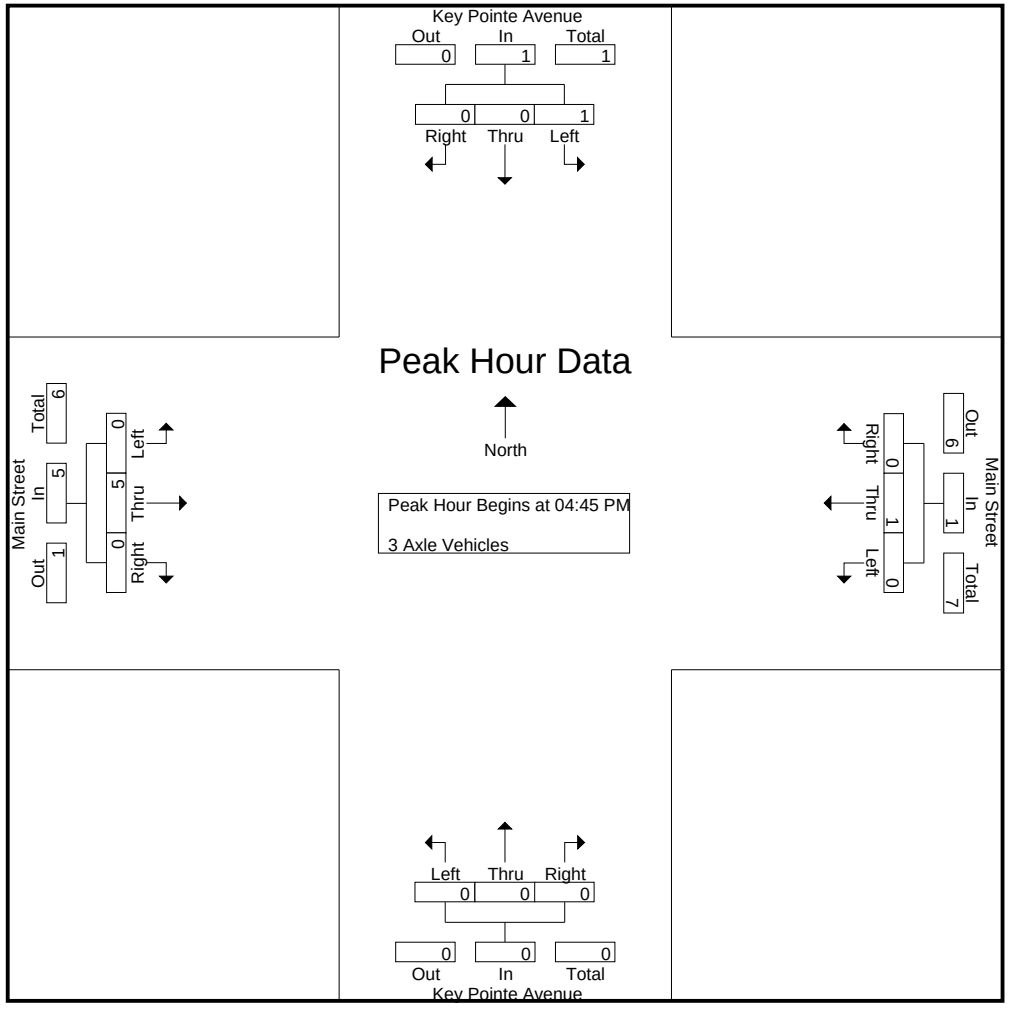
City of Hesperia
N/S: Key Pointe Avenue
E/W: Main Street
Weather: Clear

File Name : 11_HES_Key Pointe_Main PM
Site Code : 05119658
Start Date : 9/28/2019
Page No : 2



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City of Hesperia
N/S: Key Pointe Avenue
E/W: Main Street
Weather: Clear

File Name : 11_HES_Key Pointe_Main PM
Site Code : 05119658
Start Date : 9/28/2019
Page No : 3

	Key Pointe Avenue Southbound				Main Street Westbound				Key Pointe Avenue Northbound				Main Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	04:45 PM				04:45 PM				04:45 PM				04:45 PM				
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	**2**	0	**2**	
+30 mins.	**1**	0	0	**1**	0	**1**	0	**1**	0	0	0	0	0	1	0	1	
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	
Total Volume	1	0	0	1	0	1	0	1	0	0	0	0	0	5	0	5	
% App. Total	100	0	0		0	100	0		0	0	0		0	100	0		
PHF	.250	.000	.000	.250	.000	.250	.000	.250	.000	.000	.000	.000	.000	.625	.000	.625	

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City of Hesperia
N/S: Key Pointe Avenue
E/W: Main Street
Weather: Clear

File Name : 11_HES_Key Pointe_Main PM
Site Code : 05119658
Start Date : 9/28/2019
Page No : 1

Groups Printed- 4+ Axle Trucks

	Key Pointe Avenue Southbound					Main Street Westbound					Key Pointe Avenue Northbound					Main Street Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	1	0	0	0	1	0	3	0	0	3	0	0	0	0	0	0	3	0	0	3	0	7	7
04:15 PM	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	4	0	0	4	0	7	7
04:30 PM	1	0	0	0	1	0	4	1	0	5	0	0	0	0	0	0	0	0	0	0	0	6	6
04:45 PM	1	0	0	0	1	0	2	0	0	2	0	0	0	0	0	0	3	0	0	3	0	6	6
Total	3	0	0	0	3	0	12	1	0	13	0	0	0	0	0	0	10	0	0	10	0	26	26
05:00 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1	3	0	0	4	0	5	5
05:15 PM	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	3	0	0	3	0	7	7
05:30 PM	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	2	0	0	2	0	5	5
05:45 PM	0	0	0	0	0	0	3	2	0	5	0	0	0	0	0	0	1	0	0	1	0	6	6
Total	0	0	0	0	0	0	11	2	0	13	0	0	0	0	0	1	9	0	0	10	0	23	23
Grand Total	3	0	0	0	3	0	23	3	0	26	0	0	0	0	0	1	19	0	0	20	0	49	49
Apprch %	100	0	0			0	88.5	11.5			0	0	0			5	95	0					
Total %	6.1	0	0		6.1	0	46.9	6.1		53.1	0	0	0		0	2	38.8	0		40.8	0	100	

	Key Pointe Avenue Southbound				Main Street Westbound				Key Pointe Avenue Northbound				Main Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	**1**	0	0	**1**	0	2	0	2	0	0	0	0	0	**3**	0	3	6
05:00 PM	0	0	0	0	0	1	0	1	0	0	0	0	**1**	3	0	**4**	5
05:15 PM	0	0	0	0	0	**4**	0	**4**	0	0	0	0	0	3	0	3	**7**
05:30 PM	0	0	0	0	0	3	0	3	0	0	0	0	0	2	0	2	5
Total Volume	1	0	0	1	0	10	0	10	0	0	0	0	1	11	0	12	23
% App. Total	100	0	0		0	100	0		0	0	0		8.3	91.7	0		
PHF	.250	.000	.000	.250	.000	.625	.000	.625	.000	.000	.000	.000	.250	.917	.000	.750	.821

Counts Unlimited
PO Box 1178
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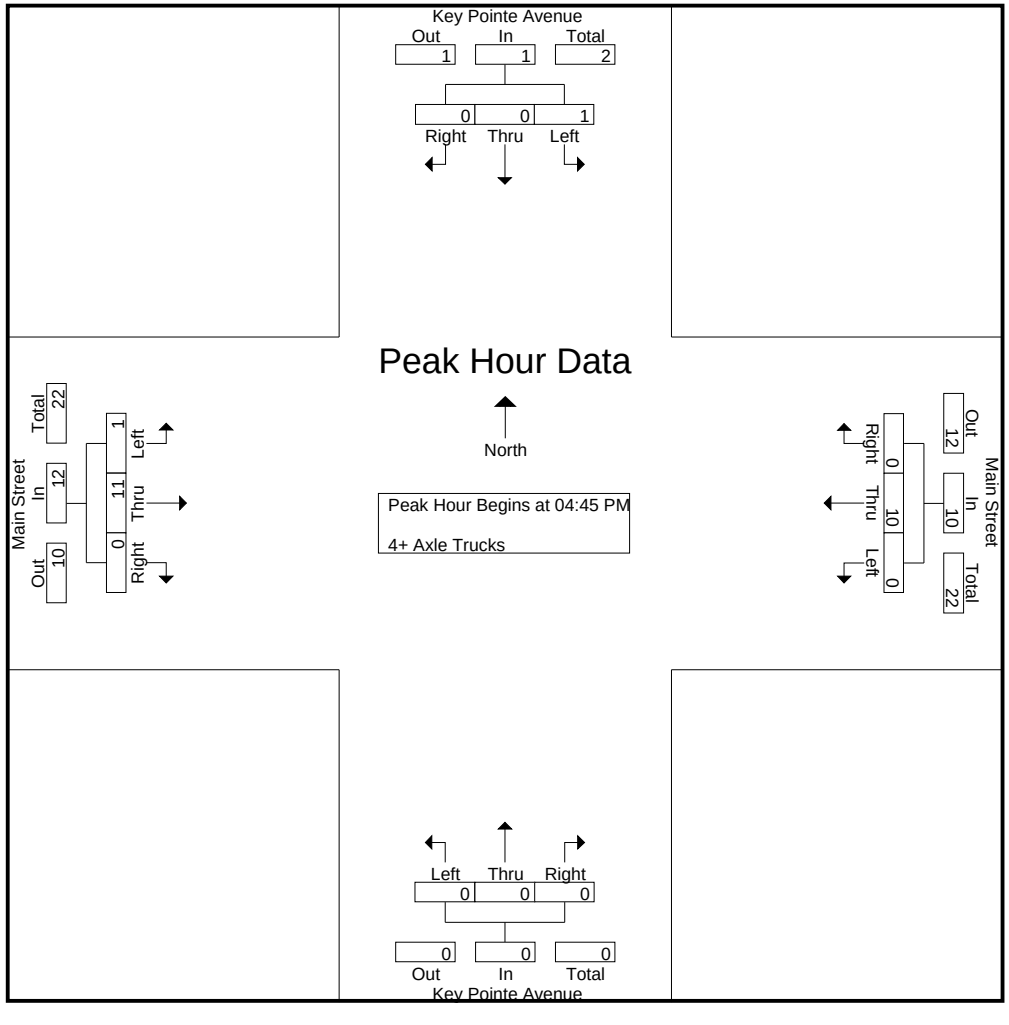
City of Hesperia
N/S: Key Pointe Avenue
E/W: Main Street
Weather: Clear

File Name : 11_HES_Key Pointe_Main PM
Site Code : 05119658
Start Date : 9/28/2019
Page No : 2



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City of Hesperia
N/S: Key Pointe Avenue
E/W: Main Street
Weather: Clear

File Name : 11_HES_Key Pointe_Main PM
Site Code : 05119658
Start Date : 9/28/2019

	Key Pointe Avenue Southbound				Main Street Westbound				Key Pointe Avenue Northbound				Main Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	04:45 PM				04:45 PM				04:45 PM				04:45 PM				
+0 mins.	**1**	0	0	**1**	0	2	0	2	0	0	0	0	0	**3**	0	3	
+15 mins.	0	0	0	0	0	1	0	1	0	0	0	0	**1**	3	0	**4**	
+30 mins.	0	0	0	0	0	**4**	0	**4**	0	0	0	0	0	3	0	3	
+45 mins.	0	0	0	0	0	3	0	3	0	0	0	0	0	2	0	2	
Total Volume	1	0	0	1	0	10	0	10	0	0	0	0	1	11	0	12	
% App. Total	100	0	0		0	100	0		0	0	0		8.3	91.7	0		
PHF	.250	.000	.000	.250	.000	.625	.000	.625	.000	.000	.000	.000	.250	.917	.000	.750	

Location: Hesperia
N/S: Key Pointe Avenue
E/W: Main Street

Date: 9/28/2019
Day: Saturday

PEDESTRIANS

	North Leg Key Pointe Avenue	East Leg Main Street	South Leg Key Pointe Avenue	West Leg Main Street	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
7:00 AM	0	1	1	0	2
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	2	0	0	0	2
8:30 AM	0	0	1	0	1
8:45 AM	2	0	1	0	3
TOTAL VOLUMES:	4	1	3	0	8

	North Leg Key Pointe Avenue	East Leg Main Street	South Leg Key Pointe Avenue	West Leg Main Street	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
4:00 PM	0	0	0	0	0
4:15 PM	1	0	0	2	3
4:30 PM	0	2	0	1	3
4:45 PM	1	0	0	1	2
5:00 PM	0	0	0	1	1
5:15 PM	0	0	0	1	1
5:30 PM	0	0	0	0	0
5:45 PM	1	0	0	2	3
TOTAL VOLUMES:	3	2	0	8	13

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951-268-0268

Location: Hesperia
N/S: Key Pointe Avenue
E/W: Main Street

Date: 9/28/2019
Day: Saturday

BICYCLES

	Southbound Key Pointe Avenue			Westbound Main Street			Northbound Key Pointe Avenue			Eastbound Main Street			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	0	0	0	0	0	0	0	0

	Southbound Key Pointe Avenue			Westbound Main Street			Northbound Key Pointe Avenue			Eastbound Main Street			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	0	0	0	0	1	0	0	0	1
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	1	0	0	0	1
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	0	0	0	2	0	0	0	2

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City of Hesperia
N/S: I-15 Southbound Off Ramp
E/W: Main Street
Weather: Clear

File Name : 12_HES_15S Off Ramp_Main AM
Site Code : 05119658
Start Date : 9/28/2019
Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	I-15 Southbound Off Ramp Southbound				Main Street Westbound				Main Street Eastbound						
Start Time	Left	Right	RTOR	App. Total	Thru	Right	RTOR	App. Total	Left	Thru	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	97	29	10	126	128	0	0	128	0	242	0	242	10	496	506
07:15 AM	59	38	20	97	177	0	0	177	0	237	0	237	20	511	531
07:30 AM	47	46	29	93	196	0	0	196	0	218	0	218	29	507	536
07:45 AM	68	42	18	110	176	0	0	176	0	254	0	254	18	540	558
Total	271	155	77	426	677	0	0	677	0	951	0	951	77	2054	2131
08:00 AM	55	32	18	87	143	0	0	143	0	222	0	222	18	452	470
08:15 AM	42	48	23	90	166	0	0	166	0	221	0	221	23	477	500
08:30 AM	52	45	25	97	156	0	0	156	0	229	0	229	25	482	507
08:45 AM	63	54	27	117	157	0	0	157	0	213	0	213	27	487	514
Total	212	179	93	391	622	0	0	622	0	885	0	885	93	1898	1991
Grand Total	483	334	170	817	1299	0	0	1299	0	1836	0	1836	170	3952	4122
Apprch %	59.1	40.9			100	0			0	100					
Total %	12.2	8.5		20.7	32.9	0		32.9	0	46.5		46.5	4.1	95.9	
Passenger Vehicles	469	309		937	1223	0		1223	0	1776		1776	0	0	3936
% Passenger Vehicles	97.1	92.5	93.5	94.9	94.1	0	0	94.1	0	96.7	0	96.7	0	0	95.5
Large 2 Axle Vehicles	5	16		30	59	0		59	0	34		34	0	0	123
% Large 2 Axle Vehicles	1	4.8	5.3	3	4.5	0	0	4.5	0	1.9	0	1.9	0	0	3
3 Axle Vehicles	2	3		6	8	0		8	0	4		4	0	0	18
% 3 Axle Vehicles	0.4	0.9	0.6	0.6	0.6	0	0	0.6	0	0.2	0	0.2	0	0	0.4
4+ Axle Trucks	7	6		14	9	0		9	0	22		22	0	0	45
% 4+ Axle Trucks	1.4	1.8	0.6	1.4	0.7	0	0	0.7	0	1.2	0	1.2	0	0	1.1

	I-15 Southbound Off Ramp Southbound			Main Street Westbound			Main Street 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	**97**	29	**126**	128	0	128	0	242	242	496
07:15 AM	59	38	97	177	0	177	0	237	237	511
07:30 AM	47	**46**	93	**196**	0	**196**	0	218	218	507
07:45 AM	68	42	110	176	0	176	0	**254**	**254**	**540**
Total Volume	271	155	426	677	0	677	0	951	951	2054
% App. Total	63.6	36.4		100	0		0	100		
PHF	.698	.842	.845	.864	.000	.864	.000	.936	.936	.951

Counts Unlimited
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City of Hesperia
N/S: I-15 Southbound Off Ramp
E/W: Main Street
Weather: Clear

File Name : 12_HES_15S Off Ramp_Main AM
Site Code : 05119658
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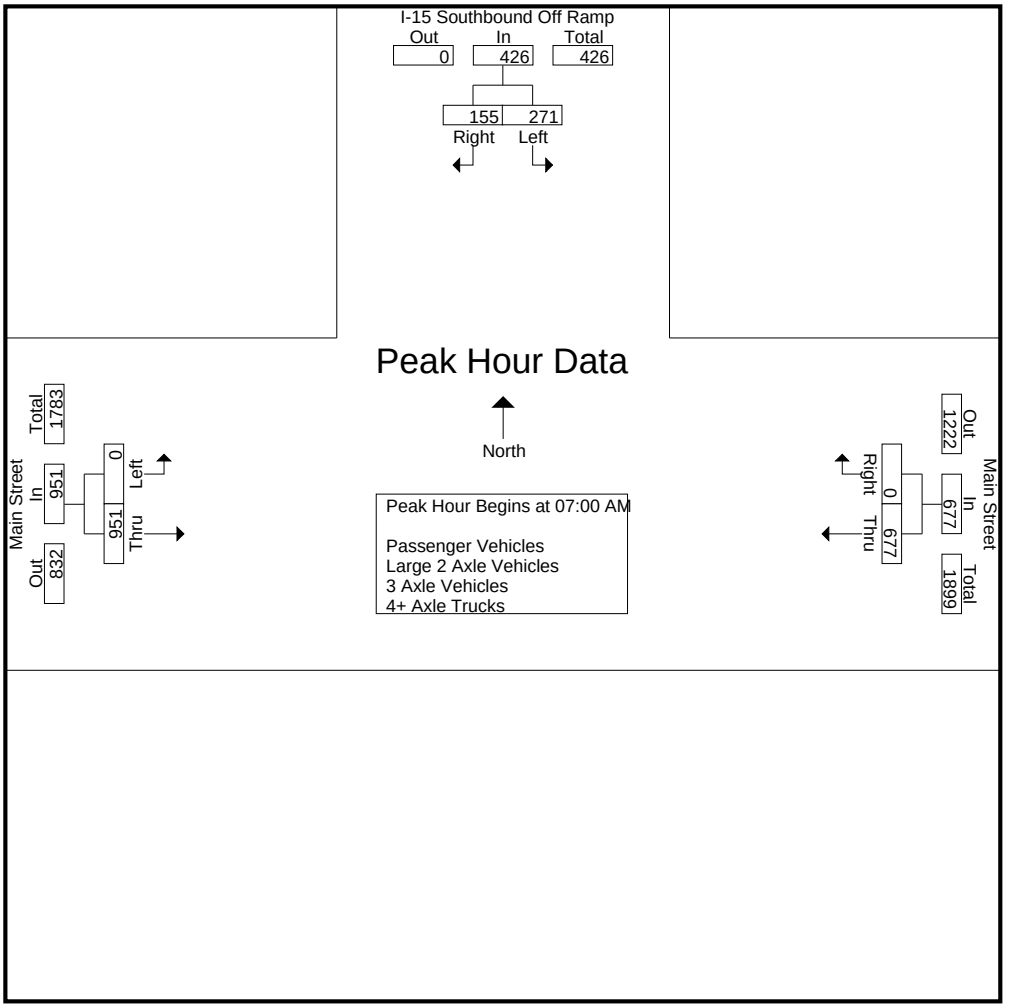

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM			07:15 AM			07:00 AM		
+0 mins.	**97**	29	**126**	177	0	177	0	242	242
+15 mins.	59	38	97	**196**	0	**196**	0	237	237
+30 mins.	47	**46**	93	176	0	176	0	218	218
+45 mins.	68	42	110	143	0	143	0	**254**	**254**
Total Volume	271	155	426	692	0	692	0	951	951
% App. Total	63.6	36.4		100	0		0	100	
PHF	.698	.842	.845	.883	.000	.883	.000	.936	.936

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City of Hesperia
N/S: I-15 Southbound Off Ramp
E/W: Main Street
Weather: Clear

File Name : 12_HES_15S Off Ramp_Main AM
Site Code : 05119658
Start Date : 9/28/2019
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Groups Printed- Passenger Vehicles

	I-15 Southbound Off Ramp Southbound				Main Street Westbound				Main Street Eastbound						
Start Time	Left	Right	RTOR	App. Total	Thru	Right	RTOR	App. Total	Left	Thru	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	95	26	10	121	116	0	0	116	0	231	0	231	10	468	478
07:15 AM	57	32	17	89	166	0	0	166	0	232	0	232	17	487	504
07:30 AM	45	44	27	89	188	0	0	188	0	213	0	213	27	490	517
07:45 AM	66	40	17	106	163	0	0	163	0	245	0	245	17	514	531
Total	263	142	71	405	633	0	0	633	0	921	0	921	71	1959	2030
08:00 AM	54	28	16	82	137	0	0	137	0	216	0	216	16	435	451
08:15 AM	42	46	22	88	155	0	0	155	0	209	0	209	22	452	474
08:30 AM	51	43	25	94	146	0	0	146	0	221	0	221	25	461	486
08:45 AM	59	50	25	109	152	0	0	152	0	209	0	209	25	470	495
Total	206	167	88	373	590	0	0	590	0	855	0	855	88	1818	1906
Grand Total	469	309	159	778	1223	0	0	1223	0	1776	0	1776	159	3777	3936
Apprch %	60.3	39.7			100	0			0	100					
Total %	12.4	8.2		20.6	32.4	0		32.4	0	47		47	4	96	

	I-15 Southbound Off Ramp Southbound			Main Street Westbound			Main Street 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	**95**	26	**121**	116	0	116	0	231	231	468
07:15 AM	57	32	89	166	0	166	0	232	232	487
07:30 AM	45	**44**	89	**188**	0	**188**	0	213	213	490
07:45 AM	66	40	106	163	0	163	0	**245**	**245**	**514**
Total Volume	263	142	405	633	0	633	0	921	921	1959
% App. Total	64.9	35.1		100	0		0	100		
PHF	.692	.807	.837	.842	.000	.842	.000	.940	.940	.953

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City of Hesperia
N/S: I-15 Southbound Off Ramp
E/W: Main Street
Weather: Clear

File Name : 12_HES_15S Off Ramp_Main AM
Site Code : 05119658
Start Date : 9/28/2019
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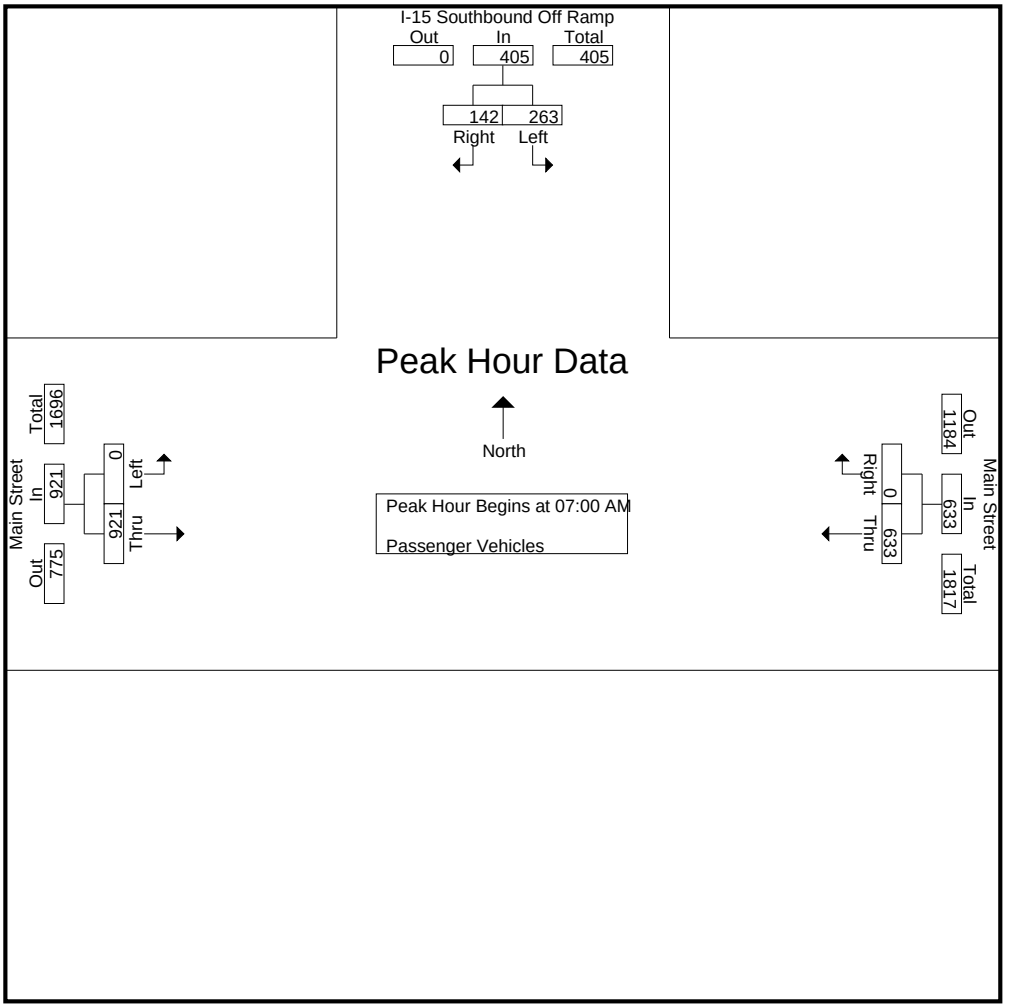

Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM			07:00 AM			07:00 AM		
+0 mins.	**95**	26	**121**	116	0	116	0	231	231
+15 mins.	57	32	89	166	0	166	0	232	232
+30 mins.	45	**44**	89	**188**	0	**188**	0	213	213
+45 mins.	66	40	106	163	0	163	0	**245**	**245**
Total Volume	263	142	405	633	0	633	0	921	921
% App. Total	64.9	35.1		100	0		0	100	
PHF	.692	.807	.837	.842	.000	.842	.000	.940	.940

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City of Hesperia
N/S: I-15 Southbound Off Ramp
E/W: Main Street
Weather: Clear

File Name : 12_HES_15S Off Ramp_Main AM
Site Code : 05119658
Start Date : 9/28/2019
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Groups Printed- Large 2 Axle Vehicles

	I-15 Southbound Off Ramp Southbound				Main Street Westbound				Main Street Eastbound						
Start Time	Left	Right	RTOR	App. Total	Thru	Right	RTOR	App. Total	Left	Thru	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	1	0	0	1	10	0	0	10	0	6	0	6	0	17	17
07:15 AM	0	4	3	4	9	0	0	9	0	3	0	3	3	16	19
07:30 AM	1	1	1	2	5	0	0	5	0	4	0	4	1	11	12
07:45 AM	0	2	1	2	10	0	0	10	0	5	0	5	1	17	18
Total	2	7	5	9	34	0	0	34	0	18	0	18	5	61	66
08:00 AM	0	4	2	4	6	0	0	6	0	3	0	3	2	13	15
08:15 AM	0	0	0	0	6	0	0	6	0	5	0	5	0	11	11
08:30 AM	1	2	0	3	8	0	0	8	0	5	0	5	0	16	16
08:45 AM	2	3	2	5	5	0	0	5	0	3	0	3	2	13	15
Total	3	9	4	12	25	0	0	25	0	16	0	16	4	53	57
Grand Total	5	16	9	21	59	0	0	59	0	34	0	34	9	114	123
Apprch %	23.8	76.2			100	0			0	100					
Total %	4.4	14		18.4	51.8	0		51.8	0	29.8		29.8	7.3	92.7	

	I-15 Southbound Off Ramp Southbound			Main Street Westbound			Main Street 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**	0	1	**10**	0	**10**	0	**6**	**6**	**17**
07:15 AM	0	**4**	**4**	9	0	9	0	3	3	16
07:30 AM	1	1	2	5	0	5	0	4	4	11
07:45 AM	0	2	2	10	0	10	0	5	5	17
Total Volume	2	7	9	34	0	34	0	18	18	61
% App. Total	22.2	77.8		100	0		0	100		
PHF	.500	.438	.563	.850	.000	.850	.000	.750	.750	.897

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City of Hesperia
N/S: I-15 Southbound Off Ramp
E/W: Main Street
Weather: Clear

File Name : 12_HES_15S Off Ramp_Main AM
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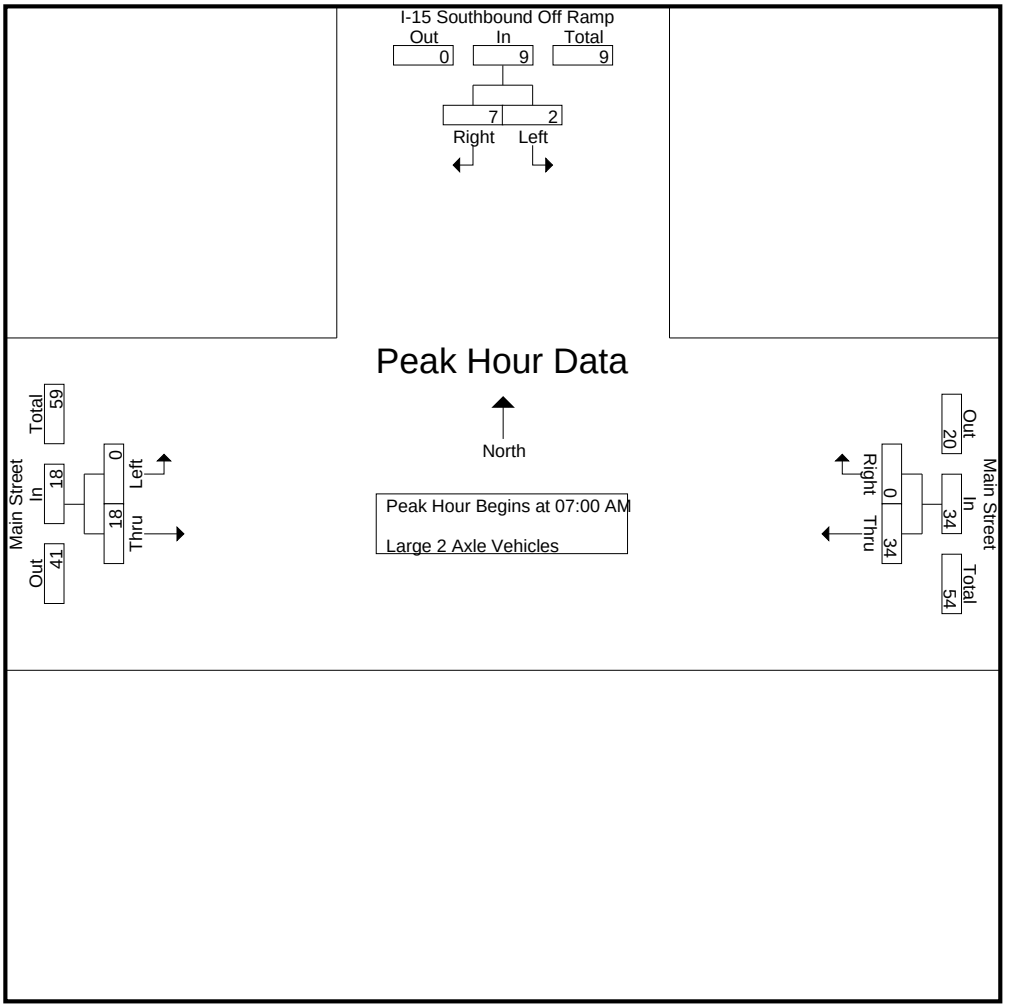

Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM			07:00 AM			07:00 AM		
+0 mins.	**1**	0	1	**10**	0	**10**	0	**6**	**6**
+15 mins.	0	**4**	**4**	9	0	9	0	3	3
+30 mins.	1	1	2	5	0	5	0	4	4
+45 mins.	0	2	2	10	0	10	0	5	5
Total Volume	2	7	9	34	0	34	0	18	18
% App. Total	22.2	77.8		100	0		0	100	
PHF	.500	.438	.563	.850	.000	.850	.000	.750	.750

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City of Hesperia
N/S: I-15 Southbound Off Ramp
E/W: Main Street
Weather: Clear

File Name : 12_HES_15S Off Ramp_Main AM
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Groups Printed- 3 Axle Vehicles

	I-15 Southbound Off Ramp Southbound				Main Street Westbound				Main Street Eastbound						
Start Time	Left	Right	RTOR	App. Total	Thru	Right	RTOR	App. Total	Left	Thru	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	0	0	0	0	1	0	0	1	0	1	0	1	0	2	2
07:15 AM	0	1	0	1	1	0	0	1	0	0	0	0	0	2	2
07:30 AM	1	1	1	2	2	0	0	2	0	0	0	0	1	4	5
07:45 AM	0	0	0	0	1	0	0	1	0	1	0	1	0	2	2
Total	1	2	1	3	5	0	0	5	0	2	0	2	1	10	11
08:00 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	1	1
08:15 AM	0	1	0	1	2	0	0	2	0	1	0	1	0	4	4
08:30 AM	0	0	0	0	1	0	0	1	0	0	0	0	0	1	1
08:45 AM	1	0	0	1	0	0	0	0	0	0	0	0	0	1	1
Total	1	1	0	2	3	0	0	3	0	2	0	2	0	7	7
Grand Total	2	3	1	5	8	0	0	8	0	4	0	4	1	17	18
Apprch %	40	60			100	0			0	100					
Total %	11.8	17.6		29.4	47.1	0		47.1	0	23.5		23.5	5.6	94.4	

	I-15 Southbound Off Ramp Southbound			Main Street Westbound			Main Street 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	1	0	1	0	**1**	**1**	2
07:15 AM	0	**1**	1	1	0	1	0	0	0	2
07:30 AM	**1**	1	**2**	**2**	0	**2**	0	0	0	**4**
07:45 AM	0	0	0	1	0	1	0	1	1	2
Total Volume	1	2	3	5	0	5	0	2	2	10
% App. Total	33.3	66.7		100	0		0	100		
PHF	.250	.500	.375	.625	.000	.625	.000	.500	.500	.625

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City of Hesperia
N/S: I-15 Southbound Off Ramp
E/W: Main Street
Weather: Clear

File Name : 12_HES_15S Off Ramp_Main AM
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Start Date : 9/28/2019
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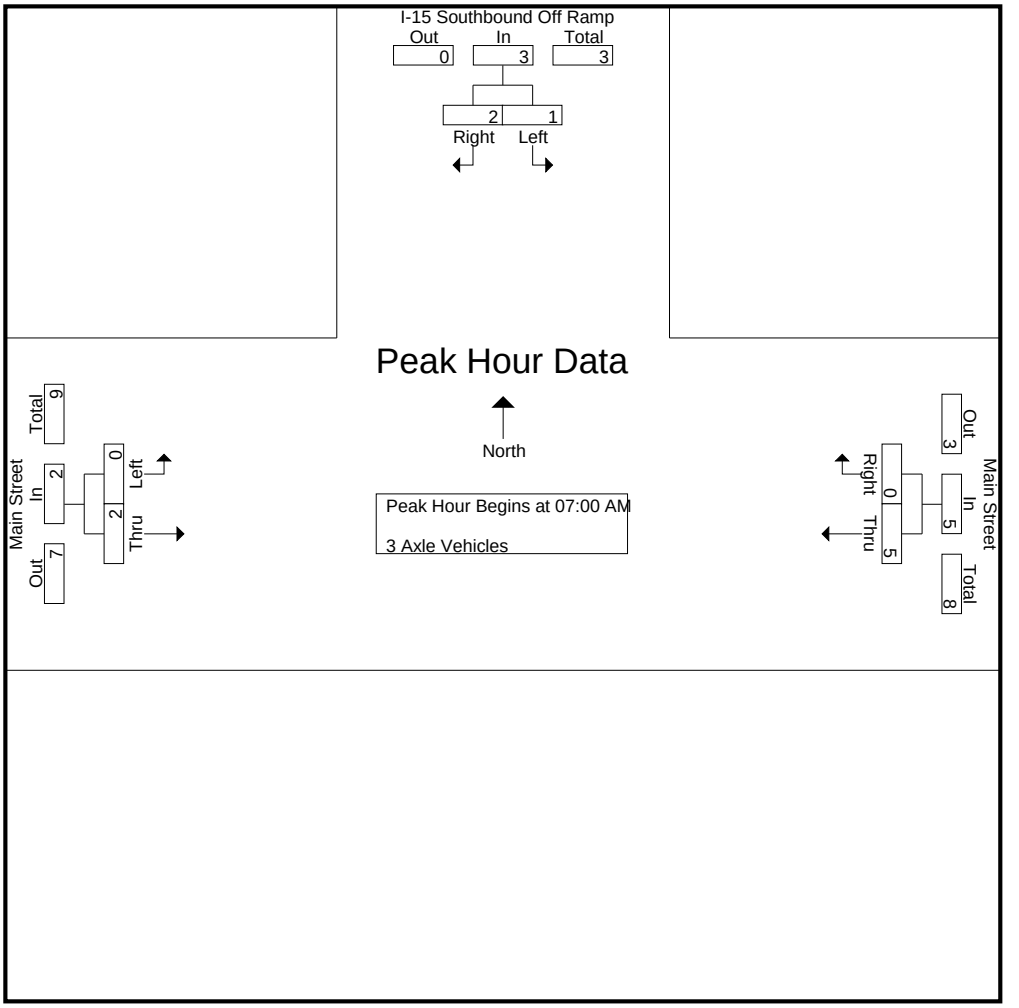

Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM			07:00 AM			07:00 AM		
+0 mins.	0	0	0	1	0	1	0	**1**	**1**
+15 mins.	0	**1**	1	1	0	1	0	0	0
+30 mins.	**1**	1	**2**	**2**	0	**2**	0	0	0
+45 mins.	0	0	0	1	0	1	0	1	1
Total Volume	1	2	3	5	0	5	0	2	2
% App. Total	33.3	66.7		100	0		0	100	
PHF	.250	.500	.375	.625	.000	.625	.000	.500	.500

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City of Hesperia
N/S: I-15 Southbound Off Ramp
E/W: Main Street
Weather: Clear

File Name : 12_HES_15S Off Ramp_Main AM
Site Code : 05119658
Start Date : 9/28/2019
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Groups Printed- 4+ Axle Trucks

	I-15 Southbound Off Ramp Southbound				Main Street Westbound				Main Street Eastbound						
Start Time	Left	Right	RTOR	App. Total	Thru	Right	RTOR	App. Total	Left	Thru	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	1	3	0	4	1	0	0	1	0	4	0	4	0	9	9
07:15 AM	2	1	0	3	1	0	0	1	0	2	0	2	0	6	6
07:30 AM	0	0	0	0	1	0	0	1	0	1	0	1	0	2	2
07:45 AM	2	0	0	2	2	0	0	2	0	3	0	3	0	7	7
Total	5	4	0	9	5	0	0	5	0	10	0	10	0	24	24
08:00 AM	1	0	0	1	0	0	0	0	0	2	0	2	0	3	3
08:15 AM	0	1	1	1	3	0	0	3	0	6	0	6	1	10	11
08:30 AM	0	0	0	0	1	0	0	1	0	3	0	3	0	4	4
08:45 AM	1	1	0	2	0	0	0	0	0	1	0	1	0	3	3
Total	2	2	1	4	4	0	0	4	0	12	0	12	1	20	21
Grand Total	7	6	1	13	9	0	0	9	0	22	0	22	1	44	45
Apprch %	53.8	46.2			100	0			0	100					
Total %	15.9	13.6		29.5	20.5	0		20.5	0	50		50	2.2	97.8	

	I-15 Southbound Off Ramp Southbound			Main Street Westbound			Main Street 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	**3**	**4**	1	0	1	0	**4**	**4**	**9**
07:15 AM	**2**	1	3	1	0	1	0	2	2	6
07:30 AM	0	0	0	1	0	1	0	1	1	2
07:45 AM	2	0	2	**2**	0	**2**	0	3	3	7
Total Volume	5	4	9	5	0	5	0	10	10	24
% App. Total	55.6	44.4		100	0		0	100		
PHF	.625	.333	.563	.625	.000	.625	.000	.625	.625	.667

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City of Hesperia
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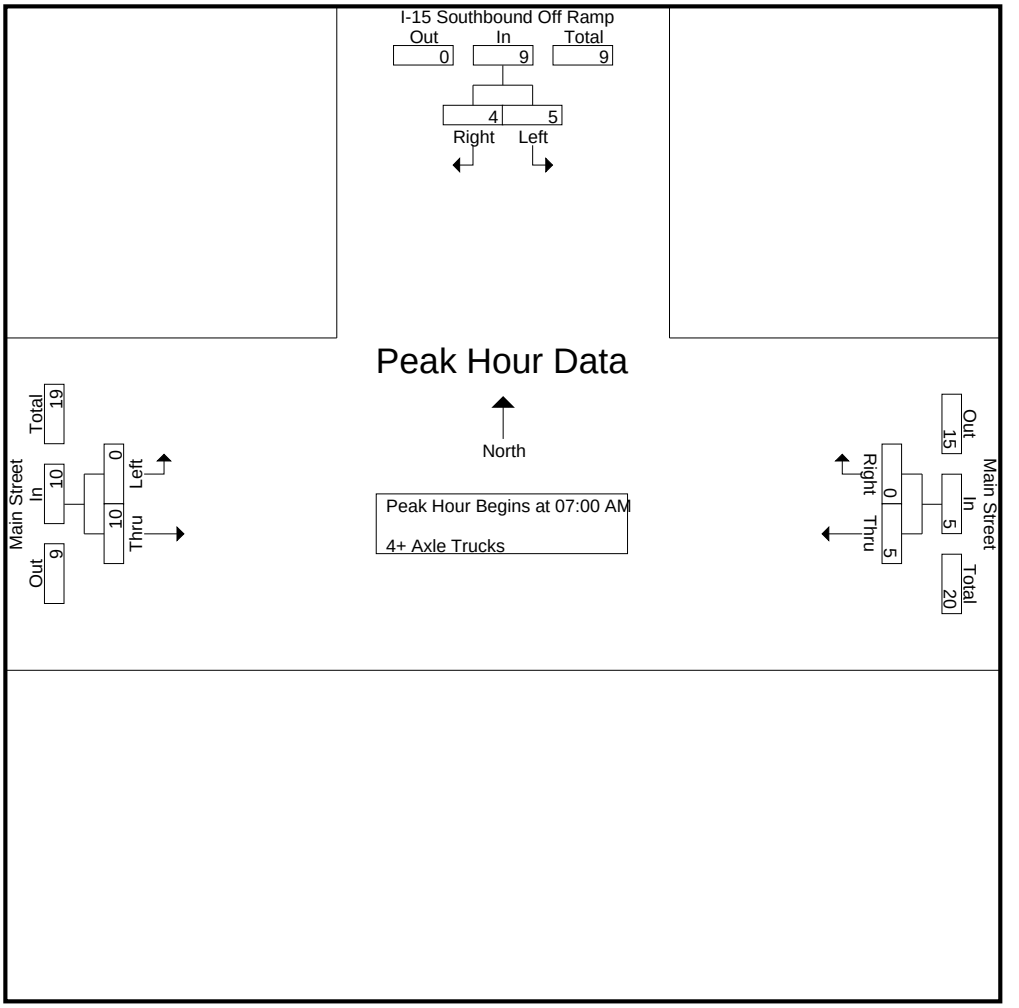

Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM			07:00 AM			07:00 AM		
+0 mins.	1	**3**	**4**	1	0	1	0	**4**	**4**
+15 mins.	**2**	1	3	1	0	1	0	2	2
+30 mins.	0	0	0	1	0	1	0	1	1
+45 mins.	2	0	2	**2**	0	**2**	0	3	3
Total Volume	5	4	9	5	0	5	0	10	10
% App. Total	55.6	44.4		100	0		0	100	
PHF	.625	.333	.563	.625	.000	.625	.000	.625	.625

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City of Hesperia
N/S: I-15 Southbound Off Ramp
E/W: Main Street
Weather: Clear

File Name : 12_HES_15S Off Ramp_Main PM
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Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	I-15 Southbound Off Ramp Southbound				Main Street Westbound				Main Street Eastbound						
Start Time	Left	Right	RTOR	App. Total	Thru	Right	RTOR	App. Total	Left	Thru	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	94	68	30	162	242	0	0	242	0	329	0	329	30	733	763
04:15 PM	115	80	28	195	273	0	0	273	0	307	0	307	28	775	803
04:30 PM	88	91	32	179	274	0	0	274	0	310	0	310	32	763	795
04:45 PM	140	99	34	239	265	0	0	265	0	302	0	302	34	806	840
Total	437	338	124	775	1054	0	0	1054	0	1248	0	1248	124	3077	3201
05:00 PM	125	97	29	222	264	0	0	264	0	295	0	295	29	781	810
05:15 PM	146	91	25	237	288	0	0	288	0	269	0	269	25	794	819
05:30 PM	110	92	22	202	296	0	0	296	0	332	0	332	22	830	852
05:45 PM	95	89	26	184	282	0	0	282	0	286	0	286	26	752	778
Total	476	369	102	845	1130	0	0	1130	0	1182	0	1182	102	3157	3259
Grand Total	913	707	226	1620	2184	0	0	2184	0	2430	0	2430	226	6234	6460
Apprch %	56.4	43.6			100	0			0	100					
Total %	14.6	11.3		26	35	0		35	0	39		39	3.5	96.5	
Passenger Vehicles	894	683		1800	2145	0		2145	0	2374		2374	0	0	6319
% Passenger Vehicles	97.9	96.6	98.7	97.5	98.2	0	0	98.2	0	97.7	0	97.7	0	0	97.8
Large 2 Axle Vehicles	8	8		18	26	0		26	0	34		34	0	0	78
% Large 2 Axle Vehicles	0.9	1.1	0.9	1	1.2	0	0	1.2	0	1.4	0	1.4	0	0	1.2
3 Axle Vehicles	4	2		6	4	0		4	0	6		6	0	0	16
% 3 Axle Vehicles	0.4	0.3	0	0.3	0.2	0	0	0.2	0	0.2	0	0.2	0	0	0.2
4+ Axle Trucks	7	14		22	9	0		9	0	16		16	0	0	47
% 4+ Axle Trucks	0.8	2	0.4	1.2	0.4	0	0	0.4	0	0.7	0	0.7	0	0	0.7

	I-15 Southbound Off Ramp Southbound			Main Street Westbound			Main Street 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	140	**99**	**239**	265	0	265	0	302	302	806
05:00 PM	125	97	222	264	0	264	0	295	295	781
05:15 PM	**146**	91	237	288	0	288	0	269	269	794
05:30 PM	110	92	202	**296**	0	**296**	0	**332**	**332**	**830**
Total Volume	521	379	900	1113	0	1113	0	1198	1198	3211
% App. Total	57.9	42.1		100	0		0	100		
PHF	.892	.957	.941	.940	.000	.940	.000	.902	.902	.967

Counts Unlimited
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City of Hesperia
N/S: I-15 Southbound Off Ramp
E/W: Main Street
Weather: Clear

File Name : 12_HES_15S Off Ramp_Main PM
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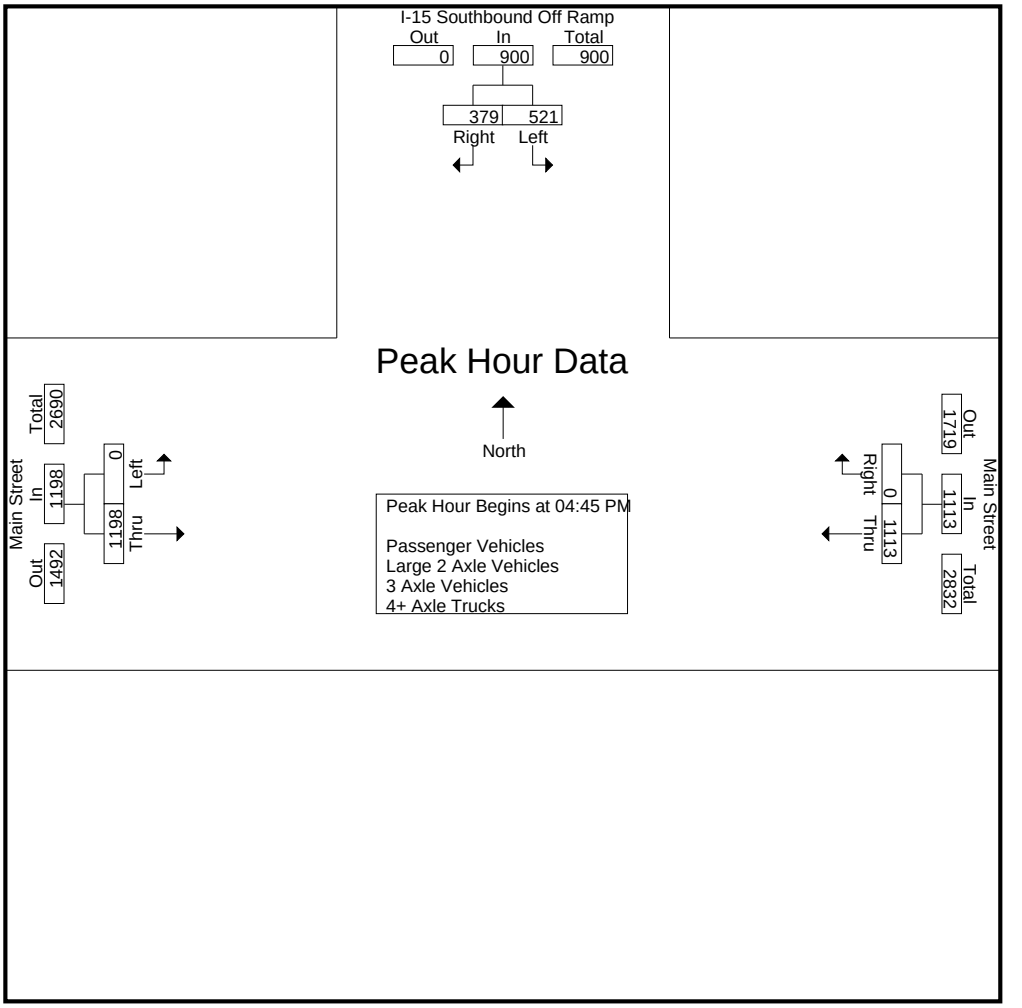

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM			05:00 PM			04:00 PM		
+0 mins.	140	**99**	**239**	264	0	264	0	**329**	**329**
+15 mins.	125	97	222	288	0	288	0	307	307
+30 mins.	**146**	91	237	**296**	0	**296**	0	310	310
+45 mins.	110	92	202	282	0	282	0	302	302
Total Volume	521	379	900	1130	0	1130	0	1248	1248
% App. Total	57.9	42.1		100	0		0	100	
PHF	.892	.957	.941	.954	.000	.954	.000	.948	.948

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Hesperia
N/S: I-15 Southbound Off Ramp
E/W: Main Street
Weather: Clear

File Name : 12_HES_15S Off Ramp_Main PM
Site Code : 05119658
Start Date : 9/28/2019
Page No : 1

Groups Printed- Passenger Vehicles

	I-15 Southbound Off Ramp Southbound				Main Street Westbound				Main Street Eastbound						
Start Time	Left	Right	RTOR	App. Total	Thru	Right	RTOR	App. Total	Left	Thru	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	94	63	29	157	237	0	0	237	0	316	0	316	29	710	739
04:15 PM	113	78	28	191	267	0	0	267	0	298	0	298	28	756	784
04:30 PM	85	87	31	172	269	0	0	269	0	302	0	302	31	743	774
04:45 PM	137	97	34	234	261	0	0	261	0	295	0	295	34	790	824
Total	429	325	122	754	1034	0	0	1034	0	1211	0	1211	122	2999	3121
05:00 PM	122	97	29	219	261	0	0	261	0	291	0	291	29	771	800
05:15 PM	142	86	25	228	285	0	0	285	0	262	0	262	25	775	800
05:30 PM	106	90	22	196	288	0	0	288	0	325	0	325	22	809	831
05:45 PM	95	85	25	180	277	0	0	277	0	285	0	285	25	742	767
Total	465	358	101	823	1111	0	0	1111	0	1163	0	1163	101	3097	3198
Grand Total	894	683	223	1577	2145	0	0	2145	0	2374	0	2374	223	6096	6319
Apprch %	56.7	43.3			100	0			0	100					
Total %	14.7	11.2		25.9	35.2	0		35.2	0	38.9		38.9	3.5	96.5	

	I-15 Southbound Off Ramp Southbound			Main Street Westbound			Main Street 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	137	**97**	**234**	261	0	261	0	295	295	790
05:00 PM	122	97	219	261	0	261	0	291	291	771
05:15 PM	**142**	86	228	285	0	285	0	262	262	775
05:30 PM	106	90	196	**288**	0	**288**	0	**325**	**325**	**809**
Total Volume	507	370	877	1095	0	1095	0	1173	1173	3145
% App. Total	57.8	42.2		100	0		0	100		
PHF	.893	.954	.937	.951	.000	.951	.000	.902	.902	.972

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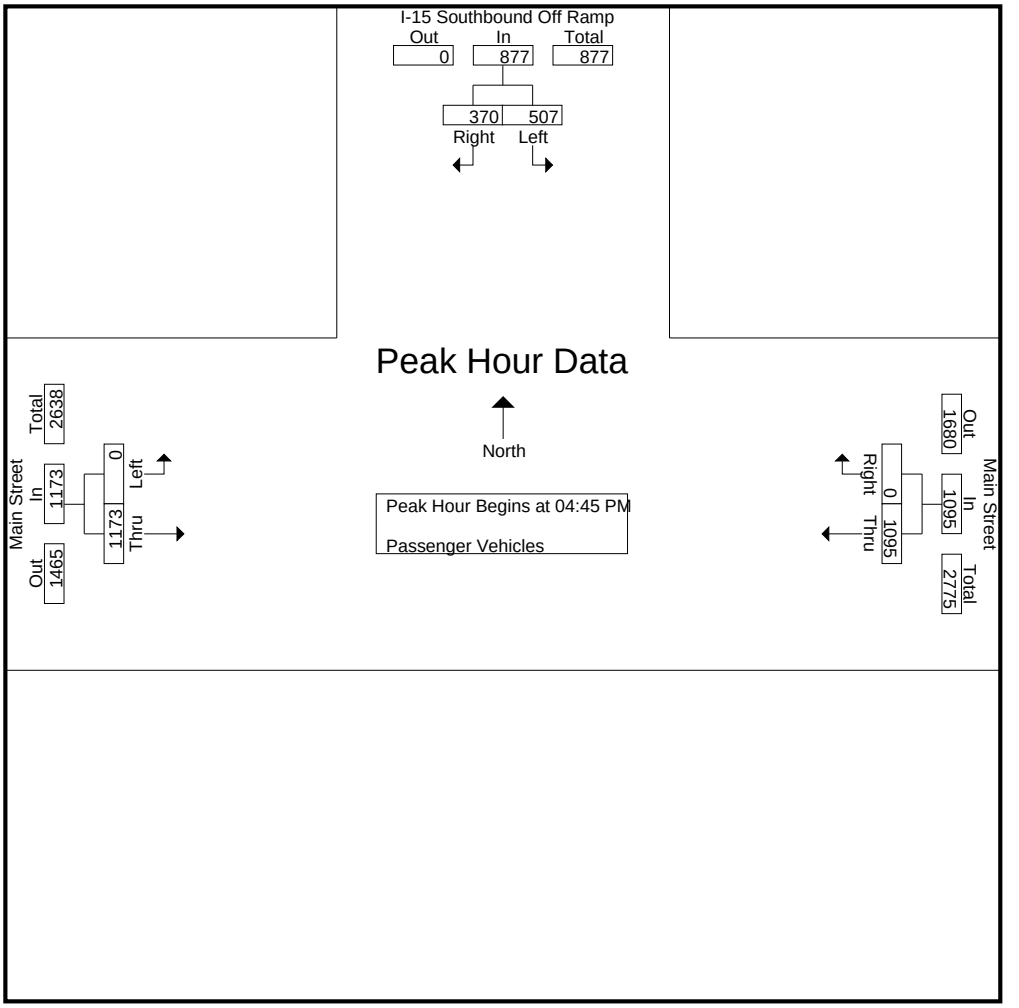
City of Hesperia
N/S: I-15 Southbound Off Ramp
E/W: Main Street
Weather: Clear

File Name : 12_HES_15S Off Ramp_Main PM
Site Code : 05119658
Start Date : 9/28/2019
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.	137	**97**	**234**	261	0	261	0	295	295
+15 mins.	122	97	219	261	0	261	0	291	291
+30 mins.	**142**	86	228	285	0	285	0	262	262
+45 mins.	106	90	196	**288**	0	**288**	0	**325**	**325**
Total Volume	507	370	877	1095	0	1095	0	1173	1173
% App. Total	57.8	42.2		100	0		0	100	
PHF	.893	.954	.937	.951	.000	.951	.000	.902	.902

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City of Hesperia
N/S: I-15 Southbound Off Ramp
E/W: Main Street
Weather: Clear

File Name : 12_HES_15S Off Ramp_Main PM
Site Code : 05119658
Start Date : 9/28/2019
Page No : 1

Groups Printed- Large 2 Axle Vehicles

	I-15 Southbound Off Ramp Southbound				Main Street Westbound				Main Street Eastbound						
Start Time	Left	Right	RTOR	App. Total	Thru	Right	RTOR	App. Total	Left	Thru	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	0	1	1	1	4	0	0	4	0	9	0	9	1	14	15
04:15 PM	1	0	0	1	3	0	0	3	0	7	0	7	0	11	11
04:30 PM	1	1	0	2	4	0	0	4	0	5	0	5	0	11	11
04:45 PM	2	1	0	3	2	0	0	2	0	4	0	4	0	9	9
Total	4	3	1	7	13	0	0	13	0	25	0	25	1	45	46
05:00 PM	1	0	0	1	2	0	0	2	0	1	0	1	0	4	4
05:15 PM	3	2	0	5	2	0	0	2	0	4	0	4	0	11	11
05:30 PM	0	0	0	0	7	0	0	7	0	4	0	4	0	11	11
05:45 PM	0	3	1	3	2	0	0	2	0	0	0	0	1	5	6
Total	4	5	1	9	13	0	0	13	0	9	0	9	1	31	32
Grand Total	8	8	2	16	26	0	0	26	0	34	0	34	2	76	78
Apprch %	50	50			100	0			0	100					
Total %	10.5	10.5		21.1	34.2	0		34.2	0	44.7		44.7	2.6	97.4	

	I-15 Southbound Off Ramp Southbound			Main Street Westbound			Main Street 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	2	1	3	2	0	2	0	**4**	**4**	9
05:00 PM	1	0	1	2	0	2	0	1	1	4
05:15 PM	**3**	**2**	**5**	2	0	2	0	4	4	**11**
05:30 PM	0	0	0	**7**	0	**7**	0	4	4	11
Total Volume	6	3	9	13	0	13	0	13	13	35
% App. Total	66.7	33.3		100	0		0	100		
PHF	.500	.375	.450	.464	.000	.464	.000	.813	.813	.795

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City of Hesperia
N/S: I-15 Southbound Off Ramp
E/W: Main Street
Weather: Clear

File Name : 12_HES_15S Off Ramp_Main PM
Site Code : 05119658
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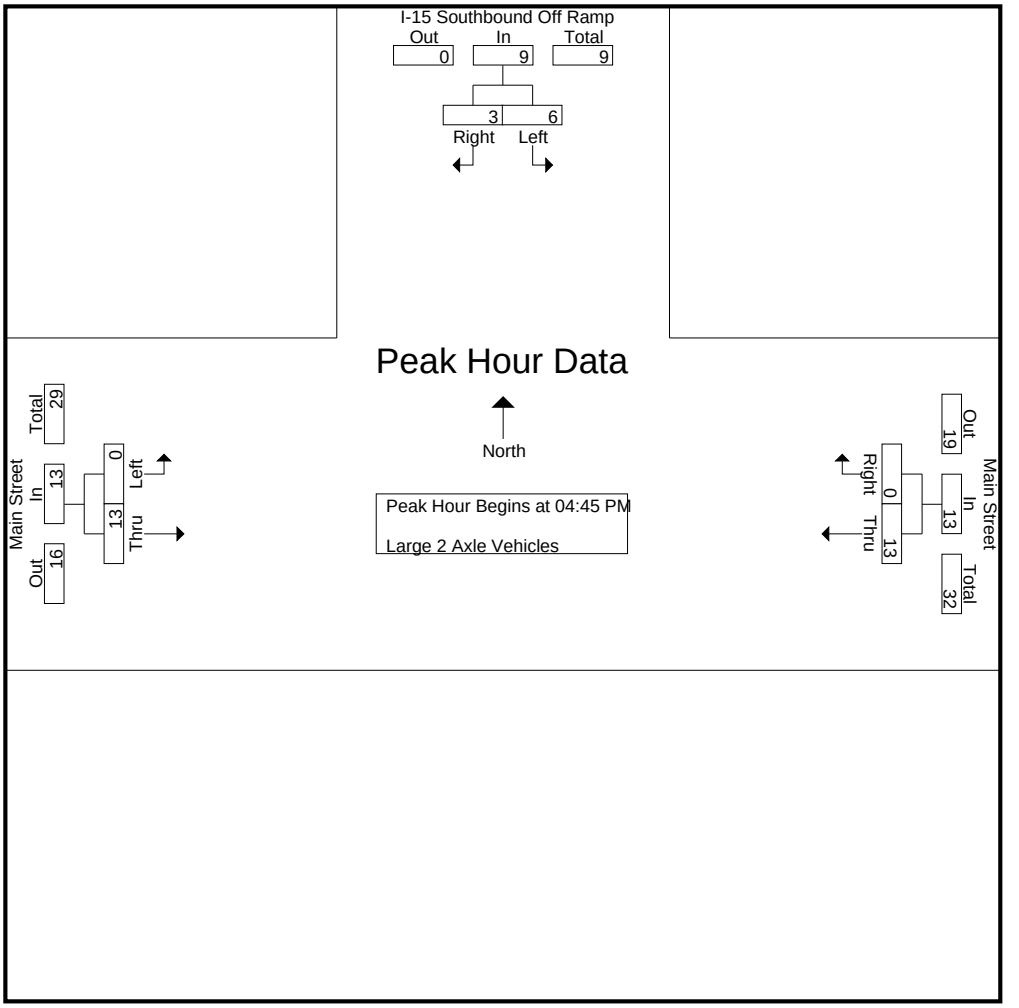

Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM			04:45 PM			04:45 PM		
+0 mins.	2	1	3	2	0	2	0	**4**	**4**
+15 mins.	1	0	1	2	0	2	0	1	1
+30 mins.	**3**	**2**	**5**	2	0	2	0	4	4
+45 mins.	0	0	0	**7**	0	**7**	0	4	4
Total Volume	6	3	9	13	0	13	0	13	13
% App. Total	66.7	33.3		100	0		0	100	
PHF	.500	.375	.450	.464	.000	.464	.000	.813	.813

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City of Hesperia
N/S: I-15 Southbound Off Ramp
E/W: Main Street
Weather: Clear

File Name : 12_HES_15S Off Ramp_Main PM
Site Code : 05119658
Start Date : 9/28/2019
Page No : 1

Groups Printed- 3 Axle Vehicles

	I-15 Southbound Off Ramp Southbound				Main Street Westbound				Main Street Eastbound						
Start Time	Left	Right	RTOR	App. Total	Thru	Right	RTOR	App. Total	Left	Thru	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	1	1
04:15 PM	1	1	0	2	2	0	0	2	0	0	0	0	0	4	4
04:30 PM	0	0	0	0	0	0	0	0	0	2	0	2	0	2	2
04:45 PM	1	0	0	1	1	0	0	1	0	1	0	1	0	3	3
Total	2	2	0	4	3	0	0	3	0	3	0	3	0	10	10
05:00 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	1	1
05:15 PM	0	0	0	0	1	0	0	1	0	1	0	1	0	2	2
05:30 PM	2	0	0	2	0	0	0	0	0	1	0	1	0	3	3
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	2	0	0	2	1	0	0	1	0	3	0	3	0	6	6
Grand Total	4	2	0	6	4	0	0	4	0	6	0	6	0	16	16
Apprch %	66.7	33.3			100	0			0	100					
Total %	25	12.5		37.5	25	0		25	0	37.5		37.5	0	100	

	I-15 Southbound Off Ramp Southbound			Main Street Westbound			Main Street 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	**1**	0	**1**	0	**1**	**1**	**3**
05:00 PM	0	0	0	0	0	0	0	1	1	1
05:15 PM	0	0	0	1	0	1	0	1	1	2
05:30 PM	**2**	0	**2**	0	0	0	0	1	1	3
Total Volume	3	0	3	2	0	2	0	4	4	9
% App. Total	100	0		100	0		0	100		
PHF	.375	.000	.375	.500	.000	.500	.000	1.00	1.00	.750

Counts Unlimited
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City of Hesperia
N/S: I-15 Southbound Off Ramp
E/W: Main Street
Weather: Clear

File Name : 12_HES_15S Off Ramp_Main PM
Site Code : 05119658
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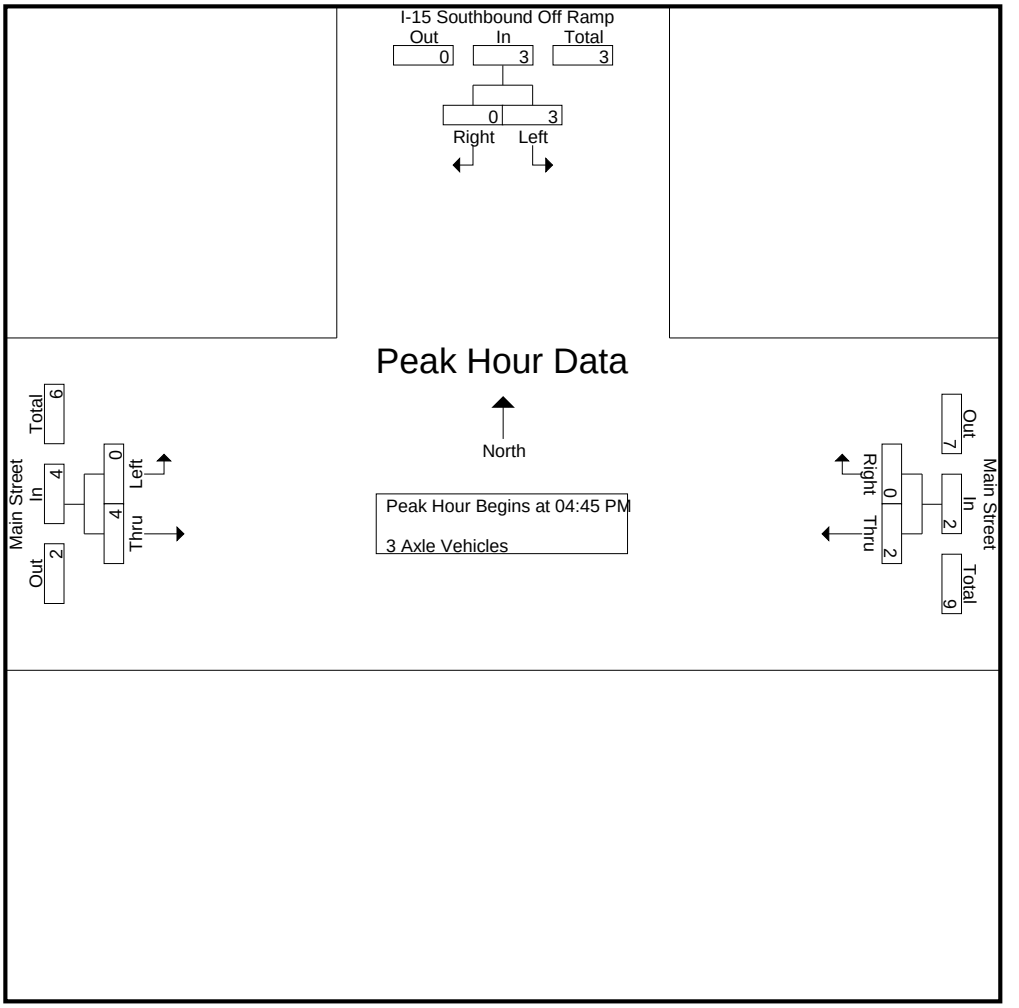

Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM			04:45 PM			04:45 PM		
+0 mins.	1	0	1	**1**	0	**1**	0	**1**	**1**
+15 mins.	0	0	0	0	0	0	0	1	1
+30 mins.	0	0	0	1	0	1	0	1	1
+45 mins.	**2**	0	**2**	0	0	0	0	1	1
Total Volume	3	0	3	2	0	2	0	4	4
% App. Total	100	0		100	0		0	100	
PHF	.375	.000	.375	.500	.000	.500	.000	1.000	1.000

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City of Hesperia
N/S: I-15 Southbound Off Ramp
E/W: Main Street
Weather: Clear

File Name : 12_HES_15S Off Ramp_Main PM
Site Code : 05119658
Start Date : 9/28/2019
Page No : 1

Groups Printed- 4+ Axle Trucks

	I-15 Southbound Off Ramp Southbound				Main Street Westbound				Main Street Eastbound						
Start Time	Left	Right	RTOR	App. Total	Thru	Right	RTOR	App. Total	Left	Thru	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	0	3	0	3	1	0	0	1	0	4	0	4	0	8	8
04:15 PM	0	1	0	1	1	0	0	1	0	2	0	2	0	4	4
04:30 PM	2	3	1	5	1	0	0	1	0	1	0	1	1	7	8
04:45 PM	0	1	0	1	1	0	0	1	0	2	0	2	0	4	4
Total	2	8	1	10	4	0	0	4	0	9	0	9	1	23	24
05:00 PM	2	0	0	2	1	0	0	1	0	2	0	2	0	5	5
05:15 PM	1	3	0	4	0	0	0	0	0	2	0	2	0	6	6
05:30 PM	2	2	0	4	1	0	0	1	0	2	0	2	0	7	7
05:45 PM	0	1	0	1	3	0	0	3	0	1	0	1	0	5	5
Total	5	6	0	11	5	0	0	5	0	7	0	7	0	23	23
Grand Total	7	14	1	21	9	0	0	9	0	16	0	16	1	46	47
Apprch %	33.3	66.7			100	0			0	100					
Total %	15.2	30.4		45.7	19.6	0		19.6	0	34.8		34.8	2.1	97.9	

	I-15 Southbound Off Ramp Southbound			Main Street Westbound			Main Street 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	1	1	**1**	0	**1**	0	**2**	**2**	4
05:00 PM	**2**	0	2	1	0	1	0	2	2	5
05:15 PM	1	**3**	**4**	0	0	0	0	2	2	6
05:30 PM	2	2	4	1	0	1	0	2	2	**7**
Total Volume	5	6	11	3	0	3	0	8	8	22
% App. Total	45.5	54.5		100	0		0	100		
PHF	.625	.500	.688	.750	.000	.750	.000	1.00	1.00	.786

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City of Hesperia
N/S: I-15 Southbound Off Ramp
E/W: Main Street
Weather: Clear

File Name : 12_HES_15S Off Ramp_Main PM
Site Code : 05119658
Start Date : 9/28/2019
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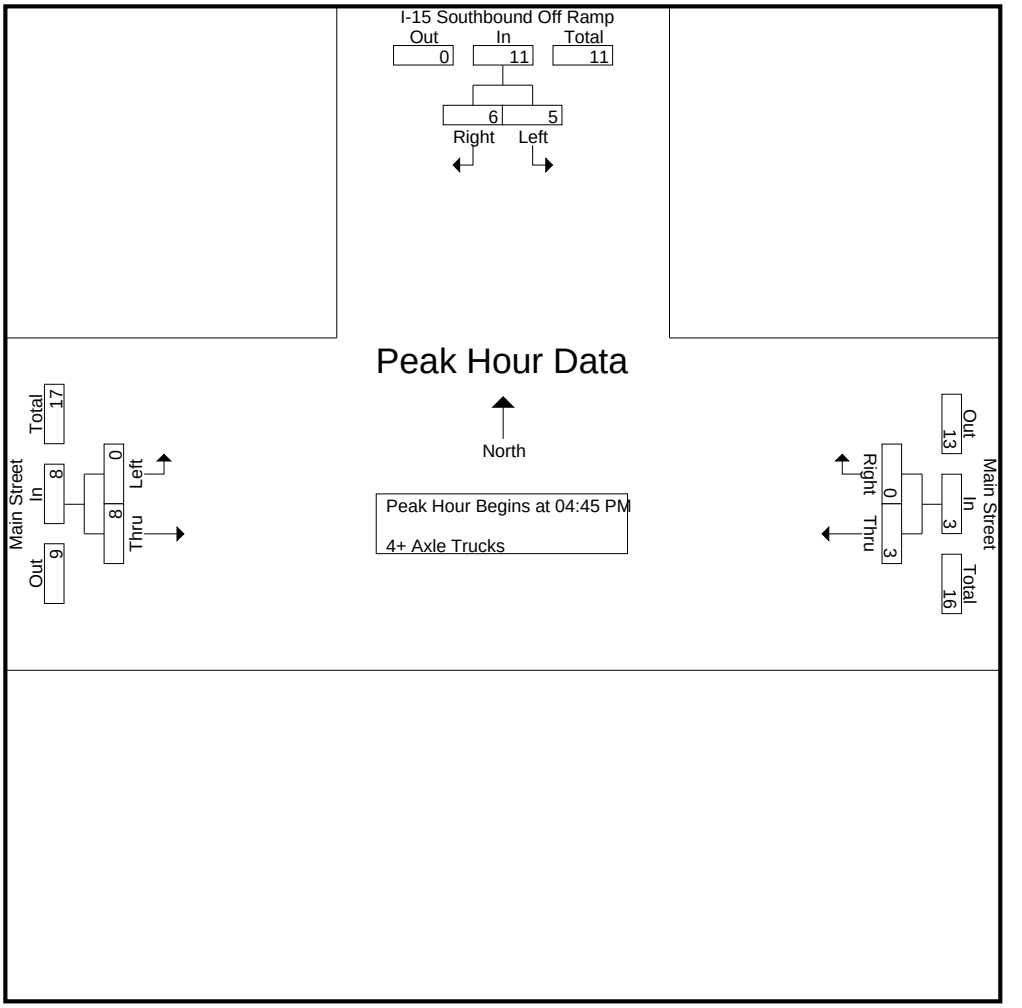

Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM			04:45 PM			04:45 PM		
+0 mins.	0	1	1	**1**	0	**1**	0	**2**	**2**
+15 mins.	**2**	0	2	1	0	1	0	2	2
+30 mins.	1	**3**	**4**	0	0	0	0	2	2
+45 mins.	2	2	4	1	0	1	0	2	2
Total Volume	5	6	11	3	0	3	0	8	8
% App. Total	45.5	54.5		100	0		0	100	
PHF	.625	.500	.688	.750	.000	.750	.000	1.000	1.000

Location: Hesperia
N/S: I-15 SB Off Ramp
E/W: Main Street

Date: 9/28/2019
Day: Saturday

PEDESTRIANS

	North Leg I-15 SB Off Ramp	East Leg Main Street	South Leg Dead End	West Leg Main Street	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0

	North Leg I-15 SB Off Ramp	East Leg Main Street	South Leg Dead End	West Leg Main Street	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	1	0	0	0	1
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
TOTAL VOLUMES:	1	0	0	0	1

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Corona, CA 92878
951-268-0268

Location: Hesperia
N/S: I-15 SB Off Ramp
E/W: Main Street

Date: 9/28/2019
Day: Saturday

BICYCLES

	Southbound I-15 SB Off Ramp			Westbound Main Street			Northbound Dead End			Eastbound Main Street			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	0	0	0	0	0	0	0	0

	Southbound I-15 SB Off Ramp			Westbound Main Street			Northbound Dead End			Eastbound Main Street			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	0	0	0	0	0	0	0	0

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City of Hesperia
N/S: I-15 Northbound Ramps
E/W: Main Street
Weather: Clear

File Name : 13_HES_15N_Main AM
Site Code : 05119658
Start Date : 9/28/2019
Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	I-15 Northbound On Ramp Southbound					Main Street Westbound					I-15 Northbound Off Ramp Northbound					Main Street Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	0	0	0	0	0	0	270	84	6	354	10	1	116	55	127	0	281	54	0	335	61	816	877
07:15 AM	0	0	0	0	0	0	278	129	13	407	14	1	84	55	99	0	236	65	0	301	68	807	875
07:30 AM	0	0	0	0	0	0	324	129	6	453	19	0	81	51	100	0	182	70	0	252	57	805	862
07:45 AM	0	0	0	0	0	0	274	96	6	370	21	1	75	45	97	0	233	80	0	313	51	780	831
Total	0	0	0	0	0	0	1146	438	31	1584	64	3	356	206	423	0	932	269	0	1201	237	3208	3445
08:00 AM	0	0	0	0	0	0	277	96	1	373	4	2	65	49	71	0	208	57	0	265	50	709	759
08:15 AM	0	0	0	0	0	0	278	83	16	361	12	0	56	41	68	0	189	69	0	258	57	687	744
08:30 AM	0	0	0	0	0	0	251	94	14	345	11	0	65	36	76	0	205	65	0	270	50	691	741
08:45 AM	0	0	0	0	0	0	273	82	11	355	22	0	67	37	89	0	209	56	0	265	48	709	757
Total	0	0	0	0	0	0	1079	355	42	1434	49	2	253	163	304	0	811	247	0	1058	205	2796	3001
Grand Total	0	0	0	0	0	0	2225	793	73	3018	113	5	609	369	727	0	1743	516	0	2259	442	6004	6446
Apprch %	0	0	0			0	73.7	26.3			15.5	0.7	83.8			0	77.2	22.8					
Total %	0	0	0		0	0	37.1	13.2		50.3	1.9	0.1	10.1		12.1	0	29	8.6		37.6	6.9	93.1	
Passenger Vehicles	0	0	0		0	0	2118	766		2952	99	3	570		1017	0	1688	492		2180	0	0	6149
% Passenger Vehicles	0	0	0	0	0	0	95.2	96.6	93.2	95.5	87.6	60	93.6	93.5	92.8	0	96.8	95.3	0	96.5	0	0	95.4
Large 2 Axle Vehicles	0	0	0		0	0	68	16		86	6	1	25		48	0	36	8		44	0	0	178
% Large 2 Axle Vehicles	0	0	0	0	0	0	3.1	2	2.7	2.8	5.3	20	4.1	4.3	4.4	0	2.1	1.6	0	1.9	0	0	2.8
3 Axle Vehicles	0	0	0		0	0	11	2		13	0	0	2		4	0	5	2		7	0	0	24
% 3 Axle Vehicles	0	0	0	0	0	0	0.5	0.3	0	0.4	0	0	0.3	0.5	0.4	0	0.3	0.4	0	0.3	0	0	0.4
4+ Axle Trucks	0	0	0		0	0	28	9		40	8	1	12		27	0	14	14		28	0	0	95
% 4+ Axle Trucks	0	0	0	0	0	0	1.3	1.1	4.1	1.3	7.1	20	2	1.6	2.5	0	0.8	2.7	0	1.2	0	0	1.5

	I-15 Northbound On Ramp Southbound				Main Street Westbound				I-15 Northbound Off Ramp Northbound				Main Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	0	0	0	0	270	84	354	10	**1**	**116**	**127**	0	**281**	54	**335**	**816**
07:15 AM	0	0	0	0	0	278	**129**	407	14	1	84	99	0	236	65	301	807
07:30 AM	0	0	0	0	0	**324**	129	**453**	19	0	81	100	0	182	70	252	805
07:45 AM	0	0	0	0	0	274	96	370	**21**	1	75	97	0	233	**80**	313	780
Total Volume	0	0	0	0	0	1146	438	1584	64	3	356	423	0	932	269	1201	3208
% App. Total	0	0	0		0	72.3	27.7		15.1	0.7	84.2		0	77.6	22.4		
PHF	.000	.000	.000	.000	.000	.884	.849	.874	.762	.750	.767	.833	.000	.829	.841	.896	.983

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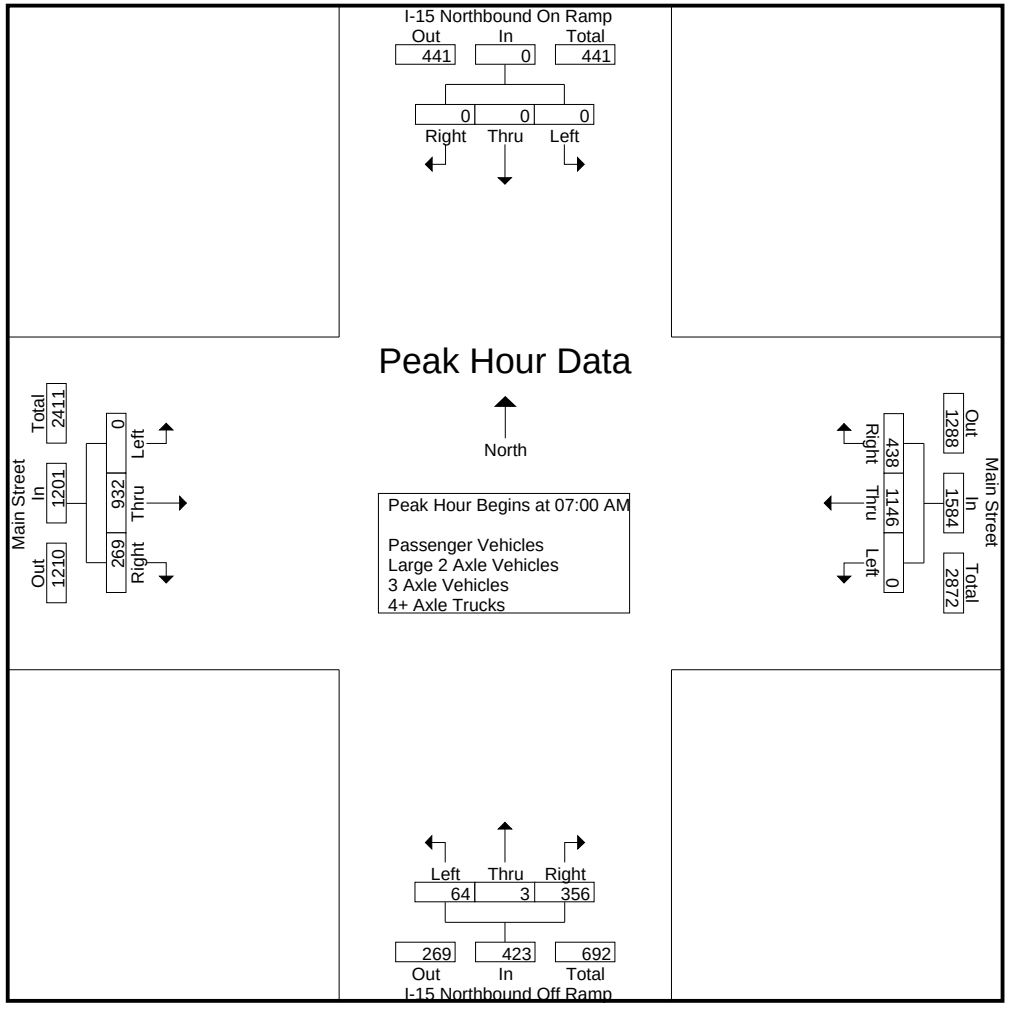
City of Hesperia
N/S: I-15 Northbound Ramps
E/W: Main Street
Weather: Clear

File Name : 13_HES_15N_Main AM
Site Code : 05119658
Start Date : 9/28/2019
Page No : 2



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City of Hesperia
N/S: I-15 Northbound Ramps
E/W: Main Street
Weather: Clear

File Name : 13_HES_15N_Main AM
Site Code : 05119658
Start Date : 9/28/2019
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	I-15 Northbound On Ramp Southbound				Main Street Westbound				I-15 Northbound Off Ramp Northbound				Main Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:00 AM				07:15 AM				07:00 AM				07:00 AM				
+0 mins.	0	0	0	0	0	278	**129**	407	10	**1**	**116**	**127**	0	**281**	54	**335**	
+15 mins.	0	0	0	0	0	**324**	129	**453**	14	1	84	99	0	236	65	301	
+30 mins.	0	0	0	0	0	274	96	370	19	0	81	100	0	182	70	252	
+45 mins.	0	0	0	0	0	277	96	373	**21**	1	75	97	0	233	**80**	313	
Total Volume	0	0	0	0	0	1153	450	1603	64	3	356	423	0	932	269	1201	
% App. Total	0	0	0		0	71.9	28.1		15.1	0.7	84.2		0	77.6	22.4		
PHF	.000	.000	.000	.000	.000	.890	.872	.885	.762	.750	.767	.833	.000	.829	.841	.896	

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City of Hesperia
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E/W: Main Street
Weather: Clear

File Name : 13_HES_15N_Main AM
Site Code : 05119658
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Groups Printed- Passenger Vehicles

	I-15 Northbound On Ramp Southbound					Main Street Westbound					I-15 Northbound Off Ramp Northbound					Main Street Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	0	0	0	0	0	0	260	83	5	343	7	0	111	53	118	0	272	49	0	321	58	782	840
07:15 AM	0	0	0	0	0	0	262	127	13	389	13	1	78	53	92	0	229	64	0	293	66	774	840
07:30 AM	0	0	0	0	0	0	310	124	5	434	17	0	75	47	92	0	175	69	0	244	52	770	822
07:45 AM	0	0	0	0	0	0	261	92	5	353	18	0	71	43	89	0	226	76	0	302	48	744	792
Total	0	0	0	0	0	0	1093	426	28	1519	55	1	335	196	391	0	902	258	0	1160	224	3070	3294
08:00 AM	0	0	0	0	0	0	263	94	1	357	4	2	58	44	64	0	204	54	0	258	45	679	724
08:15 AM	0	0	0	0	0	0	263	80	15	343	10	0	53	39	63	0	181	64	0	245	54	651	705
08:30 AM	0	0	0	0	0	0	236	89	14	325	10	0	61	32	71	0	200	61	0	261	46	657	703
08:45 AM	0	0	0	0	0	0	263	77	10	340	20	0	63	34	83	0	201	55	0	256	44	679	723
Total	0	0	0	0	0	0	1025	340	40	1365	44	2	235	149	281	0	786	234	0	1020	189	2666	2855
Grand Total	0	0	0	0	0	0	2118	766	68	2884	99	3	570	345	672	0	1688	492	0	2180	413	5736	6149
Apprch %	0	0	0			0	73.4	26.6			14.7	0.4	84.8			0	77.4	22.6					
Total %	0	0	0		0	0	36.9	13.4		50.3	1.7	0.1	9.9		11.7	0	29.4	8.6		38	6.7	93.3	

	I-15 Northbound On Ramp Southbound				Main Street Westbound				I-15 Northbound Off Ramp Northbound				Main Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	0	0	0	0	260	83	343	7	0	**111**	**118**	0	**272**	49	**321**	**782**
07:15 AM	0	0	0	0	0	262	**127**	389	13	**1**	78	92	0	229	64	293	774
07:30 AM	0	0	0	0	0	**310**	124	**434**	17	0	75	92	0	175	69	244	770
07:45 AM	0	0	0	0	0	261	92	353	**18**	0	71	89	0	226	**76**	302	744
Total Volume	0	0	0	0	0	1093	426	1519	55	1	335	391	0	902	258	1160	3070
% App. Total	0	0	0		0	72	28		14.1	0.3	85.7		0	77.8	22.2		
PHF	.000	.000	.000	.000	.000	.881	.839	.875	.764	.250	.755	.828	.000	.829	.849	.903	.981

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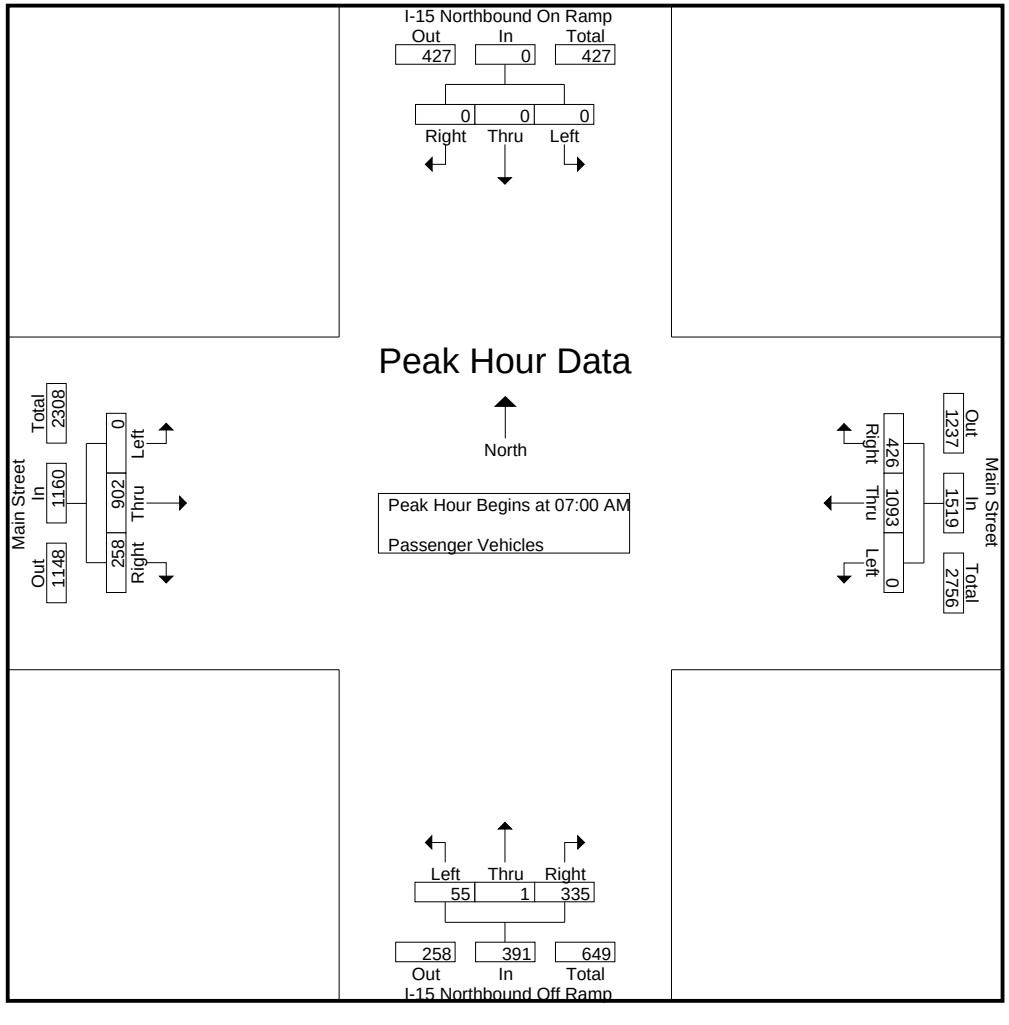
City of Hesperia
N/S: I-15 Northbound Ramps
E/W: Main Street
Weather: Clear

File Name : 13_HES_15N_Main AM
Site Code : 05119658
Start Date : 9/28/2019
Page No : 2



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City of Hesperia
N/S: I-15 Northbound Ramps
E/W: Main Street
Weather: Clear

File Name : 13_HES_15N_Main AM
Site Code : 05119658
Start Date : 9/28/2019

	I-15 Northbound On Ramp Southbound				Main Street Westbound				I-15 Northbound Off Ramp Northbound				Main Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:00 AM				07:00 AM				07:00 AM				07:00 AM				
+0 mins.	0	0	0	0	0	260	83	343	7	0	**111**	**118**	0	**272**	49	**321**	
+15 mins.	0	0	0	0	0	262	**127**	389	13	**1**	78	92	0	229	64	293	
+30 mins.	0	0	0	0	0	**310**	124	**434**	17	0	75	92	0	175	69	244	
+45 mins.	0	0	0	0	0	261	92	353	**18**	0	71	89	0	226	**76**	302	
Total Volume	0	0	0	0	0	1093	426	1519	55	1	335	391	0	902	258	1160	
% App. Total	0	0	0		0	72	28		14.1	0.3	85.7		0	77.8	22.2		
PHF	.000	.000	.000	.000	.000	.881	.839	.875	.764	.250	.755	.828	.000	.829	.849	.903	

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City of Hesperia
N/S: I-15 Northbound Ramps
E/W: Main Street
Weather: Clear

File Name : 13_HES_15N_Main AM
Site Code : 05119658
Start Date : 9/28/2019
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Groups Printed- Large 2 Axle Vehicles

	I-15 Northbound On Ramp Southbound					Main Street Westbound					I-15 Northbound Off Ramp Northbound					Main Street Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	0	0	0	0	0	0	7	0	0	7	2	1	3	1	6	0	6	2	0	8	1	21	22
07:15 AM	0	0	0	0	0	0	12	2	0	14	0	0	4	2	4	0	4	0	0	4	2	22	24
07:30 AM	0	0	0	0	0	0	7	2	0	9	0	0	4	3	4	0	6	0	0	6	3	19	22
07:45 AM	0	0	0	0	0	0	10	1	0	11	1	0	2	1	3	0	4	0	0	4	1	18	19
Total	0	0	0	0	0	0	36	5	0	41	3	1	13	7	17	0	20	2	0	22	7	80	87
08:00 AM	0	0	0	0	0	0	9	1	0	10	0	0	4	3	4	0	2	1	0	3	3	17	20
08:15 AM	0	0	0	0	0	0	5	2	1	7	0	0	3	2	3	0	5	2	0	7	3	17	20
08:30 AM	0	0	0	0	0	0	11	4	0	15	1	0	4	3	5	0	4	3	0	7	3	27	30
08:45 AM	0	0	0	0	0	0	7	4	1	11	2	0	1	1	3	0	5	0	0	5	2	19	21
Total	0	0	0	0	0	0	32	11	2	43	3	0	12	9	15	0	16	6	0	22	11	80	91
Grand Total	0	0	0	0	0	0	68	16	2	84	6	1	25	16	32	0	36	8	0	44	18	160	178
Apprch %	0	0	0			0	81	19			18.8	3.1	78.1			0	81.8	18.2					
Total %	0	0	0		0	0	42.5	10		52.5	3.8	0.6	15.6		20	0	22.5	5		27.5	10.1	89.9	

	I-15 Northbound On Ramp Southbound				Main Street Westbound				I-15 Northbound Off Ramp Northbound				Main Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	0	0	0	0	7	0	7	**2**	**1**	3	**6**	0	**6**	**2**	**8**	21
07:15 AM	0	0	0	0	0	**12**	**2**	**14**	0	0	**4**	4	0	4	0	4	**22**
07:30 AM	0	0	0	0	0	7	2	9	0	0	4	4	0	6	0	6	19
07:45 AM	0	0	0	0	0	10	1	11	1	0	2	3	0	4	0	4	18
Total Volume	0	0	0	0	0	36	5	41	3	1	13	17	0	20	2	22	80
% App. Total	0	0	0		0	87.8	12.2		17.6	5.9	76.5		0	90.9	9.1		
PHF	.000	.000	.000	.000	.000	.750	.625	.732	.375	.250	.813	.708	.000	.833	.250	.688	.909

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City of Hesperia
N/S: I-15 Northbound Ramps
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Weather: Clear

File Name : 13_HES_15N_Main AM
Site Code : 05119658
Start Date : 9/28/2019
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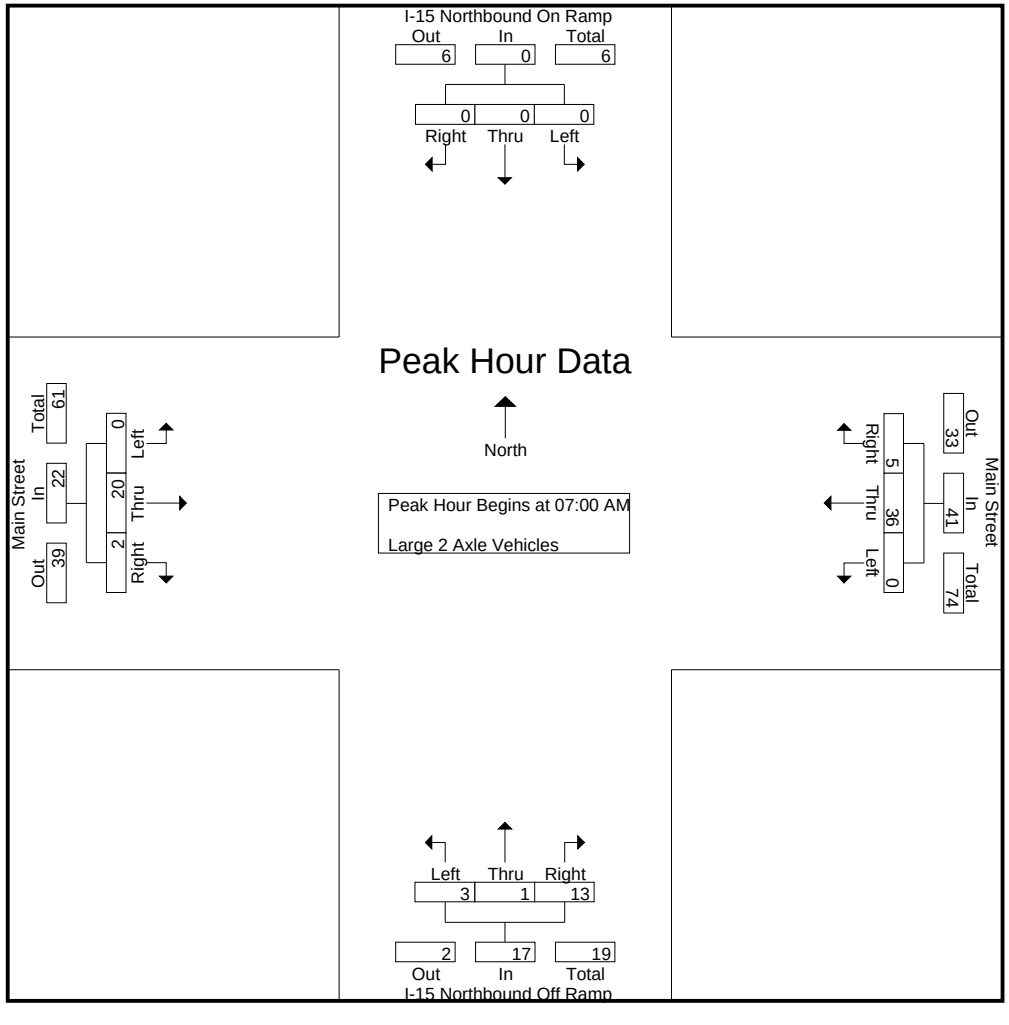

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City of Hesperia
N/S: I-15 Northbound Ramps
E/W: Main Street
Weather: Clear

File Name : 13_HES_15N_Main AM
Site Code : 05119658
Start Date : 9/28/2019
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	I-15 Northbound On Ramp Southbound				Main Street Westbound				I-15 Northbound Off Ramp Northbound				Main Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:00 AM				07:00 AM				07:00 AM				07:00 AM				
+0 mins.	0	0	0	0	0	7	0	7	**2**	**1**	3	**6**	0	**6**	**2**	**8**	
+15 mins.	0	0	0	0	0	**12**	**2**	**14**	0	0	**4**	4	0	4	0	4	
+30 mins.	0	0	0	0	0	7	2	9	0	0	4	4	0	6	0	6	
+45 mins.	0	0	0	0	0	10	1	11	1	0	2	3	0	4	0	4	
Total Volume	0	0	0	0	0	36	5	41	3	1	13	17	0	20	2	22	
% App. Total	0	0	0		0	87.8	12.2		17.6	5.9	76.5		0	90.9	9.1		
PHF	.000	.000	.000	.000	.000	.750	.625	.732	.375	.250	.813	.708	.000	.833	.250	.688	

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City of Hesperia
N/S: I-15 Northbound Ramps
E/W: Main Street
Weather: Clear

File Name : 13_HES_15N_Main AM
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Groups Printed- 3 Axle Vehicles

	I-15 Northbound On Ramp Southbound					Main Street Westbound					I-15 Northbound Off Ramp Northbound					Main Street Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	1	0	0	1	0	4	4
07:15 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	1
07:30 AM	0	0	0	0	0	0	3	1	0	4	0	0	0	0	0	0	1	0	0	1	0	5	5
07:45 AM	0	0	0	0	0	0	0	1	0	1	0	0	1	0	1	0	0	2	0	2	0	4	4
Total	0	0	0	0	0	0	7	2	0	9	0	0	1	0	1	0	2	2	0	4	0	14	14
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	1	1
08:15 AM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	0	3	3
08:30 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	1	0	0	0	0	0	0	1	1	2
08:45 AM	0	0	0	0	0	0	1	0	0	1	0	0	1	1	1	0	1	0	0	1	1	3	4
Total	0	0	0	0	0	0	4	0	0	4	0	0	1	2	1	0	3	0	0	3	2	8	10
Grand Total	0	0	0	0	0	0	11	2	0	13	0	0	2	2	2	0	5	2	0	7	2	22	24
Apprch %	0	0	0			0	84.6	15.4			0	0	100			0	71.4	28.6					
Total %	0	0	0		0	0	50	9.1		59.1	0	0	9.1		9.1	0	22.7	9.1		31.8	8.3	91.7	

	I-15 Northbound On Ramp Southbound				Main Street Westbound				I-15 Northbound Off Ramp Northbound				Main Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	0	0	0	0	**3**	0	3	0	0	0	0	0	**1**	0	1	4
07:15 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
07:30 AM	0	0	0	0	0	3	**1**	**4**	0	0	0	0	0	1	0	1	**5**
07:45 AM	0	0	0	0	0	0	1	1	0	0	**1**	**1**	0	0	**2**	**2**	4
Total Volume	0	0	0	0	0	7	2	9	0	0	1	1	0	2	2	4	14
% App. Total	0	0	0		0	77.8	22.2		0	0	100		0	50	50		
PHF	.000	.000	.000	.000	.000	.583	.500	.563	.000	.000	.250	.250	.000	.500	.250	.500	.700

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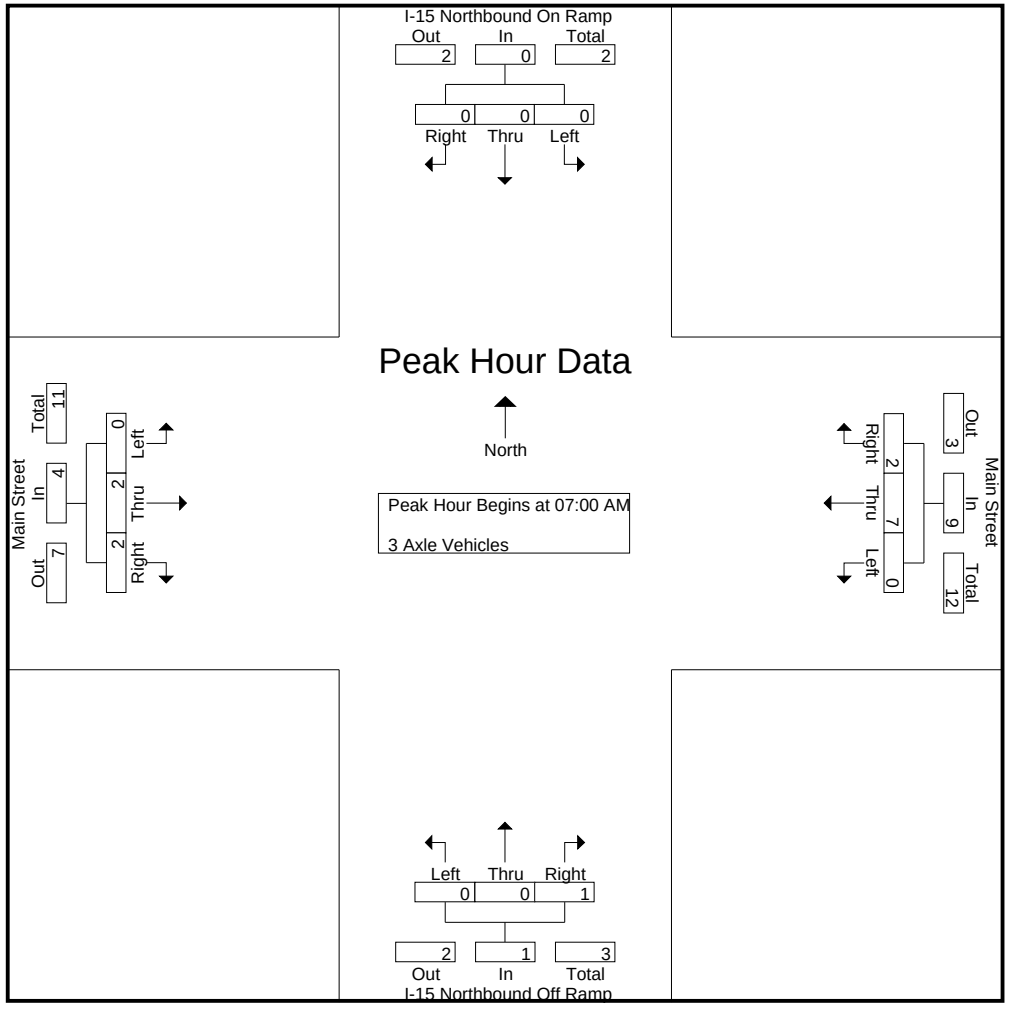

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	I-15 Northbound On Ramp Southbound				Main Street Westbound				I-15 Northbound Off Ramp Northbound				Main Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:00 AM				07:00 AM				07:00 AM				07:00 AM				
+0 mins.	0	0	0	0	0	**3**	0	3	0	0	0	0	0	**1**	0	1	
+15 mins.	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	
+30 mins.	0	0	0	0	0	3	**1**	**4**	0	0	0	0	0	1	0	1	
+45 mins.	0	0	0	0	0	0	1	1	0	0	**1**	**1**	0	0	**2**	**2**	
Total Volume	0	0	0	0	0	7	2	9	0	0	1	1	0	2	2	4	
% App. Total	0	0	0		0	77.8	22.2		0	0	100		0	50	50		
PHF	.000	.000	.000	.000	.000	.583	.500	.563	.000	.000	.250	.250	.000	.500	.250	.500	

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City of Hesperia
N/S: I-15 Northbound Ramps
E/W: Main Street
Weather: Clear

File Name : 13_HES_15N_Main AM
Site Code : 05119658
Start Date : 9/28/2019
Page No : 1

Groups Printed- 4+ Axle Trucks

	I-15 Northbound On Ramp Southbound					Main Street Westbound					I-15 Northbound Off Ramp Northbound					Main Street Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	1	1	1	1	0	2	1	3	0	2	3	0	5	2	9	11
07:15 AM	0	0	0	0	0	0	3	0	0	3	1	0	2	0	3	0	3	1	0	4	0	10	10
07:30 AM	0	0	0	0	0	0	4	2	1	6	2	0	2	1	4	0	0	1	0	1	2	11	13
07:45 AM	0	0	0	0	0	0	3	2	1	5	2	1	1	1	4	0	3	2	0	5	2	14	16
Total	0	0	0	0	0	0	10	5	3	15	6	1	7	3	14	0	8	7	0	15	6	44	50
08:00 AM	0	0	0	0	0	0	5	1	0	6	0	0	3	2	3	0	1	2	0	3	2	12	14
08:15 AM	0	0	0	0	0	0	8	1	0	9	2	0	0	0	2	0	2	3	0	5	0	16	16
08:30 AM	0	0	0	0	0	0	3	1	0	4	0	0	0	0	0	0	1	1	0	2	0	6	6
08:45 AM	0	0	0	0	0	0	2	1	0	3	0	0	2	1	2	0	2	1	0	3	1	8	9
Total	0	0	0	0	0	0	18	4	0	22	2	0	5	3	7	0	6	7	0	13	3	42	45
Grand Total	0	0	0	0	0	0	28	9	3	37	8	1	12	6	21	0	14	14	0	28	9	86	95
Apprch %	0	0	0			0	75.7	24.3			38.1	4.8	57.1			0	50	50					
Total %	0	0	0		0	0	32.6	10.5		43	9.3	1.2	14		24.4	0	16.3	16.3		32.6	9.5	90.5	

	I-15 Northbound On Ramp Southbound				Main Street Westbound				I-15 Northbound Off Ramp Northbound				Main Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	0	0	0	0	0	1	1	1	0	**2**	3	0	2	**3**	**5**	9
07:15 AM	0	0	0	0	0	3	0	3	1	0	2	3	0	**3**	1	4	10
07:30 AM	0	0	0	0	0	**4**	**2**	**6**	**2**	0	2	**4**	0	0	1	1	11
07:45 AM	0	0	0	0	0	3	2	5	2	**1**	1	4	0	3	2	5	**14**
Total Volume	0	0	0	0	0	10	5	15	6	1	7	14	0	8	7	15	44
% App. Total	0	0	0		0	66.7	33.3		42.9	7.1	50		0	53.3	46.7		
PHF	.000	.000	.000	.000	.000	.625	.625	.625	.750	.250	.875	.875	.000	.667	.583	.750	.786

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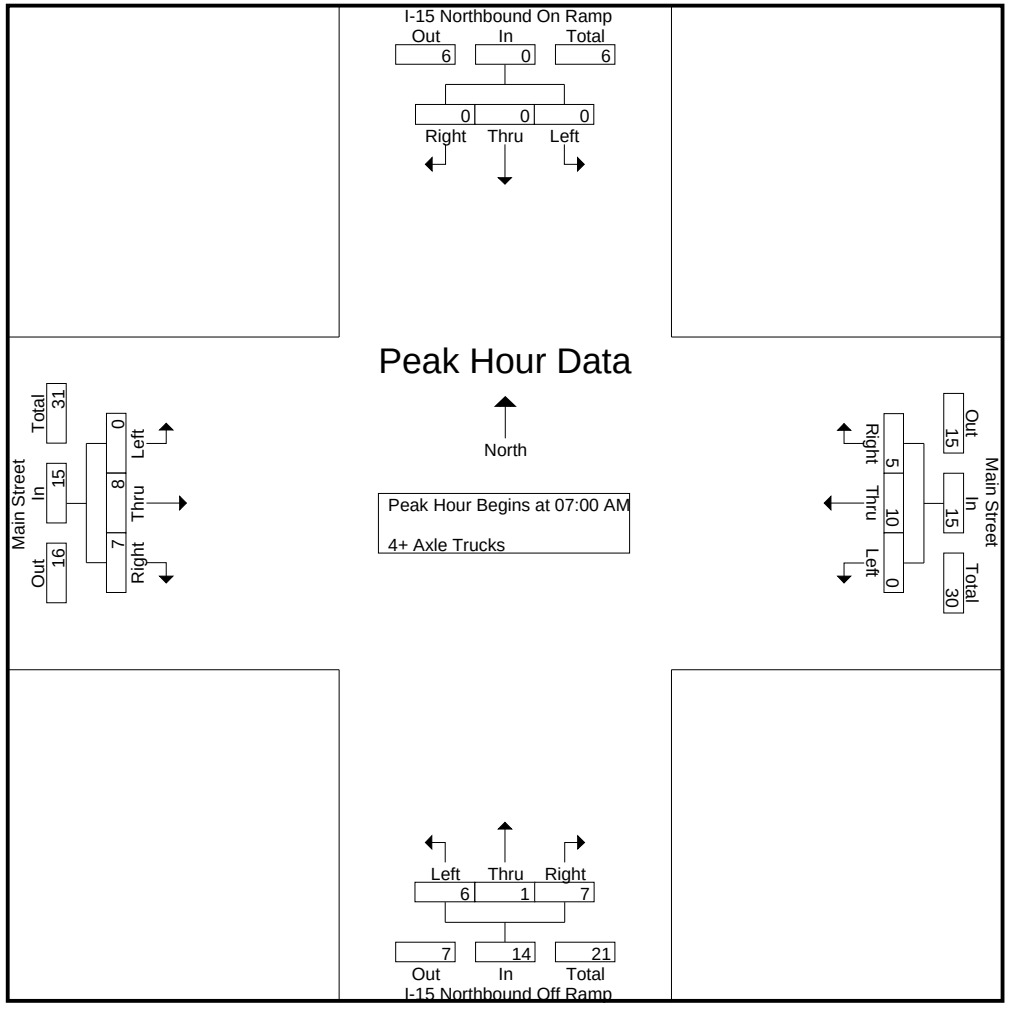
City of Hesperia
N/S: I-15 Northbound Ramps
E/W: Main Street
Weather: Clear

File Name : 13_HES_15N_Main AM
Site Code : 05119658
Start Date : 9/28/2019
Page No : 2



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City of Hesperia
N/S: I-15 Northbound Ramps
E/W: Main Street
Weather: Clear

File Name : 13_HES_15N_Main AM
Site Code : 05119658
Start Date : 9/28/2019

	I-15 Northbound On Ramp Southbound				Main Street Westbound				I-15 Northbound Off Ramp Northbound				Main Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:00 AM				07:00 AM				07:00 AM				07:00 AM				
+0 mins.	0	0	0	0	0	0	1	1	1	0	**2**	3	0	2	**3**	**5**	
+15 mins.	0	0	0	0	0	3	0	3	1	0	2	3	0	**3**	1	4	
+30 mins.	0	0	0	0	0	**4**	**2**	**6**	**2**	0	2	**4**	0	0	1	1	
+45 mins.	0	0	0	0	0	3	2	5	2	**1**	1	4	0	3	2	5	
Total Volume	0	0	0	0	0	10	5	15	6	1	7	14	0	8	7	15	
% App. Total	0	0	0		0	66.7	33.3		42.9	7.1	50		0	53.3	46.7		
PHF	.000	.000	.000	.000	.000	.625	.625	.625	.750	.250	.875	.875	.000	.667	.583	.750	

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City of Hesperia
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File Name : 13_HES_15N_Main PM
Site Code : 05119658
Start Date : 9/28/2019
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Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	I-15 Northbound On Ramp Southbound					Main Street Westbound					I-15 Northbound Off Ramp Northbound					Main Street Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	0	0	0	0	0	0	275	96	22	371	36	1	152	19	189	0	352	65	0	417	41	977	1018
04:15 PM	0	0	0	0	0	0	350	86	25	436	38	1	161	28	200	0	366	56	0	422	53	1058	1111
04:30 PM	0	0	0	0	0	0	334	83	24	417	38	0	232	38	270	0	347	42	0	389	62	1076	1138
04:45 PM	0	0	0	0	0	0	316	85	28	401	52	0	213	38	265	0	384	38	0	422	66	1088	1154
Total	0	0	0	0	0	0	1275	350	99	1625	164	2	758	123	924	0	1449	201	0	1650	222	4199	4421
05:00 PM	0	0	0	0	0	0	288	90	20	378	32	0	155	54	187	0	363	40	0	403	74	968	1042
05:15 PM	0	0	0	0	0	0	349	95	39	444	42	0	191	29	233	0	340	51	0	391	68	1068	1136
05:30 PM	0	0	0	0	0	0	321	108	56	429	49	0	196	22	245	0	360	57	0	417	78	1091	1169
05:45 PM	0	0	0	0	0	0	318	94	22	412	48	2	198	32	248	0	344	24	0	368	54	1028	1082
Total	0	0	0	0	0	0	1276	387	137	1663	171	2	740	137	913	0	1407	172	0	1579	274	4155	4429
Grand Total	0	0	0	0	0	0	2551	737	236	3288	335	4	1498	260	1837	0	2856	373	0	3229	496	8354	8850
Apprch %	0	0	0			0	77.6	22.4			18.2	0.2	81.5			0	88.4	11.6					
Total %	0	0	0		0	0	30.5	8.8		39.4	4	0	17.9		22	0	34.2	4.5		38.7	5.6	94.4	
Passenger Vehicles	0	0	0		0	0	2486	717		3432	326	3	1437		2014	0	2797	355		3152	0	0	8598
% Passenger Vehicles	0	0	0	0	0	0	97.5	97.3	97	97.4	97.3	75	95.9	95.4	96	0	97.9	95.2	0	97.6	0	0	97.2
Large 2 Axle Vehicles	0	0	0		0	0	39	10		53	1	0	29		35	0	36	9		45	0	0	133
% Large 2 Axle Vehicles	0	0	0	0	0	0	1.5	1.4	1.7	1.5	0.3	0	1.9	1.9	1.7	0	1.3	2.4	0	1.4	0	0	1.5
3 Axle Vehicles	0	0	0		0	0	10	0		10	0	1	5		6	0	9	1		10	0	0	26
% 3 Axle Vehicles	0	0	0	0	0	0	0.4	0	0	0.3	0	25	0.3	0	0.3	0	0.3	0.3	0	0.3	0	0	0.3
4+ Axle Trucks	0	0	0		0	0	16	10		29	8	0	27		42	0	14	8		22	0	0	93
% 4+ Axle Trucks	0	0	0	0	0	0	0.6	1.4	1.3	0.8	2.4	0	1.8	2.7	2	0	0.5	2.1	0	0.7	0	0	1.1

	I-15 Northbound On Ramp Southbound				Main Street Westbound				I-15 Northbound Off Ramp Northbound				Main Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	0	0	0	0	316	85	401	**52**	0	**213**	**265**	0	**384**	38	**422**	1088
05:00 PM	0	0	0	0	0	288	90	378	32	0	155	187	0	363	40	403	968
05:15 PM	0	0	0	0	0	**349**	95	**444**	42	0	191	233	0	340	51	391	1068
05:30 PM	0	0	0	0	0	321	**108**	429	49	0	196	245	0	360	**57**	417	**1091**
Total Volume	0	0	0	0	0	1274	378	1652	175	0	755	930	0	1447	186	1633	4215
% App. Total	0	0	0		0	77.1	22.9		18.8	0	81.2		0	88.6	11.4		
PHF	.000	.000	.000	.000	.000	.913	.875	.930	.841	.000	.886	.877	.000	.942	.816	.967	.966

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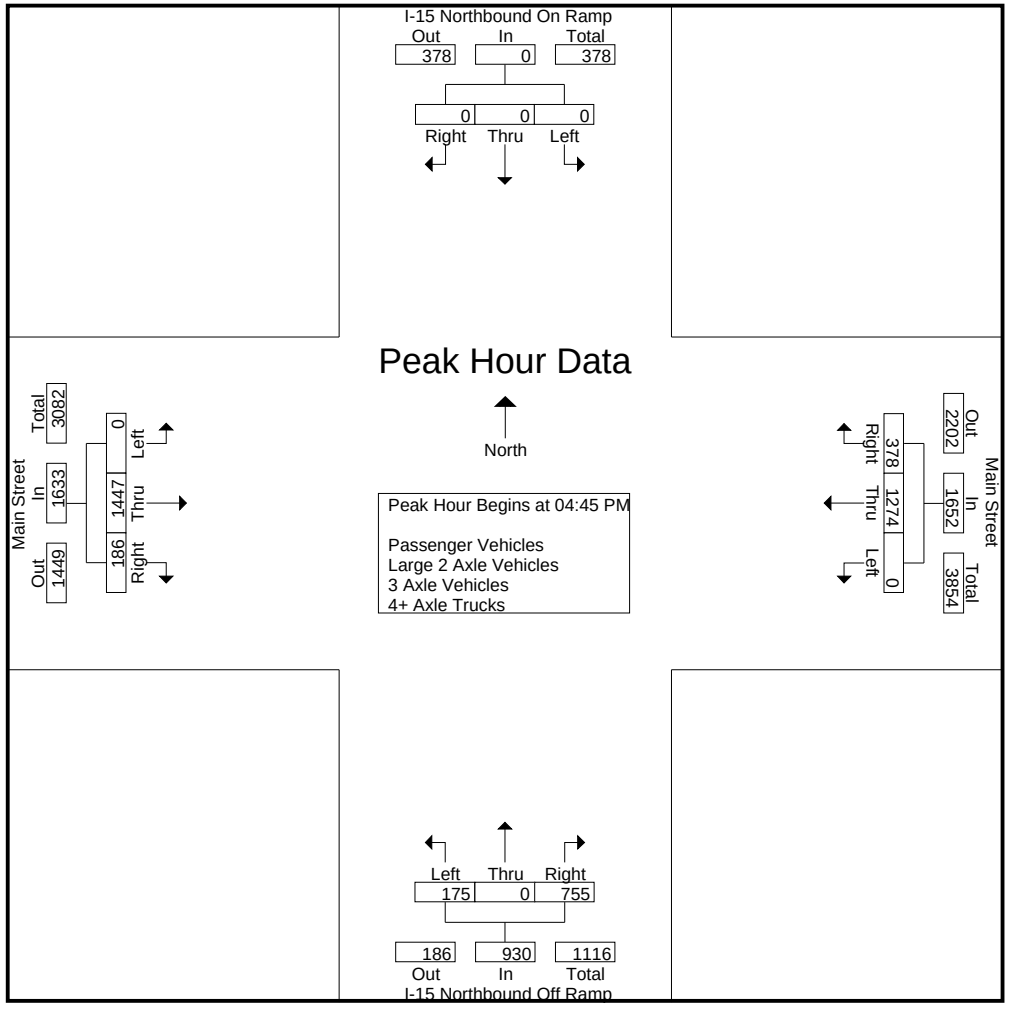
City of Hesperia
N/S: I-15 Northbound Ramps
E/W: Main Street
Weather: Clear

File Name : 13_HES_15N_Main PM
Site Code : 05119658
Start Date : 9/28/2019
Page No : 2



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City of Hesperia
N/S: I-15 Northbound Ramps
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Weather: Clear

File Name : 13_HES_15N_Main PM
Site Code : 05119658
Start Date : 9/28/2019
Page No : 3

	I-15 Northbound On Ramp Southbound				Main Street Westbound				I-15 Northbound Off Ramp Northbound				Main Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	04:00 PM				05:00 PM				04:30 PM				04:00 PM				
+0 mins.	0	0	0	0	0	288	90	378	38	0	**232**	**270**	0	352	**65**	417	
+15 mins.	0	0	0	0	0	**349**	95	**444**	**52**	0	213	265	0	366	56	**422**	
+30 mins.	0	0	0	0	0	321	**108**	429	32	0	155	187	0	347	42	389	
+45 mins.	0	0	0	0	0	318	94	412	42	0	191	233	0	**384**	38	422	
Total Volume	0	0	0	0	0	1276	387	1663	164	0	791	955	0	1449	201	1650	
% App. Total	0	0	0		0	76.7	23.3		17.2	0	82.8		0	87.8	12.2		
PHF	.000	.000	.000	.000	.000	.914	.896	.936	.788	.000	.852	.884	.000	.943	.773	.977	

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Page No : 1

Groups Printed- Passenger Vehicles

	I-15 Northbound On Ramp Southbound					Main Street Westbound					I-15 Northbound Off Ramp Northbound					Main Street Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	0	0	0	0	0	0	269	96	22	365	34	1	149	18	184	0	345	60	0	405	40	954	994
04:15 PM	0	0	0	0	0	0	343	83	25	426	37	0	154	28	191	0	359	55	0	414	53	1031	1084
04:30 PM	0	0	0	0	0	0	323	82	24	405	37	0	224	36	261	0	338	38	0	376	60	1042	1102
04:45 PM	0	0	0	0	0	0	307	82	27	389	50	0	201	37	251	0	375	35	0	410	64	1050	1114
Total	0	0	0	0	0	0	1242	343	98	1585	158	1	728	119	887	0	1417	188	0	1605	217	4077	4294
05:00 PM	0	0	0	0	0	0	283	88	20	371	32	0	142	48	174	0	355	39	0	394	68	939	1007
05:15 PM	0	0	0	0	0	0	340	88	36	428	42	0	183	27	225	0	333	49	0	382	63	1035	1098
05:30 PM	0	0	0	0	0	0	311	105	54	416	49	0	193	22	242	0	350	55	0	405	76	1063	1139
05:45 PM	0	0	0	0	0	0	310	93	21	403	45	2	191	32	238	0	342	24	0	366	53	1007	1060
Total	0	0	0	0	0	0	1244	374	131	1618	168	2	709	129	879	0	1380	167	0	1547	260	4044	4304
Grand Total	0	0	0	0	0	0	2486	717	229	3203	326	3	1437	248	1766	0	2797	355	0	3152	477	8121	8598
Apprch %	0	0	0			0	77.6	22.4			18.5	0.2	81.4			0	88.7	11.3					
Total %	0	0	0		0	0	30.6	8.8		39.4	4	0	17.7		21.7	0	34.4	4.4		38.8	5.5	94.5	

	I-15 Northbound On Ramp Southbound				Main Street Westbound				I-15 Northbound Off Ramp Northbound				Main Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	0	0	0	0	307	82	389	**50**	0	**201**	**251**	0	**375**	35	**410**	1050
05:00 PM	0	0	0	0	0	283	88	371	32	0	142	174	0	355	39	394	939
05:15 PM	0	0	0	0	0	**340**	88	**428**	42	0	183	225	0	333	49	382	1035
05:30 PM	0	0	0	0	0	311	**105**	416	49	0	193	242	0	350	**55**	405	**1063**
Total Volume	0	0	0	0	0	1241	363	1604	173	0	719	892	0	1413	178	1591	4087
% App. Total	0	0	0		0	77.4	22.6		19.4	0	80.6		0	88.8	11.2		
PHF	.000	.000	.000	.000	.000	.913	.864	.937	.865	.000	.894	.888	.000	.942	.809	.970	.961

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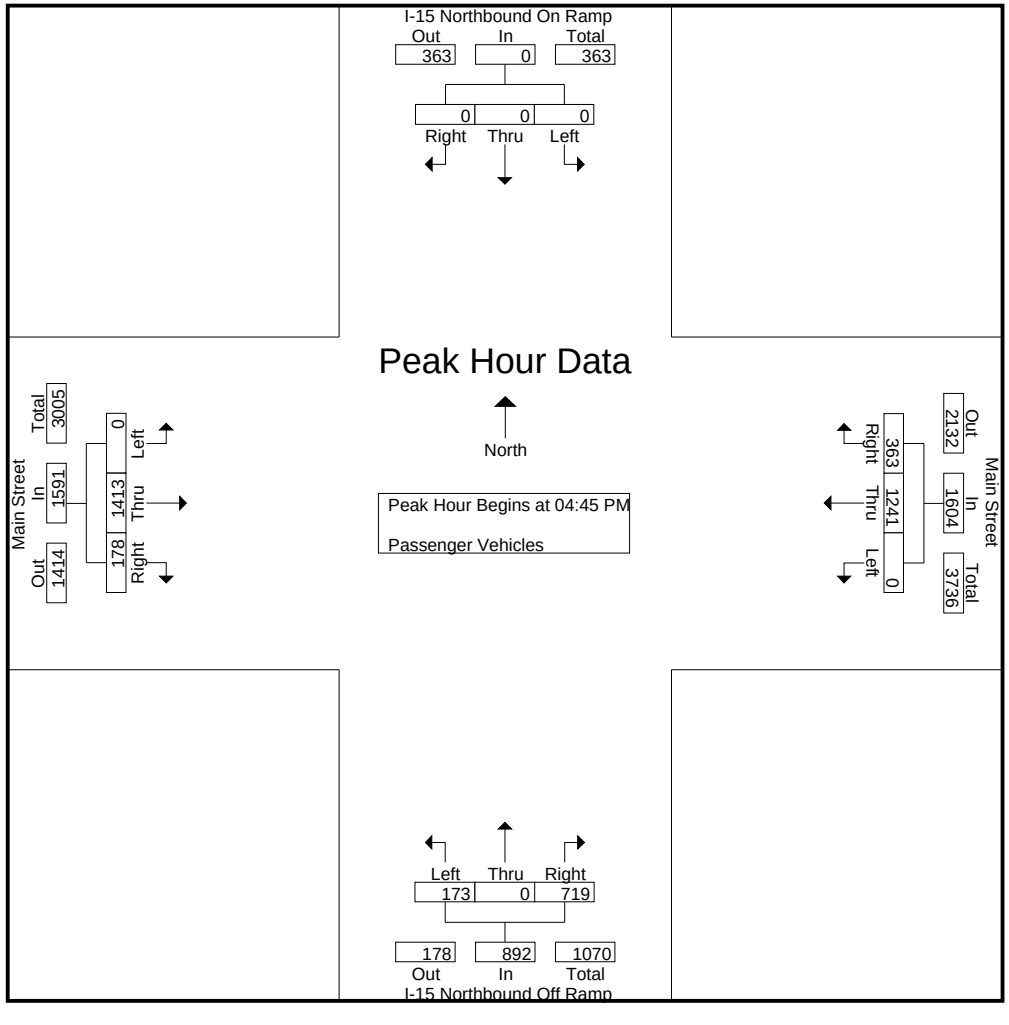

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	I-15 Northbound On Ramp Southbound				Main Street Westbound				I-15 Northbound Off Ramp Northbound				Main Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	04:45 PM				04:45 PM				04:45 PM				04:45 PM				
+0 mins.	0	0	0	0	0	307	82	389	**50**	0	**201**	**251**	0	**375**	35	**410**	
+15 mins.	0	0	0	0	0	283	88	371	32	0	142	174	0	355	39	394	
+30 mins.	0	0	0	0	0	**340**	88	**428**	42	0	183	225	0	333	49	382	
+45 mins.	0	0	0	0	0	311	**105**	416	49	0	193	242	0	350	**55**	405	
Total Volume	0	0	0	0	0	1241	363	1604	173	0	719	892	0	1413	178	1591	
% App. Total	0	0	0		0	77.4	22.6		19.4	0	80.6		0	88.8	11.2		
PHF	.000	.000	.000	.000	.000	.913	.864	.937	.865	.000	.894	.888	.000	.942	.809	.970	

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Groups Printed- Large 2 Axle Vehicles

	I-15 Northbound On Ramp Southbound					Main Street Westbound					I-15 Northbound Off Ramp Northbound					Main Street Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	0	0	0	0	0	0	5	0	0	5	1	0	0	0	1	0	4	4	0	8	0	14	14
04:15 PM	0	0	0	0	0	0	4	1	0	5	0	0	4	0	4	0	5	0	0	5	0	14	14
04:30 PM	0	0	0	0	0	0	7	1	0	8	0	0	4	1	4	0	6	2	0	8	1	20	21
04:45 PM	0	0	0	0	0	0	3	0	0	3	0	0	5	0	5	0	7	1	0	8	0	16	16
Total	0	0	0	0	0	0	19	2	0	21	1	0	13	1	14	0	22	7	0	29	1	64	65
05:00 PM	0	0	0	0	0	0	3	1	0	4	0	0	5	3	5	0	4	0	0	4	3	13	16
05:15 PM	0	0	0	0	0	0	7	4	2	11	0	0	5	1	5	0	4	1	0	5	3	21	24
05:30 PM	0	0	0	0	0	0	6	3	2	9	0	0	3	0	3	0	5	1	0	6	2	18	20
05:45 PM	0	0	0	0	0	0	4	0	0	4	0	0	3	0	3	0	1	0	0	1	0	8	8
Total	0	0	0	0	0	0	20	8	4	28	0	0	16	4	16	0	14	2	0	16	8	60	68
Grand Total	0	0	0	0	0	0	39	10	4	49	1	0	29	5	30	0	36	9	0	45	9	124	133
Apprch %	0	0	0			0	79.6	20.4			3.3	0	96.7			0	80	20					
Total %	0	0	0		0	0	31.5	8.1		39.5	0.8	0	23.4		24.2	0	29	7.3		36.3	6.8	93.2	

	I-15 Northbound On Ramp Southbound				Main Street Westbound				I-15 Northbound Off Ramp Northbound				Main Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	0	0	0	0	3	0	3	0	0	**5**	**5**	0	**7**	**1**	**8**	16
05:00 PM	0	0	0	0	0	3	1	4	0	0	5	5	0	4	0	4	13
05:15 PM	0	0	0	0	0	**7**	**4**	**11**	0	0	5	5	0	4	1	5	**21**
05:30 PM	0	0	0	0	0	6	3	9	0	0	3	3	0	5	1	6	18
Total Volume	0	0	0	0	0	19	8	27	0	0	18	18	0	20	3	23	68
% App. Total	0	0	0		0	70.4	29.6		0	0	100		0	87	13		
PHF	.000	.000	.000	.000	.000	.679	.500	.614	.000	.000	.900	.900	.000	.714	.750	.719	.810

Counts Unlimited
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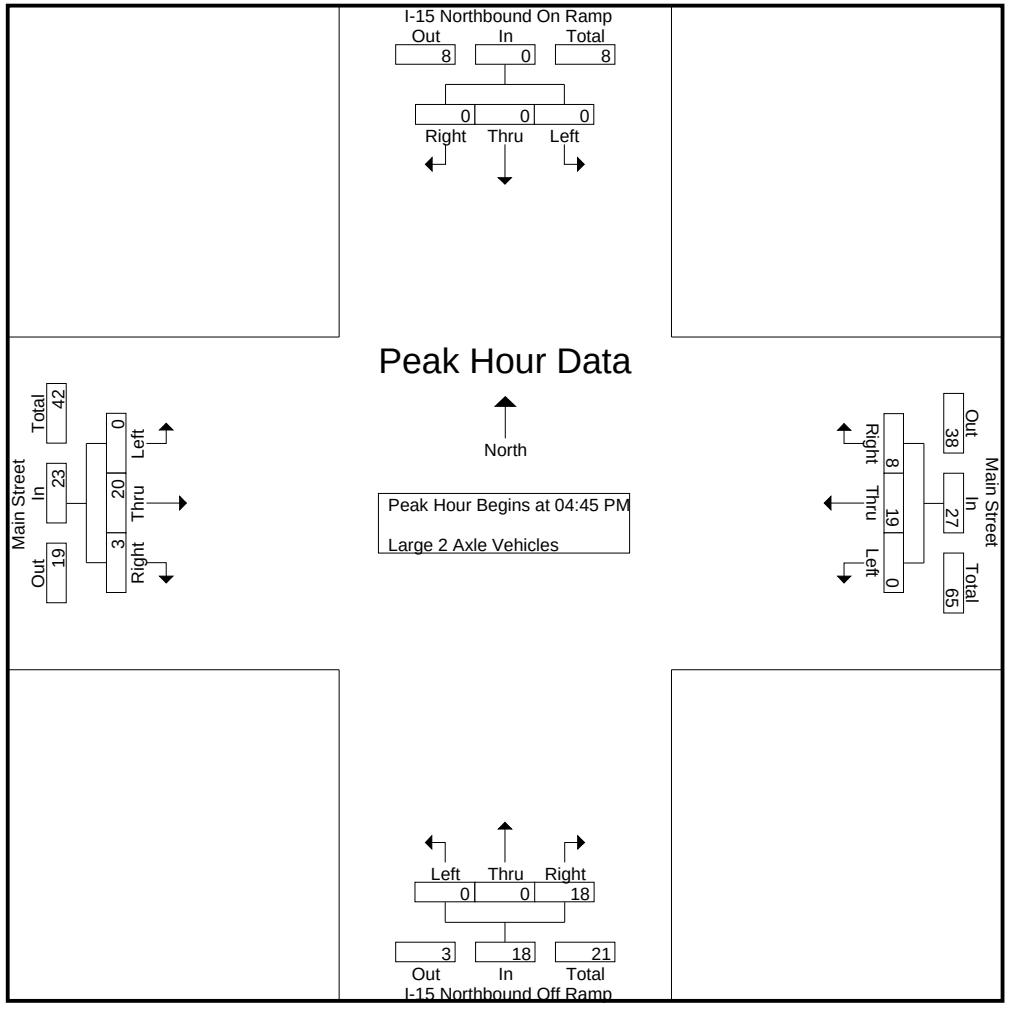
Corona, CA 92878
(951) 268-6268

City of Hesperia
N/S: I-15 Northbound Ramps
E/W: Main Street
Weather: Clear

File Name : 13_HES_15N_Main PM
Site Code : 05119658
Start Date : 9/28/2019
Page No : 2



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Corona, CA 92878
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City of Hesperia
N/S: I-15 Northbound Ramps
E/W: Main Street
Weather: Clear

File Name : 13_HES_15N_Main PM
Site Code : 05119658
Start Date : 9/28/2019
Page No : 3

	I-15 Northbound On Ramp Southbound				Main Street Westbound				I-15 Northbound Off Ramp Northbound				Main Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	04:45 PM				04:45 PM				04:45 PM				04:45 PM				
+0 mins.	0	0	0	0	0	3	0	3	0	0	**5**	**5**	0	**7**	**1**	**8**	
+15 mins.	0	0	0	0	0	3	1	4	0	0	5	5	0	4	0	4	
+30 mins.	0	0	0	0	0	**7**	**4**	**11**	0	0	5	5	0	4	1	5	
+45 mins.	0	0	0	0	0	6	3	9	0	0	3	3	0	5	1	6	
Total Volume	0	0	0	0	0	19	8	27	0	0	18	18	0	20	3	23	
% App. Total	0	0	0		0	70.4	29.6		0	0	100		0	87	13		
PHF	.000	.000	.000	.000	.000	.679	.500	.614	.000	.000	.900	.900	.000	.714	.750	.719	

Counts Unlimited
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City of Hesperia
N/S: I-15 Northbound Ramps
E/W: Main Street
Weather: Clear

File Name : 13_HES_15N_Main PM
Site Code : 05119658
Start Date : 9/28/2019
Page No : 1

Groups Printed- 3 Axle Vehicles

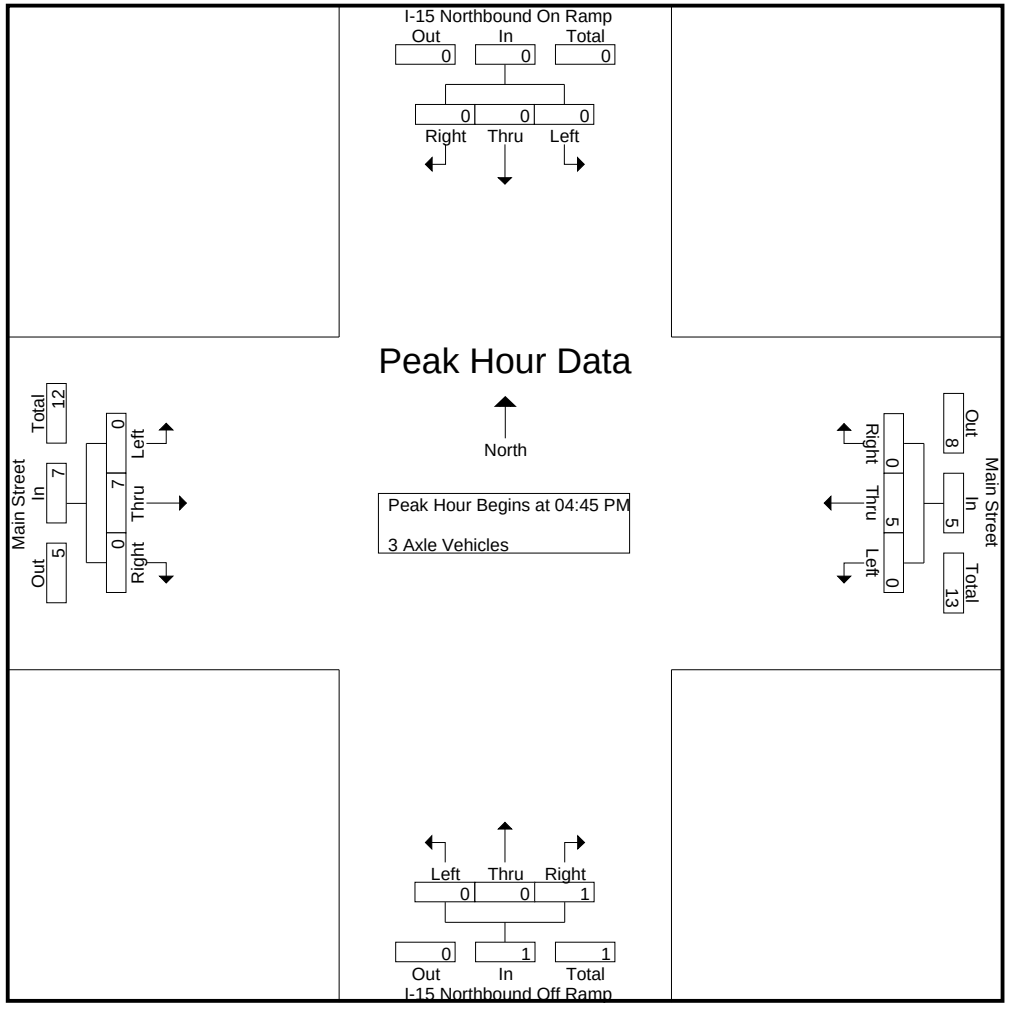
	I-15 Northbound On Ramp Southbound					Main Street Westbound					I-15 Northbound Off Ramp Northbound					Main Street Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	1
04:15 PM	0	0	0	0	0	0	2	0	0	2	0	1	1	0	2	0	1	0	0	1	0	5	5
04:30 PM	0	0	0	0	0	0	1	0	0	1	0	0	2	0	2	0	1	1	0	2	0	5	5
04:45 PM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	2	0	0	2	0	4	4
Total	0	0	0	0	0	0	6	0	0	6	0	1	3	0	4	0	4	1	0	5	0	15	15
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	1	0	0	1	0	2	2
05:15 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	2	2
05:30 PM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	3	0	0	3	0	5	5
05:45 PM	0	0	0	0	0	0	1	0	0	1	0	0	1	0	1	0	0	0	0	0	0	2	2
Total	0	0	0	0	0	0	4	0	0	4	0	0	2	0	2	0	5	0	0	5	0	11	11
Grand Total	0	0	0	0	0	0	10	0	0	10	0	1	5	0	6	0	9	1	0	10	0	26	26
Apprch %	0	0	0			0	100	0			0	16.7	83.3			0	90	10					
Total %	0	0	0		0	0	38.5	0		38.5	0	3.8	19.2		23.1	0	34.6	3.8		38.5	0	100	

	I-15 Northbound On Ramp Southbound				Main Street Westbound				I-15 Northbound Off Ramp Northbound				Main Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	0	0	0	0	**2**	0	**2**	0	0	0	0	0	2	0	2	4
05:00 PM	0	0	0	0	0	0	0	0	0	0	**1**	**1**	0	1	0	1	2
05:15 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
05:30 PM	0	0	0	0	0	2	0	2	0	0	0	0	0	**3**	0	**3**	**5**
Total Volume	0	0	0	0	0	5	0	5	0	0	1	1	0	7	0	7	13
% App. Total	0	0	0		0	100	0		0	0	100		0	100	0		
PHF	.000	.000	.000	.000	.000	.625	.000	.625	.000	.000	.250	.250	.000	.583	.000	.583	.650

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Hesperia
N/S: I-15 Northbound Ramps
E/W: Main Street
Weather: Clear

File Name : 13_HES_15N_Main PM
Site Code : 05119658
Start Date : 9/28/2019
Page No : 2



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City of Hesperia
N/S: I-15 Northbound Ramps
E/W: Main Street
Weather: Clear

File Name : 13_HES_15N_Main PM
Site Code : 05119658
Start Date : 9/28/2019
Page No : 3

	I-15 Northbound On Ramp Southbound				Main Street Westbound				I-15 Northbound Off Ramp Northbound				Main Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	04:45 PM				04:45 PM				04:45 PM				04:45 PM				
+0 mins.	0	0	0	0	0	**2**	0	**2**	0	0	0	0	0	2	0	2	
+15 mins.	0	0	0	0	0	0	0	0	0	0	**1**	**1**	0	1	0	1	
+30 mins.	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	
+45 mins.	0	0	0	0	0	2	0	2	0	0	0	0	0	**3**	0	**3**	
Total Volume	0	0	0	0	0	5	0	5	0	0	1	1	0	7	0	7	
% App. Total	0	0	0		0	100	0		0	0	100		0	100	0		
PHF	.000	.000	.000	.000	.000	.625	.000	.625	.000	.000	.250	.250	.000	.583	.000	.583	

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City of Hesperia
N/S: I-15 Northbound Ramps
E/W: Main Street
Weather: Clear

File Name : 13_HES_15N_Main PM
Site Code : 05119658
Start Date : 9/28/2019
Page No : 1

Groups Printed- 4+ Axle Trucks

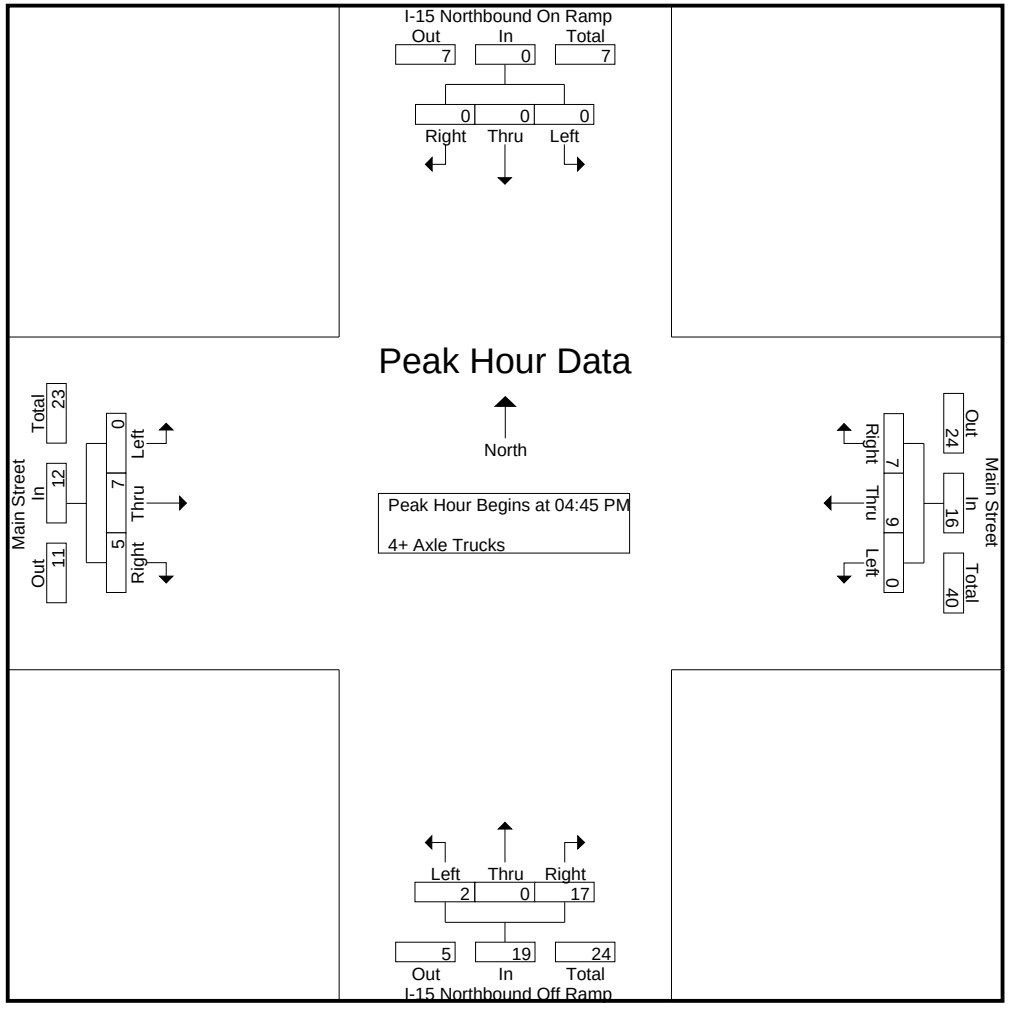
	I-15 Northbound On Ramp Southbound					Main Street Westbound					I-15 Northbound Off Ramp Northbound					Main Street Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	1	0	3	1	4	0	3	1	0	4	1	8	9
04:15 PM	0	0	0	0	0	0	1	2	0	3	1	0	2	0	3	0	1	1	0	2	0	8	8
04:30 PM	0	0	0	0	0	0	3	0	0	3	1	0	2	1	3	0	2	1	0	3	1	9	10
04:45 PM	0	0	0	0	0	0	4	3	1	7	2	0	7	1	9	0	0	2	0	2	2	18	20
Total	0	0	0	0	0	0	8	5	1	13	5	0	14	3	19	0	6	5	0	11	4	43	47
05:00 PM	0	0	0	0	0	0	2	1	0	3	0	0	7	3	7	0	3	1	0	4	3	14	17
05:15 PM	0	0	0	0	0	0	1	3	1	4	0	0	3	1	3	0	2	1	0	3	2	10	12
05:30 PM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	2	1	0	3	0	5	5
05:45 PM	0	0	0	0	0	0	3	1	1	4	3	0	3	0	6	0	1	0	0	1	1	11	12
Total	0	0	0	0	0	0	8	5	2	13	3	0	13	4	16	0	8	3	0	11	6	40	46
Grand Total	0	0	0	0	0	0	16	10	3	26	8	0	27	7	35	0	14	8	0	22	10	83	93
Apprch %	0	0	0			0	61.5	38.5			22.9	0	77.1			0	63.6	36.4					
Total %	0	0	0		0	0	19.3	12		31.3	9.6	0	32.5		42.2	0	16.9	9.6		26.5	10.8	89.2	

	I-15 Northbound On Ramp Southbound				Main Street Westbound				I-15 Northbound Off Ramp Northbound				Main Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	0	0	0	0	**4**	**3**	**7**	**2**	0	**7**	**9**	0	0	**2**	2	**18**
05:00 PM	0	0	0	0	0	2	1	3	0	0	7	7	0	**3**	1	**4**	14
05:15 PM	0	0	0	0	0	1	3	4	0	0	3	3	0	2	1	3	10
05:30 PM	0	0	0	0	0	2	0	2	0	0	0	0	0	2	1	3	5
Total Volume	0	0	0	0	0	9	7	16	2	0	17	19	0	7	5	12	47
% App. Total	0	0	0		0	56.2	43.8		10.5	0	89.5		0	58.3	41.7		
PHF	.000	.000	.000	.000	.000	.563	.583	.571	.250	.000	.607	.528	.000	.583	.625	.750	.653

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Hesperia
N/S: I-15 Northbound Ramps
E/W: Main Street
Weather: Clear

File Name : 13_HES_15N_Main PM
Site Code : 05119658
Start Date : 9/28/2019
Page No : 2



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City of Hesperia
N/S: I-15 Northbound Ramps
E/W: Main Street
Weather: Clear

File Name : 13_HES_15N_Main PM
Site Code : 05119658
Start Date : 9/28/2019
Page No : 3

	I-15 Northbound On Ramp Southbound				Main Street Westbound				I-15 Northbound Off Ramp Northbound				Main Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	04:45 PM				04:45 PM				04:45 PM				04:45 PM				
+0 mins.	0	0	0	0	0	**4**	**3**	**7**	**2**	0	**7**	**9**	0	0	**2**	2	
+15 mins.	0	0	0	0	0	2	1	3	0	0	7	7	0	**3**	1	**4**	
+30 mins.	0	0	0	0	0	1	3	4	0	0	3	3	0	2	1	3	
+45 mins.	0	0	0	0	0	2	0	2	0	0	0	0	0	2	1	3	
Total Volume	0	0	0	0	0	9	7	16	2	0	17	19	0	7	5	12	
% App. Total	0	0	0		0	56.2	43.8		10.5	0	89.5		0	58.3	41.7		
PHF	.000	.000	.000	.000	.000	.563	.583	.571	.250	.000	.607	.528	.000	.583	.625	.750	

Location: Hesperia
N/S: I-15 Northbound Ramps
E/W: Main Street

Date: 9/28/2019
Day: Saturday

PEDESTRIANS

	North Leg I-15 Northbound Ramps	East Leg Main Street	South Leg I-15 Northbound Ramps	West Leg Main Street	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0

	North Leg I-15 Northbound Ramps	East Leg Main Street	South Leg I-15 Northbound Ramps	West Leg Main Street	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	2	0	2
TOTAL VOLUMES:	0	0	2	0	2

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
951-268-0268

Location: Hesperia
N/S: I-15 Northbound Ramps
E/W: Main Street

Date: 9/28/2019
Day: Saturday

BICYCLES

	Southbound I-15 Northbound Ramps			Westbound Main Street			Northbound I-15 Northbound Ramps			Eastbound Main Street			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	0	0	0	0	0	0	0	0

	Southbound I-15 Northbound Ramps			Westbound Main Street			Northbound I-15 Northbound Ramps			Eastbound Main Street			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	0	0	0	0	0	0	0	0

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
951-268-6268

INTERSECTION TURNING MOVEMENT COUNTS

T1218

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Hesperia	PROJECT #:	SC2468
Tue, Jan 7, 20	NORTH & SOUTH:	Mariposa	LOCATION #:	22
	EAST & WEST:	Main	CONTROL:	SIGNAL

NOTES:

Queue WB AM 7:15:43, 7:43:20, 8:07:45, 8:23:38, 8:42:30; WB PM 4:01:49 - 4:05:00, 4:39:40 - 4:53:38, 5:02:50, 5:33:00, 5:43:35 - 5:56:30; EB PM 4:06:16, 4:34:49, 5:17:20

AM PM MD OTHER OTHER — ▲ N ◄ W S ▼ E ►

Add U-Turns to Left Turns

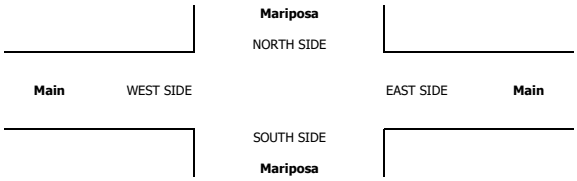
		NORTHBOUND (Mariposa)			SOUTHBOUND (Mariposa)			EASTBOUND (Main)			WESTBOUND (Main)			
	LANES:	NL 1	NT 0.5	NR 0.5	SL 1	ST 0.5	SR 0.5	EL 1	ET 4	ER 0	WL 1	WT 4	WR 0	TOTAL
AM	7:00 AM	18	13	9	12	24	44	26	278	52	22	304	3	805
	7:15 AM	21	7	4	6	11	31	30	240	16	8	359	7	740
	7:30 AM	14	9	13	11	6	51	27	209	8	6	344	15	713
	7:45 AM	15	8	5	6	7	34	30	258	14	6	353	3	739
	8:00 AM	14	2	2	13	2	29	17	228	13	10	289	17	636
	8:15 AM	12	5	9	10	7	36	25	243	12	10	306	5	680
	8:30 AM	12	2	9	10	6	39	15	198	12	9	271	14	597
	8:45 AM	20	2	4	11	5	27	25	206	12	11	270	15	608
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	126	48	55	79	68	291	195	1,860	139	82	2,496	79	5,518
	APPROACH %	55%	21%	24%	18%	16%	66%	9%	85%	6%	3%	94%	3%	
	APP/DEPART	229	/	320	438	/	285	2,194	/	1,998	2,657	/	2,915	0
	BEGIN PEAK HR		7:00 AM											
	VOLUMES	68	37	31	35	48	160	113	985	90	42	1,360	28	2,997
	APPROACH %	50%	27%	23%	14%	20%	66%	10%	83%	8%	3%	95%	2%	
	PEAK HR FACTOR		0.850			0.759			0.834			0.956		0.931
	APP/DEPART	136	/	177	243	/	179	1,188	/	1,052	1,430	/	1,589	0
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	24	17	22	36	12	46	62	464	19	17	318	13	1,050
	4:15 PM	18	12	13	26	10	45	54	457	22	16	381	18	1,072
	4:30 PM	25	13	17	20	12	37	55	448	28	10	358	22	1,045
	4:45 PM	19	20	12	24	18	46	60	462	37	12	323	15	1,048
	5:00 PM	33	19	14	34	18	39	53	423	41	20	342	17	1,053
	5:15 PM	33	26	23	31	12	45	53	461	28	23	314	25	1,074
	5:30 PM	36	16	13	26	13	58	46	483	48	15	306	23	1,083
	5:45 PM	23	14	18	40	5	37	59	491	27	21	329	34	1,098
	VOLUMES	211	137	132	237	100	353	442	3,689	250	134	2,671	167	8,523
	APPROACH %	44%	29%	28%	34%	14%	51%	10%	84%	6%	5%	90%	6%	
	APP/DEPART	480	/	736	690	/	476	4,381	/	4,066	2,972	/	3,245	0
	BEGIN PEAK HR		5:00 PM											
	VOLUMES	125	75	68	131	48	179	211	1,858	144	79	1,291	99	4,308
	APPROACH %	47%	28%	25%	37%	13%	50%	10%	84%	7%	5%	88%	7%	
	PEAK HR FACTOR		0.817			0.923			0.959			0.956		0.981
	APP/DEPART	268	/	380	358	/	265	2,213	/	2,063	1,469	/	1,600	0

U-TURNS

NB	SB	EB	WB	TTL
0	0	1	0	1
0	0	0	0	0
0	0	0	0	0
0	0	0	1	1
0	0	0	1	1
0	0	0	1	1
0	0	0	0	0
0	0	1	1	2
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	2	4	6
0	0	0	0	0
0	0	1	0	1
0	0	0	0	0
0	0	0	0	0
0	0	0	2	2
0	0	2	0	2
0	0	2	0	2
0	0	2	1	3
0	0	1	1	2
0	0	1	2	3
0	0	1	2	3
0	0	10	8	18

RTOR

NRR	SRR	ERR	WRR
0	0	0	0
4	19	5	0
2	13	4	1
11	25	1	0
3	20	2	0
2	19	1	1
8	22	0	2
4	21	0	0
3	19	2	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
37	158	15	4
20	77	12	1
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
11	19	0	2
7	22	1	7
10	14	3	2
6	20	1	3
7	12	1	4
4	21	5	4
7	23	8	3
8	14	2	5
60	145	21	30
26	70	16	16



ALL PED AND BIKE

	E SIDE	W SIDE	S SIDE	N SIDE	TOTAL
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	1	0	0	1
8:30 AM	0	0	0	0	0
8:45 AM	0	0	1	0	1
9:00 AM	0	0	0	0	0
9:15 AM	0	0	0	0	0
9:30 AM	0	0	0	0	0
9:45 AM	0	0	0	0	0
TOTAL	0	1	1	0	2
3:00 PM	0	0	0	0	0
3:15 PM	0	0	0	0	0
3:30 PM	0	0	0	0	0
3:45 PM	0	0	0	0	0
4:00 PM	0	0	1	0	1
4:15 PM	0	1	0	0	1
4:30 PM	0	1	0	0	1
4:45 PM	0	0	0	0	0
5:00 PM	0	1	0	0	1
5:15 PM	1	0	0	0	1
5:30 PM	1	4	2	0	7
5:45 PM	0	2	0	0	2
TOTAL	2	9	3	0	14

PEDESTRIAN CROSSINGS

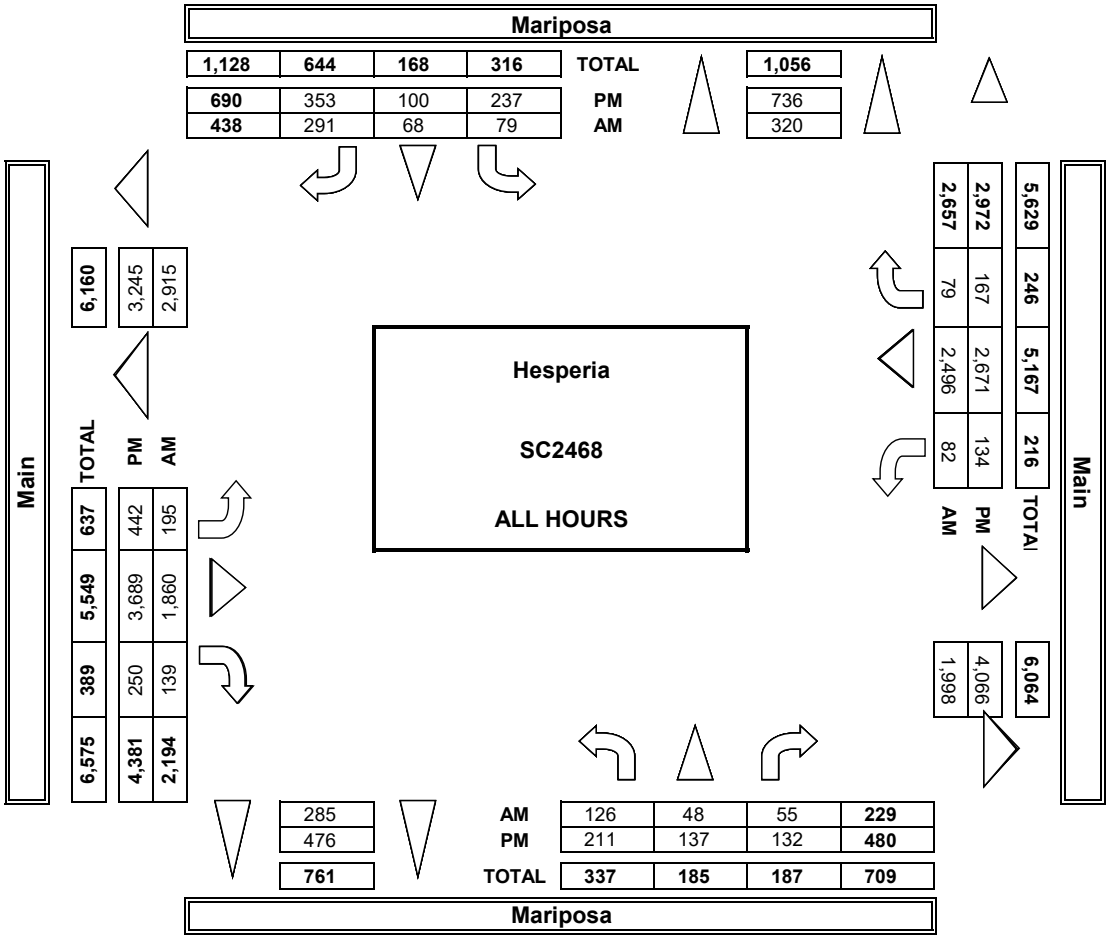
E SIDE	W SIDE	S SIDE	N SIDE	TOTAL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	1	0	0	1
0	0	0	0	0
0	0	1	0	1
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	1	1	0	2
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	1	0	1
0	1	0	0	1
0	1	0	0	1
0	0	0	0	0
0	1	0	0	1
0	0	0	0	0
1	4	2	0	7
0	2	0	0	2
1	9	3	0	13

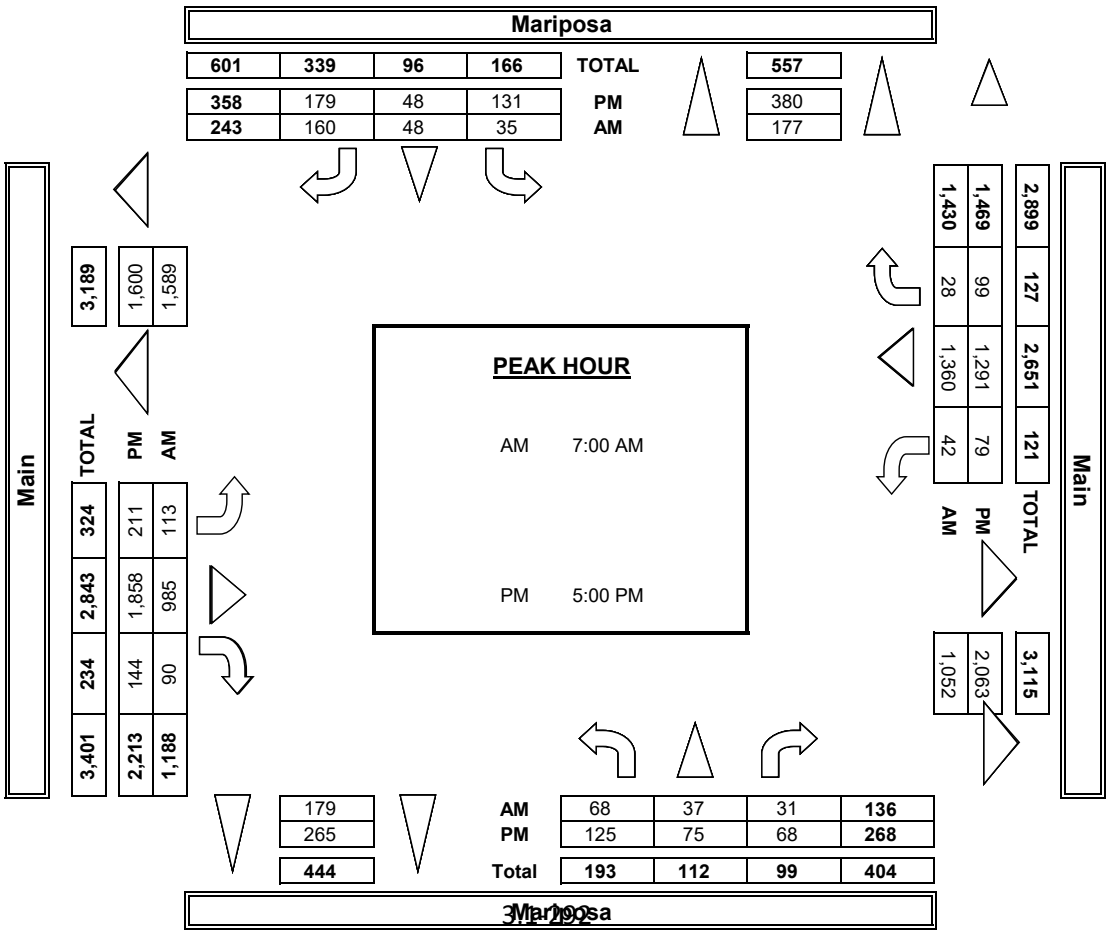
BICYCLE CROSSINGS

ES	WS	SS	NS	TOTAL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
1	0	0	0	1
0	0	0	0	0
0	0	0	0	0
1	0	0	0	1

AimTD LLC

TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Hesperia	PROJECT #:	SC2468
1/7/20	NORTH & SOUTH:	Mariposa	LOCATION #:	22
TUESDAY	EAST & WEST:	Main	CONTROL:	SIGNAL

CLASS 1: PASSENGER VEHICLES

NOTES:

AM / PM / MD / OTHER / OTHER

▲ N ◄ W E ► S ▼

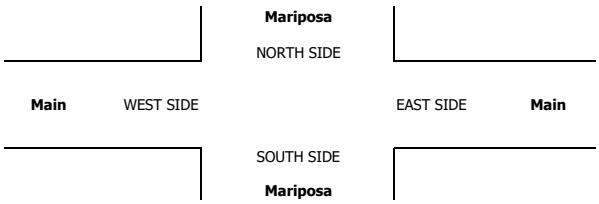
	NORTHBOUND (Mariposa)			SOUTHBOUND (Mariposa)			EASTBOUND (Main)			WESTBOUND (Main)			
LANES:	NL 1	NT 0.5	NR 0.5	SL 1	ST 0.5	SR 0.5	EL 1	ET 4	ER 0	WL 1	WT 4	WR 0	TOTAL
7:00 AM	16	13	8	12	24	37	26	248	52	22	282	3	743
7:15 AM	20	6	4	6	11	30	28	222	16	8	328	7	686
7:30 AM	14	9	12	10	6	48	25	191	6	4	315	15	655
7:45 AM	13	7	3	5	7	30	27	236	13	6	319	3	669
8:00 AM	13	1	2	13	2	27	16	204	11	7	253	17	566
8:15 AM	11	5	8	10	6	31	23	220	10	8	276	5	613
8:30 AM	11	2	8	10	6	35	15	183	11	8	247	12	548
8:45 AM	16	2	4	11	5	24	21	180	10	10	245	15	543
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	114	45	49	77	67	262	181	1,684	129	73	2,265	77	5,023
APPROACH %	55%	22%	24%	19%	17%	65%	9%	84%	6%	3%	94%	3%	
APP/DEPART	208	/	302	406	/	266	1,994	/	1,813	2,415	/	2,642	0
BEGIN PEAK HR	7:00 AM												
VOLUMES	63	35	27	33	48	145	105	897	87	39	1,244	28	2,753
APPROACH %	50%	28%	22%	15%	21%	64%	10%	82%	8%	3%	95%	2%	
PEAK HR FACTOR		0.845			0.774			0.836			0.956		0.926
APP/DEPART	125	/	168	226	/	174	1,090	/	958	1,312	/	1,453	0
03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	22	17	21	34	12	39	55	432	18	17	307	12	986
4:15 PM	16	12	12	25	10	45	49	430	21	16	360	17	1,013
4:30 PM	24	11	16	19	11	37	49	427	26	10	337	19	986
4:45 PM	19	16	12	24	18	43	58	427	35	12	312	15	991
5:00 PM	29	17	14	34	16	35	51	395	39	18	330	16	994
5:15 PM	32	26	23	30	12	44	49	445	25	22	306	24	1,038
5:30 PM	36	16	13	25	13	57	43	460	48	14	287	22	1,034
5:45 PM	23	14	17	40	4	36	57	468	27	19	319	34	1,058
VOLUMES	201	129	128	231	96	336	411	3,484	239	128	2,558	159	8,100
APPROACH %	44%	28%	28%	35%	14%	51%	10%	84%	6%	4%	90%	6%	
APP/DEPART	458	/	691	663	/	458	4,134	/	3,848	2,845	/	3,103	0
BEGIN PEAK HR	5:00 PM												
VOLUMES	120	73	67	129	45	172	197	1,768	139	70	1,242	96	4,124
APPROACH %	46%	28%	26%	37%	13%	50%	9%	84%	7%	5%	88%	7%	
PEAK HR FACTOR		0.802			0.911			0.954			0.948		0.974
APP/DEPART	260	/	366	346	/	254	2,107	/	1,967	1,411	/	1,537	0

U-TURNS

	NB	SB	EB	WB	TTL
AM 7:00 AM	0	0	1	0	1
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	1	1
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	1	1
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	1	1
9:00 AM	0	0	0	0	0
9:15 AM	0	0	0	0	0
9:30 AM	0	0	0	0	0
9:45 AM	0	0	0	0	0
AM VOLUMES	0	0	1	3	4
PM 03:00 PM	0	0	0	0	0
3:15 PM	0	0	0	0	0
3:30 PM	0	0	0	0	0
3:45 PM	0	0	0	0	0
4:00 PM	0	0	1	0	1
4:15 PM	0	0	0	2	2
4:30 PM	0	0	2	0	2
4:45 PM	0	0	2	0	2
5:00 PM	0	0	2	1	3
5:15 PM	0	0	1	1	2
5:30 PM	0	0	0	1	1
5:45 PM	0	0	0	0	0
PM VOLUMES	0	0	8	5	13

RTOR

	NRR 0	SRR 0	ERR 0	WRR 0
AM 7:00 AM	4	13	5	0
7:15 AM	2	13	4	1
7:30 AM	10	23	1	0
7:45 AM	2	17	2	0
8:00 AM	2	17	1	1
8:15 AM	8	20	0	2
8:30 AM	3	17	0	0
8:45 AM	3	17	1	0
9:00 AM	0	0	0	0
9:15 AM	0	0	0	0
9:30 AM	0	0	0	0
9:45 AM	0	0	0	0
AM VOLUMES	34	137	14	4
AM BEGIN PEAK HR	18	66	12	1
PM 03:00 PM	0	0	0	0
3:15 PM	0	0	0	0
3:30 PM	0	0	0	0
3:45 PM	0	0	0	0
4:00 PM	10	19	0	2
4:15 PM	6	22	1	6
4:30 PM	9	14	3	2
4:45 PM	6	17	1	3
5:00 PM	7	11	1	3
5:15 PM	4	21	5	4
5:30 PM	7	22	8	3
5:45 PM	8	13	2	5
PM VOLUMES	57	139	21	28
PM BEGIN PEAK HR	26	67	16	15



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Hesperia	PROJECT #:	SC2468
1/7/20	NORTH & SOUTH:	Mariposa	LOCATION #:	22
TUESDAY	EAST & WEST:	Main	CONTROL:	SIGNAL

CLASS 2: 2-AXLE WORK VEHICLES/ TRUCKS	NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

	NORTHBOUND (Mariposa)			SOUTHBOUND (Mariposa)			EASTBOUND (Main)			WESTBOUND (Main)			
LANES:	NL 1	NT 0.5	NR 0.5	SL 1	ST 0.5	SR 0.5	EL 1	ET 4	ER 0	WL 1	WT 4	WR 0	TOTAL
7:00 AM	1	0	0	0	0	5	0	15	0	0	13	0	34
7:15 AM	0	1	0	0	0	0	1	10	0	0	20	0	32
7:30 AM	0	0	1	0	0	3	1	14	2	2	17	0	40
7:45 AM	2	1	2	0	0	3	2	15	0	0	20	0	45
8:00 AM	1	0	0	0	0	1	0	17	2	1	23	0	45
8:15 AM	0	0	1	0	1	2	2	16	1	2	16	0	41
8:30 AM	0	0	0	0	0	0	0	10	1	1	16	0	28
8:45 AM	3	0	0	0	0	3	2	18	2	0	13	0	41
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	7	2	4	0	1	17	8	115	8	6	138	0	306
APPROACH %	54%	15%	31%	0%	6%	94%	6%	88%	6%	4%	96%	0%	
APP/DEPART	13	/	10	18	/	15	131	/	119	144	/	162	0
BEGIN PEAK HR		7:30 AM											
VOLUMES	3	1	4	0	1	9	5	62	5	5	76	0	171
APPROACH %	38%	13%	50%	0%	10%	90%	7%	86%	7%	6%	94%	0%	
PEAK HR FACTOR		0.400			0.833			0.947			0.844		0.950
APP/DEPART	8	/	6	10	/	11	72	/	66	81	/	88	0
03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	2	0	0	2	0	5	6	23	1	0	9	0	48
4:15 PM	2	0	1	1	0	0	5	19	1	0	12	1	42
4:30 PM	0	2	1	1	0	0	4	15	2	0	10	1	36
4:45 PM	0	4	0	0	0	1	1	24	2	0	7	0	39
5:00 PM	3	1	0	0	0	4	0	22	2	0	8	1	41
5:15 PM	0	0	0	1	0	0	2	9	1	1	7	0	21
5:30 PM	0	0	0	0	0	1	1	16	0	0	14	1	33
5:45 PM	0	0	1	0	1	1	0	14	0	1	6	0	24
VOLUMES	7	7	3	5	1	12	19	142	9	2	73	4	284
APPROACH %	41%	41%	18%	28%	6%	67%	11%	84%	5%	3%	92%	5%	
APP/DEPART	17	/	29	18	/	11	170	/	151	79	/	93	0
BEGIN PEAK HR		4:00 PM											
VOLUMES	4	6	2	4	0	6	16	81	6	0	38	2	165
APPROACH %	33%	50%	17%	40%	0%	60%	16%	79%	6%	0%	95%	5%	
PEAK HR FACTOR		0.750			0.357			0.858			0.769		0.859
APP/DEPART	12	/	24	10	/	6	103	/	87	40	/	48	0

U-TURNS

NB	SB	EB	WB	TTL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Hesperia	PROJECT #:	SC2468
1/7/20	NORTH & SOUTH:	Mariposa	LOCATION #:	22
TUESDAY	EAST & WEST:	Main	CONTROL:	SIGNAL

CLASS 3: 3-AXLE TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

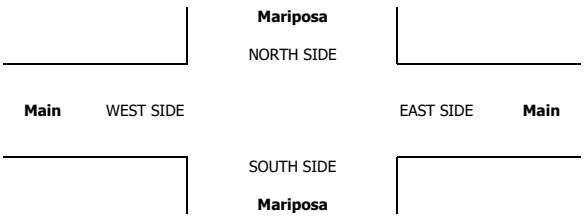
	NORTHBOUND Mariposa			SOUTHBOUND Mariposa			EASTBOUND Main			WESTBOUND Main			
LANES:	NL 1	NT 0.5	NR 0.5	SL 1	ST 0.5	SR 0.5	EL 1	ET 4	ER 0	WL 1	WT 4	WR 0	TOTAL
7:00 AM	1	0	0	0	0	0	0	3	0	0	1	0	5
7:15 AM	0	0	0	0	0	1	1	2	0	0	1	0	5
7:30 AM	0	0	0	0	0	0	0	1	0	0	3	0	4
7:45 AM	0	0	0	0	0	1	1	2	1	0	6	0	11
8:00 AM	0	0	0	0	0	1	1	1	0	1	4	0	8
8:15 AM	1	0	0	0	0	1	0	1	1	0	3	0	7
8:30 AM	0	0	0	0	0	1	0	2	0	0	3	0	6
8:45 AM	0	0	0	0	0	0	0	2	0	0	2	0	4
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	2	0	0	0	0	5	3	14	2	1	23	0	50
APPROACH %	100%	0%	0%	0%	0%	100%	16%	74%	11%	4%	96%	0%	
APP/DEPART	2	/	3	5	/	3	19	/	14	24	/	30	0
BEGIN PEAK HR		7:45 AM											
VOLUMES	1	0	0	0	0	4	2	6	2	1	16	0	32
APPROACH %	100%	0%	0%	0%	0%	100%	20%	60%	20%	6%	94%	0%	
PEAK HR FACTOR		0.250			1.000			0.625			0.708		0.727
APP/DEPART	1	/	2	4	/	3	10	/	6	17	/	21	0
03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	1	1	3	0	0	0	0	5
4:15 PM	0	0	0	0	0	0	0	2	0	0	1	0	3
4:30 PM	0	0	0	0	0	0	1	0	0	0	1	0	2
4:45 PM	0	0	0	0	0	0	0	4	0	0	1	0	5
5:00 PM	0	1	0	0	0	0	1	2	0	0	1	0	5
5:15 PM	0	0	0	0	0	0	0	4	0	0	0	0	4
5:30 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
5:45 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
VOLUMES	0	1	0	0	0	1	3	16	0	0	5	0	26
APPROACH %	0%	100%	0%	0%	0%	100%	16%	84%	0%	0%	100%	0%	
APP/DEPART	1	/	4	1	/	0	19	/	16	5	/	6	0
BEGIN PEAK HR		4:30 PM											
VOLUMES	0	1	0	0	0	0	2	10	0	0	3	0	16
APPROACH %	0%	100%	0%	0%	0%	0%	17%	83%	0%	0%	100%	0%	
PEAK HR FACTOR		0.250			0.000			0.750			0.750		0.800
APP/DEPART	1	/	3	0	/	0	12	/	10	3	/	3	0

U-TURNS

NB	SB	EB	WB	TTL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

RTOR

NRR	SRR	ERR	WRR
0	0	0	0
0	0	0	0
0	0	0	0
0	1	0	0
0	1	0	0
0	1	0	0
0	1	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	4	0	0
0	4	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Hesperia	PROJECT #:	SC2468
1/7/20	NORTH & SOUTH:	Mariposa	LOCATION #:	22
TUESDAY	EAST & WEST:	Main	CONTROL:	SIGNAL

CLASS 4: 4 OR MORE AXLE TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N ◄ W E ► S ▼

		NORTHBOUND (Mariposa)			SOUTHBOUND (Mariposa)			EASTBOUND (Main)			WESTBOUND (Main)			
	LANES:	NL 1	NT 0.5	NR 0.5	SL 1	ST 0.5	SR 0.5	EL 1	ET 4	ER 0	WL 1	WT 4	WR 0	TOTAL
AM	7:00 AM	0	0	1	0	0	2	0	7	0	0	5	0	15
	7:15 AM	0	0	0	0	0	0	0	5	0	0	8	0	13
	7:30 AM	0	0	0	0	0	0	0	2	0	0	8	0	10
	7:45 AM	0	0	0	0	0	0	0	5	0	0	6	0	11
	8:00 AM	0	1	0	0	0	0	0	5	0	0	7	0	13
	8:15 AM	0	0	0	0	0	2	0	5	0	0	10	0	17
	8:30 AM	1	0	1	0	0	2	0	1	0	0	4	1	10
	8:45 AM	1	0	0	0	0	0	1	5	0	1	8	0	16
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	2	1	2	0	0	6	1	35	0	1	56	1	105
	APPROACH %	40%	20%	40%	0%	0%	100%	3%	97%	0%	2%	97%	2%	
	APP/DEPART	5	/	3	6	/	1	36	/	37	58	/	64	0
	BEGIN PEAK HR		8:00 AM											
	VOLUMES	2	1	1	0	0	4	1	16	0	1	29	1	56
	APPROACH %	50%	25%	25%	0%	0%	100%	6%	94%	0%	3%	94%	3%	
	PEAK HR FACTOR		0.500			0.500			0.708			0.775		0.824
	APP/DEPART	4	/	3	4	/	1	17	/	17	31	/	35	0
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	1	0	0	1	0	6	0	0	1	1	10
	4:15 PM	0	0	0	0	0	0	0	4	0	0	4	0	8
	4:30 PM	1	0	0	0	1	0	1	4	0	0	9	1	17
	4:45 PM	0	0	0	0	0	1	1	6	0	0	3	0	11
	5:00 PM	1	0	0	0	2	0	1	3	0	2	2	0	11
	5:15 PM	0	0	0	0	0	1	2	3	1	0	1	1	9
	5:30 PM	0	0	0	0	0	0	1	5	0	0	5	0	11
	5:45 PM	0	0	0	0	0	0	1	9	0	0	2	0	12
	VOLUMES	2	0	1	0	3	3	7	40	1	2	27	3	89
	APPROACH %	67%	0%	33%	0%	50%	50%	15%	83%	2%	6%	84%	9%	
	APP/DEPART	3	/	10	6	/	6	48	/	41	32	/	32	0
	BEGIN PEAK HR		4:30 PM											
	VOLUMES	2	0	0	0	3	2	5	16	1	2	15	2	48
	APPROACH %	100%	0%	0%	0%	60%	40%	23%	73%	5%	11%	79%	11%	
	PEAK HR FACTOR		0.500			0.625			0.786			0.475		0.706
	APP/DEPART	2	/	7	5	/	6	22	/	16	19	/	19	0

U-TURNS

NB	SB	EB	WB	TTL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Hesperia	PROJECT #:	SC2468
1/7/20	NORTH & SOUTH:	Mariposa	LOCATION #:	22
TUESDAY	EAST & WEST:	Main	CONTROL:	SIGNAL

CLASS 5:	NOTES:
RV	

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND Mariposa			SOUTHBOUND Mariposa			EASTBOUND Main			WESTBOUND Main			
	LANES:	NL 1	NT 0.5	NR 0.5	SL 1	ST 0.5	SR 0.5	EL 1	ET 4	ER 0	WL 1	WT 4	WR 0	TOTAL
AM	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	0	1	0	1
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	1	0	1
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	0%	
	APP/DEPART	0	/	0	0	/	0	0	/	0	1	/	1	0
	BEGIN PEAK HR		7:00 AM											
	VOLUMES	0	0	0	0	0	0	0	0	0	0	1	0	1
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	0%	
	PEAK HR FACTOR		0.000			0.000			0.000			0.250		0.250
	APP/DEPART	0	/	0	0	/	0	0	/	0	1	/	1	0
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	1	0	0	0	1
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	1	0	1	0	2
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	100%	0%	100%	0%	
	APP/DEPART	0	/	0	0	/	1	1	/	0	1	/	1	0
	BEGIN PEAK HR		3:30 PM											
	VOLUMES	0	0	0	0	0	0	0	0	1	0	0	0	1
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	0%	
	PEAK HR FACTOR		0.000			0.000			0.250			0.000		0.250
	APP/DEPART	0	/	0	0	/	1	1	/	0	0	/	0	0

U-TURNS

NB	SB	EB	WB	TTL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

RTOR

NRR	SRR	ERR	WRR
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0

0	0	0	0

Mariposa

NORTH SIDE

Main WEST SIDE EAST SIDE **Main**

SOUTH SIDE

Mariposa

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Hesperia	PROJECT #:	SC2468
1/7/20	NORTH & SOUTH:	Mariposa	LOCATION #:	22
TUESDAY	EAST & WEST:	Main	CONTROL:	SIGNAL

CLASS 6:	NOTES:
BUSES	

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

	NORTHBOUND Mariposa			SOUTHBOUND Mariposa			EASTBOUND Main			WESTBOUND Main			
LANES:	NL 1	NT 0.5	NR 0.5	SL 1	ST 0.5	SR 0.5	EL 1	ET 4	ER 0	WL 1	WT 4	WR 0	TOTAL
AM 7:00 AM	0	0	0	0	0	0	0	5	0	0	3	0	8
7:15 AM	1	0	0	0	0	0	0	1	0	0	2	0	4
7:30 AM	0	0	0	1	0	0	1	1	0	0	1	0	4
7:45 AM	0	0	0	1	0	0	0	0	0	0	1	0	2
8:00 AM	0	0	0	0	0	0	0	1	0	0	2	0	3
8:15 AM	0	0	0	0	0	0	0	1	0	0	1	0	2
8:30 AM	0	0	0	0	0	1	0	2	0	0	1	1	5
8:45 AM	0	0	0	0	0	0	0	1	0	0	2	0	3
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	1	0	0	2	0	1	1	12	0	0	13	1	31
APPROACH %	100%	0%	0%	67%	0%	33%	8%	92%	0%	0%	93%	7%	
APP/DEPART	1	/	2	3	/	0	13	/	14	14	/	15	0
BEGIN PEAK HR		7:00 AM											
VOLUMES	1	0	0	2	0	0	1	7	0	0	7	0	18
APPROACH %	100%	0%	0%	100%	0%	0%	13%	88%	0%	0%	100%	0%	
PEAK HR FACTOR		0.250			0.500			0.400			0.583		0.563
APP/DEPART	1	/	1	2	/	0	8	/	9	7	/	8	0
PM 03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
4:15 PM	0	0	0	0	0	0	0	2	0	0	3	0	5
4:30 PM	0	0	0	0	0	0	0	2	0	0	1	1	4
4:45 PM	0	0	0	0	0	1	0	1	0	0	0	0	2
5:00 PM	0	0	0	0	0	0	0	1	0	0	1	0	2
5:15 PM	1	0	0	0	0	0	0	0	0	0	0	0	1
5:30 PM	0	0	0	1	0	0	1	1	0	0	0	0	3
5:45 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
VOLUMES	1	0	0	1	0	1	1	7	0	0	7	1	19
APPROACH %	100%	0%	0%	50%	0%	50%	13%	88%	0%	0%	88%	13%	
APP/DEPART	1	/	2	2	/	0	8	/	8	8	/	9	0
BEGIN PEAK HR		4:15 PM											
VOLUMES	0	0	0	0	0	1	0	6	0	0	5	1	13
APPROACH %	0%	0%	0%	0%	0%	100%	0%	100%	0%	0%	83%	17%	
PEAK HR FACTOR		0.000			0.250			0.750			0.500		0.650
APP/DEPART	0	/	1	1	/	0	6	/	6	6	/	6	0

U-TURNS

NB	SB	EB	WB	TTL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

RTOR

NRR	SRR	ERR	WRR
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	1	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	1	0	0

0	0	0	0

0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	1	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	1	0	0

0	1	0	0

Mariposa

NORTH SIDE

Main WEST SIDE — EAST SIDE **Main**

SOUTH SIDE

Mariposa

INTERSECTION TURNING MOVEMENT COUNTS

T1218

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Hesperia	PROJECT #:	SC2468
Tue, Jan 7, 20	NORTH & SOUTH:	Mountain Vista	LOCATION #:	23
	EAST & WEST:	Main	CONTROL:	SIGNAL

NOTES:

Queue WB PM 4:12:30 - 4:12:51; EB PM 4:02:10 - 4:02:26, 4:07:16-4:07:28, 4:45:30- 4:45:42

AM PM MD OTHER OTHER — ▲ N ◄ W E ► S ▼

Add U-Turns to Left Turns

		NORTHBOUND (Mountain Vista)			SOUTHBOUND (Mountain Vista)			EASTBOUND (Main)			WESTBOUND (Main)			
	LANES:	NL 1.5	NT 1.5	NR 2	SL 1.3	ST 0.3	SR 0.3	EL 2	ET 4	ER 0	WL 1	WT 3	WR 1	TOTAL
AM	7:00 AM	4	0	6	11	1	0	1	289	3	18	334	8	675
	7:15 AM	3	0	8	6	1	2	2	226	6	11	366	13	644
	7:30 AM	3	1	3	7	0	3	5	224	2	15	398	19	680
	7:45 AM	3	0	6	19	0	4	7	256	6	15	311	13	640
	8:00 AM	3	0	5	12	1	4	8	238	1	18	332	12	634
	8:15 AM	5	2	7	12	3	3	6	221	6	11	320	17	613
	8:30 AM	8	0	4	9	0	0	5	217	1	22	268	10	544
	8:45 AM	6	1	8	10	1	0	2	208	2	17	309	13	577
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	35	4	47	86	7	16	36	1,879	27	127	2,638	105	5,007
	APPROACH %	41%	5%	55%	79%	6%	15%	2%	97%	1%	4%	92%	4%	
	APP/DEPART	86	/	126	109	/	159	1,942	/	2,014	2,870	/	2,708	0
	BEGIN PEAK HR		7:00 AM											
	VOLUMES	13	1	23	43	2	9	15	995	17	59	1,409	53	2,639
	APPROACH %	35%	3%	62%	80%	4%	17%	1%	97%	2%	4%	93%	3%	
	PEAK HR FACTOR		0.841			0.587			0.876			0.880		0.970
	APP/DEPART	37	/	59	54	/	77	1,027	/	1,062	1,521	/	1,441	0
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	7	0	3	17	0	1	8	529	4	16	387	16	988
	4:15 PM	9	3	6	14	2	1	9	452	4	14	378	15	907
	4:30 PM	6	0	5	24	1	4	9	475	0	14	392	20	950
	4:45 PM	7	2	10	20	4	0	21	454	8	14	344	17	901
	5:00 PM	3	1	6	21	1	0	21	474	2	14	386	17	946
	5:15 PM	13	1	7	12	1	2	11	454	6	27	337	10	881
	5:30 PM	11	2	7	17	2	1	16	485	2	25	334	12	914
	5:45 PM	15	1	5	18	0	1	17	526	5	18	360	9	975
	VOLUMES	71	10	49	143	11	10	112	3,849	31	142	2,918	116	7,462
	APPROACH %	55%	8%	38%	87%	7%	6%	3%	96%	1%	4%	92%	4%	
	APP/DEPART	130	/	175	164	/	184	3,992	/	4,041	3,176	/	3,062	0
	BEGIN PEAK HR		4:00 PM											
	VOLUMES	29	5	24	75	7	6	47	1,910	16	58	1,501	68	3,746
	APPROACH %	50%	9%	41%	85%	8%	7%	2%	97%	1%	4%	92%	4%	
	PEAK HR FACTOR		0.763			0.759			0.912			0.955		0.948
	APP/DEPART	58	/	100	88	/	81	1,973	/	2,009	1,627	/	1,556	0

U-TURNS

NB	SB	EB	WB	TTL
0	0	1	1	2
0	0	1	0	1
0	0	3	0	3
0	0	5	0	5
0	0	3	0	3
0	0	2	0	2
0	0	2	1	3
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	19	2	21
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	3	0	3
0	0	6	0	6
0	0	2	0	2
0	0	9	0	9
0	0	16	0	16
0	0	7	0	7
0	0	9	0	9
0	0	11	0	11
0	0	63	0	63

RTOR

NRR	SRR	ERR	WRR
0	0	0	1
6	1	0	1
2	2	0	1
5	2	1	0
5	3	0	2
5	2	4	0
3	0	0	1
7	0	0	3
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
39	10	5	9
19	5	1	3
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	1
4	0	0	2
3	1	0	4
7	0	2	7
4	0	0	1
5	1	0	2
1	0	0	4
3	0	0	2
27	2	2	23
14	1	2	14

Mountain Vista

NORTH SIDE

Main WEST SIDE EAST SIDE **Main**

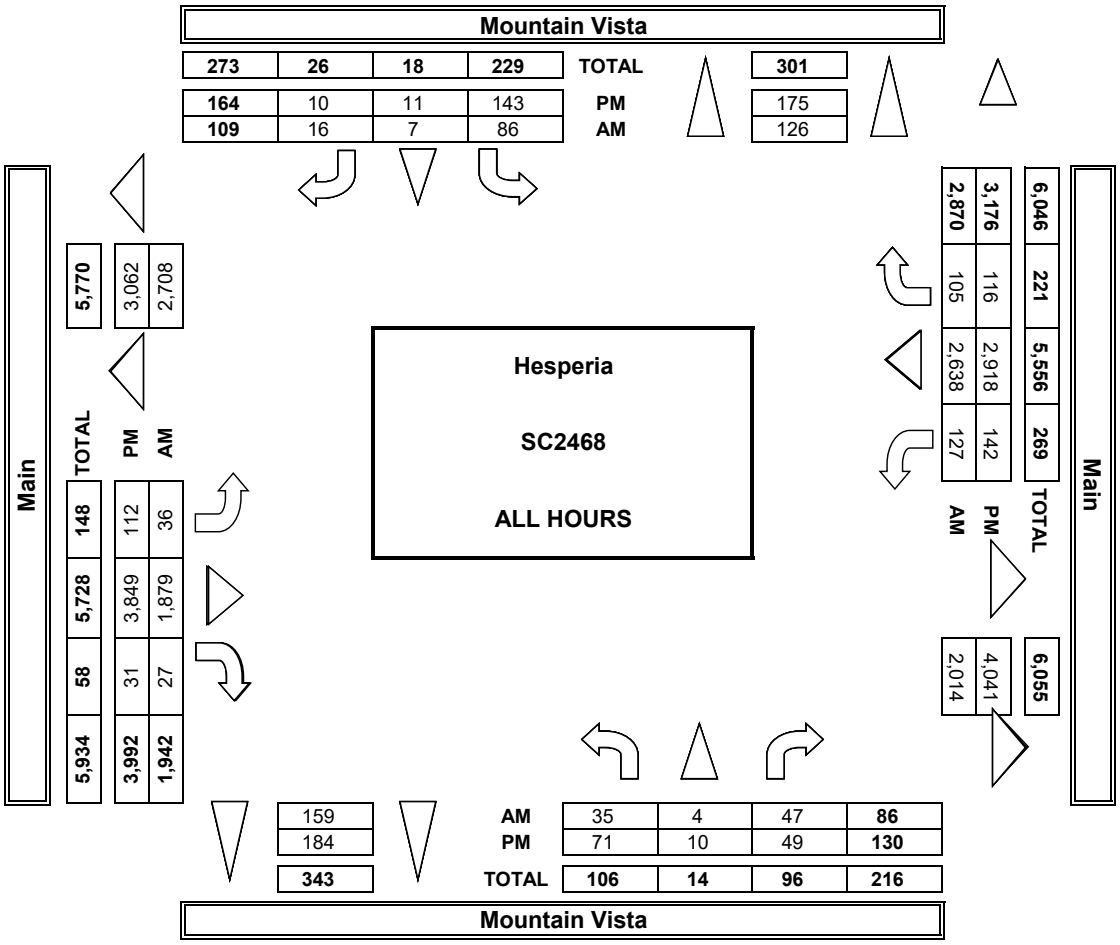
SOUTH SIDE

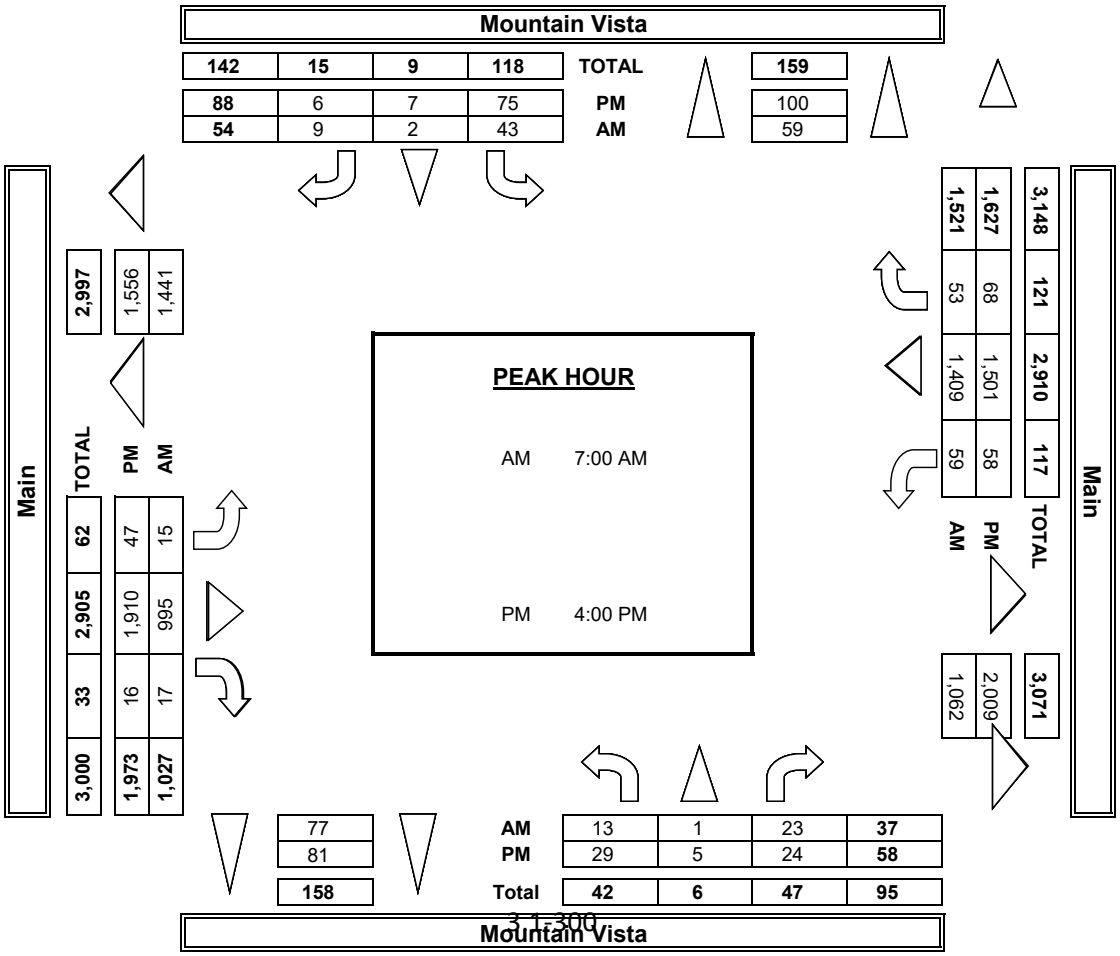
Mountain Vista

		ALL PED AND BIKE					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS				
		E SIDE	W SIDE	S SIDE	N SIDE	TOTAL	E SIDE	W SIDE	S SIDE	N SIDE	TOTAL	ES	WS	SS	NS	TOTAL
AM	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	1	1	1	3	0	1	1	1	3	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:45 AM	0	0	1	0	1	0	0	1	0	1	0	0	0	0	0
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	1	2	1	4	0	1	2	1	4	0	0	0	0	0
PM	3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	3	3	0	6	0	3	3	0	6	0	0	0	0	0
	4:30 PM	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	2	3	1	6	0	2	2	0	4	0	0	1	1	2
	5:30 PM	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0
	5:45 PM	0	0	1	0	1	0	0	1	0	1	0	0	0	0	0
	TOTAL	0	7	7	1	15	0	7	6	0	13	0	0	1	1	2

AimTD LLC

TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: 1/7/20 TUESDAY	LOCATION:	Hesperia	PROJECT #:	SC2468
	NORTH & SOUTH:	Mountain Vista	LOCATION #:	23
	EAST & WEST:	Main	CONTROL:	SIGNAL

CLASS 1: PASSENGER VEHICLES

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

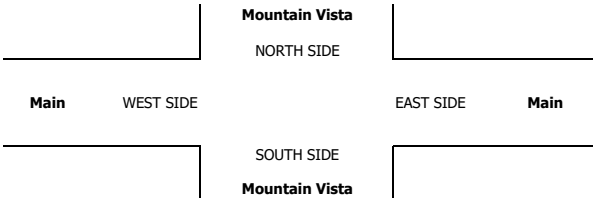
	NORTHBOUND Mountain Vista			SOUTHBOUND Mountain Vista			EASTBOUND Main			WESTBOUND Main			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1.5	1.5	2	1.3	0.3	0.3	2	4	0	1	3	1	
7:00 AM	4	0	5	9	1	0	1	258	3	15	313	8	617
7:15 AM	3	0	5	5	1	2	1	211	3	10	344	11	596
7:30 AM	2	1	1	6	0	3	5	208	2	14	364	19	625
7:45 AM	2	0	5	18	0	4	7	230	5	11	279	13	574
8:00 AM	2	0	1	12	1	4	7	214	1	16	300	10	568
8:15 AM	3	2	5	12	3	2	5	201	6	7	291	17	554
8:30 AM	6	0	3	8	0	0	4	206	1	17	253	10	508
8:45 AM	5	1	6	9	1	0	2	179	0	15	280	13	511
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	27	4	31	79	7	15	32	1,707	21	105	2,424	101	4,553
APPROACH %	44%	6%	50%	78%	7%	15%	2%	97%	1%	4%	92%	4%	
APP/DEPART	62	/	118	101	/	132	1,760	/	1,818	2,630	/	2,485	0
BEGIN PEAK HR		7:00 AM											
VOLUMES	11	1	16	38	2	9	4	907	13	49	1,300	51	2,412
APPROACH %	39%	4%	57%	78%	4%	18%	0%	97%	1%	3%	93%	4%	
PEAK HR FACTOR		0.778			0.557			0.891			0.882		0.965
APP/DEPART	28	/	56	49	/	64	934	/	962	1,401	/	1,330	0
03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	7	0	2	16	0	1	8	490	4	15	376	16	935
4:15 PM	9	3	6	14	2	1	9	429	4	14	366	15	872
4:30 PM	5	0	4	23	1	4	8	449	0	13	375	20	902
4:45 PM	7	2	10	19	4	0	20	424	7	14	331	17	855
5:00 PM	3	1	6	21	1	0	19	453	2	14	377	17	914
5:15 PM	13	1	7	12	1	2	10	434	6	26	320	10	842
5:30 PM	11	2	6	17	2	1	15	469	2	25	321	12	883
5:45 PM	14	1	5	18	0	1	17	509	5	18	347	8	943
VOLUMES	69	10	46	140	11	10	106	3,657	30	139	2,813	115	7,146
APPROACH %	55%	8%	37%	87%	7%	6%	3%	96%	1%	5%	92%	4%	
APP/DEPART	125	/	172	161	/	180	3,793	/	3,843	3,067	/	2,951	0
BEGIN PEAK HR		5:00 PM											
VOLUMES	41	5	24	68	4	4	21	1,865	15	83	1,365	47	3,582
APPROACH %	59%	7%	34%	89%	5%	5%	1%	96%	1%	6%	91%	3%	
PEAK HR FACTOR		0.833			0.864			0.914			0.916		0.950
APP/DEPART	70	/	73	76	/	102	1,941	/	1,957	1,495	/	1,450	0

U-TURNS

NB	SB	EB	WB	TTL
0	0	1	1	2
0	0	1	0	1
0	0	3	0	3
0	0	5	0	5
0	0	3	0	3
0	0	2	0	2
0	0	2	0	2
0	0	2	0	2
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	19	1	20
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	3	0	3
0	0	6	0	6
0	0	2	0	2
0	0	8	0	8
0	0	15	0	15
0	0	6	0	6
0	0	8	0	8
0	0	11	0	11
0	0	59	0	59

RTOR

NRR	SRR	ERR	WRR
0	0	0	0
5	0	0	1
4	1	0	1
1	2	0	1
4	2	1	0
1	3	0	2
4	1	4	0
3	0	0	1
6	0	0	3
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
28	9	5	9
14	5	1	3
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	1
0	0	0	2
2	1	0	4
7	0	2	7
4	0	0	1
5	1	0	2
1	0	0	4
3	0	0	2
26	2	2	23
13	1	0	9



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Hesperia	PROJECT #:	SC2468
1/7/20	NORTH & SOUTH:	Mountain Vista	LOCATION #:	23
TUESDAY	EAST & WEST:	Main	CONTROL:	SIGNAL

CLASS 2: 2-AXLE WORK VEHICLES/ TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

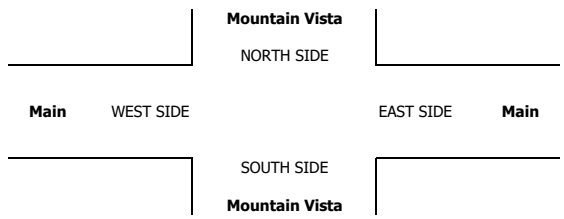
		NORTHBOUND (Mountain Vista)			SOUTHBOUND (Mountain Vista)			EASTBOUND (Main)			WESTBOUND (Main)			
	LANES:	NL 1.5	NT 1.5	NR 2	SL 1.3	ST 0.3	SR 0.3	EL 2	ET 4	ER 0	WL 1	WT 3	WR 1	TOTAL
AM	7:00 AM	0	0	0	1	0	0	0	17	0	1	14	0	33
	7:15 AM	0	0	1	0	0	0	1	9	2	0	12	0	25
	7:30 AM	0	0	1	1	0	0	0	12	0	0	23	0	37
	7:45 AM	1	0	0	1	0	0	0	18	1	2	14	0	37
	8:00 AM	1	0	1	0	0	0	1	16	0	0	18	1	38
	8:15 AM	1	0	0	0	0	1	1	13	0	2	15	0	33
	8:30 AM	0	0	0	1	0	0	1	6	0	1	8	0	17
	8:45 AM	0	0	0	1	0	0	0	16	1	0	16	0	34
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	3	0	3	5	0	1	4	107	4	6	120	1	254
	APPROACH %	50%	0%	50%	83%	0%	17%	3%	93%	3%	5%	94%	1%	
	APP/DEPART	6	/	5	6	/	10	115	/	115	127	/	124	0
	BEGIN PEAK HR		7:30 AM											
	VOLUMES	3	0	2	2	0	1	2	59	1	4	70	1	145
	APPROACH %	60%	0%	40%	67%	0%	33%	3%	95%	2%	5%	93%	1%	
	PEAK HR FACTOR		0.625			0.750			0.816			0.815		0.954
	APP/DEPART	5	/	3	3	/	5	62	/	63	75	/	74	0
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	1	0	0	0	27	0	1	8	0	37
	4:15 PM	0	0	0	0	0	0	0	16	0	0	4	0	20
	4:30 PM	1	0	1	1	0	0	1	19	0	0	4	0	27
	4:45 PM	0	0	0	1	0	0	1	18	0	0	8	0	28
	5:00 PM	0	0	0	0	0	0	2	17	0	0	4	0	23
	5:15 PM	0	0	0	0	0	0	1	12	0	1	12	0	26
	5:30 PM	0	0	1	0	0	0	1	8	0	0	9	0	19
	5:45 PM	0	0	0	0	0	0	0	8	0	0	11	1	20
	VOLUMES	1	0	2	3	0	0	6	125	0	2	60	1	200
	APPROACH %	33%	0%	67%	100%	0%	0%	5%	95%	0%	3%	95%	2%	
	APP/DEPART	3	/	3	3	/	2	131	/	130	63	/	65	0
	BEGIN PEAK HR		4:00 PM											
	VOLUMES	1	0	1	3	0	0	1	80	0	1	24	0	112
	APPROACH %	50%	0%	50%	100%	0%	0%	1%	98%	0%	4%	96%	0%	
	PEAK HR FACTOR		0.250			0.750			0.759			0.694		0.757
	APP/DEPART	2	/	1	3	/	1	82	/	84	25	/	26	0

U-TURNS

NB	SB	EB	WB	TTL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	4	0	4

RTOR

NRR	SRR	ERR	WRR
0	0	0	0
1	0	0	0
0	0	0	0
0	0	0	0
1	0	0	0
0	1	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
2	1	0	0
1	1	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
1	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
1	0	0	0
1	0	0	0



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Hesperia	PROJECT #:	SC2468
1/7/20	NORTH & SOUTH:	Mountain Vista	LOCATION #:	23
TUESDAY	EAST & WEST:	Main	CONTROL:	SIGNAL

CLASS 3: 3-AXLE TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

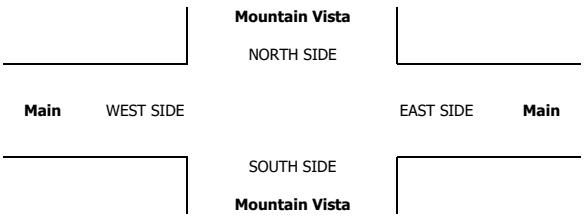
		NORTHBOUND Mountain Vista			SOUTHBOUND Mountain Vista			EASTBOUND Main			WESTBOUND Main			
	LANES:	NL 1.5	NT 1.5	NR 2	SL 1.3	ST 0.3	SR 0.3	EL 2	ET 4	ER 0	WL 1	WT 3	WR 1	TOTAL
AM	7:00 AM	0	0	1	0	0	0	0	3	0	0	0	0	4
	7:15 AM	0	0	2	0	0	0	0	2	0	0	2	0	6
	7:30 AM	0	0	1	0	0	0	0	1	0	1	2	0	5
	7:45 AM	0	0	1	0	0	0	0	1	0	0	7	0	9
	8:00 AM	0	0	3	0	0	0	0	1	0	0	3	1	8
	8:15 AM	0	0	2	0	0	0	0	0	0	0	4	0	6
	8:30 AM	0	0	1	0	0	0	0	2	0	0	3	0	6
	8:45 AM	0	0	2	0	0	0	0	5	1	0	3	0	11
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	13	0	0	0	0	15	1	1	24	1	55
	APPROACH %	0%	0%	100%	0%	0%	0%	0%	94%	6%	4%	92%	4%	
	APP/DEPART	13	/	1	0	/	2	16	/	28	26	/	24	0
	BEGIN PEAK HR		8:00 AM											
	VOLUMES	0	0	8	0	0	0	0	8	1	0	13	1	31
	APPROACH %	0%	0%	100%	0%	0%	0%	0%	89%	11%	0%	93%	7%	
	PEAK HR FACTOR		0.667			0.000			0.375			0.875		0.705
	APP/DEPART	8	/	1	0	/	1	9	/	16	14	/	13	0
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	3	0	0	0	0	3
	4:15 PM	0	0	0	0	0	0	0	2	0	0	1	0	3
	4:30 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
	4:45 PM	0	0	0	0	0	0	0	5	0	0	2	0	7
	5:00 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
	5:15 PM	0	0	0	0	0	0	0	5	0	0	2	0	7
	5:30 PM	0	0	0	0	0	0	0	1	0	0	1	0	2
	5:45 PM	0	0	0	0	0	0	0	2	0	0	1	0	3
	VOLUMES	0	0	0	0	0	0	0	19	0	0	8	0	27
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	100%	0%	
	APP/DEPART	0	/	0	0	/	0	19	/	19	8	/	8	0
	BEGIN PEAK HR		4:45 PM											
	VOLUMES	0	0	0	0	0	0	0	12	0	0	5	0	17
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	100%	0%	
	PEAK HR FACTOR		0.000			0.000			0.600			0.625		0.607
	APP/DEPART	0	/	0	0	/	0	12	/	12	5	/	5	0

U-TURNS

NB	SB	EB	WB	TTL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

RTOR

NRR	SRR	ERR	WRR
1	0	0	0
1	0	0	0
1	0	0	0
1	0	0	0
3	0	0	0
1	0	0	0
0	0	0	0
1	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
9	0	0	0
5	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Hesperia	PROJECT #:	SC2468
1/7/20	NORTH & SOUTH:	Mountain Vista	LOCATION #:	23
TUESDAY	EAST & WEST:	Main	CONTROL:	SIGNAL

CLASS 4: 4 OR MORE AXLE TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N ◄ W E ► S ▼

		NORTHBOUND Mountain Vista			SOUTHBOUND Mountain Vista			EASTBOUND Main			WESTBOUND Main			
	LANES:	NL 1.5	NT 1.5	NR 2	SL 1.3	ST 0.3	SR 0.3	EL 2	ET 4	ER 0	WL 1	WT 3	WR 1	TOTAL
AM	7:00 AM	0	0	0	1	0	0	0	8	0	2	5	0	16
	7:15 AM	0	0	0	1	0	0	0	2	1	1	6	2	13
	7:30 AM	1	0	0	0	0	0	0	2	0	0	8	0	11
	7:45 AM	0	0	0	0	0	0	0	5	0	2	8	0	15
	8:00 AM	0	0	0	0	0	0	0	7	0	2	10	0	19
	8:15 AM	1	0	0	0	0	0	0	5	0	2	9	0	17
	8:30 AM	2	0	0	0	0	0	0	2	0	3	2	0	9
	8:45 AM	1	0	0	0	0	0	0	6	0	2	8	0	17
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	5	0	0	2	0	0	0	37	1	14	56	2	117
	APPROACH %	100%	0%	0%	100%	0%	0%	0%	97%	3%	19%	78%	3%	
	APP/DEPART	5	/	2	2	/	15	38	/	39	72	/	61	0
	BEGIN PEAK HR		7:30 AM											
	VOLUMES	4	0	0	0	0	0	0	20	0	9	29	0	62
	APPROACH %	100%	0%	0%	0%	0%	0%	0%	100%	0%	24%	76%	0%	
	PEAK HR FACTOR		0.500			0.000			0.714			0.792		0.816
	APP/DEPART	4	/	0	0	/	9	20	/	20	38	/	33	0
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	1	0	0	0	0	9	0	0	1	0	11
	4:15 PM	0	0	0	0	0	0	0	2	0	0	4	0	6
	4:30 PM	0	0	0	0	0	0	0	6	0	1	10	0	17
	4:45 PM	0	0	0	0	0	0	0	6	1	0	2	0	9
	5:00 PM	0	0	0	0	0	0	0	2	0	0	4	0	6
	5:15 PM	0	0	0	0	0	0	0	3	0	0	3	0	6
	5:30 PM	0	0	0	0	0	0	0	5	0	0	3	0	8
	5:45 PM	1	0	0	0	0	0	0	7	0	0	1	0	9
	VOLUMES	1	0	1	0	0	0	0	40	1	1	28	0	72
	APPROACH %	50%	0%	50%	0%	0%	0%	0%	98%	2%	3%	97%	0%	
	APP/DEPART	2	/	0	0	/	2	41	/	41	29	/	29	0
	BEGIN PEAK HR		4:00 PM											
	VOLUMES	0	0	1	0	0	0	0	23	1	1	17	0	43
	APPROACH %	0%	0%	100%	0%	0%	0%	0%	96%	4%	6%	94%	0%	
	PEAK HR FACTOR		0.250			0.000			0.667			0.409		0.632
	APP/DEPART	1	/	0	0	/	2	24	/	24	18	/	17	0

U-TURNS

NB	SB	EB	WB	TTL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Hesperia	PROJECT #:	SC2468
1/7/20	NORTH & SOUTH:	Mountain Vista	LOCATION #:	23
TUESDAY	EAST & WEST:	Main	CONTROL:	SIGNAL

CLASS 5:	NOTES:
RV	

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND Mountain Vista			SOUTHBOUND Mountain Vista			EASTBOUND Main			WESTBOUND Main			
	LANES:	NL 1.5	NT 1.5	NR 2	SL 1.3	ST 0.3	SR 0.3	EL 2	ET 4	ER 0	WL 1	WT 3	WR 1	TOTAL
AM	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	0	1	0	1
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	1	0	1
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	0%	
	APP/DEPART	0	/	0	0	/	0	0	/	0	1	/	1	0
	BEGIN PEAK HR		7:00 AM											
	VOLUMES	0	0	0	0	0	0	0	0	0	0	1	0	1
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	0%	
	PEAK HR FACTOR		0.000			0.000			0.000			0.250		0.250
	APP/DEPART	0	/	0	0	/	0	0	/	0	1	/	1	0
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	1	0	1
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	0%	
	APP/DEPART	0	/	0	0	/	0	0	/	0	1	/	1	0
	BEGIN PEAK HR		3:30 PM											
	VOLUMES	0	0	0	0	0	0	0	0	0	0	1	0	1
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	0%	
	PEAK HR FACTOR		0.000			0.000			0.000			0.250		0.250
	APP/DEPART	0	/	0	0	/	0	0	/	0	1	/	1	0

U-TURNS

NB	SB	EB	WB	TTL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Hesperia	PROJECT #:	SC2468
1/7/20	NORTH & SOUTH:	Mountain Vista	LOCATION #:	23
TUESDAY	EAST & WEST:	Main	CONTROL:	SIGNAL

CLASS 6:	NOTES:	AM / PM / MD / OTHER / OTHER
BUSES		▲ N ◄ W E ► S ▼

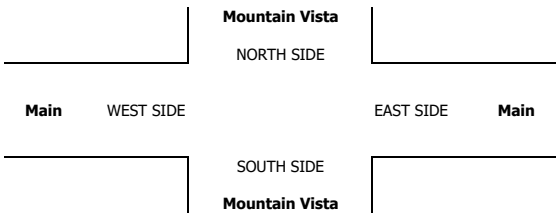
	NORTHBOUND Mountain Vista			SOUTHBOUND Mountain Vista			EASTBOUND Main			WESTBOUND Main			
LANES:	NL 1.5	NT 1.5	NR 2	SL 1.3	ST 0.3	SR 0.3	EL 2	ET 4	ER 0	WL 1	WT 3	WR 1	TOTAL
AM 7:00 AM	0	0	0	0	0	0	0	3	0	0	2	0	5
7:15 AM	0	0	0	0	0	0	0	2	0	0	2	0	4
7:30 AM	0	0	0	0	0	0	0	1	0	0	1	0	2
7:45 AM	0	0	0	0	0	0	0	2	0	0	2	0	4
8:00 AM	0	0	0	0	0	0	0	0	0	0	1	0	1
8:15 AM	0	0	0	0	0	0	0	2	0	0	1	0	3
8:30 AM	0	0	0	0	0	0	0	1	0	0	2	0	3
8:45 AM	0	0	0	0	0	0	0	2	0	0	2	0	4
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	0	0	0	0	0	0	0	13	0	0	13	0	26
APPROACH %	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	100%	0%	
APP/DEPART	0	/	0	0	/	0	13	/	13	13	/	13	0
BEGIN PEAK HR		7:00 AM											
VOLUMES	0	0	0	0	0	0	0	8	0	0	7	0	15
APPROACH %	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	100%	0%	
PEAK HR FACTOR		0.000			0.000			0.667			0.875		0.750
APP/DEPART	0	/	0	0	/	0	8	/	8	7	/	7	0
PM 03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	0	0	0	2	0	2
4:15 PM	0	0	0	0	0	0	0	3	0	0	2	0	5
4:30 PM	0	0	0	0	0	0	0	1	0	0	2	0	3
4:45 PM	0	0	0	0	0	0	0	1	0	0	1	0	2
5:00 PM	0	0	0	0	0	0	0	1	0	0	1	0	2
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	2	0	0	0	0	2
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	0	0	0	0	0	0	0	8	0	0	8	0	16
APPROACH %	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	100%	0%	
APP/DEPART	0	/	0	0	/	0	8	/	8	8	/	8	0
BEGIN PEAK HR		4:15 PM											
VOLUMES	0	0	0	0	0	0	0	6	0	0	6	0	12
APPROACH %	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	100%	0%	
PEAK HR FACTOR		0.000			0.000			0.500			0.750		0.600
APP/DEPART	0	/	0	0	/	0	6	/	6	6	/	6	0

U-TURNS

NB	SB	EB	WB	TTL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

RTOR

NRR	SRR	ERR	WRR
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0



INTERSECTION TURNING MOVEMENT COUNTS

T1218

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Hesperia	PROJECT #:	SC2468
Tue, Jan 7, 20	NORTH & SOUTH:	Escondido	LOCATION #:	24
	EAST & WEST:	Main	CONTROL:	SIGNAL

NOTES:

Queue WB PM 4:00:30 - 4:00:51

AM / PM / MD / OTHER / OTHER — ▲ N / ◄ W / E ► / S ▼

Add U-Turns to Left Turns

		NORTHBOUND (Escondido)			SOUTHBOUND (Escondido)			EASTBOUND (Main)			WESTBOUND (Main)			
	LANES:	NL 2	NT 1	NR 1	SL 1	ST 0.5	SR 0.5	EL 1	ET 3	ER 1	WL 2	WT 2	WR 1	TOTAL
AM	7:00 AM	156	3	76	0	1	2	0	168	129	61	206	1	803
	7:15 AM	165	6	85	1	1	4	2	180	75	88	195	1	803
	7:30 AM	168	8	94	0	1	3	0	177	50	57	264	1	823
	7:45 AM	152	4	62	0	0	3	2	197	74	54	210	0	758
	8:00 AM	137	4	61	1	1	4	3	183	69	82	222	0	767
	8:15 AM	139	0	57	0	0	0	3	172	72	75	200	1	719
	8:30 AM	121	2	58	1	2	2	2	162	61	54	204	0	669
	8:45 AM	125	3	56	0	2	3	6	164	45	50	194	1	649
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	1,163	30	549	3	8	21	18	1,403	575	521	1,695	5	5,991
	APPROACH %	67%	2%	32%	9%	25%	66%	1%	70%	29%	23%	76%	0%	
	APP/DEPART	1,742	/	53	32	/	1,106	1,996	/	1,955	2,221	/	2,877	0
	BEGIN PEAK HR		7:00 AM											
	VOLUMES	641	21	317	1	3	12	4	722	328	260	875	3	3,187
	APPROACH %	65%	2%	32%	6%	19%	75%	0%	69%	31%	23%	77%	0%	
	PEAK HR FACTOR		0.906			0.667			0.887			0.884		0.968
	APP/DEPART	979	/	28	16	/	592	1,054	/	1,040	1,138	/	1,527	0
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	137	11	51	22	12	19	17	350	151	80	255	2	1,107
	4:15 PM	143	23	62	15	11	31	19	304	145	97	234	1	1,085
	4:30 PM	138	15	50	11	9	23	13	341	150	81	268	3	1,102
	4:45 PM	149	9	54	21	10	16	13	322	138	84	215	3	1,034
	5:00 PM	151	11	43	18	8	12	10	322	156	87	247	2	1,067
	5:15 PM	130	14	58	11	10	12	10	329	164	93	251	3	1,085
	5:30 PM	141	12	52	9	12	14	14	382	157	103	235	3	1,134
	5:45 PM	144	13	40	16	7	12	18	306	169	123	212	2	1,062
	VOLUMES	1,133	108	410	123	79	139	114	2,656	1,230	748	1,917	19	8,676
	APPROACH %	69%	7%	25%	36%	23%	41%	3%	66%	31%	28%	71%	1%	
	APP/DEPART	1,651	/	241	341	/	2,057	4,000	/	3,190	2,684	/	3,188	0
	BEGIN PEAK HR		5:00 PM											
	VOLUMES	566	50	193	54	37	50	52	1,339	646	406	945	10	4,348
	APPROACH %	70%	6%	24%	38%	26%	35%	3%	66%	32%	30%	69%	1%	
	PEAK HR FACTOR		0.987			0.928			0.921			0.981		0.959
	APP/DEPART	809	/	112	141	/	1,090	2,037	/	1,586	1,361	/	1,560	0

U-TURNS

NB	SB	EB	WB	TTL
0	0	0	0	
1	0	0	0	1
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
1	0	0	0	1
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
2	0	0	0	2
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
1	0	0	0	1
0	0	0	0	0
1	0	0	1	2

RTOR

NRR	SRR	ERR	WRR
0	0	0	0
28	1	50	0
33	0	26	0
58	0	11	0
38	0	24	0
44	2	24	0
29	0	24	1
34	0	22	0
33	0	21	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
297	3	202	1
157	1	111	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
14	2	50	1
26	2	67	0
20	2	47	0
17	5	65	1
20	1	49	0
22	0	40	2
22	1	45	0
14	1	48	0
155	14	411	4
78	3	182	2

Escondido

NORTH SIDE

Main WEST SIDE — EAST SIDE **Main**

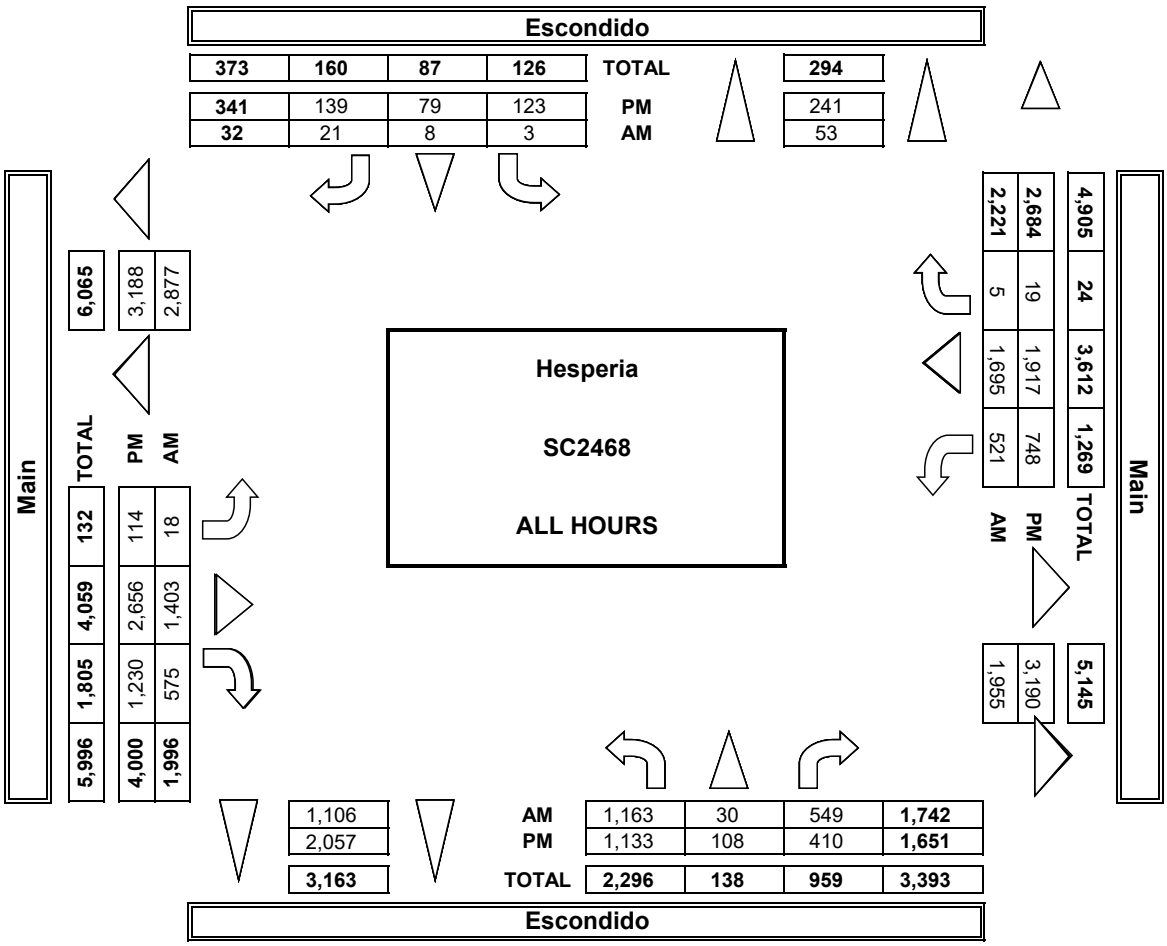
SOUTH SIDE

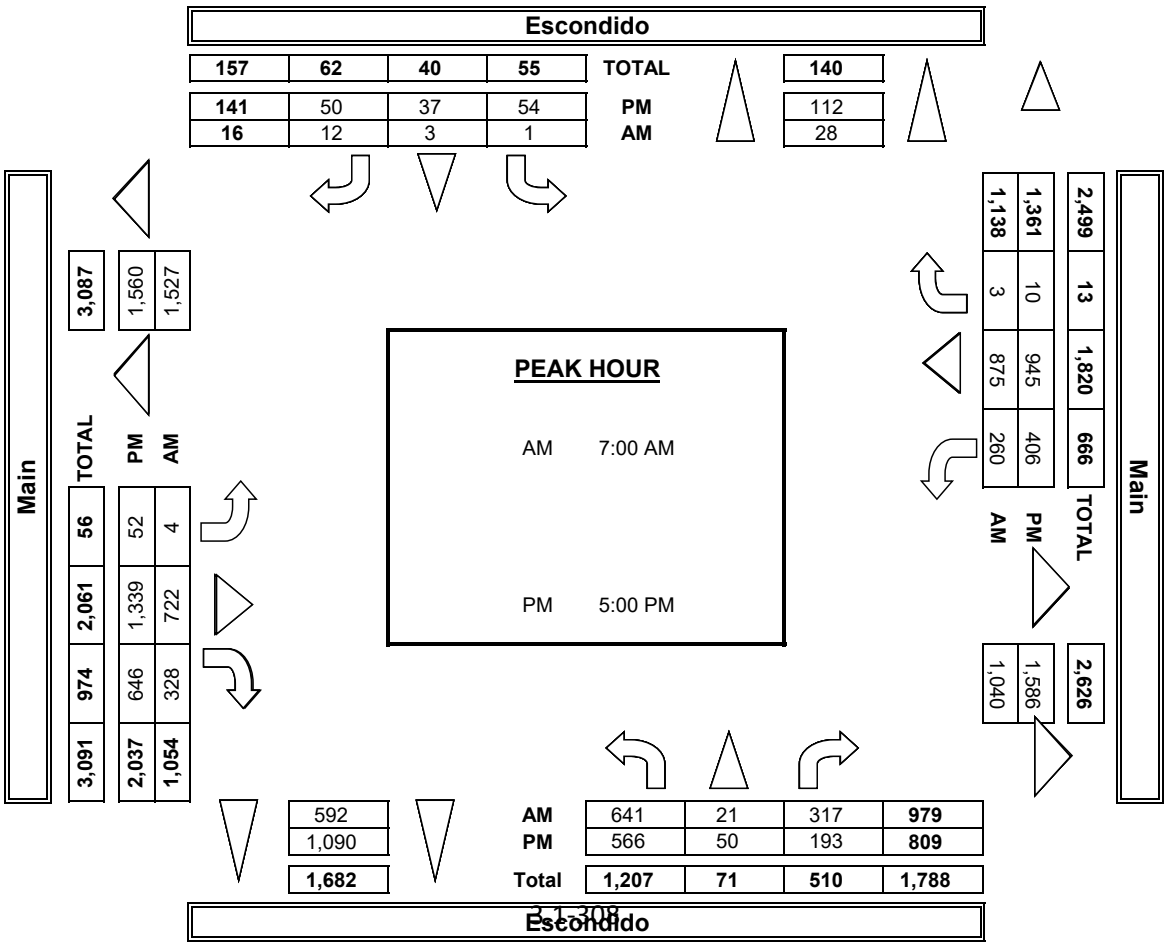
Escondido

		ALL PED AND BIKE					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS				
		E SIDE	W SIDE	S SIDE	N SIDE	TOTAL	E SIDE	W SIDE	S SIDE	N SIDE	TOTAL	ES	WS	SS	NS	TOTAL
AM	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:15 AM	1	0	0	0	1	1	0	0	0	1	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:45 AM	1	0	1	0	2	1	0	1	0	2	0	0	0	0	0
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	2	0	1	0	3	2	0	1	0	3	0	0	0	0	0
PM	3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	1	0	1	0	0	1	0	1	0	0	0	0	0
	4:15 PM	0	0	2	0	2	0	0	2	0	2	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	1	1	0	0	0	0	0	0	0	0	1	1
	5:30 PM	0	0	1	0	1	0	0	1	0	1	0	0	0	0	0
	5:45 PM	0	0	1	0	1	0	0	1	0	1	0	0	0	0	0
	TOTAL	0	0	5	1	6	0	0	5	0	5	0	0	0	1	1

AimTD LLC

TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: 1/7/20 TUESDAY	LOCATION:	Hesperia	PROJECT #:	SC2468
	NORTH & SOUTH:	Escondido	LOCATION #:	24
	EAST & WEST:	Main	CONTROL:	SIGNAL

CLASS 1: PASSENGER VEHICLES

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

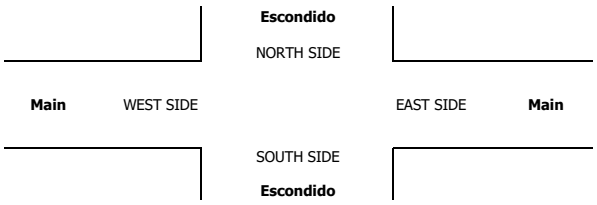
	NORTHBOUND Escondido			SOUTHBOUND Escondido			EASTBOUND Main			WESTBOUND Main			
LANES:	NL 2	NT 1	NR 1	SL 1	ST 0.5	SR 0.5	EL 1	ET 3	ER 1	WL 2	WT 2	WR 1	TOTAL
7:00 AM	152	3	73	0	1	2	0	150	116	61	182	1	741
7:15 AM	159	6	81	1	1	4	2	165	69	86	172	1	747
7:30 AM	162	8	90	0	1	3	0	165	44	53	241	1	768
7:45 AM	141	4	61	0	0	3	2	181	67	51	183	0	693
8:00 AM	128	4	56	1	1	4	2	164	64	78	199	0	701
8:15 AM	132	0	53	0	0	0	3	154	67	72	179	1	661
8:30 AM	115	2	56	1	2	2	2	149	58	46	184	0	617
8:45 AM	117	3	55	0	2	3	5	146	37	48	174	1	591
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	1,106	30	525	3	8	21	16	1,274	522	495	1,514	5	5,519
APPROACH %	67%	2%	32%	9%	25%	66%	1%	70%	29%	25%	75%	0%	
APP/DEPART	1,661	/	51	32	/	1,027	1,812	/	1,802	2,014	/	2,639	0
BEGIN PEAK HR		7:00 AM											
VOLUMES	613	21	305	1	3	12	4	661	296	251	778	3	2,949
APPROACH %	65%	2%	32%	6%	19%	75%	0%	69%	31%	24%	75%	0%	
PEAK HR FACTOR		0.904			0.667			0.903			0.875		0.960
APP/DEPART	940	/	28	16	/	551	961	/	967	1,032	/	1,403	0
03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	135	11	49	21	12	19	17	323	143	78	248	2	1,058
4:15 PM	140	23	60	15	11	31	18	282	135	96	223	1	1,035
4:30 PM	134	15	49	11	9	22	13	321	144	78	253	3	1,052
4:45 PM	145	9	51	21	10	16	13	300	133	83	208	3	992
5:00 PM	151	11	41	18	8	12	10	306	145	87	236	2	1,027
5:15 PM	129	14	58	11	10	12	10	316	162	92	236	3	1,053
5:30 PM	139	12	52	9	12	14	13	374	154	102	223	3	1,107
5:45 PM	140	13	40	15	7	12	18	296	161	122	201	2	1,027
VOLUMES	1,113	108	400	121	79	138	112	2,518	1,177	738	1,828	19	8,351
APPROACH %	69%	7%	25%	36%	23%	41%	3%	66%	31%	29%	71%	1%	
APP/DEPART	1,621	/	239	338	/	1,995	3,807	/	3,039	2,585	/	3,078	0
BEGIN PEAK HR		5:00 PM											
VOLUMES	558	50	191	53	37	50	51	1,292	622	403	896	10	4,214
APPROACH %	70%	6%	24%	38%	26%	36%	3%	66%	32%	31%	68%	1%	
PEAK HR FACTOR		0.985			0.921			0.908			0.989		0.952
APP/DEPART	800	/	111	140	/	1,063	1,965	/	1,536	1,309	/	1,504	0

U-TURNS

	NB	SB	EB	WB	TTL
7:00 AM	1	0	0	0	1
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	1	0	0	0	1
8:45 AM	0	0	0	0	0
9:00 AM	0	0	0	0	0
9:15 AM	0	0	0	0	0
9:30 AM	0	0	0	0	0
9:45 AM	0	0	0	0	0
	2	0	0	0	2
03:00 PM	0	0	0	0	0
3:15 PM	0	0	0	0	0
3:30 PM	0	0	0	0	0
3:45 PM	0	0	0	0	0
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	1	0	0	0	1
5:45 PM	0	0	0	0	0
	1	0	0	0	1

RTOR

	NRR 0	SRR 0	ERR 0	WRR 0
7:00 AM	27	1	46	0
7:15 AM	31	0	23	0
7:30 AM	55	0	11	0
7:45 AM	37	0	23	0
8:00 AM	43	2	22	0
8:15 AM	28	0	24	1
8:30 AM	32	0	21	0
8:45 AM	33	0	17	0
9:00 AM	0	0	0	0
9:15 AM	0	0	0	0
9:30 AM	0	0	0	0
9:45 AM	0	0	0	0
	286	3	187	1
	150	1	103	0
03:00 PM	0	0	0	0
3:15 PM	0	0	0	0
3:30 PM	0	0	0	0
3:45 PM	0	0	0	0
4:00 PM	13	2	46	1
4:15 PM	25	2	62	0
4:30 PM	19	2	45	0
4:45 PM	17	5	64	1
5:00 PM	19	1	48	0
5:15 PM	22	0	40	2
5:30 PM	22	1	45	0
5:45 PM	14	1	46	0
	151	14	396	4
	77	3	179	2



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Hesperia	PROJECT #:	SC2468
1/7/20	NORTH & SOUTH:	Escondido	LOCATION #:	24
TUESDAY	EAST & WEST:	Main	CONTROL:	SIGNAL

CLASS 2: 2-AXLE WORK VEHICLES/ TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND (Escondido)			SOUTHBOUND (Escondido)			EASTBOUND (Main)			WESTBOUND (Main)			
	LANES:	NL 2	NT 1	NR 1	SL 1	ST 0.5	SR 0.5	EL 1	ET 3	ER 1	WL 2	WT 2	WR 1	TOTAL
AM	7:00 AM	3	0	1	0	0	0	0	9	7	0	13	0	33
	7:15 AM	5	0	0	0	0	0	0	8	2	1	12	0	28
	7:30 AM	1	0	2	0	0	0	0	9	3	2	14	0	31
	7:45 AM	7	0	1	0	0	0	0	12	3	1	14	0	38
	8:00 AM	7	0	1	0	0	0	1	12	2	2	11	0	36
	8:15 AM	3	0	1	0	0	0	0	11	2	1	9	0	27
	8:30 AM	2	0	1	0	0	0	0	7	2	5	10	0	27
	8:45 AM	5	0	0	0	0	0	0	10	6	2	10	0	33
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	33	0	7	0	0	0	1	78	27	14	93	0	253
	APPROACH %	83%	0%	18%	0%	0%	0%	1%	74%	25%	13%	87%	0%	
	APP/DEPART	40	/	1	0	/	41	106	/	85	107	/	126	0
	BEGIN PEAK HR	7:15 AM												
	VOLUMES	20	0	4	0	0	0	1	41	10	6	51	0	133
	APPROACH %	83%	0%	17%	0%	0%	0%	2%	79%	19%	11%	89%	0%	
	PEAK HR FACTOR	0.750			0.000			0.867			0.891			0.875
	APP/DEPART	24	/	1	0	/	16	52	/	45	57	/	71	0
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	1	0	0	1	0	0	0	17	5	0	6	0	30
	4:15 PM	1	0	1	0	0	0	0	16	8	1	5	0	32
	4:30 PM	0	0	1	0	0	1	0	15	5	2	6	0	30
	4:45 PM	2	0	0	0	0	0	0	16	3	0	3	0	24
	5:00 PM	0	0	1	0	0	0	0	11	10	0	6	0	28
	5:15 PM	1	0	0	0	0	0	0	5	2	0	12	0	20
	5:30 PM	2	0	0	0	0	0	1	5	1	1	8	0	18
	5:45 PM	3	0	0	1	0	0	0	4	7	1	6	0	22
	VOLUMES	10	0	3	2	0	1	1	89	41	5	52	0	204
	APPROACH %	77%	0%	23%	67%	0%	33%	1%	68%	31%	9%	91%	0%	
	APP/DEPART	13	/	1	3	/	46	131	/	94	57	/	63	0
	BEGIN PEAK HR	4:00 PM												
	VOLUMES	4	0	2	1	0	1	0	64	21	3	20	0	116
	APPROACH %	67%	0%	33%	50%	0%	50%	0%	75%	25%	13%	87%	0%	
	PEAK HR FACTOR	0.750			0.500			0.885			0.719			0.906
	APP/DEPART	6	/	0	2	/	24	85	/	67	23	/	25	0

U-TURNS

NB	SB	EB	WB	TTL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Hesperia	PROJECT #:	SC2468
1/7/20	NORTH & SOUTH:	Escondido	LOCATION #:	24
TUESDAY	EAST & WEST:	Main	CONTROL:	SIGNAL

CLASS 3: 3-AXLE TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

	NORTHBOUND Escondido			SOUTHBOUND Escondido			EASTBOUND Main			WESTBOUND Main			
LANES:	NL 2	NT 1	NR 1	SL 1	ST 0.5	SR 0.5	EL 1	ET 3	ER 1	WL 2	WT 2	WR 1	TOTAL
7:00 AM	0	0	0	0	0	0	0	3	0	0	1	0	4
7:15 AM	0	0	0	0	0	0	0	5	0	0	3	0	8
7:30 AM	1	0	0	0	0	0	0	2	0	1	2	0	6
7:45 AM	1	0	0	0	0	0	0	0	1	0	5	0	7
8:00 AM	1	0	0	0	0	0	0	3	1	0	3	0	8
8:15 AM	1	0	0	0	0	0	0	2	0	1	2	0	6
8:30 AM	2	0	0	0	0	0	0	4	0	1	2	0	9
8:45 AM	0	0	0	0	0	0	0	3	1	0	2	0	6
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	6	0	0	0	0	0	0	22	3	3	20	0	54
APPROACH %	100%	0%	0%	0%	0%	0%	0%	88%	12%	13%	87%	0%	
APP/DEPART	6	/	0	0	/	6	25	/	22	23	/	26	0
BEGIN PEAK HR		7:45 AM											
VOLUMES	5	0	0	0	0	0	0	9	2	2	12	0	30
APPROACH %	100%	0%	0%	0%	0%	0%	0%	82%	18%	14%	86%	0%	
PEAK HR FACTOR		0.625			0.000			0.688			0.700		0.833
APP/DEPART	5	/	0	0	/	4	11	/	9	14	/	17	0
03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	3	1	0	0	0	4
4:15 PM	0	0	1	0	0	0	1	0	0	0	0	0	2
4:30 PM	1	0	0	0	0	0	0	1	0	0	0	0	2
4:45 PM	1	0	1	0	0	0	0	3	0	0	2	0	7
5:00 PM	0	0	0	0	0	0	0	2	0	0	2	0	4
5:15 PM	0	0	0	0	0	0	0	3	0	1	1	0	5
5:30 PM	0	0	0	0	0	0	0	0	1	0	0	0	1
5:45 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
VOLUMES	2	0	2	0	0	0	1	12	2	1	6	0	26
APPROACH %	50%	0%	50%	0%	0%	0%	7%	80%	13%	14%	86%	0%	
APP/DEPART	4	/	1	0	/	3	15	/	14	7	/	8	0
BEGIN PEAK HR		4:30 PM											
VOLUMES	2	0	1	0	0	0	0	9	0	1	5	0	18
APPROACH %	67%	0%	33%	0%	0%	0%	0%	100%	0%	17%	83%	0%	
PEAK HR FACTOR		0.375			0.000			0.750			0.750		0.643
APP/DEPART	3	/	0	0	/	1	9	/	10	6	/	7	0

U-TURNS

NB	SB	EB	WB	TTL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

RTOR

NRR	SRR	ERR	WRR
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	1	0
0	0	0	0
0	0	0	0
0	0	1	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	2	0

0	0	1	0

NB	SB	EB	WB	TTL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

NRR	SRR	ERR	WRR
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
1	0	0	0

0	0	0	0

Escondido

NORTH SIDE

Main WEST SIDE EAST SIDE **Main**

SOUTH SIDE

Escondido

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Hesperia	PROJECT #:	SC2468
1/7/20	NORTH & SOUTH:	Escondido	LOCATION #:	24
TUESDAY	EAST & WEST:	Main	CONTROL:	SIGNAL

CLASS 4: 4 OR MORE AXLE TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N ◄ W E ► S ▼

	NORTHBOUND Escondido			SOUTHBOUND Escondido			EASTBOUND Main			WESTBOUND Main			
LANES:	NL 2	NT 1	NR 1	SL 1	ST 0.5	SR 0.5	EL 1	ET 3	ER 1	WL 2	WT 2	WR 1	TOTAL
7:00 AM	1	0	0	0	0	0	0	5	2	0	8	0	16
7:15 AM	0	0	0	0	0	0	0	2	3	0	7	0	12
7:30 AM	3	0	0	0	0	0	0	0	2	1	6	0	12
7:45 AM	2	0	0	0	0	0	0	4	2	1	7	0	16
8:00 AM	0	0	0	0	0	0	0	3	2	0	8	0	13
8:15 AM	3	0	1	0	0	0	0	5	2	1	9	0	21
8:30 AM	1	0	0	0	0	0	0	1	1	1	7	0	11
8:45 AM	2	0	0	0	0	0	1	4	0	0	8	0	15
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	12	0	1	0	0	0	1	24	14	4	60	0	116
APPROACH %	92%	0%	8%	0%	0%	0%	3%	62%	36%	6%	94%	0%	
APP/DEPART	13	/	1	0	/	18	39	/	25	64	/	72	0
BEGIN PEAK HR		7:30 AM											
VOLUMES	8	0	1	0	0	0	0	12	8	3	30	0	62
APPROACH %	89%	0%	11%	0%	0%	0%	0%	60%	40%	9%	91%	0%	
PEAK HR FACTOR		0.563			0.000			0.714			0.825		0.738
APP/DEPART	9	/	0	0	/	11	20	/	13	33	/	38	0
03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	7	1	0	1	0	9
4:15 PM	0	0	0	0	0	0	0	3	2	0	4	0	9
4:30 PM	1	0	0	0	0	0	0	3	0	0	9	0	13
4:45 PM	1	0	1	0	0	0	0	3	2	0	2	0	9
5:00 PM	0	0	1	0	0	0	0	3	0	0	2	0	6
5:15 PM	0	0	0	0	0	0	0	4	0	0	2	0	6
5:30 PM	0	0	0	0	0	0	0	3	0	0	4	0	7
5:45 PM	0	0	0	0	0	0	0	6	1	0	4	0	11
VOLUMES	2	0	2	0	0	0	0	32	6	0	28	0	70
APPROACH %	50%	0%	50%	0%	0%	0%	0%	84%	16%	0%	100%	0%	
APP/DEPART	4	/	0	0	/	6	38	/	34	28	/	30	0
BEGIN PEAK HR		4:00 PM											
VOLUMES	2	0	1	0	0	0	0	16	5	0	16	0	40
APPROACH %	67%	0%	33%	0%	0%	0%	0%	76%	24%	0%	100%	0%	
PEAK HR FACTOR		0.375			0.000			0.656			0.444		0.769
APP/DEPART	3	/	0	0	/	5	21	/	17	16	/	18	0

U-TURNS

NB	SB	EB	WB	TTL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Hesperia	PROJECT #:	SC2468
1/7/20	NORTH & SOUTH:	Escondido	LOCATION #:	24
TUESDAY	EAST & WEST:	Main	CONTROL:	SIGNAL

CLASS 5: RV

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND Escondido			SOUTHBOUND Escondido			EASTBOUND Main			WESTBOUND Main			
	LANES:	NL 2	NT 1	NR 1	SL 1	ST 0.5	SR 0.5	EL 1	ET 3	ER 1	WL 2	WT 2	WR 1	TOTAL
AM	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	0	1	0	1
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	1	0	1
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	0%	
	APP/DEPART	0	/	0	0	/	0	0	/	0	1	/	1	0
	BEGIN PEAK HR		7:00 AM											
	VOLUMES	0	0	0	0	0	0	0	0	0	0	1	0	1
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	0%	
	PEAK HR FACTOR		0.000			0.000			0.000			0.250		0.250
	APP/DEPART	0	/	0	0	/	0	0	/	0	1	/	1	0
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	1	0	1
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	0%	
	APP/DEPART	0	/	0	0	/	0	0	/	0	1	/	1	0
	BEGIN PEAK HR		3:30 PM											
	VOLUMES	0	0	0	0	0	0	0	0	0	0	1	0	1
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	0%	
	PEAK HR FACTOR		0.000			0.000			0.000			0.250		0.250
	APP/DEPART	0	/	0	0	/	0	0	/	0	1	/	1	0

U-TURNS

NB	SB	EB	WB	TTL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

RTOR

NRR	SRR	ERR	WRR
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0

0	0	0	0

U-TURNS

NB	SB	EB	WB	TTL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

RTOR

NRR	SRR	ERR	WRR
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0

0	0	0	0

Escondido

NORTH SIDE

Main WEST SIDE EAST SIDE **Main**

SOUTH SIDE

Escondido

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Hesperia	PROJECT #:	SC2468
1/7/20	NORTH & SOUTH:	Escondido	LOCATION #:	24
TUESDAY	EAST & WEST:	Main	CONTROL:	SIGNAL

CLASS 6: BUSES

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

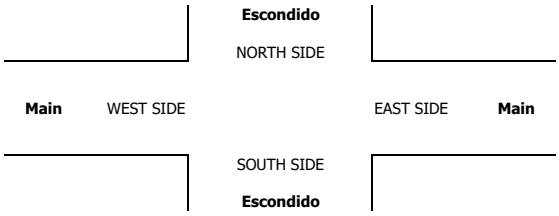
		NORTHBOUND Escondido			SOUTHBOUND Escondido			EASTBOUND Main			WESTBOUND Main			
	LANES:	NL 2	NT 1	NR 1	SL 1	ST 0.5	SR 0.5	EL 1	ET 3	ER 1	WL 2	WT 2	WR 1	TOTAL
AM	7:00 AM	0	0	2	0	0	0	0	1	4	0	2	0	9
	7:15 AM	1	0	4	0	0	0	0	0	1	1	1	0	8
	7:30 AM	1	0	2	0	0	0	0	1	1	0	1	0	6
	7:45 AM	1	0	0	0	0	0	0	0	1	1	0	0	3
	8:00 AM	1	0	4	0	0	0	0	1	0	2	1	0	9
	8:15 AM	0	0	2	0	0	0	0	0	1	0	1	0	4
	8:30 AM	1	0	1	0	0	0	0	1	0	1	1	0	5
	8:45 AM	1	0	1	0	0	0	0	1	1	0	0	0	4
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	6	0	16	0	0	0	0	5	9	5	7	0	48
	APPROACH %	27%	0%	73%	0%	0%	0%	0%	36%	64%	42%	58%	0%	
	APP/DEPART	22	/	0	0	/	14	14	/	21	12	/	13	0
	BEGIN PEAK HR		7:00 AM											
	VOLUMES	3	0	8	0	0	0	0	2	7	2	4	0	26
	APPROACH %	27%	0%	73%	0%	0%	0%	0%	22%	78%	33%	67%	0%	
	PEAK HR FACTOR		0.550			0.000			0.450			0.750		0.722
	APP/DEPART	11	/	0	0	/	9	9	/	10	6	/	7	0
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	1	0	2	0	0	0	0	0	1	2	0	0	6
	4:15 PM	2	0	0	0	0	0	0	3	0	0	1	0	6
	4:30 PM	2	0	0	0	0	0	0	1	1	1	0	0	5
	4:45 PM	0	0	1	0	0	0	0	0	0	0	0	0	1
	5:00 PM	0	0	0	0	0	0	0	0	1	0	1	0	2
	5:15 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
	5:30 PM	0	0	0	0	0	0	0	0	1	0	0	0	1
	5:45 PM	1	0	0	0	0	0	0	0	0	0	0	0	1
	VOLUMES	6	0	3	0	0	0	0	5	4	3	2	0	23
	APPROACH %	67%	0%	33%	0%	0%	0%	0%	56%	44%	60%	40%	0%	
	APP/DEPART	9	/	0	0	/	7	9	/	8	5	/	8	0
	BEGIN PEAK HR		4:00 PM											
	VOLUMES	5	0	3	0	0	0	0	4	2	3	1	0	18
	APPROACH %	63%	0%	38%	0%	0%	0%	0%	67%	33%	75%	25%	0%	
	PEAK HR FACTOR		0.667			0.000			0.500			0.500		0.750
	APP/DEPART	8	/	0	0	/	5	6	/	7	4	/	6	0

U-TURNS

NB	SB	EB	WB	TTL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

RTOR

NRR 0	SRR 0	ERR 0	WRR 0
1	0	1	0
2	0	0	0
1	0	0	0
0	0	0	0
1	0	0	0
1	0	0	0
1	0	0	0
0	0	1	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
7	0	2	0
4	0	1	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
1	0	2	0
1	0	2	0



INTERSECTION TURNING MOVEMENT COUNTS

T1218

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Tue, Jan 7, 20

LOCATION: Hesperia
NORTH & SOUTH: Escondido
EAST & WEST: Sultana

PROJECT #: SC2468
LOCATION #: 25
CONTROL: STOP E/W

NOTES:

AM / PM / MD / OTHER / OTHER

▲ N ◄ W E ► S ▼

Add U-Turns to Left Turns

		NORTHBOUND (Escondido)			SOUTHBOUND (Escondido)			EASTBOUND (Sultana)			WESTBOUND (Sultana)			
	LANES:	NL 0	NT 2	NR 0	SL 1	ST 2	SR 0	EL 0	ET 1	ER 0	WL 1	WT 0	WR 1	TOTAL
AM	7:00 AM	0	201	11	17	147	0	0	0	0	13	0	53	442
	7:15 AM	0	230	10	23	136	0	0	0	0	6	0	36	441
	7:30 AM	0	224	7	27	83	0	0	0	0	2	0	58	401
	7:45 AM	0	128	3	14	108	0	0	0	0	2	0	48	303
	8:00 AM	1	187	2	15	113	0	0	0	0	2	0	32	352
	8:15 AM	0	168	2	20	92	0	0	0	0	1	0	31	314
	8:30 AM	0	149	2	22	60	0	0	0	0	1	0	34	268
	8:45 AM	0	125	0	14	56	0	0	0	0	0	0	28	223
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	1	1,412	37	152	795	0	0	0	0	27	0	320	2,744
	APPROACH %	0%	97%	3%	16%	84%	0%	0%	0%	0%	8%	0%	92%	
	APP/DEPART	1,450	/	1,733	947	/	822	0	/	188	347	/	1	0
	BEGIN PEAK HR		7:00 AM											
	VOLUMES	0	783	31	81	474	0	0	0	0	23	0	195	1,587
	APPROACH %	0%	96%	4%	15%	85%	0%	0%	0%	0%	11%	0%	89%	
	PEAK HR FACTOR		0.848			0.846			0.000			0.826		0.898
	APP/DEPART	814	/	979	555	/	497	0	/	111	218	/	0	0
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	144	5	51	174	0	0	0	1	3	0	36	414
	4:15 PM	0	169	5	53	166	0	0	0	0	1	0	27	421
	4:30 PM	0	147	8	60	160	0	0	0	0	2	0	22	399
	4:45 PM	0	113	1	60	155	0	0	0	0	1	0	32	362
	5:00 PM	0	135	1	60	178	0	0	0	0	3	0	29	406
	5:15 PM	0	151	4	53	191	0	0	0	0	3	0	35	437
	5:30 PM	0	137	2	58	182	0	0	1	0	1	0	40	421
	5:45 PM	0	118	3	66	194	0	0	0	0	4	0	23	408
	VOLUMES	0	1,114	29	461	1,400	0	0	1	1	18	0	244	3,268
	APPROACH %	0%	97%	3%	25%	75%	0%	0%	50%	50%	7%	0%	93%	
	APP/DEPART	1,143	/	1,361	1,861	/	1,419	2	/	488	262	/	0	0
	BEGIN PEAK HR		5:00 PM											
	VOLUMES	0	541	10	237	745	0	0	1	0	11	0	127	1,672
	APPROACH %	0%	98%	2%	24%	76%	0%	0%	100%	0%	8%	0%	92%	
	PEAK HR FACTOR		0.889			0.944			0.250			0.841		0.957
	APP/DEPART	551	/	669	982	/	756	1	/	247	138	/	0	0

U-TURNS

NB 0	SB 0	EB 0	WB 0	TTL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	1	0	0	1
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	1	0	0	1
				0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	1	0	0	1
0	1	0	0	1
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	1	0	0	1
0	3	0	0	3
				0

RTOR

NRR X	SRR X	ERR X	WRR X
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
			0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
			0

Escondido
NORTH SIDE

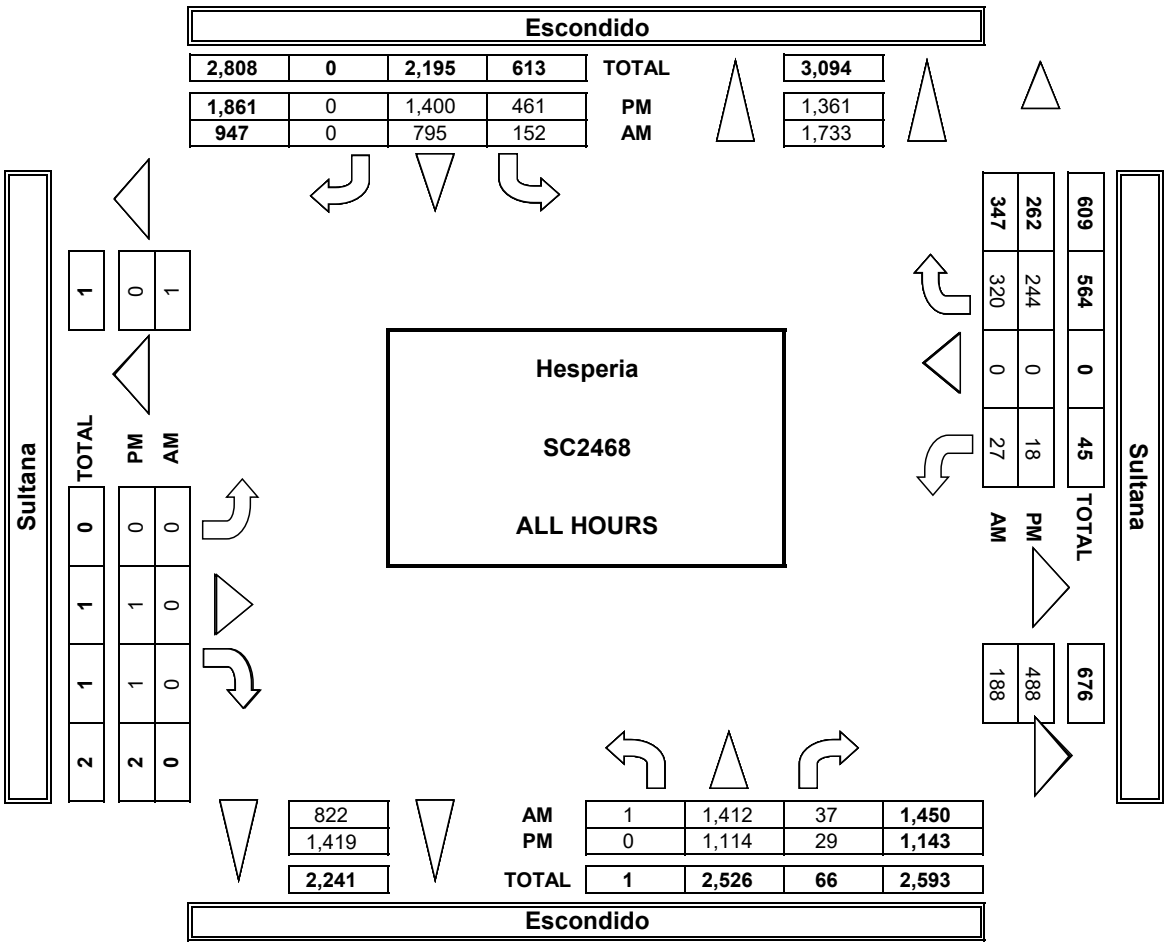
Sultana WEST SIDE — EAST SIDE **Sultana**

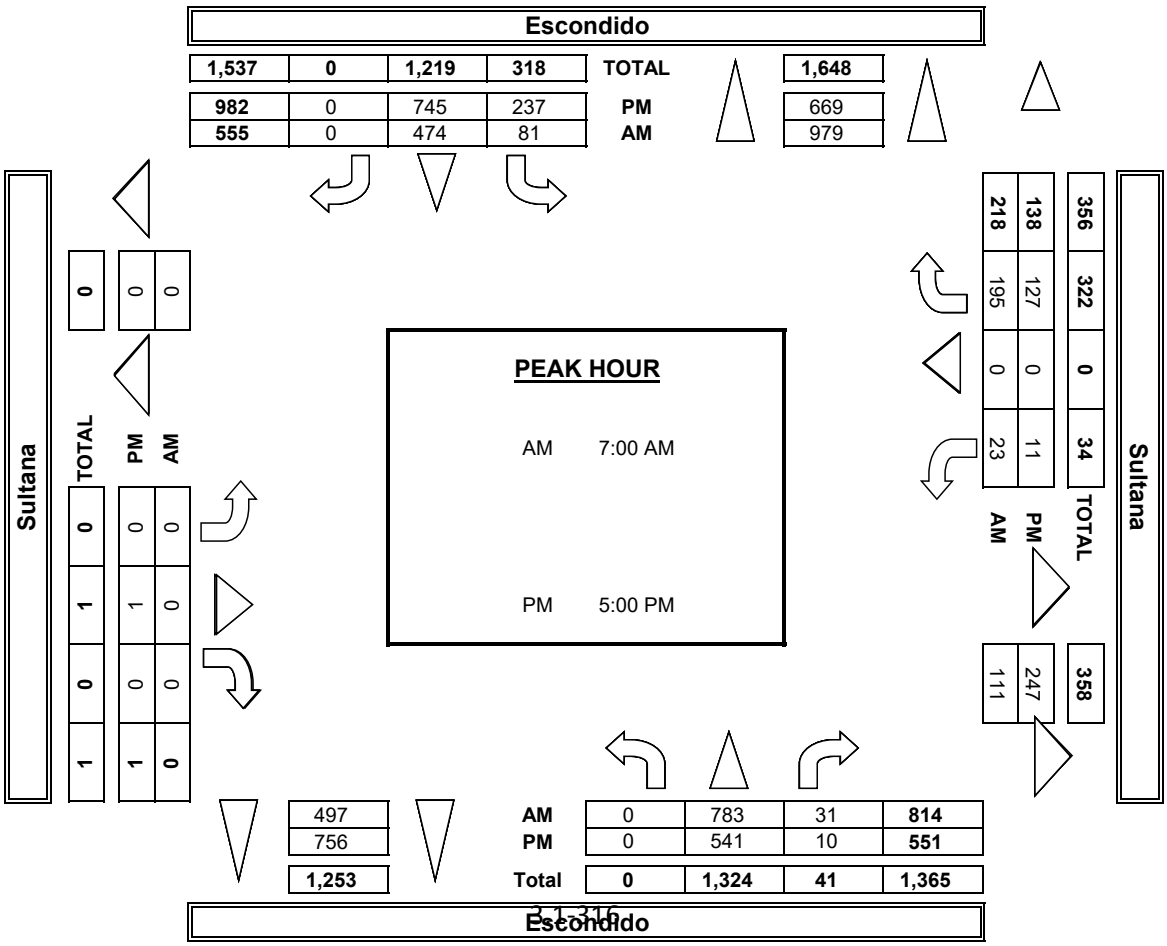
SOUTH SIDE
Escondido

		ALL PED AND BIKE					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS				
		E SIDE	W SIDE	S SIDE	N SIDE	TOTAL	E SIDE	W SIDE	S SIDE	N SIDE	TOTAL	ES	WS	SS	NS	TOTAL
AM	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	1	1	0	0	2	0	0	0	0	0	1	1	0	0	2
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:30 AM	1	4	0	0	5	1	4	0	0	5	0	0	0	0	0
	8:45 AM	2	0	0	0	2	0	0	0	0	0	2	0	0	0	2
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	4	5	0	0	9	1	4	0	0	5	3	1	0	0	4
PM	3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	1	0	0	0	1	1	0	0	0	1	0	0	0	0	0
	5:15 PM	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	3	0	0	0	3	3	0	0	0	3	0	0	0	0	0
	TOTAL	4	2	0	0	6	4	2	0	0	6	0	0	0	0	0

AimTD LLC

TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: 1/7/20 TUESDAY	LOCATION:	Hesperia	PROJECT #:	SC2468
	NORTH & SOUTH:	Escondido	LOCATION #:	25
	EAST & WEST:	Sultana	CONTROL:	STOP E/W

CLASS 1: PASSENGER VEHICLES

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

	NORTHBOUND (Escondido)			SOUTHBOUND (Escondido)			EASTBOUND (Sultana)			WESTBOUND (Sultana)			
LANES:	NL 0	NT 2	NR 0	SL 1	ST 2	SR 0	EL 0	ET 1	ER 0	WL 1	WT 0	WR 1	TOTAL
7:00 AM	0	196	10	16	142	0	0	0	0	13	0	49	426
7:15 AM	0	224	10	22	131	0	0	0	0	6	0	33	426
7:30 AM	0	215	7	25	81	0	0	0	0	2	0	56	386
7:45 AM	0	120	3	12	99	0	0	0	0	2	0	41	277
8:00 AM	1	182	2	13	107	0	0	0	0	2	0	29	336
8:15 AM	0	162	2	19	87	0	0	0	0	1	0	30	301
8:30 AM	0	142	2	21	55	0	0	0	0	1	0	30	251
8:45 AM	0	118	0	12	52	0	0	0	0	0	0	27	209
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	1	1,359	36	140	754	0	0	0	0	27	0	295	2,612
APPROACH %	0%	97%	3%	16%	84%	0%	0%	0%	0%	8%	0%	92%	
APP/DEPART	1,396	/	1,654	894	/	781	0	/	176	322	/	1	0
BEGIN PEAK HR		7:00 AM											
VOLUMES	0	755	30	75	453	0	0	0	0	23	0	179	1,515
APPROACH %	0%	96%	4%	14%	86%	0%	0%	0%	0%	11%	0%	89%	
PEAK HR FACTOR		0.839			0.835			0.000			0.815		0.889
APP/DEPART	785	/	934	528	/	476	0	/	105	202	/	0	0
03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	138	5	51	167	0	0	0	1	3	0	32	397
4:15 PM	0	169	5	51	161	0	0	0	0	1	0	27	414
4:30 PM	0	142	8	59	158	0	0	0	0	2	0	22	391
4:45 PM	0	110	1	59	152	0	0	0	0	1	0	32	355
5:00 PM	0	133	0	60	177	0	0	0	0	3	0	29	402
5:15 PM	0	149	4	53	191	0	0	0	0	3	0	35	435
5:30 PM	0	137	2	58	182	0	0	1	0	1	0	40	421
5:45 PM	0	117	3	66	191	0	0	0	0	4	0	23	404
VOLUMES	0	1,095	28	457	1,379	0	0	1	1	18	0	240	3,219
APPROACH %	0%	98%	2%	25%	75%	0%	0%	50%	50%	7%	0%	93%	
APP/DEPART	1,123	/	1,337	1,836	/	1,398	2	/	484	258	/	0	0
BEGIN PEAK HR		5:00 PM											
VOLUMES	0	536	9	236	741	0	0	1	0	11	0	127	1,662
APPROACH %	0%	98%	2%	24%	76%	0%	0%	100%	0%	8%	0%	92%	
PEAK HR FACTOR		0.891			0.951			0.250			0.841		0.955
APP/DEPART	545	/	664	978	/	752	1	/	246	138	/	0	0

U-TURNS

NB	SB	EB	WB	TTL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
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0	0	0	0	0
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0	0	0	0	0
0	0	0	0	0
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0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	1	0	0	1
0	2	0	0	2

RTOR

NRR X	SRR X	ERR X	WRR X
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
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0	0	0	0
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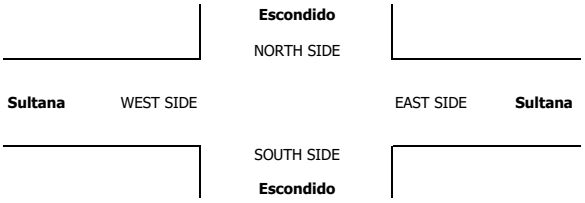
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Hesperia	PROJECT #:	SC2468
1/7/20	NORTH & SOUTH:	Escondido	LOCATION #:	25
TUESDAY	EAST & WEST:	Sultana	CONTROL:	STOP E/W

CLASS 2: 2-AXLE WORK VEHICLES/ TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND Escondido			SOUTHBOUND Escondido			EASTBOUND Sultana			WESTBOUND Sultana			
	LANES:	NL 0	NT 2	NR 0	SL 1	ST 2	SR 0	EL 0	ET 1	ER 0	WL 1	WT 0	WR 1	TOTAL
AM	7:00 AM	0	3	1	1	2	0	0	0	0	0	0	3	10
	7:15 AM	0	2	0	0	0	0	0	0	0	0	0	1	3
	7:30 AM	0	5	0	1	1	0	0	0	0	0	0	1	8
	7:45 AM	0	6	0	0	4	0	0	0	0	0	0	3	13
	8:00 AM	0	2	0	1	2	0	0	0	0	0	0	1	6
	8:15 AM	0	1	0	0	3	0	0	0	0	0	0	0	4
	8:30 AM	0	5	0	0	2	0	0	0	0	0	0	3	10
	8:45 AM	0	1	0	1	2	0	0	0	0	0	0	1	5
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	25	1	4	16	0	0	0	0	0	0	13	59
	APPROACH %	0%	96%	4%	20%	80%	0%	0%	0%	0%	0%	0%	100%	
	APP/DEPART	26	/	38	20	/	16	0	/	5	13	/	0	0
	BEGIN PEAK HR		7:00 AM											
	VOLUMES	0	16	1	2	7	0	0	0	0	0	0	8	34
	APPROACH %	0%	94%	6%	22%	78%	0%	0%	0%	0%	0%	0%	100%	
	PEAK HR FACTOR		0.708			0.563			0.000			0.667		0.654
	APP/DEPART	17	/	24	9	/	7	0	/	3	8	/	0	0
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	1	0	0	2	0	0	0	0	0	0	3	6
	4:15 PM	0	0	0	1	3	0	0	0	0	0	0	0	4
	4:30 PM	0	1	0	1	0	0	0	0	0	0	0	0	2
	4:45 PM	0	0	0	1	1	0	0	0	0	0	0	0	2
	5:00 PM	0	1	1	0	0	0	0	0	0	0	0	0	2
	5:15 PM	0	1	0	0	0	0	0	0	0	0	0	0	1
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	2	0	0	0	0	0	0	0	2
	VOLUMES	0	4	1	3	8	0	0	0	0	0	0	3	19
	APPROACH %	0%	80%	20%	27%	73%	0%	0%	0%	0%	0%	0%	100%	
	APP/DEPART	5	/	7	11	/	8	0	/	4	3	/	0	0
	BEGIN PEAK HR		4:00 PM											
	VOLUMES	0	2	0	3	6	0	0	0	0	0	0	3	14
	APPROACH %	0%	100%	0%	33%	67%	0%	0%	0%	0%	0%	0%	100%	
	PEAK HR FACTOR		0.500			0.563			0.000			0.250		0.583
	APP/DEPART	2	/	5	9	/	6	0	/	3	3	/	0	0

U-TURNS

NB	SB	EB	WB	TTL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Hesperia	PROJECT #:	SC2468
1/7/20	NORTH & SOUTH:	Escondido	LOCATION #:	25
TUESDAY	EAST & WEST:	Sultana	CONTROL:	STOP E/W

CLASS 3: 3-AXLE TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

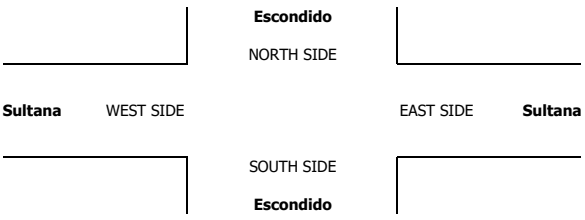
		NORTHBOUND (Escondido)			SOUTHBOUND (Escondido)			EASTBOUND (Sultana)			WESTBOUND (Sultana)			
	LANES:	NL 0	NT 2	NR 0	SL 1	ST 2	SR 0	EL 0	ET 1	ER 0	WL 1	WT 0	WR 1	TOTAL
AM	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	1	1	0	0	0	0	0	0	1	3
	7:45 AM	0	0	0	1	2	0	0	0	0	0	0	1	4
	8:00 AM	0	0	0	1	0	0	0	0	0	0	0	1	2
	8:15 AM	0	0	0	1	0	0	0	0	0	0	0	1	2
	8:30 AM	0	0	0	1	1	0	0	0	0	0	0	1	3
	8:45 AM	0	1	0	1	0	0	0	0	0	0	0	0	2
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	1	0	6	4	0	0	0	0	0	0	5	16
	APPROACH %	0%	100%	0%	60%	40%	0%	0%	0%	0%	0%	0%	100%	
	APP/DEPART	1	/	7	10	/	4	0	/	5	5	/	0	0
	BEGIN PEAK HR		7:30 AM											
	VOLUMES	0	0	0	3	3	0	0	0	0	0	0	4	11
	APPROACH %	0%	0%	0%	43%	43%	0%	0%	0%	0%	0%	0%	100%	
	PEAK HR FACTOR		0.000			0.583			0.000			1.000		0.688
	APP/DEPART	0	/	5	7	/	3	0	/	3	4	/	0	0
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	1	0	0	2	0	0	0	0	0	0	0	3
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	1	0	0	0	0	0	0	0	0	0	0	1
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
	VOLUMES	0	2	0	0	3	0	0	0	0	0	0	0	5
	APPROACH %	0%	100%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	
	APP/DEPART	2	/	2	3	/	3	0	/	0	0	/	0	0
	BEGIN PEAK HR		4:00 PM											
	VOLUMES	0	2	0	0	2	0	0	0	0	0	0	0	4
	APPROACH %	0%	100%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	
	PEAK HR FACTOR		0.500			0.250			0.000			0.000		0.333
	APP/DEPART	2	/	2	2	/	2	0	/	0	0	/	0	0

U-TURNS

NB	SB	EB	WB	TTL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	1	0	0	1
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	1	0	0	1
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

RTOR

NRR X	SRR X	ERR X	WRR X
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Hesperia	PROJECT #:	SC2468
1/7/20	NORTH & SOUTH:	Escondido	LOCATION #:	25
TUESDAY	EAST & WEST:	Sultana	CONTROL:	STOP E/W

CLASS 4: 4 OR MORE AXLE TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N ◄ W E ► S ▼

	NORTHBOUND (Escondido)			SOUTHBOUND (Escondido)			EASTBOUND (Sultana)			WESTBOUND (Sultana)			
LANES:	NL 0	NT 2	NR 0	SL 1	ST 2	SR 0	EL 0	ET 1	ER 0	WL 1	WT 0	WR 1	TOTAL
7:00 AM	0	0	0	0	1	0	0	0	0	0	0	0	1
7:15 AM	0	0	0	1	2	0	0	0	0	0	0	2	5
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	1	0	0	2	0	0	0	0	0	0	1	4
8:00 AM	0	1	0	0	2	0	0	0	0	0	0	0	3
8:15 AM	0	4	0	0	1	0	0	0	0	0	0	0	5
8:30 AM	0	0	0	0	1	0	0	0	0	0	0	0	1
8:45 AM	0	3	0	0	1	0	0	0	0	0	0	0	4
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	0	9	0	1	10	0	0	0	0	0	0	3	23
APPROACH %	0%	100%	0%	9%	91%	0%	0%	0%	0%	0%	0%	100%	
APP/DEPART	9	/	12	11	/	10	0	/	1	3	/	0	0
BEGIN PEAK HR		7:45 AM											
VOLUMES	0	8	0	0	5	0	0	0	0	0	0	0	13
APPROACH %	0%	100%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	
PEAK HR FACTOR		0.500			0.625			0.000			0.000		0.650
APP/DEPART	8	/	8	5	/	5	0	/	0	0	/	0	0
03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
4:15 PM	0	0	0	1	1	0	0	0	0	0	0	0	2
4:30 PM	0	1	0	0	1	0	0	0	0	0	0	0	2
4:45 PM	0	2	0	0	2	0	0	0	0	0	0	0	4
5:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	1
5:15 PM	0	1	0	0	0	0	0	0	0	0	0	0	1
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	0	5	0	1	5	0	0	0	0	0	0	0	11
APPROACH %	0%	100%	0%	17%	83%	0%	0%	0%	0%	0%	0%	0%	
APP/DEPART	5	/	6	6	/	5	0	/	0	0	/	0	0
BEGIN PEAK HR		4:00 PM											
VOLUMES	0	4	0	0	4	0	0	0	0	0	0	0	9
APPROACH %	0%	100%	0%	0%	80%	0%	0%	0%	0%	0%	0%	0%	
PEAK HR FACTOR		0.500			0.625			0.000			0.000		0.563
APP/DEPART	4	/	5	5	/	4	0	/	0	0	/	0	0

U-TURNS

NB	SB	EB	WB	TTL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	1	0	0	1
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	1	0	0	1

RTOR

NRR X	SRR X	ERR X	WRR X
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
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0	0	0	0
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0	0	0	0
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0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
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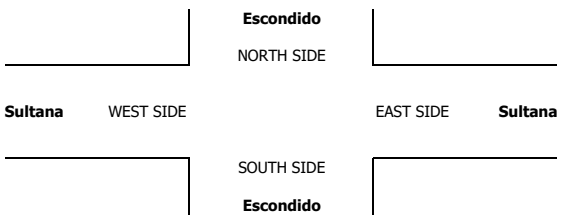
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Hesperia	PROJECT #:	SC2468
1/7/20	NORTH & SOUTH:	Escondido	LOCATION #:	25
TUESDAY	EAST & WEST:	Sultana	CONTROL:	STOP E/W

CLASS 5:	NOTES:
RV	

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

	NORTHBOUND Escondido			SOUTHBOUND Escondido			EASTBOUND Sultana			WESTBOUND Sultana			
LANES:	NL 0	NT 2	NR 0	SL 1	ST 2	SR 0	EL 0	ET 1	ER 0	WL 1	WT 0	WR 1	TOTAL
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
BEGIN PEAK HR		7:00 AM											
VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
BEGIN PEAK HR		3:00 PM											
VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0

U-TURNS

NB	SB	EB	WB	TTL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Hesperia	PROJECT #:	SC2468
1/7/20	NORTH & SOUTH:	Escondido	LOCATION #:	25
TUESDAY	EAST & WEST:	Sultana	CONTROL:	STOP E/W

CLASS 6:	NOTES:
BUSES	

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND Escondido			SOUTHBOUND Escondido			EASTBOUND Sultana			WESTBOUND Sultana			
	LANES:	NL 0	NT 2	NR 0	SL 1	ST 2	SR 0	EL 0	ET 1	ER 0	WL 1	WT 0	WR 1	TOTAL
AM	7:00 AM	0	2	0	0	2	0	0	0	0	0	0	1	5
	7:15 AM	0	4	0	0	3	0	0	0	0	0	0	0	7
	7:30 AM	0	4	0	0	0	0	0	0	0	0	0	0	4
	7:45 AM	0	1	0	1	1	0	0	0	0	0	0	2	5
	8:00 AM	0	2	0	0	2	0	0	0	0	0	0	1	5
	8:15 AM	0	1	0	0	1	0	0	0	0	0	0	0	2
	8:30 AM	0	2	0	0	1	0	0	0	0	0	0	0	3
	8:45 AM	0	2	0	0	1	0	0	0	0	0	0	0	3
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	18	0	1	11	0	0	0	0	0	0	4	34
	APPROACH %	0%	100%	0%	8%	92%	0%	0%	0%	0%	0%	0%	100%	
	APP/DEPART	18	/	22	12	/	11	0	/	1	4	/	0	0
	BEGIN PEAK HR		7:15 AM											
	VOLUMES	0	11	0	1	6	0	0	0	0	0	0	3	21
	APPROACH %	0%	100%	0%	14%	86%	0%	0%	0%	0%	0%	0%	100%	
	PEAK HR FACTOR		0.688			0.583			0.000			0.375		0.750
	APP/DEPART	11	/	14	7	/	6	0	/	1	3	/	0	0
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	4	0	0	2	0	0	0	0	0	0	1	7
	4:15 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
	4:30 PM	0	3	0	0	1	0	0	0	0	0	0	0	4
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	1	0	0	0	0	0	0	0	0	0	0	1
	VOLUMES	0	8	0	0	5	0	0	0	0	0	0	1	14
	APPROACH %	0%	100%	0%	0%	100%	0%	0%	0%	0%	0%	0%	100%	
	APP/DEPART	8	/	9	5	/	5	0	/	0	1	/	0	0
	BEGIN PEAK HR		4:00 PM											
	VOLUMES	0	7	0	0	4	0	0	0	0	0	0	1	12
	APPROACH %	0%	100%	0%	0%	100%	0%	0%	0%	0%	0%	0%	100%	
	PEAK HR FACTOR		0.438			0.500			0.000			0.250		0.429
	APP/DEPART	7	/	8	4	/	4	0	/	0	1	/	0	0

U-TURNS

NB	SB	EB	WB	TTL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

RTOR

NRR X	SRR X	ERR X	WRR X
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0

Escondido

NORTH SIDE

Sultana WEST SIDE EAST SIDE **Sultana**

SOUTH SIDE

Escondido

INTERSECTION TURNING MOVEMENT COUNTS

T1218

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Hesperia	PROJECT #:	SC2468
Tue, Jan 7, 20	NORTH & SOUTH:	Topaz	LOCATION #:	26
	EAST & WEST:	Main	CONTROL:	SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N / ◄ W / E ► / S ▼

Add U-Turns to Left Turns

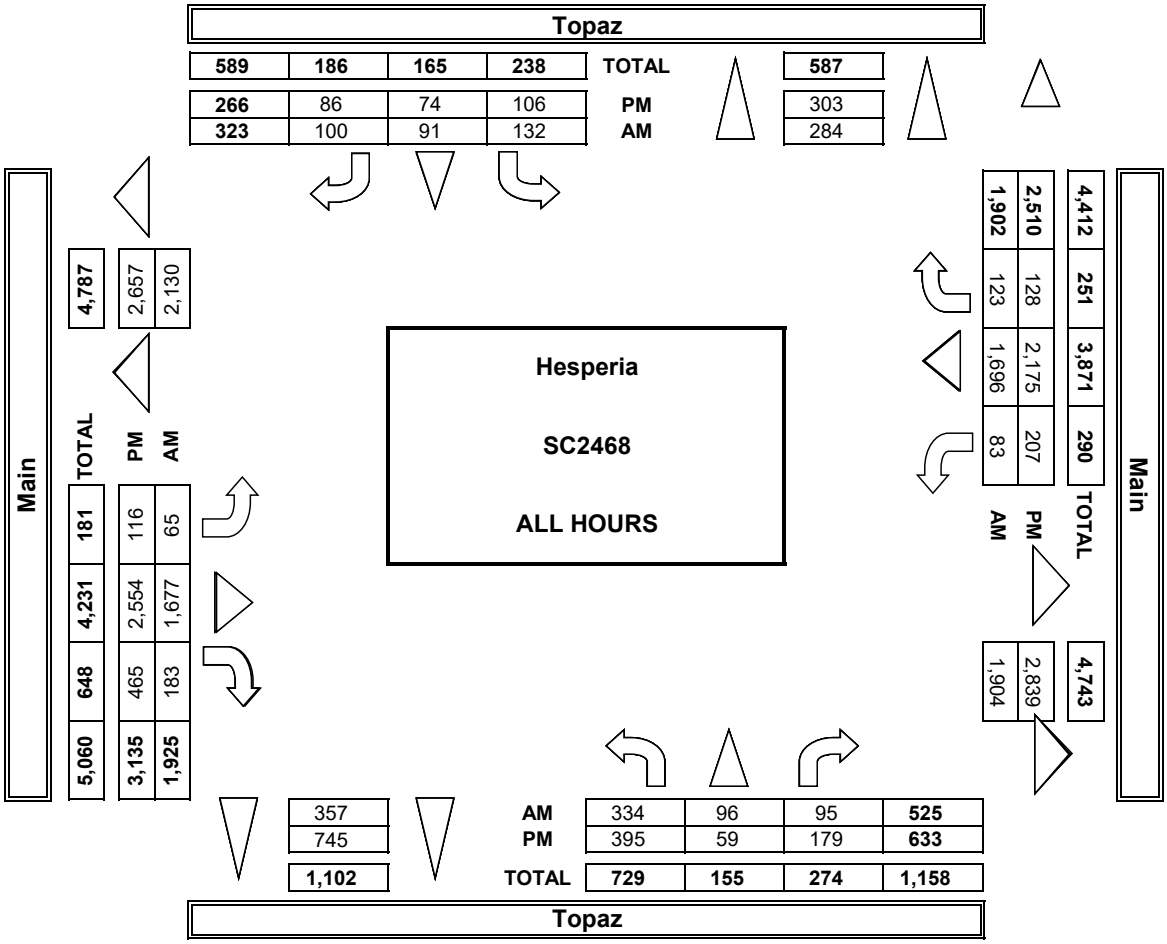
		NORTHBOUND (Topaz)			SOUTHBOUND (Topaz)			EASTBOUND (Main)			WESTBOUND (Main)			
	LANES:	NL 1	NT 1	NR 0	SL 1	ST 1	SR 0	EL 1	ET 2	ER 1	WL 1	WT 2	WR 0	TOTAL
AM	7:00 AM	31	25	10	22	12	21	10	219	14	3	201	35	603
	7:15 AM	38	37	11	30	29	29	15	215	20	11	231	41	707
	7:30 AM	51	7	15	25	13	15	8	228	21	6	227	3	619
	7:45 AM	41	9	21	16	5	5	5	259	25	10	217	9	622
	8:00 AM	53	5	6	12	9	4	11	205	16	14	220	8	563
	8:15 AM	35	4	12	7	7	14	2	193	36	10	202	11	533
	8:30 AM	44	4	8	9	11	7	7	185	25	15	202	8	525
	8:45 AM	41	5	12	11	5	5	7	173	26	14	196	8	503
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	334	96	95	132	91	100	65	1,677	183	83	1,696	123	4,675
	APPROACH %	64%	18%	18%	41%	28%	31%	3%	87%	10%	4%	89%	6%	
	APP/DEPART	525	/	284	323	/	357	1,925	/	1,904	1,902	/	2,130	0
	BEGIN PEAK HR		7:00 AM											
	VOLUMES	161	78	57	93	59	70	38	921	80	30	876	88	2,551
	APPROACH %	54%	26%	19%	42%	27%	32%	4%	89%	8%	3%	88%	9%	
	PEAK HR FACTOR		0.860			0.631			0.899			0.878		0.902
	APP/DEPART	296	/	204	222	/	169	1,039	/	1,071	994	/	1,107	0
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	47	7	17	13	17	4	10	312	67	24	294	12	824
	4:15 PM	61	10	16	8	6	7	12	333	67	22	280	15	837
	4:30 PM	47	8	24	13	8	11	18	309	50	26	258	19	791
	4:45 PM	54	7	31	21	4	8	15	339	46	34	273	14	846
	5:00 PM	46	7	22	19	17	17	13	346	48	20	285	18	858
	5:15 PM	45	7	30	10	8	8	13	292	64	35	288	16	816
	5:30 PM	49	7	19	13	11	15	20	310	62	29	233	13	781
	5:45 PM	46	6	20	9	3	16	15	313	61	17	264	21	791
	VOLUMES	395	59	179	106	74	86	116	2,554	465	207	2,175	128	6,544
	APPROACH %	62%	9%	28%	40%	28%	32%	4%	81%	15%	8%	87%	5%	
	APP/DEPART	633	/	303	266	/	745	3,135	/	2,839	2,510	/	2,657	0
	BEGIN PEAK HR		4:15 PM											
	VOLUMES	208	32	93	61	35	43	58	1,327	211	102	1,096	66	3,332
	APPROACH %	62%	10%	28%	44%	25%	31%	4%	83%	13%	8%	87%	5%	
	PEAK HR FACTOR		0.905			0.656			0.968			0.978		0.971
	APP/DEPART	333	/	155	139	/	348	1,596	/	1,481	1,264	/	1,348	0

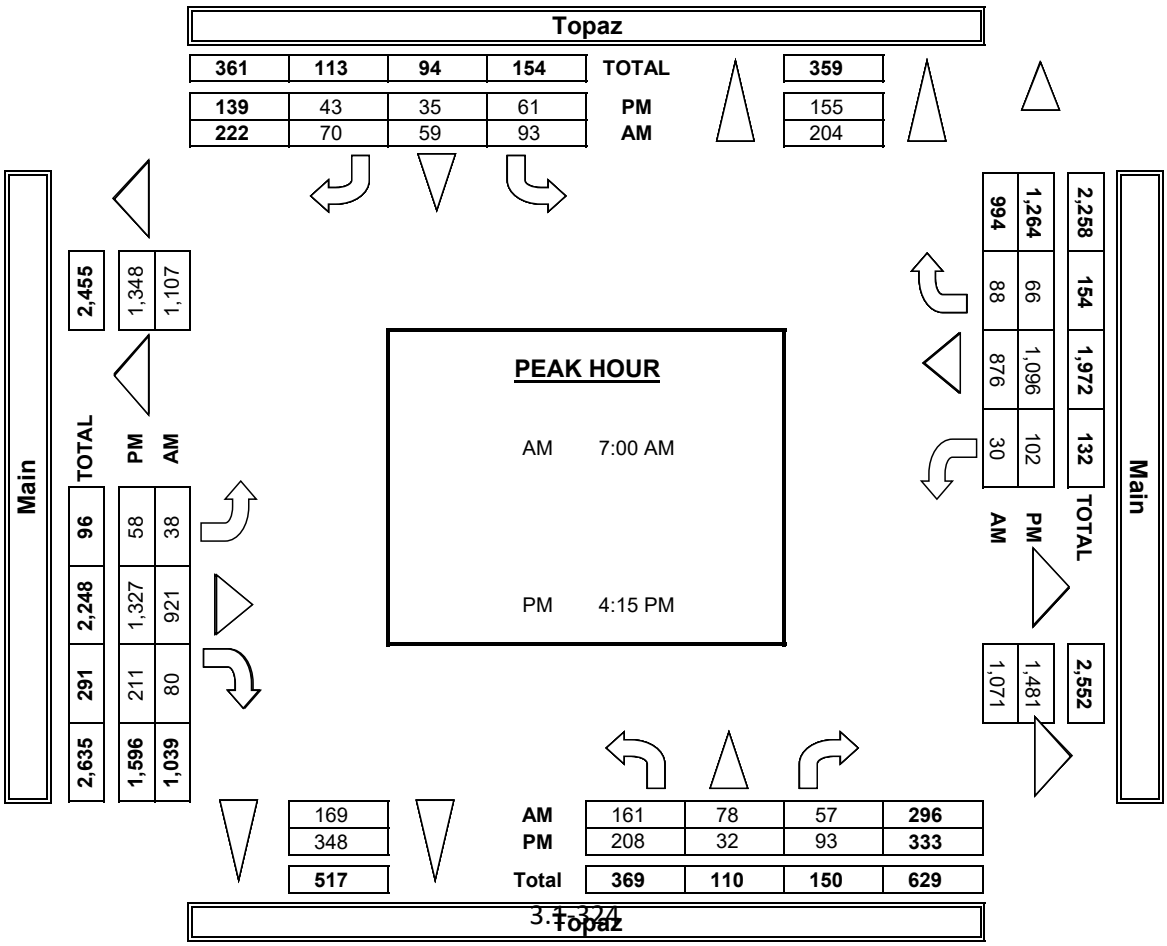
U-TURNS

NB	SB	EB	WB	TTL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

AimTD LLC

TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Hesperia	PROJECT #:	SC2468
1/7/20	NORTH & SOUTH:	Topaz	LOCATION #:	26
TUESDAY	EAST & WEST:	Main	CONTROL:	SIGNAL

CLASS 1: PASSENGER VEHICLES

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

	NORTHBOUND (Topaz)			SOUTHBOUND (Topaz)			EASTBOUND (Main)			WESTBOUND (Main)			
LANES:	NL 1	NT 1	NR 0	SL 1	ST 1	SR 0	EL 1	ET 2	ER 1	WL 1	WT 2	WR 0	TOTAL
AM													
7:00 AM	29	25	10	22	11	21	10	202	14	3	182	32	561
7:15 AM	37	37	11	29	28	29	14	203	20	11	209	38	666
7:30 AM	49	7	15	24	13	15	8	216	21	6	203	2	579
7:45 AM	38	8	19	15	4	5	5	250	23	9	193	8	577
8:00 AM	51	5	6	12	8	4	9	186	14	12	192	8	507
8:15 AM	34	4	12	7	7	14	2	181	36	10	184	10	501
8:30 AM	43	4	8	9	9	6	7	172	25	14	188	8	493
8:45 AM	40	5	12	11	5	4	7	161	26	13	181	8	473
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	321	95	93	129	85	98	62	1,571	179	78	1,532	114	4,357
APPROACH %	63%	19%	18%	41%	27%	31%	3%	87%	10%	5%	89%	7%	
APP/DEPART	509	/	271	312	/	342	1,812	/	1,793	1,724	/	1,951	0
BEGIN PEAK HR	7:00 AM												
VOLUMES	153	77	55	90	56	70	37	871	78	29	787	80	2,383
APPROACH %	54%	27%	19%	42%	26%	32%	4%	88%	8%	3%	88%	9%	
PEAK HR FACTOR		0.838			0.628			0.887			0.868		0.895
APP/DEPART	285	/	194	216	/	163	986	/	1,016	896	/	1,010	0
PM													
03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	46	7	16	13	17	4	10	295	67	23	285	12	795
4:15 PM	61	10	15	8	6	7	11	320	67	22	264	15	806
4:30 PM	47	7	24	13	8	11	18	293	49	25	243	18	756
4:45 PM	54	7	31	20	4	8	14	317	45	34	268	14	816
5:00 PM	46	7	22	19	17	17	10	335	43	20	280	18	834
5:15 PM	42	7	29	10	8	8	13	281	63	35	280	16	792
5:30 PM	49	7	19	13	11	15	19	301	62	29	226	13	764
5:45 PM	45	6	20	9	3	16	15	304	60	16	259	21	774
VOLUMES	390	58	176	105	74	86	110	2,446	456	204	2,105	127	6,337
APPROACH %	63%	9%	28%	40%	28%	32%	4%	81%	15%	8%	86%	5%	
APP/DEPART	624	/	295	265	/	733	3,012	/	2,727	2,436	/	2,582	0
BEGIN PEAK HR	4:15 PM												
VOLUMES	208	31	92	60	35	43	52	1,265	204	101	1,055	65	3,212
APPROACH %	63%	9%	28%	43%	25%	31%	3%	83%	13%	8%	86%	5%	
PEAK HR FACTOR		0.899			0.651			0.956			0.960		0.963
APP/DEPART	331	/	148	138	/	340	1,522	/	1,417	1,221	/	1,307	0

U-TURNS

	NB	SB	EB	WB	TTL
AM	0	0	0	0	0
AM	0	0	0	0	0
AM	0	0	0	0	0
AM	0	0	0	0	0
AM	0	0	0	0	0
AM	0	0	0	0	0
AM	0	0	0	0	0
AM	0	0	0	0	0
AM	0	0	0	0	0
AM	0	0	0	0	0
AM	0	0	0	0	0
AM	0	0	0	0	0
AM	0	0	0	0	0
PM	0	0	0	0	0
PM	0	0	0	0	0
PM	0	0	0	0	0
PM	0	0	0	0	0
PM	0	0	0	0	0
PM	0	0	0	0	0
PM	0	0	0	0	0
PM	0	0	1	0	1
PM	0	0	0	0	0
PM	0	1	0	1	2
PM	0	0	0	0	0
PM	0	0	0	0	0
	0	1	1	1	3

RTOR

	NRR	SRR	ERR	WRR
AM	5	16	1	1
AM	3	16	3	2
AM	5	8	6	0
AM	4	3	2	0
AM	4	1	2	0
AM	3	6	11	0
AM	3	6	6	0
AM	7	2	7	1
AM	0	0	0	0
AM	0	0	0	0
AM	0	0	0	0
AM	0	0	0	0
AM	0	0	0	0
PM	0	0	0	0
PM	0	0	0	0
PM	0	0	0	0
PM	0	0	0	0
PM	4	1	18	0
PM	3	6	22	3
PM	9	10	18	1
PM	10	2	12	2
PM	8	12	16	1
PM	11	5	24	0
PM	7	8	20	0
PM	4	9	8	3
	56	53	138	10

	NRR	SRR	ERR	WRR
	17	43	12	3

	NRR	SRR	ERR	WRR
	30	30	68	7

Topaz
NORTH SIDE

Main WEST SIDE EAST SIDE **Main**

SOUTH SIDE
Topaz

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Hesperia	PROJECT #:	SC2468
1/7/20	NORTH & SOUTH:	Topaz	LOCATION #:	26
TUESDAY	EAST & WEST:	Main	CONTROL:	SIGNAL

CLASS 2: 2-AXLE WORK VEHICLES/ TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND (Topaz)			SOUTHBOUND (Topaz)			EASTBOUND (Main)			WESTBOUND (Main)			
	LANES:	NL 1	NT 1	NR 0	SL 1	ST 1	SR 0	EL 1	ET 2	ER 1	WL 1	WT 2	WR 0	TOTAL
AM	7:00 AM	2	0	0	0	1	0	0	5	0	0	8	0	16
	7:15 AM	1	0	0	0	0	0	0	3	0	0	9	2	15
	7:30 AM	2	0	0	1	0	0	0	7	0	0	14	0	24
	7:45 AM	1	0	1	0	0	0	0	6	2	0	8	1	19
	8:00 AM	1	0	0	0	0	0	0	8	2	2	14	0	27
	8:15 AM	1	0	0	0	0	0	0	2	0	0	9	1	13
	8:30 AM	0	0	0	0	1	0	0	6	0	1	5	0	13
	8:45 AM	0	0	0	0	0	0	0	4	0	0	7	0	11
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	8	0	1	1	2	0	0	41	4	3	74	4	138
	APPROACH %	89%	0%	11%	33%	67%	0%	0%	91%	9%	4%	91%	5%	
	APP/DEPART	9	/	4	3	/	9	45	/	43	81	/	82	0
	BEGIN PEAK HR		7:15 AM											
	VOLUMES	5	0	1	1	0	0	0	24	4	2	45	3	85
	APPROACH %	83%	0%	17%	100%	0%	0%	0%	86%	14%	4%	90%	6%	
	PEAK HR FACTOR		0.750			0.250			0.700			0.781		0.787
	APP/DEPART	6	/	3	1	/	6	28	/	26	50	/	50	0
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	1	0	1	0	0	0	0	7	0	1	4	0	14
	4:15 PM	0	0	1	0	0	0	1	4	0	0	8	0	14
	4:30 PM	0	0	0	0	0	0	0	12	1	0	3	0	16
	4:45 PM	0	0	0	0	0	0	0	10	1	0	1	0	12
	5:00 PM	0	0	0	0	0	0	3	5	4	0	1	0	13
	5:15 PM	3	0	1	0	0	0	0	2	1	0	2	0	9
	5:30 PM	0	0	0	0	0	0	0	5	0	0	4	0	9
	5:45 PM	1	0	0	0	0	0	0	5	1	0	4	0	11
	VOLUMES	5	0	3	0	0	0	4	50	8	1	27	0	98
	APPROACH %	63%	0%	38%	0%	0%	0%	6%	81%	13%	4%	96%	0%	
	APP/DEPART	8	/	4	0	/	9	62	/	53	28	/	32	0
	BEGIN PEAK HR		4:00 PM											
	VOLUMES	1	0	2	0	0	0	1	33	2	1	16	0	56
	APPROACH %	33%	0%	67%	0%	0%	0%	3%	92%	6%	6%	94%	0%	
	PEAK HR FACTOR		0.375			0.000			0.692			0.531		0.875
	APP/DEPART	3	/	1	0	/	3	36	/	35	17	/	17	0

U-TURNS

NB	SB	EB	WB	TTL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Hesperia	PROJECT #:	SC2468
1/7/20	NORTH & SOUTH:	Topaz	LOCATION #:	26
TUESDAY	EAST & WEST:	Main	CONTROL:	SIGNAL

CLASS 3: 3-AXLE TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

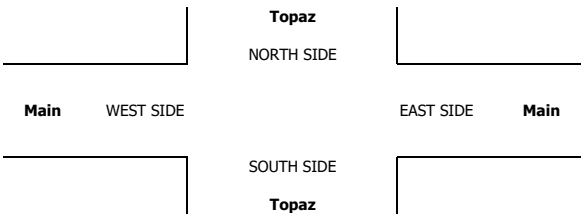
	NORTHBOUND (Topaz)			SOUTHBOUND (Topaz)			EASTBOUND (Main)			WESTBOUND (Main)			
LANES:	NL 1	NT 1	NR 0	SL 1	ST 1	SR 0	EL 1	ET 2	ER 1	WL 1	WT 2	WR 0	TOTAL
7:00 AM	0	0	0	0	0	0	0	4	0	0	2	0	6
7:15 AM	0	0	0	0	0	0	0	4	0	0	5	0	9
7:30 AM	0	0	0	0	0	0	0	2	0	0	3	1	6
7:45 AM	1	0	0	1	0	0	0	1	0	0	10	0	13
8:00 AM	0	0	0	0	1	0	1	4	0	0	4	0	10
8:15 AM	0	0	0	0	0	0	0	3	0	0	4	0	7
8:30 AM	1	0	0	0	1	0	0	3	0	0	6	0	11
8:45 AM	0	0	0	0	0	0	0	3	0	1	4	0	8
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	2	0	0	1	2	0	1	24	0	1	38	1	70
APPROACH %	100%	0%	0%	33%	67%	0%	4%	96%	0%	3%	95%	3%	
APP/DEPART	2	/	2	3	/	3	25	/	25	40	/	40	0
BEGIN PEAK HR		7:45 AM											
VOLUMES	2	0	0	1	2	0	1	11	0	0	24	0	41
APPROACH %	100%	0%	0%	33%	67%	0%	8%	92%	0%	0%	100%	0%	
PEAK HR FACTOR		0.500			0.750			0.600			0.600		0.788
APP/DEPART	2	/	1	3	/	2	12	/	12	24	/	26	0
03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	2	0	0	0	0	2
4:15 PM	0	0	0	0	0	0	0	3	0	0	2	0	5
4:30 PM	0	0	0	0	0	0	0	1	0	0	2	1	4
4:45 PM	0	0	0	0	0	0	0	4	0	0	1	0	5
5:00 PM	0	0	0	0	0	0	0	3	0	0	1	0	4
5:15 PM	0	0	0	0	0	0	0	4	0	0	2	0	6
5:30 PM	0	0	0	0	0	0	0	2	0	0	1	0	3
5:45 PM	0	0	0	0	0	0	0	0	0	1	0	0	1
VOLUMES	0	0	0	0	0	0	0	19	0	1	9	1	30
APPROACH %	0%	0%	0%	0%	0%	0%	0%	100%	0%	9%	82%	9%	
APP/DEPART	0	/	1	0	/	1	19	/	19	11	/	9	0
BEGIN PEAK HR		4:30 PM											
VOLUMES	0	0	0	0	0	0	0	12	0	0	6	1	19
APPROACH %	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	86%	14%	
PEAK HR FACTOR		0.000			0.000			0.750			0.583		0.792
APP/DEPART	0	/	1	0	/	0	12	/	12	7	/	6	0

U-TURNS

NB	SB	EB	WB	TTL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

RTOR

NRR	SRR	ERR	WRR
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Hesperia	PROJECT #:	SC2468
1/7/20	NORTH & SOUTH:	Topaz	LOCATION #:	26
TUESDAY	EAST & WEST:	Main	CONTROL:	SIGNAL

CLASS 4: 4 OR MORE AXLE TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N ◄ W E ► S ▼

		NORTHBOUND (Topaz)			SOUTHBOUND (Topaz)			EASTBOUND (Main)			WESTBOUND (Main)			
	LANES:	NL 1	NT 1	NR 0	SL 1	ST 1	SR 0	EL 1	ET 2	ER 1	WL 1	WT 2	WR 0	TOTAL
AM	7:00 AM	0	0	0	0	0	0	0	5	0	0	7	0	12
	7:15 AM	0	0	0	0	0	0	1	2	0	0	5	1	9
	7:30 AM	0	0	0	0	0	0	0	0	0	0	6	0	6
	7:45 AM	0	1	0	0	1	0	0	2	0	1	6	0	11
	8:00 AM	0	0	0	0	0	0	0	3	0	0	8	0	11
	8:15 AM	0	0	0	0	0	0	0	5	0	0	4	0	9
	8:30 AM	0	0	0	0	0	0	0	1	0	0	2	0	3
	8:45 AM	1	0	0	0	0	1	0	3	0	0	3	0	8
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	1	1	0	0	1	1	1	21	0	1	41	1	69
	APPROACH %	50%	50%	0%	0%	50%	50%	5%	95%	0%	2%	95%	2%	
	APP/DEPART	2	/	3	2	/	2	22	/	21	43	/	43	0
	BEGIN PEAK HR		7:00 AM											
	VOLUMES	0	1	0	0	1	0	1	9	0	1	24	1	38
	APPROACH %	0%	100%	0%	0%	100%	0%	10%	90%	0%	4%	92%	4%	
	PEAK HR FACTOR		0.250			0.250			0.500			0.929		0.792
	APP/DEPART	1	/	3	1	/	2	10	/	9	26	/	24	0
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	6	0	0	1	0	7
	4:15 PM	0	0	0	0	0	0	0	5	0	0	5	0	10
	4:30 PM	0	0	0	0	0	0	0	1	0	0	10	0	11
	4:45 PM	0	0	0	0	0	0	1	7	0	0	3	0	11
	5:00 PM	0	0	0	0	0	0	0	3	1	0	2	0	6
	5:15 PM	0	0	0	0	0	0	0	4	0	0	4	0	8
	5:30 PM	0	0	0	0	0	0	1	2	0	0	2	0	5
	5:45 PM	0	0	0	0	0	0	0	4	0	0	1	0	5
	VOLUMES	0	0	0	0	0	0	2	32	1	0	28	0	63
	APPROACH %	0%	0%	0%	0%	0%	0%	6%	91%	3%	0%	100%	0%	
	APP/DEPART	0	/	2	0	/	1	35	/	32	28	/	28	0
	BEGIN PEAK HR		4:00 PM											
	VOLUMES	0	0	0	0	0	0	1	19	0	0	19	0	39
	APPROACH %	0%	0%	0%	0%	0%	0%	5%	95%	0%	0%	100%	0%	
	PEAK HR FACTOR		0.000			0.000			0.625			0.475		0.886
	APP/DEPART	0	/	1	0	/	0	20	/	19	19	/	19	0

U-TURNS

NB	SB	EB	WB	TTL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Hesperia	PROJECT #:	SC2468
1/7/20	NORTH & SOUTH:	Topaz	LOCATION #:	26
TUESDAY	EAST & WEST:	Main	CONTROL:	SIGNAL

CLASS 5: RV

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

	NORTHBOUND (Topaz)			SOUTHBOUND (Topaz)			EASTBOUND (Main)			WESTBOUND (Main)			
LANES:	NL 1	NT 1	NR 0	SL 1	ST 1	SR 0	EL 1	ET 2	ER 1	WL 1	WT 2	WR 0	TOTAL
AM													
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
BEGIN PEAK HR		7:00 AM											
VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
PM													
03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	0	0	0	0	0	0	0	0	0	0	1	0	1
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	0%	
APP/DEPART	0	/	0	0	/	0	0	/	0	1	/	1	0
BEGIN PEAK HR		3:15 PM											
VOLUMES	0	0	0	0	0	0	0	0	0	0	1	0	1
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	0%	
PEAK HR FACTOR		0.000			0.000			0.000			0.250		0.250
APP/DEPART	0	/	0	0	/	0	0	/	0	1	/	1	0

U-TURNS

NB	SB	EB	WB	TTL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Hesperia	PROJECT #:	SC2468
1/7/20	NORTH & SOUTH:	Topaz	LOCATION #:	26
TUESDAY	EAST & WEST:	Main	CONTROL:	SIGNAL

CLASS 6:	NOTES:
BUSES	

AM / PM / MD / OTHER / OTHER — ▲ N ◄ W E ► S ▼

		NORTHBOUND (Topaz)			SOUTHBOUND (Topaz)			EASTBOUND (Main)			WESTBOUND (Main)			
	LANES:	NL 1	NT 1	NR 0	SL 1	ST 1	SR 0	EL 1	ET 2	ER 1	WL 1	WT 2	WR 0	TOTAL
AM	7:00 AM	0	0	0	0	0	0	0	3	0	0	2	3	8
	7:15 AM	0	0	0	1	1	0	0	3	0	0	3	0	8
	7:30 AM	0	0	0	0	0	0	0	3	0	0	1	0	4
	7:45 AM	1	0	1	0	0	0	0	0	0	0	0	0	2
	8:00 AM	1	0	0	0	0	0	1	4	0	0	2	0	8
	8:15 AM	0	0	0	0	0	0	0	2	0	0	1	0	3
	8:30 AM	0	0	0	0	0	1	0	3	0	0	1	0	5
	8:45 AM	0	0	0	0	0	0	0	2	0	0	1	0	3
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	2	0	1	1	1	1	1	20	0	0	11	3	41
	APPROACH %	67%	0%	33%	33%	33%	33%	5%	95%	0%	0%	79%	21%	
	APP/DEPART	3	/	4	3	/	1	21	/	22	14	/	14	0
	BEGIN PEAK HR		7:15 AM											
	VOLUMES	2	0	1	1	1	0	1	10	0	0	6	0	22
	APPROACH %	67%	0%	33%	50%	50%	0%	9%	91%	0%	0%	100%	0%	
	PEAK HR FACTOR		0.375			0.250			0.550			0.500		0.688
	APP/DEPART	3	/	1	2	/	1	11	/	12	6	/	8	0
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	2	0	0	3	0	5
	4:15 PM	0	0	0	0	0	0	0	1	0	0	1	0	2
	4:30 PM	0	1	0	0	0	0	0	2	0	1	0	0	4
	4:45 PM	0	0	0	1	0	0	0	1	0	0	0	0	2
	5:00 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
	5:15 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	1	0	1	0	0	0	7	0	1	5	0	15
	APPROACH %	0%	100%	0%	100%	0%	0%	0%	100%	0%	17%	83%	0%	
	APP/DEPART	1	/	1	1	/	1	7	/	8	6	/	5	0
	BEGIN PEAK HR		4:00 PM											
	VOLUMES	0	1	0	1	0	0	0	6	0	1	4	0	13
	APPROACH %	0%	100%	0%	100%	0%	0%	0%	100%	0%	20%	80%	0%	
	PEAK HR FACTOR		0.250			0.250			0.750			0.417		0.650
	APP/DEPART	1	/	1	1	/	1	6	/	7	5	/	4	0

U-TURNS					
NB	SB	EB	WB	TTL	
0	0	0	0	0	
0	0	0	0	0	
0	0	0	0	0	
0	0	0	0	0	
0	0	0	0	0	
0	0	0	0	0	
0	0	0	0	0	
0	0	0	0	0	
0	0	0	0	0	
0	0	0	0	0	
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0	0	0	0	0	
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0	0	0	0	0	
0	0	0	0	0	
0	0	0	0	0	
0	0	0	0	0	
0	0	0	0	0	
0	0	0	0	0	
0	0	0	0	0	
0	0	0	0	0	
0	0	0	0	0	

RTOR			
NRR 0	SRR 0	ERR 0	WRR 0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
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0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0

Topaz

NORTH SIDE

Main WEST SIDE EAST SIDE **Main**

SOUTH SIDE

Topaz

APPENDIX 3.2:

EXISTING (2019) CONDITIONS INTERSECTION OPERATIONS ANALYSIS WORKSHEETS

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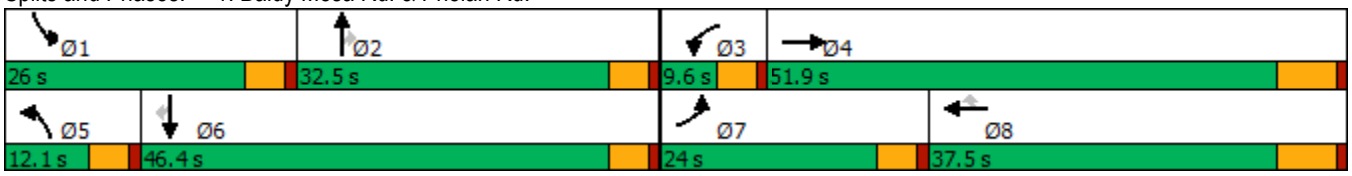
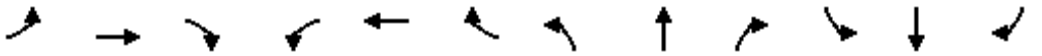
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	155	554	12	335	142	36	72	52	182	49	185
Future Volume (vph)	155	554	12	335	142	36	72	52	182	49	185
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4	3	8		5	2		1	6	
Permitted Phases					8			2			6
Detector Phase	7	4	3	8	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	30.5	9.6	37.5	37.5	9.6	31.6	31.6	9.6	40.6	40.6
Total Split (s)	24.0	51.9	9.6	37.5	37.5	12.1	32.5	32.5	26.0	46.4	46.4
Total Split (%)	20.0%	43.3%	8.0%	31.3%	31.3%	10.1%	27.1%	27.1%	21.7%	38.7%	38.7%
Yellow Time (s)	3.6	5.5	3.6	5.5	5.5	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.5	4.6	6.5	6.5	4.6	4.6	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Max	None	Max	Max	None	None	None	None	None	None
Act Effct Green (s)	14.5	50.3	5.2	32.6	32.6	6.6	13.4	13.4	16.5	24.1	24.1
Actuated g/C Ratio	0.15	0.54	0.06	0.35	0.35	0.07	0.14	0.14	0.18	0.26	0.26
v/c Ratio	0.73	0.37	0.16	0.33	0.25	0.37	0.33	0.15	0.75	0.12	0.39
Control Delay	57.9	16.6	54.2	27.6	4.9	57.3	43.0	0.8	56.2	28.5	6.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	57.9	16.6	54.2	27.6	4.9	57.3	43.0	0.8	56.2	28.5	6.2
LOS	E	B	D	C	A	E	D	A	E	C	A
Approach Delay		25.4		21.7			32.6			30.7	
Approach LOS		C		C			C			C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 93.9	
Natural Cycle: 100	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.75	
Intersection Signal Delay: 26.2	Intersection LOS: C
Intersection Capacity Utilization 52.1%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 1: Baldy Mesa Rd. & Phelan Rd.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	155	554	23	12	335	142	36	72	52	182	49	185
Future Volume (veh/h)	155	554	23	12	335	142	36	72	52	182	49	185
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	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	180	644	17	14	390	109	42	84	32	212	57	108
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	211	1627	43	85	1370	611	57	189	161	244	397	336
Arrive On Green	0.13	0.48	0.48	0.05	0.40	0.40	0.04	0.11	0.11	0.15	0.22	0.22
Sat Flow, veh/h	1619	3404	90	1619	3420	1525	1619	1800	1525	1619	1800	1525
Grp Volume(v), veh/h	180	323	338	14	390	109	42	84	32	212	57	108
Grp Sat Flow(s),veh/h/ln	1619	1710	1784	1619	1710	1525	1619	1800	1525	1619	1800	1525
Q Serve(g_s), s	10.3	11.6	11.6	0.8	7.3	4.4	2.4	4.2	1.8	12.2	2.4	5.6
Cycle Q Clear(g_c), s	10.3	11.6	11.6	0.8	7.3	4.4	2.4	4.2	1.8	12.2	2.4	5.6
Prop In Lane	1.00		0.05	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	211	817	853	85	1370	611	57	189	161	244	397	336
V/C Ratio(X)	0.86	0.40	0.40	0.16	0.28	0.18	0.74	0.44	0.20	0.87	0.14	0.32
Avail Cap(c_a), veh/h	331	817	853	85	1370	611	128	529	448	365	792	671
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.4	16.0	16.0	43.0	19.3	18.4	45.4	39.9	38.8	39.4	29.8	31.1
Incr Delay (d2), s/veh	7.3	1.4	1.4	0.3	0.5	0.6	6.7	1.6	0.6	9.8	0.2	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.3	4.2	4.4	0.3	2.7	1.5	1.1	1.9	0.7	5.5	1.1	2.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	47.8	17.4	17.3	43.3	19.8	19.0	52.0	41.5	39.4	49.2	30.0	31.6
LnGrp LOS	D	B	B	D	B	B	D	D	D	D	C	C
Approach Vol, veh/h		841			513			158			377	
Approach Delay, s/veh		23.9			20.3			43.9			41.3	
Approach LOS		C			C			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.9	14.6	9.6	51.9	7.9	25.5	16.9	44.6
Change Period (Y+Rc), s	4.6	4.6	4.6	6.5	4.6	4.6	4.6	6.5
Max Green Setting (Gmax), s	21.4	27.9	5.0	45.4	7.5	41.8	19.4	31.0
Max Q Clear Time (g_c+I1), s	14.2	6.2	2.8	13.6	4.4	7.6	12.3	9.3
Green Ext Time (p_c), s	0.2	0.5	0.0	3.6	0.0	0.7	0.1	2.4

Intersection Summary	
HCM 6th Ctrl Delay	28.0
HCM 6th LOS	C

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	3	814	6	5	445	0	16	0	19	6	0	9
Future Vol, veh/h	3	814	6	5	445	0	16	0	19	6	0	9
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	105	-	105	110	-	110	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	86	86	86	86	86	86	86	86	86	86	86	86
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	3	947	7	6	517	0	19	0	22	7	0	10

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	517	0	0	954	0	0	1487	1482	947	1497	1489	517
Stage 1	-	-	-	-	-	-	953	953	-	529	529	-
Stage 2	-	-	-	-	-	-	534	529	-	968	960	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
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	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1059	-	-	729	-	-	104	126	319	102	125	562
Stage 1	-	-	-	-	-	-	314	340	-	537	530	-
Stage 2	-	-	-	-	-	-	534	530	-	308	338	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1059	-	-	729	-	-	101	125	319	94	124	562
Mov Cap-2 Maneuver	-	-	-	-	-	-	220	241	-	205	238	-
Stage 1	-	-	-	-	-	-	313	339	-	535	526	-
Stage 2	-	-	-	-	-	-	520	526	-	286	337	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0.1	21	16.5
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	265	1059	-	-	729	-	-	331
HCM Lane V/C Ratio	0.154	0.003	-	-	0.008	-	-	0.053
HCM Control Delay (s)	21	8.4	-	-	10	-	-	16.5
HCM Lane LOS	C	A	-	-	A	-	-	C
HCM 95th %tile Q(veh)	0.5	0	-	-	0	-	-	0.2

Intersection	
Int Delay, s/veh	0.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	797	10	3	421	14	6
Future Vol, veh/h	797	10	3	421	14	6
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	110	-	0	-
Veh in Median Storage, #	0	-	-	0	1	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	916	11	3	484	16	7

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	927	0	1412	922
Stage 1	-	-	-	-	922	-
Stage 2	-	-	-	-	490	-
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	-	-	746	-	154	330
Stage 1	-	-	-	-	391	-
Stage 2	-	-	-	-	620	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	746	-	153	330
Mov Cap-2 Maneuver	-	-	-	-	283	-
Stage 1	-	-	-	-	391	-
Stage 2	-	-	-	-	618	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	18.2
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	296	-	-	746	-
HCM Lane V/C Ratio	0.078	-	-	0.005	-
HCM Control Delay (s)	18.2	-	-	9.8	-
HCM Lane LOS	C	-	-	A	-
HCM 95th %tile Q(veh)	0.3	-	-	0	-

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	49	122	68	64	92	36	711	43	210	788	68
Future Volume (vph)	49	122	68	64	92	36	711	43	210	788	68
Turn Type	Perm	NA	Perm	Perm	NA	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		4			8	5	2		1	6	
Permitted Phases	4		4	8				2			6
Detector Phase	4	4	4	8	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	15.0	15.0	15.0	42.0	42.0	9.0	28.0	28.0	9.0	37.0	37.0
Total Split (s)	44.0	44.0	44.0	44.0	44.0	10.0	45.0	45.0	31.0	66.0	66.0
Total Split (%)	36.7%	36.7%	36.7%	36.7%	36.7%	8.3%	37.5%	37.5%	25.8%	55.0%	55.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	3.0	5.0	5.0	3.0	5.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	4.0	6.0	6.0	4.0	6.0	6.0
Lead/Lag						Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?						Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Max	Max	None	Max	Max
Act Effct Green (s)	21.3	21.3	21.3	21.3	21.3	5.8	45.4	45.4	17.2	61.1	61.1
Actuated g/C Ratio	0.21	0.21	0.21	0.21	0.21	0.06	0.46	0.46	0.17	0.62	0.62
v/c Ratio	0.70	0.33	0.17	0.27	0.84	0.37	0.47	0.06	0.73	0.38	0.07
Control Delay	79.8	34.6	3.7	34.8	41.4	59.9	22.5	0.7	53.9	12.4	3.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	79.8	34.6	3.7	34.8	41.4	59.9	22.5	0.7	53.9	12.4	3.5
LOS	E	C	A	C	D	E	C	A	D	B	A
Approach Delay		35.0			40.4		23.0			20.0	
Approach LOS		D			D		C			C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 99.1	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.84	
Intersection Signal Delay: 25.8	Intersection LOS: C
Intersection Capacity Utilization 78.2%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 8: US-395 & Luna Rd.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	49	122	68	64	92	264	36	711	43	210	788	68
Future Volume (veh/h)	49	122	68	64	92	264	36	711	43	210	788	68
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	53	133	41	70	100	221	39	773	31	228	857	56
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	148	468	397	315	130	286	59	1675	745	263	2083	929
Arrive On Green	0.25	0.25	0.25	0.25	0.25	0.25	0.03	0.46	0.46	0.15	0.58	0.58
Sat Flow, veh/h	1134	1900	1610	1298	526	1162	1810	3610	1605	1810	3610	1610
Grp Volume(v), veh/h	53	133	41	70	0	321	39	773	31	228	857	56
Grp Sat Flow(s),veh/h/ln	1134	1900	1610	1298	0	1688	1810	1805	1605	1810	1805	1610
Q Serve(g_s), s	4.7	5.9	2.0	4.8	0.0	18.4	2.2	15.2	1.1	12.8	13.7	1.6
Cycle Q Clear(g_c), s	23.2	5.9	2.0	10.7	0.0	18.4	2.2	15.2	1.1	12.8	13.7	1.6
Prop In Lane	1.00		1.00	1.00		0.69	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	148	468	397	315	0	416	59	1675	745	263	2083	929
V/C Ratio(X)	0.36	0.28	0.10	0.22	0.00	0.77	0.66	0.46	0.04	0.87	0.41	0.06
Avail Cap(c_a), veh/h	294	712	604	482	0	633	104	1675	745	470	2083	929
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.2	31.8	30.3	36.1	0.0	36.5	49.8	19.0	15.2	43.5	12.2	9.6
Incr Delay (d2), s/veh	0.5	0.1	0.0	0.1	0.0	1.4	9.1	0.9	0.1	6.4	0.6	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	2.6	0.8	1.5	0.0	7.5	1.1	5.8	0.4	5.9	4.8	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	47.8	31.9	30.3	36.2	0.0	37.8	58.9	19.9	15.3	49.9	12.8	9.8
LnGrp LOS	D	C	C	D	A	D	E	B	B	D	B	A
Approach Vol, veh/h		227			391			843			1141	
Approach Delay, s/veh		35.3			37.5			21.6			20.1	
Approach LOS		D			D			C			C	

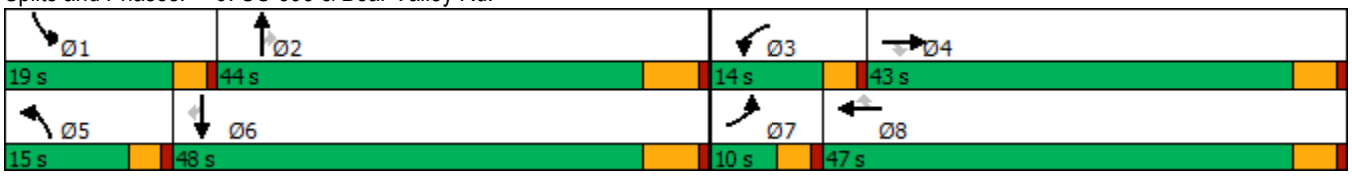
Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	19.1	54.3		30.6	7.4	66.0		30.6
Change Period (Y+Rc), s	4.0	6.0		5.0	4.0	6.0		5.0
Max Green Setting (Gmax), s	27.0	39.0		39.0	6.0	60.0		39.0
Max Q Clear Time (g_c+I1), s	14.8	17.2		25.2	4.2	15.7		20.4
Green Ext Time (p_c), s	0.3	3.8		0.5	0.0	4.7		1.3

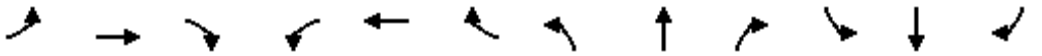
Intersection Summary		
HCM 6th Ctrl Delay		24.5
HCM 6th LOS		C

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	41	298	165	150	246	93	105	674	95	163	734	22
Future Volume (vph)	41	298	165	150	246	93	105	674	95	163	734	22
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.0	43.0	43.0	9.0	43.0	43.0	9.0	44.0	44.0	9.0	44.0	44.0
Total Split (s)	10.0	43.0	43.0	14.0	47.0	47.0	15.0	44.0	44.0	19.0	48.0	48.0
Total Split (%)	8.3%	35.8%	35.8%	11.7%	39.2%	39.2%	12.5%	36.7%	36.7%	15.8%	40.0%	40.0%
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0	4.0	3.0	5.0	5.0	3.0	5.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	5.0	5.0	4.0	5.0	5.0	4.0	6.0	6.0	4.0	6.0	6.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Max	Max	None	Max	Max
Act Effct Green (s)	5.9	16.1	16.1	10.1	24.5	24.5	9.7	39.2	39.2	13.0	42.5	42.5
Actuated g/C Ratio	0.06	0.16	0.16	0.10	0.25	0.25	0.10	0.40	0.40	0.13	0.44	0.44
v/c Ratio	0.39	0.52	0.42	0.83	0.28	0.20	0.60	0.48	0.14	0.70	0.48	0.03
Control Delay	58.7	39.6	8.2	78.9	31.0	6.5	59.0	24.9	5.9	58.4	22.7	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	58.7	39.6	8.2	78.9	31.0	6.5	59.0	24.9	5.9	58.4	22.7	0.1
LOS	E	D	A	E	C	A	E	C	A	E	C	A
Approach Delay		30.9			41.0			26.9			28.5	
Approach LOS		C			D			C			C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 97.7	
Natural Cycle: 105	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.83	
Intersection Signal Delay: 30.6	Intersection LOS: C
Intersection Capacity Utilization 60.1%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 9: US-395 & Bear Valley Rd.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	41	298	165	150	246	93	105	674	95	163	734	22
Future Volume (veh/h)	41	298	165	150	246	93	105	674	95	163	734	22
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	42	307	89	155	254	62	108	695	71	168	757	17
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	66	427	190	189	672	300	138	1609	717	205	1742	777
Arrive On Green	0.04	0.12	0.12	0.10	0.19	0.19	0.08	0.45	0.45	0.11	0.48	0.48
Sat Flow, veh/h	1810	3610	1610	1810	3610	1610	1810	3610	1610	1810	3610	1610
Grp Volume(v), veh/h	42	307	89	155	254	62	108	695	71	168	757	17
Grp Sat Flow(s),veh/h/ln	1810	1805	1610	1810	1805	1610	1810	1805	1610	1810	1805	1610
Q Serve(g_s), s	2.0	7.1	4.5	7.3	5.4	2.8	5.1	11.5	2.2	7.9	11.9	0.5
Cycle Q Clear(g_c), s	2.0	7.1	4.5	7.3	5.4	2.8	5.1	11.5	2.2	7.9	11.9	0.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	66	427	190	189	672	300	138	1609	717	205	1742	777
V/C Ratio(X)	0.63	0.72	0.47	0.82	0.38	0.21	0.78	0.43	0.10	0.82	0.43	0.02
Avail Cap(c_a), veh/h	125	1576	703	208	1742	777	229	1609	717	312	1742	777
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.3	37.0	35.8	38.2	31.0	30.0	39.5	16.6	14.0	37.7	14.7	11.8
Incr Delay (d2), s/veh	7.2	0.9	0.7	19.8	0.1	0.1	7.1	0.8	0.3	8.2	0.8	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	3.0	1.7	4.0	2.2	1.0	2.4	4.2	0.8	3.7	4.3	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	48.5	37.8	36.5	58.0	31.1	30.1	46.6	17.4	14.3	45.9	15.5	11.8
LnGrp LOS	D	D	D	E	C	C	D	B	B	D	B	B
Approach Vol, veh/h		438			471			874			942	
Approach Delay, s/veh		38.6			39.8			20.8			20.9	
Approach LOS		D			D			C			C	

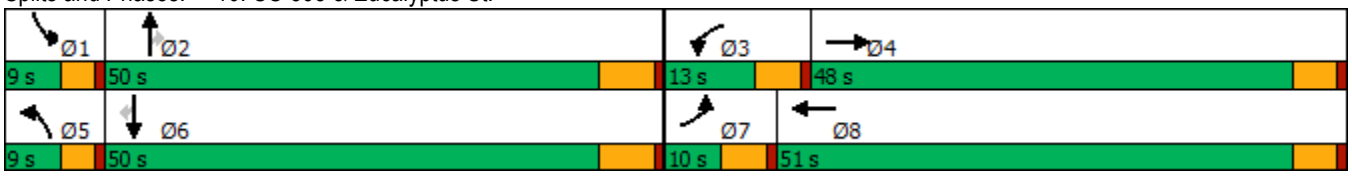
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.9	44.8	13.1	15.3	10.6	48.0	7.2	21.2
Change Period (Y+Rc), s	4.0	6.0	4.0	5.0	4.0	6.0	4.0	5.0
Max Green Setting (Gmax), s	15.0	38.0	10.0	38.0	11.0	42.0	6.0	42.0
Max Q Clear Time (g_c+I1), s	9.9	13.5	9.3	9.1	7.1	13.9	4.0	7.4
Green Ext Time (p_c), s	0.1	2.7	0.0	1.2	0.1	2.9	0.0	0.9

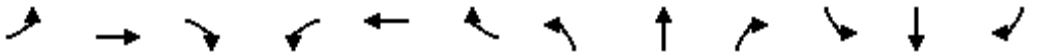
Intersection Summary	
HCM 6th Ctrl Delay	27.0
HCM 6th LOS	C

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	9	5	75	6	7	834	58	4	1066	8
Future Volume (vph)	9	5	75	6	7	834	58	4	1066	8
Turn Type	Prot	NA	Prot	NA	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4	3	8	5	2		1	6	
Permitted Phases							2			6
Detector Phase	7	4	3	8	5	2	2	1	6	6
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	10.0	48.0	10.0	48.0	9.0	41.0	41.0	9.0	41.0	41.0
Total Split (s)	10.0	48.0	13.0	51.0	9.0	50.0	50.0	9.0	50.0	50.0
Total Split (%)	8.3%	40.0%	10.8%	42.5%	7.5%	41.7%	41.7%	7.5%	41.7%	41.7%
Yellow Time (s)	4.0	4.0	4.0	4.0	3.0	5.0	5.0	3.0	5.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	4.0	6.0	6.0	4.0	6.0	6.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	Max	Max	None	Max	Max
Act Effct Green (s)	5.2	15.0	8.7	18.2	5.2	55.4	55.4	5.2	55.4	55.4
Actuated g/C Ratio	0.06	0.18	0.11	0.22	0.06	0.67	0.67	0.06	0.67	0.67
v/c Ratio	0.09	0.06	0.43	0.07	0.07	0.37	0.06	0.04	0.47	0.01
Control Delay	46.2	16.1	47.3	11.5	46.1	13.0	1.5	46.0	14.4	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	46.2	16.1	47.3	11.5	46.1	13.0	1.5	46.0	14.4	0.0
LOS	D	B	D	B	D	B	A	D	B	A
Approach Delay		26.9		38.1		12.5			14.4	
Approach LOS		C		D		B			B	

Intersection Summary		
Cycle Length: 120		
Actuated Cycle Length: 82.4		
Natural Cycle: 110		
Control Type: Actuated-Uncoordinated		
Maximum v/c Ratio: 0.47		
Intersection Signal Delay: 14.9	Intersection LOS: B	
Intersection Capacity Utilization 50.3%	ICU Level of Service A	
Analysis Period (min) 15		

Splits and Phases: 10: US-395 & Eucalyptus St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	9	5	12	75	6	20	7	834	58	4	1066	8
Future Volume (veh/h)	9	5	12	75	6	20	7	834	58	4	1066	8
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	10	5	5	81	6	11	8	897	58	4	1146	8
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	23	69	69	105	74	136	19	2135	952	10	2117	944
Arrive On Green	0.01	0.08	0.08	0.06	0.12	0.12	0.01	0.59	0.59	0.01	0.59	0.59
Sat Flow, veh/h	1810	872	872	1810	600	1099	1810	3610	1610	1810	3610	1610
Grp Volume(v), veh/h	10	0	10	81	0	17	8	897	58	4	1146	8
Grp Sat Flow(s),veh/h/ln	1810	0	1743	1810	0	1699	1810	1805	1610	1810	1805	1610
Q Serve(g_s), s	0.4	0.0	0.4	3.3	0.0	0.7	0.3	10.1	1.1	0.2	14.4	0.2
Cycle Q Clear(g_c), s	0.4	0.0	0.4	3.3	0.0	0.7	0.3	10.1	1.1	0.2	14.4	0.2
Prop In Lane	1.00		0.50	1.00		0.65	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	23	0	137	105	0	211	19	2135	952	10	2117	944
V/C Ratio(X)	0.44	0.00	0.07	0.77	0.00	0.08	0.43	0.42	0.06	0.41	0.54	0.01
Avail Cap(c_a), veh/h	121	0	999	193	0	1042	121	2135	952	121	2117	944
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.8	0.0	32.0	34.8	0.0	29.1	36.9	8.3	6.5	37.2	9.4	6.4
Incr Delay (d2), s/veh	4.9	0.0	0.2	4.5	0.0	0.2	5.8	0.6	0.1	10.2	1.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	0.2	1.5	0.0	0.3	0.2	2.9	0.3	0.1	5.3	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	41.7	0.0	32.2	39.3	0.0	29.2	42.7	8.9	6.6	47.4	10.4	6.5
LnGrp LOS	D	A	C	D	A	C	D	A	A	D	B	A
Approach Vol, veh/h		20			98			963			1158	
Approach Delay, s/veh		37.0			37.6			9.1			10.5	
Approach LOS		D			D			A			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	4.4	50.4	9.3	10.9	4.8	50.0	5.9	14.3
Change Period (Y+Rc), s	4.0	6.0	5.0	5.0	4.0	6.0	5.0	5.0
Max Green Setting (Gmax), s	5.0	44.0	8.0	43.0	5.0	44.0	5.0	46.0
Max Q Clear Time (g_c+I1), s	2.2	12.1	5.3	2.4	2.3	16.4	2.4	2.7
Green Ext Time (p_c), s	0.0	6.3	0.0	0.0	0.0	10.4	0.0	0.1

Intersection Summary	
HCM 6th Ctrl Delay	11.3
HCM 6th LOS	B

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	1	0	0	0	3	934	0	0	1152	0
Future Vol, veh/h	0	0	1	0	0	0	3	934	0	0	1152	0
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	-	-	-	-	-	-	-	-	-	-	-	-
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	0	0	0	0	0
Mvmt Flow	0	0	1	0	0	0	3	1038	0	0	1280	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2324	2324	1280	2325	2324	1038	1280	0	0	1038	0	0
Stage 1	1280	1280	-	1044	1044	-	-	-	-	-	-	-
Stage 2	1044	1044	-	1281	1280	-	-	-	-	-	-	-
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	27	38	204	26	38	283	549	-	-	678	-	-
Stage 1	206	239	-	279	309	-	-	-	-	-	-	-
Stage 2	279	309	-	205	239	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	27	38	204	26	38	283	549	-	-	678	-	-
Mov Cap-2 Maneuver	27	38	-	26	38	-	-	-	-	-	-	-
Stage 1	203	239	-	275	305	-	-	-	-	-	-	-
Stage 2	275	305	-	204	239	-	-	-	-	-	-	-

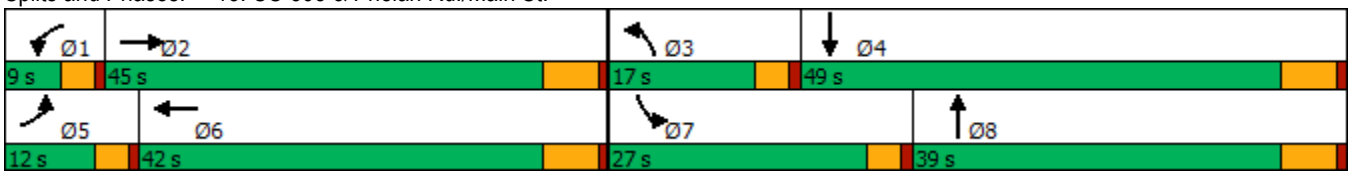
Approach	EB	WB	NB	SB
HCM Control Delay, s	22.7	0	0	0
HCM LOS	C	A		

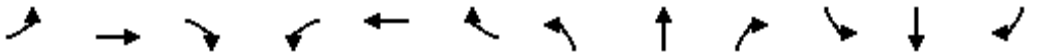
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	549	-	-	204	-	678	-	-
HCM Lane V/C Ratio	0.006	-	-	0.005	-	-	-	-
HCM Control Delay (s)	11.6	0	-	22.7	0	0	-	-
HCM Lane LOS	B	A	-	C	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0	-	0	-	-

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	47	646	4	316	92	661	206	909
Future Volume (vph)	47	646	4	316	92	661	206	909
Turn Type	Prot	NA	Prot	NA	Prot	NA	Prot	NA
Protected Phases	5	2	1	6	3	8	7	4
Permitted Phases								
Detector Phase	5	2	1	6	3	8	7	4
Switch Phase								
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.0	16.0	9.0	16.0	9.0	16.0	9.0	16.0
Total Split (s)	12.0	45.0	9.0	42.0	17.0	39.0	27.0	49.0
Total Split (%)	10.0%	37.5%	7.5%	35.0%	14.2%	32.5%	22.5%	40.8%
Yellow Time (s)	3.0	5.0	3.0	5.0	3.0	5.0	3.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	6.0	4.0	6.0	4.0	6.0	4.0	6.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None
Act Effct Green (s)	7.1	27.3	5.4	22.5	9.8	24.9	15.8	34.1
Actuated g/C Ratio	0.08	0.32	0.06	0.26	0.11	0.29	0.18	0.39
v/c Ratio	0.33	0.69	0.04	0.56	0.47	0.67	0.65	0.69
Control Delay	51.5	30.3	50.5	24.4	50.2	32.6	46.4	27.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	51.5	30.3	50.5	24.4	50.2	32.6	46.4	27.6
LOS	D	C	D	C	D	C	D	C
Approach Delay		31.5		24.6		34.8		31.0
Approach LOS		C		C		C		C

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 86.5	
Natural Cycle: 65	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.69	
Intersection Signal Delay: 30.9	Intersection LOS: C
Intersection Capacity Utilization 73.3%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 13: US-395 & Phelan Rd./Main St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	47	646	106	4	316	217	92	661	9	206	909	31
Future Volume (veh/h)	47	646	106	4	316	217	92	661	9	206	909	31
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	49	673	65	4	329	146	96	689	9	215	947	28
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	80	904	87	10	570	248	125	1035	14	265	1293	38
Arrive On Green	0.04	0.27	0.27	0.01	0.23	0.23	0.07	0.28	0.28	0.15	0.36	0.36
Sat Flow, veh/h	1810	3326	321	1810	2448	1065	1810	3649	48	1810	3580	106
Grp Volume(v), veh/h	49	365	373	4	241	234	96	341	357	215	477	498
Grp Sat Flow(s),veh/h/ln	1810	1805	1842	1810	1805	1708	1810	1805	1891	1810	1805	1881
Q Serve(g_s), s	1.8	12.6	12.6	0.2	8.1	8.3	3.6	11.4	11.4	7.9	15.7	15.7
Cycle Q Clear(g_c), s	1.8	12.6	12.6	0.2	8.1	8.3	3.6	11.4	11.4	7.9	15.7	15.7
Prop In Lane	1.00		0.17	1.00		0.62	1.00		0.03	1.00		0.06
Lane Grp Cap(c), veh/h	80	491	501	10	420	398	125	512	537	265	652	679
V/C Ratio(X)	0.61	0.74	0.75	0.41	0.57	0.59	0.77	0.67	0.67	0.81	0.73	0.73
Avail Cap(c_a), veh/h	212	1030	1051	132	951	900	344	871	913	609	1135	1183
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.1	22.7	22.7	33.9	23.2	23.3	31.3	21.6	21.6	28.3	19.0	19.0
Incr Delay (d2), s/veh	5.5	2.3	2.2	19.5	1.2	1.4	7.1	1.8	1.7	4.4	1.9	1.9
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	0.8	4.8	4.9	0.1	3.1	3.0	1.6	4.3	4.5	3.3	5.6	5.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	37.6	25.0	24.9	53.4	24.4	24.7	38.4	23.4	23.3	32.7	20.9	20.8
LnGrp LOS	D	C	C	D	C	C	D	C	C	C	C	C
Approach Vol, veh/h		787			479			794			1190	
Approach Delay, s/veh		25.7			24.8			25.2			23.0	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	4.4	24.6	8.7	30.7	7.0	21.9	14.0	25.4
Change Period (Y+Rc), s	4.0	6.0	4.0	6.0	4.0	6.0	4.0	6.0
Max Green Setting (Gmax), s	5.0	39.0	13.0	43.0	8.0	36.0	23.0	33.0
Max Q Clear Time (g_c+I1), s	2.2	14.6	5.6	17.7	3.8	10.3	9.9	13.4
Green Ext Time (p_c), s	0.0	3.9	0.1	7.0	0.0	2.4	0.3	4.2

Intersection Summary	
HCM 6th Ctrl Delay	24.5
HCM 6th LOS	C

Intersection	
Int Delay, s/veh	0.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	5	9	780	13	24	993
Future Vol, veh/h	5	9	780	13	24	993
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	375	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	5	10	839	14	26	1068

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1966	427	0	0	853	0
Stage 1	846	-	-	-	-	-
Stage 2	1120	-	-	-	-	-
Critical Hdwy	6.6	6.9	-	-	4.1	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	63	582	-	-	795	-
Stage 1	386	-	-	-	-	-
Stage 2	315	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	61	582	-	-	795	-
Mov Cap-2 Maneuver	61	-	-	-	-	-
Stage 1	386	-	-	-	-	-
Stage 2	305	-	-	-	-	-

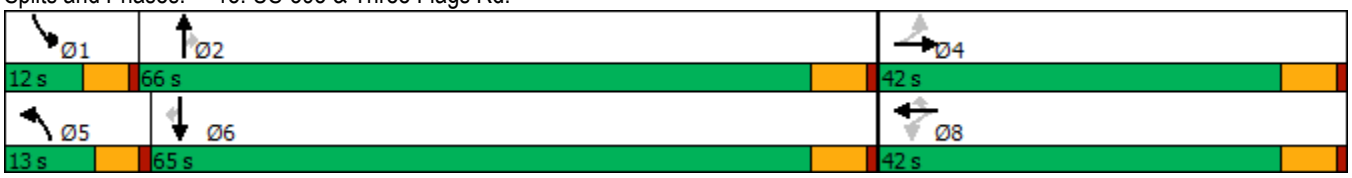
Approach	WB	NB	SB
HCM Control Delay, s	32.1	0	0.2
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	61	582	795	-
HCM Lane V/C Ratio	-	-	0.088	0.017	0.032	-
HCM Control Delay (s)	-	-	69.6	11.3	9.7	-
HCM Lane LOS	-	-	F	B	A	-
HCM 95th %tile Q(veh)	-	-	0.3	0.1	0.1	-

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	24	1	165	2	41	23	724	101	20	889	73
Future Volume (vph)	24	1	165	2	41	23	724	101	20	889	73
Turn Type	Perm	NA	Perm	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		4		8		5	2		1	6	
Permitted Phases	4		8		8			2			6
Detector Phase	4	4	8	8	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	16.0	16.0	16.0	16.0	16.0	10.0	16.0	16.0	10.0	16.0	16.0
Total Split (s)	42.0	42.0	42.0	42.0	42.0	13.0	66.0	66.0	12.0	65.0	65.0
Total Split (%)	35.0%	35.0%	35.0%	35.0%	35.0%	10.8%	55.0%	55.0%	10.0%	54.2%	54.2%
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	5.0	6.0	6.0	5.0	6.0	6.0
Lead/Lag						Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?						Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Max	Max	None	Max	Max
Act Effct Green (s)	17.4	17.4	17.4	17.4	17.4	6.1	60.8	60.8	5.8	60.6	60.6
Actuated g/C Ratio	0.18	0.18	0.18	0.18	0.18	0.06	0.64	0.64	0.06	0.64	0.64
v/c Ratio	0.10	0.24	0.73	0.01	0.13	0.22	0.34	0.10	0.20	0.42	0.07
Control Delay	33.4	9.4	54.8	32.0	3.7	50.5	9.9	2.6	50.8	10.9	3.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	33.4	9.4	54.8	32.0	3.7	50.5	9.9	2.6	50.8	10.9	3.0
LOS	C	A	D	C	A	D	A	A	D	B	A
Approach Delay		14.8		44.4			10.1			11.1	
Approach LOS		B		D			B			B	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 94.5	
Natural Cycle: 55	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.73	
Intersection Signal Delay: 14.1	Intersection LOS: B
Intersection Capacity Utilization 51.7%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 15: US-395 & Three Flags Rd.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	24	1	81	165	2	41	23	724	101	20	889	73
Future Volume (veh/h)	24	1	81	165	2	41	23	724	101	20	889	73
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	26	1	51	179	2	36	25	787	98	22	966	58
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	325	5	272	284	326	276	46	2265	1009	42	2257	1007
Arrive On Green	0.17	0.17	0.17	0.17	0.17	0.17	0.03	0.63	0.63	0.02	0.63	0.63
Sat Flow, veh/h	1464	31	1584	1450	1900	1605	1810	3610	1609	1810	3610	1610
Grp Volume(v), veh/h	26	0	52	179	2	36	25	787	98	22	966	58
Grp Sat Flow(s),veh/h/ln	1464	0	1615	1450	1900	1605	1810	1805	1609	1810	1805	1610
Q Serve(g_s), s	1.4	0.0	2.6	11.5	0.1	1.8	1.3	9.9	2.3	1.1	13.1	1.3
Cycle Q Clear(g_c), s	1.5	0.0	2.6	14.2	0.1	1.8	1.3	9.9	2.3	1.1	13.1	1.3
Prop In Lane	1.00		0.98	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	325	0	277	284	326	276	46	2265	1009	42	2257	1007
V/C Ratio(X)	0.08	0.00	0.19	0.63	0.01	0.13	0.54	0.35	0.10	0.53	0.43	0.06
Avail Cap(c_a), veh/h	625	0	608	581	715	604	151	2265	1009	132	2257	1007
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	33.5	0.0	33.9	40.0	32.8	33.6	46.1	8.5	7.1	46.2	9.2	7.0
Incr Delay (d2), s/veh	0.0	0.0	0.1	0.9	0.0	0.1	3.7	0.4	0.2	3.8	0.6	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	0.5	0.0	1.0	4.1	0.0	0.7	0.6	3.1	0.7	0.5	4.1	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	33.5	0.0	34.0	40.8	32.8	33.6	49.8	8.9	7.3	49.9	9.8	7.1
LnGrp LOS	C	A	C	D	C	C	D	A	A	D	A	A
Approach Vol, veh/h		78			217			910			1046	
Approach Delay, s/veh		33.8			39.5			9.9			10.5	
Approach LOS		C			D			A			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.2	66.0		22.4	7.4	65.8		22.4				
Change Period (Y+Rc), s	5.0	6.0		6.0	5.0	6.0		6.0				
Max Green Setting (Gmax), s	7.0	60.0		36.0	8.0	59.0		36.0				
Max Q Clear Time (g_c+I1), s	3.1	11.9		4.6	3.3	15.1		16.2				
Green Ext Time (p_c), s	0.0	5.7		0.2	0.0	7.2		0.3				

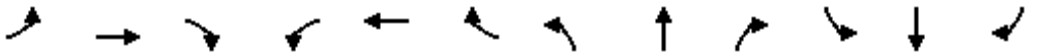
Intersection Summary			
HCM 6th Ctrl Delay		13.8	
HCM 6th LOS		B	

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	26	30	92	12	103	8	718	59	101	1006	33
Future Volume (vph)	26	30	92	12	103	8	718	59	101	1006	33
Turn Type	Perm	NA	Perm	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		4		8		5	2		1	6	
Permitted Phases	4		8		8			2			6
Detector Phase	4	4	8	8	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	15.0	15.0	46.0	46.0	46.0	9.0	34.0	34.0	9.0	34.0	34.0
Total Split (s)	47.0	47.0	47.0	47.0	47.0	9.0	52.0	52.0	21.0	64.0	64.0
Total Split (%)	39.2%	39.2%	39.2%	39.2%	39.2%	7.5%	43.3%	43.3%	17.5%	53.3%	53.3%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	3.0	5.0	5.0	3.0	5.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	0.0	-2.0	-2.0	0.0	-2.0	-2.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag						Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?						Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Max	Max	None	Max	Max
Act Effct Green (s)	16.5	16.5	16.5	16.5	16.5	5.1	50.5	50.5	10.4	63.6	63.6
Actuated g/C Ratio	0.18	0.18	0.18	0.18	0.18	0.06	0.56	0.56	0.12	0.71	0.71
v/c Ratio	0.11	0.10	0.39	0.04	0.29	0.09	0.38	0.07	0.53	0.43	0.03
Control Delay	29.5	27.4	35.4	28.1	7.6	48.4	14.2	2.1	48.2	8.7	1.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	29.5	27.4	35.4	28.1	7.6	48.4	14.2	2.1	48.2	8.7	1.9
LOS	C	C	D	C	A	D	B	A	D	A	A
Approach Delay		28.3		21.1			13.7			12.0	
Approach LOS		C		C			B			B	

Intersection Summary		
Cycle Length: 120		
Actuated Cycle Length: 89.6		
Natural Cycle: 90		
Control Type: Actuated-Uncoordinated		
Maximum v/c Ratio: 0.53		
Intersection Signal Delay: 13.9	Intersection LOS: B	
Intersection Capacity Utilization 54.5%	ICU Level of Service A	
Analysis Period (min) 15		

Splits and Phases: 16: US-395 & Joshua St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	26	30	3	92	12	103	8	718	59	101	1006	33
Future Volume (veh/h)	26	30	3	92	12	103	8	718	59	101	1006	33
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	28	33	0	100	13	58	9	780	50	110	1093	31
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	268	255	0	261	255	216	20	2328	1039	142	2570	1146
Arrive On Green	0.13	0.13	0.00	0.13	0.13	0.13	0.01	0.64	0.64	0.08	0.71	0.71
Sat Flow, veh/h	1423	1900	0	1475	1900	1607	1810	3610	1610	1810	3610	1610
Grp Volume(v), veh/h	28	33	0	100	13	58	9	780	50	110	1093	31
Grp Sat Flow(s),veh/h/ln	1423	1900	0	1475	1900	1607	1810	1805	1610	1810	1805	1610
Q Serve(g_s), s	1.5	1.3	0.0	5.4	0.5	2.7	0.4	8.2	1.0	5.0	10.5	0.5
Cycle Q Clear(g_c), s	2.0	1.3	0.0	6.7	0.5	2.7	0.4	8.2	1.0	5.0	10.5	0.5
Prop In Lane	1.00		0.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	268	255	0	261	255	216	20	2328	1039	142	2570	1146
V/C Ratio(X)	0.10	0.13	0.00	0.38	0.05	0.27	0.44	0.33	0.05	0.78	0.43	0.03
Avail Cap(c_a), veh/h	803	969	0	816	969	820	107	2328	1039	365	2570	1146
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.7	32.1	0.0	35.1	31.8	32.8	41.4	6.8	5.5	38.1	5.0	3.6
Incr Delay (d2), s/veh	0.1	0.1	0.0	0.3	0.0	0.2	10.7	0.4	0.1	6.7	0.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.6	0.0	1.9	0.2	1.1	0.2	2.3	0.2	2.3	2.3	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	32.7	32.2	0.0	35.4	31.8	33.0	52.1	7.2	5.6	44.8	5.5	3.6
LnGrp LOS	C	C	A	D	C	C	D	A	A	D	A	A
Approach Vol, veh/h		61			171			839			1234	
Approach Delay, s/veh		32.4			34.3			7.6			9.0	
Approach LOS		C			C			A			A	

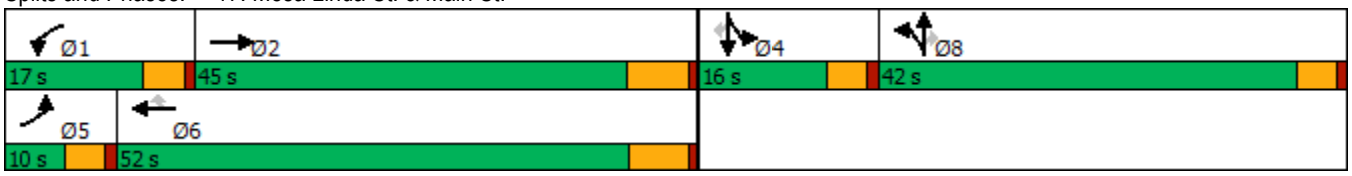
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.6	58.4		15.3	4.9	64.0		15.3				
Change Period (Y+Rc), s	4.0	6.0		5.0	4.0	6.0		5.0				
Max Green Setting (Gmax), s	17.0	46.0		42.0	5.0	58.0		42.0				
Max Q Clear Time (g_c+I1), s	7.0	10.2		4.0	2.4	12.5		8.7				
Green Ext Time (p_c), s	0.1	11.0		0.1	0.0	18.3		0.3				

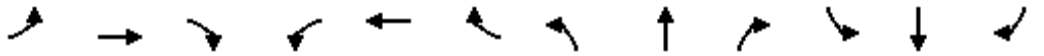
Intersection Summary			
HCM 6th Ctrl Delay		11.0	
HCM 6th LOS		B	

Lane Group	EBL	EBT	WBL	WBT	WBR	NBT	NBR	SBT	SBR
Lane Configurations									
Traffic Volume (vph)	5	856	50	514	17	2	126	2	14
Future Volume (vph)	5	856	50	514	17	2	126	2	14
Turn Type	Prot	NA	Prot	NA	Perm	NA	Perm	NA	Perm
Protected Phases	5	2	1	6		8		4	
Permitted Phases					6		8		4
Detector Phase	5	2	1	6	6	8	8	4	4
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	16.5	9.6	23.2	23.2	40.6	40.6	14.6	14.6
Total Split (s)	10.0	45.0	17.0	52.0	52.0	42.0	42.0	16.0	16.0
Total Split (%)	8.3%	37.5%	14.2%	43.3%	43.3%	35.0%	35.0%	13.3%	13.3%
Yellow Time (s)	3.6	5.5	3.6	5.2	5.2	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.5	4.6	6.2	6.2	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lead	Lag	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes				
Recall Mode	None	Max	None	Max	Max	None	None	None	None
Act Effct Green (s)	5.3	41.7	7.9	50.6	50.6	14.2	14.2	10.6	10.6
Actuated g/C Ratio	0.06	0.47	0.09	0.57	0.57	0.16	0.16	0.12	0.12
v/c Ratio	0.06	0.44	0.42	0.22	0.02	0.01	0.39	0.28	0.05
Control Delay	48.6	20.4	51.3	12.6	0.1	31.5	8.0	45.1	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	48.6	20.4	51.3	12.6	0.1	31.5	8.0	45.1	0.3
LOS	D	C	D	B	A	C	A	D	A
Approach Delay		20.5		15.6		8.3		35.3	
Approach LOS		C		B		A		D	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 88.9	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.44	
Intersection Signal Delay: 18.4	Intersection LOS: B
Intersection Capacity Utilization 47.3%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 17: Mesa Linda St. & Main St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	856	3	50	514	17	0	2	126	47	2	14
Future Volume (veh/h)	5	856	3	50	514	17	0	2	126	47	2	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	6	1007	4	59	605	12	0	2	127	55	2	2
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	13	2576	10	73	2688	835	0	204	173	148	5	136
Arrive On Green	0.01	0.51	0.51	0.05	0.55	0.55	0.00	0.11	0.11	0.09	0.09	0.09
Sat Flow, veh/h	1619	5052	20	1619	4914	1525	0	1800	1525	1657	60	1525
Grp Volume(v), veh/h	6	653	358	59	605	12	0	2	127	57	0	2
Grp Sat Flow(s),veh/h/ln	1619	1638	1796	1619	1638	1525	0	1800	1525	1717	0	1525
Q Serve(g_s), s	0.3	10.2	10.2	3.0	5.3	0.3	0.0	0.1	6.7	2.6	0.0	0.1
Cycle Q Clear(g_c), s	0.3	10.2	10.2	3.0	5.3	0.3	0.0	0.1	6.7	2.6	0.0	0.1
Prop In Lane	1.00		0.01	1.00		1.00	0.00		1.00	0.96		1.00
Lane Grp Cap(c), veh/h	13	1670	916	73	2688	835	0	204	173	153	0	136
V/C Ratio(X)	0.48	0.39	0.39	0.81	0.23	0.01	0.00	0.01	0.73	0.37	0.00	0.01
Avail Cap(c_a), veh/h	104	1670	916	240	2688	835	0	804	681	234	0	208
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	41.4	12.6	12.6	39.6	9.8	8.7	0.0	32.9	35.9	35.9	0.0	34.8
Incr Delay (d2), s/veh	10.0	0.7	1.3	7.7	0.2	0.0	0.0	0.0	5.9	1.5	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	3.2	3.6	1.3	1.6	0.1	0.0	0.0	2.8	1.2	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	51.4	13.2	13.8	47.4	10.0	8.7	0.0	33.0	41.8	37.4	0.0	34.8
LnGrp LOS	D	B	B	D	A	A	A	C	D	D	A	C
Approach Vol, veh/h		1017			676			129			59	
Approach Delay, s/veh		13.7			13.2			41.6			37.3	
Approach LOS		B			B			D			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.4	49.2		12.1	5.3	52.3		14.1				
Change Period (Y+Rc), s	4.6	6.5		4.6	4.6	* 6.5		4.6				
Max Green Setting (Gmax), s	12.4	38.5		11.4	5.4	* 46		37.4				
Max Q Clear Time (g_c+I1), s	5.0	12.2		4.6	2.3	7.3		8.7				
Green Ext Time (p_c), s	0.0	6.1		0.1	0.0	4.0		0.4				

Intersection Summary		
HCM 6th Ctrl Delay		16.2
HCM 6th LOS		B

Notes

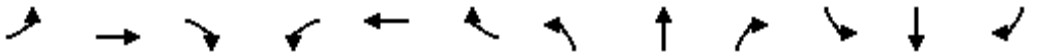
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	50	815	36	70	526	17	31	7	48	34	6	26
Future Volume (vph)	50	815	36	70	526	17	31	7	48	34	6	26
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Split	NA	Perm	Split	NA	Perm
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases			2			6			8			4
Detector Phase	5	2	2	1	6	6	8	8	8	4	4	4
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	32.2	32.2	9.6	32.2	32.2	43.6	43.6	43.6	41.6	41.6	41.6
Total Split (s)	12.0	34.7	34.7	10.1	32.8	32.8	43.6	43.6	43.6	41.6	41.6	41.6
Total Split (%)	9.2%	26.7%	26.7%	7.8%	25.2%	25.2%	33.5%	33.5%	33.5%	32.0%	32.0%	32.0%
Yellow Time (s)	3.6	5.2	5.2	3.6	5.2	5.2	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	6.2	4.6	6.2	6.2	4.6	4.6	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes						
Recall Mode	None	Max	Max	None	Max	Max	None	None	None	None	None	None
Act Effct Green (s)	7.1	38.2	38.2	5.9	37.0	37.0	14.5	14.5	14.5	14.3	14.3	14.3
Actuated g/C Ratio	0.09	0.49	0.49	0.08	0.48	0.48	0.19	0.19	0.19	0.18	0.18	0.18
v/c Ratio	0.38	0.38	0.05	0.35	0.25	0.02	0.07	0.07	0.15	0.13	0.02	0.08
Control Delay	49.6	22.7	0.1	46.9	22.5	0.1	30.7	30.6	0.8	31.6	31.0	0.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	49.6	22.7	0.1	46.9	22.5	0.1	30.7	30.6	0.8	31.6	31.0	0.4
LOS	D	C	A	D	C	A	C	C	A	C	C	A
Approach Delay		23.3			24.7			14.1			19.3	
Approach LOS		C			C			B			B	

Intersection Summary		
Cycle Length: 130		
Actuated Cycle Length: 77.4		
Natural Cycle: 130		
Control Type: Actuated-Uncoordinated		
Maximum v/c Ratio: 0.38		
Intersection Signal Delay: 23.2	Intersection LOS: C	
Intersection Capacity Utilization 52.0%	ICU Level of Service A	
Analysis Period (min) 15		

Splits and Phases: 18: Cataba Av. & Main St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	50	815	36	70	526	17	31	7	48	34	6	26
Future Volume (veh/h)	50	815	36	70	526	17	31	7	48	34	6	26
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	1700	1800	1800	1600	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	56	916	33	79	591	12	41	0	34	38	7	0
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	79	2133	662	172	2179	676	382	0	180	138	153	130
Arrive On Green	0.05	0.43	0.43	0.06	0.44	0.44	0.12	0.00	0.12	0.09	0.09	0.00
Sat Flow, veh/h	1619	4914	1524	2956	4914	1524	3238	0	1522	1619	1800	1525
Grp Volume(v), veh/h	56	916	33	79	591	12	41	0	34	38	7	0
Grp Sat Flow(s),veh/h/ln	1619	1638	1524	1478	1638	1524	1619	0	1522	1619	1800	1525
Q Serve(g_s), s	2.2	8.5	0.8	1.7	5.0	0.3	0.7	0.0	1.3	1.4	0.2	0.0
Cycle Q Clear(g_c), s	2.2	8.5	0.8	1.7	5.0	0.3	0.7	0.0	1.3	1.4	0.2	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	79	2133	662	172	2179	676	382	0	180	138	153	130
V/C Ratio(X)	0.71	0.43	0.05	0.46	0.27	0.02	0.11	0.00	0.19	0.28	0.05	0.00
Avail Cap(c_a), veh/h	182	2133	662	248	2179	676	1923	0	904	912	1014	860
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	30.8	12.9	10.7	29.9	11.6	10.3	25.9	0.0	26.1	28.1	27.6	0.0
Incr Delay (d2), s/veh	4.3	0.6	0.1	0.7	0.3	0.0	0.1	0.0	0.5	1.1	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	2.5	0.2	0.6	1.5	0.1	0.3	0.0	0.5	0.6	0.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	35.1	13.6	10.9	30.6	11.9	10.3	26.0	0.0	26.6	29.2	27.7	0.0
LnGrp LOS	D	B	B	C	B	B	C	A	C	C	C	A
Approach Vol, veh/h		1005			682			75			45	
Approach Delay, s/veh		14.7			14.0			26.3			29.0	
Approach LOS		B			B			C			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.4	34.7		10.2	7.8	35.3		12.3				
Change Period (Y+Rc), s	4.6	6.2		4.6	4.6	6.2		4.6				
Max Green Setting (Gmax), s	5.5	28.5		37.0	7.4	26.6		39.0				
Max Q Clear Time (g_c+I1), s	3.7	10.5		3.4	4.2	7.0		3.3				
Green Ext Time (p_c), s	0.0	5.3		0.1	0.0	3.4		0.2				

Intersection Summary		
HCM 6th Ctrl Delay		15.3
HCM 6th LOS		B

Notes

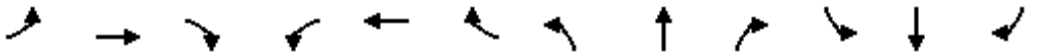
User approved pedestrian interval to be less than phase max green.
User approved volume balancing among the lanes for turning movement.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	30	863	12	138	651	11	11	78	143	26
Future Volume (vph)	30	863	12	138	651	11	11	78	143	26
Turn Type	Prot	NA	Perm	Prot	NA	Perm	NA	Perm	Perm	NA
Protected Phases	5	2		1	6		8			4
Permitted Phases			2			8		8	4	
Detector Phase	5	2	2	1	6	8	8	8	4	4
Switch Phase										
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	29.2	29.2	9.6	30.2	38.6	38.6	38.6	41.6	41.6
Total Split (s)	14.0	45.0	45.0	29.0	60.0	46.0	46.0	46.0	46.0	46.0
Total Split (%)	11.7%	37.5%	37.5%	24.2%	50.0%	38.3%	38.3%	38.3%	38.3%	38.3%
Yellow Time (s)	3.6	5.2	5.2	3.6	5.2	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	6.2	4.6	6.2	4.6	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes					
Recall Mode	None	Max	Max	None	Max	None	None	None	None	None
Act Effct Green (s)	6.5	44.8	44.8	12.3	55.2	17.7	17.7	17.7	17.7	17.7
Actuated g/C Ratio	0.07	0.50	0.50	0.14	0.61	0.20	0.20	0.20	0.20	0.20
v/c Ratio	0.27	0.36	0.02	0.65	0.26	0.05	0.03	0.21	0.59	0.12
Control Delay	50.5	16.8	0.0	53.1	10.4	29.6	29.3	3.4	43.2	22.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	50.5	16.8	0.0	53.1	10.4	29.6	29.3	3.4	43.2	22.0
LOS	D	B	A	D	B	C	C	A	D	C
Approach Delay		17.7			17.0		9.0			38.5
Approach LOS		B			B		A			D

Intersection Summary		
Cycle Length: 120		
Actuated Cycle Length: 90.5		
Natural Cycle: 85		
Control Type: Actuated-Uncoordinated		
Maximum v/c Ratio: 0.65		
Intersection Signal Delay: 18.8	Intersection LOS: B	
Intersection Capacity Utilization 56.1%	ICU Level of Service B	
Analysis Period (min) 15		

Splits and Phases: 19: Key Point Av. & Main St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	863	12	138	651	107	11	11	78	143	26	15
Future Volume (veh/h)	30	863	12	138	651	107	11	11	78	143	26	15
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	31	881	9	141	664	75	11	11	20	146	27	10
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	50	2771	859	172	2868	321	254	264	223	272	183	68
Arrive On Green	0.03	0.56	0.56	0.11	0.64	0.64	0.15	0.15	0.15	0.15	0.15	0.15
Sat Flow, veh/h	1619	4914	1524	1619	4484	502	1315	1800	1522	1320	1253	464
Grp Volume(v), veh/h	31	881	9	141	484	255	11	11	20	146	0	37
Grp Sat Flow(s),veh/h/ln	1619	1638	1524	1619	1638	1710	1315	1800	1522	1320	0	1716
Q Serve(g_s), s	1.6	8.0	0.2	7.2	5.2	5.3	0.6	0.4	1.0	9.0	0.0	1.6
Cycle Q Clear(g_c), s	1.6	8.0	0.2	7.2	5.2	5.3	2.2	0.4	1.0	9.4	0.0	1.6
Prop In Lane	1.00		1.00	1.00		0.29	1.00		1.00	1.00		0.27
Lane Grp Cap(c), veh/h	50	2771	859	172	2096	1094	254	264	223	272	0	251
V/C Ratio(X)	0.62	0.32	0.01	0.82	0.23	0.23	0.04	0.04	0.09	0.54	0.00	0.15
Avail Cap(c_a), veh/h	181	2771	859	470	2096	1094	708	886	749	728	0	845
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	40.3	9.7	8.0	36.8	6.4	6.4	32.3	30.8	31.0	34.9	0.0	31.3
Incr Delay (d2), s/veh	4.7	0.3	0.0	3.6	0.3	0.5	0.1	0.1	0.2	1.6	0.0	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	0.7	2.4	0.1	2.8	1.4	1.5	0.2	0.2	0.4	3.0	0.0	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	45.0	10.0	8.1	40.4	6.7	6.9	32.3	30.9	31.2	36.5	0.0	31.6
LnGrp LOS	D	B	A	D	A	A	C	C	C	D	A	C
Approach Vol, veh/h		921			880			42			183	
Approach Delay, s/veh		11.2			12.1			31.4			35.5	
Approach LOS		B			B			C			D	

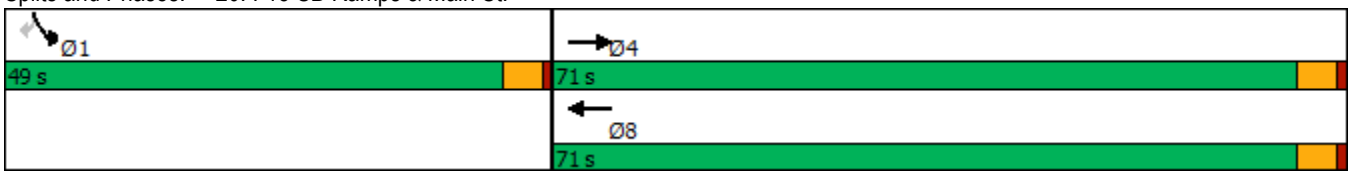
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	13.6	53.6		16.9	7.2	60.0		16.9				
Change Period (Y+Rc), s	4.6	6.2		4.6	4.6	6.2		4.6				
Max Green Setting (Gmax), s	24.4	38.8		41.4	9.4	53.8		41.4				
Max Q Clear Time (g_c+I1), s	9.2	10.0		11.4	3.6	7.3		4.2				
Green Ext Time (p_c), s	0.1	6.0		0.7	0.0	4.7		0.1				

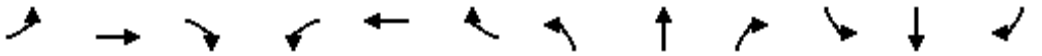
Intersection Summary			
HCM 6th Ctrl Delay		14.2	
HCM 6th LOS		B	

Lane Group	EBT	WBT	SBL	SBR
Lane Configurations				
Traffic Volume (vph)	982	709	283	173
Future Volume (vph)	982	709	283	173
Turn Type	NA	NA	Prot	Perm
Protected Phases	4	8	1	
Permitted Phases				1
Detector Phase	4	8	1	1
Switch Phase				
Minimum Initial (s)	5.0	5.0	5.0	5.0
Minimum Split (s)	9.6	22.6	9.6	9.6
Total Split (s)	71.0	71.0	49.0	49.0
Total Split (%)	59.2%	59.2%	40.8%	40.8%
Yellow Time (s)	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	4.6
Lead/Lag				
Lead-Lag Optimize?				
Recall Mode	None	None	None	None
Act Effct Green (s)	14.8	14.8	8.8	8.8
Actuated g/C Ratio	0.45	0.45	0.27	0.27
v/c Ratio	0.44	0.32	0.32	0.32
Control Delay	6.9	6.3	11.3	4.3
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	6.9	6.3	11.3	4.3
LOS	A	A	B	A
Approach Delay	6.9	6.3		
Approach LOS	A	A		

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 32.9	
Natural Cycle: 40	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.44	
Intersection Signal Delay: 7.1	Intersection LOS: A
Intersection Capacity Utilization 34.2%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 20: I-15 SB Ramps & Main St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↱		↑↑↑	↱				↰↰		↱
Traffic Volume (veh/h)	0	982	0	0	709	0	0	0	0	283	0	173
Future Volume (veh/h)	0	982	0	0	709	0	0	0	0	283	0	173
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	1900	1900	0	1900	1900				1900	0	1900
Adj Flow Rate, veh/h	0	1034	0	0	746	0				298	0	101
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95				0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0				0	0	0
Cap, veh/h	0	2507		0	2507					667	0	306
Arrive On Green	0.00	0.48	0.00	0.00	0.48	0.00				0.19	0.00	0.19
Sat Flow, veh/h	0	5358	1610	0	5358	1610				3510	0	1610
Grp Volume(v), veh/h	0	1034	0	0	746	0				298	0	101
Grp Sat Flow(s),veh/h/ln	0	1729	1610	0	1729	1610				1755	0	1610
Q Serve(g_s), s	0.0	3.6	0.0	0.0	2.4	0.0				2.1	0.0	1.5
Cycle Q Clear(g_c), s	0.0	3.6	0.0	0.0	2.4	0.0				2.1	0.0	1.5
Prop In Lane	0.00		1.00	0.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2507		0	2507					667	0	306
V/C Ratio(X)	0.00	0.41		0.00	0.30					0.45	0.00	0.33
Avail Cap(c_a), veh/h	0	12233		0	12233					5536	0	2539
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	4.7	0.0	0.0	4.4	0.0				10.1	0.0	9.9
Incr Delay (d2), s/veh	0.0	0.1	0.0	0.0	0.1	0.0				0.5	0.0	0.6
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	0.0	0.1	0.0	0.0	0.1	0.0				0.6	0.0	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	4.8	0.0	0.0	4.5	0.0				10.6	0.0	10.5
LnGrp LOS	A	A		A	A					B	A	B
Approach Vol, veh/h		1034	A		746	A					399	
Approach Delay, s/veh		4.8			4.5						10.5	
Approach LOS		A			A						B	

Timer - Assigned Phs				4		6		8				
Phs Duration (G+Y+Rc), s				18.2		9.9		18.2				
Change Period (Y+Rc), s				4.6		4.6		4.6				
Max Green Setting (Gmax), s				66.4		44.4		66.4				
Max Q Clear Time (g_c+I1), s				5.6		4.1		4.4				
Green Ext Time (p_c), s				8.0		1.5		5.2				

Intersection Summary			
HCM 6th Ctrl Delay		5.7	
HCM 6th LOS		A	

Notes

Unsignalized Delay for [EBR, WBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBT	EBR	WBT	WBR	NBL	NBT	NBR
Lane Configurations							
Traffic Volume (vph)	960	286	1191	453	78	6	378
Future Volume (vph)	960	286	1191	453	78	6	378
Turn Type	NA	Perm	NA	Perm	Split	NA	Perm
Protected Phases	2		6		8	8	
Permitted Phases		2		6			8
Detector Phase	2	2	6	6	8	8	8
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.6	22.6	22.6	22.6	9.6	9.6	9.6
Total Split (s)	78.0	78.0	78.0	78.0	42.0	42.0	42.0
Total Split (%)	65.0%	65.0%	65.0%	65.0%	35.0%	35.0%	35.0%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Lead/Lag							
Lead-Lag Optimize?							
Recall Mode	None	None	None	None	Min	Min	Min
Act Effct Green (s)	22.8	22.8	22.8	22.8	9.1	9.1	9.1
Actuated g/C Ratio	0.55	0.55	0.55	0.55	0.22	0.22	0.22
v/c Ratio	0.35	0.29	0.43	0.42	0.20	0.44	0.45
Control Delay	5.7	1.7	6.1	2.0	16.5	10.2	10.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	5.7	1.7	6.1	2.0	16.5	10.2	10.4
LOS	A	A	A	A	B	B	B
Approach Delay	4.7		5.0			11.4	
Approach LOS	A		A			B	

Intersection Summary			
Cycle Length: 120			
Actuated Cycle Length: 41.6			
Natural Cycle: 40			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.45			
Intersection Signal Delay: 5.8		Intersection LOS: A	
Intersection Capacity Utilization 43.8%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 21: I-15 NB Ramps & Main St.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↱		↑↑↑	↱	↰	↑	↱			
Traffic Volume (veh/h)	0	960	286	0	1191	453	78	6	378	0	0	0
Future Volume (veh/h)	0	960	286	0	1191	453	78	6	378	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	0	1900	1900	0	1900	1900	1900	1900	1900			
Adj Flow Rate, veh/h	0	980	0	0	1215	430	80	0	180			
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98			
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0			
Cap, veh/h	0	3063		0	3063	951	261	0	464			
Arrive On Green	0.00	0.59	0.00	0.00	0.59	0.59	0.14	0.00	0.14			
Sat Flow, veh/h	0	5358	1610	0	5358	1610	1810	0	3220			
Grp Volume(v), veh/h	0	980	0	0	1215	430	80	0	180			
Grp Sat Flow(s),veh/h/ln	0	1729	1610	0	1729	1610	1810	0	1610			
Q Serve(g_s), s	0.0	3.3	0.0	0.0	4.3	5.2	1.4	0.0	1.8			
Cycle Q Clear(g_c), s	0.0	3.3	0.0	0.0	4.3	5.2	1.4	0.0	1.8			
Prop In Lane	0.00		1.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	0	3063		0	3063	951	261	0	464			
V/C Ratio(X)	0.00	0.32		0.00	0.40	0.45	0.31	0.00	0.39			
Avail Cap(c_a), veh/h	0	10981		0	10981	3409	1952	0	3474			
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	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	0.0	3.6	0.0	0.0	3.8	4.0	13.3	0.0	13.4			
Incr Delay (d2), s/veh	0.0	0.1	0.0	0.0	0.1	0.3	0.7	0.0	0.5			
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	0.0	0.1	0.0	0.0	0.1	0.2	0.5	0.0	0.6			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	3.6	0.0	0.0	3.9	4.3	13.9	0.0	14.0			
LnGrp LOS	A	A		A	A	A	B	A	B			
Approach Vol, veh/h		980	A		1645			260				
Approach Delay, s/veh		3.6			4.0			14.0				
Approach LOS		A			A			B				
Timer - Assigned Phs		2				6		8				
Phs Duration (G+Y+Rc), s		25.1				25.1		9.6				
Change Period (Y+Rc), s		4.6				4.6		4.6				
Max Green Setting (Gmax), s		73.4				73.4		37.4				
Max Q Clear Time (g_c+I1), s		5.3				7.2		3.8				
Green Ext Time (p_c), s		7.4				13.3		1.0				

Intersection Summary	
HCM 6th Ctrl Delay	4.8
HCM 6th LOS	A

Notes

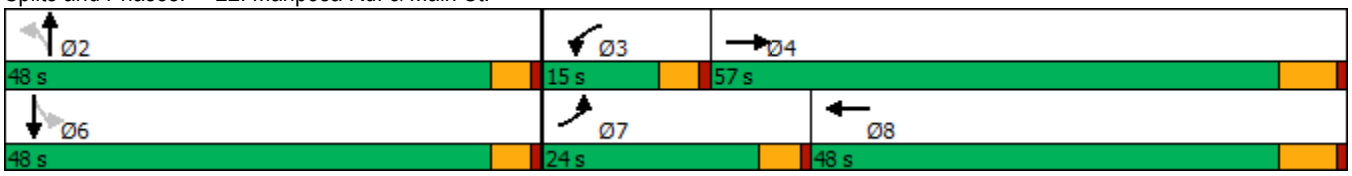
User approved volume balancing among the lanes for turning movement.

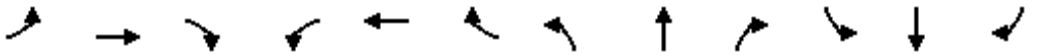
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	117	1058	43	1460	71	38	35	48
Future Volume (vph)	117	1058	43	1460	71	38	35	48
Turn Type	Prot	NA	Prot	NA	Perm	NA	Perm	NA
Protected Phases	7	4	3	8		2		6
Permitted Phases					2		6	
Detector Phase	7	4	3	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	24.2	9.6	24.2	44.6	44.6	44.6	44.6
Total Split (s)	24.0	57.0	15.0	48.0	48.0	48.0	48.0	48.0
Total Split (%)	20.0%	47.5%	12.5%	40.0%	40.0%	40.0%	40.0%	40.0%
Yellow Time (s)	3.6	5.2	3.6	5.2	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	4.6	6.2	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes				
Recall Mode	None	Max	Max	None	None	None	None	None
Act Effct Green (s)	11.6	51.4	10.5	50.4	16.9	16.9	16.9	16.9
Actuated g/C Ratio	0.12	0.54	0.11	0.53	0.18	0.18	0.18	0.18
v/c Ratio	0.64	0.37	0.26	0.49	0.71	0.24	0.18	0.56
Control Delay	55.3	13.8	46.1	17.0	69.0	19.6	32.6	16.0
Queue Delay	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	55.3	14.0	46.1	17.0	69.0	19.6	32.6	16.0
LOS	E	B	D	B	E	B	C	B
Approach Delay		17.8		17.8		43.8		18.3
Approach LOS		B		B		D		B

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 94.4	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.71	
Intersection Signal Delay: 19.0	Intersection LOS: B
Intersection Capacity Utilization 68.9%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 22: Mariposa Rd. & Main St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	117	1058	92	43	1460	28	71	38	35	35	48	172
Future Volume (veh/h)	117	1058	92	43	1460	28	71	38	35	35	48	172
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	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	126	1138	86	46	1570	29	76	41	16	38	52	102
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	154	3230	243	181	3546	65	184	218	85	270	96	189
Arrive On Green	0.10	0.55	0.55	0.11	0.56	0.56	0.18	0.18	0.18	0.18	0.18	0.18
Sat Flow, veh/h	1619	5919	445	1619	6307	116	1183	1232	481	1292	543	1065
Grp Volume(v), veh/h	126	892	332	46	1156	443	76	0	57	38	0	154
Grp Sat Flow(s),veh/h/ln	1619	1548	1720	1619	1548	1779	1183	0	1713	1292	0	1608
Q Serve(g_s), s	7.1	10.1	10.1	2.4	13.5	13.5	5.8	0.0	2.6	2.4	0.0	8.1
Cycle Q Clear(g_c), s	7.1	10.1	10.1	2.4	13.5	13.5	13.9	0.0	2.6	5.0	0.0	8.1
Prop In Lane	1.00		0.26	1.00		0.07	1.00		0.28	1.00		0.66
Lane Grp Cap(c), veh/h	154	2534	938	181	2611	1000	184	0	304	270	0	285
V/C Ratio(X)	0.82	0.35	0.35	0.25	0.44	0.44	0.41	0.00	0.19	0.14	0.00	0.54
Avail Cap(c_a), veh/h	337	2534	938	181	2611	1000	526	0	799	643	0	750
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	41.3	11.9	11.9	37.8	11.9	11.9	41.2	0.0	32.6	34.7	0.0	34.9
Incr Delay (d2), s/veh	4.0	0.4	1.0	3.4	0.1	0.3	1.5	0.0	0.3	0.2	0.0	1.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.9	3.0	3.5	1.1	3.9	4.5	1.8	0.0	1.1	0.8	0.0	3.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	45.4	12.3	13.0	41.2	12.0	12.2	42.7	0.0	32.9	35.0	0.0	36.4
LnGrp LOS	D	B	B	D	B	B	D	A	C	C	A	D
Approach Vol, veh/h		1350			1645			133			192	
Approach Delay, s/veh		15.5			12.9			38.5			36.2	
Approach LOS		B			B			D			D	

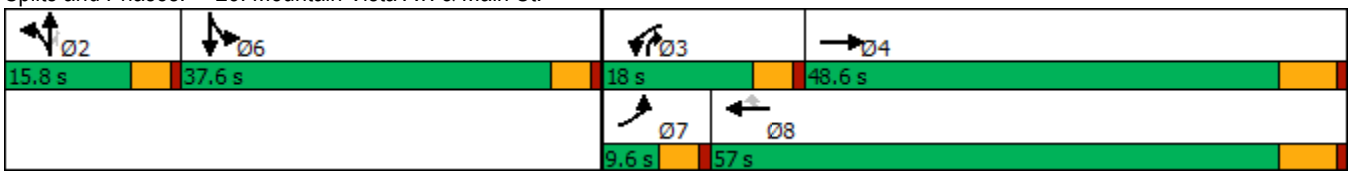
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		21.1	15.0	57.0		21.1	13.5	58.5				
Change Period (Y+Rc), s		4.6	4.6	6.2		4.6	4.6	6.2				
Max Green Setting (Gmax), s		43.4	10.4	50.8		43.4	19.4	41.8				
Max Q Clear Time (g_c+I1), s		15.9	4.4	12.1		10.1	9.1	15.5				
Green Ext Time (p_c), s		0.6	0.0	9.0		1.1	0.1	11.4				

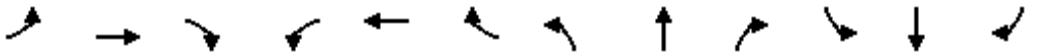
Intersection Summary												
HCM 6th Ctrl Delay			16.3									
HCM 6th LOS			B									

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	16	1064	72	1506	57	16	1	29	49	2
Future Volume (vph)	16	1064	72	1506	57	16	1	29	49	2
Turn Type	Prot	NA	Prot	NA	Perm	Split	NA	pm+ov	Split	NA
Protected Phases	7	4	3	8		2	2	3	6	6
Permitted Phases					8			2		
Detector Phase	7	4	3	8	8	2	2	3	6	6
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	43.2	9.6	32.2	32.2	14.6	14.6	9.6	37.6	37.6
Total Split (s)	9.6	48.6	18.0	57.0	57.0	15.8	15.8	18.0	37.6	37.6
Total Split (%)	8.0%	40.5%	15.0%	47.5%	47.5%	13.2%	13.2%	15.0%	31.3%	31.3%
Yellow Time (s)	3.6	5.2	3.6	5.2	5.2	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	4.6	6.2	6.2	4.6	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lead	Lag	Lag			Lead		
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes			Yes		
Recall Mode	None	Max	None	Max	Max	None	None	None	None	None
Act Effct Green (s)	5.2	54.5	8.5	63.8	63.8	10.4	10.4	11.7	13.8	13.8
Actuated g/C Ratio	0.06	0.63	0.10	0.74	0.74	0.12	0.12	0.14	0.16	0.16
v/c Ratio	0.09	0.29	0.47	0.43	0.05	0.05	0.02	0.07	0.13	0.12
Control Delay	48.3	13.8	51.2	12.1	1.1	44.1	43.2	0.3	34.7	27.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	48.3	13.8	51.2	12.1	1.1	44.1	43.2	0.3	34.7	27.0
LOS	D	B	D	B	A	D	D	A	C	C
Approach Delay		14.3		13.5			16.0			31.0
Approach LOS		B		B			B			C

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 86.6	
Natural Cycle: 105	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.47	
Intersection Signal Delay: 14.2	Intersection LOS: B
Intersection Capacity Utilization 57.2%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 23: Mountain Vista Av. & Main St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	16	1064	21	72	1506	57	16	1	29	49	2	9
Future Volume (veh/h)	16	1064	21	72	1506	57	16	1	29	49	2	9
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1600	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	16	1097	21	74	1553	56	16	1	10	56	0	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	55	3537	68	92	2947	914	180	100	343	292	162	0
Arrive On Green	0.02	0.56	0.56	0.06	0.60	0.60	0.06	0.06	0.06	0.09	0.00	0.00
Sat Flow, veh/h	2956	6302	120	1619	4914	1525	3238	1800	3051	3238	1800	0
Grp Volume(v), veh/h	16	808	310	74	1553	56	16	1	10	56	0	0
Grp Sat Flow(s),veh/h/ln	1478	1548	1778	1619	1638	1525	1619	1800	1525	1619	1800	0
Q Serve(g_s), s	0.5	7.8	7.8	3.8	15.7	1.3	0.4	0.0	0.2	1.4	0.0	0.0
Cycle Q Clear(g_c), s	0.5	7.8	7.8	3.8	15.7	1.3	0.4	0.0	0.2	1.4	0.0	0.0
Prop In Lane	1.00		0.07	1.00		1.00	1.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	55	2606	998	92	2947	914	180	100	343	292	162	0
V/C Ratio(X)	0.29	0.31	0.31	0.80	0.53	0.06	0.09	0.01	0.03	0.19	0.00	0.00
Avail Cap(c_a), veh/h	175	2606	998	256	2947	914	428	238	577	1262	701	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	41.0	9.9	9.9	39.5	9.9	7.0	38.0	37.8	33.5	35.7	0.0	0.0
Incr Delay (d2), s/veh	1.1	0.3	0.8	5.9	0.7	0.1	0.2	0.0	0.0	0.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	2.2	2.7	1.6	4.4	0.4	0.2	0.0	0.1	0.5	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	42.1	10.2	10.7	45.4	10.6	7.2	38.2	37.8	33.5	36.0	0.0	0.0
LnGrp LOS	D	B	B	D	B	A	D	D	C	D	A	A
Approach Vol, veh/h		1134			1683			27			56	
Approach Delay, s/veh		10.8			12.0			36.4			36.0	
Approach LOS		B			B			D			D	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		9.3	9.4	53.7		12.2	6.2	57.0				
Change Period (Y+Rc), s		4.6	4.6	6.2		4.6	4.6	6.2				
Max Green Setting (Gmax), s		11.2	13.4	42.4		33.0	5.0	50.8				
Max Q Clear Time (g_c+I1), s		2.4	5.8	9.8		3.4	2.5	17.7				
Green Ext Time (p_c), s		0.0	0.0	7.7		0.1	0.0	13.4				

Intersection Summary	
HCM 6th Ctrl Delay	12.2
HCM 6th LOS	B

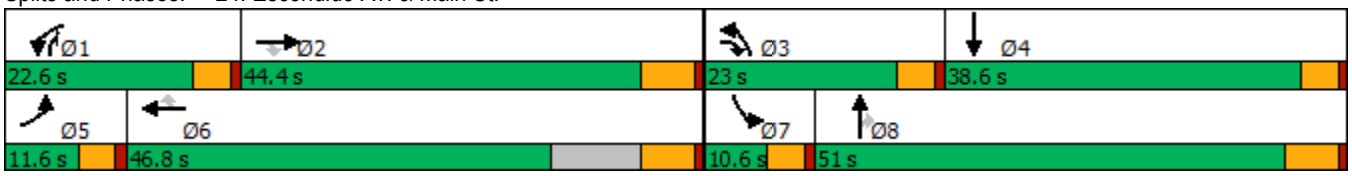
Notes

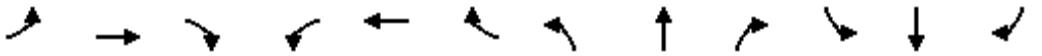
User approved volume balancing among the lanes for turning movement.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations											
Traffic Volume (vph)	4	773	355	267	969	3	663	21	319	1	3
Future Volume (vph)	4	773	355	267	969	3	663	21	319	1	3
Turn Type	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA
Protected Phases	5	2	3	1	6		3	8	1	7	4
Permitted Phases			2			6			8		
Detector Phase	5	2	3	1	6	6	3	8	1	7	4
Switch Phase											
Minimum Initial (s)	5.0	10.0	5.0	5.0	10.0	10.0	5.0	10.0	5.0	5.0	10.0
Minimum Split (s)	9.6	41.2	9.6	22.6	31.2	31.2	9.6	49.2	22.6	9.6	37.6
Total Split (s)	11.6	44.4	23.0	22.6	46.8	46.8	23.0	51.0	22.6	10.6	38.6
Total Split (%)	9.0%	34.5%	17.9%	17.6%	36.4%	36.4%	17.9%	39.7%	17.6%	8.2%	30.0%
Yellow Time (s)	3.6	5.2	3.6	3.6	5.2	5.2	3.6	5.2	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	4.6	4.6	6.2	6.2	4.6	6.2	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Min	None	None	Min
Act Effct Green (s)	5.3	21.7	47.2	12.6	37.7	37.7	19.1	34.4	53.5	5.2	13.6
Actuated g/C Ratio	0.06	0.25	0.54	0.14	0.43	0.43	0.22	0.39	0.61	0.06	0.15
v/c Ratio	0.04	0.66	0.37	0.65	0.68	0.00	1.07	0.03	0.33	0.01	0.06
Control Delay	49.0	33.0	2.8	45.3	24.4	0.0	90.4	20.9	5.8	50.0	19.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	49.0	33.0	2.8	45.3	24.4	0.0	90.4	20.9	5.8	50.0	19.7
LOS	D	C	A	D	C	A	F	C	A	D	B
Approach Delay		23.6			28.8			62.0			21.6
Approach LOS		C			C			E			C

Intersection Summary	
Cycle Length: 128.6	
Actuated Cycle Length: 87.8	
Natural Cycle: 125	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.07	
Intersection Signal Delay: 36.9	Intersection LOS: D
Intersection Capacity Utilization 75.7%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 24: Escondido Av. & Main St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	4	773	355	267	969	3	663	21	319	1	3	12
Future Volume (veh/h)	4	773	355	267	969	3	663	21	319	1	3	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1700	1800	1800	1600	1800	1800	1600	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	4	797	252	275	999	3	684	22	167	1	3	11
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	9	1226	735	353	1243	555	687	643	727	2	43	156
Arrive On Green	0.01	0.25	0.25	0.12	0.36	0.36	0.23	0.36	0.36	0.00	0.13	0.13
Sat Flow, veh/h	1619	4914	1525	2956	3420	1525	2956	1800	1525	1619	338	1239
Grp Volume(v), veh/h	4	797	252	275	999	3	684	22	167	1	0	14
Grp Sat Flow(s),veh/h/ln	1619	1638	1525	1478	1710	1525	1478	1800	1525	1619	0	1577
Q Serve(g_s), s	0.2	11.5	8.1	7.2	20.8	0.1	18.3	0.6	5.1	0.0	0.0	0.6
Cycle Q Clear(g_c), s	0.2	11.5	8.1	7.2	20.8	0.1	18.3	0.6	5.1	0.0	0.0	0.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.79
Lane Grp Cap(c), veh/h	9	1226	735	353	1243	555	687	643	727	2	0	199
V/C Ratio(X)	0.46	0.65	0.34	0.78	0.80	0.01	1.00	0.03	0.23	0.45	0.00	0.07
Avail Cap(c_a), veh/h	143	2369	1090	672	1753	782	687	1018	1045	123	0	677
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	39.3	26.6	12.7	33.9	22.7	16.1	30.4	16.6	12.2	39.5	0.0	30.5
Incr Delay (d2), s/veh	13.8	0.6	0.3	1.4	1.9	0.0	33.3	0.0	0.2	44.9	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	4.1	2.7	2.4	7.5	0.0	9.5	0.3	1.7	0.0	0.0	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	53.1	27.2	13.0	35.3	24.6	16.1	63.7	16.6	12.4	84.4	0.0	30.7
LnGrp LOS	D	C	B	D	C	B	E	B	B	F	A	C
Approach Vol, veh/h		1053			1277			873			15	
Approach Delay, s/veh		23.9			26.8			52.7			34.2	
Approach LOS		C			C			D			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.1	26.0	23.0	16.2	5.0	35.0	4.7	34.5
Change Period (Y+Rc), s	4.6	6.2	4.6	* 6.2	4.6	6.2	4.6	6.2
Max Green Setting (Gmax), s	18.0	38.2	18.4	* 34	7.0	40.6	6.0	44.8
Max Q Clear Time (g_c+I1), s	9.2	13.5	20.3	2.6	2.2	22.8	2.0	7.1
Green Ext Time (p_c), s	0.3	6.1	0.0	0.0	0.0	6.0	0.0	0.7

Intersection Summary	
HCM 6th Ctrl Delay	32.9
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	2.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	23	207	793	32	86	491
Future Vol, veh/h	23	207	793	32	86	491
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	100	0	-	-	195	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	26	230	881	36	96	546

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1364	459	0	0	917	0
Stage 1	899	-	-	-	-	-
Stage 2	465	-	-	-	-	-
Critical Hdwy	6.8	6.9	-	-	4.1	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	141	554	-	-	752	-
Stage 1	362	-	-	-	-	-
Stage 2	604	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	123	554	-	-	752	-
Mov Cap-2 Maneuver	249	-	-	-	-	-
Stage 1	362	-	-	-	-	-
Stage 2	527	-	-	-	-	-

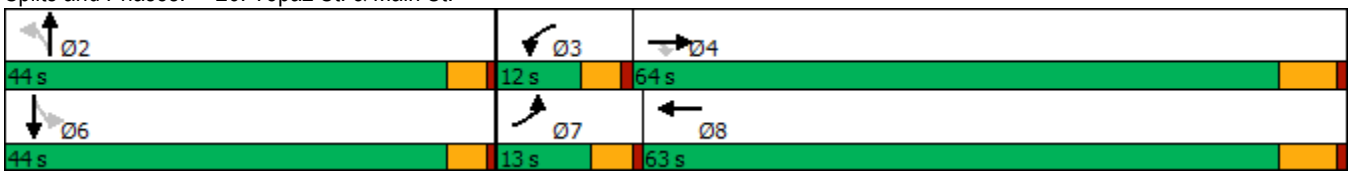
Approach	WB	NB	SB
HCM Control Delay, s	16.5	0	1.6
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	249	554	752	-
HCM Lane V/C Ratio	-	-	0.103	0.415	0.127	-
HCM Control Delay (s)	-	-	21.1	16	10.5	-
HCM Lane LOS	-	-	C	C	B	-
HCM 95th %tile Q(veh)	-	-	0.3	2	0.4	-

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	40	961	81	32	964	165	80	95	62
Future Volume (vph)	40	961	81	32	964	165	80	95	62
Turn Type	Prot	NA	Perm	Prot	NA	Perm	NA	Perm	NA
Protected Phases	7	4		3	8		2		6
Permitted Phases			4			2		6	
Detector Phase	7	4	4	3	8	2	2	6	6
Switch Phase									
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	25.2	25.2	9.6	23.2	32.6	32.6	38.6	38.6
Total Split (s)	13.0	64.0	64.0	12.0	63.0	44.0	44.0	44.0	44.0
Total Split (%)	10.8%	53.3%	53.3%	10.0%	52.5%	36.7%	36.7%	36.7%	36.7%
Yellow Time (s)	3.6	5.2	5.2	3.6	5.2	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	6.2	4.6	6.2	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes				
Recall Mode	None	None	None	Max	None	None	None	None	None
Act Effct Green (s)	7.0	35.4	35.4	8.0	41.9	20.8	20.8	20.8	20.8
Actuated g/C Ratio	0.09	0.44	0.44	0.10	0.52	0.26	0.26	0.26	0.26
v/c Ratio	0.32	0.71	0.13	0.23	0.67	0.66	0.34	0.39	0.32
Control Delay	48.8	21.5	3.9	46.8	19.1	41.3	23.1	31.9	19.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	48.8	21.5	3.9	46.8	19.1	41.3	23.1	31.9	19.9
LOS	D	C	A	D	B	D	C	C	B
Approach Delay		21.2			19.9		33.0		24.9
Approach LOS		C			B		C		C

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 80.7	
Natural Cycle: 80	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.71	
Intersection Signal Delay: 22.3	Intersection LOS: C
Intersection Capacity Utilization 68.5%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 26: Topaz St. & Main St.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	40	961	81	32	964	93	165	80	58	95	62	70
Future Volume (veh/h)	40	961	81	32	964	93	165	80	58	95	62	70
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	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	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	44	1068	77	36	1071	100	183	89	45	106	69	30
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, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	67	1436	627	178	1543	144	349	272	138	319	288	125
Arrive On Green	0.04	0.42	0.42	0.11	0.49	0.49	0.24	0.24	0.24	0.24	0.24	0.24
Sat Flow, veh/h	1619	3420	1494	1619	3162	295	1243	1126	569	1201	1190	517
Grp Volume(v), veh/h	44	1068	77	36	579	592	183	0	134	106	0	99
Grp Sat Flow(s),veh/h/ln	1619	1710	1494	1619	1710	1747	1243	0	1695	1201	0	1707
Q Serve(g_s), s	1.8	17.8	2.1	1.4	17.7	17.7	9.4	0.0	4.4	5.4	0.0	3.1
Cycle Q Clear(g_c), s	1.8	17.8	2.1	1.4	17.7	17.7	12.5	0.0	4.4	9.8	0.0	3.1
Prop In Lane	1.00		1.00	1.00		0.17	1.00		0.34	1.00		0.30
Lane Grp Cap(c), veh/h	67	1436	627	178	835	852	349	0	410	319	0	413
V/C Ratio(X)	0.65	0.74	0.12	0.20	0.69	0.69	0.52	0.00	0.33	0.33	0.00	0.24
Avail Cap(c_a), veh/h	202	2932	1280	178	1441	1471	775	0	990	731	0	997
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	31.8	16.5	12.0	27.3	13.4	13.4	25.6	0.0	21.0	25.1	0.0	20.6
Incr Delay (d2), s/veh	3.9	0.8	0.1	2.6	1.0	1.0	1.2	0.0	0.5	0.6	0.0	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	0.7	5.7	0.6	0.6	5.3	5.4	2.8	0.0	1.7	1.5	0.0	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	35.8	17.3	12.0	29.9	14.4	14.4	26.8	0.0	21.5	25.7	0.0	20.9
LnGrp LOS	D	B	B	C	B	B	C	A	C	C	A	C
Approach Vol, veh/h		1189			1207			317			205	
Approach Delay, s/veh		17.6			14.9			24.6			23.3	
Approach LOS		B			B			C			C	

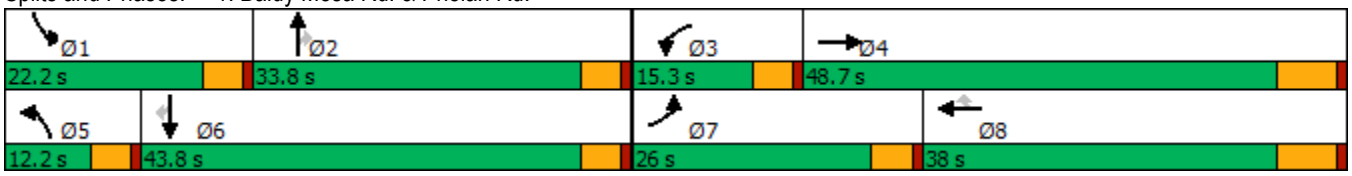
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		20.9	12.0	34.5		20.9	7.4	39.1				
Change Period (Y+Rc), s		4.6	4.6	6.2		4.6	4.6	6.2				
Max Green Setting (Gmax), s		39.4	7.4	57.8		39.4	8.4	56.8				
Max Q Clear Time (g_c+I1), s		14.5	3.4	19.8		11.8	3.8	19.7				
Green Ext Time (p_c), s		1.5	0.0	8.6		1.0	0.0	8.3				

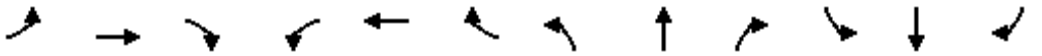
Intersection Summary	
HCM 6th Ctrl Delay	17.6
HCM 6th LOS	B

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	151	538	58	561	120	38	29	26	117	37	135
Future Volume (vph)	151	538	58	561	120	38	29	26	117	37	135
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4	3	8		5	2		1	6	
Permitted Phases					8			2			6
Detector Phase	7	4	3	8	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	30.5	9.6	37.5	37.5	9.6	31.6	31.6	9.6	40.6	40.6
Total Split (s)	26.0	48.7	15.3	38.0	38.0	12.2	33.8	33.8	22.2	43.8	43.8
Total Split (%)	21.7%	40.6%	12.8%	31.7%	31.7%	10.2%	28.2%	28.2%	18.5%	36.5%	36.5%
Yellow Time (s)	3.6	5.5	3.6	5.5	5.5	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.5	4.6	6.5	6.5	4.6	4.6	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Max	None	Max	Max	None	None	None	None	None	None
Act Effct Green (s)	13.5	44.4	7.9	36.1	36.1	6.6	13.0	13.0	12.6	16.6	16.6
Actuated g/C Ratio	0.15	0.50	0.09	0.41	0.41	0.07	0.15	0.15	0.14	0.19	0.19
v/c Ratio	0.66	0.36	0.43	0.43	0.18	0.34	0.12	0.07	0.55	0.12	0.35
Control Delay	51.9	18.4	53.6	24.4	2.0	53.7	37.8	0.3	49.7	32.1	6.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	51.9	18.4	53.6	24.4	2.0	53.7	37.8	0.3	49.7	32.1	6.8
LOS	D	B	D	C	A	D	D	A	D	C	A
Approach Delay		25.4		23.1			33.8			27.4	
Approach LOS		C		C			C			C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 88.9	
Natural Cycle: 100	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.66	
Intersection Signal Delay: 25.2	Intersection LOS: C
Intersection Capacity Utilization 62.2%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 1: Baldy Mesa Rd. & Phelan Rd.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	151	538	37	58	561	120	38	29	26	117	37	135
Future Volume (veh/h)	151	538	37	58	561	120	38	29	26	117	37	135
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		0.99	1.00		0.99	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	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	162	578	31	62	603	89	41	31	17	126	40	83
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	194	1613	86	98	1468	651	59	216	181	155	323	274
Arrive On Green	0.12	0.49	0.49	0.06	0.43	0.43	0.04	0.12	0.12	0.10	0.18	0.18
Sat Flow, veh/h	1619	3301	177	1619	3420	1517	1619	1800	1513	1619	1800	1525
Grp Volume(v), veh/h	162	299	310	62	603	89	41	31	17	126	40	83
Grp Sat Flow(s),veh/h/ln	1619	1710	1768	1619	1710	1517	1619	1800	1513	1619	1800	1525
Q Serve(g_s), s	8.5	9.4	9.4	3.2	10.6	3.1	2.2	1.3	0.9	6.6	1.6	4.1
Cycle Q Clear(g_c), s	8.5	9.4	9.4	3.2	10.6	3.1	2.2	1.3	0.9	6.6	1.6	4.1
Prop In Lane	1.00		0.10	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	194	836	864	98	1468	651	59	216	181	155	323	274
V/C Ratio(X)	0.83	0.36	0.36	0.63	0.41	0.14	0.70	0.14	0.09	0.81	0.12	0.30
Avail Cap(c_a), veh/h	401	836	864	201	1468	651	142	609	511	330	817	692
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.2	13.7	13.7	39.6	17.1	14.9	41.2	34.0	33.8	38.3	29.7	30.8
Incr Delay (d2), s/veh	3.6	1.2	1.2	2.5	0.9	0.4	5.5	0.3	0.2	3.9	0.2	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.3	3.3	3.4	1.3	3.7	1.0	1.0	0.6	0.3	2.8	0.7	1.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	40.7	14.9	14.9	42.1	17.9	15.4	46.6	34.3	34.1	42.2	29.9	31.4
LnGrp LOS	D	B	B	D	B	B	D	C	C	D	C	C
Approach Vol, veh/h		771			754			89			249	
Approach Delay, s/veh		20.3			19.6			40.0			36.6	
Approach LOS		C			B			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.9	15.0	9.8	48.7	7.7	20.1	15.0	43.6
Change Period (Y+Rc), s	4.6	4.6	4.6	6.5	4.6	4.6	4.6	6.5
Max Green Setting (Gmax), s	17.6	29.2	10.7	42.2	7.6	39.2	21.4	31.5
Max Q Clear Time (g_c+I1), s	8.6	3.3	5.2	11.4	4.2	6.1	10.5	12.6
Green Ext Time (p_c), s	0.1	0.2	0.0	3.2	0.0	0.5	0.1	3.6

Intersection Summary	
HCM 6th Ctrl Delay	23.1
HCM 6th LOS	C

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	4	663	4	28	773	5	3	0	15	6	0	3
Future Vol, veh/h	4	663	4	28	773	5	3	0	15	6	0	3
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	105	-	105	110	-	110	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	4	698	4	29	814	5	3	0	16	6	0	3

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	819	0	0	702	0	0	1582	1583	698	1588	1582	814
Stage 1	-	-	-	-	-	-	706	706	-	872	872	-
Stage 2	-	-	-	-	-	-	876	877	-	716	710	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
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	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	818	-	-	905	-	-	89	110	444	88	110	381
Stage 1	-	-	-	-	-	-	430	442	-	348	371	-
Stage 2	-	-	-	-	-	-	346	369	-	424	440	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	818	-	-	905	-	-	86	106	444	82	106	381
Mov Cap-2 Maneuver	-	-	-	-	-	-	208	226	-	202	223	-
Stage 1	-	-	-	-	-	-	428	440	-	346	359	-
Stage 2	-	-	-	-	-	-	332	357	-	407	438	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.3	15.2	20.6
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	373	818	-	-	905	-	-	240
HCM Lane V/C Ratio	0.051	0.005	-	-	0.033	-	-	0.039
HCM Control Delay (s)	15.2	9.4	-	-	9.1	-	-	20.6
HCM Lane LOS	C	A	-	-	A	-	-	C
HCM 95th %tile Q(veh)	0.2	0	-	-	0.1	-	-	0.1

Intersection	
Int Delay, s/veh	0.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	665	2	4	840	6	5
Future Vol, veh/h	665	2	4	840	6	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	110	-	0	-
Veh in Median Storage, #	0	-	-	0	1	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	693	2	4	875	6	5

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	695	0	1577	694
Stage 1	-	-	-	-	694	-
Stage 2	-	-	-	-	883	-
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	-	-	910	-	122	446
Stage 1	-	-	-	-	499	-
Stage 2	-	-	-	-	408	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	910	-	122	446
Mov Cap-2 Maneuver	-	-	-	-	259	-
Stage 1	-	-	-	-	499	-
Stage 2	-	-	-	-	406	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	16.7
HCM LOS			C

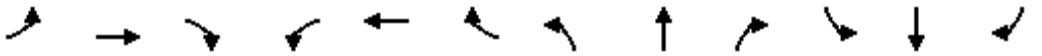
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	320	-	-	910	-
HCM Lane V/C Ratio	0.036	-	-	0.005	-
HCM Control Delay (s)	16.7	-	-	9	-
HCM Lane LOS	C	-	-	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	50	70	38	44	105	64	847	82	214	834	86
Future Volume (vph)	50	70	38	44	105	64	847	82	214	834	86
Turn Type	Perm	NA	Perm	Perm	NA	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		4			8	5	2		1	6	
Permitted Phases	4		4	8				2			6
Detector Phase	4	4	4	8	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	15.0	15.0	15.0	42.0	42.0	9.0	28.0	28.0	9.0	37.0	37.0
Total Split (s)	42.0	42.0	42.0	42.0	42.0	14.0	49.0	49.0	29.0	64.0	64.0
Total Split (%)	35.0%	35.0%	35.0%	35.0%	35.0%	11.7%	40.8%	40.8%	24.2%	53.3%	53.3%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	3.0	5.0	5.0	3.0	5.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	4.0	6.0	6.0	4.0	6.0	6.0
Lead/Lag						Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?						Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Max	Max	None	Max	Max
Act Effct Green (s)	20.2	20.2	20.2	20.2	20.2	8.2	48.0	48.0	16.8	59.1	59.1
Actuated g/C Ratio	0.20	0.20	0.20	0.20	0.20	0.08	0.48	0.48	0.17	0.59	0.59
v/c Ratio	0.67	0.19	0.10	0.17	0.79	0.46	0.51	0.10	0.74	0.41	0.09
Control Delay	75.8	34.1	0.5	34.2	42.3	58.1	22.0	4.8	55.9	14.2	3.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	75.8	34.1	0.5	34.2	42.3	58.1	22.0	4.8	55.9	14.2	3.5
LOS	E	C	A	C	D	E	C	A	E	B	A
Approach Delay		39.1			41.3		23.0			21.3	
Approach LOS		D			D		C			C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 100.3	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.79	
Intersection Signal Delay: 25.7	Intersection LOS: C
Intersection Capacity Utilization 79.0%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 8: US-395 & Luna Rd.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	50	70	38	44	105	207	64	847	82	214	834	86
Future Volume (veh/h)	50	70	38	44	105	207	64	847	82	214	834	86
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	52	73	21	46	109	154	67	882	60	223	869	71
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	152	397	336	321	149	210	87	1787	797	260	2132	951
Arrive On Green	0.21	0.21	0.21	0.21	0.21	0.21	0.05	0.49	0.49	0.14	0.59	0.59
Sat Flow, veh/h	1196	1900	1610	1396	712	1006	1810	3610	1610	1810	3610	1610
Grp Volume(v), veh/h	52	73	21	46	0	263	67	882	60	223	869	71
Grp Sat Flow(s),veh/h/ln	1196	1900	1610	1396	0	1717	1810	1805	1610	1810	1805	1610
Q Serve(g_s), s	4.2	3.1	1.0	2.8	0.0	14.1	3.6	16.0	1.9	11.8	12.8	1.9
Cycle Q Clear(g_c), s	18.2	3.1	1.0	5.9	0.0	14.1	3.6	16.0	1.9	11.8	12.8	1.9
Prop In Lane	1.00		1.00	1.00		0.59	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	152	397	336	321	0	358	87	1787	797	260	2132	951
V/C Ratio(X)	0.34	0.18	0.06	0.14	0.00	0.73	0.77	0.49	0.08	0.86	0.41	0.07
Avail Cap(c_a), veh/h	353	716	607	555	0	647	184	1787	797	461	2132	951
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.8	32.0	31.2	34.4	0.0	36.3	46.2	16.6	13.0	41.1	10.8	8.6
Incr Delay (d2), s/veh	0.5	0.1	0.0	0.1	0.0	1.1	10.2	1.0	0.2	6.1	0.6	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	1.2	1.4	0.4	0.9	0.0	5.8	1.8	6.0	0.6	5.4	4.3	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	45.3	32.1	31.2	34.5	0.0	37.4	56.4	17.6	13.2	47.2	11.4	8.8
LnGrp LOS	D	C	C	C	A	D	E	B	B	D	B	A
Approach Vol, veh/h		146			309			1009			1163	
Approach Delay, s/veh		36.7			37.0			19.9			18.1	
Approach LOS		D			D			B			B	

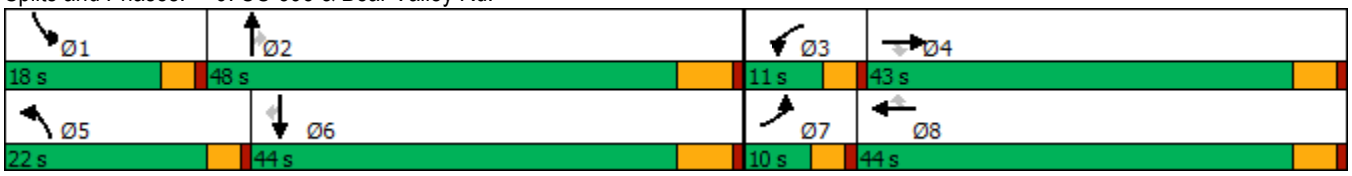
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	18.1	54.6		25.5	8.7	64.0		25.5				
Change Period (Y+Rc), s	4.0	6.0		5.0	4.0	6.0		5.0				
Max Green Setting (Gmax), s	25.0	43.0		37.0	10.0	58.0		37.0				
Max Q Clear Time (g_c+I1), s	13.8	18.0		20.2	5.6	14.8		16.1				
Green Ext Time (p_c), s	0.3	4.6		0.3	0.0	4.9		1.0				

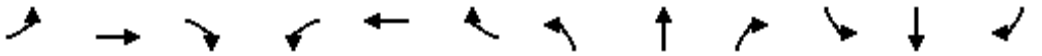
Intersection Summary			
HCM 6th Ctrl Delay		22.0	
HCM 6th LOS		C	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	54	311	133	106	306	130	176	787	202	150	734	35
Future Volume (vph)	54	311	133	106	306	130	176	787	202	150	734	35
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.0	43.0	43.0	9.0	43.0	43.0	9.0	44.0	44.0	9.0	44.0	44.0
Total Split (s)	10.0	43.0	43.0	11.0	44.0	44.0	22.0	48.0	48.0	18.0	44.0	44.0
Total Split (%)	8.3%	35.8%	35.8%	9.2%	36.7%	36.7%	18.3%	40.0%	40.0%	15.0%	36.7%	36.7%
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0	4.0	3.0	5.0	5.0	3.0	5.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	5.0	5.0	4.0	5.0	5.0	4.0	6.0	6.0	4.0	6.0	6.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Max	Max	None	Max	Max
Act Effct Green (s)	6.0	16.5	16.5	7.1	19.7	19.7	14.0	42.5	42.5	12.4	40.9	40.9
Actuated g/C Ratio	0.06	0.17	0.17	0.07	0.20	0.20	0.14	0.44	0.44	0.13	0.42	0.42
v/c Ratio	0.52	0.54	0.36	0.86	0.44	0.32	0.72	0.53	0.26	0.69	0.51	0.05
Control Delay	65.2	39.8	8.2	96.3	36.4	7.5	57.4	23.6	4.1	59.1	24.7	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	65.2	39.8	8.2	96.3	36.4	7.5	57.4	23.6	4.1	59.1	24.7	0.1
LOS	E	D	A	F	D	A	E	C	A	E	C	A
Approach Delay		34.1			41.2			25.3			29.4	
Approach LOS		C			D			C			C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 97.7	
Natural Cycle: 105	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.86	
Intersection Signal Delay: 30.7	Intersection LOS: C
Intersection Capacity Utilization 71.7%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 9: US-395 & Bear Valley Rd.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	54	311	133	106	306	130	176	787	202	150	734	35
Future Volume (veh/h)	54	311	133	106	306	130	176	787	202	150	734	35
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	57	327	58	112	322	68	185	828	152	158	773	24
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	77	470	209	141	598	266	223	1703	759	193	1644	733
Arrive On Green	0.04	0.13	0.13	0.08	0.17	0.17	0.12	0.47	0.47	0.11	0.46	0.46
Sat Flow, veh/h	1810	3610	1610	1810	3610	1604	1810	3610	1610	1810	3610	1609
Grp Volume(v), veh/h	57	327	58	112	322	68	185	828	152	158	773	24
Grp Sat Flow(s),veh/h/ln	1810	1805	1610	1810	1805	1604	1810	1805	1610	1810	1805	1609
Q Serve(g_s), s	2.8	7.7	2.9	5.4	7.3	3.3	8.9	14.0	4.9	7.6	13.2	0.7
Cycle Q Clear(g_c), s	2.8	7.7	2.9	5.4	7.3	3.3	8.9	14.0	4.9	7.6	13.2	0.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	77	470	209	141	598	266	223	1703	759	193	1644	733
V/C Ratio(X)	0.74	0.70	0.28	0.79	0.54	0.26	0.83	0.49	0.20	0.82	0.47	0.03
Avail Cap(c_a), veh/h	122	1540	687	142	1581	703	366	1703	759	284	1644	733
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.2	37.1	35.0	40.3	34.0	32.4	38.1	16.1	13.7	38.9	16.8	13.4
Incr Delay (d2), s/veh	10.0	0.7	0.3	24.8	0.3	0.2	6.2	1.0	0.6	9.4	1.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	3.2	1.1	3.2	3.0	1.2	4.0	5.1	1.6	3.6	4.9	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	52.1	37.8	35.2	65.1	34.3	32.6	44.4	17.1	14.3	48.4	17.8	13.5
LnGrp LOS	D	D	D	E	C	C	D	B	B	D	B	B
Approach Vol, veh/h		442			502			1165			955	
Approach Delay, s/veh		39.3			40.9			21.1			22.7	
Approach LOS		D			D			C			C	

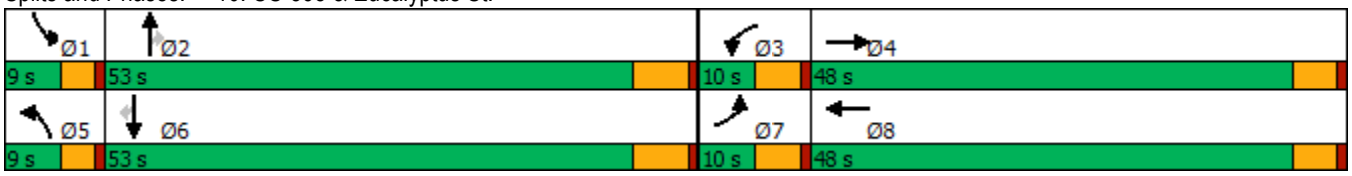
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.5	48.0	11.0	16.6	15.0	46.6	7.8	19.8
Change Period (Y+Rc), s	4.0	6.0	4.0	5.0	4.0	6.0	4.0	5.0
Max Green Setting (Gmax), s	14.0	42.0	7.0	38.0	18.0	38.0	6.0	39.0
Max Q Clear Time (g_c+I1), s	9.6	16.0	7.4	9.7	10.9	15.2	4.8	9.3
Green Ext Time (p_c), s	0.1	3.4	0.0	1.2	0.2	2.9	0.0	1.2

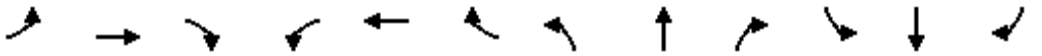
Intersection Summary	
HCM 6th Ctrl Delay	27.5
HCM 6th LOS	C

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	6	0	44	2	9	1189	85	11	910	11
Future Volume (vph)	6	0	44	2	9	1189	85	11	910	11
Turn Type	Prot	NA	Prot	NA	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4	3	8	5	2		1	6	
Permitted Phases							2			6
Detector Phase	7	4	3	8	5	2	2	1	6	6
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	10.0	48.0	10.0	48.0	9.0	41.0	41.0	9.0	41.0	41.0
Total Split (s)	10.0	48.0	10.0	48.0	9.0	53.0	53.0	9.0	53.0	53.0
Total Split (%)	8.3%	40.0%	8.3%	40.0%	7.5%	44.2%	44.2%	7.5%	44.2%	44.2%
Yellow Time (s)	4.0	4.0	4.0	4.0	3.0	5.0	5.0	3.0	5.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	4.0	6.0	6.0	4.0	6.0	6.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	Max	Max	None	Max	Max
Act Effct Green (s)	5.2	15.0	7.4	15.0	5.2	63.4	63.4	5.2	63.4	63.4
Actuated g/C Ratio	0.06	0.18	0.09	0.18	0.06	0.77	0.77	0.06	0.77	0.77
v/c Ratio	0.05	0.01	0.29	0.04	0.08	0.45	0.07	0.11	0.34	0.01
Control Delay	45.8	0.0	45.8	16.0	46.2	11.6	3.3	46.5	10.3	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	45.8	0.0	45.8	16.0	46.2	11.6	3.3	46.5	10.3	0.0
LOS	D	A	D	B	D	B	A	D	B	A
Approach Delay		30.6		40.0		11.3			10.6	
Approach LOS		C		D		B			B	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 82.3	
Natural Cycle: 110	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.45	
Intersection Signal Delay: 11.8	Intersection LOS: B
Intersection Capacity Utilization 51.1%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 10: US-395 & Eucalyptus St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	6	0	3	44	2	9	9	1189	85	11	910	11
Future Volume (veh/h)	6	0	3	44	2	9	9	1189	85	11	910	11
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	6	0	0	46	2	1	9	1252	86	12	958	11
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	14	99	0	74	102	51	21	2259	1008	27	2271	1013
Arrive On Green	0.01	0.00	0.00	0.04	0.09	0.09	0.01	0.63	0.63	0.01	0.63	0.63
Sat Flow, veh/h	1810	1900	0	1810	1195	597	1810	3610	1610	1810	3610	1610
Grp Volume(v), veh/h	6	0	0	46	0	3	9	1252	86	12	958	11
Grp Sat Flow(s),veh/h/ln	1810	1900	0	1810	0	1792	1810	1805	1610	1810	1805	1610
Q Serve(g_s), s	0.2	0.0	0.0	1.9	0.0	0.1	0.4	14.9	1.6	0.5	10.1	0.2
Cycle Q Clear(g_c), s	0.2	0.0	0.0	1.9	0.0	0.1	0.4	14.9	1.6	0.5	10.1	0.2
Prop In Lane	1.00		0.00	1.00		0.33	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	14	99	0	74	0	153	21	2259	1008	27	2271	1013
V/C Ratio(X)	0.42	0.00	0.00	0.62	0.00	0.02	0.44	0.55	0.09	0.45	0.42	0.01
Avail Cap(c_a), veh/h	120	1088	0	120	0	1026	120	2259	1008	120	2271	1013
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.1	0.0	0.0	35.4	0.0	31.5	36.9	8.0	5.6	36.7	7.0	5.2
Incr Delay (d2), s/veh	7.3	0.0	0.0	3.1	0.0	0.1	5.3	1.0	0.2	4.3	0.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	0.0	0.9	0.0	0.0	0.2	3.9	0.5	0.2	3.5	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	44.4	0.0	0.0	38.5	0.0	31.5	42.2	9.0	5.7	41.0	7.6	5.2
LnGrp LOS	D	A	A	D	A	C	D	A	A	D	A	A
Approach Vol, veh/h		6			49			1347			981	
Approach Delay, s/veh		44.4			38.1			9.0			8.0	
Approach LOS		D			D			A			A	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.1	53.0	8.1	8.9	4.9	53.3	5.6	11.4
Change Period (Y+Rc), s	4.0	6.0	5.0	5.0	4.0	6.0	5.0	5.0
Max Green Setting (Gmax), s	5.0	47.0	5.0	43.0	5.0	47.0	5.0	43.0
Max Q Clear Time (g_c+I1), s	2.5	16.9	3.9	0.0	2.4	12.1	2.2	2.1
Green Ext Time (p_c), s	0.0	9.8	0.0	0.0	0.0	8.8	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	9.3
HCM 6th LOS	A

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	3	0	4	0	0	0	6	1319	0	0	871	4
Future Vol, veh/h	3	0	4	0	0	0	6	1319	0	0	871	4
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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	3	0	4	0	0	0	6	1374	0	0	907	4

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2295	2295	909	2297	2297	1374	911	0	0	1374	0	0
Stage 1	909	909	-	1386	1386	-	-	-	-	-	-	-
Stage 2	1386	1386	-	911	911	-	-	-	-	-	-	-
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	28	39	336	28	39	180	756	-	-	506	-	-
Stage 1	332	357	-	179	212	-	-	-	-	-	-	-
Stage 2	179	212	-	331	356	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	27	38	336	27	38	180	756	-	-	506	-	-
Mov Cap-2 Maneuver	27	38	-	27	38	-	-	-	-	-	-	-
Stage 1	321	357	-	173	205	-	-	-	-	-	-	-
Stage 2	173	205	-	327	356	-	-	-	-	-	-	-

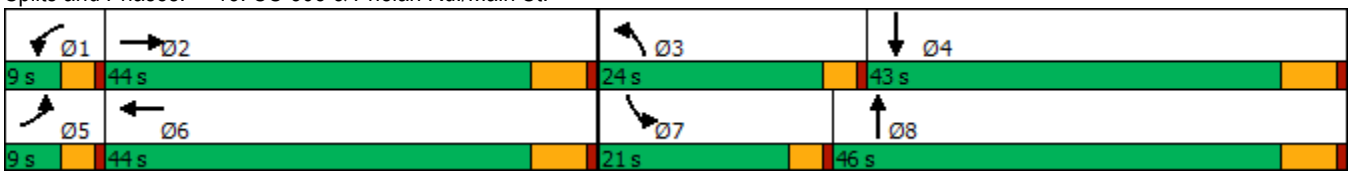
Approach	EB	WB	NB	SB
HCM Control Delay, s	77.2	0	0	0
HCM LOS	F	A		

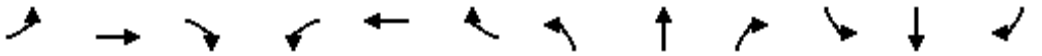
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	756	-	-	57	-	506	-	-
HCM Lane V/C Ratio	0.008	-	-	0.128	-	-	-	-
HCM Control Delay (s)	9.8	0	-	77.2	0	0	-	-
HCM Lane LOS	A	A	-	F	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.4	-	0	-	-

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	44	540	9	655	162	1016	187	663
Future Volume (vph)	44	540	9	655	162	1016	187	663
Turn Type	Prot	NA	Prot	NA	Prot	NA	Prot	NA
Protected Phases	5	2	1	6	3	8	7	4
Permitted Phases								
Detector Phase	5	2	1	6	3	8	7	4
Switch Phase								
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.0	16.0	9.0	16.0	9.0	16.0	9.0	16.0
Total Split (s)	9.0	44.0	9.0	44.0	24.0	46.0	21.0	43.0
Total Split (%)	7.5%	36.7%	7.5%	36.7%	20.0%	38.3%	17.5%	35.8%
Yellow Time (s)	3.0	5.0	3.0	5.0	3.0	5.0	3.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	6.0	4.0	6.0	4.0	6.0	4.0	6.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None
Act Effct Green (s)	5.1	38.9	5.1	33.9	15.1	37.7	15.3	37.9
Actuated g/C Ratio	0.05	0.35	0.05	0.31	0.14	0.34	0.14	0.34
v/c Ratio	0.55	0.51	0.11	0.86	0.69	0.89	0.79	0.60
Control Delay	80.1	29.7	58.3	43.6	62.3	45.5	70.5	33.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	80.1	29.7	58.3	43.6	62.3	45.5	70.5	33.9
LOS	F	C	E	D	E	D	E	C
Approach Delay		33.1		43.8		47.7		41.5
Approach LOS		C		D		D		D

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 110.1	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.89	
Intersection Signal Delay: 42.6	Intersection LOS: D
Intersection Capacity Utilization 85.8%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 13: US-395 & Phelan Rd./Main St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	44	540	66	9	655	237	162	1016	26	187	663	46
Future Volume (veh/h)	44	540	66	9	655	237	162	1016	26	187	663	46
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	46	568	41	9	689	165	171	1069	20	197	698	33
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	66	1057	76	20	823	197	206	1260	24	231	1269	60
Arrive On Green	0.04	0.31	0.31	0.01	0.28	0.28	0.11	0.35	0.35	0.13	0.36	0.36
Sat Flow, veh/h	1810	3409	246	1810	2889	691	1810	3625	68	1810	3509	166
Grp Volume(v), veh/h	46	300	309	9	430	424	171	532	557	197	359	372
Grp Sat Flow(s),veh/h/ln	1810	1805	1850	1810	1805	1776	1810	1805	1888	1810	1805	1870
Q Serve(g_s), s	2.5	13.5	13.6	0.5	22.0	22.0	9.1	26.8	26.8	10.5	15.6	15.6
Cycle Q Clear(g_c), s	2.5	13.5	13.6	0.5	22.0	22.0	9.1	26.8	26.8	10.5	15.6	15.6
Prop In Lane	1.00		0.13	1.00		0.39	1.00		0.04	1.00		0.09
Lane Grp Cap(c), veh/h	66	560	574	20	514	506	206	627	656	231	653	676
V/C Ratio(X)	0.70	0.54	0.54	0.45	0.84	0.84	0.83	0.85	0.85	0.85	0.55	0.55
Avail Cap(c_a), veh/h	92	698	715	92	698	686	368	734	768	313	679	704
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.8	28.1	28.1	48.3	33.0	33.0	42.6	29.7	29.7	42.0	25.0	25.0
Incr Delay (d2), s/veh	9.5	0.8	0.8	11.2	6.6	6.7	6.4	8.5	8.2	14.0	1.0	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	5.5	5.6	0.3	9.7	9.6	4.2	11.9	12.4	5.3	6.2	6.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	56.3	28.9	28.9	59.5	39.6	39.7	49.0	38.2	37.8	55.9	26.0	26.0
LnGrp LOS	E	C	C	E	D	D	D	D	D	E	C	C
Approach Vol, veh/h		655			863			1260			928	
Approach Delay, s/veh		30.8			39.9			39.5			32.4	
Approach LOS		C			D			D			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.1	36.5	15.2	41.5	7.6	34.0	16.6	40.2
Change Period (Y+Rc), s	4.0	6.0	4.0	6.0	4.0	6.0	4.0	6.0
Max Green Setting (Gmax), s	5.0	38.0	20.0	37.0	5.0	38.0	17.0	40.0
Max Q Clear Time (g_c+I1), s	2.5	15.6	11.1	17.6	4.5	24.0	12.5	28.8
Green Ext Time (p_c), s	0.0	3.1	0.2	4.5	0.0	4.0	0.1	5.3

Intersection Summary	
HCM 6th Ctrl Delay	36.3
HCM 6th LOS	D

Intersection	
Int Delay, s/veh	0.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	7	24	1165	26	11	840
Future Vol, veh/h	7	24	1165	26	11	840
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	375	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	98	98	98	98	98	98
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	7	24	1189	27	11	857

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	2082	608	0	0	1216	0
Stage 1	1203	-	-	-	-	-
Stage 2	879	-	-	-	-	-
Critical Hdwy	6.6	6.9	-	-	4.1	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	53	444	-	-	581	-
Stage 1	251	-	-	-	-	-
Stage 2	409	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	52	444	-	-	581	-
Mov Cap-2 Maneuver	52	-	-	-	-	-
Stage 1	251	-	-	-	-	-
Stage 2	401	-	-	-	-	-

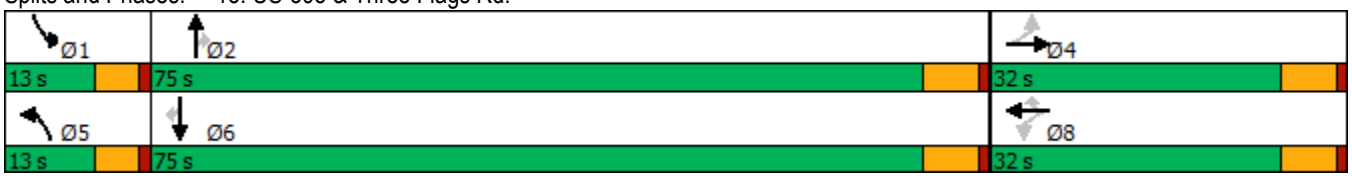
Approach	WB	NB	SB
HCM Control Delay, s	29.7	0	0.1
HCM LOS	D		

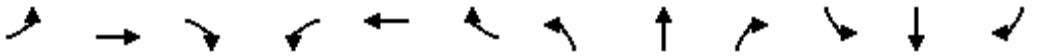
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	52	444	581	-
HCM Lane V/C Ratio	-	-	0.137	0.055	0.019	-
HCM Control Delay (s)	-	-	85	13.6	11.3	-
HCM Lane LOS	-	-	F	B	B	-
HCM 95th %tile Q(veh)	-	-	0.4	0.2	0.1	-

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	35	1	127	4	32	33	1125	147	33	751	57
Future Volume (vph)	35	1	127	4	32	33	1125	147	33	751	57
Turn Type	Perm	NA	Perm	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		4		8		5	2		1	6	
Permitted Phases	4		8		8			2			6
Detector Phase	4	4	8	8	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	16.0	16.0	16.0	16.0	16.0	10.0	16.0	16.0	10.0	16.0	16.0
Total Split (s)	32.0	32.0	32.0	32.0	32.0	13.0	75.0	75.0	13.0	75.0	75.0
Total Split (%)	26.7%	26.7%	26.7%	26.7%	26.7%	10.8%	62.5%	62.5%	10.8%	62.5%	62.5%
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	5.0	6.0	6.0	5.0	6.0	6.0
Lead/Lag						Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?						Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Max	Max	None	Max	Max
Act Effct Green (s)	14.7	14.7	14.7	14.7	14.7	6.4	69.7	69.7	6.4	69.7	69.7
Actuated g/C Ratio	0.14	0.14	0.14	0.14	0.14	0.06	0.67	0.67	0.06	0.67	0.67
v/c Ratio	0.18	0.22	0.67	0.01	0.11	0.31	0.47	0.13	0.31	0.31	0.05
Control Delay	42.1	12.7	60.5	39.0	1.0	56.8	10.3	1.9	56.8	8.7	1.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	42.1	12.7	60.5	39.0	1.0	56.8	10.3	1.9	56.8	8.7	1.6
LOS	D	B	E	D	A	E	B	A	E	A	A
Approach Delay		23.6		48.2			10.6			10.2	
Approach LOS		C		D			B			B	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 103.4	
Natural Cycle: 55	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.67	
Intersection Signal Delay: 13.5	Intersection LOS: B
Intersection Capacity Utilization 62.8%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 15: US-395 & Three Flags Rd.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	35	1	59	127	4	32	33	1125	147	33	751	57
Future Volume (veh/h)	35	1	59	127	4	32	33	1125	147	33	751	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	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	36	1	19	130	4	27	34	1148	144	34	766	41
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	242	10	181	230	223	189	55	2468	1100	55	2468	1101
Arrive On Green	0.12	0.12	0.12	0.12	0.12	0.12	0.03	0.68	0.68	0.03	0.68	0.68
Sat Flow, veh/h	1478	81	1541	1493	1900	1610	1810	3610	1609	1810	3610	1610
Grp Volume(v), veh/h	36	0	20	130	4	27	34	1148	144	34	766	41
Grp Sat Flow(s),veh/h/ln	1478	0	1623	1493	1900	1610	1810	1805	1609	1810	1805	1610
Q Serve(g_s), s	2.2	0.0	1.1	8.6	0.2	1.5	1.9	14.9	3.1	1.9	8.6	0.8
Cycle Q Clear(g_c), s	2.4	0.0	1.1	9.7	0.2	1.5	1.9	14.9	3.1	1.9	8.6	0.8
Prop In Lane	1.00		0.95	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	242	0	191	230	223	189	55	2468	1100	55	2468	1101
V/C Ratio(X)	0.15	0.00	0.10	0.56	0.02	0.14	0.62	0.47	0.13	0.62	0.31	0.04
Avail Cap(c_a), veh/h	449	0	418	439	489	415	143	2468	1100	143	2468	1101
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	40.5	0.0	39.8	44.1	39.4	40.0	48.3	7.4	5.5	48.3	6.4	5.2
Incr Delay (d2), s/veh	0.1	0.0	0.1	0.8	0.0	0.1	4.1	0.6	0.2	4.1	0.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.0	0.4	3.2	0.1	0.6	0.9	4.3	0.8	0.9	2.5	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	40.6	0.0	39.9	44.9	39.4	40.1	52.5	8.0	5.8	52.5	6.7	5.2
LnGrp LOS	D	A	D	D	D	D	D	A	A	D	A	A
Approach Vol, veh/h		56			161			1326			841	
Approach Delay, s/veh		40.3			44.0			8.9			8.5	
Approach LOS		D			D			A			A	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.1	75.0		17.9	8.1	75.0		17.9				
Change Period (Y+Rc), s	5.0	6.0		6.0	5.0	6.0		6.0				
Max Green Setting (Gmax), s	8.0	69.0		26.0	8.0	69.0		26.0				
Max Q Clear Time (g_c+I1), s	3.9	16.9		4.4	3.9	10.6		11.7				
Green Ext Time (p_c), s	0.0	9.9		0.1	0.0	5.3		0.2				

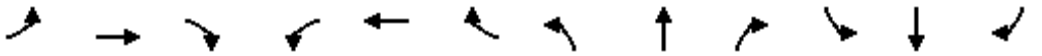
Intersection Summary			
HCM 6th Ctrl Delay		11.9	
HCM 6th LOS		B	

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	53	47	81	19	114	25	1140	87	68	848	21
Future Volume (vph)	53	47	81	19	114	25	1140	87	68	848	21
Turn Type	Perm	NA	Perm	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		4		8		5	2		1	6	
Permitted Phases	4		8		8			2			6
Detector Phase	4	4	8	8	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	15.0	15.0	46.0	46.0	46.0	9.0	34.0	34.0	9.0	34.0	34.0
Total Split (s)	46.0	46.0	46.0	46.0	46.0	10.0	59.0	59.0	15.0	64.0	64.0
Total Split (%)	38.3%	38.3%	38.3%	38.3%	38.3%	8.3%	49.2%	49.2%	12.5%	53.3%	53.3%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	3.0	5.0	5.0	3.0	5.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	0.0	-2.0	-2.0	0.0	-2.0	-2.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag						Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?						Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Max	Max	None	Max	Max
Act Effct Green (s)	16.4	16.4	16.4	16.4	16.4	5.8	60.2	60.2	8.3	67.0	67.0
Actuated g/C Ratio	0.17	0.17	0.17	0.17	0.17	0.06	0.63	0.63	0.09	0.70	0.70
v/c Ratio	0.23	0.18	0.36	0.06	0.32	0.24	0.51	0.09	0.45	0.34	0.02
Control Delay	33.9	27.9	37.1	30.5	7.9	51.8	13.5	3.4	52.5	8.7	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	33.9	27.9	37.1	30.5	7.9	51.8	13.5	3.4	52.5	8.7	0.0
LOS	C	C	D	C	A	D	B	A	D	A	A
Approach Delay		30.8		21.0			13.6			11.6	
Approach LOS		C		C			B			B	

Intersection Summary		
Cycle Length: 120		
Actuated Cycle Length: 95.2		
Natural Cycle: 90		
Control Type: Actuated-Uncoordinated		
Maximum v/c Ratio: 0.51		
Intersection Signal Delay: 14.2	Intersection LOS: B	
Intersection Capacity Utilization 59.0%	ICU Level of Service B	
Analysis Period (min) 15		

Splits and Phases: 16: US-395 & Joshua St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	53	47	10	81	19	114	25	1140	87	68	848	21
Future Volume (veh/h)	53	47	10	81	19	114	25	1140	87	68	848	21
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	55	48	7	84	20	60	26	1175	78	70	874	15
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	258	215	31	237	252	213	49	2444	1090	91	2528	1128
Arrive On Green	0.13	0.13	0.12	0.13	0.13	0.13	0.03	0.68	0.68	0.05	0.70	0.70
Sat Flow, veh/h	1411	1621	236	1446	1900	1607	1810	3610	1610	1810	3610	1610
Grp Volume(v), veh/h	55	0	55	84	20	60	26	1175	78	70	874	15
Grp Sat Flow(s),veh/h/ln	1411	0	1857	1446	1900	1607	1810	1805	1610	1810	1805	1610
Q Serve(g_s), s	3.0	0.0	2.3	4.7	0.8	2.9	1.2	13.4	1.4	3.3	8.2	0.2
Cycle Q Clear(g_c), s	3.8	0.0	2.3	7.0	0.8	2.9	1.2	13.4	1.4	3.3	8.2	0.2
Prop In Lane	1.00		0.13	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	258	0	246	237	252	213	49	2444	1090	91	2528	1128
V/C Ratio(X)	0.21	0.00	0.22	0.35	0.08	0.28	0.53	0.48	0.07	0.77	0.35	0.01
Avail Cap(c_a), veh/h	763	0	911	755	932	788	127	2444	1090	232	2528	1128
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	34.3	0.0	33.3	36.3	32.6	33.5	41.1	6.6	4.7	40.2	5.1	3.9
Incr Delay (d2), s/veh	0.2	0.0	0.2	0.3	0.0	0.3	6.6	0.7	0.1	9.7	0.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	0.0	1.0	1.7	0.4	1.1	0.6	3.4	0.3	1.6	1.9	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	34.4	0.0	33.4	36.7	32.6	33.7	47.7	7.3	4.8	49.9	5.4	3.9
LnGrp LOS	C	A	C	D	C	C	D	A	A	D	A	A
Approach Vol, veh/h		110			164			1279			959	
Approach Delay, s/veh		33.9			35.1			8.0			8.7	
Approach LOS		C			D			A			A	

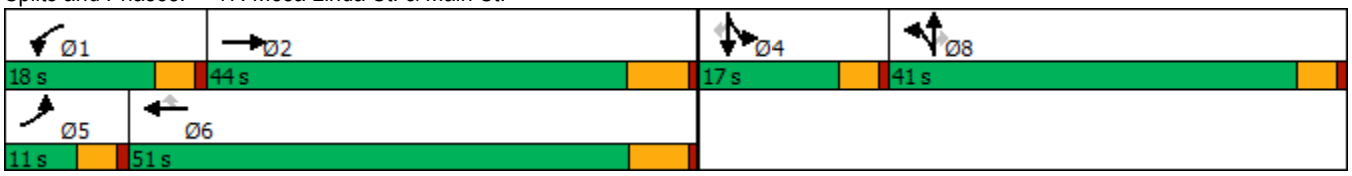
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.3	62.0		15.4	6.3	64.0		15.4				
Change Period (Y+Rc), s	4.0	6.0		5.0	4.0	6.0		5.0				
Max Green Setting (Gmax), s	11.0	53.0		41.0	6.0	58.0		41.0				
Max Q Clear Time (g_c+I1), s	5.3	15.4		5.8	3.2	10.2		9.0				
Green Ext Time (p_c), s	0.0	19.1		0.2	0.0	13.5		0.3				

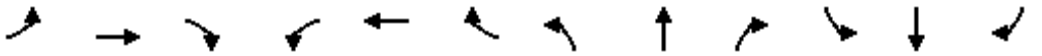
Intersection Summary			
HCM 6th Ctrl Delay		11.1	
HCM 6th LOS		B	

Lane Group	EBL	EBT	WBL	WBT	WBR	NBT	NBR	SBT	SBR
Lane Configurations									
Traffic Volume (vph)	5	733	47	892	54	7	81	0	3
Future Volume (vph)	5	733	47	892	54	7	81	0	3
Turn Type	Prot	NA	Prot	NA	Perm	NA	Perm	NA	Perm
Protected Phases	5	2	1	6		8		4	
Permitted Phases					6		8		4
Detector Phase	5	2	1	6	6	8	8	4	4
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	16.5	9.6	23.2	23.2	40.6	40.6	14.6	14.6
Total Split (s)	11.0	44.0	18.0	51.0	51.0	41.0	41.0	17.0	17.0
Total Split (%)	9.2%	36.7%	15.0%	42.5%	42.5%	34.2%	34.2%	14.2%	14.2%
Yellow Time (s)	3.6	5.5	3.6	5.2	5.2	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.5	4.6	6.2	6.2	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lead	Lag	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes				
Recall Mode	None	Max	None	Max	Max	None	None	None	None
Act Effct Green (s)	5.4	48.5	7.3	54.2	54.2	14.2	14.2	10.5	10.5
Actuated g/C Ratio	0.06	0.58	0.09	0.65	0.65	0.17	0.17	0.13	0.13
v/c Ratio	0.05	0.27	0.35	0.29	0.05	0.06	0.22	0.15	0.01
Control Delay	47.2	16.2	48.4	12.2	1.0	31.6	1.3	42.2	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	47.2	16.2	48.4	12.2	1.0	31.6	1.3	42.2	0.0
LOS	D	B	D	B	A	C	A	D	A
Approach Delay		16.4		13.3		6.4		38.6	
Approach LOS		B		B		A		D	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 83.8	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.35	
Intersection Signal Delay: 14.6	Intersection LOS: B
Intersection Capacity Utilization 47.7%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 17: Mesa Linda St. & Main St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	733	6	47	892	54	10	7	81	31	0	3
Future Volume (veh/h)	5	733	6	47	892	54	10	7	81	31	0	3
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	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	5	764	5	49	929	48	10	7	25	32	0	1
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	11	2768	18	68	2876	893	79	56	118	113	0	100
Arrive On Green	0.01	0.55	0.55	0.04	0.59	0.59	0.08	0.08	0.08	0.07	0.00	0.07
Sat Flow, veh/h	1619	5037	33	1619	4914	1525	1029	720	1525	1714	0	1525
Grp Volume(v), veh/h	5	497	272	49	929	48	17	0	25	32	0	1
Grp Sat Flow(s),veh/h/ln	1619	1638	1794	1619	1638	1525	1749	0	1525	1714	0	1525
Q Serve(g_s), s	0.2	6.2	6.2	2.3	7.4	1.0	0.7	0.0	1.2	1.4	0.0	0.0
Cycle Q Clear(g_c), s	0.2	6.2	6.2	2.3	7.4	1.0	0.7	0.0	1.2	1.4	0.0	0.0
Prop In Lane	1.00		0.02	1.00		1.00	0.59		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	11	1800	986	68	2876	893	135	0	118	113	0	100
V/C Ratio(X)	0.47	0.28	0.28	0.72	0.32	0.05	0.13	0.00	0.21	0.28	0.00	0.01
Avail Cap(c_a), veh/h	135	1800	986	283	2876	893	831	0	725	278	0	247
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	37.9	9.2	9.2	36.2	8.1	6.8	32.9	0.0	33.1	34.0	0.0	33.4
Incr Delay (d2), s/veh	11.4	0.4	0.7	5.1	0.3	0.1	0.4	0.0	0.9	1.4	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	1.7	2.0	0.9	2.0	0.3	0.3	0.0	0.5	0.6	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	49.3	9.5	9.9	41.3	8.4	6.9	33.3	0.0	34.0	35.4	0.0	33.5
LnGrp LOS	D	A	A	D	A	A	C	A	C	D	A	C
Approach Vol, veh/h		774			1026			42			33	
Approach Delay, s/veh		9.9			9.9			33.7			35.3	
Approach LOS		A			A			C			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.8	48.6		9.6	5.1	51.3		10.5				
Change Period (Y+Rc), s	4.6	6.5		4.6	4.6	* 6.5		4.6				
Max Green Setting (Gmax), s	13.4	37.5		12.4	6.4	* 45		36.4				
Max Q Clear Time (g_c+I1), s	4.3	8.2		3.4	2.2	9.4		3.2				
Green Ext Time (p_c), s	0.0	4.5		0.0	0.0	6.8		0.1				

Intersection Summary		
HCM 6th Ctrl Delay		10.9
HCM 6th LOS		B

Notes

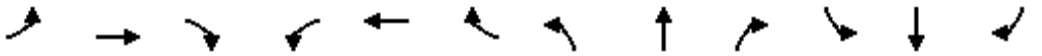
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	77	685	88	188	763	44	135	51	137	69	29	111
Future Volume (vph)	77	685	88	188	763	44	135	51	137	69	29	111
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Split	NA	Perm	Split	NA	Perm
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases			2			6			8			4
Detector Phase	5	2	2	1	6	6	8	8	8	4	4	4
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	32.2	32.2	9.6	32.2	32.2	43.6	43.6	43.6	41.6	41.6	41.6
Total Split (s)	11.0	32.8	32.8	12.0	33.8	33.8	43.6	43.6	43.6	41.6	41.6	41.6
Total Split (%)	8.5%	25.2%	25.2%	9.2%	26.0%	26.0%	33.5%	33.5%	33.5%	32.0%	32.0%	32.0%
Yellow Time (s)	3.6	5.2	5.2	3.6	5.2	5.2	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	6.2	4.6	6.2	6.2	4.6	4.6	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes						
Recall Mode	None	Max	Max	None	Max	Max	None	None	None	None	None	None
Act Effct Green (s)	6.7	28.0	28.0	7.8	29.0	29.0	14.6	14.6	14.6	14.1	14.1	14.1
Actuated g/C Ratio	0.08	0.33	0.33	0.09	0.34	0.34	0.17	0.17	0.17	0.16	0.16	0.16
v/c Ratio	0.62	0.43	0.16	0.72	0.47	0.08	0.36	0.34	0.38	0.26	0.10	0.33
Control Delay	64.3	26.9	8.2	56.2	26.6	0.3	35.3	34.5	8.7	34.3	31.8	9.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	64.3	26.9	8.2	56.2	26.6	0.3	35.3	34.5	8.7	34.3	31.8	9.3
LOS	E	C	A	E	C	A	D	C	A	C	C	A
Approach Delay		28.3			31.0			23.8			20.7	
Approach LOS		C			C			C			C	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 85.5	
Natural Cycle: 130	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.72	
Intersection Signal Delay: 28.2	Intersection LOS: C
Intersection Capacity Utilization 56.0%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 18: Cataba Av. & Main St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	77	685	88	188	763	44	135	51	137	69	29	111
Future Volume (veh/h)	77	685	88	188	763	44	135	51	137	69	29	111
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		0.99	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	1700	1800	1800	1600	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	79	699	51	192	779	33	95	112	37	70	30	23
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	98	1772	550	263	1912	593	250	278	234	202	224	190
Arrive On Green	0.06	0.36	0.36	0.09	0.39	0.39	0.15	0.15	0.15	0.12	0.12	0.12
Sat Flow, veh/h	1619	4914	1524	2956	4914	1523	1619	1800	1511	1619	1800	1525
Grp Volume(v), veh/h	79	699	51	192	779	33	95	112	37	70	30	23
Grp Sat Flow(s),veh/h/ln	1619	1638	1524	1478	1638	1523	1619	1800	1511	1619	1800	1525
Q Serve(g_s), s	3.6	7.8	1.6	4.7	8.5	1.0	3.9	4.1	1.6	2.9	1.1	1.0
Cycle Q Clear(g_c), s	3.6	7.8	1.6	4.7	8.5	1.0	3.9	4.1	1.6	2.9	1.1	1.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	98	1772	550	263	1912	593	250	278	234	202	224	190
V/C Ratio(X)	0.81	0.39	0.09	0.73	0.41	0.06	0.38	0.40	0.16	0.35	0.13	0.12
Avail Cap(c_a), veh/h	140	1772	550	297	1912	593	856	952	799	812	903	765
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.2	17.6	15.6	32.7	16.4	14.1	28.0	28.1	27.0	29.5	28.7	28.7
Incr Delay (d2), s/veh	13.1	0.7	0.3	6.2	0.6	0.2	0.9	0.9	0.3	1.0	0.3	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	1.6	2.6	0.5	1.8	2.8	0.3	1.5	1.8	0.6	1.2	0.5	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	47.3	18.2	15.9	38.9	17.0	14.2	28.9	29.0	27.3	30.6	29.0	29.0
LnGrp LOS	D	B	B	D	B	B	C	C	C	C	C	C
Approach Vol, veh/h		829			1004			244			123	
Approach Delay, s/veh		20.9			21.1			28.7			29.9	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	11.2	32.8		13.8	9.1	34.9		16.0				
Change Period (Y+Rc), s	4.6	6.2		4.6	4.6	6.2		4.6				
Max Green Setting (Gmax), s	7.4	26.6		37.0	6.4	27.6		39.0				
Max Q Clear Time (g_c+I1), s	6.7	9.8		4.9	5.6	10.5		6.1				
Green Ext Time (p_c), s	0.0	3.9		0.4	0.0	4.5		1.1				

Intersection Summary		
HCM 6th Ctrl Delay		22.4
HCM 6th LOS		C

Notes

User approved pedestrian interval to be less than phase max green.

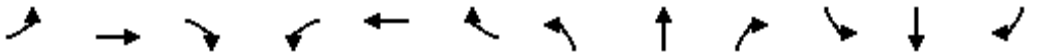
User approved volume balancing among the lanes for turning movement.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	55	902	24	215	1092	29	71	230	222	84
Future Volume (vph)	55	902	24	215	1092	29	71	230	222	84
Turn Type	Prot	NA	Perm	Prot	NA	Perm	NA	Perm	Perm	NA
Protected Phases	5	2		1	6		8			4
Permitted Phases			2			8		8	4	
Detector Phase	5	2	2	1	6	8	8	8	4	4
Switch Phase										
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	29.2	29.2	9.6	30.2	38.6	38.6	38.6	41.6	41.6
Total Split (s)	16.0	42.0	42.0	34.0	60.0	44.0	44.0	44.0	44.0	44.0
Total Split (%)	13.3%	35.0%	35.0%	28.3%	50.0%	36.7%	36.7%	36.7%	36.7%	36.7%
Yellow Time (s)	3.6	5.2	5.2	3.6	5.2	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	6.2	4.6	6.2	4.6	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes					
Recall Mode	None	Max	Max	None	Max	None	None	None	None	None
Act Effct Green (s)	7.9	42.5	42.5	17.8	54.9	24.0	24.0	24.0	24.0	24.0
Actuated g/C Ratio	0.08	0.42	0.42	0.18	0.55	0.24	0.24	0.24	0.24	0.24
v/c Ratio	0.44	0.44	0.03	0.76	0.50	0.11	0.17	0.44	0.79	0.28
Control Delay	58.6	23.8	0.1	57.5	16.7	30.6	31.0	6.6	55.2	27.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	58.6	23.8	0.1	57.5	16.7	30.6	31.0	6.6	55.2	27.9
LOS	E	C	A	E	B	C	C	A	E	C
Approach Delay		25.2			22.4		13.9			45.9
Approach LOS		C			C		B			D

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 100.1	
Natural Cycle: 85	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.79	
Intersection Signal Delay: 24.9	Intersection LOS: C
Intersection Capacity Utilization 66.3%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 19: Key Point Av. & Main St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	55	902	24	215	1092	213	29	71	230	222	84	31
Future Volume (veh/h)	55	902	24	215	1092	213	29	71	230	222	84	31
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		0.98	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	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	56	920	20	219	1114	141	30	72	94	227	86	11
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	70	2116	657	250	2394	303	342	468	390	340	406	52
Arrive On Green	0.04	0.43	0.43	0.15	0.54	0.54	0.26	0.26	0.26	0.26	0.26	0.26
Sat Flow, veh/h	1619	4914	1525	1619	4416	559	1241	1800	1501	1168	1563	200
Grp Volume(v), veh/h	56	920	20	219	826	429	30	72	94	227	0	97
Grp Sat Flow(s),veh/h/ln	1619	1638	1525	1619	1638	1699	1241	1800	1501	1168	0	1763
Q Serve(g_s), s	3.4	13.0	0.8	13.1	15.3	15.3	1.9	3.1	4.9	18.5	0.0	4.3
Cycle Q Clear(g_c), s	3.4	13.0	0.8	13.1	15.3	15.3	6.2	3.1	4.9	21.5	0.0	4.3
Prop In Lane	1.00		1.00	1.00		0.33	1.00		1.00	1.00		0.11
Lane Grp Cap(c), veh/h	70	2116	657	250	1776	921	342	468	390	340	0	458
V/C Ratio(X)	0.81	0.43	0.03	0.88	0.47	0.47	0.09	0.15	0.24	0.67	0.00	0.21
Avail Cap(c_a), veh/h	186	2116	657	480	1776	921	512	715	596	500	0	700
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	47.1	19.8	16.3	41.0	13.9	13.9	31.2	28.3	29.0	36.6	0.0	28.8
Incr Delay (d2), s/veh	7.9	0.7	0.1	3.8	0.9	1.7	0.1	0.2	0.3	2.3	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	4.6	0.3	5.2	5.1	5.5	0.6	1.3	1.8	5.5	0.0	1.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	55.0	20.4	16.4	44.9	14.8	15.6	31.3	28.5	29.3	38.9	0.0	29.0
LnGrp LOS	D	C	B	D	B	B	C	C	C	D	A	C
Approach Vol, veh/h		996			1474			196			324	
Approach Delay, s/veh		22.3			19.5			29.3			35.9	
Approach LOS		C			B			C			D	

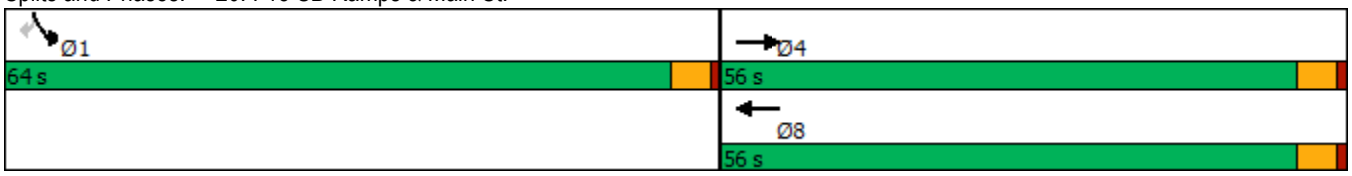
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	19.9	48.9		30.4	8.9	60.0		30.4				
Change Period (Y+Rc), s	4.6	6.2		4.6	4.6	6.2		4.6				
Max Green Setting (Gmax), s	29.4	35.8		39.4	11.4	53.8		39.4				
Max Q Clear Time (g_c+I1), s	15.1	15.0		23.5	5.4	17.3		8.2				
Green Ext Time (p_c), s	0.2	5.8		1.3	0.0	9.3		0.8				

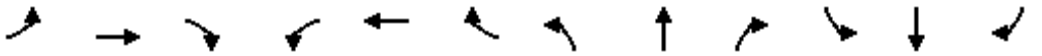
Intersection Summary			
HCM 6th Ctrl Delay		22.9	
HCM 6th LOS		C	

Lane Group	EBT	WBT	SBL	SBR
Lane Configurations				
Traffic Volume (vph)	1225	1128	537	393
Future Volume (vph)	1225	1128	537	393
Turn Type	NA	NA	Prot	Perm
Protected Phases	4	8	1	
Permitted Phases				1
Detector Phase	4	8	1	1
Switch Phase				
Minimum Initial (s)	5.0	5.0	5.0	5.0
Minimum Split (s)	9.6	22.6	9.6	9.6
Total Split (s)	56.0	56.0	64.0	64.0
Total Split (%)	46.7%	46.7%	53.3%	53.3%
Yellow Time (s)	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	4.6
Lead/Lag				
Lead-Lag Optimize?				
Recall Mode	None	None	None	None
Act Effct Green (s)	23.4	23.4	21.4	21.4
Actuated g/C Ratio	0.43	0.43	0.39	0.39
v/c Ratio	0.57	0.52	0.40	0.62
Control Delay	13.6	13.2	13.2	17.8
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	13.6	13.2	13.2	17.8
LOS	B	B	B	B
Approach Delay	13.6	13.2		
Approach LOS	B	B		

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 54.6	
Natural Cycle: 40	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.62	
Intersection Signal Delay: 13.9	Intersection LOS: B
Intersection Capacity Utilization 53.8%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 20: I-15 SB Ramps & Main St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↱		↑↑↑	↱				↰↰		↱
Traffic Volume (veh/h)	0	1225	0	0	1128	0	0	0	0	537	0	393
Future Volume (veh/h)	0	1225	0	0	1128	0	0	0	0	537	0	393
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	1900	1900	0	1900	1900				1900	0	1900
Adj Flow Rate, veh/h	0	1263	0	0	1163	0				554	0	292
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	0	0	0	0	0				0	0	0
Cap, veh/h	0	2473		0	2473					1028	0	472
Arrive On Green	0.00	0.48	0.00	0.00	0.48	0.00				0.29	0.00	0.29
Sat Flow, veh/h	0	5358	1610	0	5358	1610				3510	0	1610
Grp Volume(v), veh/h	0	1263	0	0	1163	0				554	0	292
Grp Sat Flow(s),veh/h/ln	0	1729	1610	0	1729	1610				1755	0	1610
Q Serve(g_s), s	0.0	6.7	0.0	0.0	6.0	0.0				5.3	0.0	6.3
Cycle Q Clear(g_c), s	0.0	6.7	0.0	0.0	6.0	0.0				5.3	0.0	6.3
Prop In Lane	0.00		1.00	0.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2473		0	2473					1028	0	472
V/C Ratio(X)	0.00	0.51		0.00	0.47					0.54	0.00	0.62
Avail Cap(c_a), veh/h	0	6672		0	6672					5218	0	2393
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	7.2	0.0	0.0	7.1	0.0				11.9	0.0	12.2
Incr Delay (d2), s/veh	0.0	0.2	0.0	0.0	0.1	0.0				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	0.0	1.2	0.0	0.0	1.0	0.0				1.8	0.0	2.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	7.4	0.0	0.0	7.2	0.0				12.3	0.0	13.5
LnGrp LOS	A	A		A	A					B	A	B
Approach Vol, veh/h		1263	A		1163	A					846	
Approach Delay, s/veh		7.4			7.2						12.7	
Approach LOS		A			A						B	

Timer - Assigned Phs				4		6		8				
Phs Duration (G+Y+Rc), s				23.7		16.3		23.7				
Change Period (Y+Rc), s				4.6		4.6		4.6				
Max Green Setting (Gmax), s				51.4		59.4		51.4				
Max Q Clear Time (g_c+I1), s				8.7		8.3		8.0				
Green Ext Time (p_c), s				10.3		3.4		9.2				

Intersection Summary												
HCM 6th Ctrl Delay			8.7									
HCM 6th LOS			A									

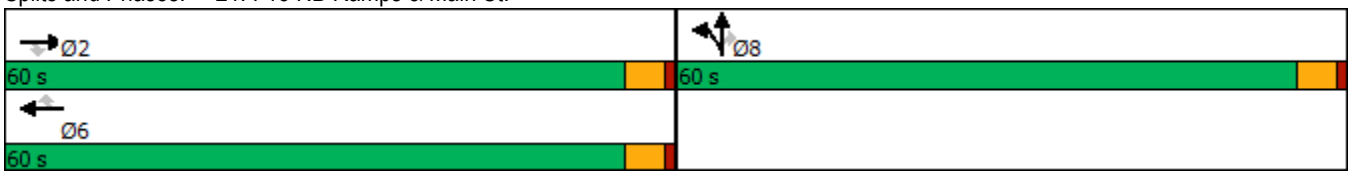
Notes

Unsignalized Delay for [EBR, WBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBT	EBR	WBT	WBR	NBL	NBT	NBR
Lane Configurations							
Traffic Volume (vph)	1478	198	1307	396	179	0	799
Future Volume (vph)	1478	198	1307	396	179	0	799
Turn Type	NA	Perm	NA	Perm	Split	NA	Perm
Protected Phases	2		6		8	8	
Permitted Phases		2		6			8
Detector Phase	2	2	6	6	8	8	8
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.6	22.6	22.6	22.6	9.6	9.6	9.6
Total Split (s)	60.0	60.0	60.0	60.0	60.0	60.0	60.0
Total Split (%)	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Lead/Lag							
Lead-Lag Optimize?							
Recall Mode	None	None	None	None	Min	Min	Min
Act Effct Green (s)	36.8	36.8	36.8	36.8	32.2	32.2	32.2
Actuated g/C Ratio	0.47	0.47	0.47	0.47	0.41	0.41	0.41
v/c Ratio	0.63	0.24	0.56	0.42	0.25	0.65	0.65
Control Delay	18.4	3.3	17.3	3.2	17.6	24.6	24.6
Queue Delay	0.0	0.0	0.0	0.1	0.0	0.0	0.0
Total Delay	18.4	3.3	17.3	3.3	17.6	24.6	24.6
LOS	B	A	B	A	B	C	C
Approach Delay	16.6		14.1			23.3	
Approach LOS	B		B			C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 79.1	
Natural Cycle: 45	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.65	
Intersection Signal Delay: 17.1	Intersection LOS: B
Intersection Capacity Utilization 69.2%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 21: I-15 NB Ramps & Main St.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↱		↑↑↑	↱	↰	↑	↱			
Traffic Volume (veh/h)	0	1478	198	0	1307	396	179	0	799	0	0	0
Future Volume (veh/h)	0	1478	198	0	1307	396	179	0	799	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	0	1900	1900	0	1900	1900	1900	1900	1900			
Adj Flow Rate, veh/h	0	1524	0	0	1347	261	185	0	677			
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	0	0	0	0	0	0	0	0			
Cap, veh/h	0	2671		0	2671	829	547	0	974			
Arrive On Green	0.00	0.51	0.00	0.00	0.51	0.51	0.30	0.00	0.30			
Sat Flow, veh/h	0	5358	1610	0	5358	1610	1810	0	3220			
Grp Volume(v), veh/h	0	1524	0	0	1347	261	185	0	677			
Grp Sat Flow(s),veh/h/ln	0	1729	1610	0	1729	1610	1810	0	1610			
Q Serve(g_s), s	0.0	10.2	0.0	0.0	8.6	4.7	4.0	0.0	9.4			
Cycle Q Clear(g_c), s	0.0	10.2	0.0	0.0	8.6	4.7	4.0	0.0	9.4			
Prop In Lane	0.00		1.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	0	2671		0	2671	829	547	0	974			
V/C Ratio(X)	0.00	0.57		0.00	0.50	0.31	0.34	0.00	0.69			
Avail Cap(c_a), veh/h	0	5701		0	5701	1770	1989	0	3539			
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	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	0.0	8.4	0.0	0.0	8.0	7.1	13.7	0.0	15.5			
Incr Delay (d2), s/veh	0.0	0.2	0.0	0.0	0.1	0.2	0.4	0.0	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			
%ile BackOfQ(50%),veh/ln	0.0	2.2	0.0	0.0	1.9	1.0	1.5	0.0	3.2			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	8.6	0.0	0.0	8.2	7.3	14.0	0.0	16.4			
LnGrp LOS	A	A		A	A	A	B	A	B			
Approach Vol, veh/h		1524	A		1608			862				
Approach Delay, s/veh		8.6			8.0			15.9				
Approach LOS		A			A			B				
Timer - Assigned Phs		2				6		8				
Phs Duration (G+Y+Rc), s		30.6				30.6		19.8				
Change Period (Y+Rc), s		4.6				4.6		4.6				
Max Green Setting (Gmax), s		55.4				55.4		55.4				
Max Q Clear Time (g_c+I1), s		12.2				10.6		11.4				
Green Ext Time (p_c), s		13.8				13.1		3.9				

Intersection Summary	
HCM 6th Ctrl Delay	9.9
HCM 6th LOS	A

Notes

User approved volume balancing among the lanes for turning movement.

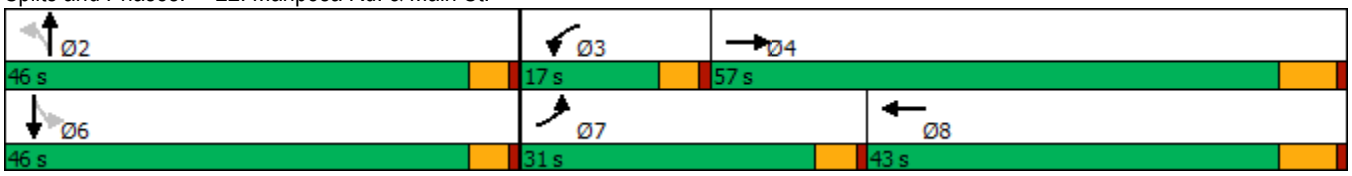
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

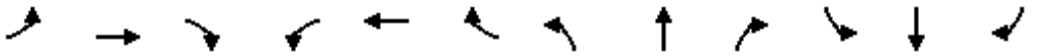
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	224	1936	84	1331	129	77	132	53
Future Volume (vph)	224	1936	84	1331	129	77	132	53
Turn Type	Prot	NA	Prot	NA	Perm	NA	Perm	NA
Protected Phases	7	4	3	8		2		6
Permitted Phases					2		6	
Detector Phase	7	4	3	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	24.2	9.6	24.2	44.6	44.6	44.6	44.6
Total Split (s)	31.0	57.0	17.0	43.0	46.0	46.0	46.0	46.0
Total Split (%)	25.8%	47.5%	14.2%	35.8%	38.3%	38.3%	38.3%	38.3%
Yellow Time (s)	3.6	5.2	3.6	5.2	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	4.6	6.2	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes				
Recall Mode	None	Max	Max	None	None	None	None	None
Act Effct Green (s)	18.0	51.3	12.5	45.8	21.8	21.8	21.8	21.8
Actuated g/C Ratio	0.18	0.51	0.12	0.45	0.22	0.22	0.22	0.22
v/c Ratio	0.80	0.68	0.43	0.53	0.92	0.38	0.63	0.52
Control Delay	61.1	21.5	51.5	23.3	94.8	25.8	48.5	15.8
Queue Delay	0.0	1.6	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	61.1	23.1	51.5	23.3	94.8	25.8	48.5	15.8
LOS	E	C	D	C	F	C	D	B
Approach Delay		26.8		24.8		58.2		27.5
Approach LOS		C		C		E		C

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 101.1
Natural Cycle: 90
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.92
Intersection Signal Delay: 28.1 — Intersection LOS: C
Intersection Capacity Utilization 77.3% — ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 22: Mariposa Rd. & Main St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	224	1936	148	84	1331	102	129	77	69	132	53	184
Future Volume (veh/h)	224	1936	148	84	1331	102	129	77	69	132	53	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		0.99	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	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	229	1976	135	86	1358	88	132	79	43	135	54	117
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	259	2959	202	196	2740	177	234	253	138	280	117	255
Arrive On Green	0.16	0.50	0.50	0.12	0.46	0.46	0.23	0.23	0.23	0.23	0.23	0.23
Sat Flow, veh/h	1619	5963	407	1619	5987	387	1165	1090	594	1218	506	1097
Grp Volume(v), veh/h	229	1539	572	86	1053	393	132	0	122	135	0	171
Grp Sat Flow(s),veh/h/ln	1619	1548	1727	1619	1548	1730	1165	0	1684	1218	0	1603
Q Serve(g_s), s	14.2	25.6	25.6	5.0	16.3	16.3	11.2	0.0	6.1	10.6	0.0	9.4
Cycle Q Clear(g_c), s	14.2	25.6	25.6	5.0	16.3	16.3	20.6	0.0	6.1	16.7	0.0	9.4
Prop In Lane	1.00		0.24	1.00		0.22	1.00		0.35	1.00		0.68
Lane Grp Cap(c), veh/h	259	2305	857	196	2125	792	234	0	391	280	0	372
V/C Ratio(X)	0.89	0.67	0.67	0.44	0.50	0.50	0.56	0.00	0.31	0.48	0.00	0.46
Avail Cap(c_a), veh/h	418	2305	857	196	2125	792	435	0	681	490	0	648
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	42.1	19.4	19.4	41.8	19.5	19.5	42.6	0.0	32.5	39.4	0.0	33.8
Incr Delay (d2), s/veh	7.9	1.6	4.1	7.0	0.2	0.5	2.1	0.0	0.5	1.3	0.0	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	5.9	8.4	10.0	2.3	5.3	6.0	3.4	0.0	2.6	3.3	0.0	3.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	50.0	21.0	23.5	48.7	19.6	20.0	44.8	0.0	33.0	40.7	0.0	34.7
LnGrp LOS	D	C	C	D	B	B	D	A	C	D	A	C
Approach Vol, veh/h		2340			1532			254			306	
Approach Delay, s/veh		24.4			21.4			39.1			37.3	
Approach LOS		C			C			D			D	

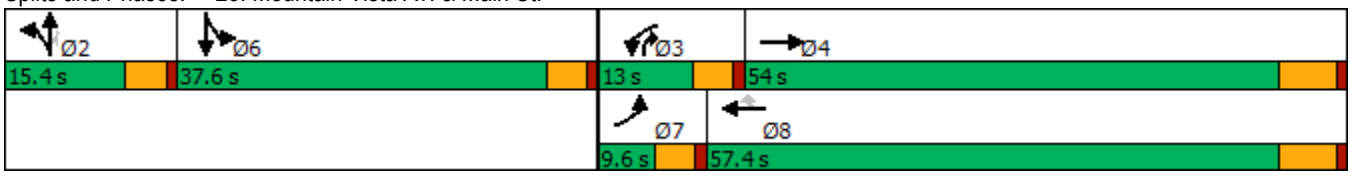
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		28.4	17.0	57.0		28.4	21.0	53.0				
Change Period (Y+Rc), s		4.6	4.6	6.2		4.6	4.6	6.2				
Max Green Setting (Gmax), s		41.4	12.4	50.8		41.4	26.4	36.8				
Max Q Clear Time (g_c+I1), s		22.6	7.0	27.6		18.7	16.2	18.3				
Green Ext Time (p_c), s		1.1	0.0	14.9		1.6	0.2	8.6				

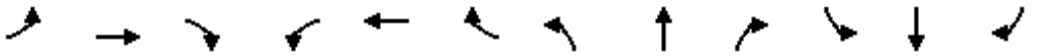
Intersection Summary	
HCM 6th Ctrl Delay	25.1
HCM 6th LOS	C

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	48	2040	61	1573	68	32	5	27	77	7
Future Volume (vph)	48	2040	61	1573	68	32	5	27	77	7
Turn Type	Prot	NA	Prot	NA	Perm	Split	NA	pm+ov	Split	NA
Protected Phases	7	4	3	8		2	2	3	6	6
Permitted Phases					8			2		
Detector Phase	7	4	3	8	8	2	2	3	6	6
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	43.2	9.6	32.2	32.2	14.6	14.6	9.6	37.6	37.6
Total Split (s)	9.6	54.0	13.0	57.4	57.4	15.4	15.4	13.0	37.6	37.6
Total Split (%)	8.0%	45.0%	10.8%	47.8%	47.8%	12.8%	12.8%	10.8%	31.3%	31.3%
Yellow Time (s)	3.6	5.2	3.6	5.2	5.2	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	4.6	6.2	6.2	4.6	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lead	Lag	Lag			Lead		
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes			Yes		
Recall Mode	None	Max	None	Max	Max	None	None	None	None	None
Act Effct Green (s)	5.2	55.6	7.3	60.0	60.0	10.3	10.3	12.8	13.9	13.9
Actuated g/C Ratio	0.06	0.60	0.08	0.65	0.65	0.11	0.11	0.14	0.15	0.15
v/c Ratio	0.31	0.58	0.50	0.52	0.07	0.10	0.06	0.06	0.21	0.19
Control Delay	53.2	18.7	59.9	15.8	2.1	46.4	44.5	0.3	38.4	34.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	53.2	18.7	59.9	15.8	2.1	46.4	44.5	0.3	38.4	34.3
LOS	D	B	E	B	A	D	D	A	D	C
Approach Delay		19.5		16.8			26.5			36.4
Approach LOS		B		B			C			D

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 92.8	
Natural Cycle: 105	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.58	
Intersection Signal Delay: 18.8	Intersection LOS: B
Intersection Capacity Utilization 58.4%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 23: Mountain Vista Av. & Main St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	48	2040	18	61	1573	68	32	5	27	77	7	6
Future Volume (veh/h)	48	2040	18	61	1573	68	32	5	27	77	7	6
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	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	1600	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	51	2147	17	64	1656	57	34	5	13	91	0	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	118	3526	28	79	2760	857	260	145	395	320	178	0
Arrive On Green	0.04	0.55	0.55	0.05	0.56	0.56	0.08	0.08	0.08	0.10	0.00	0.00
Sat Flow, veh/h	2956	6383	51	1619	4914	1525	3238	1800	3051	3238	1800	0
Grp Volume(v), veh/h	51	1562	602	64	1656	57	34	5	13	91	0	0
Grp Sat Flow(s),veh/h/ln	1478	1548	1790	1619	1638	1525	1619	1800	1525	1619	1800	0
Q Serve(g_s), s	1.5	20.7	20.7	3.6	20.3	1.6	0.9	0.2	0.3	2.4	0.0	0.0
Cycle Q Clear(g_c), s	1.5	20.7	20.7	3.6	20.3	1.6	0.9	0.2	0.3	2.4	0.0	0.0
Prop In Lane	1.00		0.03	1.00		1.00	1.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	118	2565	989	79	2760	857	260	145	395	320	178	0
V/C Ratio(X)	0.43	0.61	0.61	0.81	0.60	0.07	0.13	0.03	0.03	0.28	0.00	0.00
Avail Cap(c_a), veh/h	162	2565	989	149	2760	857	384	213	511	1172	652	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	42.8	13.8	13.8	42.9	13.2	9.1	39.0	38.7	34.7	38.1	0.0	0.0
Incr Delay (d2), s/veh	0.9	1.1	2.8	7.0	1.0	0.1	0.2	0.1	0.0	0.5	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	6.2	7.6	1.5	6.3	0.5	0.4	0.1	0.1	1.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	43.7	14.8	16.5	49.9	14.2	9.2	39.2	38.8	34.7	38.6	0.0	0.0
LnGrp LOS	D	B	B	D	B	A	D	D	C	D	A	A
Approach Vol, veh/h		2215			1777			52			91	
Approach Delay, s/veh		16.0			15.3			38.0			38.6	
Approach LOS		B			B			D			D	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		11.9	9.1	56.6		13.6	8.2	57.4				
Change Period (Y+Rc), s		4.6	4.6	6.2		4.6	4.6	6.2				
Max Green Setting (Gmax), s		10.8	8.4	47.8		33.0	5.0	51.2				
Max Q Clear Time (g_c+I1), s		2.9	5.6	22.7		4.4	3.5	22.3				
Green Ext Time (p_c), s		0.1	0.0	16.0		0.3	0.0	13.7				

Intersection Summary	
HCM 6th Ctrl Delay	16.5
HCM 6th LOS	B

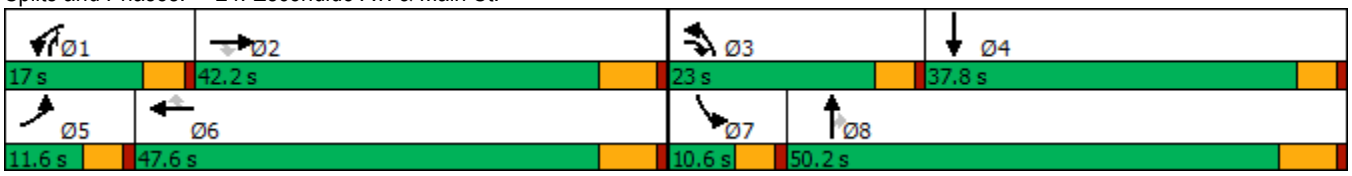
Notes

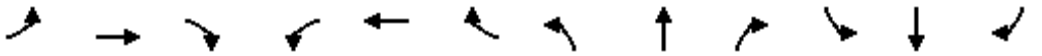
User approved volume balancing among the lanes for turning movement.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations											
Traffic Volume (vph)	53	1389	659	408	989	10	569	50	196	55	37
Future Volume (vph)	53	1389	659	408	989	10	569	50	196	55	37
Turn Type	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA
Protected Phases	5	2	3	1	6		3	8	1	7	4
Permitted Phases			2			6			8		
Detector Phase	5	2	3	1	6	6	3	8	1	7	4
Switch Phase											
Minimum Initial (s)	5.0	10.0	5.0	5.0	10.0	10.0	5.0	10.0	5.0	5.0	10.0
Minimum Split (s)	9.6	41.2	9.6	9.6	31.2	31.2	9.6	49.2	9.6	9.6	37.6
Total Split (s)	11.6	42.2	23.0	17.0	47.6	47.6	23.0	50.2	17.0	10.6	37.8
Total Split (%)	9.7%	35.2%	19.2%	14.2%	39.7%	39.7%	19.2%	41.8%	14.2%	8.8%	31.5%
Yellow Time (s)	3.6	5.2	3.6	3.6	5.2	5.2	3.6	5.2	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	4.6	4.6	6.2	6.2	4.6	6.2	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Max	None	None	Max	Max	None	None	None	None	None
Act Effct Green (s)	6.6	36.5	56.8	12.6	44.8	44.8	18.7	23.9	42.8	5.9	13.9
Actuated g/C Ratio	0.07	0.37	0.58	0.13	0.45	0.45	0.19	0.24	0.43	0.06	0.14
v/c Ratio	0.51	0.79	0.59	1.13	0.66	0.01	1.06	0.12	0.29	0.59	0.33
Control Delay	65.2	33.3	3.4	127.6	26.9	0.0	95.7	29.3	12.6	72.9	21.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	65.2	33.3	3.4	127.6	26.9	0.0	95.7	29.3	12.6	72.9	21.9
LOS	E	C	A	F	C	A	F	C	B	E	C
Approach Delay		24.7			55.9			71.7			41.6
Approach LOS		C			E			E			D

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 98.5	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.13	
Intersection Signal Delay: 43.7	Intersection LOS: D
Intersection Capacity Utilization 83.1%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 24: Escondido Av. & Main St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	53	1389	659	408	989	10	569	50	196	55	37	50
Future Volume (veh/h)	53	1389	659	408	989	10	569	50	196	55	37	50
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		0.98	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	1700	1800	1800	1600	1800	1800	1600	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	55	1447	496	425	1030	8	593	52	123	57	39	49
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	68	1815	850	376	1554	679	558	429	558	71	68	85
Arrive On Green	0.04	0.37	0.37	0.13	0.45	0.45	0.19	0.24	0.24	0.04	0.09	0.09
Sat Flow, veh/h	1619	4914	1523	2956	3420	1494	2956	1800	1525	1619	725	911
Grp Volume(v), veh/h	55	1447	496	425	1030	8	593	52	123	57	0	88
Grp Sat Flow(s),veh/h/ln	1619	1638	1523	1478	1710	1494	1478	1800	1525	1619	0	1636
Q Serve(g_s), s	3.3	25.7	20.8	12.4	22.9	0.3	18.4	2.2	5.4	3.4	0.0	5.0
Cycle Q Clear(g_c), s	3.3	25.7	20.8	12.4	22.9	0.3	18.4	2.2	5.4	3.4	0.0	5.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.56
Lane Grp Cap(c), veh/h	68	1815	850	376	1554	679	558	429	558	71	0	152
V/C Ratio(X)	0.81	0.80	0.58	1.13	0.66	0.01	1.06	0.12	0.22	0.81	0.00	0.58
Avail Cap(c_a), veh/h	116	1815	850	376	1554	679	558	812	883	100	0	557
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	46.3	27.5	14.1	42.5	20.8	14.6	39.5	29.1	21.3	46.2	0.0	42.4
Incr Delay (d2), s/veh	8.2	3.7	2.9	86.7	2.2	0.0	55.8	0.1	0.2	18.7	0.0	3.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	9.7	7.5	8.8	8.6	0.1	11.0	1.0	2.0	1.7	0.0	2.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	54.5	31.2	17.0	129.2	23.0	14.6	95.4	29.2	21.5	64.9	0.0	45.8
LnGrp LOS	D	C	B	F	C	B	F	C	C	E	A	D
Approach Vol, veh/h		1998			1463			768			145	
Approach Delay, s/veh		28.3			53.8			79.1			53.3	
Approach LOS		C			D			E			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.0	42.2	23.0	15.3	8.7	50.5	8.8	29.4
Change Period (Y+Rc), s	4.6	6.2	4.6	* 6.2	4.6	6.2	4.6	6.2
Max Green Setting (Gmax), s	12.4	36.0	18.4	* 33	7.0	41.4	6.0	44.0
Max Q Clear Time (g_c+I1), s	14.4	27.7	20.4	7.0	5.3	24.9	5.4	7.4
Green Ext Time (p_c), s	0.0	6.1	0.0	0.5	0.0	6.0	0.0	0.7

Intersection Summary	
HCM 6th Ctrl Delay	46.6
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	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	11	127	546	11	237	747
Future Vol, veh/h	11	127	546	11	237	747
Conflicting Peds, #/hr	0	0	0	4	1	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	100	0	-	-	195	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	11	132	569	11	247	778

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1462	294	0	0	584	0
Stage 1	579	-	-	-	-	-
Stage 2	883	-	-	-	-	-
Critical Hdwy	6.8	6.9	-	-	4.1	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	122	708	-	-	1001	-
Stage 1	529	-	-	-	-	-
Stage 2	369	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	91	705	-	-	997	-
Mov Cap-2 Maneuver	202	-	-	-	-	-
Stage 1	527	-	-	-	-	-
Stage 2	277	-	-	-	-	-

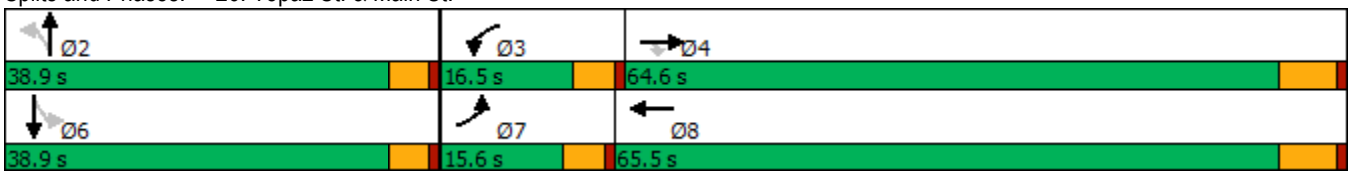
Approach	WB	NB	SB
HCM Control Delay, s	12.3	0	2.4
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	202	705	997	-
HCM Lane V/C Ratio	-	-	0.057	0.188	0.248	-
HCM Control Delay (s)	-	-	23.9	11.3	9.8	-
HCM Lane LOS	-	-	C	B	A	-
HCM 95th %tile Q(veh)	-	-	0.2	0.7	1	-

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	62	1386	216	102	1149	208	32	61	35
Future Volume (vph)	62	1386	216	102	1149	208	32	61	35
Turn Type	Prot	NA	Perm	Prot	NA	Perm	NA	Perm	NA
Protected Phases	7	4		3	8		2		6
Permitted Phases			4			2		6	
Detector Phase	7	4	4	3	8	2	2	6	6
Switch Phase									
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	25.2	25.2	9.6	23.2	32.6	32.6	38.6	38.6
Total Split (s)	15.6	64.6	64.6	16.5	65.5	38.9	38.9	38.9	38.9
Total Split (%)	13.0%	53.8%	53.8%	13.8%	54.6%	32.4%	32.4%	32.4%	32.4%
Yellow Time (s)	3.6	5.2	5.2	3.6	5.2	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	6.2	4.6	6.2	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes				
Recall Mode	None	None	None	Max	None	None	None	None	None
Act Effct Green (s)	8.3	49.5	49.5	12.3	56.1	23.5	23.5	23.5	23.5
Actuated g/C Ratio	0.08	0.49	0.49	0.12	0.55	0.23	0.23	0.23	0.23
v/c Ratio	0.48	0.85	0.26	0.54	0.67	0.77	0.29	0.25	0.19
Control Delay	61.7	29.3	4.4	58.2	20.3	56.3	12.9	36.0	18.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	61.7	29.3	4.4	58.2	20.3	56.3	12.9	36.0	18.5
LOS	E	C	A	E	C	E	B	D	B
Approach Delay		27.3			23.2		39.9		26.2
Approach LOS		C			C		D		C

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 101.2	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.85	
Intersection Signal Delay: 26.9	Intersection LOS: C
Intersection Capacity Utilization 89.8%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 26: Topaz St. & Main St.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	62	1386	216	102	1149	67	208	32	94	61	35	43
Future Volume (veh/h)	62	1386	216	102	1149	67	208	32	94	61	35	43
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	0.99		1.00	1.00		0.99
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	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	64	1429	151	105	1185	62	214	33	66	63	36	13
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	80	1689	754	199	1878	98	333	120	239	289	281	101
Arrive On Green	0.05	0.49	0.49	0.12	0.57	0.57	0.22	0.22	0.22	0.22	0.22	0.22
Sat Flow, veh/h	1619	3420	1525	1619	3306	173	1287	536	1071	1243	1258	454
Grp Volume(v), veh/h	64	1429	151	105	613	634	214	0	99	63	0	49
Grp Sat Flow(s),veh/h/ln	1619	1710	1525	1619	1710	1769	1287	0	1607	1243	0	1712
Q Serve(g_s), s	3.8	35.1	5.4	5.9	23.3	23.3	15.4	0.0	4.9	4.3	0.0	2.2
Cycle Q Clear(g_c), s	3.8	35.1	5.4	5.9	23.3	23.3	17.6	0.0	4.9	9.2	0.0	2.2
Prop In Lane	1.00		1.00	1.00		0.10	1.00		0.67	1.00		0.27
Lane Grp Cap(c), veh/h	80	1689	754	199	971	1005	333	0	359	289	0	382
V/C Ratio(X)	0.80	0.85	0.20	0.53	0.63	0.63	0.64	0.00	0.28	0.22	0.00	0.13
Avail Cap(c_a), veh/h	184	2067	922	199	1050	1086	502	0	571	453	0	608
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	45.5	21.2	13.7	39.7	14.1	14.1	37.0	0.0	31.0	34.8	0.0	30.0
Incr Delay (d2), s/veh	6.8	2.9	0.1	9.6	1.1	1.1	2.1	0.0	0.4	0.4	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	12.7	1.7	2.7	7.7	8.0	5.0	0.0	2.0	1.3	0.0	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	52.3	24.1	13.9	49.3	15.1	15.1	39.1	0.0	31.5	35.2	0.0	30.1
LnGrp LOS	D	C	B	D	B	B	D	A	C	D	A	C
Approach Vol, veh/h		1644			1352			313			112	
Approach Delay, s/veh		24.3			17.8			36.7			33.0	
Approach LOS		C			B			D			C	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		26.2	16.5	53.9		26.2	9.4	61.1				
Change Period (Y+Rc), s		4.6	4.6	6.2		4.6	4.6	6.2				
Max Green Setting (Gmax), s		34.3	11.9	58.4		34.3	11.0	59.3				
Max Q Clear Time (g_c+I1), s		19.6	7.9	37.1		11.2	5.8	25.3				
Green Ext Time (p_c), s		1.1	0.0	10.6		0.4	0.0	8.9				

Intersection Summary												
HCM 6th Ctrl Delay			23.1									
HCM 6th LOS			C									

APPENDIX 3.3:

EXISTING (2019) CONDITIONS TRAFFIC SIGNAL WARRANT ANALYSIS WORKSHEETS

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Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

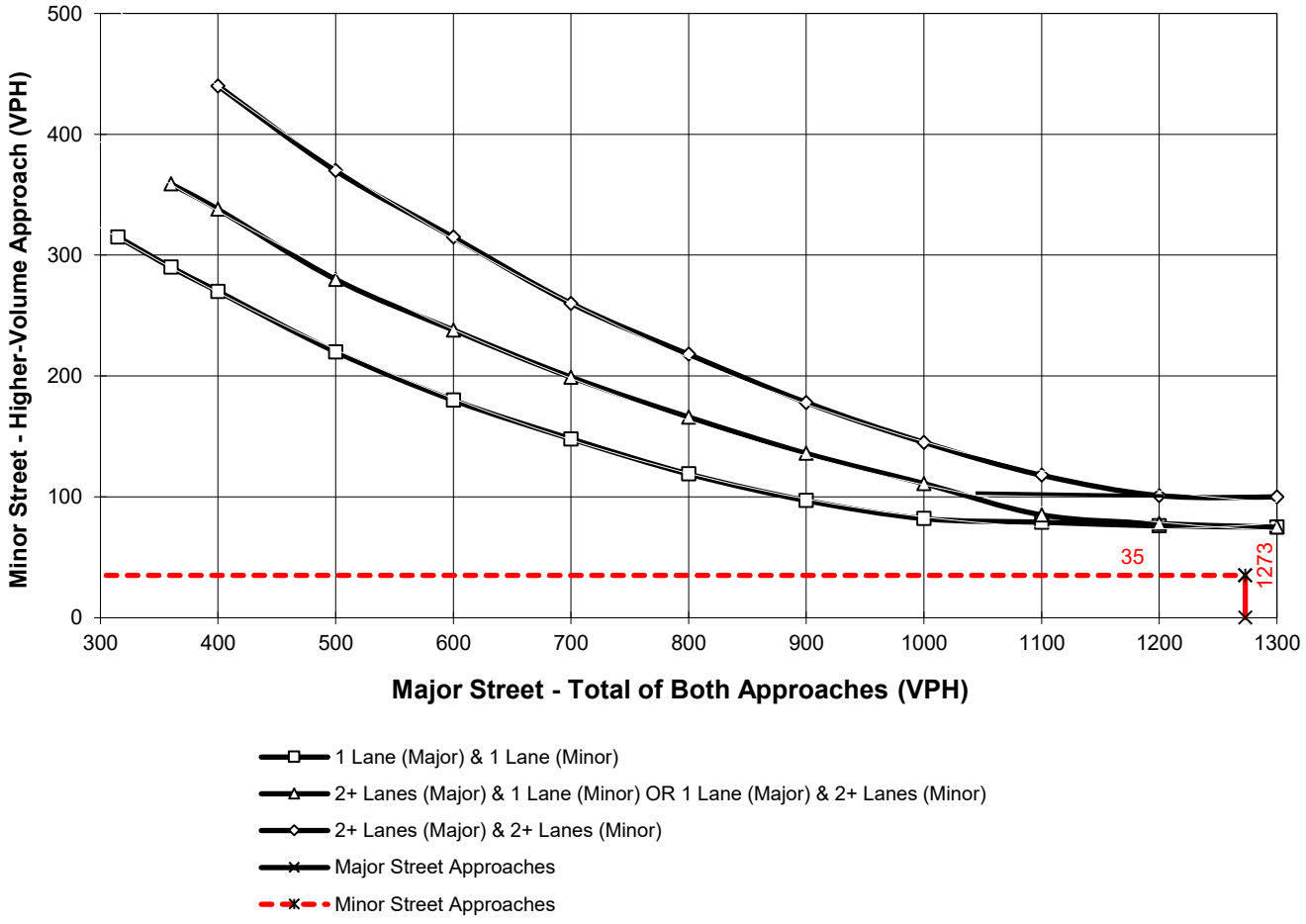
(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **Existing (2019) Conditions - Weekday AM Peak Hour**

Major Street Name = **Phelan Road** Total of Both Approaches (VPH) = **1273**
Number of Approach Lanes Major Street = **1**

Minor Street Name = **Verbena Road** High Volume Approach (VPH) = **35**
Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold for a minor-street approach with one lane

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

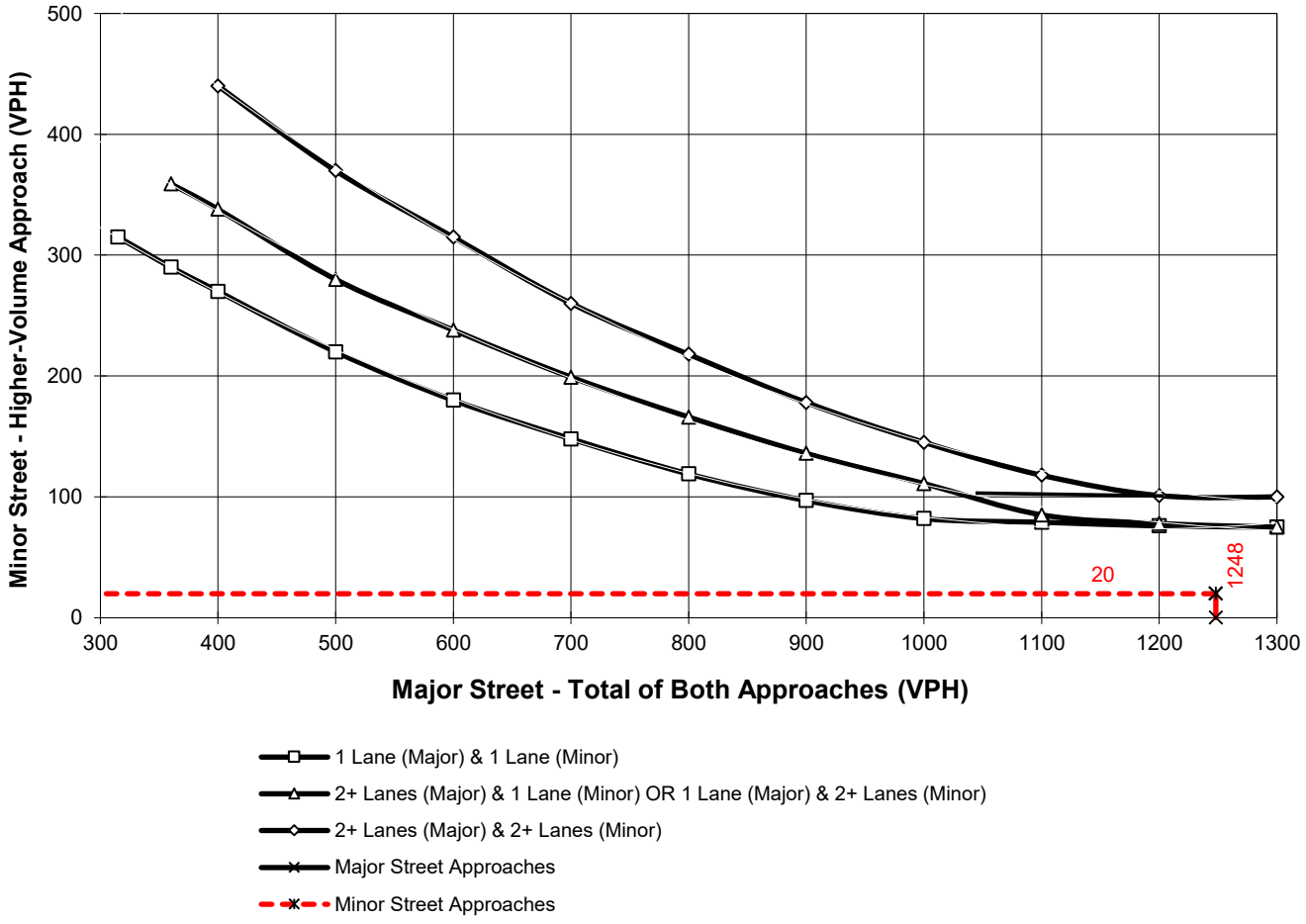
(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **Existing (2019) Conditions - Weekday AM Peak Hour**

Major Street Name = **Phelan Road** Total of Both Approaches (VPH) = **1248**
Number of Approach Lanes Major Street = **1**

Minor Street Name = **Bellflower Street** High Volume Approach (VPH) = **20**
Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold for a minor-street approach with one lane

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

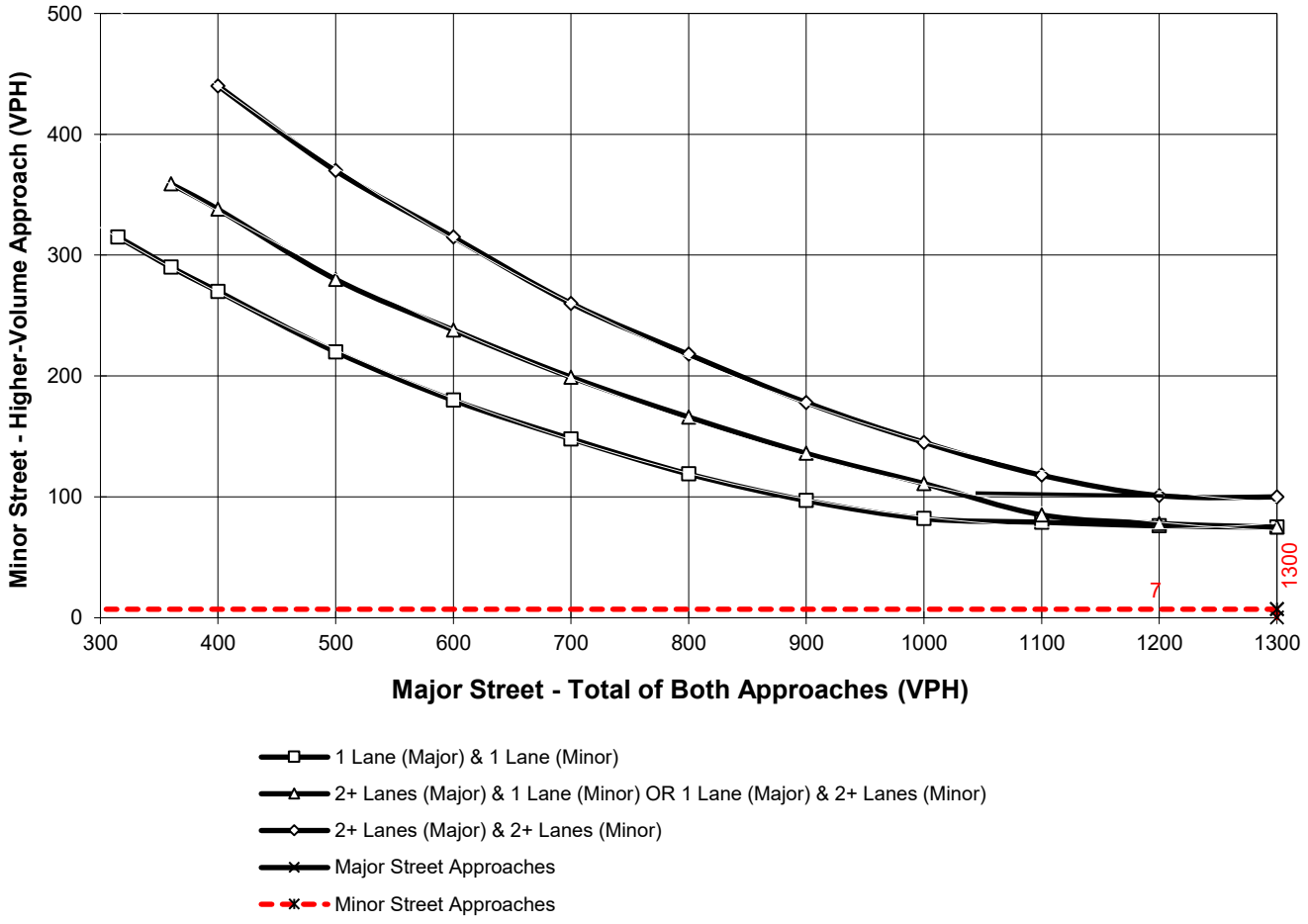
(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **Existing (2019) Conditions - Weekday PM Peak Hour**

Major Street Name = **US Highway 395** Total of Both Approaches (VPH) = **2395**
Number of Approach Lanes Major Street = **1**

Minor Street Name = **Yucca Terrace Drive** High Volume Approach (VPH) = **7**
Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold for a minor-street approach with one lane

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

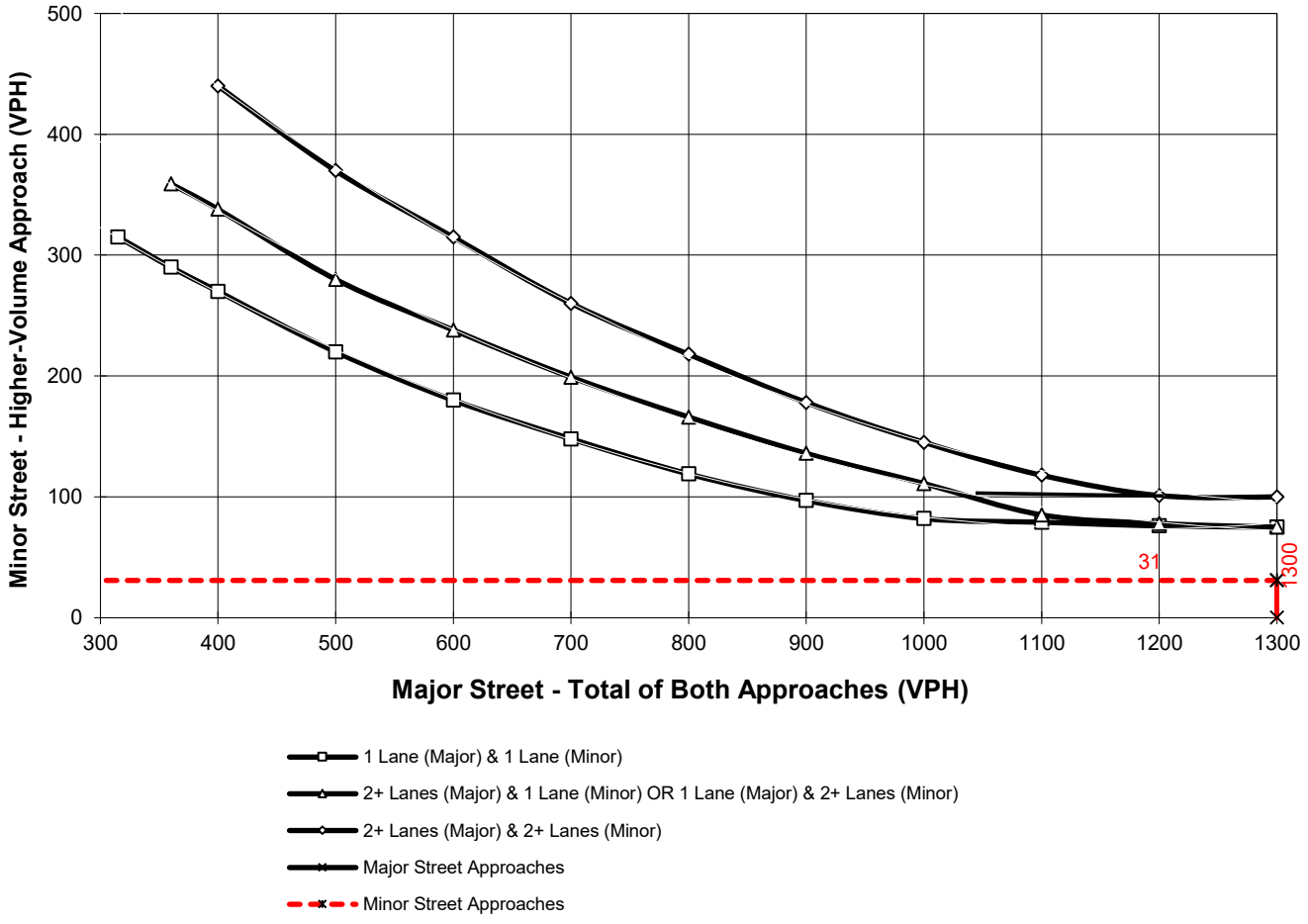
(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **Existing (2019) Conditions - Weekday PM Peak Hour**

Major Street Name = **US Highway 395** Total of Both Approaches (VPH) = **2129**
Number of Approach Lanes Major Street = **2**

Minor Street Name = **Poplar Street** High Volume Approach (VPH) = **31**
Number of Approach Lanes Minor Street = **2**

SIGNAL WARRANT NOT SATISFIED



*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold for a minor-street approach with one lane

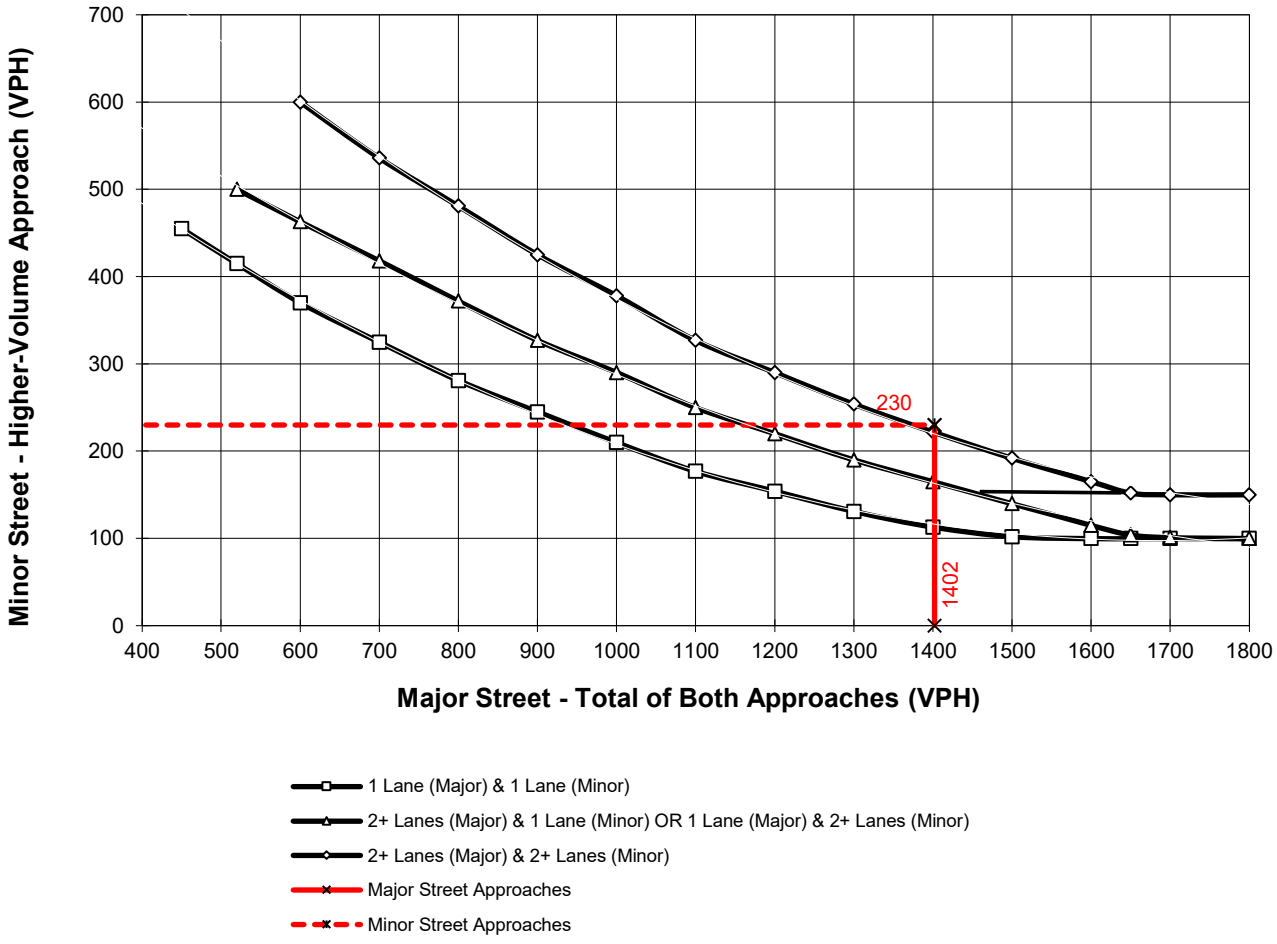
Figure 4C-3. Warrant 3, Peak Hour

Traffic Conditions = **Existing (2019) Conditions - Weekday AM Peak Hour**

Major Street Name = **Escondido Avenue**
Total of Both Approaches (VPH) = **1402**
Number of Approach Lanes on Major Street = **2**

Minor Street Name = **Sultana Street**
High Volume Approach (VPH) = **230**
Number of Approach Lanes On Minor Street = **1**

WARRANTED FOR A SIGNAL



*Note: 150 vph applies as the lower threshold for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold for a minor-street approach with one lane

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APPENDIX 3.4:

EXISTING (2019) CONDITIONS QUEUING ANALYSIS WORKSHEETS

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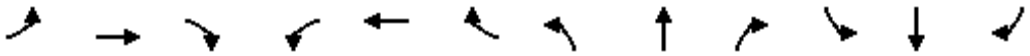
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	53	133	74	70	387	39	773	47	228	857	74
v/c Ratio	0.70	0.33	0.17	0.27	0.84	0.37	0.47	0.06	0.73	0.38	0.07
Control Delay	79.8	34.6	3.7	34.8	41.4	59.9	22.5	0.7	53.9	12.4	3.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	79.8	34.6	3.7	34.8	41.4	59.9	22.5	0.7	53.9	12.4	3.5
Queue Length 50th (ft)	32	75	0	39	169	25	171	0	143	149	0
Queue Length 95th (ft)	80	126	20	77	278	67	327	4	240	266	24
Internal Link Dist (ft)		549			898		7898			714	
Turn Bay Length (ft)	120		120	425		415		460	400		400
Base Capacity (vph)	143	761	707	479	747	111	1652	767	501	2227	1024
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.37	0.17	0.10	0.15	0.52	0.35	0.47	0.06	0.46	0.38	0.07

Intersection Summary



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	42	307	170	155	254	96	108	695	98	168	757	23
v/c Ratio	0.39	0.52	0.42	0.83	0.28	0.20	0.60	0.48	0.14	0.70	0.48	0.03
Control Delay	58.7	39.6	8.2	78.9	31.0	6.5	59.0	24.9	5.9	58.4	22.7	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	58.7	39.6	8.2	78.9	31.0	6.5	59.0	24.9	5.9	58.4	22.7	0.1
Queue Length 50th (ft)	25	92	0	92	71	0	62	155	0	95	161	0
Queue Length 95th (ft)	71	131	49	#266	104	34	#160	304	39	#232	317	0
Internal Link Dist (ft)		876			804			5210			7898	
Turn Bay Length (ft)	225		225	1000		250	220		280	230		160
Base Capacity (vph)	112	1421	738	187	1570	759	205	1450	707	280	1570	754
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.38	0.22	0.23	0.83	0.16	0.13	0.53	0.48	0.14	0.60	0.48	0.03

Intersection Summary

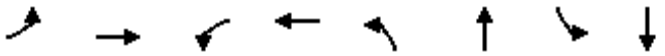
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	10	18	81	28	8	897	62	4	1146	9
v/c Ratio	0.09	0.06	0.43	0.07	0.07	0.37	0.06	0.04	0.47	0.01
Control Delay	46.2	16.1	47.3	11.5	46.1	13.0	1.5	46.0	14.4	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	46.2	16.1	47.3	11.5	46.1	13.0	1.5	46.0	14.4	0.0
Queue Length 50th (ft)	4	2	31	2	3	65	0	2	92	0
Queue Length 95th (ft)	26	19	#138	22	23	378	10	15	523	0
Internal Link Dist (ft)		810		782		6483			5210	
Turn Bay Length (ft)	200		250		500		350	430		300
Base Capacity (vph)	114	932	203	978	114	2428	1119	114	2428	1119
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.09	0.02	0.40	0.03	0.07	0.37	0.06	0.04	0.47	0.01

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	49	783	4	555	96	698	215	979
v/c Ratio	0.33	0.69	0.04	0.56	0.47	0.67	0.65	0.69
Control Delay	51.5	30.3	50.5	24.4	50.2	32.6	46.4	27.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	51.5	30.3	50.5	24.4	50.2	32.6	46.4	27.6
Queue Length 50th (ft)	25	183	2	107	49	171	108	236
Queue Length 95th (ft)	79	341	15	190	128	324	238	428
Internal Link Dist (ft)		1117		1265		3985		1763
Turn Bay Length (ft)	340		250		280		250	
Base Capacity (vph)	178	1713	111	1591	290	1472	513	1912
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.28	0.46	0.04	0.35	0.33	0.47	0.42	0.51

Intersection Summary

Intersection	
Int Delay, s/veh	0.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	5	9	780	13	24	993
Future Vol, veh/h	5	9	780	13	24	993
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	375	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	5	10	839	14	26	1068

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1966	427	0	0	853	0
Stage 1	846	-	-	-	-	-
Stage 2	1120	-	-	-	-	-
Critical Hdwy	6.6	6.9	-	-	4.1	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	63	582	-	-	795	-
Stage 1	386	-	-	-	-	-
Stage 2	315	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	61	582	-	-	795	-
Mov Cap-2 Maneuver	61	-	-	-	-	-
Stage 1	386	-	-	-	-	-
Stage 2	305	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	32.1	0	0.2
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	61	582	795	-
HCM Lane V/C Ratio	-	-	0.088	0.017	0.032	-
HCM Control Delay (s)	-	-	69.6	11.3	9.7	-
HCM Lane LOS	-	-	F	B	A	-
HCM 95th %tile Q(veh)	-	-	0.3	0.1	0.1	-



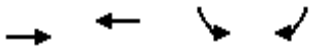
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	26	89	179	2	45	25	787	110	22	966	79
v/c Ratio	0.10	0.24	0.73	0.01	0.13	0.22	0.34	0.10	0.20	0.42	0.07
Control Delay	33.4	9.4	54.8	32.0	3.7	50.5	9.9	2.6	50.8	10.9	3.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	33.4	9.4	54.8	32.0	3.7	50.5	9.9	2.6	50.8	10.9	3.0
Queue Length 50th (ft)	12	0	95	1	0	14	87	0	12	114	0
Queue Length 95th (ft)	38	40	187	8	13	45	210	25	41	275	22
Internal Link Dist (ft)		773		663			859			1974	
Turn Bay Length (ft)	50		400		400	190			225		225
Base Capacity (vph)	555	679	512	733	659	154	2323	1056	135	2314	1063
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.05	0.13	0.35	0.00	0.07	0.16	0.34	0.10	0.16	0.42	0.07

Intersection Summary



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	28	36	100	13	112	9	780	64	110	1093	36
v/c Ratio	0.11	0.10	0.39	0.04	0.29	0.09	0.38	0.07	0.53	0.43	0.03
Control Delay	29.5	27.4	35.4	28.1	7.6	48.4	14.2	2.1	48.2	8.7	1.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	29.5	27.4	35.4	28.1	7.6	48.4	14.2	2.1	48.2	8.7	1.9
Queue Length 50th (ft)	13	15	48	6	0	4	98	0	53	76	0
Queue Length 95th (ft)	35	40	96	21	39	24	296	14	138	371	10
Internal Link Dist (ft)		1110		807			892			859	
Turn Bay Length (ft)	100		65		65	190			195		230
Base Capacity (vph)	698	921	684	932	839	102	2032	949	350	2562	1162
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.04	0.04	0.15	0.01	0.13	0.09	0.38	0.07	0.31	0.43	0.03

Intersection Summary



Lane Group	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	1034	746	298	182
v/c Ratio	0.44	0.32	0.32	0.32
Control Delay	6.9	6.3	11.3	4.3
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	6.9	6.3	11.3	4.3
Queue Length 50th (ft)	38	26	20	0
Queue Length 95th (ft)	67	47	48	30
Internal Link Dist (ft)	480	822		
Turn Bay Length (ft)			1000	540
Base Capacity (vph)	5187	5187	3502	1615
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.20	0.14	0.09	0.11

Intersection Summary

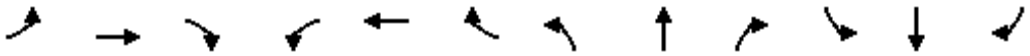


Lane Group	EBT	EBR	WBT	WBR	NBL	NBT	NBR
Lane Group Flow (vph)	980	292	1215	462	80	195	197
v/c Ratio	0.35	0.29	0.43	0.42	0.20	0.44	0.45
Control Delay	5.7	1.7	6.1	2.0	16.5	10.2	10.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	5.7	1.7	6.1	2.0	16.5	10.2	10.4
Queue Length 50th (ft)	35	0	47	0	15	12	12
Queue Length 95th (ft)	78	24	100	30	51	65	66
Internal Link Dist (ft)	822		339			457	
Turn Bay Length (ft)		250			1000		615
Base Capacity (vph)	5187	1615	5187	1615	1584	1370	1362
Starvation Cap Reductn	0	0	156	30	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.19	0.18	0.24	0.29	0.05	0.14	0.14

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	52	73	40	46	325	67	882	85	223	869	90
v/c Ratio	0.67	0.19	0.10	0.17	0.79	0.46	0.51	0.10	0.74	0.41	0.09
Control Delay	75.8	34.1	0.5	34.2	42.3	58.1	22.0	4.8	55.9	14.2	3.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	75.8	34.1	0.5	34.2	42.3	58.1	22.0	4.8	55.9	14.2	3.5
Queue Length 50th (ft)	32	40	0	25	151	42	193	0	138	153	0
Queue Length 95th (ft)	77	78	0	55	249	99	376	31	242	292	28
Internal Link Dist (ft)		549			898		7898			714	
Turn Bay Length (ft)	120		120	425		415		460	400		400
Base Capacity (vph)	147	713	669	506	690	183	1728	820	458	2126	988
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.35	0.10	0.06	0.09	0.47	0.37	0.51	0.10	0.49	0.41	0.09

Intersection Summary



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	57	327	140	112	322	137	185	828	213	158	773	37
v/c Ratio	0.52	0.54	0.36	0.86	0.44	0.32	0.72	0.53	0.26	0.69	0.51	0.05
Control Delay	65.2	39.8	8.2	96.3	36.4	7.5	57.4	23.6	4.1	59.1	24.7	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	65.2	39.8	8.2	96.3	36.4	7.5	57.4	23.6	4.1	59.1	24.7	0.1
Queue Length 50th (ft)	34	99	0	68	96	0	106	182	0	90	169	0
Queue Length 95th (ft)	#109	139	46	#215	135	44	#228	353	52	#224	344	0
Internal Link Dist (ft)		876			804			5210			7898	
Turn Bay Length (ft)	225		225	1000		250	220		280	230		160
Base Capacity (vph)	112	1421	720	130	1458	725	336	1570	823	261	1511	720
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.51	0.23	0.19	0.86	0.22	0.19	0.55	0.53	0.26	0.61	0.51	0.05

Intersection Summary

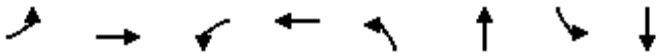
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	6	3	46	11	9	1252	89	12	958	12
v/c Ratio	0.05	0.01	0.29	0.04	0.08	0.45	0.07	0.11	0.34	0.01
Control Delay	45.8	0.0	45.8	16.0	46.2	11.6	3.3	46.5	10.3	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	45.8	0.0	45.8	16.0	46.2	11.6	3.3	46.5	10.3	0.0
Queue Length 50th (ft)	3	0	22	1	5	105	0	6	71	0
Queue Length 95th (ft)	19	0	#94	14	25	#570	28	30	394	0
Internal Link Dist (ft)		810		782		6483			5210	
Turn Bay Length (ft)	200		250		500		350	430		300
Base Capacity (vph)	114	951	161	914	114	2779	1266	114	2779	1266
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.05	0.00	0.29	0.01	0.08	0.45	0.07	0.11	0.34	0.01

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	46	637	9	938	171	1096	197	746
v/c Ratio	0.55	0.51	0.11	0.86	0.69	0.89	0.79	0.60
Control Delay	80.1	29.7	58.3	43.6	62.3	45.5	70.5	33.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	80.1	29.7	58.3	43.6	62.3	45.5	70.5	33.9
Queue Length 50th (ft)	36	186	7	338	128	423	148	248
Queue Length 95th (ft)	#94	272	25	424	198	#555	#263	332
Internal Link Dist (ft)		1117		1265		3985		1763
Turn Bay Length (ft)	340		250		280		250	
Base Capacity (vph)	84	1397	84	1260	337	1346	286	1304
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.55	0.46	0.11	0.74	0.51	0.81	0.69	0.57

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Intersection	
Int Delay, s/veh	0.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	7	24	1165	26	11	840
Future Vol, veh/h	7	24	1165	26	11	840
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	375	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	98	98	98	98	98	98
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	7	24	1189	27	11	857

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	2082	608	0	0	1216	0
Stage 1	1203	-	-	-	-	-
Stage 2	879	-	-	-	-	-
Critical Hdwy	6.6	6.9	-	-	4.1	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	53	444	-	-	581	-
Stage 1	251	-	-	-	-	-
Stage 2	409	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	52	444	-	-	581	-
Mov Cap-2 Maneuver	52	-	-	-	-	-
Stage 1	251	-	-	-	-	-
Stage 2	401	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	29.7	0	0.1
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	52	444	581	-
HCM Lane V/C Ratio	-	-	0.137	0.055	0.019	-
HCM Control Delay (s)	-	-	85	13.6	11.3	-
HCM Lane LOS	-	-	F	B	B	-
HCM 95th %tile Q(veh)	-	-	0.4	0.2	0.1	-

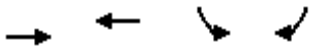


Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	36	61	130	4	33	34	1148	150	34	766	58
v/c Ratio	0.18	0.22	0.67	0.01	0.11	0.31	0.47	0.13	0.31	0.31	0.05
Control Delay	42.1	12.7	60.5	39.0	1.0	56.8	10.3	1.9	56.8	8.7	1.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	42.1	12.7	60.5	39.0	1.0	56.8	10.3	1.9	56.8	8.7	1.6
Queue Length 50th (ft)	22	1	86	2	0	23	196	0	23	113	0
Queue Length 95th (ft)	53	38	153	12	3	58	308	26	58	184	12
Internal Link Dist (ft)		773		663			859			1974	
Turn Bay Length (ft)	50		400		400	190			225		225
Base Capacity (vph)	364	456	346	482	464	141	2434	1114	141	2434	1112
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.10	0.13	0.38	0.01	0.07	0.24	0.47	0.13	0.24	0.31	0.05

Intersection Summary

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	55	58	84	20	118	26	1175	90	70	874	22
v/c Ratio	0.23	0.18	0.36	0.06	0.32	0.24	0.51	0.09	0.45	0.34	0.02
Control Delay	33.9	27.9	37.1	30.5	7.9	51.8	13.5	3.4	52.5	8.7	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	33.9	27.9	37.1	30.5	7.9	51.8	13.5	3.4	52.5	8.7	0.0
Queue Length 50th (ft)	28	24	43	10	0	14	161	0	36	54	0
Queue Length 95th (ft)	60	55	84	28	40	51	457	29	101	283	1
Internal Link Dist (ft)		1110		807			892			859	
Turn Bay Length (ft)	100		65		65	190			195		230
Base Capacity (vph)	633	834	612	851	779	115	2284	1055	212	2539	1152
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.09	0.07	0.14	0.02	0.15	0.23	0.51	0.09	0.33	0.34	0.02

Intersection Summary



Lane Group	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	1263	1163	554	405
v/c Ratio	0.57	0.52	0.40	0.62
Control Delay	13.6	13.2	13.2	17.8
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	13.6	13.2	13.2	17.8
Queue Length 50th (ft)	100	90	60	89
Queue Length 95th (ft)	201	181	122	211
Internal Link Dist (ft)	480	822		
Turn Bay Length (ft)			1000	540
Base Capacity (vph)	4649	4649	3315	1530
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.27	0.25	0.17	0.26

Intersection Summary



Lane Group	EBT	EBR	WBT	WBR	NBL	NBT	NBR
Lane Group Flow (vph)	1524	204	1347	408	185	412	412
v/c Ratio	0.63	0.24	0.56	0.42	0.25	0.65	0.65
Control Delay	18.4	3.3	17.3	3.2	17.6	24.6	24.6
Queue Delay	0.0	0.0	0.0	0.1	0.0	0.0	0.0
Total Delay	18.4	3.3	17.3	3.3	17.6	24.6	24.6
Queue Length 50th (ft)	187	0	157	0	55	150	150
Queue Length 95th (ft)	368	41	313	54	133	342	342
Internal Link Dist (ft)	822		339			457	
Turn Bay Length (ft)		250			1000		615
Base Capacity (vph)	3841	1248	3841	1301	1336	1139	1139
Starvation Cap Reductn	0	0	553	142	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.40	0.16	0.41	0.35	0.14	0.36	0.36

Intersection Summary

APPENDIX 3.5:

EXISTING (2019) CONDITIONS FREEWAY FACILITY ANALYSIS WORKSHEETS

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HCS7 Freeway Facilities Report

Project Information

Analyst	CM	Date	1/23/2020
Agency	Urban Crossroads, Inc.	Analysis Year	Existing (2019)
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	Hesperia Commerce Center II (JN 12778) - I-15 SB at Main		

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	7
Total Time Periods	1	Time Period Duration, min	15

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	I-15 SB, North of Main St.	16360	3
2	Diverge	Diverge	I-15 SB, Off-Ramp at Main St.	1500	3
3	Basic	Basic	I-15 SB, Between Off and Loop On-Ramp	975	3
4	Merge	Merge	I-15 SB, Loop On-Ramp at Main St.	1500	3
5	Basic	Basic	I-15 SB, Between Loop On-Ramp and On-Ramp	1415	3
6	Merge	Merge	I-15 SB, On-Ramp at Main St.	1500	3
7	Basic	Basic	I-15 SB, South of Main St.	5900	3

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.962	4100	7146	0.57	68.1	20.1	C

Segment 2: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.962	0.885	4100	481	7200	2100	0.57	0.23	64.6	60.5	21.2	27.2	C

Segment 3: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.971	3623	7146	0.51	68.2	17.7	B

Segment 4: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.971	0.971	4172	549	7200	1900	0.58	0.29	62.1	59.9	22.4	24.0	C

Segment 5: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.971	4172	7146	0.58	68.0	20.5	C

Segment 6: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.971	0.917	4272	100	7200	2100	0.59	0.05	62.7	60.8	22.7	22.4	C

Segment 7: Basic

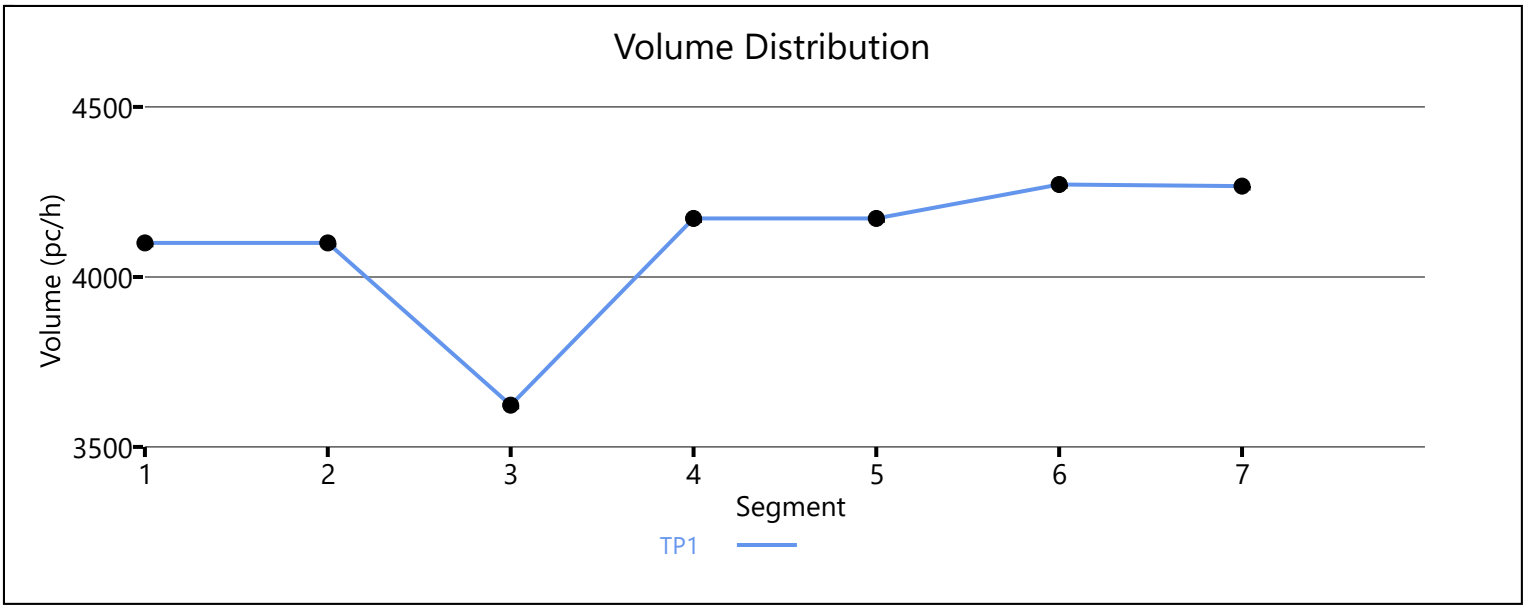
Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.971	4267	7146	0.60	67.9	20.9	C

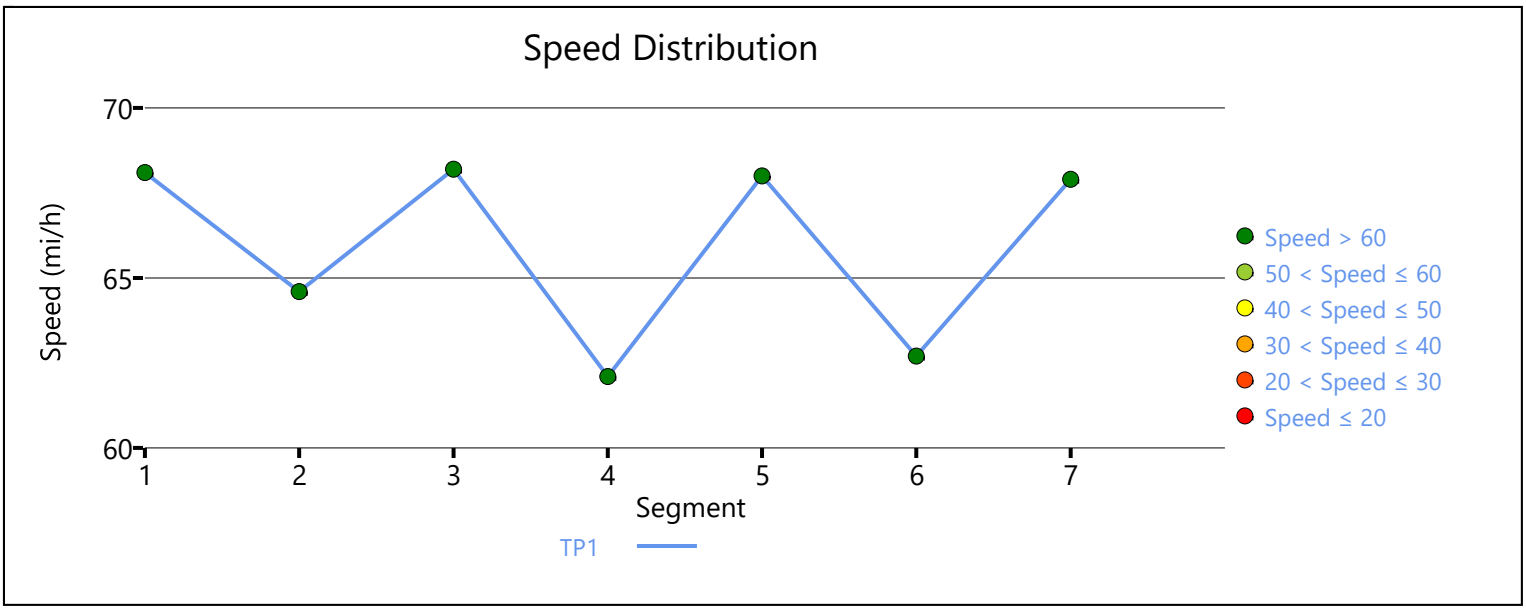
Facility Time Period Results

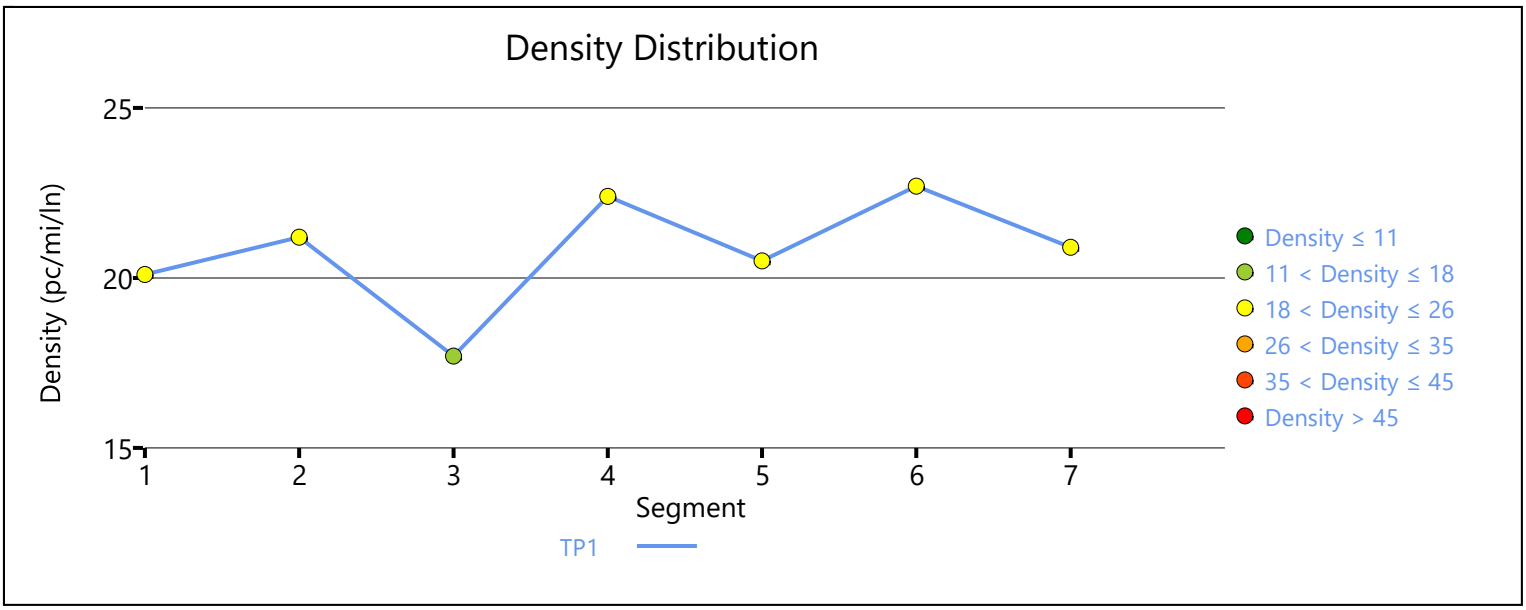
T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	67.2	20.5	19.8	4.9	C

Facility Overall Results

Space Mean Speed, mi/h	67.2	Density, veh/mi/ln	19.8
Average Travel Time, min	4.9	Density, pc/mi/ln	20.5







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HCS7 Freeway Facilities Report

Project Information

Analyst	CP	Date	1/23/2020
Agency	Urban Crossroads, Inc.	Analysis Year	Existing (2019)
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	Hesperia Commerce Center II (JN:12778) - I-15 Southbound at US Highway 395		

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	3
Total Time Periods	1	Time Period Duration, min	15

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	North of US 395	4200	3
2	Merge	Basic	On-Ramp at US 395	1500	4
3	Basic	Basic	South of US 395	4200	4

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.962	3514	7179	0.49	69.3	16.9	B

Segment 2: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.962	0.840	4666	1152	9600	2100	0.37	0.55	70.0	-	12.5	-	B

Segment 3: Basic

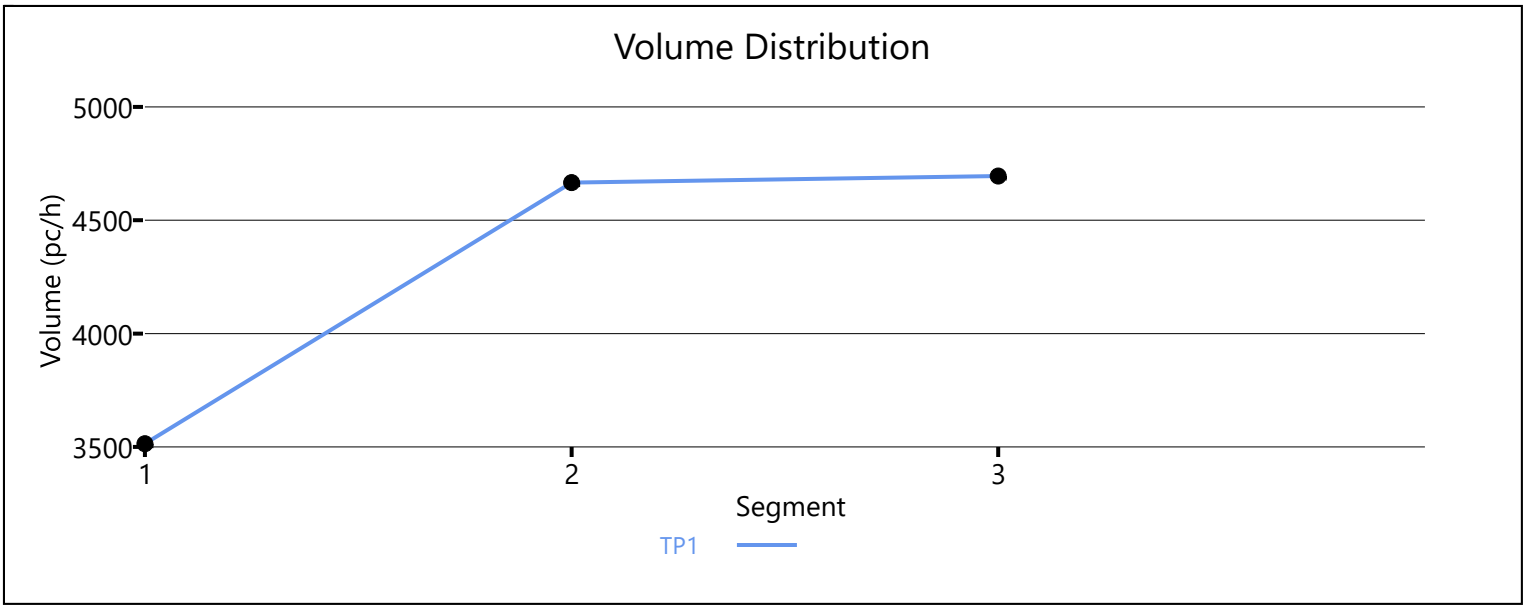
Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.926	4695	9572	0.49	69.3	16.9	B

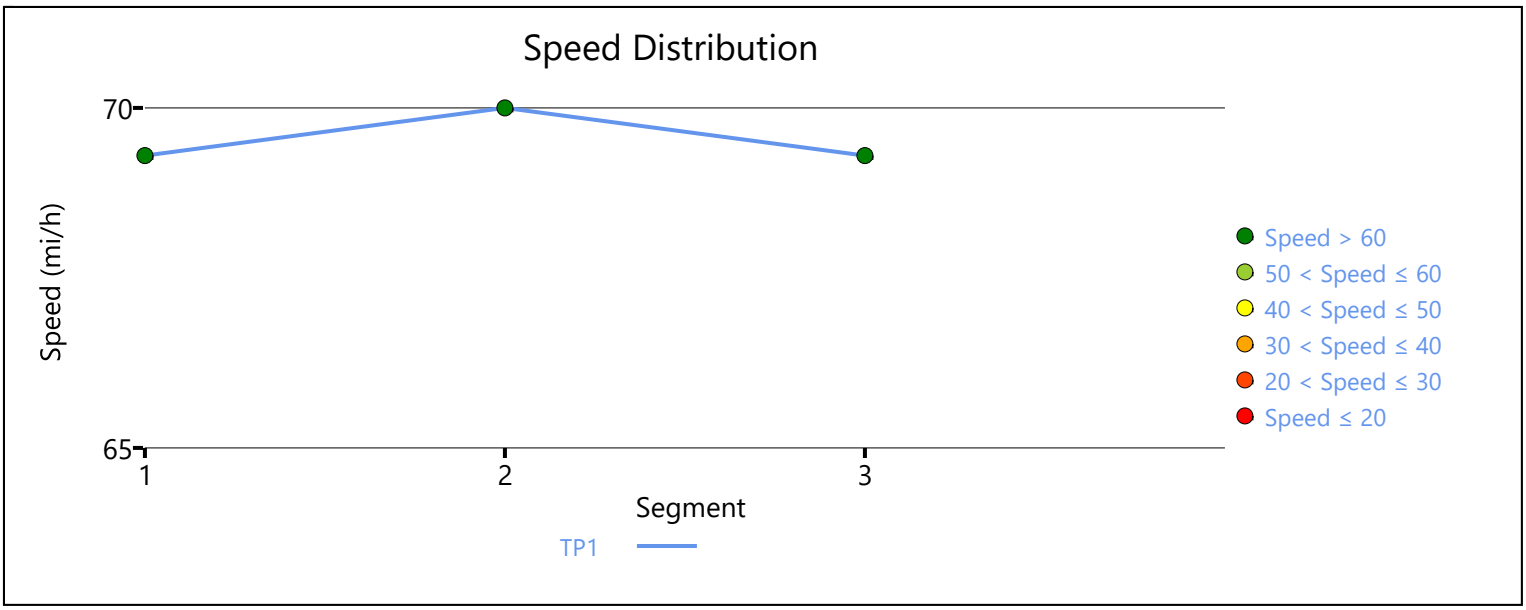
Facility Time Period Results

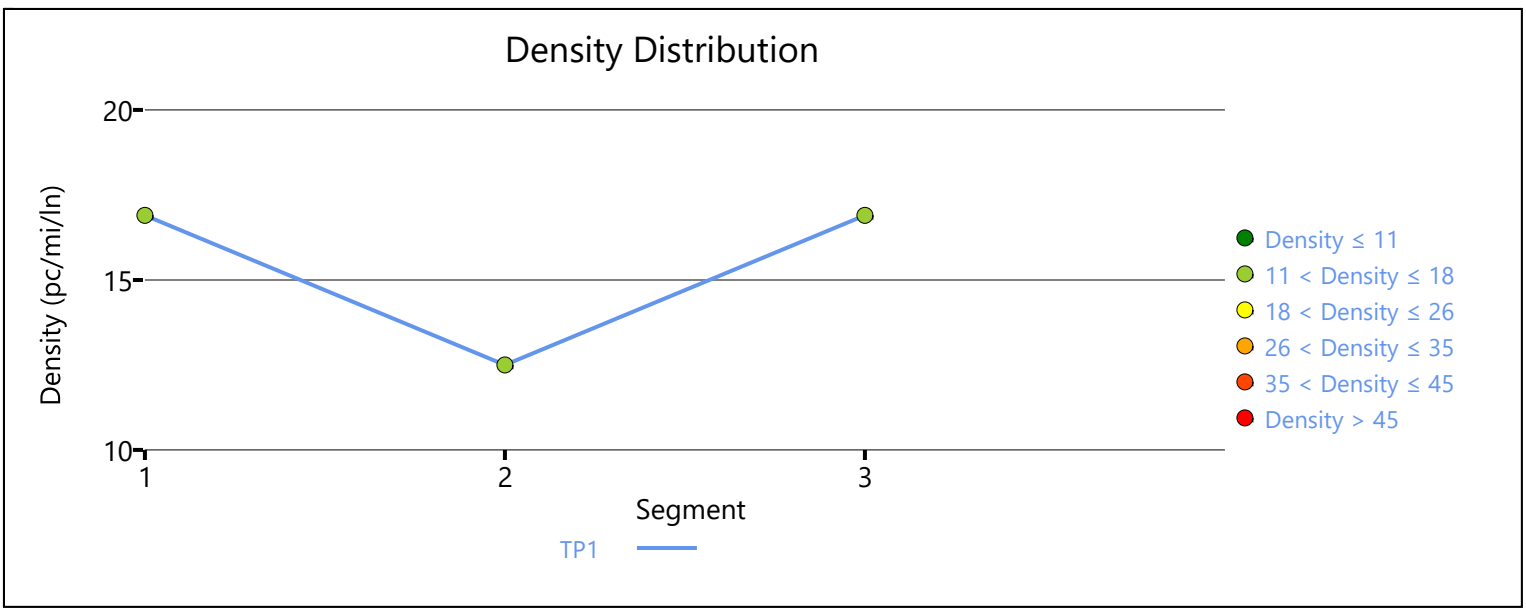
T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	69.4	16.2	15.2	1.6	B

Facility Overall Results

Space Mean Speed, mi/h	69.4	Density, veh/mi/ln	15.2
Average Travel Time, min	1.6	Density, pc/mi/ln	16.2







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HCS7 Freeway Facilities Report

Project Information

Analyst	CM	Date	1/23/2020
Agency	Urban Crossroads, Inc.	Analysis Year	Existing (2019)
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	Hesperia Commerce Center II (JN 12778) - I-15 NB at Main		

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	7
Total Time Periods	1	Time Period Duration, min	15

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	I-15 NB, South of Main St.	6140	3
2	Diverge	Diverge	I-15 NB, Off-Ramp at Main St.	1500	3
3	Basic	Basic	I-15 NB, Between Off-Ramp and Loop On-Ramp	1125	3
4	Merge	Merge	I-15 NB, Loop On-Ramp at Main St.	1500	3
5	Basic	Basic	I-15 NB, Between Loop On-Ramp and On-Ramp	1215	3
6	Merge	Merge	I-15 NB, On-Ramp at Main St.	1500	3
7	Basic	Basic	I-15 NB, North of Main St.	16370	3

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.971	3419	7146	0.48	68.2	16.7	B

Segment 2: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.971	0.909	3419	506	7200	2100	0.47	0.24	64.5	60.4	17.7	23.6	C

Segment 3: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.980	2918	7146	0.41	68.2	14.3	B

Segment 4: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.980	0.962	3228	310	7200	1900	0.45	0.16	63.2	60.9	17.0	18.2	B

Segment 5: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.971	3252	7146	0.46	68.2	15.9	B

Segment 6: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.971	0.971	3746	494	7200	2100	0.52	0.24	62.9	60.8	19.9	21.6	C

Segment 7: Basic

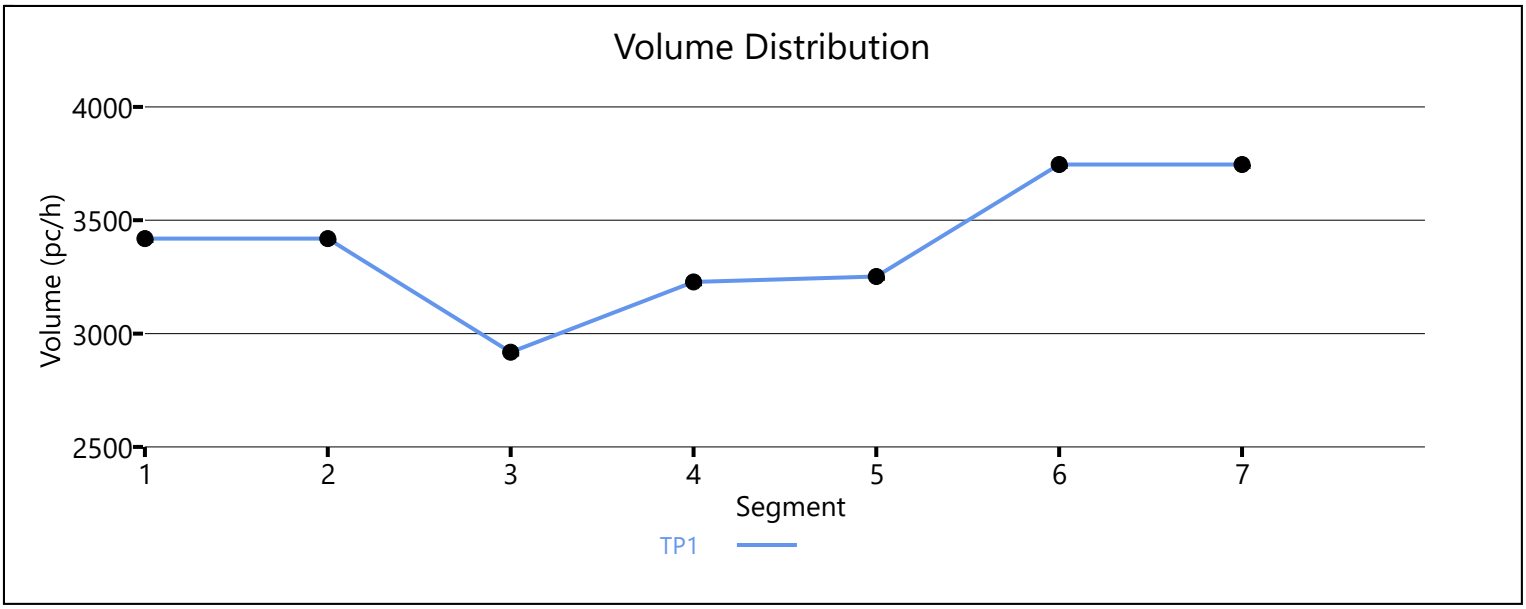
Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.971	3746	7146	0.52	68.2	18.3	C

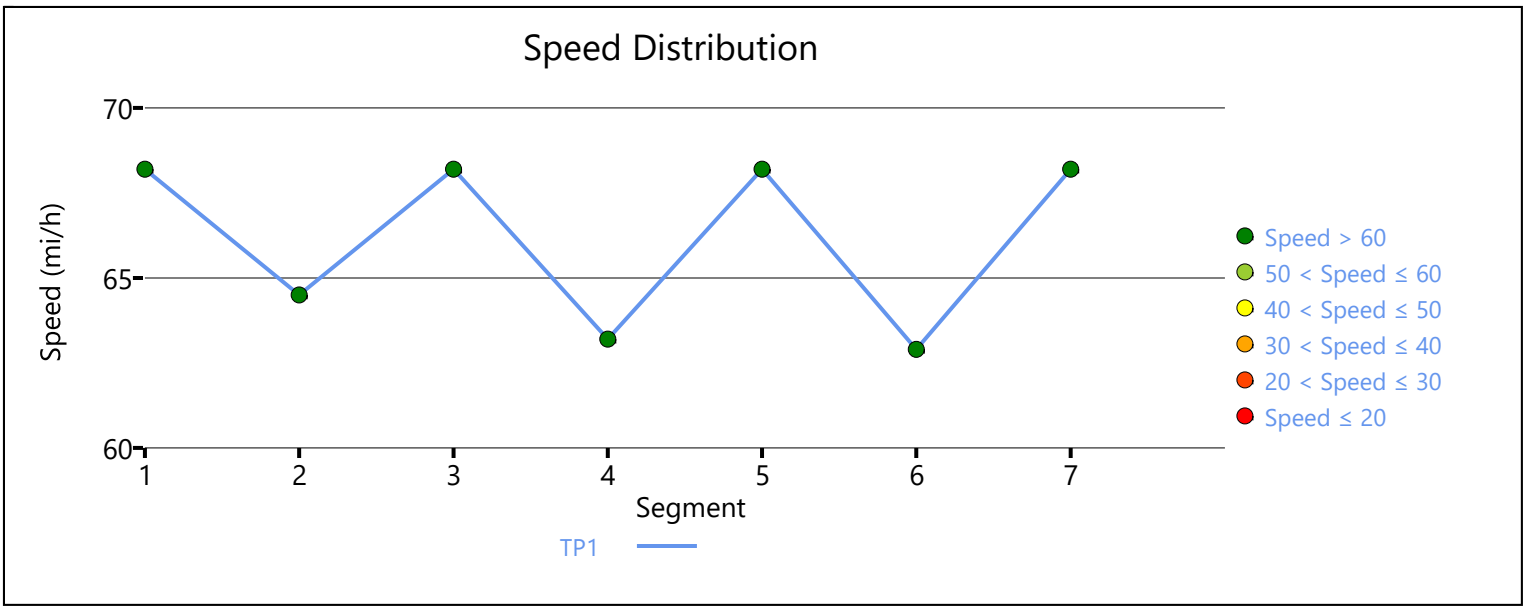
Facility Time Period Results

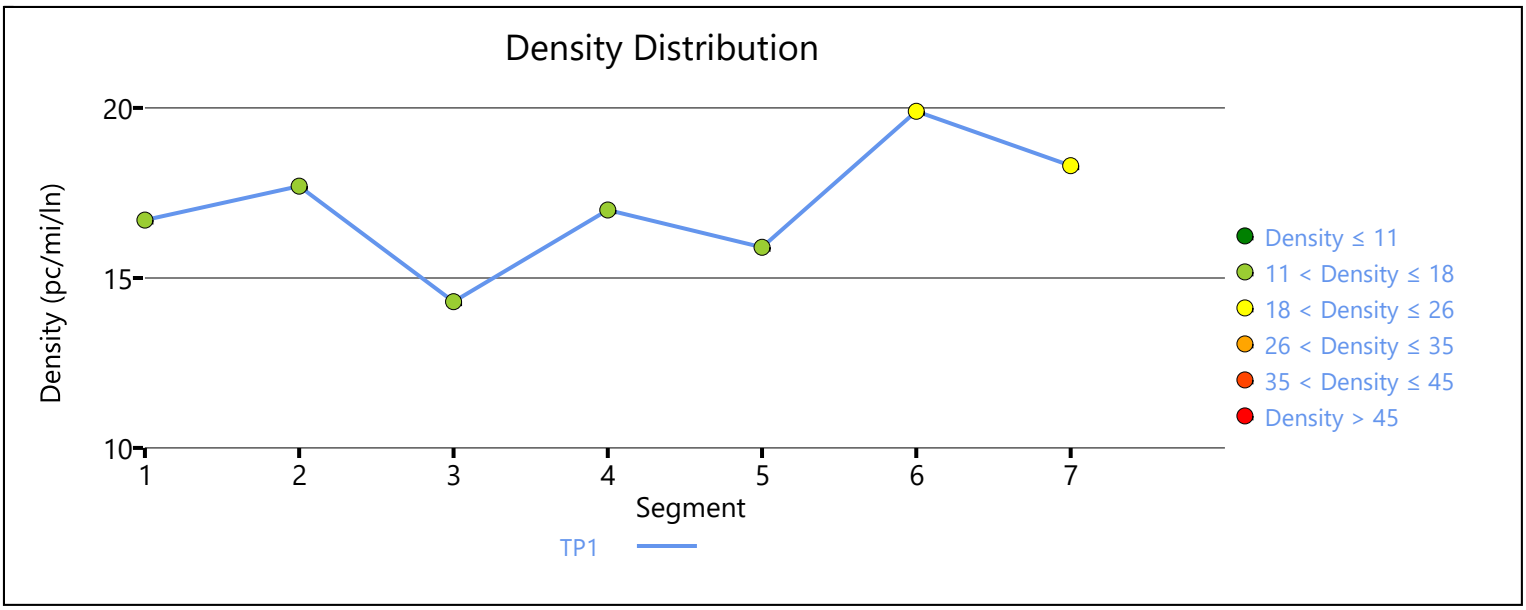
T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	67.5	17.7	17.2	4.9	B

Facility Overall Results

Space Mean Speed, mi/h	67.5	Density, veh/mi/ln	17.2
Average Travel Time, min	4.9	Density, pc/mi/ln	17.7







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HCS7 Freeway Facilities Report

Project Information

Analyst	CP	Date	1/23/2020
Agency	Urban Crossroads, Inc.	Analysis Year	Existing (2019)
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	Hesperia Commerce Center II (JN:12778) - I-15 NB at US 395		

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	3
Total Time Periods	1	Time Period Duration, min	15

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	South of US 395	2000	4
2	Diverge	Diverge	Off-Ramp at US 395	1500	4
3	Basic	Basic	North of US 395	6350	4

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.935	3980	9572	0.42	69.3	14.4	B

Segment 2: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.935	0.813	3980	832	9600	2100	0.41	0.40	66.2	59.6	15.0	18.0	B

Segment 3: Basic

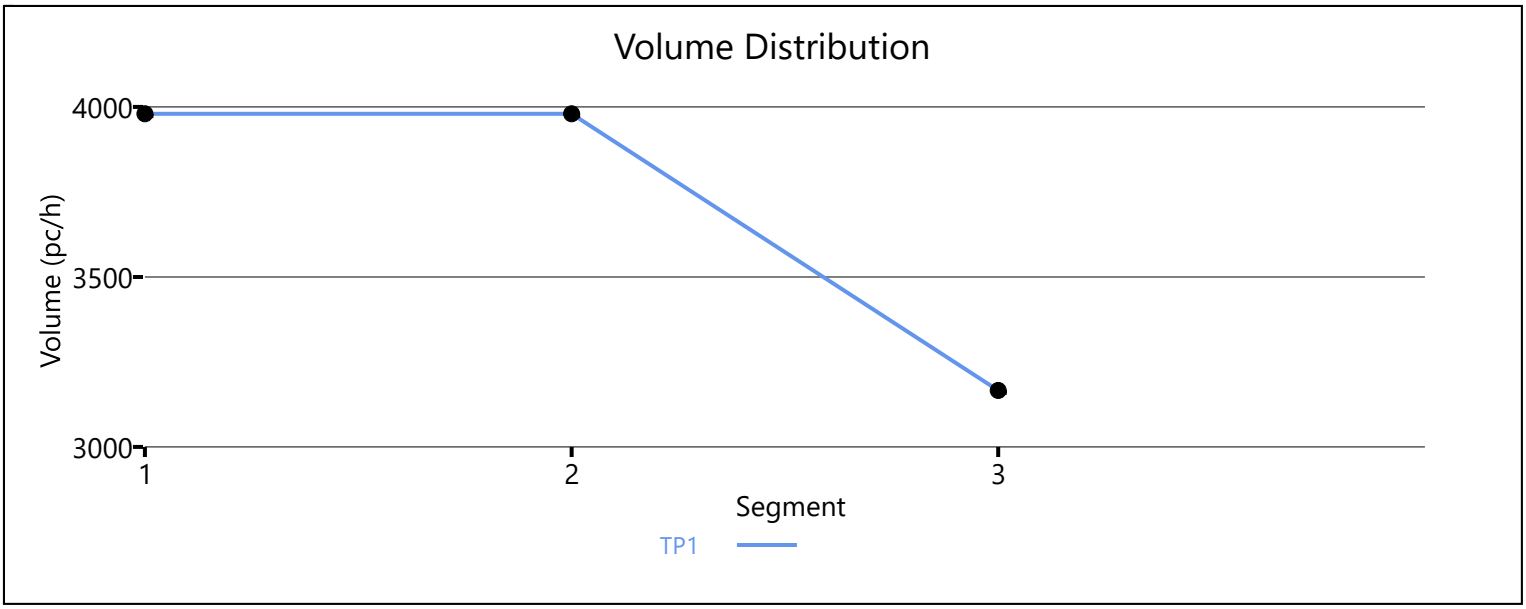
Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.962	3166	9572	0.33	69.3	11.4	B

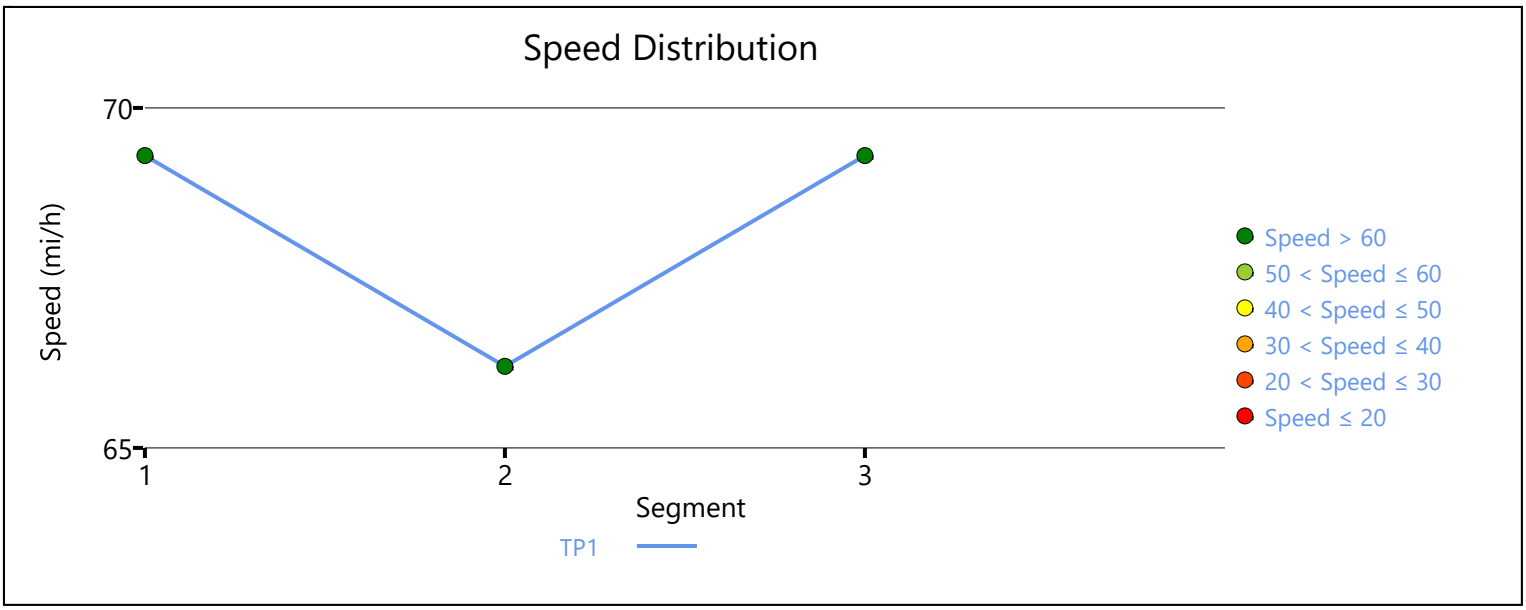
Facility Time Period Results

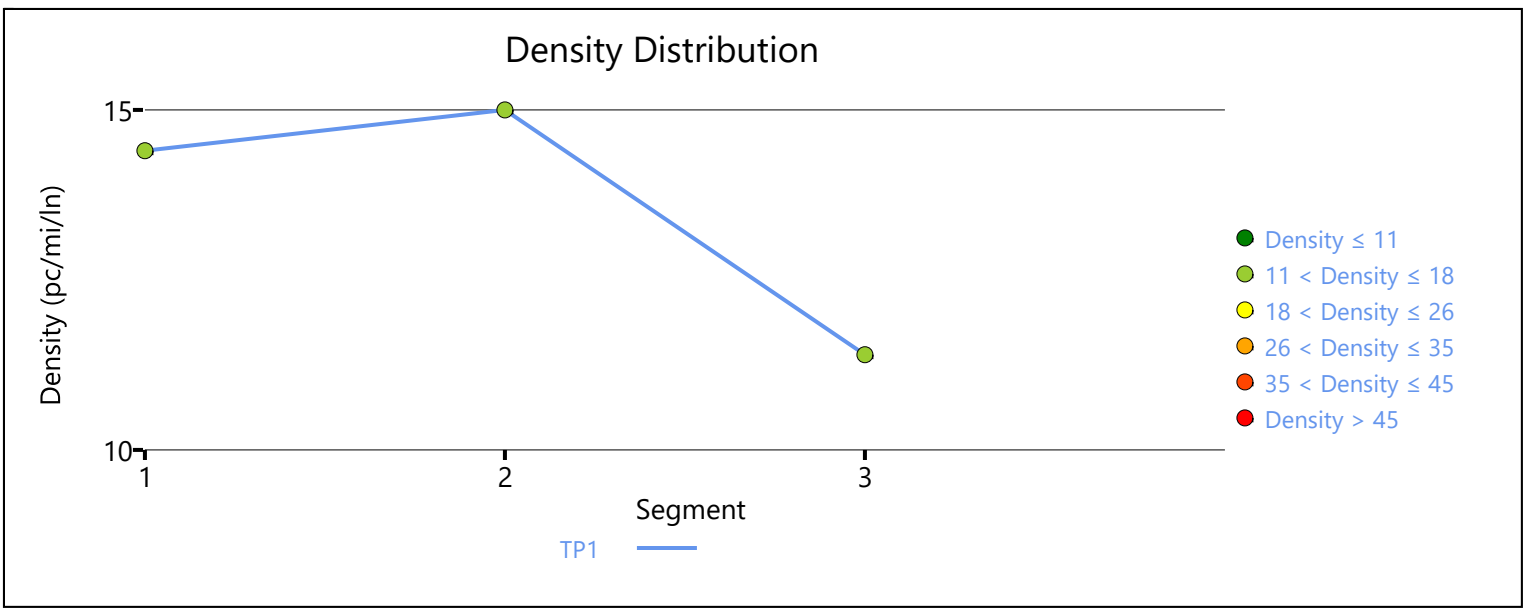
T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	68.7	12.6	12.0	1.6	B

Facility Overall Results

Space Mean Speed, mi/h	68.7	Density, veh/mi/ln	12.0
Average Travel Time, min	1.6	Density, pc/mi/ln	12.6







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HCS7 Freeway Facilities Report

Project Information

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Jurisdiction	Caltrans	Time Period Analyzed	PM Peak Hour
Project Description	Hesperia Commerce Center II (JN 12778) - I-15 SB at Main		

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	7
Total Time Periods	1	Time Period Duration, min	15

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	I-15 SB, North of Main St.	16360	3
2	Diverge	Diverge	I-15 SB, Off-Ramp at Main St.	1500	3
3	Basic	Basic	I-15 SB, Between Off and Loop On-Ramp	975	3
4	Merge	Merge	I-15 SB, Loop On-Ramp at Main St.	1500	3
5	Basic	Basic	I-15 SB, Between Loop On-Ramp and On-Ramp	1415	3
6	Merge	Merge	I-15 SB, On-Ramp at Main St.	1500	3
7	Basic	Basic	I-15 SB, South of Main St.	5900	3

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.962	4452	7146	0.62	67.6	22.0	C

Segment 2: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.962	0.971	4452	927	7200	2100	0.62	0.44	63.5	59.3	23.4	29.6	D

Segment 3: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.962	3517	7146	0.49	68.2	17.2	B

Segment 4: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.962	0.952	3870	353	7200	1900	0.54	0.19	62.5	60.3	20.6	22.0	C

Segment 5: Basic

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	1.00		0.962		3866		7146		0.54		68.2		18.9		C

Segment 6: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.962	0.901	3995	129	7200	2100	0.55	0.06	62.9	61.0	21.2	21.2	C

Segment 7: Basic

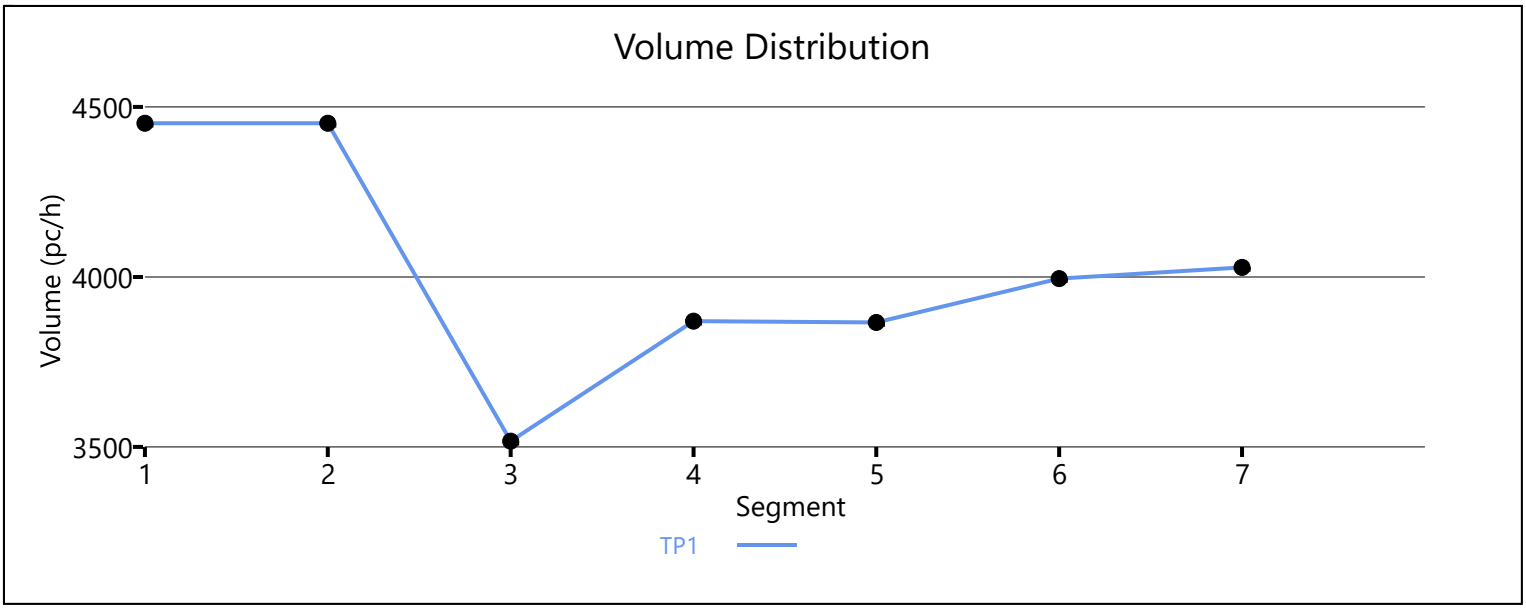
Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.952	4028	7146	0.56	68.1	19.7	C

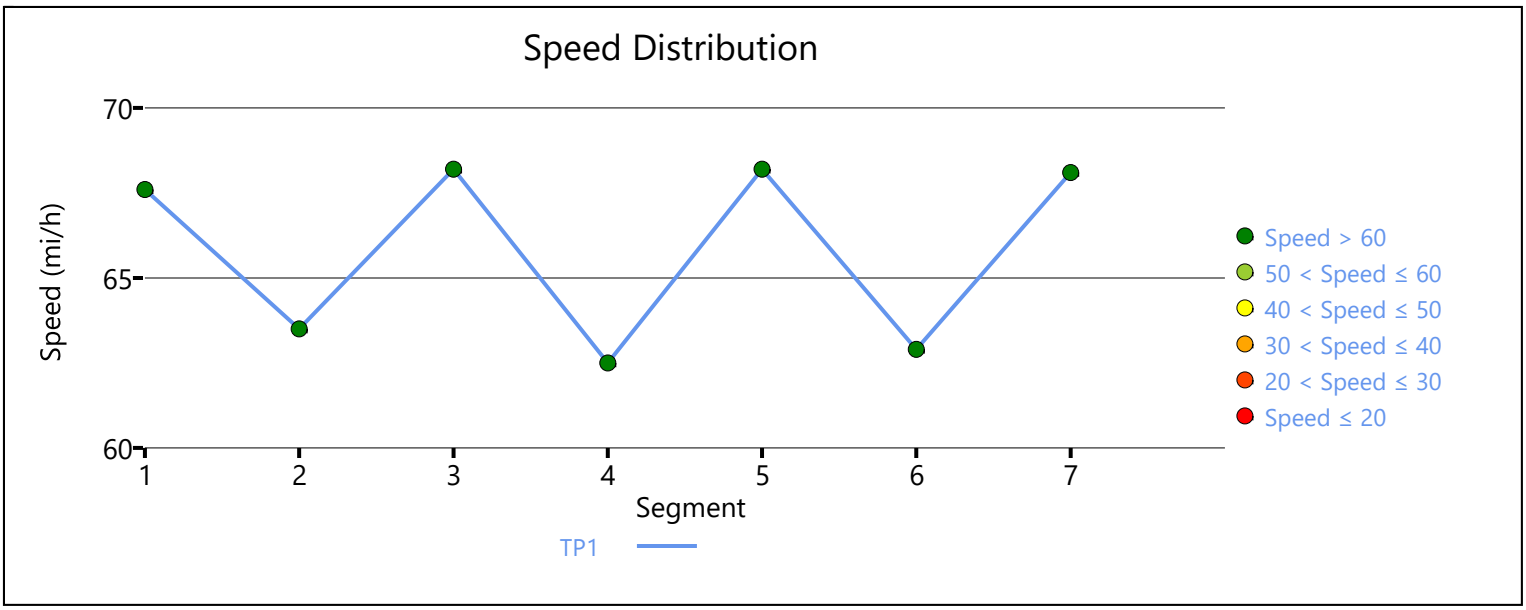
Facility Time Period Results

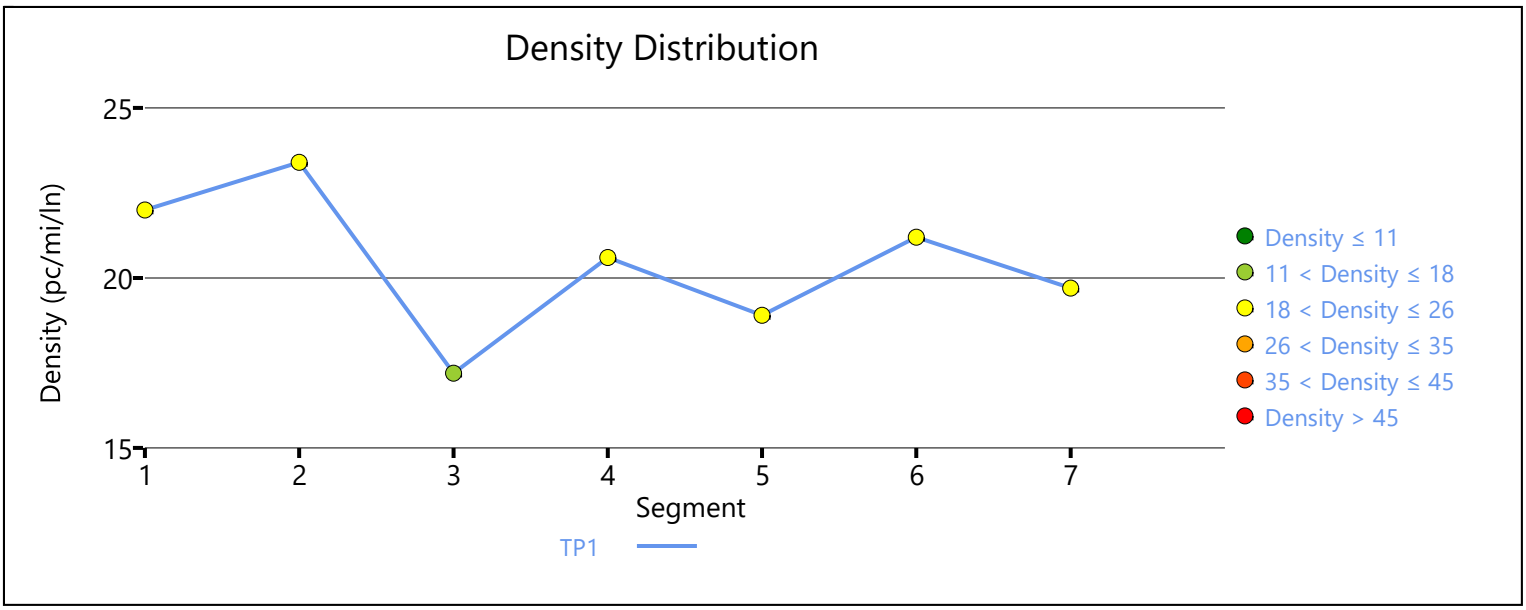
T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	67.0	21.2	20.4	4.9	C

Facility Overall Results

Space Mean Speed, mi/h	67.0	Density, veh/mi/ln	20.4
Average Travel Time, min	4.9	Density, pc/mi/ln	21.2







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HCS7 Freeway Facilities Report

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Project Description	Hesperia Commerce Center II (JN:12778) - I-15 Southbound at US Highway 395		

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	3
Total Time Periods	1	Time Period Duration, min	15

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	North of US 395	4200	3
2	Merge	Basic	On-Ramp at US 395	1500	4
3	Basic	Basic	South of US 395	4200	4

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.952	3650	7179	0.51	69.3	17.6	B

Segment 2: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.952	0.826	4596	946	9600	2100	0.38	0.45	70.0	-	13.0	-	B

Segment 3: Basic

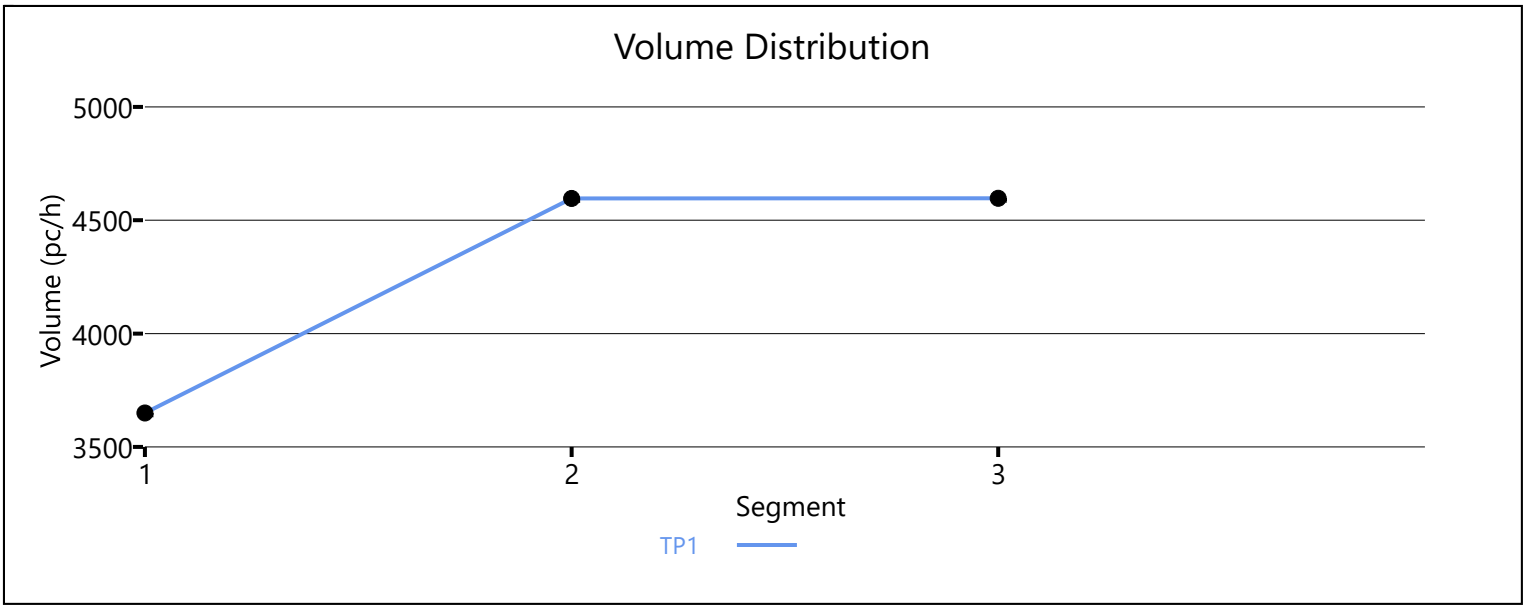
Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.926	4597	9572	0.48	69.3	16.6	B

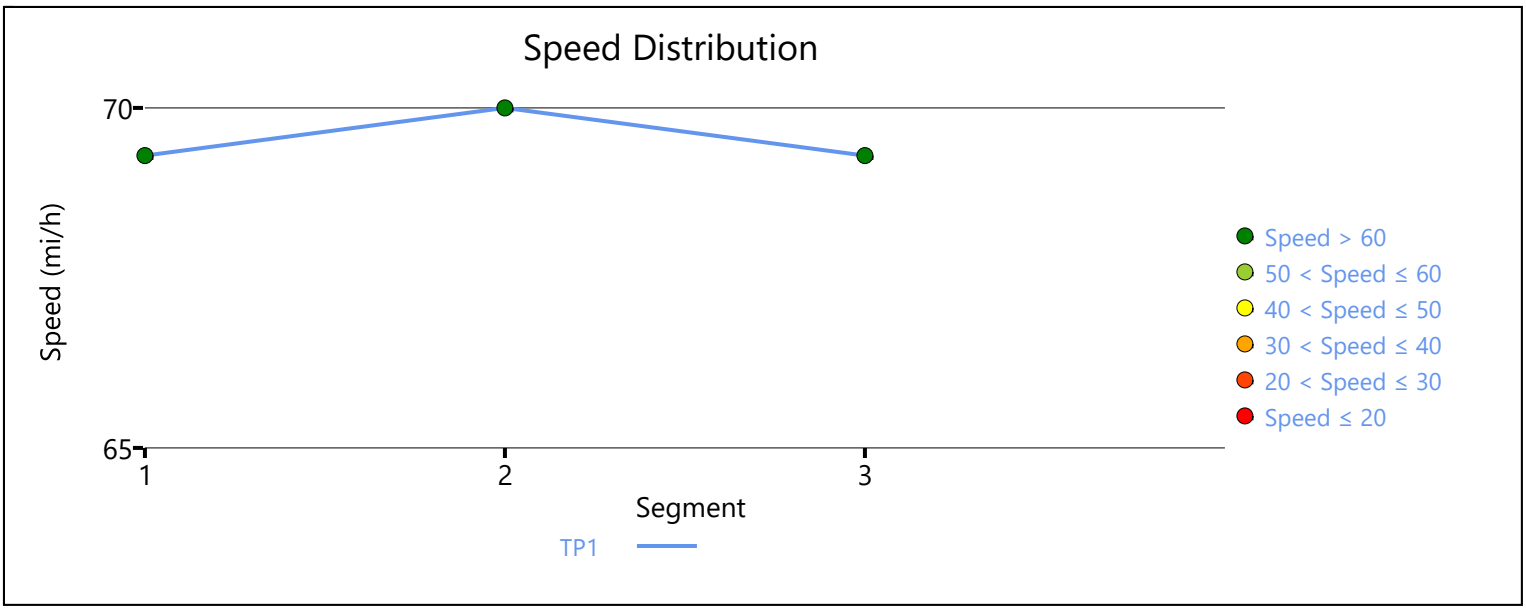
Facility Time Period Results

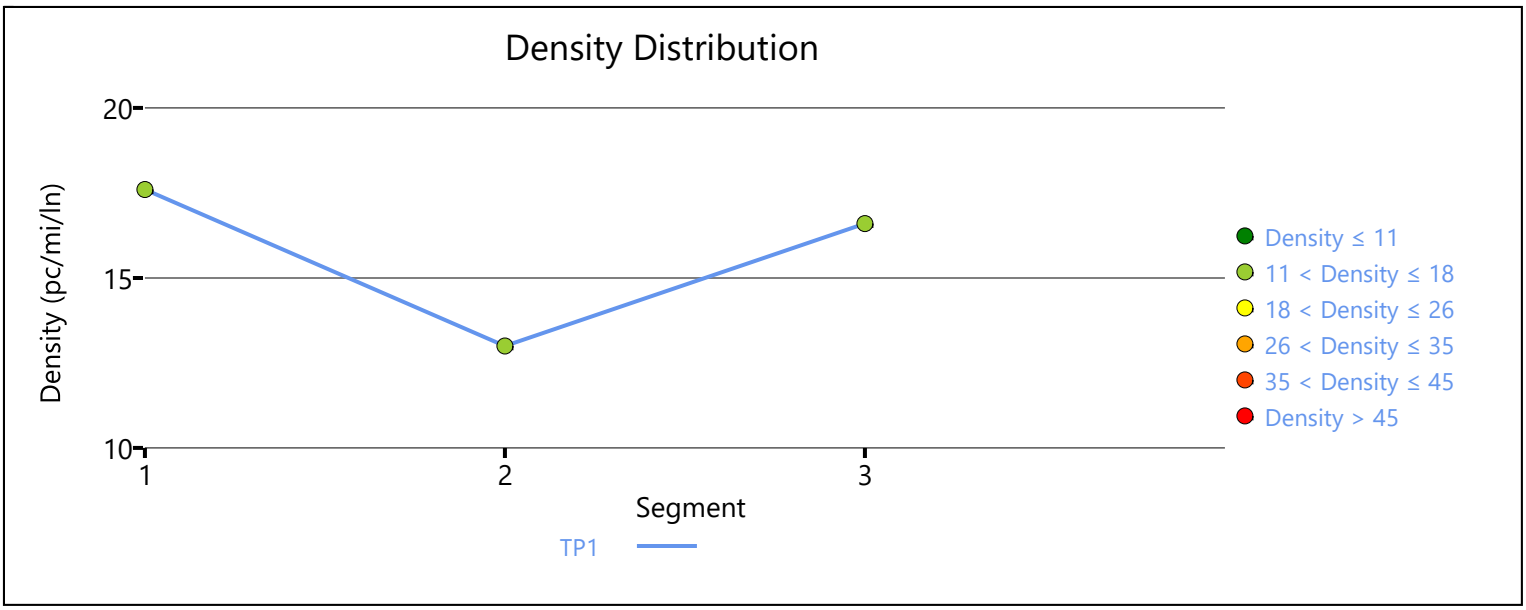
T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	69.4	16.4	15.4	1.6	B

Facility Overall Results

Space Mean Speed, mi/h	69.4	Density, veh/mi/ln	15.4
Average Travel Time, min	1.6	Density, pc/mi/ln	16.4







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HCS7 Freeway Facilities Report

Project Information

Analyst	CM	Date	1/23/2020
Agency	Urban Crossroads, Inc.	Analysis Year	Existing (2019)
Jurisdiction	Caltrans	Time Period Analyzed	PM Peak Hour
Project Description	Hesperia Commerce Center II (JN 12778) - I-15 NB at Main		

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	7
Total Time Periods	1	Time Period Duration, min	15

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	I-15 NB, South of Main St.	6140	3
2	Diverge	Diverge	I-15 NB, Off-Ramp at Main St.	1500	3
3	Basic	Basic	I-15 NB, Between Off-Ramp and Loop On-Ramp	1125	3
4	Merge	Merge	I-15 NB, Loop On-Ramp at Main St.	1500	3
5	Basic	Basic	I-15 NB, Between Loop On-Ramp and On-Ramp	1215	3
6	Merge	Merge	I-15 NB, On-Ramp at Main St.	1500	3
7	Basic	Basic	I-15 NB, North of Main St.	16370	3

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.971	6552	7146	0.92	57.9	37.7	E

Segment 2: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.971	0.926	6552	1096	7200	2100	0.91	0.52	63.0	58.9	34.7	38.0	E

Segment 3: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.980	5456	7146	0.76	64.5	28.2	D

Segment 4: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.980	0.962	5692	236	7200	1900	0.79	0.12	60.3	58.2	31.5	29.3	D

Segment 5: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.980	5688	7146	0.80	63.4	29.9	D

Segment 6: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.980	0.962	6115	427	7200	2100	0.85	0.20	59.4	57.3	34.3	32.3	D

Segment 7: Basic

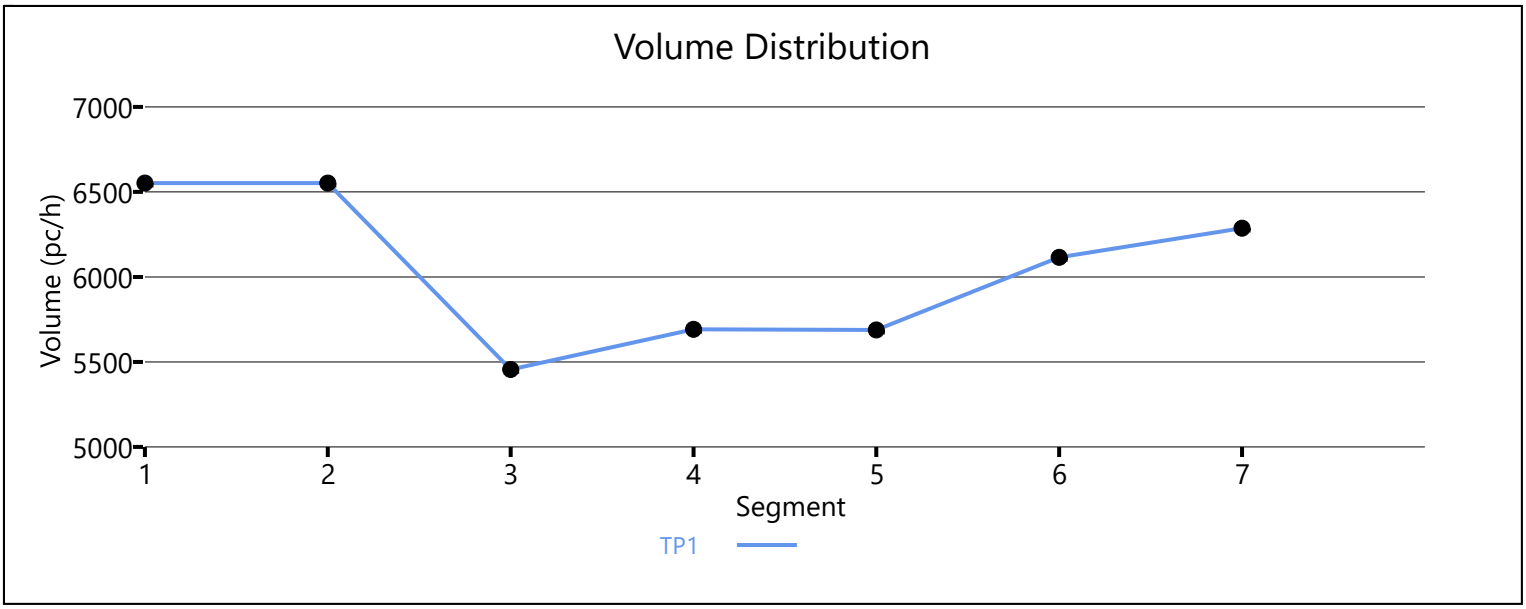
Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.952	6287	7146	0.88	59.8	35.1	E

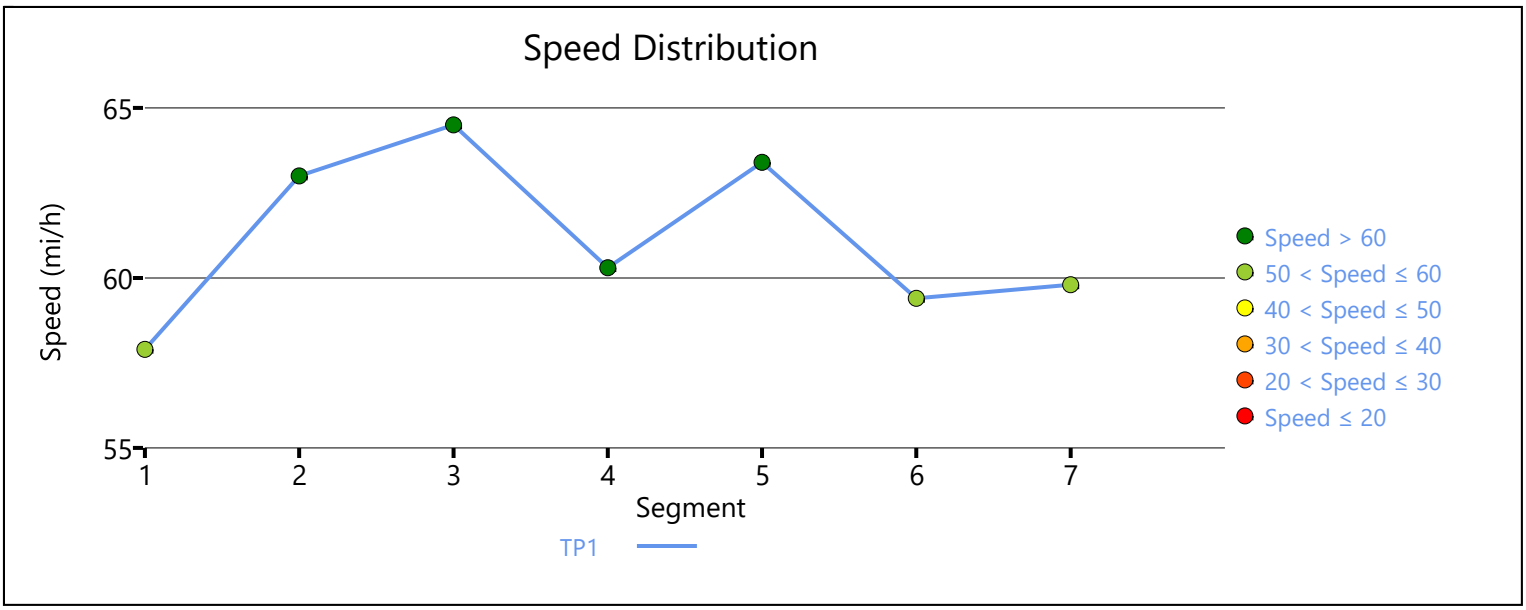
Facility Time Period Results

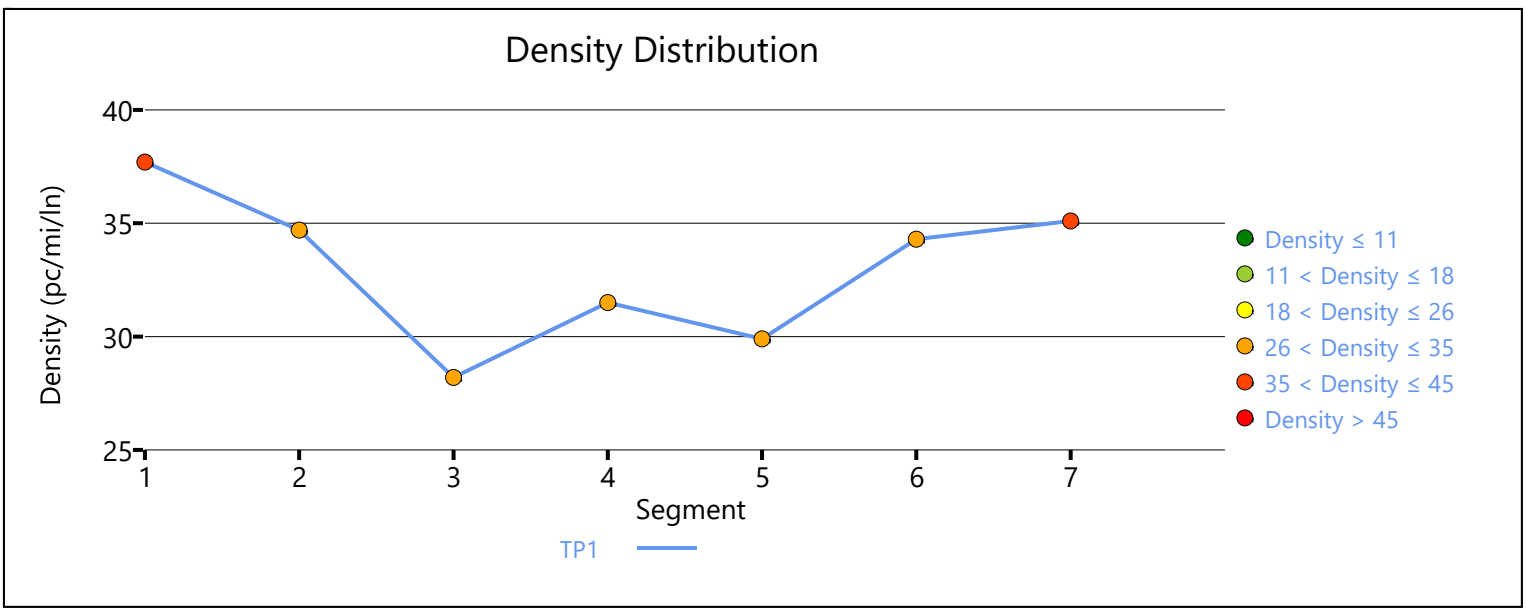
T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	59.8	34.9	33.6	5.6	D

Facility Overall Results

Space Mean Speed, mi/h	59.8	Density, veh/mi/ln	33.6
Average Travel Time, min	5.6	Density, pc/mi/ln	34.9







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HCS7 Freeway Facilities Report

Project Information

Analyst	CP	Date	1/23/2020
Agency	Urban Crossroads, Inc.	Analysis Year	Existing (2019)
Jurisdiction	Caltrans	Time Period Analyzed	PM Peak Hour
Project Description	Hesperia Commerce Center II (JN:12778) - I-15 NB at US 395		

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	3
Total Time Periods	1	Time Period Duration, min	15

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	South of US 395	2000	4
2	Diverge	Diverge	Off-Ramp at US 395	1500	4
3	Basic	Basic	North of US 395	6350	4

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.943	6398	9572	0.67	67.7	23.6	C

Segment 2: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.943	0.885	6398	1390	9600	2100	0.67	0.66	64.7	58.2	24.7	29.7	D

Segment 3: Basic

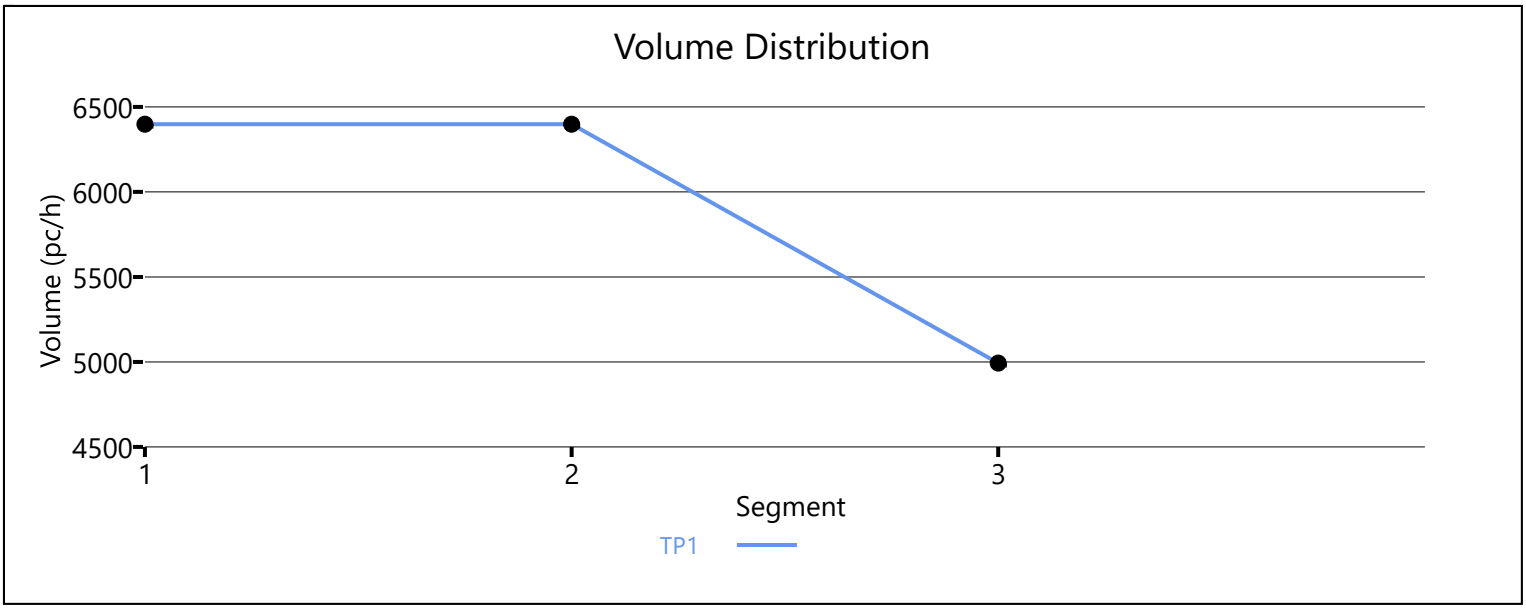
Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.962	4993	9572	0.52	69.3	18.0	B

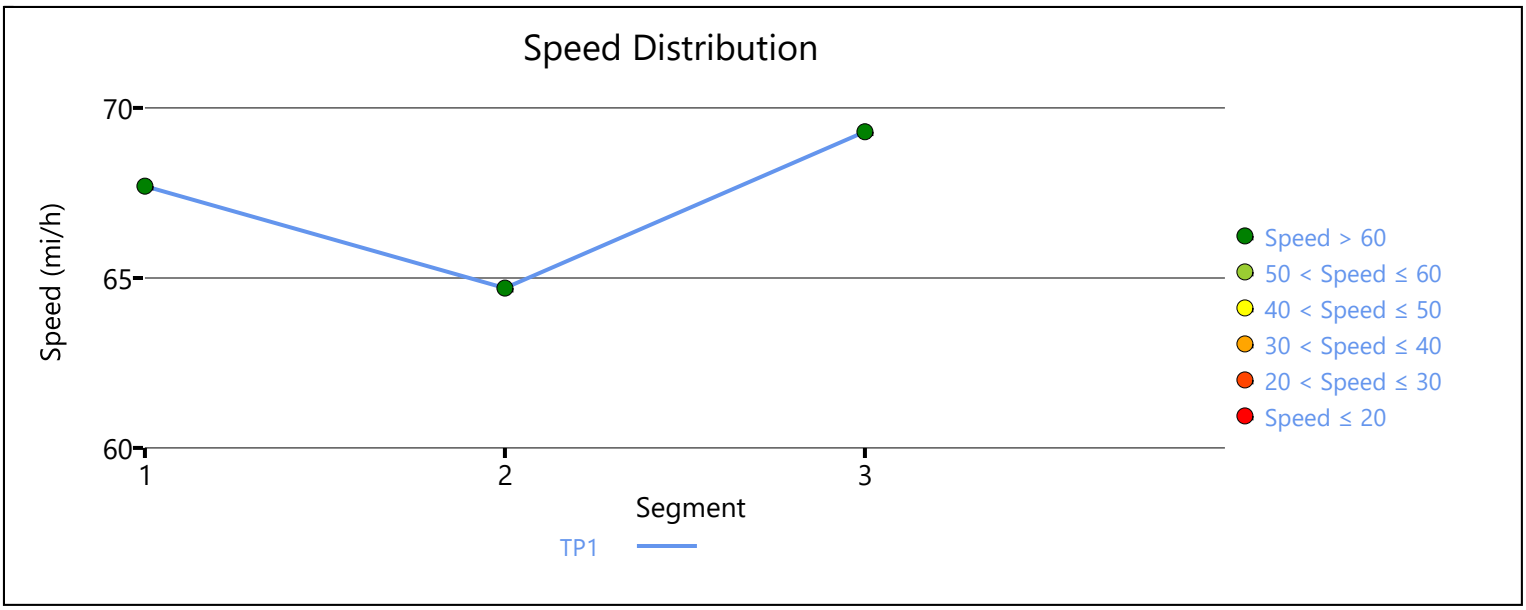
Facility Time Period Results

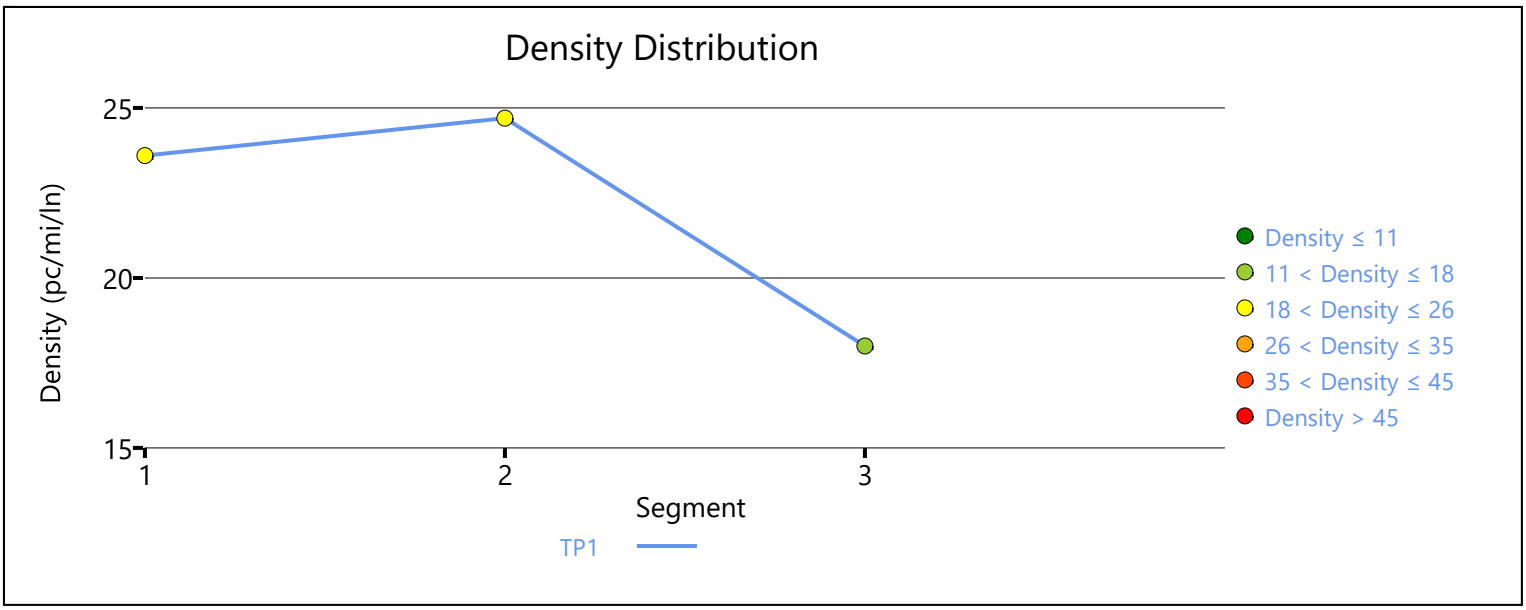
T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	68.1	20.2	19.2	1.6	C

Facility Overall Results

Space Mean Speed, mi/h	68.1	Density, veh/mi/ln	19.2
Average Travel Time, min	1.6	Density, pc/mi/ln	20.2







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APPENDIX 3.6:

EXISTING (2019) CONDITIONS INTERSECTION OPERATIONS ANALYSIS WORKSHEETS WITH IMPROVEMENTS

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Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↕			↕	
Traffic Vol, veh/h	0	0	1	0	0	0	3	934	0	0	1152	0
Future Vol, veh/h	0	0	1	0	0	0	3	934	0	0	1152	0
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	-	-	-	-	-	-	-	-	-	-	-	-
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	0	0	0	0	0
Mvmt Flow	0	0	1	0	0	0	3	1038	0	0	1280	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1805	2324	640	1684	2324	519	1280	0	0	1038	0	0
Stage 1	1280	1280	-	1044	1044	-	-	-	-	-	-	-
Stage 2	525	1044	-	640	1280	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.5	6.9	7.5	6.5	6.9	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	51	38	423	63	38	507	549	-	-	678	-	-
Stage 1	178	239	-	249	309	-	-	-	-	-	-	-
Stage 2	509	309	-	435	239	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	50	38	423	62	38	507	549	-	-	678	-	-
Mov Cap-2 Maneuver	50	38	-	62	38	-	-	-	-	-	-	-
Stage 1	176	239	-	246	305	-	-	-	-	-	-	-
Stage 2	502	305	-	434	239	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	13.5	0	0.1	0
HCM LOS	B	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	549	-	-	423	-	678	-	-
HCM Lane V/C Ratio	0.006	-	-	0.003	-	-	-	-
HCM Control Delay (s)	11.6	0.1	-	13.5	0	0	-	-
HCM Lane LOS	B	A	-	B	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0	-	0	-	-

Intersection	
Int Delay, s/veh	0.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	5	9	780	13	24	993
Future Vol, veh/h	5	9	780	13	24	993
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	375	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	5	10	839	14	26	1068

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1432	427	0	0	853	0
Stage 1	846	-	-	-	-	-
Stage 2	586	-	-	-	-	-
Critical Hdwy	6.8	6.9	-	-	4.1	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	127	582	-	-	795	-
Stage 1	386	-	-	-	-	-
Stage 2	525	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	123	582	-	-	795	-
Mov Cap-2 Maneuver	255	-	-	-	-	-
Stage 1	386	-	-	-	-	-
Stage 2	508	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	14.2	0	0.2
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	255	582	795	-
HCM Lane V/C Ratio	-	-	0.021	0.017	0.032	-
HCM Control Delay (s)	-	-	19.4	11.3	9.7	-
HCM Lane LOS	-	-	C	B	A	-
HCM 95th %tile Q(veh)	-	-	0.1	0.1	0.1	-

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	3	0	4	0	0	0	6	1319	0	0	871	4
Future Vol, veh/h	3	0	4	0	0	0	6	1319	0	0	871	4
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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	3	0	4	0	0	0	6	1374	0	0	907	4

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1608	2295	456	1840	2297	687	911	0	0	1374	0	0
Stage 1	909	909	-	1386	1386	-	-	-	-	-	-	-
Stage 2	699	1386	-	454	911	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.5	6.9	7.5	6.5	6.9	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	71	39	557	48	39	394	756	-	-	506	-	-
Stage 1	300	357	-	153	212	-	-	-	-	-	-	-
Stage 2	401	212	-	560	356	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	69	38	557	46	38	394	756	-	-	506	-	-
Mov Cap-2 Maneuver	69	38	-	46	38	-	-	-	-	-	-	-
Stage 1	290	357	-	148	205	-	-	-	-	-	-	-
Stage 2	387	205	-	556	356	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	32.5	0	0.2	0
HCM LOS	D	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	756	-	-	138	-	506	-	-
HCM Lane V/C Ratio	0.008	-	-	0.053	-	-	-	-
HCM Control Delay (s)	9.8	0.2	-	32.5	0	0	-	-
HCM Lane LOS	A	A	-	D	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.2	-	0	-	-

Intersection	
Int Delay, s/veh	0.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	7	24	1165	26	11	840
Future Vol, veh/h	7	24	1165	26	11	840
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	375	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	98	98	98	98	98	98
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	7	24	1189	27	11	857

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1654	608	0	0	1216	0
Stage 1	1203	-	-	-	-	-
Stage 2	451	-	-	-	-	-
Critical Hdwy	6.8	6.9	-	-	4.1	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	91	444	-	-	581	-
Stage 1	251	-	-	-	-	-
Stage 2	614	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	89	444	-	-	581	-
Mov Cap-2 Maneuver	194	-	-	-	-	-
Stage 1	251	-	-	-	-	-
Stage 2	602	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	16	0	0.1
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	194	444	581	-
HCM Lane V/C Ratio	-	-	0.037	0.055	0.019	-
HCM Control Delay (s)	-	-	24.3	13.6	11.3	-
HCM Lane LOS	-	-	C	B	B	-
HCM 95th %tile Q(veh)	-	-	0.1	0.2	0.1	-

APPENDIX 4.1:

POST PROCESSING WORKSHEETS

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Project:	Hesperia Commerce Center II (JN:12778)	Job #:	12778
Scenario:	Horizon Year (2040) Without Project	Analyst:	CP
		Date:	1/24/20

LOCATION: Baldy Mesa Rd. & Phelan Rd.
FORECAST YEAR: 2040

INDIVIDUAL TURN VOLUME GROWTH REVIEW

		AM PEAK HOUR INPUT DATA				PM PEAK HOUR INPUT DATA			
APPROACH	TURNING MOVEMENT	EXISTING COUNT	FUTURE VOLUME	DIFF-ERENCE	% CHANGE	EXISTING COUNT	FUTURE VOLUME	DIFF-ERENCE	% CHANGE
NORTH BOUND	Left	36	32	-4	-11%	38	26	-12	-31%
	Through	72	71	-1	-1%	29	38	9	31%
	Right	52	57	6	11%	26	27	1	4%
	NB Total	160	160	1	0%	93	91	-2	-2%
SOUTH BOUND	Left	182	240	59	32%	117	129	12	10%
	Through	49	52	4	7%	37	35	-2	-5%
	Right	185	198	13	7%	135	98	-37	-27%
	SB Total	415	490	75	18%	289	262	-27	-9%
EAST BOUND	Left	155	121	-34	-22%	151	181	31	20%
	Through	554	483	-71	-13%	538	514	-24	-4%
	Right	23	16	-7	-30%	37	30	-7	-19%
	EB Total	731	620	-111	-15%	725	725	0	0%
WEST BOUND	Left	12	12	1	4%	58	65	8	13%
	Through	335	340	6	2%	561	496	-65	-12%
	Right	142	158	17	12%	120	201	82	68%
	WB Total	488	510	23	5%	738	762	24	3%
TOTAL ENTERING VOLUME		1,793	1,780	-13	-1%	1,844	1,840	-4	0%

FORECAST PEAK HOUR TO ADT COMPARISON

		VOLUMES		PERCENT OF ADT		
		AM	PM	AM	PM	ADT
North Leg	Inbound	490	262			
North Leg	Outbound	350	420			
North Leg	**TOTAL**	**840**	**682**	**20%**	**17%**	**4,117**
South Leg	Inbound	160	91			
South Leg	Outbound	80	130			
South Leg	**TOTAL**	**240**	**221**	**#DIV/0!**	**#DIV/0!**	**-**
East Leg	Inbound	510	762			
East Leg	Outbound	780	670			
East Leg	**TOTAL**	**1,290**	**1,432**	**9%**	**10%**	**14,189**
West Leg	Inbound	620	725			
West Leg	Outbound	570	620			
West Leg	**TOTAL**	**1,190**	**1,345**	**10%**	**11%**	**12,080**
OVERALL TOTAL		***3,560***	***3,680***	**12%**	***12%***	***30,386***

U:\UcJobs_12600-13000_12700\12778\Post Processing\[01_Baldy Mesa & Phelan.xls]Output (3)

Project:	Hesperia Commerce Center II (JN:12778)	Job #:	12778
Scenario:	Horizon Year (2040) Without Project	Analyst:	CP
		Date:	1/24/20

LOCATION: US Highway 395 & Luna Rd.
FORECAST YEAR: 2040

INDIVIDUAL TURN VOLUME GROWTH REVIEW

		AM PEAK HOUR INPUT DATA				PM PEAK HOUR INPUT DATA			
APPROACH	TURNING MOVEMENT	EXISTING COUNT	FUTURE VOLUME	DIFF-ERENCE	% CHANGE	EXISTING COUNT	FUTURE VOLUME	DIFF-ERENCE	% CHANGE
NORTH BOUND	Left	36	63	28	77%	64	119	55	86%
	Through	711	1,126	416	58%	847	1,867	1,020	120%
	Right	43	60	17	40%	82	123	42	51%
	NB Total	789	1,249	460	58%	993	2,109	1,117	112%
SOUTH BOUND	Left	210	289	79	38%	214	240	26	12%
	Through	788	1,755	968	123%	834	1,439	605	73%
	Right	68	118	50	74%	86	119	33	38%
	SB Total	1,066	2,162	1,097	103%	1,134	1,798	664	59%
EAST BOUND	Left	49	63	15	30%	50	102	52	104%
	Through	122	141	20	16%	70	97	28	40%
	Right	68	127	60	88%	38	82	44	116%
	EB Total	238	331	94	39%	158	281	124	78%
WEST BOUND	Left	64	98	34	53%	44	69	26	59%
	Through	92	109	18	19%	105	132	28	26%
	Right	264	281	18	7%	207	311	105	51%
	WB Total	419	488	69	16%	355	512	158	44%
TOTAL ENTERING VOLUME		2,511	4,230	1719	68%	2,639	4,700	2062	78%

FORECAST PEAK HOUR TO ADT COMPARISON

		VOLUMES		PERCENT OF ADT		
		AM	PM	AM	PM	ADT
North Leg	Inbound	2,162	1,798			
North Leg	Outbound	1,470	2,280			
North Leg	**TOTAL**	**3,632**	**4,078**	**6%**	**7%**	**57,258**
South Leg	Inbound	1,249	2,109			
South Leg	Outbound	1,980	1,590			
South Leg	**TOTAL**	**3,229**	**3,699**	**6%**	**7%**	**55,402**
East Leg	Inbound	488	512			
East Leg	Outbound	490	460			
East Leg	**TOTAL**	**978**	**972**	**15%**	**14%**	**6,717**
West Leg	Inbound	331	281			
West Leg	Outbound	290	370			
West Leg	**TOTAL**	**621**	**651**	**19%**	**20%**	**3,330**
OVERALL TOTAL		***8,460***	***9,400***	***7%***	***8%***	***122,707***

U:\UcJobs_12600-13000_12700\12778\Post Processing\[08_US 395 & Luna.xls]Output (3)

Project: Hesperia Commerce Center II (JN:12778) Job #: 12778
Scenario: Horizon Year (2040) Without Project Analyst: CP
Date: 1/24/20

LOCATION: US Highway 395 & Bear Valley Rd.
FORECAST YEAR: 2040

INDIVIDUAL TURN VOLUME GROWTH REVIEW

		AM PEAK HOUR INPUT DATA				PM PEAK HOUR INPUT DATA			
APPROACH	TURNING MOVEMENT	EXISTING COUNT	FUTURE VOLUME	DIFF-ERENCE	% CHANGE	EXISTING COUNT	FUTURE VOLUME	DIFF-ERENCE	% CHANGE
NORTH BOUND	Left	105	146	41	39%	176	406	231	131%
	Through	674	1,043	370	55%	787	1,751	965	123%
	Right	95	116	22	23%	202	260	58	29%
	NB Total	873	1,305	432	49%	1,164	2,417	1,253	108%
SOUTH BOUND	Left	163	310	148	91%	150	229	79	53%
	Through	734	1,726	992	135%	734	1,327	594	81%
	Right	22	47	25	114%	35	95	61	175%
	SB Total	919	2,083	1,165	127%	918	1,651	733	80%
EAST BOUND	Left	41	80	40	98%	54	111	58	107%
	Through	298	464	166	56%	311	371	60	19%
	Right	165	317	152	92%	133	188	55	41%
	EB Total	504	861	358	71%	498	670	173	35%
WEST BOUND	Left	150	217	68	45%	106	116	11	10%
	Through	246	327	82	33%	306	510	204	67%
	Right	93	138	46	49%	130	209	79	61%
	WB Total	488	682	195	40%	542	835	294	54%
TOTAL ENTERING VOLUME		2,783	4,931	2148.5	77%	3,121	5,573	2452	79%

FORECAST PEAK HOUR TO ADT COMPARISON

		VOLUMES		PERCENT OF ADT		
		AM	PM	AM	PM	ADT
North Leg	Inbound	2,083	1,651			
North Leg	Outbound	1,261	2,071			
North Leg	**TOTAL**	**3,344**	**3,722**	**6%**	**7%**	**57,130**
South Leg	Inbound	1,305	2,417			
South Leg	Outbound	2,260	1,631			
South Leg	**TOTAL**	**3,565**	**4,048**	**6%**	**7%**	**58,992**
East Leg	Inbound	682	835			
East Leg	Outbound	890	860			
East Leg	**TOTAL**	**1,572**	**1,695**	**8%**	**8%**	**20,088**
West Leg	Inbound	861	670			
West Leg	Outbound	520	1,011			
West Leg	**TOTAL**	**1,381**	**1,681**	**7%**	**9%**	**19,210**
OVERALL TOTAL		***9,862***	***11,146***	**6%**	***7%***	***155,420***

U:\UcJobs_12600-13000_12700\12778\Post Processing\[09_US 395 & Bear Valley.xls]Output (3)

Project: Hesperia Commerce Center II (JN:12778) Job #: 12778
Scenario: Horizon Year (2040) Without Project Analyst: CP
Date: 1/24/20

LOCATION: US Highway 395 & Eucalyptus St.
FORECAST YEAR: 2040

INDIVIDUAL TURN VOLUME GROWTH REVIEW

		AM PEAK HOUR INPUT DATA				PM PEAK HOUR INPUT DATA			
APPROACH	TURNING MOVEMENT	EXISTING COUNT	FUTURE VOLUME	DIFF-ERENCE	% CHANGE	EXISTING COUNT	FUTURE VOLUME	DIFF-ERENCE	% CHANGE
NORTH BOUND	Left	7	5	-2	-23%	9	9	1	6%
	Through	834	1,186	353	42%	1,189	2,451	1,262	106%
	Right	58	76	19	32%	85	117	32	38%
	NB Total	898	1,267	370	41%	1,283	2,577	1,295	101%
SOUTH BOUND	Left	4	9	5	125%	11	13	2	18%
	Through	1,066	2,254	1,189	112%	910	1,510	601	66%
	Right	8	10	2	25%	11	10	-1	-9%
	SB Total	1,078	2,273	1,196	111%	932	1,533	602	65%
EAST BOUND	Left	9	11	2	22%	6	7	2	27%
	Through	5	6	1	20%	0	0	0	#DIV/0!
	Right	12	13	1	8%	3	3	0	0%
	EB Total	26	30	4	15%	9	10	2	18%
WEST BOUND	Left	75	105	31	41%	44	57	13	30%
	Through	6	5	-1	-17%	2	1	-1	-50%
	Right	20	30	11	54%	9	12	3	33%
	WB Total	100	140	40	40%	55	70	15	27%
TOTAL ENTERING VOLUME		2,101	3,710	1609	77%	2,278	4,190	1913	84%

FORECAST PEAK HOUR TO ADT COMPARISON

		VOLUMES		PERCENT OF ADT		
		AM	PM	AM	PM	ADT
North Leg	Inbound	2,273	1,533			
North Leg	Outbound	1,227	2,470			
North Leg	**TOTAL**	**3,500**	**4,003**	**6%**	**7%**	**55,279**
South Leg	Inbound	1,267	2,577			
South Leg	Outbound	2,372	1,570			
South Leg	**TOTAL**	**3,639**	**4,147**	**6%**	**7%**	**58,413**
East Leg	Inbound	140	70			
East Leg	Outbound	91	130			
East Leg	**TOTAL**	**231**	**200**	**11%**	**10%**	**2,067**
West Leg	Inbound	30	10			
West Leg	Outbound	20	20			
West Leg	**TOTAL**	**50**	**30**	**#DIV/0!**	**#DIV/0!**	**-**
OVERALL TOTAL		***7,420***	***8,380***	**6%**	***7%***	***115,759***

U:\UcJobs_12600-13000_12700\12778\Post Processing\[10_US 395 & Eucalyptus.xls]Output (3)

Project: Hesperia Commerce Center II (JN:12778) Job #: 12778
Scenario: Horizon Year (2040) Without Project Analyst: CP
Date: 1/24/20

LOCATION: US Highway 395 & Phelan Rd./Main St.
FORECAST YEAR: 2040

INDIVIDUAL TURN VOLUME GROWTH REVIEW

		AM PEAK HOUR INPUT DATA				PM PEAK HOUR INPUT DATA			
APPROACH	TURNING MOVEMENT	EXISTING COUNT	FUTURE VOLUME	DIFF-ERENCE	% CHANGE	EXISTING COUNT	FUTURE VOLUME	DIFF-ERENCE	% CHANGE
NORTH BOUND	Left	92	76	-16	-17%	162	278	117	72%
	Through	708	927	220	31%	1,086	2,369	1,284	118%
	Right	9	14	5	56%	26	92	67	261%
	NB Total	808	1,017	209	26%	1,273	2,739	1,467	115%
SOUTH BOUND	Left	206	242	37	18%	187	382	195	104%
	Through	940	2,268	1,329	141%	777	1,263	486	63%
	Right	31	20	-11	-35%	46	45	-1	-2%
	SB Total	1,176	2,530	1,354	115%	1,010	1,690	680	67%
EAST BOUND	Left	47	38	-9	-19%	45	30	-15	-33%
	Through	652	614	-38	-6%	557	624	67	12%
	Right	106	203	98	92%	68	60	-8	-11%
	EB Total	804	855	51	6%	669	714	45	7%
WEST BOUND	Left	4	18	14	350%	9	14	5	56%
	Through	318	385	68	21%	655	599	-56	-8%
	Right	217	416	199	92%	255	295	41	16%
	WB Total	539	819	281	52%	918	908	-10	-1%
TOTAL ENTERING VOLUME		3,327	5,221	1894.5	57%	3,870	6,051	2182	56%

FORECAST PEAK HOUR TO ADT COMPARISON

		VOLUMES		PERCENT OF ADT		
		AM	PM	AM	PM	ADT
North Leg	Inbound	2,530	1,690			
North Leg	Outbound	1,381	2,694			
North Leg	**TOTAL**	**3,911**	**4,384**	**7%**	**8%**	**57,983**
South Leg	Inbound	1,017	2,739			
South Leg	Outbound	2,489	1,337			
South Leg	**TOTAL**	**3,506**	**4,076**	**6%**	**7%**	**58,171**
East Leg	Inbound	819	908			
East Leg	Outbound	870	1,098			
East Leg	**TOTAL**	**1,689**	**2,006**	**9%**	**11%**	**18,326**
West Leg	Inbound	855	714			
West Leg	Outbound	481	922			
West Leg	**TOTAL**	**1,336**	**1,636**	**8%**	**10%**	**17,079**
OVERALL TOTAL		***10,442***	***12,102***	***7%***	***8%***	***151,559***

U:\UcJobs_12600-13000_12700\12778\Post Processing\[13_US 395 & Main.xls]Output (3)

Project: Hesperia Commerce Center II (JN:12778) Job #: 1278
Scenario: Horizon Year (2040) Analyst: CP
Date: 1/14/20

LOCATION: UD-395 & Poplar St.
FORECAST YEAR: 2040

INDIVIDUAL TURN VOLUME GROWTH REVIEW

		AM PEAK HOUR INPUT DATA				PM PEAK HOUR INPUT DATA			
APPROACH	TURNING MOVEMENT	EXISTING COUNT	FUTURE VOLUME	DIFF-ERENCE	% CHANGE	EXISTING COUNT	FUTURE VOLUME	DIFF-ERENCE	% CHANGE
NORTH BOUND	Left	0	0	0	#DIV/0!	0	0	0	#DIV/0!
	Through	3	448	445	14833%	3	2,308	2,305	76833%
	Right	1	68	67	6700%	1	188	187	18700%
	NB Total	4	516	512	12800%	4	2,496	2,492	62300%
SOUTH BOUND	Left	1	982	981	98100%	1	512	511	51100%
	Through	3	1,828	1,825	60833%	3	749	746	24867%
	Right	0	0	0	#DIV/0!	0	0	0	#DIV/0!
	SB Total	4	2,810	2,806	70150%	4	1,261	1,257	31425%
EAST BOUND	Left	0	0	0	#DIV/0!	0	0	0	#DIV/0!
	Through	0	0	0	#DIV/0!	0	0	0	#DIV/0!
	Right	0	0	0	#DIV/0!	0	0	0	#DIV/0!
	EB Total	0	0	0	#DIV/0!	0	0	0	#DIV/0!
WEST BOUND	Left	1	122	121	12100%	1	91	90	9000%
	Through	0	0	0	#DIV/0!	0	0	0	#DIV/0!
	Right	1	432	431	43100%	1	762	761	76100%
	WB Total	2	554	552	27600%	2	853	851	42550%
TOTAL ENTERING VOLUME		10	3,880	3870	38700%	10	4,610	4600	46000%

FORECAST PEAK HOUR TO ADT COMPARISON

		VOLUMES		PERCENT OF ADT		
		AM	PM	AM	PM	ADT
North Leg	Inbound	2,810	1,261			
North Leg	Outbound	880	3,070			
North Leg	**TOTAL**	**3,690**	**4,331**	**6%**	**8%**	**57,363**
South Leg	Inbound	516	2,496			
South Leg	Outbound	1,950	840			
South Leg	**TOTAL**	**2,466**	**3,336**	**7%**	**9%**	**35,235**
East Leg	Inbound	554	853			
East Leg	Outbound	1,050	700			
East Leg	**TOTAL**	**1,604**	**1,553**	**6%**	**6%**	**26,678**
West Leg	Inbound	0	0			
West Leg	Outbound	0	0			
West Leg	**TOTAL**	**0**	**0**	**#DIV/0!**	**#DIV/0!**	**-**
OVERALL TOTAL		***7,760***	***9,220***	***7%***	***8%***	***119,276***

U:\UcJobs_12600-13000_12700\12778\Post Processing\[14_US 395 & Poplar - SEMI.xls]Output (3)

Project:	Hesperia Commerce Center II (JN:12778)	Job #:	12778
Scenario:	Horizon Year (2040) Without Project	Analyst:	CP
		Date:	11/20/18

LOCATION: US Highway 395 & Three Flags Rd.
FORECAST YEAR: 2040

INDIVIDUAL TURN VOLUME GROWTH REVIEW

		AM PEAK HOUR INPUT DATA				PM PEAK HOUR INPUT DATA			
APPROACH	TURNING MOVEMENT	EXISTING COUNT	FUTURE VOLUME	DIFF-ERENCE	% CHANGE	EXISTING COUNT	FUTURE VOLUME	DIFF-ERENCE	% CHANGE
NORTH BOUND	Left	23	14	-9	-39%	33	21	-12	-36%
	Through	747	744	-3	0%	1,209	2,058	850	70%
	Right	101	116	16	15%	147	181	34	23%
	NB Total	871	874	4	0%	1,389	2,260	872	63%
SOUTH BOUND	Left	20	44	24	120%	33	68	35	106%
	Through	937	1,688	752	80%	760	709	-51	-7%
	Right	73	85	12	16%	57	61	4	7%
	SB Total	1,030	1,817	788	76%	850	838	-12	-1%
EAST BOUND	Left	24	26	2	8%	35	57	23	65%
	Through	1	1	0	0%	1	1	0	0%
	Right	81	83	2	2%	59	32	-27	-45%
	EB Total	106	110	4	4%	94	90	-4	-4%
WEST BOUND	Left	165	166	2	1%	127	229	102	80%
	Through	2	1	-1	-33%	4	8	4	100%
	Right	41	43	2	5%	32	175	143	447%
	WB Total	207	210	3	1%	163	412	249	153%
TOTAL ENTERING VOLUME		2,213	3,011	798	36%	2,496	3,600	1105	44%

FORECAST PEAK HOUR TO ADT COMPARISON

		VOLUMES		PERCENT OF ADT		
		AM	PM	AM	PM	ADT
North Leg	Inbound	1,817	838			
North Leg	Outbound	813	2,290			
North Leg	**TOTAL**	**2,630**	**3,128**	**7%**	**9%**	**35,434**
South Leg	Inbound	874	2,260			
South Leg	Outbound	1,937	970			
South Leg	**TOTAL**	**2,811**	**3,230**	**8%**	**9%**	**34,268**
East Leg	Inbound	210	412			
East Leg	Outbound	161	250			
East Leg	**TOTAL**	**371**	**662**	**13%**	**24%**	**2,787**
West Leg	Inbound	110	90			
West Leg	Outbound	100	90			
West Leg	**TOTAL**	**210**	**180**	**#DIV/0!**	**#DIV/0!**	**-**
OVERALL TOTAL		***6,022***	***7,200***	***8%***	***10%***	***72,489***

U:\UcJobs_12600-13000_12700\12778\Post Processing\[15_US-395_Three Flags.xls]Output (3)

Project:	Hesperia Commerce Center II (JN:12778)	Job #:	12778
Scenario:	Horizon Year (2040) Without Project	Analyst:	CP
		Date:	11/20/18

LOCATION: US-395 & Joshua St.
FORECAST YEAR: 2040

INDIVIDUAL TURN VOLUME GROWTH REVIEW

		AM PEAK HOUR INPUT DATA				PM PEAK HOUR INPUT DATA			
APPROACH	TURNING MOVEMENT	EXISTING COUNT	FUTURE VOLUME	DIFF-ERENCE	% CHANGE	EXISTING COUNT	FUTURE VOLUME	DIFF-ERENCE	% CHANGE
NORTH BOUND	Left	8	9	2	20%	25	15	-10	-39%
	Through	742	765	23	3%	1,222	1,552	330	27%
	Right	59	24	-35	-59%	87	32	-55	-63%
	NB Total	808	798	-10	-1%	1,333	1,599	266	20%
SOUTH BOUND	Left	101	207	107	106%	68	123	56	82%
	Through	1,049	1,457	409	39%	857	824	-33	-4%
	Right	33	187	154	467%	21	66	45	214%
	SB Total	1,182	1,851	669	57%	946	1,013	68	7%
EAST BOUND	Left	26	62	37	143%	53	175	123	233%
	Through	30	29	-1	-3%	47	45	-2	-3%
	Right	3	2	-1	-33%	10	5	-5	-50%
	EB Total	59	93	35	59%	109	225	116	106%
WEST BOUND	Left	92	38	-54	-58%	81	51	-30	-37%
	Through	12	20	9	74%	19	39	20	105%
	Right	103	160	57	55%	114	473	359	315%
	WB Total	206	218	12	6%	214	563	349	163%
TOTAL ENTERING VOLUME		2,255	2,960	705.5	31%	2,602	3,400	799	31%

FORECAST PEAK HOUR TO ADT COMPARISON

		VOLUMES		PERCENT OF ADT		
		AM	PM	AM	PM	ADT
North Leg	Inbound	1,851	1,013			
North Leg	Outbound	987	2,200			
North Leg	**TOTAL**	**2,838**	**3,213**	**8%**	**9%**	**33,880**
South Leg	Inbound	798	1,599			
South Leg	Outbound	1,497	880			
South Leg	**TOTAL**	**2,295**	**2,479**	**11%**	**11%**	**21,642**
East Leg	Inbound	218	563			
East Leg	Outbound	260	200			
East Leg	**TOTAL**	**478**	**763**	**5%**	**8%**	**9,904**
West Leg	Inbound	93	225			
West Leg	Outbound	216	120			
West Leg	**TOTAL**	**309**	**345**	**3%**	**4%**	**9,451**
OVERALL TOTAL		***5,920***	***6,800***	***8%***	***9%***	***74,877***

U:\UcJobs_12600-13000_12700\12778\Post Processing\[16_US-395_Joshua.xls]Output (3)

Project: Hesperia Commerce Center II (JN:12778) Job #: 1278
Scenario: Horizon Year (2040) Analyst: CP
Date: 1/14/20

LOCATION: Cataba Rd. & Main St.
FORECAST YEAR: 2040

INDIVIDUAL TURN VOLUME GROWTH REVIEW

		AM PEAK HOUR INPUT DATA				PM PEAK HOUR INPUT DATA			
APPROACH	TURNING MOVEMENT	EXISTING COUNT	FUTURE VOLUME	DIFF-ERENCE	% CHANGE	EXISTING COUNT	FUTURE VOLUME	DIFF-ERENCE	% CHANGE
NORTH BOUND	Left	0	0	0	#DIV/0!	0	0	0	#DIV/0!
	Through	0	0	0	#DIV/0!	0	0	0	#DIV/0!
	Right	0	0	0	#DIV/0!	0	0	0	#DIV/0!
	NB Total	0	0	0	#DIV/0!	0	0	0	#DIV/0!
SOUTH BOUND	Left	1	0	-1	-100%	1	0	-1	-100%
	Through	0	0	0	#DIV/0!	0	0	0	#DIV/0!
	Right	1	0	-1	-100%	1	0	-1	-100%
	SB Total	2	0	-2	-100%	2	0	-2	-100%
EAST BOUND	Left	1	0	-1	-100%	1	32	31	3100%
	Through	3	310	307	10233%	3	981	978	32600%
	Right	0	0	0	#DIV/0!	0	0	0	#DIV/0!
	EB Total	4	310	306	7650%	4	1,013	1,009	25225%
WEST BOUND	Left	0	0	0	#DIV/0!	0	0	0	#DIV/0!
	Through	3	890	887	29567%	3	398	395	13167%
	Right	1	0	-1	-100%	1	8	7	700%
	WB Total	4	890	886	22150%	4	406	402	10050%
TOTAL ENTERING VOLUME		10	1,200	1190	11900%	10	1,419	1409	14090%

FORECAST PEAK HOUR TO ADT COMPARISON

		VOLUMES		PERCENT OF ADT		
		AM	PM	AM	PM	ADT
North Leg	Inbound	0	0			
North Leg	Outbound	0	40			
North Leg	**TOTAL**	**0**	**40**	**0%**	**27%**	**149**
South Leg	Inbound	0	0			
South Leg	Outbound	0	0			
South Leg	**TOTAL**	**0**	**0**	**#DIV/0!**	**#DIV/0!**	**-**
East Leg	Inbound	890	406			
East Leg	Outbound	310	981			
East Leg	**TOTAL**	**1,200**	**1,387**	**7%**	**8%**	**18,020**
West Leg	Inbound	310	1,013			
West Leg	Outbound	890	398			
West Leg	**TOTAL**	**1,200**	**1,411**	**7%**	**8%**	**18,165**
OVERALL TOTAL		***2,400***	***2,838***	**7%**	***8%***	***36,334***

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Project: Hesperia Commerce Center II (JN:12778) Job #: 12778
Scenario: Horizon Year (2040) Without Project Analyst: CP
Date: 11/20/18

LOCATION: Key Point Av./I-15 SB On-Ramp & Main St.
FORECAST YEAR: 2040

INDIVIDUAL TURN VOLUME GROWTH REVIEW

		AM PEAK HOUR INPUT DATA				PM PEAK HOUR INPUT DATA			
APPROACH	TURNING MOVEMENT	EXISTING COUNT	FUTURE VOLUME	DIFF-ERENCE	% CHANGE	EXISTING COUNT	FUTURE VOLUME	DIFF-ERENCE	% CHANGE
NORTH BOUND	Left	11	6	-5	-43%	29	11	-18	-62%
	Through	11	12	1	9%	71	88	17	24%
	Right	78	86	8	10%	230	235	5	2%
	NB Total	100	104	5	5%	330	334	4	1%
SOUTH BOUND	Left	143	522	379	265%	222	483	261	118%
	Through	26	34	8	31%	84	81	-3	-4%
	Right	15	26	12	79%	31	24	-7	-21%
	SB Total	184	582	399	217%	337	588	252	75%
EAST BOUND	Left	30	22	-8	-25%	55	85	31	56%
	Through	863	632	-231	-27%	902	1,162	260	29%
	Right	12	3	-9	-75%	24	14	-10	-42%
	EB Total	904	657	-247	-27%	981	1,261	281	29%
WEST BOUND	Left	138	143	6	4%	215	225	11	5%
	Through	651	929	278	43%	1,092	925	-167	-15%
	Right	107	316	209	195%	213	607	395	186%
	WB Total	896	1,388	493	55%	1,519	1,757	239	16%
TOTAL ENTERING VOLUME		2,083	2,731	648.5	31%	3,166	3,940	775	24%

FORECAST PEAK HOUR TO ADT COMPARISON

		VOLUMES		PERCENT OF ADT		
		AM	PM	AM	PM	ADT
North Leg	Inbound	582	588			
North Leg	Outbound	350	780			
North Leg	**TOTAL**	**932**	**1,368**	**6%**	**9%**	**14,701**
South Leg	Inbound	104	334			
South Leg	Outbound	180	320			
South Leg	**TOTAL**	**284**	**654**	**6%**	**14%**	**4,707**
East Leg	Inbound	1,388	1,757			
East Leg	Outbound	1,240	1,880			
East Leg	**TOTAL**	**2,628**	**3,637**	**8%**	**11%**	**32,628**
West Leg	Inbound	657	1,261			
West Leg	Outbound	961	960			
West Leg	**TOTAL**	**1,618**	**2,221**	**9%**	**12%**	**18,016**
OVERALL TOTAL		***5,462***	***7,880***	***8%***	***11%***	***70,052***

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Project: Hesperia Commerce Center II (JN:12778) Job #: 12778
Scenario: Horizon Year (2040) Without Project Analyst: CP
Date: 11/20/18

LOCATION: I-15 SB Ramps & Main St.
FORECAST YEAR: 2040

INDIVIDUAL TURN VOLUME GROWTH REVIEW

		AM PEAK HOUR INPUT DATA				PM PEAK HOUR INPUT DATA			
APPROACH	TURNING MOVEMENT	EXISTING COUNT	FUTURE VOLUME	DIFF-ERENCE	% CHANGE	EXISTING COUNT	FUTURE VOLUME	DIFF-ERENCE	% CHANGE
NORTH BOUND	Left	0	0	0	#DIV/0!	0	0	0	#DIV/0!
	Through	0	0	0	#DIV/0!	0	0	0	#DIV/0!
	Right	0	0	0	#DIV/0!	0	0	0	#DIV/0!
	NB Total	0	0	0	#DIV/0!	0	0	0	#DIV/0!
SOUTH BOUND	Left	307	333	26	8%	540	607	67	12%
	Through	0	0	0	#DIV/0!	0	0	0	#DIV/0!
	Right	173	228	56	32%	393	413	21	5%
	SB Total	480	561	82	17%	933	1,020	88	9%
EAST BOUND	Left	0	0	0	#DIV/0!	0	0	0	#DIV/0!
	Through	982	1,137	155	16%	1,225	1,753	529	43%
	Right	0	0	0	#DIV/0!	0	0	0	#DIV/0!
	EB Total	982	1,137	155	16%	1,225	1,753	529	43%
WEST BOUND	Left	0	0	0	#DIV/0!	0	0	0	#DIV/0!
	Through	709	1,142	433	61%	1,128	1,377	250	22%
	Right	0	0	0	#DIV/0!	0	0	0	#DIV/0!
	WB Total	709	1,142	433	61%	1,128	1,377	250	22%
TOTAL ENTERING VOLUME		2,171	2,840	669.5	31%	3,285	4,150	866	26%

FORECAST PEAK HOUR TO ADT COMPARISON

		VOLUMES		PERCENT OF ADT		
		AM	PM	AM	PM	ADT
North Leg	Inbound	561	1,020			
North Leg	Outbound	0	0			
North Leg	**TOTAL**	**561**	**1,020**	**9%**	**17%**	**6,039**
South Leg	Inbound	0	0			
South Leg	Outbound	0	0			
South Leg	**TOTAL**	**0**	**0**	**#DIV/0!**	**#DIV/0!**	**-**
East Leg	Inbound	1,142	1,377			
East Leg	Outbound	1,470	2,360			
East Leg	**TOTAL**	**2,612**	**3,737**	**8%**	**12%**	**32,137**
West Leg	Inbound	1,137	1,753			
West Leg	Outbound	1,370	1,790			
West Leg	**TOTAL**	**2,507**	**3,543**	**8%**	**11%**	**32,628**
OVERALL TOTAL		***5,680***	***8,300***	**8%**	***12%***	***70,804***

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Project: Hesperia Commerce Center II (JN:12778) Job #: 12778
Scenario: Horizon Year (2040) Without Project Analyst: CP
Date: 11/20/18

LOCATION: I-15 NB Ramps & Main St.
FORECAST YEAR: 2040

INDIVIDUAL TURN VOLUME GROWTH REVIEW

		AM PEAK HOUR INPUT DATA				PM PEAK HOUR INPUT DATA			
APPROACH	TURNING MOVEMENT	EXISTING COUNT	FUTURE VOLUME	DIFF-ERENCE	% CHANGE	EXISTING COUNT	FUTURE VOLUME	DIFF-ERENCE	% CHANGE
NORTH BOUND	Left	78	123	46	59%	179	217	38	21%
	Through	6	8	3	45%	0	0	0	#DIV/0!
	Right	387	402	15	4%	831	706	-125	-15%
	NB Total	470	533	63	13%	1,010	923	-87	-9%
SOUTH BOUND	Left	0	0	0	#DIV/0!	0	0	0	#DIV/0!
	Through	0	0	0	#DIV/0!	0	0	0	#DIV/0!
	Right	0	0	0	#DIV/0!	0	0	0	#DIV/0!
	SB Total	0	0	0	#DIV/0!	0	0	0	#DIV/0!
EAST BOUND	Left	0	0	0	#DIV/0!	0	0	0	#DIV/0!
	Through	998	1,202	204	20%	1,544	2,109	565	37%
	Right	291	291	0	0%	221	220	-1	0%
	EB Total	1,289	1,493	204	16%	1,765	2,329	565	32%
WEST BOUND	Left	0	0	0	#DIV/0!	0	0	0	#DIV/0!
	Through	1,191	1,621	430	36%	1,307	1,527	221	17%
	Right	453	554	102	22%	396	541	145	37%
	WB Total	1,644	2,175	532	32%	1,703	2,068	366	21%
TOTAL ENTERING VOLUME		3,403	4,201	798.5	23%	4,477	5,320	844	19%

FORECAST PEAK HOUR TO ADT COMPARISON

		VOLUMES		PERCENT OF ADT		
		AM	PM	AM	PM	ADT
North Leg	Inbound	0	0			
North Leg	Outbound	562	541			
North Leg	**TOTAL**	**562**	**541**	**9%**	**9%**	**5,983**
South Leg	Inbound	533	923			
South Leg	Outbound	291	220			
South Leg	**TOTAL**	**824**	**1,143**	**7%**	**10%**	**11,734**
East Leg	Inbound	2,175	2,068			
East Leg	Outbound	1,604	2,815			
East Leg	**TOTAL**	**3,779**	**4,883**	**8%**	**10%**	**46,819**
West Leg	Inbound	1,493	2,329			
West Leg	Outbound	1,744	1,744			
West Leg	**TOTAL**	**3,237**	**4,073**	**8%**	**11%**	**38,459**
OVERALL TOTAL		***8,402***	***10,640***	***8%***	***10%***	***102,995***

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Project:	Hesperia Commerce Center II (JN:12778)	Job #:	12778
Scenario:	Horizon Year (2040) Without Project	Analyst:	CP
		Date:	11/20/18

LOCATION: Mariposa Rd. & Main St.
FORECAST YEAR: 2040

INDIVIDUAL TURN VOLUME GROWTH REVIEW

		AM PEAK HOUR INPUT DATA				PM PEAK HOUR INPUT DATA			
APPROACH	TURNING MOVEMENT	EXISTING COUNT	FUTURE VOLUME	DIFF-ERENCE	% CHANGE	EXISTING COUNT	FUTURE VOLUME	DIFF-ERENCE	% CHANGE
NORTH BOUND	Left	71	105	35	49%	129	204	76	59%
	Through	38	55	17	45%	77	114	38	49%
	Right	35	40	6	16%	69	95	27	39%
	NB Total	143	200	57	40%	274	413	140	51%
SOUTH BOUND	Left	35	33	-2	-6%	132	153	22	16%
	Through	48	58	10	21%	53	78	26	49%
	Right	172	209	38	22%	184	244	60	33%
	SB Total	255	300	46	18%	368	475	107	29%
EAST BOUND	Left	127	173	46	36%	231	287	57	25%
	Through	1,159	1,273	114	10%	1,992	2,312	321	16%
	Right	99	139	40	40%	153	226	74	48%
	EB Total	1,385	1,585	200	14%	2,375	2,825	451	19%
WEST BOUND	Left	43	56	13	30%	84	107	23	27%
	Through	1,460	1,903	443	30%	1,331	1,512	182	14%
	Right	28	35	7	25%	102	109	7	7%
	WB Total	1,531	1,994	463	30%	1,517	1,728	212	14%
TOTAL ENTERING VOLUME		3,314	4,079	765.5	23%	4,533	5,441	909	20%

FORECAST PEAK HOUR TO ADT COMPARISON

		VOLUMES		PERCENT OF ADT		
		AM	PM	AM	PM	ADT
North Leg	Inbound	300	475			
North Leg	Outbound	263	510			
North Leg	**TOTAL**	**563**	**985**	**5%**	**8%**	**11,833**
South Leg	Inbound	200	413			
South Leg	Outbound	253	411			
South Leg	**TOTAL**	**453**	**824**	**4%**	**7%**	**12,036**
East Leg	Inbound	1,994	1,728			
East Leg	Outbound	1,346	2,560			
East Leg	**TOTAL**	**3,340**	**4,288**	**9%**	**11%**	**38,737**
West Leg	Inbound	1,585	2,825			
West Leg	Outbound	2,217	1,960			
West Leg	**TOTAL**	**3,802**	**4,785**	**8%**	**10%**	**46,819**
OVERALL TOTAL		***8,158***	***10,882***	***7%***	***10%***	***109,425***

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Project: Hesperia Commerce Center II (JN:12778) Job #: 12778
Scenario: Horizon Year (2040) Without Project Analyst: CP
Date: 11/20/18

LOCATION: Escondido Av. & Main St.
FORECAST YEAR: 2040

INDIVIDUAL TURN VOLUME GROWTH REVIEW

		AM PEAK HOUR INPUT DATA				PM PEAK HOUR INPUT DATA			
APPROACH	TURNING MOVEMENT	EXISTING COUNT	FUTURE VOLUME	DIFF-ERENCE	% CHANGE	EXISTING COUNT	FUTURE VOLUME	DIFF-ERENCE	% CHANGE
NORTH BOUND	Left	663	754	91	14%	593	647	54	9%
	Through	21	22	1	5%	50	48	-2	-4%
	Right	319	325	6	2%	196	235	40	20%
	NB Total	1,003	1,101	98	10%	839	930	92	11%
SOUTH BOUND	Left	1	1	0	0%	55	57	3	5%
	Through	3	3	0	0%	37	33	-4	-11%
	Right	12	16	4	33%	52	50	-2	-4%
	SB Total	16	20	4	25%	144	140	-4	-2%
EAST BOUND	Left	4	5	1	25%	53	52	-1	-1%
	Through	773	857	84	11%	1,389	1,732	344	25%
	Right	355	347	-8	-2%	659	697	38	6%
	EB Total	1,132	1,209	78	7%	2,100	2,481	381	18%
WEST BOUND	Left	267	291	24	9%	408	422	14	3%
	Through	969	1,336	368	38%	1,063	1,177	114	11%
	Right	3	4	1	33%	10	10	0	0%
	WB Total	1,239	1,631	393	32%	1,481	1,609	128	9%
TOTAL ENTERING VOLUME		3,389	3,961	572	17%	4,563	5,160	597	13%

FORECAST PEAK HOUR TO ADT COMPARISON

		VOLUMES		PERCENT OF ADT		
		AM	PM	AM	PM	ADT
North Leg	Inbound	20	140			
North Leg	Outbound	31	110			
North Leg	**TOTAL**	**51**	**250**	**#DIV/0!**	**#DIV/0!**	**-**
South Leg	Inbound	1,101	930			
South Leg	Outbound	641	1,152			
South Leg	**TOTAL**	**1,742**	**2,082**	**17%**	**20%**	**10,441**
East Leg	Inbound	1,631	1,609			
East Leg	Outbound	1,183	2,024			
East Leg	**TOTAL**	**2,814**	**3,633**	**9%**	**11%**	**32,305**
West Leg	Inbound	1,209	2,481			
West Leg	Outbound	2,106	1,874			
West Leg	**TOTAL**	**3,315**	**4,355**	**9%**	**11%**	**38,180**
OVERALL TOTAL		***7,922***	***10,320***	**10%**	***13%***	***80,926***

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Project: Hesperia Commerce Center II (JN:12778) Job #: 12778
Scenario: Horizon Year (2040) Analyst: CP
Date: 1/14/20

LOCATION: Escondido Av. & Sultana St.
FORECAST YEAR: 2040

INDIVIDUAL TURN VOLUME GROWTH REVIEW

		AM PEAK HOUR INPUT DATA				PM PEAK HOUR INPUT DATA			
APPROACH	TURNING MOVEMENT	EXISTING COUNT	FUTURE VOLUME	DIFF-ERENCE	% CHANGE	EXISTING COUNT	FUTURE VOLUME	DIFF-ERENCE	% CHANGE
NORTH BOUND	Left	1	45	44	4400%	1	19	18	1800%
	Through	2	426	424	21200%	2	299	297	14850%
	Right	1	13	12	1200%	1	23	22	2200%
	NB Total	4	484	480	12000%	4	341	337	8425%
SOUTH BOUND	Left	1	15	14	1400%	1	45	44	4400%
	Through	2	188	186	9300%	2	396	394	19700%
	Right	1	52	51	5100%	1	37	36	3600%
	SB Total	4	255	251	6275%	4	478	474	11850%
EAST BOUND	Left	1	21	20	2000%	1	81	80	8000%
	Through	1	1	0	0%	1	13	12	1200%
	Right	1	8	7	700%	1	56	55	5500%
	EB Total	3	30	27	900%	3	150	147	4900%
WEST BOUND	Left	1	24	23	2300%	1	23	22	2200%
	Through	1	13	12	1200%	1	4	3	300%
	Right	1	63	62	6200%	1	33	32	3200%
	WB Total	3	100	97	3233%	3	60	57	1900%
TOTAL ENTERING VOLUME		14	869	855	6107%	14	1,029	1015	7250%

FORECAST PEAK HOUR TO ADT COMPARISON

		VOLUMES		PERCENT OF ADT		
		AM	PM	AM	PM	ADT
North Leg	Inbound	255	478			
North Leg	Outbound	510	413			
North Leg	**TOTAL**	**765**	**891**	**7%**	**9%**	**10,441**
South Leg	Inbound	484	341			
South Leg	Outbound	220	475			
South Leg	**TOTAL**	**704**	**816**	**7%**	**8%**	**9,829**
East Leg	Inbound	100	60			
East Leg	Outbound	29	81			
East Leg	**TOTAL**	**129**	**141**	**7%**	**8%**	**1,854**
West Leg	Inbound	30	150			
West Leg	Outbound	110	60			
West Leg	**TOTAL**	**140**	**210**	**7%**	**10%**	**2,066**
OVERALL TOTAL		***1,738***	***2,058***	***7%***	***9%***	***24,190***

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Project: Hesperia Commerce Center II (JN:12778) Job #: 12778
Scenario: Horizon Year (2040) Without Project Analyst: CP
Date: 1/24/20

LOCATION: Topaz Av. & Main St.
FORECAST YEAR: 2040

INDIVIDUAL TURN VOLUME GROWTH REVIEW

		AM PEAK HOUR INPUT DATA				PM PEAK HOUR INPUT DATA			
APPROACH	TURNING MOVEMENT	EXISTING COUNT	FUTURE VOLUME	DIFF-ERENCE	% CHANGE	EXISTING COUNT	FUTURE VOLUME	DIFF-ERENCE	% CHANGE
NORTH BOUND	Left	165	175	10	6%	208	211	3	1%
	Through	80	85	5	6%	32	34	2	6%
	Right	58	41	-17	-29%	94	85	-9	-9%
	NB Total	303	301	-2	0%	334	330	-4	-1%
SOUTH BOUND	Left	95	95	1	1%	61	75	14	23%
	Through	62	60	-2	-2%	35	37	2	6%
	Right	70	104	34	49%	43	58	15	35%
	SB Total	226	259	33	15%	139	170	31	22%
EAST BOUND	Left	40	60	20	50%	62	88	26	42%
	Through	961	984	24	2%	1,386	1,690	305	22%
	Right	81	81	0	0%	216	226	10	5%
	EB Total	1,082	1,125	44	4%	1,664	2,004	341	20%
WEST BOUND	Left	32	29	-3	-9%	102	87	-15	-15%
	Through	964	1,301	338	35%	1,149	1,261	113	10%
	Right	93	125	33	35%	67	77	10	15%
	WB Total	1,088	1,455	367	34%	1,318	1,425	108	8%
TOTAL ENTERING VOLUME		2,698	3,140	442	16%	3,454	3,929	476	14%

FORECAST PEAK HOUR TO ADT COMPARISON

		VOLUMES		PERCENT OF ADT		
		AM	PM	AM	PM	ADT
North Leg	Inbound	259	170			
North Leg	Outbound	270	199			
North Leg	**TOTAL**	**529**	**369**	**16%**	**11%**	**3,350**
South Leg	Inbound	301	330			
South Leg	Outbound	170	350			
South Leg	**TOTAL**	**471**	**680**	**#DIV/0!**	**#DIV/0!**	**-**
East Leg	Inbound	1,455	1,425			
East Leg	Outbound	1,120	1,850			
East Leg	**TOTAL**	**2,575**	**3,275**	**9%**	**11%**	**29,467**
West Leg	Inbound	1,125	2,004			
West Leg	Outbound	1,580	1,530			
West Leg	**TOTAL**	**2,705**	**3,534**	**8%**	**11%**	**32,730**
OVERALL TOTAL		***6,280***	***7,858***	**10%**	***12%***	***65,547***

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APPENDIX 5.1:

E+P CONDITIONS INTERSECTION OPERATIONS ANALYSIS WORKSHEETS

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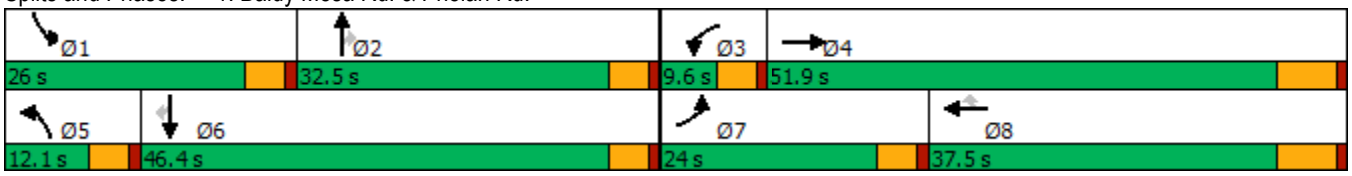
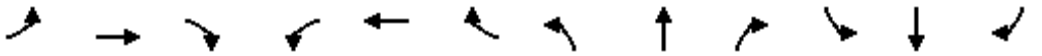
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	155	588	15	341	146	36	72	69	208	49	185
Future Volume (vph)	155	588	15	341	146	36	72	69	208	49	185
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4	3	8		5	2		1	6	
Permitted Phases					8			2			6
Detector Phase	7	4	3	8	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	30.5	9.6	37.5	37.5	9.6	31.6	31.6	9.6	40.6	40.6
Total Split (s)	24.0	51.9	9.6	37.5	37.5	12.1	32.5	32.5	26.0	46.4	46.4
Total Split (%)	20.0%	43.3%	8.0%	31.3%	31.3%	10.1%	27.1%	27.1%	21.7%	38.7%	38.7%
Yellow Time (s)	3.6	5.5	3.6	5.5	5.5	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.5	4.6	6.5	6.5	4.6	4.6	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Max	None	Max	Max	None	None	None	None	None	None
Act Effct Green (s)	14.8	47.8	5.1	31.8	31.8	6.5	13.3	13.3	18.6	29.8	29.8
Actuated g/C Ratio	0.15	0.48	0.05	0.32	0.32	0.07	0.13	0.13	0.19	0.30	0.30
v/c Ratio	0.75	0.43	0.21	0.36	0.28	0.40	0.35	0.21	0.80	0.11	0.35
Control Delay	61.3	19.9	56.7	29.2	5.3	59.5	44.2	1.3	60.1	28.1	5.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	61.3	19.9	56.7	29.2	5.3	59.5	44.2	1.3	60.1	28.1	5.6
LOS	E	B	E	C	A	E	D	A	E	C	A
Approach Delay		28.2		23.0			30.7			33.8	
Approach LOS		C		C			C			C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 99	
Natural Cycle: 100	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.80	
Intersection Signal Delay: 28.4	Intersection LOS: C
Intersection Capacity Utilization 54.7%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 1: Baldy Mesa Rd. & Phelan Rd.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	155	588	23	15	341	146	36	72	69	208	49	185
Future Volume (veh/h)	155	588	23	15	341	146	36	72	69	208	49	185
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	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	180	684	17	17	397	114	42	84	52	242	57	108
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	210	1595	40	83	1333	594	57	185	157	273	426	361
Arrive On Green	0.13	0.47	0.47	0.05	0.39	0.39	0.03	0.10	0.10	0.17	0.24	0.24
Sat Flow, veh/h	1619	3410	85	1619	3420	1525	1619	1800	1525	1619	1800	1525
Grp Volume(v), veh/h	180	343	358	17	397	114	42	84	52	242	57	108
Grp Sat Flow(s),veh/h/ln	1619	1710	1785	1619	1710	1525	1619	1800	1525	1619	1800	1525
Q Serve(g_s), s	10.6	13.0	13.0	1.0	7.8	4.8	2.5	4.3	3.1	14.2	2.4	5.6
Cycle Q Clear(g_c), s	10.6	13.0	13.0	1.0	7.8	4.8	2.5	4.3	3.1	14.2	2.4	5.6
Prop In Lane	1.00		0.05	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	210	800	835	83	1333	594	57	185	157	273	426	361
V/C Ratio(X)	0.86	0.43	0.43	0.20	0.30	0.19	0.74	0.45	0.33	0.89	0.13	0.30
Avail Cap(c_a), veh/h	324	800	835	83	1333	594	125	518	439	357	775	657
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.3	17.2	17.2	44.1	20.4	19.5	46.4	40.9	40.4	39.5	29.2	30.4
Incr Delay (d2), s/veh	8.4	1.7	1.6	0.4	0.6	0.7	7.0	1.7	1.2	16.1	0.1	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.4	4.8	5.0	0.4	2.9	1.6	1.1	2.0	1.1	6.8	1.1	2.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	49.7	18.9	18.8	44.6	21.0	20.2	53.4	42.7	41.6	55.6	29.4	30.9
LnGrp LOS	D	B	B	D	C	C	D	D	D	E	C	C
Approach Vol, veh/h		881			528			178			407	
Approach Delay, s/veh		25.1			21.6			44.9			45.4	
Approach LOS		C			C			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	20.9	14.6	9.6	51.9	8.0	27.5	17.2	44.3
Change Period (Y+Rc), s	4.6	4.6	4.6	6.5	4.6	4.6	4.6	6.5
Max Green Setting (Gmax), s	21.4	27.9	5.0	45.4	7.5	41.8	19.4	31.0
Max Q Clear Time (g_c+I1), s	16.2	6.3	3.0	15.0	4.5	7.6	12.6	9.8
Green Ext Time (p_c), s	0.2	0.6	0.0	3.8	0.0	0.7	0.1	2.5

Intersection Summary	
HCM 6th Ctrl Delay	30.1
HCM 6th LOS	C

Intersection	
Int Delay, s/veh	1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	3	891	6	5	458	1	16	0	19	15	0	9
Future Vol, veh/h	3	891	6	5	458	1	16	0	19	15	0	9
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	105	-	105	110	-	110	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	86	86	86	86	86	86	86	86	86	86	86	86
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	3	1036	7	6	533	1	19	0	22	17	0	10

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	534	0	0	1043	0	0	1593	1588	1036	1602	1594	533
Stage 1	-	-	-	-	-	-	1042	1042	-	545	545	-
Stage 2	-	-	-	-	-	-	551	546	-	1057	1049	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
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	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1044	-	-	675	-	-	87	109	284	86	108	551
Stage 1	-	-	-	-	-	-	280	309	-	526	522	-
Stage 2	-	-	-	-	-	-	522	521	-	275	307	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1044	-	-	675	-	-	85	108	284	79	107	551
Mov Cap-2 Maneuver	-	-	-	-	-	-	199	221	-	183	217	-
Stage 1	-	-	-	-	-	-	279	308	-	524	517	-
Stage 2	-	-	-	-	-	-	508	516	-	253	306	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0.1	23.2	21.7
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	238	1044	-	-	675	-	-	244
HCM Lane V/C Ratio	0.171	0.003	-	-	0.009	-	-	0.114
HCM Control Delay (s)	23.2	8.5	-	-	10.4	-	-	21.7
HCM Lane LOS	C	A	-	-	B	-	-	C
HCM 95th %tile Q(veh)	0.6	0	-	-	0	-	-	0.4

Intersection	
Int Delay, s/veh	0.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	884	10	3	452	14	6
Future Vol, veh/h	884	10	3	452	14	6
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	110	-	0	-
Veh in Median Storage, #	0	-	-	0	1	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	1016	11	3	520	16	7

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1027	0	1548	1022
Stage 1	-	-	-	-	1022	-
Stage 2	-	-	-	-	526	-
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	-	-	684	-	127	289
Stage 1	-	-	-	-	350	-
Stage 2	-	-	-	-	597	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	684	-	126	289
Mov Cap-2 Maneuver	-	-	-	-	253	-
Stage 1	-	-	-	-	350	-
Stage 2	-	-	-	-	595	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	20
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	263	-	-	684	-
HCM Lane V/C Ratio	0.087	-	-	0.005	-
HCM Control Delay (s)	20	-	-	10.3	-
HCM Lane LOS	C	-	-	B	-
HCM 95th %tile Q(veh)	0.3	-	-	0	-

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑	↱	↰	
Traffic Vol, veh/h	0	890	447	400	12	7
Future Vol, veh/h	0	890	447	400	12	7
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	0	-
Veh in Median Storage, #	-	0	0	-	1	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	967	486	435	13	8

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	1453	486
Stage 1	-	-	-	-	486	-
Stage 2	-	-	-	-	967	-
Critical Hdwy	-	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	0	-	-	-	145	585
Stage 1	0	-	-	-	623	-
Stage 2	0	-	-	-	372	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	145	585
Mov Cap-2 Maneuver	-	-	-	-	273	-
Stage 1	-	-	-	-	623	-
Stage 2	-	-	-	-	372	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	16.3
HCM LOS			C

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	340
HCM Lane V/C Ratio	-	-	-	0.061
HCM Control Delay (s)	-	-	-	16.3
HCM Lane LOS	-	-	-	C
HCM 95th %tile Q(veh)	-	-	-	0.2

Intersection	
Int Delay, s/veh	7.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1	0	161	3	0	42
Future Vol, veh/h	1	0	161	3	0	42
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	100	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	1	0	175	3	0	46

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1	0	354	1
Stage 1	-	-	-	-	1	-
Stage 2	-	-	-	-	353	-
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	-	-	1635	-	648	1090
Stage 1	-	-	-	-	1028	-
Stage 2	-	-	-	-	716	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1635	-	579	1090
Mov Cap-2 Maneuver	-	-	-	-	579	-
Stage 1	-	-	-	-	1028	-
Stage 2	-	-	-	-	639	-

Approach	EB	WB	NB
HCM Control Delay, s	0	7.3	8.4
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1090	-	-	1635	-
HCM Lane V/C Ratio	0.042	-	-	0.107	-
HCM Control Delay (s)	8.4	-	-	7.5	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0.4	-

Intersection	
Int Delay, s/veh	4.9

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	43	0	271	164	0	50
Future Vol, veh/h	43	0	271	164	0	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	-	-	100	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	47	0	295	178	0	54

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	47	0	815	47
Stage 1	-	-	-	-	47	-
Stage 2	-	-	-	-	768	-
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	-	-	1573	-	350	1028
Stage 1	-	-	-	-	981	-
Stage 2	-	-	-	-	461	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1573	-	284	1028
Mov Cap-2 Maneuver	-	-	-	-	332	-
Stage 1	-	-	-	-	981	-
Stage 2	-	-	-	-	374	-

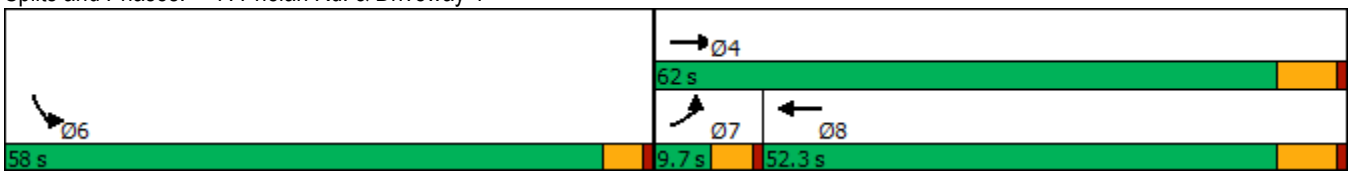
Approach	EB	WB	NB
HCM Control Delay, s	0	4.9	8.7
HCM LOS			A

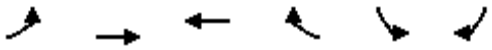
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1028	-	-	1573	-
HCM Lane V/C Ratio	0.053	-	-	0.187	-
HCM Control Delay (s)	8.7	-	-	7.8	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0.2	-	-	0.7	-

Lane Group	EBL	EBT	WBT	SBL
Lane Configurations				
Traffic Volume (vph)	86	816	840	112
Future Volume (vph)	86	816	840	112
Turn Type	Prot	NA	NA	Prot
Protected Phases	7	4	8	6
Permitted Phases				
Detector Phase	7	4	8	6
Switch Phase				
Minimum Initial (s)	5.0	10.0	10.0	10.0
Minimum Split (s)	9.6	16.5	23.5	26.6
Total Split (s)	9.7	62.0	52.3	58.0
Total Split (%)	8.1%	51.7%	43.6%	48.3%
Yellow Time (s)	3.6	5.5	5.5	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.5	6.5	4.6
Lead/Lag	Lead		Lag	
Lead-Lag Optimize?	Yes		Yes	
Recall Mode	None	Max	Max	None
Act Effct Green (s)	5.1	55.7	46.0	13.1
Actuated g/C Ratio	0.06	0.70	0.58	0.16
v/c Ratio	0.90	0.37	0.77	0.49
Control Delay	108.3	6.0	16.7	35.5
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	108.3	6.0	16.7	35.5
LOS	F	A	B	D
Approach Delay		15.7	16.7	35.5
Approach LOS		B	B	D

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 79.9	
Natural Cycle: 80	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.90	
Intersection Signal Delay: 17.3	Intersection LOS: B
Intersection Capacity Utilization 68.4%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 7: Phelan Rd. & Driveway 4





Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	86	816	840	440	112	7
Future Volume (veh/h)	86	816	840	440	112	7
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	1700	1800	1700	1800	1700	1800
Adj Flow Rate, veh/h	93	887	913	478	122	8
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	109	2498	1243	640	185	12
Arrive On Green	0.07	0.73	0.60	0.60	0.12	0.12
Sat Flow, veh/h	1619	3510	2147	1062	1497	98
Grp Volume(v), veh/h	93	887	712	679	131	0
Grp Sat Flow(s),veh/h/ln	1619	1710	1615	1509	1607	0
Q Serve(g_s), s	4.3	7.2	23.8	24.7	5.9	0.0
Cycle Q Clear(g_c), s	4.3	7.2	23.8	24.7	5.9	0.0
Prop In Lane	1.00			0.70	0.93	0.06
Lane Grp Cap(c), veh/h	109	2498	974	910	198	0
V/C Ratio(X)	0.86	0.36	0.73	0.75	0.66	0.00
Avail Cap(c_a), veh/h	109	2498	974	910	1130	0
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	0.00
Uniform Delay (d), s/veh	35.1	3.7	10.7	10.9	31.8	0.0
Incr Delay (d2), s/veh	43.3	0.4	4.8	5.6	3.7	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	2.9	1.1	6.9	6.8	2.5	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	78.3	4.1	15.5	16.5	35.5	0.0
LnGrp LOS	E	A	B	B	D	A
Approach Vol, veh/h		980	1391		131	
Approach Delay, s/veh		11.2	16.0		35.5	
Approach LOS		B	B		D	

Timer - Assigned Phs			4		6	7	8
Phs Duration (G+Y+Rc), s			62.0		14.0	9.7	52.3
Change Period (Y+Rc), s			6.5		4.6	4.6	6.5
Max Green Setting (Gmax), s			55.5		53.4	5.1	45.8
Max Q Clear Time (g_c+I1), s			9.2		7.9	6.3	26.7
Green Ext Time (p_c), s			6.2		0.4	0.0	8.6

Intersection Summary	
HCM 6th Ctrl Delay	15.1
HCM 6th LOS	B

Notes

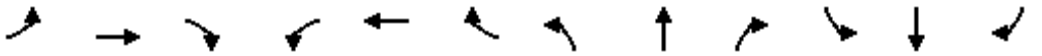
User approved volume balancing among the lanes for turning movement.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	49	122	68	73	92	36	718	44	210	830	68
Future Volume (vph)	49	122	68	73	92	36	718	44	210	830	68
Turn Type	Perm	NA	Perm	Perm	NA	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		4			8	5	2		1	6	
Permitted Phases	4		4	8				2			6
Detector Phase	4	4	4	8	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	15.0	15.0	15.0	42.0	42.0	9.0	28.0	28.0	9.0	37.0	37.0
Total Split (s)	44.0	44.0	44.0	44.0	44.0	10.0	45.0	45.0	31.0	66.0	66.0
Total Split (%)	36.7%	36.7%	36.7%	36.7%	36.7%	8.3%	37.5%	37.5%	25.8%	55.0%	55.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	3.0	5.0	5.0	3.0	5.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	4.0	6.0	6.0	4.0	6.0	6.0
Lead/Lag						Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?						Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Max	Max	None	Max	Max
Act Effct Green (s)	21.3	21.3	21.3	21.3	21.3	5.8	45.4	45.4	17.2	61.1	61.1
Actuated g/C Ratio	0.21	0.21	0.21	0.21	0.21	0.06	0.46	0.46	0.17	0.62	0.62
v/c Ratio	0.70	0.33	0.17	0.31	0.84	0.37	0.47	0.06	0.73	0.41	0.07
Control Delay	79.8	34.6	3.7	35.6	41.4	59.9	22.6	0.8	53.9	12.7	3.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	79.8	34.6	3.7	35.6	41.4	59.9	22.6	0.8	53.9	12.7	3.5
LOS	E	C	A	D	D	E	C	A	D	B	A
Approach Delay		35.0			40.5		23.1			19.9	
Approach LOS		D			D		C			B	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 99.1	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.84	
Intersection Signal Delay: 25.7	Intersection LOS: C
Intersection Capacity Utilization 78.3%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 8: US-395 & Luna Rd.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	49	122	68	73	92	264	36	718	44	210	830	68
Future Volume (veh/h)	49	122	68	73	92	264	36	718	44	210	830	68
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	53	133	41	79	100	221	39	780	32	228	902	56
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	148	468	397	315	130	286	59	1675	745	263	2083	929
Arrive On Green	0.25	0.25	0.25	0.25	0.25	0.25	0.03	0.46	0.46	0.15	0.58	0.58
Sat Flow, veh/h	1134	1900	1610	1298	526	1162	1810	3610	1605	1810	3610	1610
Grp Volume(v), veh/h	53	133	41	79	0	321	39	780	32	228	902	56
Grp Sat Flow(s),veh/h/ln	1134	1900	1610	1298	0	1688	1810	1805	1605	1810	1805	1610
Q Serve(g_s), s	4.7	5.9	2.0	5.5	0.0	18.4	2.2	15.4	1.1	12.8	14.7	1.6
Cycle Q Clear(g_c), s	23.2	5.9	2.0	11.4	0.0	18.4	2.2	15.4	1.1	12.8	14.7	1.6
Prop In Lane	1.00		1.00	1.00		0.69	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	148	468	397	315	0	416	59	1675	745	263	2083	929
V/C Ratio(X)	0.36	0.28	0.10	0.25	0.00	0.77	0.66	0.47	0.04	0.87	0.43	0.06
Avail Cap(c_a), veh/h	294	712	604	482	0	633	104	1675	745	470	2083	929
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.2	31.8	30.3	36.4	0.0	36.5	49.8	19.1	15.2	43.5	12.4	9.6
Incr Delay (d2), s/veh	0.5	0.1	0.0	0.2	0.0	1.4	9.1	0.9	0.1	6.4	0.7	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	2.6	0.8	1.7	0.0	7.5	1.1	5.9	0.4	5.9	5.1	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	47.8	31.9	30.3	36.5	0.0	37.8	58.9	20.0	15.4	49.9	13.1	9.8
LnGrp LOS	D	C	C	D	A	D	E	B	B	D	B	A
Approach Vol, veh/h		227			400			851			1186	
Approach Delay, s/veh		35.3			37.6			21.6			20.0	
Approach LOS		D			D			C			B	

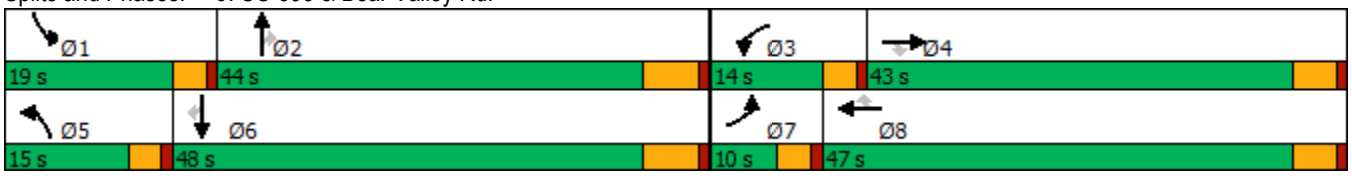
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	19.1	54.3		30.6	7.4	66.0		30.6				
Change Period (Y+Rc), s	4.0	6.0		5.0	4.0	6.0		5.0				
Max Green Setting (Gmax), s	27.0	39.0		39.0	6.0	60.0		39.0				
Max Q Clear Time (g_c+I1), s	14.8	17.4		25.2	4.2	16.7		20.4				
Green Ext Time (p_c), s	0.3	3.8		0.5	0.0	5.1		1.3				

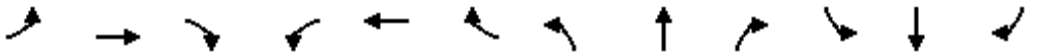
Intersection Summary			
HCM 6th Ctrl Delay		24.5	
HCM 6th LOS		C	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	41	298	165	184	246	93	105	683	101	163	785	22
Future Volume (vph)	41	298	165	184	246	93	105	683	101	163	785	22
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.0	43.0	43.0	9.0	43.0	43.0	9.0	44.0	44.0	9.0	44.0	44.0
Total Split (s)	10.0	43.0	43.0	14.0	47.0	47.0	15.0	44.0	44.0	19.0	48.0	48.0
Total Split (%)	8.3%	35.8%	35.8%	11.7%	39.2%	39.2%	12.5%	36.7%	36.7%	15.8%	40.0%	40.0%
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0	4.0	3.0	5.0	5.0	3.0	5.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	5.0	5.0	4.0	5.0	5.0	4.0	6.0	6.0	4.0	6.0	6.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Max	Max	None	Max	Max
Act Effct Green (s)	5.9	16.1	16.1	10.1	24.5	24.5	9.7	39.2	39.2	13.0	42.5	42.5
Actuated g/C Ratio	0.06	0.16	0.16	0.10	0.25	0.25	0.10	0.40	0.40	0.13	0.44	0.44
v/c Ratio	0.39	0.52	0.42	1.02	0.28	0.20	0.60	0.49	0.15	0.70	0.52	0.03
Control Delay	58.7	39.6	8.2	116.7	31.0	6.5	59.0	25.0	5.8	58.4	23.3	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	58.7	39.6	8.2	116.7	31.0	6.5	59.0	25.0	5.8	58.4	23.3	0.1
LOS	E	D	A	F	C	A	E	C	A	E	C	A
Approach Delay		30.9			56.8			26.8			28.6	
Approach LOS		C			E			C			C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 97.7	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.02	
Intersection Signal Delay: 33.6	Intersection LOS: C
Intersection Capacity Utilization 62.3%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 9: US-395 & Bear Valley Rd.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	41	298	165	184	246	93	105	683	101	163	785	22
Future Volume (veh/h)	41	298	165	184	246	93	105	683	101	163	785	22
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	42	307	89	190	254	62	108	704	77	168	809	17
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	66	426	190	205	704	314	138	1588	708	205	1721	768
Arrive On Green	0.04	0.12	0.12	0.11	0.19	0.19	0.08	0.44	0.44	0.11	0.48	0.48
Sat Flow, veh/h	1810	3610	1610	1810	3610	1610	1810	3610	1610	1810	3610	1610
Grp Volume(v), veh/h	42	307	89	190	254	62	108	704	77	168	809	17
Grp Sat Flow(s),veh/h/ln	1810	1805	1610	1810	1805	1610	1810	1805	1610	1810	1805	1610
Q Serve(g_s), s	2.0	7.2	4.5	9.2	5.4	2.8	5.2	12.0	2.5	8.0	13.3	0.5
Cycle Q Clear(g_c), s	2.0	7.2	4.5	9.2	5.4	2.8	5.2	12.0	2.5	8.0	13.3	0.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	66	426	190	205	704	314	138	1588	708	205	1721	768
V/C Ratio(X)	0.64	0.72	0.47	0.92	0.36	0.20	0.78	0.44	0.11	0.82	0.47	0.02
Avail Cap(c_a), veh/h	123	1557	695	205	1721	768	226	1588	708	308	1721	768
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.9	37.5	36.3	38.7	30.7	29.7	40.0	17.2	14.5	38.2	15.5	12.2
Incr Delay (d2), s/veh	7.3	0.9	0.7	42.0	0.1	0.1	7.1	0.9	0.3	8.6	0.9	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	3.0	1.7	6.2	2.2	1.0	2.4	4.4	0.8	3.8	4.8	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	49.2	38.3	36.9	80.7	30.8	29.8	47.1	18.1	14.8	46.8	16.5	12.2
LnGrp LOS	D	D	D	F	C	C	D	B	B	D	B	B
Approach Vol, veh/h		438			506			889			994	
Approach Delay, s/veh		39.1			49.4			21.3			21.5	
Approach LOS		D			D			C			C	

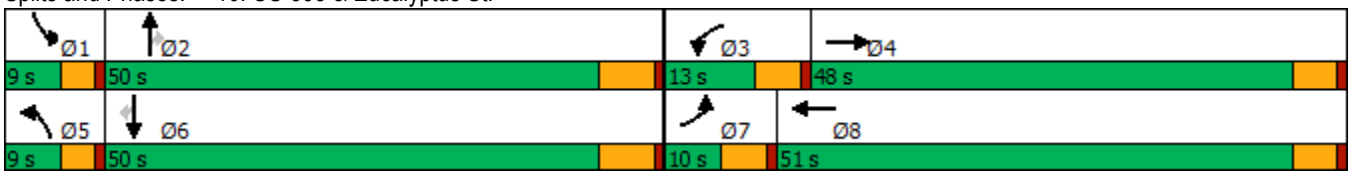
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.0	44.7	14.0	15.4	10.7	48.0	7.2	22.2
Change Period (Y+Rc), s	4.0	6.0	4.0	5.0	4.0	6.0	4.0	5.0
Max Green Setting (Gmax), s	15.0	38.0	10.0	38.0	11.0	42.0	6.0	42.0
Max Q Clear Time (g_c+I1), s	10.0	14.0	11.2	9.2	7.2	15.3	4.0	7.4
Green Ext Time (p_c), s	0.1	2.7	0.0	1.2	0.1	3.1	0.0	0.9

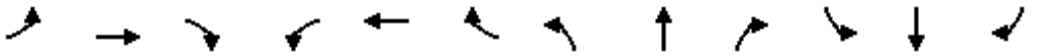
Intersection Summary	
HCM 6th Ctrl Delay	29.2
HCM 6th LOS	C

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	9	5	92	6	8	848	61	4	1151	8
Future Volume (vph)	9	5	92	6	8	848	61	4	1151	8
Turn Type	Prot	NA	Prot	NA	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4	3	8	5	2		1	6	
Permitted Phases							2			6
Detector Phase	7	4	3	8	5	2	2	1	6	6
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	10.0	48.0	10.0	48.0	9.0	41.0	41.0	9.0	41.0	41.0
Total Split (s)	10.0	48.0	13.0	51.0	9.0	50.0	50.0	9.0	50.0	50.0
Total Split (%)	8.3%	40.0%	10.8%	42.5%	7.5%	41.7%	41.7%	7.5%	41.7%	41.7%
Yellow Time (s)	4.0	4.0	4.0	4.0	3.0	5.0	5.0	3.0	5.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	4.0	6.0	6.0	4.0	6.0	6.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	Max	Max	None	Max	Max
Act Effct Green (s)	5.2	15.0	9.7	18.3	5.2	52.1	52.1	5.2	52.1	52.1
Actuated g/C Ratio	0.06	0.18	0.11	0.22	0.06	0.62	0.62	0.06	0.62	0.62
v/c Ratio	0.09	0.09	0.48	0.07	0.08	0.41	0.06	0.04	0.56	0.01
Control Delay	46.1	13.3	47.6	11.4	46.0	13.6	1.9	45.8	15.7	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	46.1	13.3	47.6	11.4	46.0	13.6	1.9	45.8	15.7	0.0
LOS	D	B	D	B	D	B	A	D	B	A
Approach Delay		22.0		39.6		13.1			15.7	
Approach LOS		C		D		B			B	

Intersection Summary		
Cycle Length: 120		
Actuated Cycle Length: 84.5		
Natural Cycle: 110		
Control Type: Actuated-Uncoordinated		
Maximum v/c Ratio: 0.56		
Intersection Signal Delay: 16.0	Intersection LOS: B	
Intersection Capacity Utilization 53.5%	ICU Level of Service A	
Analysis Period (min) 15		

Splits and Phases: 10: US-395 & Eucalyptus St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	9	5	21	92	6	20	8	848	61	4	1151	8
Future Volume (veh/h)	9	5	21	92	6	20	8	848	61	4	1151	8
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	10	5	15	99	6	11	9	912	62	4	1238	8
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	23	37	110	127	87	160	21	2084	929	10	2062	920
Arrive On Green	0.01	0.09	0.09	0.07	0.15	0.15	0.01	0.58	0.58	0.01	0.57	0.57
Sat Flow, veh/h	1810	419	1256	1810	600	1100	1810	3610	1610	1810	3610	1610
Grp Volume(v), veh/h	10	0	20	99	0	17	9	912	62	4	1238	8
Grp Sat Flow(s),veh/h/ln	1810	0	1674	1810	0	1699	1810	1805	1610	1810	1805	1610
Q Serve(g_s), s	0.4	0.0	0.9	4.1	0.0	0.7	0.4	11.0	1.3	0.2	17.2	0.2
Cycle Q Clear(g_c), s	0.4	0.0	0.9	4.1	0.0	0.7	0.4	11.0	1.3	0.2	17.2	0.2
Prop In Lane	1.00		0.75	1.00		0.65	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	23	0	146	127	0	247	21	2084	929	10	2062	920
V/C Ratio(X)	0.44	0.00	0.14	0.78	0.00	0.07	0.44	0.44	0.07	0.42	0.60	0.01
Avail Cap(c_a), veh/h	117	0	934	188	0	1015	117	2084	929	117	2062	920
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.8	0.0	32.5	35.2	0.0	28.4	37.8	9.2	7.2	38.2	10.8	7.1
Incr Delay (d2), s/veh	5.0	0.0	0.4	6.0	0.0	0.1	5.3	0.7	0.1	10.2	1.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	0.3	1.9	0.0	0.3	0.2	3.3	0.4	0.1	6.5	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	42.7	0.0	32.9	41.3	0.0	28.5	43.2	9.9	7.3	48.4	12.1	7.1
LnGrp LOS	D	A	C	D	A	C	D	A	A	D	B	A
Approach Vol, veh/h		30			116			983			1250	
Approach Delay, s/veh		36.2			39.4			10.0			12.2	
Approach LOS		D			D			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	4.4	50.5	10.4	11.7	4.9	50.0	6.0	16.2
Change Period (Y+Rc), s	4.0	6.0	5.0	5.0	4.0	6.0	5.0	5.0
Max Green Setting (Gmax), s	5.0	44.0	8.0	43.0	5.0	44.0	5.0	46.0
Max Q Clear Time (g_c+I1), s	2.2	13.0	6.1	2.9	2.4	19.2	2.4	2.7
Green Ext Time (p_c), s	0.0	6.4	0.0	0.1	0.0	10.9	0.0	0.1

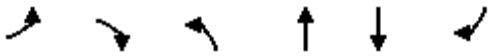
Intersection Summary	
HCM 6th Ctrl Delay	12.9
HCM 6th LOS	B

Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Configurations					
Traffic Volume (vph)	19	74	324	969	1175
Future Volume (vph)	19	74	324	969	1175
Turn Type	Prot	Perm	Prot	NA	NA
Protected Phases	4		5	2	6
Permitted Phases		4			
Detector Phase	4	4	5	2	6
Switch Phase					
Minimum Initial (s)	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	22.6	22.6	9.6	16.5	23.5
Total Split (s)	22.6	22.6	23.0	97.4	74.4
Total Split (%)	18.8%	18.8%	19.2%	81.2%	62.0%
Yellow Time (s)	3.6	3.6	3.6	5.5	5.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	6.5	6.5
Lead/Lag			Lead		Lag
Lead-Lag Optimize?			Yes		Yes
Recall Mode	None	None	None	Max	Max
Act Effct Green (s)	11.5	11.5	18.5	92.8	68.2
Actuated g/C Ratio	0.10	0.10	0.17	0.84	0.62
v/c Ratio	0.11	0.34	1.20	0.68	1.23
Control Delay	47.2	14.2	157.4	7.9	135.8
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	47.2	14.2	157.4	7.9	135.8
LOS	D	B	F	A	F
Approach Delay	20.9			45.3	135.8
Approach LOS	C			D	F

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 110.7	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.23	
Intersection Signal Delay: 88.0	Intersection LOS: F
Intersection Capacity Utilization 107.9%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 11: US-395 & Yucca Terrace Dr.





Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	19	74	324	969	1175	111
Future Volume (veh/h)	19	74	324	969	1175	111
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	21	60	360	1077	1306	123
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	149	133	299	1553	1044	98
Arrive On Green	0.08	0.08	0.17	0.82	0.61	0.61
Sat Flow, veh/h	1810	1610	1810	1900	1710	161
Grp Volume(v), veh/h	21	60	360	1077	0	1429
Grp Sat Flow(s),veh/h/ln	1810	1610	1810	1900	0	1871
Q Serve(g_s), s	1.2	3.9	18.4	26.5	0.0	67.9
Cycle Q Clear(g_c), s	1.2	3.9	18.4	26.5	0.0	67.9
Prop In Lane	1.00	1.00	1.00			0.09
Lane Grp Cap(c), veh/h	149	133	299	1553	0	1143
V/C Ratio(X)	0.14	0.45	1.20	0.69	0.00	1.25
Avail Cap(c_a), veh/h	293	261	299	1553	0	1143
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	0.00	1.00
Uniform Delay (d), s/veh	47.3	48.6	46.4	4.3	0.0	21.6
Incr Delay (d2), s/veh	0.4	2.4	118.4	2.6	0.0	120.1
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	3.6	17.7	5.1	0.0	61.7
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	47.8	51.0	164.8	6.8	0.0	141.8
LnGrp LOS	D	D	F	A	A	F
Approach Vol, veh/h	81			1437	1429	
Approach Delay, s/veh	50.1			46.4	141.8	
Approach LOS	D			D	F	

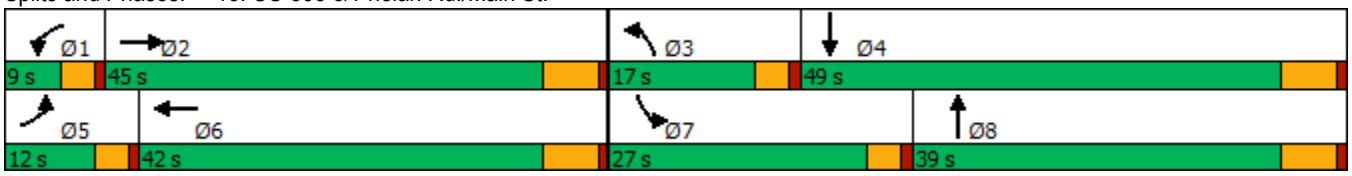
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		97.4		13.8	23.0	74.4
Change Period (Y+Rc), s		6.5		4.6	4.6	6.5
Max Green Setting (Gmax), s		90.9		18.0	18.4	67.9
Max Q Clear Time (g_c+I1), s		28.5		5.9	20.4	69.9
Green Ext Time (p_c), s		10.5		0.1	0.0	0.0

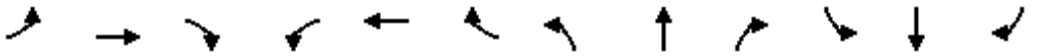
Intersection Summary			
HCM 6th Ctrl Delay		92.8	
HCM 6th LOS		F	

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	47	761	4	1072	178	794	264	955
Future Volume (vph)	47	761	4	1072	178	794	264	955
Turn Type	Prot	NA	Prot	NA	Prot	NA	Prot	NA
Protected Phases	5	2	1	6	3	8	7	4
Permitted Phases								
Detector Phase	5	2	1	6	3	8	7	4
Switch Phase								
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.0	16.0	9.0	16.0	9.0	16.0	9.0	16.0
Total Split (s)	12.0	45.0	9.0	42.0	17.0	39.0	27.0	49.0
Total Split (%)	10.0%	37.5%	7.5%	35.0%	14.2%	32.5%	22.5%	40.8%
Yellow Time (s)	3.0	5.0	3.0	5.0	3.0	5.0	3.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	6.0	4.0	6.0	4.0	6.0	4.0	6.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None
Act Effct Green (s)	7.1	43.6	5.1	36.4	13.1	31.4	20.3	38.6
Actuated g/C Ratio	0.06	0.39	0.05	0.32	0.12	0.28	0.18	0.34
v/c Ratio	0.43	0.67	0.05	1.39	0.89	0.84	0.85	0.84
Control Delay	65.9	32.3	56.8	210.1	90.1	48.0	69.6	41.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	65.9	32.3	56.8	210.1	90.1	48.0	69.6	41.6
LOS	E	C	E	F	F	D	E	D
Approach Delay		34.0		209.7		55.6		47.5
Approach LOS		C		F		E		D

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 113.2	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.39	
Intersection Signal Delay: 99.4	Intersection LOS: F
Intersection Capacity Utilization 94.7%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 13: US-395 & Phelan Rd./Main St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	47	761	121	4	1072	452	178	794	9	264	955	31
Future Volume (veh/h)	47	761	121	4	1072	452	178	794	9	264	955	31
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	49	793	81	4	1117	391	185	827	9	275	995	28
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	64	1202	123	9	878	302	214	1011	11	307	1175	33
Arrive On Green	0.04	0.36	0.36	0.01	0.33	0.33	0.12	0.28	0.28	0.17	0.33	0.33
Sat Flow, veh/h	1810	3307	338	1810	2636	906	1810	3658	40	1810	3586	101
Grp Volume(v), veh/h	49	433	441	4	759	749	185	408	428	275	501	522
Grp Sat Flow(s),veh/h/ln	1810	1805	1839	1810	1805	1737	1810	1805	1893	1810	1805	1882
Q Serve(g_s), s	2.9	21.7	21.7	0.2	36.0	36.0	10.8	22.8	22.8	16.1	27.9	27.9
Cycle Q Clear(g_c), s	2.9	21.7	21.7	0.2	36.0	36.0	10.8	22.8	22.8	16.1	27.9	27.9
Prop In Lane	1.00		0.18	1.00		0.52	1.00		0.02	1.00		0.05
Lane Grp Cap(c), veh/h	64	656	669	9	601	579	214	499	523	307	591	617
V/C Ratio(X)	0.76	0.66	0.66	0.42	1.26	1.30	0.86	0.82	0.82	0.90	0.85	0.85
Avail Cap(c_a), veh/h	134	656	669	84	601	579	218	551	578	385	718	749
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	51.6	28.8	28.8	53.6	36.0	36.0	46.8	36.5	36.5	43.9	33.8	33.8
Incr Delay (d2), s/veh	12.7	2.4	2.4	20.6	130.7	145.3	27.4	9.0	8.6	18.8	8.3	8.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	9.0	9.2	0.2	36.3	37.2	6.3	10.6	11.0	8.4	12.6	13.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	64.3	31.2	31.2	74.2	166.7	181.3	74.1	45.5	45.1	62.7	42.1	41.8
LnGrp LOS	E	C	C	E	F	F	E	D	D	E	D	D
Approach Vol, veh/h		923			1512			1021			1298	
Approach Delay, s/veh		33.0			173.7			50.5			46.3	
Approach LOS		C			F			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	4.6	45.3	16.8	41.4	7.9	42.0	22.3	35.9
Change Period (Y+Rc), s	4.0	6.0	4.0	6.0	4.0	6.0	4.0	6.0
Max Green Setting (Gmax), s	5.0	39.0	13.0	43.0	8.0	36.0	23.0	33.0
Max Q Clear Time (g_c+I1), s	2.2	23.7	12.8	29.9	4.9	38.0	18.1	24.8
Green Ext Time (p_c), s	0.0	4.2	0.0	5.5	0.0	0.0	0.3	3.3

Intersection Summary	
HCM 6th Ctrl Delay	85.1
HCM 6th LOS	F

Intersection	
Int Delay, s/veh	0.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	5	9	971	13	24	1054
Future Vol, veh/h	5	9	971	13	24	1054
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	375	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	5	10	1044	14	26	1133

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	2236	529	0	0	1058	0
Stage 1	1051	-	-	-	-	-
Stage 2	1185	-	-	-	-	-
Critical Hdwy	6.6	6.9	-	-	4.1	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	42	499	-	-	666	-
Stage 1	302	-	-	-	-	-
Stage 2	293	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	40	499	-	-	666	-
Mov Cap-2 Maneuver	40	-	-	-	-	-
Stage 1	302	-	-	-	-	-
Stage 2	282	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	46.7	0	0.2
HCM LOS	E		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	40	499	666	-
HCM Lane V/C Ratio	-	-	0.134	0.019	0.039	-
HCM Control Delay (s)	-	-	108.5	12.4	10.6	-
HCM Lane LOS	-	-	F	B	B	-
HCM 95th %tile Q(veh)	-	-	0.4	0.1	0.1	-

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	24	1	165	2	41	23	918	101	20	966	73
Future Volume (vph)	24	1	165	2	41	23	918	101	20	966	73
Turn Type	Perm	NA	Perm	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		4		8		5	2		1	6	
Permitted Phases	4		8		8			2			6
Detector Phase	4	4	8	8	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	16.0	16.0	16.0	16.0	16.0	10.0	16.0	16.0	10.0	16.0	16.0
Total Split (s)	42.0	42.0	42.0	42.0	42.0	13.0	66.0	66.0	12.0	65.0	65.0
Total Split (%)	35.0%	35.0%	35.0%	35.0%	35.0%	10.8%	55.0%	55.0%	10.0%	54.2%	54.2%
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	5.0	6.0	6.0	5.0	6.0	6.0
Lead/Lag						Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?						Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Max	Max	None	Max	Max
Act Effct Green (s)	17.4	17.4	17.4	17.4	17.4	6.1	60.8	60.8	5.8	60.6	60.6
Actuated g/C Ratio	0.18	0.18	0.18	0.18	0.18	0.06	0.64	0.64	0.06	0.64	0.64
v/c Ratio	0.10	0.24	0.73	0.01	0.13	0.22	0.43	0.10	0.20	0.45	0.07
Control Delay	33.4	9.4	54.8	32.0	3.7	50.5	10.8	2.6	50.8	11.3	3.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	33.4	9.4	54.8	32.0	3.7	50.5	10.8	2.6	50.8	11.3	3.0
LOS	C	A	D	C	A	D	B	A	D	B	A
Approach Delay		14.8		44.4			10.9			11.5	
Approach LOS		B		D			B			B	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 94.5	
Natural Cycle: 60	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.73	
Intersection Signal Delay: 14.2	Intersection LOS: B
Intersection Capacity Utilization 57.0%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 15: US-395 & Three Flags Rd.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	24	1	81	165	2	41	23	918	101	20	966	73
Future Volume (veh/h)	24	1	81	165	2	41	23	918	101	20	966	73
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	26	1	51	179	2	36	25	998	98	22	1050	58
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	325	5	272	284	326	276	46	2265	1009	42	2257	1007
Arrive On Green	0.17	0.17	0.17	0.17	0.17	0.17	0.03	0.63	0.63	0.02	0.63	0.63
Sat Flow, veh/h	1464	31	1584	1450	1900	1605	1810	3610	1609	1810	3610	1610
Grp Volume(v), veh/h	26	0	52	179	2	36	25	998	98	22	1050	58
Grp Sat Flow(s),veh/h/ln	1464	0	1615	1450	1900	1605	1810	1805	1609	1810	1805	1610
Q Serve(g_s), s	1.4	0.0	2.6	11.5	0.1	1.8	1.3	13.6	2.3	1.1	14.7	1.3
Cycle Q Clear(g_c), s	1.5	0.0	2.6	14.2	0.1	1.8	1.3	13.6	2.3	1.1	14.7	1.3
Prop In Lane	1.00		0.98	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	325	0	277	284	326	276	46	2265	1009	42	2257	1007
V/C Ratio(X)	0.08	0.00	0.19	0.63	0.01	0.13	0.54	0.44	0.10	0.53	0.47	0.06
Avail Cap(c_a), veh/h	625	0	608	581	715	604	151	2265	1009	132	2257	1007
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	33.5	0.0	33.9	40.0	32.8	33.6	46.1	9.2	7.1	46.2	9.5	7.0
Incr Delay (d2), s/veh	0.0	0.0	0.1	0.9	0.0	0.1	3.7	0.6	0.2	3.8	0.7	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.0	1.0	4.1	0.0	0.7	0.6	4.3	0.7	0.5	4.6	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	33.5	0.0	34.0	40.8	32.8	33.6	49.8	9.8	7.3	49.9	10.2	7.1
LnGrp LOS	C	A	C	D	C	C	D	A	A	D	B	A
Approach Vol, veh/h		78			217			1121			1130	
Approach Delay, s/veh		33.8			39.5			10.5			10.8	
Approach LOS		C			D			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.2	66.0		22.4	7.4	65.8		22.4				
Change Period (Y+Rc), s	5.0	6.0		6.0	5.0	6.0		6.0				
Max Green Setting (Gmax), s	7.0	60.0		36.0	8.0	59.0		36.0				
Max Q Clear Time (g_c+I1), s	3.1	15.6		4.6	3.3	16.7		16.2				
Green Ext Time (p_c), s	0.0	7.7		0.2	0.0	8.1		0.3				

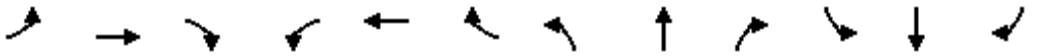
Intersection Summary			
HCM 6th Ctrl Delay		13.8	
HCM 6th LOS		B	

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	26	30	92	12	137	8	879	59	107	1073	33
Future Volume (vph)	26	30	92	12	137	8	879	59	107	1073	33
Turn Type	Perm	NA	Perm	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		4		8		5	2		1	6	
Permitted Phases	4		8		8			2			6
Detector Phase	4	4	8	8	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	15.0	15.0	46.0	46.0	46.0	9.0	34.0	34.0	9.0	34.0	34.0
Total Split (s)	47.0	47.0	47.0	47.0	47.0	9.0	52.0	52.0	21.0	64.0	64.0
Total Split (%)	39.2%	39.2%	39.2%	39.2%	39.2%	7.5%	43.3%	43.3%	17.5%	53.3%	53.3%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	3.0	5.0	5.0	3.0	5.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	0.0	-2.0	-2.0	0.0	-2.0	-2.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag						Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?						Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Max	Max	None	Max	Max
Act Effct Green (s)	16.5	16.5	16.5	16.5	16.5	5.1	49.5	49.5	10.6	62.8	62.8
Actuated g/C Ratio	0.19	0.19	0.19	0.19	0.19	0.06	0.56	0.56	0.12	0.71	0.71
v/c Ratio	0.11	0.10	0.39	0.04	0.36	0.09	0.47	0.07	0.54	0.46	0.03
Control Delay	29.6	27.4	35.3	28.2	7.3	48.4	15.5	2.2	48.4	9.1	1.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	29.6	27.4	35.3	28.2	7.3	48.4	15.5	2.2	48.4	9.1	1.9
LOS	C	C	D	C	A	D	B	A	D	A	A
Approach Delay		28.3		19.1			15.0			12.3	
Approach LOS		C		B			B			B	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 88.8	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.54	
Intersection Signal Delay: 14.4	Intersection LOS: B
Intersection Capacity Utilization 56.3%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 16: US-395 & Joshua St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	26	30	3	92	12	137	8	879	59	107	1073	33
Future Volume (veh/h)	26	30	3	92	12	137	8	879	59	107	1073	33
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	28	33	0	100	13	95	9	955	50	116	1166	31
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	262	256	0	261	256	216	20	2313	1032	149	2569	1146
Arrive On Green	0.13	0.13	0.00	0.13	0.13	0.13	0.01	0.64	0.64	0.08	0.71	0.71
Sat Flow, veh/h	1376	1900	0	1475	1900	1607	1810	3610	1610	1810	3610	1610
Grp Volume(v), veh/h	28	33	0	100	13	95	9	955	50	116	1166	31
Grp Sat Flow(s),veh/h/ln	1376	1900	0	1475	1900	1607	1810	1805	1610	1810	1805	1610
Q Serve(g_s), s	1.5	1.3	0.0	5.4	0.5	4.6	0.4	10.9	1.0	5.3	11.6	0.5
Cycle Q Clear(g_c), s	2.0	1.3	0.0	6.7	0.5	4.6	0.4	10.9	1.0	5.3	11.6	0.5
Prop In Lane	1.00		0.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	262	256	0	261	256	216	20	2313	1032	149	2569	1146
V/C Ratio(X)	0.11	0.13	0.00	0.38	0.05	0.44	0.44	0.41	0.05	0.78	0.45	0.03
Avail Cap(c_a), veh/h	779	969	0	815	969	819	107	2313	1032	365	2569	1146
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.7	32.1	0.0	35.1	31.8	33.5	41.4	7.4	5.6	37.9	5.2	3.6
Incr Delay (d2), s/veh	0.1	0.1	0.0	0.3	0.0	0.5	10.7	0.5	0.1	6.5	0.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.6	0.0	1.9	0.2	1.8	0.2	3.0	0.3	2.4	2.6	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	32.7	32.2	0.0	35.4	31.8	34.1	52.1	7.9	5.7	44.4	5.8	3.6
LnGrp LOS	C	C	A	D	C	C	D	A	A	D	A	A
Approach Vol, veh/h		61			208			1014			1313	
Approach Delay, s/veh		32.4			34.6			8.2			9.1	
Approach LOS		C			C			A			A	

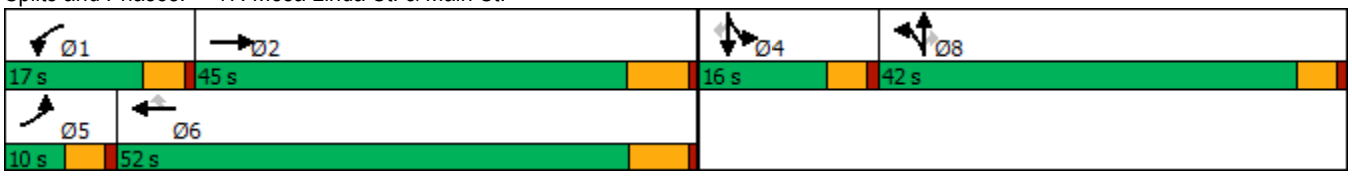
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.9	58.0		15.3	5.0	64.0		15.3				
Change Period (Y+Rc), s	4.0	6.0		5.0	4.0	6.0		5.0				
Max Green Setting (Gmax), s	17.0	46.0		42.0	5.0	58.0		42.0				
Max Q Clear Time (g_c+I1), s	7.3	12.9		4.0	2.4	13.6		8.7				
Green Ext Time (p_c), s	0.1	13.7		0.1	0.0	19.9		0.3				

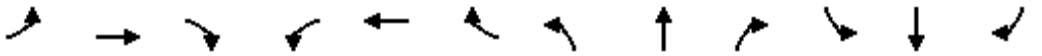
Intersection Summary			
HCM 6th Ctrl Delay		11.4	
HCM 6th LOS		B	

Lane Group	EBL	EBT	WBL	WBT	WBR	NBT	NBR	SBT	SBR
Lane Configurations									
Traffic Volume (vph)	5	1023	50	1503	17	2	126	2	14
Future Volume (vph)	5	1023	50	1503	17	2	126	2	14
Turn Type	Prot	NA	Prot	NA	Perm	NA	Perm	NA	Perm
Protected Phases	5	2	1	6		8		4	
Permitted Phases					6		8		4
Detector Phase	5	2	1	6	6	8	8	4	4
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	16.5	9.6	23.2	23.2	40.6	40.6	14.6	14.6
Total Split (s)	10.0	45.0	17.0	52.0	52.0	42.0	42.0	16.0	16.0
Total Split (%)	8.3%	37.5%	14.2%	43.3%	43.3%	35.0%	35.0%	13.3%	13.3%
Yellow Time (s)	3.6	5.5	3.6	5.2	5.2	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.5	4.6	6.2	6.2	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lead	Lag	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes				
Recall Mode	None	Max	None	Max	Max	None	None	None	None
Act Effct Green (s)	5.3	41.7	7.9	50.6	50.6	14.2	14.2	10.6	10.6
Actuated g/C Ratio	0.06	0.47	0.09	0.57	0.57	0.16	0.16	0.12	0.12
v/c Ratio	0.06	0.52	0.42	0.63	0.02	0.01	0.39	0.28	0.05
Control Delay	48.6	21.6	51.3	17.7	0.1	31.5	8.0	45.1	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	48.6	21.6	51.3	17.7	0.1	31.5	8.0	45.1	0.3
LOS	D	C	D	B	A	C	A	D	A
Approach Delay		21.7		18.6		8.3		35.3	
Approach LOS		C		B		A		D	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 88.9	
Natural Cycle: 110	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.63	
Intersection Signal Delay: 19.7	Intersection LOS: B
Intersection Capacity Utilization 60.2%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 17: Mesa Linda St. & Main St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	1023	3	50	1503	17	0	2	126	47	2	14
Future Volume (veh/h)	5	1023	3	50	1503	17	0	2	126	47	2	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	6	1204	4	59	1768	12	0	2	127	55	2	2
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	13	2578	9	73	2688	835	0	204	173	148	5	136
Arrive On Green	0.01	0.51	0.51	0.05	0.55	0.55	0.00	0.11	0.11	0.09	0.09	0.09
Sat Flow, veh/h	1619	5056	17	1619	4914	1525	0	1800	1525	1657	60	1525
Grp Volume(v), veh/h	6	780	428	59	1768	12	0	2	127	57	0	2
Grp Sat Flow(s),veh/h/ln	1619	1638	1797	1619	1638	1525	0	1800	1525	1717	0	1525
Q Serve(g_s), s	0.3	12.8	12.8	3.0	21.3	0.3	0.0	0.1	6.7	2.6	0.0	0.1
Cycle Q Clear(g_c), s	0.3	12.8	12.8	3.0	21.3	0.3	0.0	0.1	6.7	2.6	0.0	0.1
Prop In Lane	1.00		0.01	1.00		1.00	0.00		1.00	0.96		1.00
Lane Grp Cap(c), veh/h	13	1670	916	73	2688	835	0	204	173	153	0	136
V/C Ratio(X)	0.48	0.47	0.47	0.81	0.66	0.01	0.00	0.01	0.73	0.37	0.00	0.01
Avail Cap(c_a), veh/h	104	1670	916	240	2688	835	0	804	681	234	0	208
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	41.4	13.2	13.2	39.6	13.4	8.7	0.0	32.9	35.9	35.9	0.0	34.8
Incr Delay (d2), s/veh	10.0	0.9	1.7	7.7	1.3	0.0	0.0	0.0	5.9	1.5	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	4.0	4.6	1.3	6.5	0.1	0.0	0.0	2.8	1.2	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	51.4	14.1	14.9	47.4	14.7	8.7	0.0	33.0	41.8	37.4	0.0	34.8
LnGrp LOS	D	B	B	D	B	A	A	C	D	D	A	C
Approach Vol, veh/h		1214			1839			129			59	
Approach Delay, s/veh		14.6			15.7			41.6			37.3	
Approach LOS		B			B			D			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.4	49.2		12.1	5.3	52.3		14.1				
Change Period (Y+Rc), s	4.6	6.5		4.6	4.6	* 6.5		4.6				
Max Green Setting (Gmax), s	12.4	38.5		11.4	5.4	* 46		37.4				
Max Q Clear Time (g_c+I1), s	5.0	14.8		4.6	2.3	23.3		8.7				
Green Ext Time (p_c), s	0.0	7.4		0.1	0.0	12.8		0.4				

Intersection Summary			
HCM 6th Ctrl Delay		16.7	
HCM 6th LOS		B	

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	50	982	36	70	1515	17	31	7	48	34	6	26
Future Volume (vph)	50	982	36	70	1515	17	31	7	48	34	6	26
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Split	NA	Perm	Split	NA	Perm
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases			2			6			8			4
Detector Phase	5	2	2	1	6	6	8	8	8	4	4	4
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	32.2	32.2	9.6	32.2	32.2	43.6	43.6	43.6	41.6	41.6	41.6
Total Split (s)	12.0	34.7	34.7	10.1	32.8	32.8	43.6	43.6	43.6	41.6	41.6	41.6
Total Split (%)	9.2%	26.7%	26.7%	7.8%	25.2%	25.2%	33.5%	33.5%	33.5%	32.0%	32.0%	32.0%
Yellow Time (s)	3.6	5.2	5.2	3.6	5.2	5.2	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	6.2	4.6	6.2	6.2	4.6	4.6	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes						
Recall Mode	None	Max	Max	None	Max	Max	None	None	None	None	None	None
Act Effct Green (s)	7.1	38.2	38.2	5.9	37.0	37.0	14.5	14.5	14.5	14.3	14.3	14.3
Actuated g/C Ratio	0.09	0.49	0.49	0.08	0.48	0.48	0.19	0.19	0.19	0.18	0.18	0.18
v/c Ratio	0.38	0.45	0.05	0.35	0.72	0.02	0.07	0.07	0.15	0.13	0.02	0.08
Control Delay	49.6	23.4	0.1	46.9	27.9	0.1	30.7	30.6	0.8	31.6	31.0	0.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	49.6	23.4	0.1	46.9	27.9	0.1	30.7	30.6	0.8	31.6	31.0	0.4
LOS	D	C	A	D	C	A	C	C	A	C	C	A
Approach Delay		23.8			28.4			14.1			19.3	
Approach LOS		C			C			B			B	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 77.4	
Natural Cycle: 130	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.72	
Intersection Signal Delay: 26.0	Intersection LOS: C
Intersection Capacity Utilization 61.2%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 18: Cataba Av. & Main St.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	50	982	36	70	1515	17	31	7	48	34	6	26
Future Volume (veh/h)	50	982	36	70	1515	17	31	7	48	34	6	26
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	1700	1800	1800	1600	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	56	1103	33	79	1702	12	41	0	34	38	7	0
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	79	2133	662	172	2179	676	382	0	180	138	153	130
Arrive On Green	0.05	0.43	0.43	0.06	0.44	0.44	0.12	0.00	0.12	0.09	0.09	0.00
Sat Flow, veh/h	1619	4914	1524	2956	4914	1524	3238	0	1522	1619	1800	1525
Grp Volume(v), veh/h	56	1103	33	79	1702	12	41	0	34	38	7	0
Grp Sat Flow(s),veh/h/ln	1619	1638	1524	1478	1638	1524	1619	0	1522	1619	1800	1525
Q Serve(g_s), s	2.2	10.8	0.8	1.7	19.4	0.3	0.7	0.0	1.3	1.4	0.2	0.0
Cycle Q Clear(g_c), s	2.2	10.8	0.8	1.7	19.4	0.3	0.7	0.0	1.3	1.4	0.2	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	79	2133	662	172	2179	676	382	0	180	138	153	130
V/C Ratio(X)	0.71	0.52	0.05	0.46	0.78	0.02	0.11	0.00	0.19	0.28	0.05	0.00
Avail Cap(c_a), veh/h	182	2133	662	248	2179	676	1923	0	904	912	1014	860
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	30.8	13.6	10.7	29.9	15.6	10.3	25.9	0.0	26.1	28.1	27.6	0.0
Incr Delay (d2), s/veh	4.3	0.9	0.1	0.7	2.9	0.0	0.1	0.0	0.5	1.1	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	3.2	0.2	0.6	6.1	0.1	0.3	0.0	0.5	0.6	0.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	35.1	14.5	10.9	30.6	18.4	10.3	26.0	0.0	26.6	29.2	27.7	0.0
LnGrp LOS	D	B	B	C	B	B	C	A	C	C	C	A
Approach Vol, veh/h		1192			1793			75			45	
Approach Delay, s/veh		15.3			18.9			26.3			29.0	
Approach LOS		B			B			C			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.4	34.7		10.2	7.8	35.3		12.3				
Change Period (Y+Rc), s	4.6	6.2		4.6	4.6	6.2		4.6				
Max Green Setting (Gmax), s	5.5	28.5		37.0	7.4	26.6		39.0				
Max Q Clear Time (g_c+I1), s	3.7	12.8		3.4	4.2	21.4		3.3				
Green Ext Time (p_c), s	0.0	6.2		0.1	0.0	4.0		0.2				

Intersection Summary			
HCM 6th Ctrl Delay		17.9	
HCM 6th LOS		B	

Notes

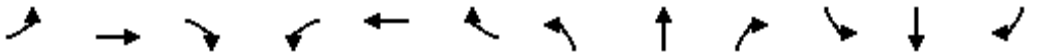
User approved pedestrian interval to be less than phase max green.
User approved volume balancing among the lanes for turning movement.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	30	1030	12	138	1640	11	11	78	143	26
Future Volume (vph)	30	1030	12	138	1640	11	11	78	143	26
Turn Type	Prot	NA	Perm	Prot	NA	Perm	NA	Perm	Perm	NA
Protected Phases	5	2		1	6		8			4
Permitted Phases			2			8		8	4	
Detector Phase	5	2	2	1	6	8	8	8	4	4
Switch Phase										
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	29.2	29.2	9.6	30.2	38.6	38.6	38.6	41.6	41.6
Total Split (s)	14.0	45.0	45.0	29.0	60.0	46.0	46.0	46.0	46.0	46.0
Total Split (%)	11.7%	37.5%	37.5%	24.2%	50.0%	38.3%	38.3%	38.3%	38.3%	38.3%
Yellow Time (s)	3.6	5.2	5.2	3.6	5.2	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	6.2	4.6	6.2	4.6	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes					
Recall Mode	None	Max	Max	None	Max	None	None	None	None	None
Act Effct Green (s)	6.5	44.8	44.8	12.3	55.2	17.7	17.7	17.7	17.7	17.7
Actuated g/C Ratio	0.07	0.50	0.50	0.14	0.61	0.20	0.20	0.20	0.20	0.20
v/c Ratio	0.27	0.43	0.02	0.65	0.60	0.05	0.03	0.21	0.59	0.12
Control Delay	50.5	17.6	0.0	53.1	14.8	29.6	29.3	3.4	43.2	22.0
Queue Delay	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0
Total Delay	50.5	17.6	0.0	53.1	15.0	29.6	29.3	3.4	43.2	22.0
LOS	D	B	A	D	B	C	C	A	D	C
Approach Delay		18.3			17.8		9.0			38.5
Approach LOS		B			B		A			D

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 90.5	
Natural Cycle: 85	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.65	
Intersection Signal Delay: 18.9	Intersection LOS: B
Intersection Capacity Utilization 68.5%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 19: Key Point Av. & Main St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	1030	12	138	1640	107	11	11	78	143	26	15
Future Volume (veh/h)	30	1030	12	138	1640	107	11	11	78	143	26	15
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	31	1051	9	141	1673	75	11	11	20	146	27	10
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	50	2771	859	172	3084	138	254	264	223	272	183	68
Arrive On Green	0.03	0.56	0.56	0.11	0.64	0.64	0.15	0.15	0.15	0.15	0.15	0.15
Sat Flow, veh/h	1619	4914	1524	1619	4821	216	1315	1800	1522	1320	1253	464
Grp Volume(v), veh/h	31	1051	9	141	1137	611	11	11	20	146	0	37
Grp Sat Flow(s),veh/h/ln	1619	1638	1524	1619	1638	1761	1315	1800	1522	1320	0	1716
Q Serve(g_s), s	1.6	10.0	0.2	7.2	16.1	16.1	0.6	0.4	1.0	9.0	0.0	1.6
Cycle Q Clear(g_c), s	1.6	10.0	0.2	7.2	16.1	16.1	2.2	0.4	1.0	9.4	0.0	1.6
Prop In Lane	1.00		1.00	1.00		0.12	1.00		1.00	1.00		0.27
Lane Grp Cap(c), veh/h	50	2771	859	172	2096	1127	254	264	223	272	0	251
V/C Ratio(X)	0.62	0.38	0.01	0.82	0.54	0.54	0.04	0.04	0.09	0.54	0.00	0.15
Avail Cap(c_a), veh/h	181	2771	859	470	2096	1127	708	886	749	728	0	845
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	40.3	10.2	8.0	36.8	8.4	8.4	32.3	30.8	31.0	34.9	0.0	31.3
Incr Delay (d2), s/veh	4.7	0.4	0.0	3.6	1.0	1.9	0.1	0.1	0.2	1.6	0.0	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	0.7	3.0	0.1	2.8	4.3	4.9	0.2	0.2	0.4	3.0	0.0	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	45.0	10.6	8.1	40.4	9.4	10.2	32.3	30.9	31.2	36.5	0.0	31.6
LnGrp LOS	D	B	A	D	A	B	C	C	C	D	A	C
Approach Vol, veh/h		1091			1889			42			183	
Approach Delay, s/veh		11.5			12.0			31.4			35.5	
Approach LOS		B			B			C			D	

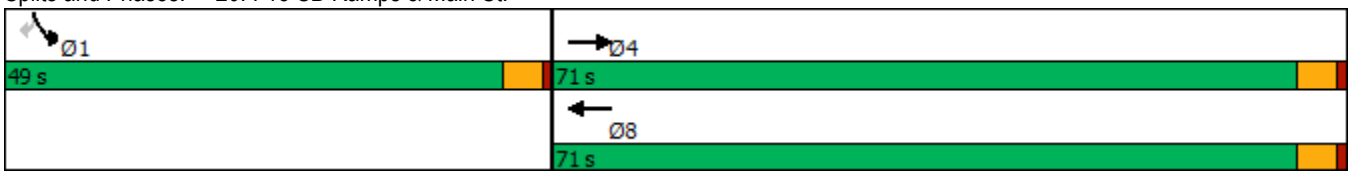
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	13.6	53.6		16.9	7.2	60.0		16.9				
Change Period (Y+Rc), s	4.6	6.2		4.6	4.6	6.2		4.6				
Max Green Setting (Gmax), s	24.4	38.8		41.4	9.4	53.8		41.4				
Max Q Clear Time (g_c+I1), s	9.2	12.0		11.4	3.6	18.1		4.2				
Green Ext Time (p_c), s	0.1	7.3		0.7	0.0	14.9		0.1				

Intersection Summary			
HCM 6th Ctrl Delay		13.4	
HCM 6th LOS		B	

Lane Group	EBT	EBR	WBT	SBL	SBR
Lane Configurations					
Traffic Volume (vph)	1071	78	1259	307	612
Future Volume (vph)	1071	78	1259	307	612
Turn Type	NA	Free	NA	Prot	Perm
Protected Phases	4		8	1	
Permitted Phases		Free			1
Detector Phase	4		8	1	1
Switch Phase					
Minimum Initial (s)	5.0		5.0	5.0	5.0
Minimum Split (s)	9.6		22.6	9.6	9.6
Total Split (s)	71.0		71.0	49.0	49.0
Total Split (%)	59.2%		59.2%	40.8%	40.8%
Yellow Time (s)	3.6		3.6	3.6	3.6
All-Red Time (s)	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.6		4.6	4.6	4.6
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	None		None	None	None
Act Effct Green (s)	29.9	83.4	29.9	44.3	44.3
Actuated g/C Ratio	0.36	1.00	0.36	0.53	0.53
v/c Ratio	0.61	0.05	0.71	0.17	0.73
Control Delay	23.3	0.1	25.3	11.2	21.4
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	23.3	0.1	25.3	11.2	21.4
LOS	C	A	C	B	C
Approach Delay	21.7		25.3		
Approach LOS	C		C		

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 83.4	
Natural Cycle: 50	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.73	
Intersection Signal Delay: 22.0	Intersection LOS: C
Intersection Capacity Utilization 69.9%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 20: I-15 SB Ramps & Main St.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↱		↑↑↑	↱				↰↰		↱
Traffic Volume (veh/h)	0	1071	78	0	1259	0	0	0	0	307	0	612
Future Volume (veh/h)	0	1071	78	0	1259	0	0	0	0	307	0	612
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	1900	1900	0	1900	1900				1900	0	1900
Adj Flow Rate, veh/h	0	1127	0	0	1325	0				323	0	563
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95				0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0				0	0	0
Cap, veh/h	0	2222		0	2222					1449	0	665
Arrive On Green	0.00	0.43	0.00	0.00	0.43	0.00				0.41	0.00	0.41
Sat Flow, veh/h	0	5358	1610	0	5358	1610				3510	0	1610
Grp Volume(v), veh/h	0	1127	0	0	1325	0				323	0	563
Grp Sat Flow(s),veh/h/ln	0	1729	1610	0	1729	1610				1755	0	1610
Q Serve(g_s), s	0.0	9.2	0.0	0.0	11.4	0.0				3.4	0.0	18.3
Cycle Q Clear(g_c), s	0.0	9.2	0.0	0.0	11.4	0.0				3.4	0.0	18.3
Prop In Lane	0.00		1.00	0.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2222		0	2222					1449	0	665
V/C Ratio(X)	0.00	0.51		0.00	0.60					0.22	0.00	0.85
Avail Cap(c_a), veh/h	0	5948		0	5948					2692	0	1235
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	12.1	0.0	0.0	12.7	0.0				11.0	0.0	15.4
Incr Delay (d2), s/veh	0.0	0.2	0.0	0.0	0.3	0.0				0.1	0.0	3.1
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	2.6	0.0	0.0	3.2	0.0				1.2	0.0	6.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	12.3	0.0	0.0	13.0	0.0				11.1	0.0	18.5
LnGrp LOS	A	B		A	B					B	A	B
Approach Vol, veh/h		1127	A		1325	A					886	
Approach Delay, s/veh		12.3			13.0						15.8	
Approach LOS		B			B						B	

Timer - Assigned Phs			4		6		8					
Phs Duration (G+Y+Rc), s			29.4		28.5		29.4					
Change Period (Y+Rc), s			4.6		4.6		4.6					
Max Green Setting (Gmax), s			66.4		44.4		66.4					
Max Q Clear Time (g_c+I1), s			11.2		20.3		13.4					
Green Ext Time (p_c), s			9.0		3.6		11.4					

Intersection Summary												
HCM 6th Ctrl Delay			13.5									
HCM 6th LOS			B									

Notes

Unsignalized Delay for [EBR, WBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBT	EBR	WBT	WBR	NBL	NBT	NBR
Lane Configurations							
Traffic Volume (vph)	1013	365	1277	453	542	6	387
Future Volume (vph)	1013	365	1277	453	542	6	387
Turn Type	NA	Perm	NA	Perm	Split	NA	Perm
Protected Phases	2		6		8	8	
Permitted Phases		2		6			8
Detector Phase	2	2	6	6	8	8	8
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.6	22.6	22.6	22.6	9.6	9.6	9.6
Total Split (s)	78.0	78.0	78.0	78.0	42.0	42.0	42.0
Total Split (%)	65.0%	65.0%	65.0%	65.0%	35.0%	35.0%	35.0%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Lead/Lag							
Lead-Lag Optimize?							
Recall Mode	None	None	None	None	Min	Min	Min
Act Effct Green (s)	33.3	33.3	33.3	33.3	34.7	34.7	34.7
Actuated g/C Ratio	0.43	0.43	0.43	0.43	0.45	0.45	0.45
v/c Ratio	0.46	0.41	0.58	0.48	0.68	0.26	0.27
Control Delay	16.3	3.0	17.9	3.2	23.8	7.9	8.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	16.3	3.0	17.9	3.3	23.8	7.9	8.0
LOS	B	A	B	A	C	A	A
Approach Delay	12.8		14.0			17.1	
Approach LOS	B		B			B	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 77.3	
Natural Cycle: 45	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.68	
Intersection Signal Delay: 14.3	Intersection LOS: B
Intersection Capacity Utilization 62.4%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 21: I-15 NB Ramps & Main St.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↱		↑↑↑	↱	↰	↑	↱			
Traffic Volume (veh/h)	0	1013	365	0	1277	453	542	6	387	0	0	0
Future Volume (veh/h)	0	1013	365	0	1277	453	542	6	387	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	0	1900	1900	0	1900	1900	1900	1900	1900			
Adj Flow Rate, veh/h	0	1034	0	0	1303	430	553	0	189			
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98			
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0			
Cap, veh/h	0	2482		0	2482	770	654	0	1165			
Arrive On Green	0.00	0.48	0.00	0.00	0.48	0.48	0.36	0.00	0.36			
Sat Flow, veh/h	0	5358	1610	0	5358	1610	1810	0	3220			
Grp Volume(v), veh/h	0	1034	0	0	1303	430	553	0	189			
Grp Sat Flow(s),veh/h/ln	0	1729	1610	0	1729	1610	1810	0	1610			
Q Serve(g_s), s	0.0	7.5	0.0	0.0	10.1	10.9	16.2	0.0	2.3			
Cycle Q Clear(g_c), s	0.0	7.5	0.0	0.0	10.1	10.9	16.2	0.0	2.3			
Prop In Lane	0.00		1.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	0	2482		0	2482	770	654	0	1165			
V/C Ratio(X)	0.00	0.42		0.00	0.53	0.56	0.84	0.00	0.16			
Avail Cap(c_a), veh/h	0	6616		0	6616	2054	1176	0	2093			
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	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	0.0	9.8	0.0	0.0	10.5	10.7	16.9	0.0	12.5			
Incr Delay (d2), s/veh	0.0	0.1	0.0	0.0	0.2	0.6	3.1	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	2.0	0.0	0.0	2.7	2.8	6.6	0.0	0.8			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	9.9	0.0	0.0	10.6	11.3	20.0	0.0	12.5			
LnGrp LOS	A	A		A	B	B	B	A	B			
Approach Vol, veh/h		1034	A		1733			742				
Approach Delay, s/veh		9.9			10.8			18.1				
Approach LOS		A			B			B				

Timer - Assigned Phs	2			6		8			
Phs Duration (G+Y+Rc), s	32.1			32.1		25.4			
Change Period (Y+Rc), s	4.6			4.6		4.6			
Max Green Setting (Gmax), s	73.4			73.4		37.4			
Max Q Clear Time (g_c+I1), s	9.5			12.9		18.2			
Green Ext Time (p_c), s	8.0			14.6		2.6			

Intersection Summary									
HCM 6th Ctrl Delay		12.1							
HCM 6th LOS		B							

Notes

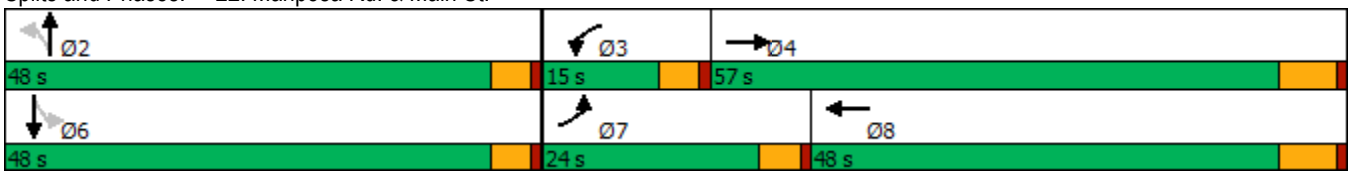
User approved volume balancing among the lanes for turning movement.

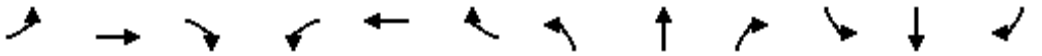
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	127	1174	43	1546	71	38	35	48
Future Volume (vph)	127	1174	43	1546	71	38	35	48
Turn Type	Prot	NA	Prot	NA	Perm	NA	Perm	NA
Protected Phases	7	4	3	8		2		6
Permitted Phases					2		6	
Detector Phase	7	4	3	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	24.2	9.6	24.2	44.6	44.6	44.6	44.6
Total Split (s)	24.0	57.0	15.0	48.0	48.0	48.0	48.0	48.0
Total Split (%)	20.0%	47.5%	12.5%	40.0%	40.0%	40.0%	40.0%	40.0%
Yellow Time (s)	3.6	5.2	3.6	5.2	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	4.6	6.2	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes				
Recall Mode	None	Max	Max	None	None	None	None	None
Act Effct Green (s)	12.1	51.4	10.5	49.8	16.9	16.9	16.9	16.9
Actuated g/C Ratio	0.13	0.54	0.11	0.53	0.18	0.18	0.18	0.18
v/c Ratio	0.66	0.41	0.26	0.52	0.71	0.24	0.18	0.56
Control Delay	55.8	14.2	46.1	17.8	68.8	19.6	32.6	16.0
Queue Delay	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	55.8	14.4	46.1	17.8	68.8	19.6	32.6	16.0
LOS	E	B	D	B	E	B	C	B
Approach Delay		18.2		18.6		43.7		18.3
Approach LOS		B		B		D		B

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 94.4	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.71	
Intersection Signal Delay: 19.5	Intersection LOS: B
Intersection Capacity Utilization 70.9%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 22: Mariposa Rd. & Main St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	127	1174	99	43	1546	28	71	38	35	35	48	172
Future Volume (veh/h)	127	1174	99	43	1546	28	71	38	35	35	48	172
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	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	137	1262	93	46	1662	29	76	41	16	38	52	102
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	166	3236	238	181	3504	61	184	218	85	270	96	189
Arrive On Green	0.10	0.55	0.55	0.11	0.55	0.55	0.18	0.18	0.18	0.18	0.18	0.18
Sat Flow, veh/h	1619	5930	436	1619	6314	110	1183	1232	481	1292	543	1065
Grp Volume(v), veh/h	137	987	368	46	1222	469	76	0	57	38	0	154
Grp Sat Flow(s),veh/h/ln	1619	1548	1722	1619	1548	1780	1183	0	1713	1292	0	1608
Q Serve(g_s), s	7.7	11.4	11.5	2.4	14.8	14.8	5.8	0.0	2.6	2.4	0.0	8.1
Cycle Q Clear(g_c), s	7.7	11.4	11.5	2.4	14.8	14.8	13.9	0.0	2.6	5.0	0.0	8.1
Prop In Lane	1.00		0.25	1.00		0.06	1.00		0.28	1.00		0.66
Lane Grp Cap(c), veh/h	166	2534	939	181	2577	988	184	0	304	270	0	285
V/C Ratio(X)	0.83	0.39	0.39	0.25	0.47	0.47	0.41	0.00	0.19	0.14	0.00	0.54
Avail Cap(c_a), veh/h	337	2534	939	181	2577	988	526	0	799	643	0	750
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	41.0	12.2	12.2	37.8	12.5	12.5	41.2	0.0	32.6	34.7	0.0	34.9
Incr Delay (d2), s/veh	3.9	0.5	1.2	3.4	0.1	0.4	1.5	0.0	0.3	0.2	0.0	1.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.1	3.4	4.0	1.1	4.3	5.0	1.8	0.0	1.1	0.8	0.0	3.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	44.9	12.7	13.4	41.2	12.7	12.9	42.7	0.0	32.9	35.0	0.0	36.4
LnGrp LOS	D	B	B	D	B	B	D	A	C	C	A	D
Approach Vol, veh/h		1492			1737			133			192	
Approach Delay, s/veh		15.8			13.5			38.5			36.2	
Approach LOS		B			B			D			D	

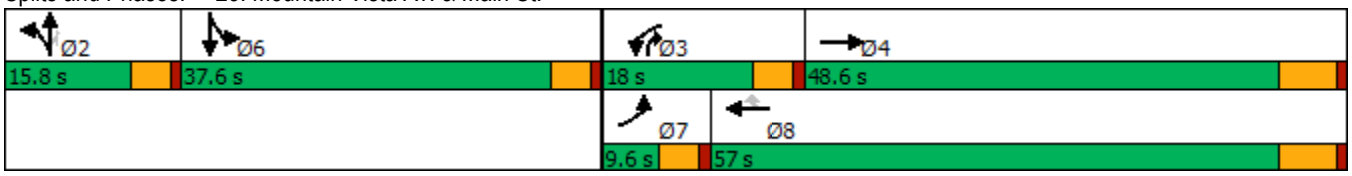
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		21.1	15.0	57.0		21.1	14.1	57.9				
Change Period (Y+Rc), s		4.6	4.6	6.2		4.6	4.6	6.2				
Max Green Setting (Gmax), s		43.4	10.4	50.8		43.4	19.4	41.8				
Max Q Clear Time (g_c+I1), s		15.9	4.4	13.5		10.1	9.7	16.8				
Green Ext Time (p_c), s		0.6	0.0	10.3		1.1	0.1	12.0				

Intersection Summary												
HCM 6th Ctrl Delay			16.6									
HCM 6th LOS			B									

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	16	1079	72	1601	57	16	1	29	49	2
Future Volume (vph)	16	1079	72	1601	57	16	1	29	49	2
Turn Type	Prot	NA	Prot	NA	Perm	Split	NA	pm+ov	Split	NA
Protected Phases	7	4	3	8		2	2	3	6	6
Permitted Phases					8			2		
Detector Phase	7	4	3	8	8	2	2	3	6	6
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	43.2	9.6	32.2	32.2	14.6	14.6	9.6	37.6	37.6
Total Split (s)	9.6	48.6	18.0	57.0	57.0	15.8	15.8	18.0	37.6	37.6
Total Split (%)	8.0%	40.5%	15.0%	47.5%	47.5%	13.2%	13.2%	15.0%	31.3%	31.3%
Yellow Time (s)	3.6	5.2	3.6	5.2	5.2	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	4.6	6.2	6.2	4.6	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lead	Lag	Lag			Lead		
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes			Yes		
Recall Mode	None	Max	None	Max	Max	None	None	None	None	None
Act Effct Green (s)	5.2	54.5	8.5	63.8	63.8	10.4	10.4	11.7	13.8	13.8
Actuated g/C Ratio	0.06	0.63	0.10	0.74	0.74	0.12	0.12	0.14	0.16	0.16
v/c Ratio	0.09	0.29	0.47	0.46	0.05	0.05	0.02	0.07	0.13	0.12
Control Delay	48.3	13.8	51.2	12.5	1.1	44.1	43.2	0.3	34.7	27.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	48.3	13.8	51.2	12.5	1.1	44.1	43.2	0.3	34.7	27.0
LOS	D	B	D	B	A	D	D	A	C	C
Approach Delay		14.3		13.8			16.0			31.0
Approach LOS		B		B			B			C

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 86.6	
Natural Cycle: 105	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.47	
Intersection Signal Delay: 14.4	Intersection LOS: B
Intersection Capacity Utilization 58.7%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 23: Mountain Vista Av. & Main St.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	16	1079	21	72	1601	57	16	1	29	49	2	9
Future Volume (veh/h)	16	1079	21	72	1601	57	16	1	29	49	2	9
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1600	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	16	1112	21	74	1651	56	16	1	10	56	0	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	55	3538	67	92	2947	914	180	100	343	292	162	0
Arrive On Green	0.02	0.56	0.56	0.06	0.60	0.60	0.06	0.06	0.06	0.09	0.00	0.00
Sat Flow, veh/h	2956	6304	119	1619	4914	1525	3238	1800	3051	3238	1800	0
Grp Volume(v), veh/h	16	819	314	74	1651	56	16	1	10	56	0	0
Grp Sat Flow(s),veh/h/ln	1478	1548	1778	1619	1638	1525	1619	1800	1525	1619	1800	0
Q Serve(g_s), s	0.5	8.0	8.0	3.8	17.2	1.3	0.4	0.0	0.2	1.4	0.0	0.0
Cycle Q Clear(g_c), s	0.5	8.0	8.0	3.8	17.2	1.3	0.4	0.0	0.2	1.4	0.0	0.0
Prop In Lane	1.00		0.07	1.00		1.00	1.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	55	2606	998	92	2947	914	180	100	343	292	162	0
V/C Ratio(X)	0.29	0.31	0.31	0.80	0.56	0.06	0.09	0.01	0.03	0.19	0.00	0.00
Avail Cap(c_a), veh/h	175	2606	998	256	2947	914	428	238	577	1262	701	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	41.0	9.9	9.9	39.5	10.2	7.0	38.0	37.8	33.5	35.7	0.0	0.0
Incr Delay (d2), s/veh	1.1	0.3	0.8	5.9	0.8	0.1	0.2	0.0	0.0	0.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	2.2	2.7	1.6	4.9	0.4	0.2	0.0	0.1	0.5	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	42.1	10.2	10.7	45.4	11.0	7.2	38.2	37.8	33.5	36.0	0.0	0.0
LnGrp LOS	D	B	B	D	B	A	D	D	C	D	A	A
Approach Vol, veh/h		1149			1781			27			56	
Approach Delay, s/veh		10.8			12.3			36.4			36.0	
Approach LOS		B			B			D			D	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		9.3	9.4	53.7		12.2	6.2	57.0				
Change Period (Y+Rc), s		4.6	4.6	6.2		4.6	4.6	6.2				
Max Green Setting (Gmax), s		11.2	13.4	42.4		33.0	5.0	50.8				
Max Q Clear Time (g_c+I1), s		2.4	5.8	10.0		3.4	2.5	19.2				
Green Ext Time (p_c), s		0.0	0.0	7.8		0.1	0.0	14.3				

Intersection Summary												
HCM 6th Ctrl Delay			12.4									
HCM 6th LOS			B									

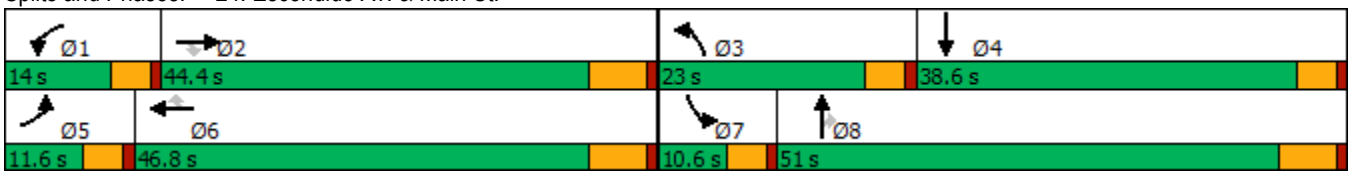
Notes

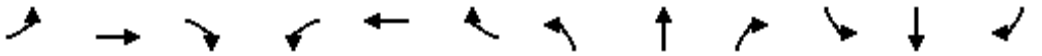
User approved volume balancing among the lanes for turning movement.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations											
Traffic Volume (vph)	4	782	361	267	1020	3	697	21	319	1	3
Future Volume (vph)	4	782	361	267	1020	3	697	21	319	1	3
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA
Protected Phases	5	2		1	6		3	8		7	4
Permitted Phases			2			6			8		
Detector Phase	5	2	2	1	6	6	3	8	8	7	4
Switch Phase											
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.6	41.2	41.2	9.6	31.2	31.2	9.6	49.2	49.2	9.6	37.6
Total Split (s)	11.6	44.4	44.4	14.0	46.8	46.8	23.0	51.0	51.0	10.6	38.6
Total Split (%)	9.7%	37.0%	37.0%	11.7%	39.0%	39.0%	19.2%	42.5%	42.5%	8.8%	32.2%
Yellow Time (s)	3.6	5.2	5.2	3.6	5.2	5.2	3.6	5.2	5.2	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	6.2	4.6	6.2	6.2	4.6	6.2	6.2	4.6	4.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Min	Min	None	Min
Act Effct Green (s)	5.3	22.9	22.9	9.7	35.8	35.8	18.9	34.3	34.3	5.1	13.6
Actuated g/C Ratio	0.06	0.27	0.27	0.11	0.42	0.42	0.22	0.40	0.40	0.06	0.16
v/c Ratio	0.04	0.61	0.55	0.83	0.74	0.00	1.10	0.03	0.42	0.01	0.06
Control Delay	46.5	29.9	6.3	60.8	26.4	0.0	101.3	19.0	5.3	47.0	18.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	46.5	29.9	6.3	60.8	26.4	0.0	101.3	19.0	5.3	47.0	18.4
LOS	D	C	A	E	C	A	F	B	A	D	B
Approach Delay		22.5			33.5			70.1			20.2
Approach LOS		C			C			E			C

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 85.8	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.10	
Intersection Signal Delay: 40.7	Intersection LOS: D
Intersection Capacity Utilization 78.4%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 24: Escondido Av. & Main St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	4	782	361	267	1020	3	697	21	319	1	3	12
Future Volume (veh/h)	4	782	361	267	1020	3	697	21	319	1	3	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1700	1800	1800	1600	1800	1800	1600	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	4	806	258	275	1052	3	719	22	167	1	3	11
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	9	1312	407	341	1289	575	672	629	533	2	42	153
Arrive On Green	0.01	0.27	0.27	0.12	0.38	0.38	0.23	0.35	0.35	0.00	0.12	0.12
Sat Flow, veh/h	1619	4914	1525	2956	3420	1525	2956	1800	1525	1619	338	1239
Grp Volume(v), veh/h	4	806	258	275	1052	3	719	22	167	1	0	14
Grp Sat Flow(s),veh/h/ln	1619	1638	1525	1478	1710	1525	1478	1800	1525	1619	0	1577
Q Serve(g_s), s	0.2	11.6	12.1	7.3	22.4	0.1	18.4	0.7	6.5	0.0	0.0	0.6
Cycle Q Clear(g_c), s	0.2	11.6	12.1	7.3	22.4	0.1	18.4	0.7	6.5	0.0	0.0	0.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.79
Lane Grp Cap(c), veh/h	9	1312	407	341	1289	575	672	629	533	2	0	195
V/C Ratio(X)	0.46	0.61	0.63	0.81	0.82	0.01	1.07	0.03	0.31	0.45	0.00	0.07
Avail Cap(c_a), veh/h	140	2319	720	343	1716	765	672	996	844	120	0	663
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	40.1	26.0	26.2	34.9	22.7	15.7	31.3	17.3	19.2	40.4	0.0	31.4
Incr Delay (d2), s/veh	13.8	0.5	1.6	12.3	2.4	0.0	54.9	0.0	0.3	44.9	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	4.1	4.5	3.0	8.2	0.0	11.5	0.3	2.3	0.0	0.0	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	53.9	26.5	27.8	47.2	25.1	15.7	86.2	17.4	19.6	85.3	0.0	31.5
LnGrp LOS	D	C	C	D	C	B	F	B	B	F	A	C
Approach Vol, veh/h		1068			1330			908			15	
Approach Delay, s/veh		26.9			29.6			72.2			35.1	
Approach LOS		C			C			E			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.9	27.8	23.0	16.2	5.0	36.7	4.7	34.5
Change Period (Y+Rc), s	4.6	6.2	4.6	* 6.2	4.6	6.2	4.6	6.2
Max Green Setting (Gmax), s	9.4	38.2	18.4	* 34	7.0	40.6	6.0	44.8
Max Q Clear Time (g_c+I1), s	9.3	14.1	20.4	2.6	2.2	24.4	2.0	8.5
Green Ext Time (p_c), s	0.0	6.1	0.0	0.0	0.0	6.1	0.0	0.7

Intersection Summary	
HCM 6th Ctrl Delay	40.4
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	3.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	23	224	810	32	89	494
Future Vol, veh/h	23	224	810	32	89	494
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	100	0	-	-	195	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	26	249	900	36	99	549

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1391	468	0	0	936	0
Stage 1	918	-	-	-	-	-
Stage 2	473	-	-	-	-	-
Critical Hdwy	6.8	6.9	-	-	4.1	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	136	547	-	-	740	-
Stage 1	354	-	-	-	-	-
Stage 2	599	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	118	547	-	-	740	-
Mov Cap-2 Maneuver	243	-	-	-	-	-
Stage 1	354	-	-	-	-	-
Stage 2	519	-	-	-	-	-

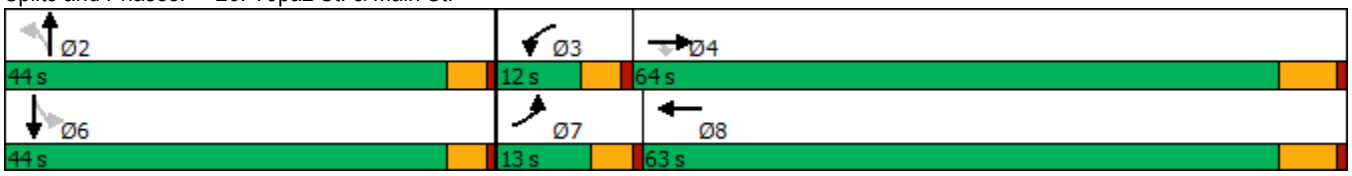
Approach	WB	NB	SB
HCM Control Delay, s	17.4	0	1.6
HCM LOS	C		

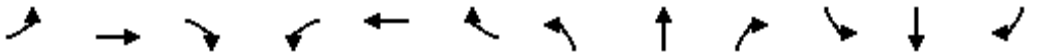
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	243	547	740	-
HCM Lane V/C Ratio	-	-	0.105	0.455	0.134	-
HCM Control Delay (s)	-	-	21.5	17	10.6	-
HCM Lane LOS	-	-	C	C	B	-
HCM 95th %tile Q(veh)	-	-	0.3	2.4	0.5	-

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	41	965	84	32	990	182	80	95	62
Future Volume (vph)	41	965	84	32	990	182	80	95	62
Turn Type	Prot	NA	Perm	Prot	NA	Perm	NA	Perm	NA
Protected Phases	7	4		3	8		2		6
Permitted Phases			4			2		6	
Detector Phase	7	4	4	3	8	2	2	6	6
Switch Phase									
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	25.2	25.2	9.6	23.2	32.6	32.6	38.6	38.6
Total Split (s)	13.0	64.0	64.0	12.0	63.0	44.0	44.0	44.0	44.0
Total Split (%)	10.8%	53.3%	53.3%	10.0%	52.5%	36.7%	36.7%	36.7%	36.7%
Yellow Time (s)	3.6	5.2	5.2	3.6	5.2	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	6.2	4.6	6.2	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes				
Recall Mode	None	None	None	Max	None	None	None	None	None
Act Effct Green (s)	7.1	37.1	37.1	8.0	43.6	23.2	23.2	23.2	23.2
Actuated g/C Ratio	0.08	0.44	0.44	0.09	0.51	0.27	0.27	0.27	0.27
v/c Ratio	0.34	0.72	0.13	0.24	0.69	0.70	0.32	0.37	0.32
Control Delay	52.2	22.8	4.0	49.7	20.9	44.1	22.8	31.3	19.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	52.2	22.8	4.0	49.7	20.9	44.1	22.8	31.3	19.2
LOS	D	C	A	D	C	D	C	C	B
Approach Delay		22.5			21.7		34.9		24.1
Approach LOS		C			C		C		C

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 84.9	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.72	
Intersection Signal Delay: 23.8	Intersection LOS: C
Intersection Capacity Utilization 70.7%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 26: Topaz St. & Main St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	41	965	84	32	990	93	182	80	58	95	62	79
Future Volume (veh/h)	41	965	84	32	990	93	182	80	58	95	62	79
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	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	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	46	1072	80	36	1100	100	202	89	45	106	69	40
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, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	68	1424	622	170	1519	138	360	293	148	338	278	161
Arrive On Green	0.04	0.42	0.42	0.10	0.48	0.48	0.26	0.26	0.26	0.26	0.26	0.26
Sat Flow, veh/h	1619	3420	1494	1619	3170	288	1232	1126	569	1202	1069	620
Grp Volume(v), veh/h	46	1072	80	36	593	607	202	0	134	106	0	109
Grp Sat Flow(s),veh/h/ln	1619	1710	1494	1619	1710	1748	1232	0	1695	1202	0	1688
Q Serve(g_s), s	2.0	18.8	2.3	1.4	19.5	19.5	10.9	0.0	4.5	5.5	0.0	3.6
Cycle Q Clear(g_c), s	2.0	18.8	2.3	1.4	19.5	19.5	14.5	0.0	4.5	10.0	0.0	3.6
Prop In Lane	1.00		1.00	1.00		0.16	1.00		0.34	1.00		0.37
Lane Grp Cap(c), veh/h	68	1424	622	170	820	838	360	0	441	338	0	439
V/C Ratio(X)	0.67	0.75	0.13	0.21	0.72	0.72	0.56	0.00	0.30	0.31	0.00	0.25
Avail Cap(c_a), veh/h	193	2804	1224	170	1378	1408	728	0	947	697	0	944
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	33.3	17.5	12.7	28.9	14.6	14.6	26.4	0.0	21.0	25.0	0.0	20.6
Incr Delay (d2), s/veh	4.3	0.8	0.1	2.8	1.2	1.2	1.4	0.0	0.4	0.5	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	6.1	0.7	0.6	6.1	6.3	3.2	0.0	1.8	1.6	0.0	1.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	37.6	18.3	12.8	31.7	15.9	15.9	27.7	0.0	21.3	25.5	0.0	20.9
LnGrp LOS	D	B	B	C	B	B	C	A	C	C	A	C
Approach Vol, veh/h		1198			1236			336			215	
Approach Delay, s/veh		18.7			16.3			25.2			23.2	
Approach LOS		B			B			C			C	

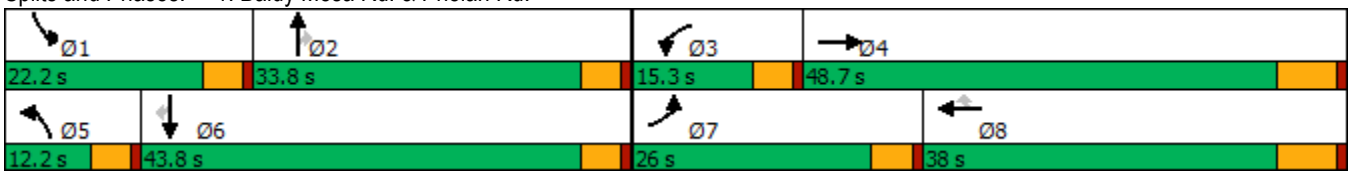
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		22.9	12.0	35.6		22.9	7.6	40.0				
Change Period (Y+Rc), s		4.6	4.6	6.2		4.6	4.6	6.2				
Max Green Setting (Gmax), s		39.4	7.4	57.8		39.4	8.4	56.8				
Max Q Clear Time (g_c+I1), s		16.5	3.4	20.8		12.0	4.0	21.5				
Green Ext Time (p_c), s		1.5	0.0	8.6		1.0	0.0	8.5				

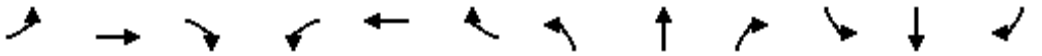
Intersection Summary												
HCM 6th Ctrl Delay			18.8									
HCM 6th LOS			B									

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	151	545	75	595	145	38	29	30	123	37	135
Future Volume (vph)	151	545	75	595	145	38	29	30	123	37	135
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4	3	8		5	2		1	6	
Permitted Phases					8			2			6
Detector Phase	7	4	3	8	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	30.5	9.6	37.5	37.5	9.6	31.6	31.6	9.6	40.6	40.6
Total Split (s)	26.0	48.7	15.3	38.0	38.0	12.2	33.8	33.8	22.2	43.8	43.8
Total Split (%)	21.7%	40.6%	12.8%	31.7%	31.7%	10.2%	28.2%	28.2%	18.5%	36.5%	36.5%
Yellow Time (s)	3.6	5.5	3.6	5.5	5.5	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.5	4.6	6.5	6.5	4.6	4.6	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Max	None	Max	Max	None	None	None	None	None	None
Act Effct Green (s)	13.6	44.2	8.6	36.3	36.3	6.6	13.1	13.1	12.8	19.9	19.9
Actuated g/C Ratio	0.15	0.48	0.09	0.39	0.39	0.07	0.14	0.14	0.14	0.21	0.21
v/c Ratio	0.69	0.39	0.54	0.48	0.23	0.36	0.12	0.08	0.59	0.10	0.32
Control Delay	55.2	20.1	58.9	26.2	3.9	55.6	38.8	0.4	53.0	31.6	6.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	55.2	20.1	58.9	26.2	3.9	55.6	38.8	0.4	53.0	31.6	6.2
LOS	E	C	E	C	A	E	D	A	D	C	A
Approach Delay		27.3		25.2			33.6			28.9	
Approach LOS		C		C			C			C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 92.7	
Natural Cycle: 100	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.69	
Intersection Signal Delay: 27.0	Intersection LOS: C
Intersection Capacity Utilization 62.5%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 1: Baldy Mesa Rd. & Phelan Rd.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	151	545	37	75	595	145	38	29	30	123	37	135
Future Volume (veh/h)	151	545	37	75	595	145	38	29	30	123	37	135
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		0.99	1.00		0.99	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	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	162	586	31	81	640	116	41	31	21	132	40	83
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	194	1585	84	116	1477	655	58	212	178	161	327	277
Arrive On Green	0.12	0.48	0.48	0.07	0.43	0.43	0.04	0.12	0.12	0.10	0.18	0.18
Sat Flow, veh/h	1619	3304	175	1619	3420	1517	1619	1800	1512	1619	1800	1525
Grp Volume(v), veh/h	162	303	314	81	640	116	41	31	21	132	40	83
Grp Sat Flow(s),veh/h/ln	1619	1710	1769	1619	1710	1517	1619	1800	1512	1619	1800	1525
Q Serve(g_s), s	8.6	9.9	9.9	4.3	11.5	4.1	2.2	1.4	1.1	7.0	1.6	4.1
Cycle Q Clear(g_c), s	8.6	9.9	9.9	4.3	11.5	4.1	2.2	1.4	1.1	7.0	1.6	4.1
Prop In Lane	1.00		0.10	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	194	820	848	116	1477	655	58	212	178	161	327	277
V/C Ratio(X)	0.84	0.37	0.37	0.70	0.43	0.18	0.70	0.15	0.12	0.82	0.12	0.30
Avail Cap(c_a), veh/h	394	820	848	197	1477	655	140	598	502	324	802	680
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.9	14.5	14.5	39.9	17.5	15.4	41.9	34.8	34.7	38.8	30.1	31.2
Incr Delay (d2), s/veh	3.6	1.3	1.2	2.8	0.9	0.6	5.7	0.3	0.3	3.8	0.2	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.3	3.5	3.6	1.7	4.1	1.3	1.0	0.6	0.4	2.9	0.7	1.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	41.5	15.7	15.7	42.7	18.4	16.0	47.6	35.1	35.0	42.6	30.3	31.8
LnGrp LOS	D	B	B	D	B	B	D	D	C	D	C	C
Approach Vol, veh/h		779			837			93			255	
Approach Delay, s/veh		21.1			20.4			40.6			37.2	
Approach LOS		C			C			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.4	15.0	10.9	48.7	7.8	20.6	15.1	44.5
Change Period (Y+Rc), s	4.6	4.6	4.6	6.5	4.6	4.6	4.6	6.5
Max Green Setting (Gmax), s	17.6	29.2	10.7	42.2	7.6	39.2	21.4	31.5
Max Q Clear Time (g_c+I1), s	9.0	3.4	6.3	11.9	4.2	6.1	10.6	13.5
Green Ext Time (p_c), s	0.1	0.2	0.0	3.3	0.0	0.5	0.1	3.8

Intersection Summary	
HCM 6th Ctrl Delay	23.8
HCM 6th LOS	C

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	4	680	4	28	849	13	3	0	15	8	0	3
Future Vol, veh/h	4	680	4	28	849	13	3	0	15	8	0	3
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	105	-	105	110	-	110	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	4	716	4	29	894	14	3	0	16	8	0	3

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	908	0	0	720	0	0	1685	1690	716	1686	1680	894
Stage 1	-	-	-	-	-	-	724	724	-	952	952	-
Stage 2	-	-	-	-	-	-	961	966	-	734	728	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
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	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	758	-	-	891	-	-	75	94	434	75	96	343
Stage 1	-	-	-	-	-	-	420	433	-	314	341	-
Stage 2	-	-	-	-	-	-	311	336	-	415	432	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	758	-	-	891	-	-	72	90	434	70	92	343
Mov Cap-2 Maneuver	-	-	-	-	-	-	189	208	-	186	207	-
Stage 1	-	-	-	-	-	-	418	431	-	312	330	-
Stage 2	-	-	-	-	-	-	298	325	-	398	430	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.3	15.6	22.9
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	357	758	-	-	891	-	-	213
HCM Lane V/C Ratio	0.053	0.006	-	-	0.033	-	-	0.054
HCM Control Delay (s)	15.6	9.8	-	-	9.2	-	-	22.9
HCM Lane LOS	C	A	-	-	A	-	-	C
HCM 95th %tile Q(veh)	0.2	0	-	-	0.1	-	-	0.2

Intersection	
Int Delay, s/veh	0.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	683	2	4	942	6	5
Future Vol, veh/h	683	2	4	942	6	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	110	-	0	-
Veh in Median Storage, #	0	-	-	0	1	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	711	2	4	981	6	5

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	713	0	1701	712
Stage 1	-	-	-	-	712	-
Stage 2	-	-	-	-	989	-
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	-	-	896	-	102	436
Stage 1	-	-	-	-	490	-
Stage 2	-	-	-	-	363	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	896	-	102	436
Mov Cap-2 Maneuver	-	-	-	-	235	-
Stage 1	-	-	-	-	490	-
Stage 2	-	-	-	-	362	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	17.6
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	297	-	-	896	-
HCM Lane V/C Ratio	0.039	-	-	0.005	-
HCM Control Delay (s)	17.6	-	-	9	-
HCM Lane LOS	C	-	-	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑	↱	↰	↱
Traffic Vol, veh/h	0	687	904	82	65	42
Future Vol, veh/h	0	687	904	82	65	42
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	0	0
Veh in Median Storage, #	-	0	0	-	2	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	747	983	89	71	46

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	1730	983
Stage 1	-	-	-	-	983	-
Stage 2	-	-	-	-	747	-
Critical Hdwy	-	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	0	-	-	-	98	305
Stage 1	0	-	-	-	366	-
Stage 2	0	-	-	-	472	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	98	305
Mov Cap-2 Maneuver	-	-	-	-	289	-
Stage 1	-	-	-	-	366	-
Stage 2	-	-	-	-	472	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	20.4
HCM LOS			C

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	-	-	-	289	305
HCM Lane V/C Ratio	-	-	-	0.244	0.15
HCM Control Delay (s)	-	-	-	21.4	18.9
HCM Lane LOS	-	-	-	C	C
HCM 95th %tile Q(veh)	-	-	-	0.9	0.5

Intersection	
Int Delay, s/veh	8.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	7	0	32	12	0	236
Future Vol, veh/h	7	0	32	12	0	236
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	100	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	8	0	35	13	0	257

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	8	0	91	8
Stage 1	-	-	-	-	8	-
Stage 2	-	-	-	-	83	-
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	-	-	1625	-	914	1080
Stage 1	-	-	-	-	1020	-
Stage 2	-	-	-	-	945	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1625	-	894	1080
Mov Cap-2 Maneuver	-	-	-	-	894	-
Stage 1	-	-	-	-	1020	-
Stage 2	-	-	-	-	924	-

Approach	EB	WB	NB
HCM Control Delay, s	0	5.3	9.4
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1080	-	-	1625	-
HCM Lane V/C Ratio	0.238	-	-	0.021	-
HCM Control Delay (s)	9.4	-	-	7.3	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0.9	-	-	0.1	-

Intersection	
Int Delay, s/veh	6.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	243	0	54	44	0	280
Future Vol, veh/h	243	0	54	44	0	280
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	100	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	264	0	59	48	0	304

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	264	0	430	264
Stage 1	-	-	-	-	264	-
Stage 2	-	-	-	-	166	-
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	-	-	1312	-	586	780
Stage 1	-	-	-	-	785	-
Stage 2	-	-	-	-	868	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1312	-	560	780
Mov Cap-2 Maneuver	-	-	-	-	623	-
Stage 1	-	-	-	-	785	-
Stage 2	-	-	-	-	829	-

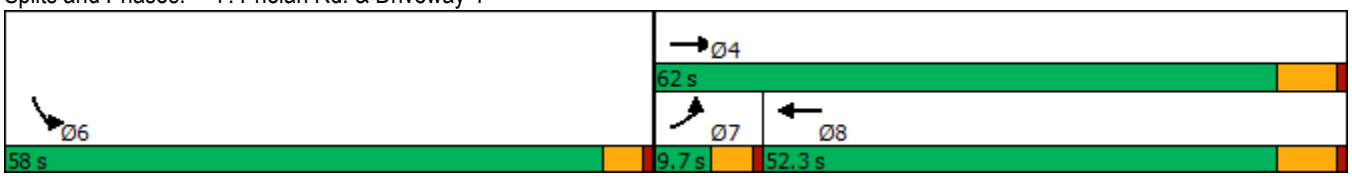
Approach	EB	WB	NB
HCM Control Delay, s	0	4.3	12.5
HCM LOS			B

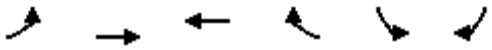
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	780	-	-	1312	-
HCM Lane V/C Ratio	0.39	-	-	0.045	-
HCM Control Delay (s)	12.5	-	-	7.9	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	1.9	-	-	0.1	-

Lane Group	EBL	EBT	WBT	SBL
Lane Configurations				
Traffic Volume (vph)	18	734	944	631
Future Volume (vph)	18	734	944	631
Turn Type	Prot	NA	NA	Prot
Protected Phases	7	4	8	6
Permitted Phases				
Detector Phase	7	4	8	6
Switch Phase				
Minimum Initial (s)	5.0	10.0	10.0	10.0
Minimum Split (s)	9.6	16.5	23.5	26.6
Total Split (s)	9.7	62.0	52.3	58.0
Total Split (%)	8.1%	51.7%	43.6%	48.3%
Yellow Time (s)	3.6	5.5	5.5	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.5	6.5	4.6
Lead/Lag	Lead		Lag	
Lead-Lag Optimize?	Yes		Yes	
Recall Mode	None	Max	Max	None
Act Effct Green (s)	5.1	55.5	51.6	53.4
Actuated g/C Ratio	0.04	0.46	0.43	0.44
v/c Ratio	0.29	0.50	0.82	1.02
Control Delay	67.1	24.0	36.5	71.7
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	67.1	24.0	36.5	71.7
LOS	E	C	D	E
Approach Delay		25.1	36.5	71.7
Approach LOS		C	D	E

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Natural Cycle: 110	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.02	
Intersection Signal Delay: 42.6	Intersection LOS: D
Intersection Capacity Utilization 83.5%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 7: Phelan Rd. & Driveway 4





Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	18	734	944	88	631	42
Future Volume (veh/h)	18	734	944	88	631	42
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	1700	1800	1700	1800	1700	1800
Adj Flow Rate, veh/h	20	798	1026	96	686	46
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	33	1582	1206	113	669	45
Arrive On Green	0.02	0.46	0.40	0.40	0.44	0.44
Sat Flow, veh/h	1619	3510	3070	279	1504	101
Grp Volume(v), veh/h	20	798	555	567	733	0
Grp Sat Flow(s),veh/h/ln	1619	1710	1615	1650	1607	0
Q Serve(g_s), s	1.5	19.6	37.4	37.5	53.4	0.0
Cycle Q Clear(g_c), s	1.5	19.6	37.4	37.5	53.4	0.0
Prop In Lane	1.00			0.17	0.94	0.06
Lane Grp Cap(c), veh/h	33	1582	652	666	715	0
V/C Ratio(X)	0.61	0.50	0.85	0.85	1.03	0.00
Avail Cap(c_a), veh/h	69	1582	652	666	715	0
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	0.00
Uniform Delay (d), s/veh	58.3	22.6	32.5	32.5	33.3	0.0
Incr Delay (d2), s/veh	6.6	1.2	13.1	12.9	40.2	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	0.6	7.5	15.8	16.1	28.4	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	64.9	23.8	45.6	45.4	73.5	0.0
LnGrp LOS	E	C	D	D	F	A
Approach Vol, veh/h		818	1122		733	
Approach Delay, s/veh		24.8	45.5		73.5	
Approach LOS		C	D		E	

Timer - Assigned Phs	4	6	7	8
Phs Duration (G+Y+Rc), s	62.0	58.0	7.0	55.0
Change Period (Y+Rc), s	6.5	4.6	4.6	6.5
Max Green Setting (Gmax), s	55.5	53.4	5.1	45.8
Max Q Clear Time (g_c+I1), s	21.6	55.4	3.5	39.5
Green Ext Time (p_c), s	5.2	0.0	0.0	3.2

Intersection Summary	
HCM 6th Ctrl Delay	46.9
HCM 6th LOS	D

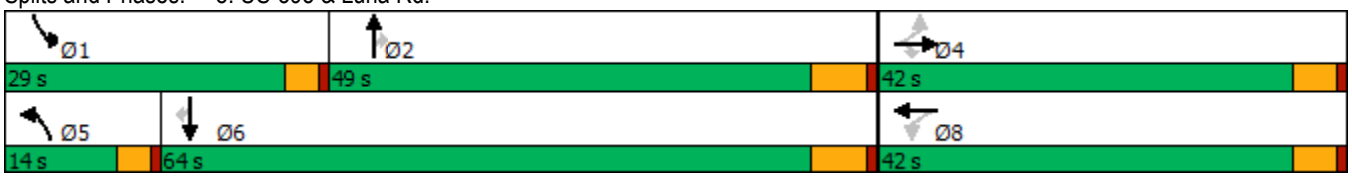
Notes

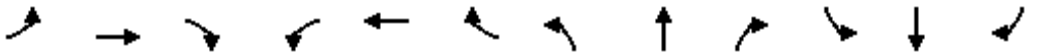
User approved volume balancing among the lanes for turning movement.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	50	70	38	46	105	64	887	90	214	842	86
Future Volume (vph)	50	70	38	46	105	64	887	90	214	842	86
Turn Type	Perm	NA	Perm	Perm	NA	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		4			8	5	2		1	6	
Permitted Phases	4		4	8				2			6
Detector Phase	4	4	4	8	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	15.0	15.0	15.0	42.0	42.0	9.0	28.0	28.0	9.0	37.0	37.0
Total Split (s)	42.0	42.0	42.0	42.0	42.0	14.0	49.0	49.0	29.0	64.0	64.0
Total Split (%)	35.0%	35.0%	35.0%	35.0%	35.0%	11.7%	40.8%	40.8%	24.2%	53.3%	53.3%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	3.0	5.0	5.0	3.0	5.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	4.0	6.0	6.0	4.0	6.0	6.0
Lead/Lag						Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?						Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Max	Max	None	Max	Max
Act Effct Green (s)	20.2	20.2	20.2	20.2	20.2	8.2	48.0	48.0	16.8	59.1	59.1
Actuated g/C Ratio	0.20	0.20	0.20	0.20	0.20	0.08	0.48	0.48	0.17	0.59	0.59
v/c Ratio	0.67	0.19	0.10	0.18	0.79	0.46	0.53	0.11	0.74	0.41	0.09
Control Delay	75.8	34.1	0.5	34.3	42.3	58.1	22.5	5.2	55.9	14.3	3.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	75.8	34.1	0.5	34.3	42.3	58.1	22.5	5.2	55.9	14.3	3.5
LOS	E	C	A	C	D	E	C	A	E	B	A
Approach Delay		39.1			41.3		23.2			21.3	
Approach LOS		D			D		C			C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 100.3	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.79	
Intersection Signal Delay: 25.7	Intersection LOS: C
Intersection Capacity Utilization 80.1%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 8: US-395 & Luna Rd.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	50	70	38	46	105	207	64	887	90	214	842	86
Future Volume (veh/h)	50	70	38	46	105	207	64	887	90	214	842	86
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	52	73	21	48	109	154	67	924	69	223	877	71
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	152	397	336	321	149	210	87	1787	797	260	2132	951
Arrive On Green	0.21	0.21	0.21	0.21	0.21	0.21	0.05	0.49	0.49	0.14	0.59	0.59
Sat Flow, veh/h	1196	1900	1610	1396	712	1006	1810	3610	1610	1810	3610	1610
Grp Volume(v), veh/h	52	73	21	48	0	263	67	924	69	223	877	71
Grp Sat Flow(s),veh/h/ln	1196	1900	1610	1396	0	1717	1810	1805	1610	1810	1805	1610
Q Serve(g_s), s	4.2	3.1	1.0	2.9	0.0	14.1	3.6	17.1	2.2	11.8	12.9	1.9
Cycle Q Clear(g_c), s	18.2	3.1	1.0	6.0	0.0	14.1	3.6	17.1	2.2	11.8	12.9	1.9
Prop In Lane	1.00		1.00	1.00		0.59	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	152	397	336	321	0	358	87	1787	797	260	2132	951
V/C Ratio(X)	0.34	0.18	0.06	0.15	0.00	0.73	0.77	0.52	0.09	0.86	0.41	0.07
Avail Cap(c_a), veh/h	353	716	607	555	0	647	184	1787	797	461	2132	951
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.8	32.0	31.2	34.4	0.0	36.3	46.2	16.8	13.1	41.1	10.9	8.6
Incr Delay (d2), s/veh	0.5	0.1	0.0	0.1	0.0	1.1	10.2	1.1	0.2	6.1	0.6	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	1.2	1.4	0.4	1.0	0.0	5.8	1.8	6.3	0.8	5.4	4.3	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	45.3	32.1	31.2	34.5	0.0	37.4	56.4	17.9	13.3	47.2	11.5	8.8
LnGrp LOS	D	C	C	C	A	D	E	B	B	D	B	A
Approach Vol, veh/h		146			311			1060			1171	
Approach Delay, s/veh		36.7			37.0			20.0			18.1	
Approach LOS		D			D			C			B	

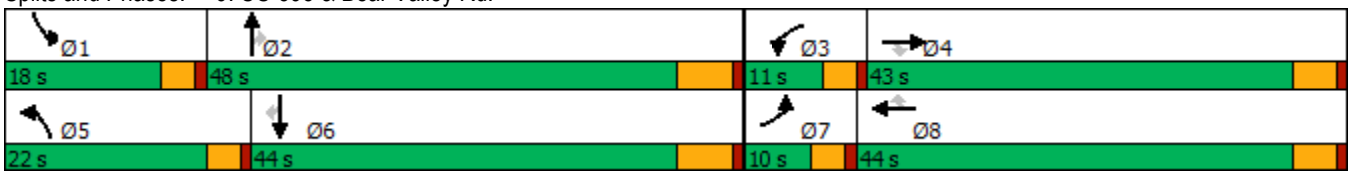
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	18.1	54.6		25.5	8.7	64.0		25.5				
Change Period (Y+Rc), s	4.0	6.0		5.0	4.0	6.0		5.0				
Max Green Setting (Gmax), s	25.0	43.0		37.0	10.0	58.0		37.0				
Max Q Clear Time (g_c+I1), s	13.8	19.1		20.2	5.6	14.9		16.1				
Green Ext Time (p_c), s	0.3	4.9		0.3	0.0	4.9		1.0				

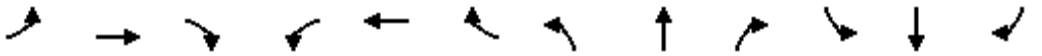
Intersection Summary			
HCM 6th Ctrl Delay		22.1	
HCM 6th LOS		C	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	54	311	133	113	306	130	176	835	236	150	744	35
Future Volume (vph)	54	311	133	113	306	130	176	835	236	150	744	35
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.0	43.0	43.0	9.0	43.0	43.0	9.0	44.0	44.0	9.0	44.0	44.0
Total Split (s)	10.0	43.0	43.0	11.0	44.0	44.0	22.0	48.0	48.0	18.0	44.0	44.0
Total Split (%)	8.3%	35.8%	35.8%	9.2%	36.7%	36.7%	18.3%	40.0%	40.0%	15.0%	36.7%	36.7%
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0	4.0	3.0	5.0	5.0	3.0	5.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	5.0	5.0	4.0	5.0	5.0	4.0	6.0	6.0	4.0	6.0	6.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Max	Max	None	Max	Max
Act Effct Green (s)	6.0	16.5	16.5	7.1	19.7	19.7	14.0	42.5	42.5	12.4	40.9	40.9
Actuated g/C Ratio	0.06	0.17	0.17	0.07	0.20	0.20	0.14	0.44	0.44	0.13	0.42	0.42
v/c Ratio	0.52	0.54	0.36	0.92	0.44	0.32	0.72	0.56	0.29	0.69	0.52	0.05
Control Delay	65.2	39.8	8.2	106.7	36.4	7.5	57.4	24.1	4.1	59.1	24.8	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	65.2	39.8	8.2	106.7	36.4	7.5	57.4	24.1	4.1	59.1	24.8	0.1
LOS	E	D	A	F	D	A	E	C	A	E	C	A
Approach Delay		34.1			44.0			25.0			29.4	
Approach LOS		C			D			C			C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 97.7	
Natural Cycle: 105	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.92	
Intersection Signal Delay: 30.9	Intersection LOS: C
Intersection Capacity Utilization 72.1%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 9: US-395 & Bear Valley Rd.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	54	311	133	113	306	130	176	835	236	150	744	35
Future Volume (veh/h)	54	311	133	113	306	130	176	835	236	150	744	35
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	57	327	58	119	322	68	185	879	187	158	783	24
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	77	469	209	142	600	267	223	1701	759	193	1643	732
Arrive On Green	0.04	0.13	0.13	0.08	0.17	0.17	0.12	0.47	0.47	0.11	0.46	0.46
Sat Flow, veh/h	1810	3610	1610	1810	3610	1604	1810	3610	1610	1810	3610	1609
Grp Volume(v), veh/h	57	327	58	119	322	68	185	879	187	158	783	24
Grp Sat Flow(s),veh/h/ln	1810	1805	1610	1810	1805	1604	1810	1805	1610	1810	1805	1609
Q Serve(g_s), s	2.8	7.7	2.9	5.8	7.3	3.3	8.9	15.2	6.2	7.6	13.4	0.7
Cycle Q Clear(g_c), s	2.8	7.7	2.9	5.8	7.3	3.3	8.9	15.2	6.2	7.6	13.4	0.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	77	469	209	142	600	267	223	1701	759	193	1643	732
V/C Ratio(X)	0.74	0.70	0.28	0.84	0.54	0.26	0.83	0.52	0.25	0.82	0.48	0.03
Avail Cap(c_a), veh/h	122	1539	687	142	1580	702	366	1701	759	284	1643	732
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.2	37.1	35.0	40.5	34.0	32.3	38.2	16.5	14.1	38.9	16.9	13.4
Incr Delay (d2), s/veh	10.0	0.7	0.3	32.7	0.3	0.2	6.2	1.1	0.8	9.5	1.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	3.2	1.1	3.7	3.0	1.2	4.0	5.5	2.1	3.6	5.0	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	52.2	37.8	35.2	73.2	34.3	32.5	44.4	17.6	14.9	48.4	17.9	13.5
LnGrp LOS	D	D	D	E	C	C	D	B	B	D	B	B
Approach Vol, veh/h		442			509			1251			965	
Approach Delay, s/veh		39.3			43.2			21.1			22.8	
Approach LOS		D			D			C			C	

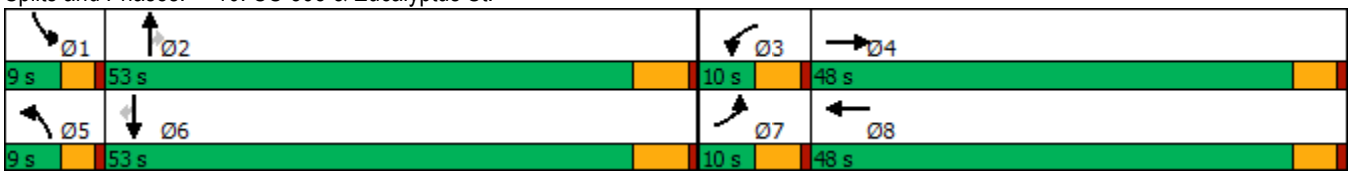
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.5	48.0	11.0	16.6	15.0	46.6	7.8	19.8
Change Period (Y+Rc), s	4.0	6.0	4.0	5.0	4.0	6.0	4.0	5.0
Max Green Setting (Gmax), s	14.0	42.0	7.0	38.0	18.0	38.0	6.0	39.0
Max Q Clear Time (g_c+I1), s	9.6	17.2	7.8	9.7	10.9	15.4	4.8	9.3
Green Ext Time (p_c), s	0.1	3.7	0.0	1.2	0.2	3.0	0.0	1.2

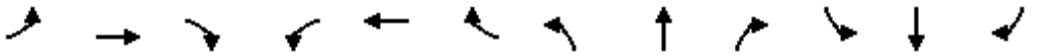
Intersection Summary	
HCM 6th Ctrl Delay	27.7
HCM 6th LOS	C

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	6	0	48	2	17	1271	102	11	927	11
Future Volume (vph)	6	0	48	2	17	1271	102	11	927	11
Turn Type	Prot	NA	Prot	NA	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4	3	8	5	2		1	6	
Permitted Phases							2			6
Detector Phase	7	4	3	8	5	2	2	1	6	6
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	10.0	48.0	10.0	48.0	9.0	41.0	41.0	9.0	41.0	41.0
Total Split (s)	10.0	48.0	10.0	48.0	9.0	53.0	53.0	9.0	53.0	53.0
Total Split (%)	8.3%	40.0%	8.3%	40.0%	7.5%	44.2%	44.2%	7.5%	44.2%	44.2%
Yellow Time (s)	4.0	4.0	4.0	4.0	3.0	5.0	5.0	3.0	5.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	4.0	6.0	6.0	4.0	6.0	6.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	Max	Max	None	Max	Max
Act Effct Green (s)	5.2	15.0	8.5	15.0	5.2	60.4	60.4	5.2	60.4	60.4
Actuated g/C Ratio	0.06	0.18	0.10	0.18	0.06	0.72	0.72	0.06	0.72	0.72
v/c Ratio	0.05	0.01	0.28	0.04	0.16	0.52	0.09	0.11	0.38	0.01
Control Delay	45.5	0.0	44.8	15.8	47.1	13.0	3.7	46.2	11.1	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	45.5	0.0	44.8	15.8	47.1	13.0	3.7	46.2	11.1	0.0
LOS	D	A	D	B	D	B	A	D	B	A
Approach Delay		24.8		39.6		12.7			11.3	
Approach LOS		C		D		B			B	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 84.4	
Natural Cycle: 110	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.52	
Intersection Signal Delay: 12.9	Intersection LOS: B
Intersection Capacity Utilization 53.6%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 10: US-395 & Eucalyptus St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	6	0	5	48	2	9	17	1271	102	11	927	11
Future Volume (veh/h)	6	0	5	48	2	9	17	1271	102	11	927	11
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	6	0	2	51	2	1	18	1338	104	12	976	11
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	14	0	90	78	109	54	38	2251	1004	27	2229	994
Arrive On Green	0.01	0.00	0.06	0.04	0.09	0.09	0.02	0.62	0.62	0.01	0.62	0.62
Sat Flow, veh/h	1810	0	1610	1810	1195	597	1810	3610	1610	1810	3610	1610
Grp Volume(v), veh/h	6	0	2	51	0	3	18	1338	104	12	976	11
Grp Sat Flow(s),veh/h/ln	1810	0	1610	1810	0	1792	1810	1805	1610	1810	1805	1610
Q Serve(g_s), s	0.3	0.0	0.1	2.1	0.0	0.1	0.7	16.9	2.0	0.5	10.8	0.2
Cycle Q Clear(g_c), s	0.3	0.0	0.1	2.1	0.0	0.1	0.7	16.9	2.0	0.5	10.8	0.2
Prop In Lane	1.00		1.00	1.00		0.33	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	14	0	90	78	0	163	38	2251	1004	27	2229	994
V/C Ratio(X)	0.42	0.00	0.02	0.65	0.00	0.02	0.48	0.59	0.10	0.45	0.44	0.01
Avail Cap(c_a), veh/h	119	0	910	119	0	1013	119	2251	1004	119	2229	994
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.6	0.0	34.0	35.8	0.0	31.5	36.9	8.6	5.8	37.2	7.6	5.6
Incr Delay (d2), s/veh	7.3	0.0	0.1	3.4	0.0	0.0	3.5	1.2	0.2	4.4	0.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	0.0	1.0	0.0	0.0	0.3	4.6	0.6	0.3	3.8	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	44.9	0.0	34.1	39.2	0.0	31.5	40.3	9.7	6.0	41.6	8.3	5.6
LnGrp LOS	D	A	C	D	A	C	D	A	A	D	A	A
Approach Vol, veh/h		8			54			1460			999	
Approach Delay, s/veh		42.2			38.8			9.8			8.6	
Approach LOS		D			D			A			A	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.1	53.5	8.3	9.2	5.6	53.0	5.6	11.9
Change Period (Y+Rc), s	4.0	6.0	5.0	5.0	4.0	6.0	5.0	5.0
Max Green Setting (Gmax), s	5.0	47.0	5.0	43.0	5.0	47.0	5.0	43.0
Max Q Clear Time (g_c+I1), s	2.5	18.9	4.1	2.1	2.7	12.8	2.3	2.1
Green Ext Time (p_c), s	0.0	10.6	0.0	0.0	0.0	9.0	0.0	0.0

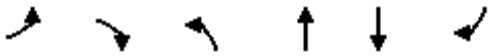
Intersection Summary	
HCM 6th Ctrl Delay	10.1
HCM 6th LOS	B

Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Configurations					
Traffic Volume (vph)	110	413	71	1377	1006
Future Volume (vph)	110	413	71	1377	1006
Turn Type	Prot	Perm	Prot	NA	NA
Protected Phases	4		5	2	6
Permitted Phases		4			
Detector Phase	4	4	5	2	6
Switch Phase					
Minimum Initial (s)	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	26.6	26.6	9.6	16.5	23.5
Total Split (s)	29.0	29.0	15.0	91.0	76.0
Total Split (%)	24.2%	24.2%	12.5%	75.8%	63.3%
Yellow Time (s)	3.6	3.6	3.6	5.5	5.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	6.5	6.5
Lead/Lag			Lead		Lag
Lead-Lag Optimize?			Yes		Yes
Recall Mode	None	None	None	Max	Max
Act Effct Green (s)	20.2	20.2	8.5	84.7	73.7
Actuated g/C Ratio	0.17	0.17	0.07	0.73	0.64
v/c Ratio	0.37	0.92	0.56	1.03	0.89
Control Delay	45.2	47.3	69.1	51.5	32.0
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	45.2	47.3	69.1	51.5	32.0
LOS	D	D	E	D	C
Approach Delay	46.9			52.4	32.0
Approach LOS	D			D	C

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 116	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.03	
Intersection Signal Delay: 44.4	Intersection LOS: D
Intersection Capacity Utilization 90.1%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 11: US-395 & Yucca Terrace Dr.





Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	110	413	71	1377	1006	27
Future Volume (veh/h)	110	413	71	1377	1006	27
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	115	356	74	1434	1048	28
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	368	327	95	1338	1130	30
Arrive On Green	0.20	0.20	0.05	1.00	0.92	0.61
Sat Flow, veh/h	1810	1610	1810	1900	1842	49
Grp Volume(v), veh/h	115	356	74	1434	0	1076
Grp Sat Flow(s),veh/h/ln	1810	1610	1810	1900	0	1891
Q Serve(g_s), s	6.5	24.4	4.8	84.5	0.0	38.9
Cycle Q Clear(g_c), s	6.5	24.4	4.8	84.5	0.0	38.9
Prop In Lane	1.00	1.00	1.00			0.03
Lane Grp Cap(c), veh/h	368	327	95	1338	0	1160
V/C Ratio(X)	0.31	1.09	0.78	1.07	0.00	0.93
Avail Cap(c_a), veh/h	368	327	157	1338	0	1160
HCM Platoon Ratio	1.00	1.00	1.00	1.50	1.50	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	40.7	47.8	56.2	0.0	0.0	3.7
Incr Delay (d2), s/veh	0.5	75.1	5.2	46.3	0.0	13.9
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	26.4	2.3	17.2	0.0	7.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	41.1	122.9	61.3	46.3	0.0	17.7
LnGrp LOS	D	F	E	F	A	B
Approach Vol, veh/h	471			1508	1076	
Approach Delay, s/veh	103.0			47.1	17.7	
Approach LOS	F			D	B	

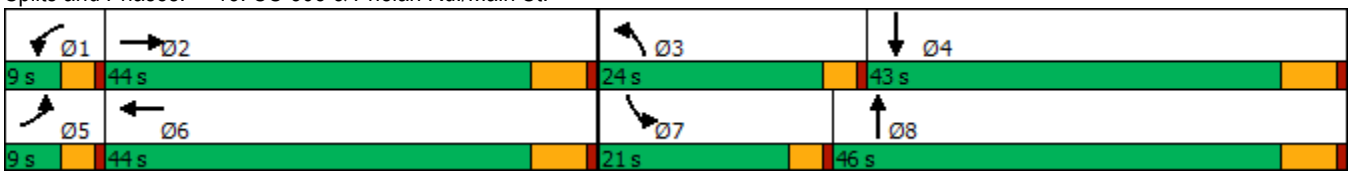
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		91.0		29.0	10.9	80.1
Change Period (Y+Rc), s		6.5		4.6	4.6	6.5
Max Green Setting (Gmax), s		84.5		24.4	10.4	69.5
Max Q Clear Time (g_c+I1), s		86.5		26.4	6.8	40.9
Green Ext Time (p_c), s		0.0		0.0	0.0	9.1

Intersection Summary		
HCM 6th Ctrl Delay		45.3
HCM 6th LOS		D

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	45	1169	9	807	180	1104	512	861
Future Volume (vph)	45	1169	9	807	180	1104	512	861
Turn Type	Prot	NA	Prot	NA	Prot	NA	Prot	NA
Protected Phases	5	2	1	6	3	8	7	4
Permitted Phases								
Detector Phase	5	2	1	6	3	8	7	4
Switch Phase								
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.0	16.0	9.0	16.0	9.0	16.0	9.0	16.0
Total Split (s)	9.0	44.0	9.0	44.0	24.0	46.0	21.0	43.0
Total Split (%)	7.5%	36.7%	7.5%	36.7%	20.0%	38.3%	17.5%	35.8%
Yellow Time (s)	3.0	5.0	3.0	5.0	3.0	5.0	3.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	6.0	4.0	6.0	4.0	6.0	4.0	6.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None
Act Effct Green (s)	5.0	43.4	5.0	38.0	16.4	40.0	17.0	40.7
Actuated g/C Ratio	0.04	0.37	0.04	0.32	0.14	0.34	0.14	0.34
v/c Ratio	0.62	1.07	0.12	1.02	0.76	0.97	2.08	0.77
Control Delay	89.3	80.5	58.9	69.6	68.0	59.5	525.4	40.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	89.3	80.5	58.9	69.6	68.0	59.5	525.4	40.8
LOS	F	F	E	E	E	E	F	D
Approach Delay		80.8		69.5		60.6		215.7
Approach LOS		F		E		E		F

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 118.2	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 2.08	
Intersection Signal Delay: 110.1	Intersection LOS: F
Intersection Capacity Utilization 110.4%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 13: US-395 & Phelan Rd./Main St.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	45	1169	152	9	807	299	180	1104	26	512	861	46
Future Volume (veh/h)	45	1169	152	9	807	299	180	1104	26	512	861	46
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	47	1231	132	9	849	231	189	1162	20	539	906	33
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	61	1119	120	20	892	243	218	1219	21	260	1274	46
Arrive On Green	0.03	0.34	0.34	0.01	0.32	0.32	0.12	0.34	0.34	0.14	0.36	0.36
Sat Flow, veh/h	1810	3282	351	1810	2805	763	1810	3631	62	1810	3552	129
Grp Volume(v), veh/h	47	675	688	9	546	534	189	578	604	539	460	479
Grp Sat Flow(s),veh/h/ln	1810	1805	1828	1810	1805	1763	1810	1805	1889	1810	1805	1877
Q Serve(g_s), s	3.0	40.3	40.3	0.6	35.0	35.1	12.1	37.0	37.0	17.0	26.0	26.0
Cycle Q Clear(g_c), s	3.0	40.3	40.3	0.6	35.0	35.1	12.1	37.0	37.0	17.0	26.0	26.0
Prop In Lane	1.00		0.19	1.00		0.43	1.00		0.03	1.00		0.07
Lane Grp Cap(c), veh/h	61	615	623	20	574	561	218	606	634	260	647	673
V/C Ratio(X)	0.77	1.10	1.10	0.46	0.95	0.95	0.87	0.95	0.95	2.07	0.71	0.71
Avail Cap(c_a), veh/h	76	615	623	76	580	566	306	610	638	260	647	673
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	56.7	39.0	39.0	58.2	39.4	39.5	51.1	38.4	38.4	50.7	32.7	32.7
Incr Delay (d2), s/veh	28.0	65.8	67.9	11.9	25.6	26.2	15.2	25.3	24.6	496.0	3.8	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	27.7	28.4	0.3	18.5	18.2	6.2	19.4	20.2	43.1	11.2	11.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	84.8	104.8	106.9	70.1	65.1	65.7	66.3	63.7	63.1	546.7	36.5	36.3
LnGrp LOS	F	F	F	E	E	E	E	E	E	F	D	D
Approach Vol, veh/h		1410			1089			1371			1478	
Approach Delay, s/veh		105.2			65.4			63.8			222.5	
Approach LOS		F			E			E			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.3	46.3	18.3	48.4	8.0	43.6	21.0	45.7
Change Period (Y+Rc), s	4.0	6.0	4.0	6.0	4.0	6.0	4.0	6.0
Max Green Setting (Gmax), s	5.0	38.0	20.0	37.0	5.0	38.0	17.0	40.0
Max Q Clear Time (g_c+I1), s	2.6	42.3	14.1	28.0	5.0	37.1	19.0	39.0
Green Ext Time (p_c), s	0.0	0.0	0.2	4.0	0.0	0.6	0.0	0.7

Intersection Summary	
HCM 6th Ctrl Delay	118.9
HCM 6th LOS	F

Intersection	
Int Delay, s/veh	0.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	7	24	1286	26	11	1011
Future Vol, veh/h	7	24	1286	26	11	1011
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	375	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	98	98	98	98	98	98
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	7	24	1312	27	11	1032

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	2380	670	0	0	1339	0
Stage 1	1326	-	-	-	-	-
Stage 2	1054	-	-	-	-	-
Critical Hdwy	6.6	6.9	-	-	4.1	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	34	404	-	-	521	-
Stage 1	216	-	-	-	-	-
Stage 2	338	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	33	404	-	-	521	-
Mov Cap-2 Maneuver	33	-	-	-	-	-
Stage 1	216	-	-	-	-	-
Stage 2	331	-	-	-	-	-

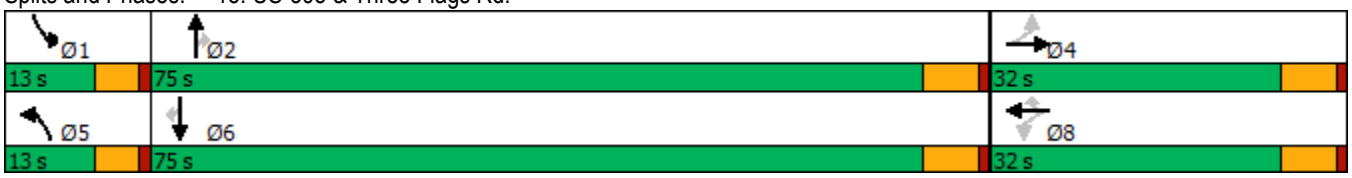
Approach	WB	NB	SB
HCM Control Delay, s	43.3	0	0.1
HCM LOS	E		

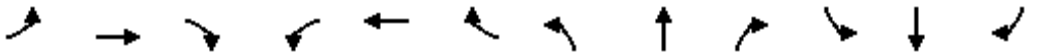
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	33	404	521	-
HCM Lane V/C Ratio	-	-	0.216	0.061	0.022	-
HCM Control Delay (s)	-	-	142	14.5	12.1	-
HCM Lane LOS	-	-	F	B	B	-
HCM 95th %tile Q(veh)	-	-	0.7	0.2	0.1	-

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	35	1	127	4	32	33	1246	147	33	928	57
Future Volume (vph)	35	1	127	4	32	33	1246	147	33	928	57
Turn Type	Perm	NA	Perm	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		4		8		5	2		1	6	
Permitted Phases	4		8		8			2			6
Detector Phase	4	4	8	8	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	16.0	16.0	16.0	16.0	16.0	10.0	16.0	16.0	10.0	16.0	16.0
Total Split (s)	32.0	32.0	32.0	32.0	32.0	13.0	75.0	75.0	13.0	75.0	75.0
Total Split (%)	26.7%	26.7%	26.7%	26.7%	26.7%	10.8%	62.5%	62.5%	10.8%	62.5%	62.5%
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	5.0	6.0	6.0	5.0	6.0	6.0
Lead/Lag						Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?						Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Max	Max	None	Max	Max
Act Effct Green (s)	14.7	14.7	14.7	14.7	14.7	6.4	69.7	69.7	6.4	69.7	69.7
Actuated g/C Ratio	0.14	0.14	0.14	0.14	0.14	0.06	0.67	0.67	0.06	0.67	0.67
v/c Ratio	0.18	0.22	0.67	0.01	0.11	0.31	0.52	0.13	0.31	0.39	0.05
Control Delay	42.1	12.7	60.5	39.0	1.0	56.8	11.0	1.9	56.8	9.4	1.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	42.1	12.7	60.5	39.0	1.0	56.8	11.0	1.9	56.8	9.4	1.6
LOS	D	B	E	D	A	E	B	A	E	A	A
Approach Delay		23.6		48.2			11.1			10.5	
Approach LOS		C		D			B			B	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 103.4	
Natural Cycle: 60	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.67	
Intersection Signal Delay: 13.6	Intersection LOS: B
Intersection Capacity Utilization 66.1%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 15: US-395 & Three Flags Rd.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	35	1	59	127	4	32	33	1246	147	33	928	57
Future Volume (veh/h)	35	1	59	127	4	32	33	1246	147	33	928	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	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	36	1	19	130	4	27	34	1271	144	34	947	41
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	242	10	181	230	223	189	55	2468	1100	55	2468	1101
Arrive On Green	0.12	0.12	0.12	0.12	0.12	0.12	0.03	0.68	0.68	0.03	0.68	0.68
Sat Flow, veh/h	1478	81	1541	1493	1900	1610	1810	3610	1609	1810	3610	1610
Grp Volume(v), veh/h	36	0	20	130	4	27	34	1271	144	34	947	41
Grp Sat Flow(s),veh/h/ln	1478	0	1623	1493	1900	1610	1810	1805	1609	1810	1805	1610
Q Serve(g_s), s	2.2	0.0	1.1	8.6	0.2	1.5	1.9	17.4	3.1	1.9	11.4	0.8
Cycle Q Clear(g_c), s	2.4	0.0	1.1	9.7	0.2	1.5	1.9	17.4	3.1	1.9	11.4	0.8
Prop In Lane	1.00		0.95	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	242	0	191	230	223	189	55	2468	1100	55	2468	1101
V/C Ratio(X)	0.15	0.00	0.10	0.56	0.02	0.14	0.62	0.52	0.13	0.62	0.38	0.04
Avail Cap(c_a), veh/h	449	0	418	439	489	415	143	2468	1100	143	2468	1101
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	40.5	0.0	39.8	44.1	39.4	40.0	48.3	7.8	5.5	48.3	6.8	5.2
Incr Delay (d2), s/veh	0.1	0.0	0.1	0.8	0.0	0.1	4.1	0.8	0.2	4.1	0.5	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.0	0.4	3.2	0.1	0.6	0.9	5.0	0.8	0.9	3.3	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	40.6	0.0	39.9	44.9	39.4	40.1	52.5	8.6	5.8	52.5	7.3	5.2
LnGrp LOS	D	A	D	D	D	D	D	A	A	D	A	A
Approach Vol, veh/h		56			161			1449			1022	
Approach Delay, s/veh		40.3			44.0			9.3			8.7	
Approach LOS		D			D			A			A	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.1	75.0		17.9	8.1	75.0		17.9				
Change Period (Y+Rc), s	5.0	6.0		6.0	5.0	6.0		6.0				
Max Green Setting (Gmax), s	8.0	69.0		26.0	8.0	69.0		26.0				
Max Q Clear Time (g_c+I1), s	3.9	19.4		4.4	3.9	13.4		11.7				
Green Ext Time (p_c), s	0.0	11.5		0.1	0.0	7.0		0.2				

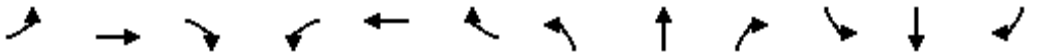
Intersection Summary			
HCM 6th Ctrl Delay		11.8	
HCM 6th LOS		B	

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	53	47	81	19	121	25	1251	87	102	992	21
Future Volume (vph)	53	47	81	19	121	25	1251	87	102	992	21
Turn Type	Perm	NA	Perm	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		4		8		5	2		1	6	
Permitted Phases	4		8		8			2			6
Detector Phase	4	4	8	8	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	15.0	15.0	46.0	46.0	46.0	9.0	34.0	34.0	9.0	34.0	34.0
Total Split (s)	46.0	46.0	46.0	46.0	46.0	10.0	59.0	59.0	15.0	64.0	64.0
Total Split (%)	38.3%	38.3%	38.3%	38.3%	38.3%	8.3%	49.2%	49.2%	12.5%	53.3%	53.3%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	3.0	5.0	5.0	3.0	5.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	0.0	-2.0	-2.0	0.0	-2.0	-2.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag						Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?						Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Max	Max	None	Max	Max
Act Effct Green (s)	16.4	16.4	16.4	16.4	16.4	5.8	56.6	56.6	9.5	66.5	66.5
Actuated g/C Ratio	0.17	0.17	0.17	0.17	0.17	0.06	0.60	0.60	0.10	0.70	0.70
v/c Ratio	0.23	0.18	0.36	0.06	0.33	0.24	0.60	0.09	0.58	0.40	0.02
Control Delay	34.2	28.1	37.3	30.7	7.9	52.0	15.7	3.4	56.1	9.3	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	34.2	28.1	37.3	30.7	7.9	52.0	15.7	3.4	56.1	9.3	0.0
LOS	C	C	D	C	A	D	B	A	E	A	A
Approach Delay		31.1		20.7			15.6			13.4	
Approach LOS		C		C			B			B	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 94.7	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.60	
Intersection Signal Delay: 15.7	Intersection LOS: B
Intersection Capacity Utilization 62.1%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 16: US-395 & Joshua St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	53	47	10	81	19	121	25	1251	87	102	992	21
Future Volume (veh/h)	53	47	10	81	19	121	25	1251	87	102	992	21
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	55	48	7	84	20	67	26	1290	78	105	1023	15
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	257	215	31	238	252	213	49	2357	1051	134	2528	1128
Arrive On Green	0.13	0.13	0.12	0.13	0.13	0.13	0.03	0.65	0.65	0.07	0.70	0.70
Sat Flow, veh/h	1402	1621	236	1446	1900	1607	1810	3610	1610	1810	3610	1610
Grp Volume(v), veh/h	55	0	55	84	20	67	26	1290	78	105	1023	15
Grp Sat Flow(s),veh/h/ln	1402	0	1857	1446	1900	1607	1810	1805	1610	1810	1805	1610
Q Serve(g_s), s	3.1	0.0	2.3	4.7	0.8	3.2	1.2	16.5	1.5	4.9	10.2	0.2
Cycle Q Clear(g_c), s	3.9	0.0	2.3	7.0	0.8	3.2	1.2	16.5	1.5	4.9	10.2	0.2
Prop In Lane	1.00		0.13	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	257	0	246	238	252	213	49	2357	1051	134	2528	1128
V/C Ratio(X)	0.21	0.00	0.22	0.35	0.08	0.31	0.53	0.55	0.07	0.78	0.40	0.01
Avail Cap(c_a), veh/h	759	0	911	755	931	788	127	2357	1051	232	2528	1128
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	34.3	0.0	33.3	36.3	32.6	33.6	41.1	8.0	5.4	39.0	5.4	3.9
Incr Delay (d2), s/veh	0.2	0.0	0.2	0.3	0.0	0.3	6.6	0.9	0.1	7.1	0.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	0.0	1.0	1.7	0.4	1.3	0.6	4.6	0.4	2.3	2.4	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	34.4	0.0	33.4	36.7	32.6	33.9	47.7	8.9	5.6	46.1	5.8	3.9
LnGrp LOS	C	A	C	D	C	C	D	A	A	D	A	A
Approach Vol, veh/h		110			171			1394			1143	
Approach Delay, s/veh		33.9			35.1			9.5			9.5	
Approach LOS		C			D			A			A	

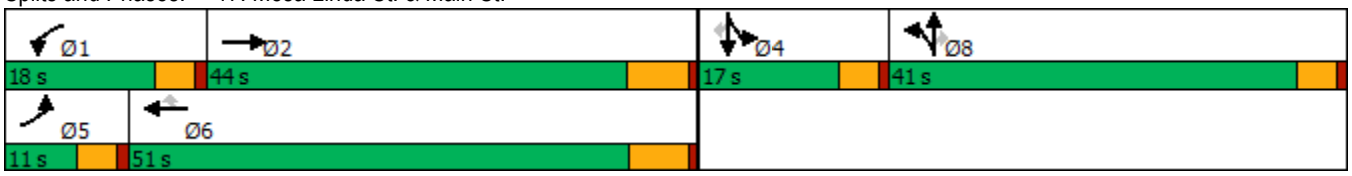
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.4	59.9		15.4	6.3	64.0		15.4				
Change Period (Y+Rc), s	4.0	6.0		5.0	4.0	6.0		5.0				
Max Green Setting (Gmax), s	11.0	53.0		41.0	6.0	58.0		41.0				
Max Q Clear Time (g_c+I1), s	6.9	18.5		5.9	3.2	12.2		9.0				
Green Ext Time (p_c), s	0.1	20.3		0.2	0.0	16.6		0.3				

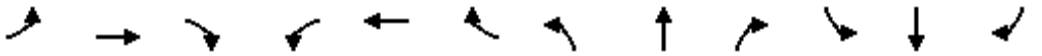
Intersection Summary			
HCM 6th Ctrl Delay		12.0	
HCM 6th LOS		B	

Lane Group	EBL	EBT	WBL	WBT	WBR	NBT	NBR	SBT	SBR
Lane Configurations									
Traffic Volume (vph)	5	1696	47	1102	54	7	81	0	3
Future Volume (vph)	5	1696	47	1102	54	7	81	0	3
Turn Type	Prot	NA	Prot	NA	Perm	NA	Perm	NA	Perm
Protected Phases	5	2	1	6		8		4	
Permitted Phases					6		8		4
Detector Phase	5	2	1	6	6	8	8	4	4
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	16.5	9.6	23.2	23.2	40.6	40.6	14.6	14.6
Total Split (s)	11.0	44.0	18.0	51.0	51.0	41.0	41.0	17.0	17.0
Total Split (%)	9.2%	36.7%	15.0%	42.5%	42.5%	34.2%	34.2%	14.2%	14.2%
Yellow Time (s)	3.6	5.5	3.6	5.2	5.2	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.5	4.6	6.2	6.2	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lead	Lag	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes				
Recall Mode	None	Max	None	Max	Max	None	None	None	None
Act Effct Green (s)	5.4	48.5	7.3	54.2	54.2	14.2	14.2	10.5	10.5
Actuated g/C Ratio	0.06	0.58	0.09	0.65	0.65	0.17	0.17	0.13	0.13
v/c Ratio	0.05	0.62	0.35	0.36	0.05	0.06	0.22	0.15	0.01
Control Delay	47.2	21.3	48.4	12.9	1.0	31.6	1.3	42.2	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	47.2	21.3	48.4	12.9	1.0	31.6	1.3	42.2	0.0
LOS	D	C	D	B	A	C	A	D	A
Approach Delay		21.4		13.7		6.4		38.6	
Approach LOS		C		B		A		D	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 83.8	
Natural Cycle: 110	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.62	
Intersection Signal Delay: 18.1	Intersection LOS: B
Intersection Capacity Utilization 64.5%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 17: Mesa Linda St. & Main St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	1696	6	47	1102	54	10	7	81	31	0	3
Future Volume (veh/h)	5	1696	6	47	1102	54	10	7	81	31	0	3
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	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	5	1767	5	49	1148	48	10	7	25	32	0	1
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	11	2780	8	68	2876	893	79	56	118	113	0	100
Arrive On Green	0.01	0.55	0.55	0.04	0.59	0.59	0.08	0.08	0.08	0.07	0.00	0.07
Sat Flow, veh/h	1619	5059	14	1619	4914	1525	1029	720	1525	1714	0	1525
Grp Volume(v), veh/h	5	1144	628	49	1148	48	17	0	25	32	0	1
Grp Sat Flow(s),veh/h/ln	1619	1638	1797	1619	1638	1525	1749	0	1525	1714	0	1525
Q Serve(g_s), s	0.2	18.5	18.5	2.3	9.7	1.0	0.7	0.0	1.2	1.4	0.0	0.0
Cycle Q Clear(g_c), s	0.2	18.5	18.5	2.3	9.7	1.0	0.7	0.0	1.2	1.4	0.0	0.0
Prop In Lane	1.00		0.01	1.00		1.00	0.59		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	11	1800	988	68	2876	893	135	0	118	113	0	100
V/C Ratio(X)	0.47	0.64	0.64	0.72	0.40	0.05	0.13	0.00	0.21	0.28	0.00	0.01
Avail Cap(c_a), veh/h	135	1800	988	283	2876	893	831	0	725	278	0	247
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	37.9	11.9	11.9	36.2	8.6	6.8	32.9	0.0	33.1	34.0	0.0	33.4
Incr Delay (d2), s/veh	11.4	1.7	3.1	5.1	0.4	0.1	0.4	0.0	0.9	1.4	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	5.3	6.2	0.9	2.6	0.3	0.3	0.0	0.5	0.6	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	49.3	13.7	15.1	41.3	9.0	6.9	33.3	0.0	34.0	35.4	0.0	33.5
LnGrp LOS	D	B	B	D	A	A	C	A	C	D	A	C
Approach Vol, veh/h		1777			1245			42			33	
Approach Delay, s/veh		14.3			10.2			33.7			35.3	
Approach LOS		B			B			C			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.8	48.6		9.6	5.1	51.3		10.5				
Change Period (Y+Rc), s	4.6	6.5		4.6	4.6	* 6.5		4.6				
Max Green Setting (Gmax), s	13.4	37.5		12.4	6.4	* 45		36.4				
Max Q Clear Time (g_c+I1), s	4.3	20.5		3.4	2.2	11.7		3.2				
Green Ext Time (p_c), s	0.0	10.0		0.0	0.0	8.8		0.1				

Intersection Summary		
HCM 6th Ctrl Delay		13.1
HCM 6th LOS		B

Notes

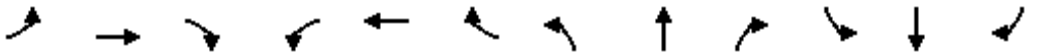
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	77	1622	88	188	959	44	135	51	137	69	29	111
Future Volume (vph)	77	1622	88	188	959	44	135	51	137	69	29	111
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Split	NA	Perm	Split	NA	Perm
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases			2			6			8			4
Detector Phase	5	2	2	1	6	6	8	8	8	4	4	4
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	32.2	32.2	9.6	32.2	32.2	43.6	43.6	43.6	41.6	41.6	41.6
Total Split (s)	11.0	32.8	32.8	12.0	33.8	33.8	43.6	43.6	43.6	41.6	41.6	41.6
Total Split (%)	8.5%	25.2%	25.2%	9.2%	26.0%	26.0%	33.5%	33.5%	33.5%	32.0%	32.0%	32.0%
Yellow Time (s)	3.6	5.2	5.2	3.6	5.2	5.2	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	6.2	4.6	6.2	6.2	4.6	4.6	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes						
Recall Mode	None	Max	Max	None	Max	Max	None	None	None	None	None	None
Act Effct Green (s)	6.7	28.0	28.0	7.8	29.0	29.0	14.6	14.6	14.6	14.1	14.1	14.1
Actuated g/C Ratio	0.08	0.33	0.33	0.09	0.34	0.34	0.17	0.17	0.17	0.16	0.16	0.16
v/c Ratio	0.62	1.03	0.16	0.72	0.59	0.08	0.36	0.34	0.38	0.26	0.10	0.33
Control Delay	64.3	60.1	8.2	56.2	28.1	0.3	35.3	34.5	8.7	34.3	31.8	9.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	64.3	60.1	8.2	56.2	28.1	0.3	35.3	34.5	8.7	34.3	31.8	9.3
LOS	E	E	A	E	C	A	D	C	A	C	C	A
Approach Delay		57.8			31.5			23.8			20.7	
Approach LOS		E			C			C			C	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 85.5	
Natural Cycle: 130	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.03	
Intersection Signal Delay: 43.5	Intersection LOS: D
Intersection Capacity Utilization 67.5%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 18: Cataba Av. & Main St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	77	1622	88	188	959	44	135	51	137	69	29	111
Future Volume (veh/h)	77	1622	88	188	959	44	135	51	137	69	29	111
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		0.99	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	1700	1800	1800	1600	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	79	1655	51	192	979	33	95	112	37	70	30	23
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	98	1772	550	263	1912	593	250	278	234	202	224	190
Arrive On Green	0.06	0.36	0.36	0.09	0.39	0.39	0.15	0.15	0.15	0.12	0.12	0.12
Sat Flow, veh/h	1619	4914	1524	2956	4914	1523	1619	1800	1511	1619	1800	1525
Grp Volume(v), veh/h	79	1655	51	192	979	33	95	112	37	70	30	23
Grp Sat Flow(s),veh/h/ln	1619	1638	1524	1478	1638	1523	1619	1800	1511	1619	1800	1525
Q Serve(g_s), s	3.6	24.0	1.6	4.7	11.2	1.0	3.9	4.1	1.6	2.9	1.1	1.0
Cycle Q Clear(g_c), s	3.6	24.0	1.6	4.7	11.2	1.0	3.9	4.1	1.6	2.9	1.1	1.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	98	1772	550	263	1912	593	250	278	234	202	224	190
V/C Ratio(X)	0.81	0.93	0.09	0.73	0.51	0.06	0.38	0.40	0.16	0.35	0.13	0.12
Avail Cap(c_a), veh/h	140	1772	550	297	1912	593	856	952	799	812	903	765
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.2	22.7	15.6	32.7	17.2	14.1	28.0	28.1	27.0	29.5	28.7	28.7
Incr Delay (d2), s/veh	13.1	10.6	0.3	6.2	1.0	0.2	0.9	0.9	0.3	1.0	0.3	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	1.6	9.3	0.5	1.8	3.7	0.3	1.5	1.8	0.6	1.2	0.5	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	47.3	33.3	15.9	38.9	18.2	14.2	28.9	29.0	27.3	30.6	29.0	29.0
LnGrp LOS	D	C	B	D	B	B	C	C	C	C	C	C
Approach Vol, veh/h		1785			1204			244			123	
Approach Delay, s/veh		33.5			21.4			28.7			29.9	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	11.2	32.8		13.8	9.1	34.9		16.0				
Change Period (Y+Rc), s	4.6	6.2		4.6	4.6	6.2		4.6				
Max Green Setting (Gmax), s	7.4	26.6		37.0	6.4	27.6		39.0				
Max Q Clear Time (g_c+I1), s	6.7	26.0		4.9	5.6	13.2		6.1				
Green Ext Time (p_c), s	0.0	0.5		0.4	0.0	5.3		1.1				

Intersection Summary		
HCM 6th Ctrl Delay		28.7
HCM 6th LOS		C

Notes

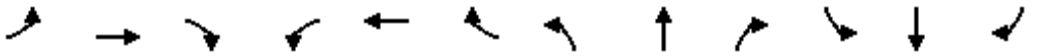
User approved pedestrian interval to be less than phase max green.
User approved volume balancing among the lanes for turning movement.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	55	1839	24	215	1288	29	71	230	222	84
Future Volume (vph)	55	1839	24	215	1288	29	71	230	222	84
Turn Type	Prot	NA	Perm	Prot	NA	Perm	NA	Perm	Perm	NA
Protected Phases	5	2		1	6		8			4
Permitted Phases			2			8		8	4	
Detector Phase	5	2	2	1	6	8	8	8	4	4
Switch Phase										
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	29.2	29.2	9.6	30.2	38.6	38.6	38.6	41.6	41.6
Total Split (s)	16.0	42.0	42.0	34.0	60.0	44.0	44.0	44.0	44.0	44.0
Total Split (%)	13.3%	35.0%	35.0%	28.3%	50.0%	36.7%	36.7%	36.7%	36.7%	36.7%
Yellow Time (s)	3.6	5.2	5.2	3.6	5.2	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	6.2	4.6	6.2	4.6	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes					
Recall Mode	None	Max	Max	None	Max	None	None	None	None	None
Act Effct Green (s)	7.9	42.5	42.5	17.8	54.9	24.0	24.0	24.0	24.0	24.0
Actuated g/C Ratio	0.08	0.42	0.42	0.18	0.55	0.24	0.24	0.24	0.24	0.24
v/c Ratio	0.44	0.90	0.03	0.76	0.58	0.11	0.17	0.44	0.79	0.28
Control Delay	58.6	36.2	0.1	57.5	18.1	30.6	31.0	6.6	55.2	27.9
Queue Delay	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0
Total Delay	58.6	36.2	0.1	57.5	18.3	30.6	31.0	6.6	55.2	27.9
LOS	E	D	A	E	B	C	C	A	E	C
Approach Delay		36.4			23.2		13.9			45.9
Approach LOS		D			C		B			D

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 100.1	
Natural Cycle: 105	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.90	
Intersection Signal Delay: 30.1	Intersection LOS: C
Intersection Capacity Utilization 85.4%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 19: Key Point Av. & Main St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	55	1839	24	215	1288	213	29	71	230	222	84	31
Future Volume (veh/h)	55	1839	24	215	1288	213	29	71	230	222	84	31
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		0.98	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	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	56	1877	20	219	1314	141	30	72	94	227	86	11
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	70	2116	657	250	2442	262	342	468	390	340	406	52
Arrive On Green	0.04	0.43	0.43	0.15	0.54	0.54	0.26	0.26	0.26	0.26	0.26	0.26
Sat Flow, veh/h	1619	4914	1525	1619	4505	483	1241	1800	1501	1168	1563	200
Grp Volume(v), veh/h	56	1877	20	219	956	499	30	72	94	227	0	97
Grp Sat Flow(s),veh/h/ln	1619	1638	1525	1619	1638	1712	1241	1800	1501	1168	0	1763
Q Serve(g_s), s	3.4	34.9	0.8	13.1	18.7	18.7	1.9	3.1	4.9	18.5	0.0	4.3
Cycle Q Clear(g_c), s	3.4	34.9	0.8	13.1	18.7	18.7	6.2	3.1	4.9	21.5	0.0	4.3
Prop In Lane	1.00		1.00	1.00		0.28	1.00		1.00	1.00		0.11
Lane Grp Cap(c), veh/h	70	2116	657	250	1776	928	342	468	390	340	0	458
V/C Ratio(X)	0.81	0.89	0.03	0.88	0.54	0.54	0.09	0.15	0.24	0.67	0.00	0.21
Avail Cap(c_a), veh/h	186	2116	657	480	1776	928	512	715	596	500	0	700
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	47.1	26.0	16.3	41.0	14.7	14.7	31.2	28.3	29.0	36.6	0.0	28.8
Incr Delay (d2), s/veh	7.9	6.0	0.1	3.8	1.2	2.2	0.1	0.2	0.3	2.3	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	13.2	0.3	5.2	6.2	6.8	0.6	1.3	1.8	5.5	0.0	1.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	55.0	32.0	16.4	44.9	15.9	16.9	31.3	28.5	29.3	38.9	0.0	29.0
LnGrp LOS	D	C	B	D	B	B	C	C	C	D	A	C
Approach Vol, veh/h		1953			1674			196			324	
Approach Delay, s/veh		32.5			20.0			29.3			35.9	
Approach LOS		C			B			C			D	

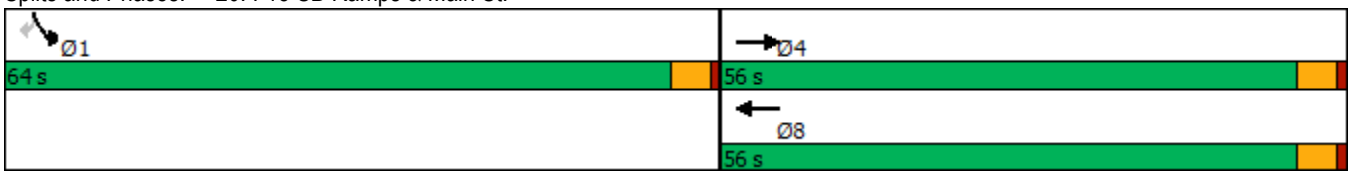
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	19.9	48.9		30.4	8.9	60.0		30.4				
Change Period (Y+Rc), s	4.6	6.2		4.6	4.6	6.2		4.6				
Max Green Setting (Gmax), s	29.4	35.8		39.4	11.4	53.8		39.4				
Max Q Clear Time (g_c+I1), s	15.1	36.9		23.5	5.4	20.7		8.2				
Green Ext Time (p_c), s	0.2	0.0		1.3	0.0	11.2		0.8				

Intersection Summary			
HCM 6th Ctrl Delay		27.6	
HCM 6th LOS		C	

Lane Group	EBT	EBR	WBT	SBL	SBR
Lane Configurations					
Traffic Volume (vph)	1724	438	1237	540	480
Future Volume (vph)	1724	438	1237	540	480
Turn Type	NA	Free	NA	Prot	Perm
Protected Phases	4		8	1	
Permitted Phases		Free			1
Detector Phase	4		8	1	1
Switch Phase					
Minimum Initial (s)	5.0		5.0	5.0	5.0
Minimum Split (s)	9.6		22.6	9.6	9.6
Total Split (s)	56.0		56.0	64.0	64.0
Total Split (%)	46.7%		46.7%	53.3%	53.3%
Yellow Time (s)	3.6		3.6	3.6	3.6
All-Red Time (s)	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.6		4.6	4.6	4.6
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	None		None	None	None
Act Effct Green (s)	39.9	83.2	39.9	33.6	33.6
Actuated g/C Ratio	0.48	1.00	0.48	0.40	0.40
v/c Ratio	0.72	0.28	0.51	0.39	0.75
Control Delay	20.0	0.4	16.6	19.0	29.1
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	20.0	0.4	16.6	19.0	29.1
LOS	B	A	B	B	C
Approach Delay	16.0		16.6		
Approach LOS	B		B		

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 83.2	
Natural Cycle: 40	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.75	
Intersection Signal Delay: 18.0	Intersection LOS: B
Intersection Capacity Utilization 61.3%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 20: I-15 SB Ramps & Main St.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↱		↑↑↑	↱				↰↰		↱
Traffic Volume (veh/h)	0	1724	438	0	1237	0	0	0	0	540	0	480
Future Volume (veh/h)	0	1724	438	0	1237	0	0	0	0	540	0	480
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	1900	1900	0	1900	1900				1900	0	1900
Adj Flow Rate, veh/h	0	1777	0	0	1275	0				557	0	382
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	0	0	0	0	0				0	0	0
Cap, veh/h	0	2791		0	2791					1092	0	501
Arrive On Green	0.00	0.54	0.00	0.00	0.54	0.00				0.31	0.00	0.31
Sat Flow, veh/h	0	5358	1610	0	5358	1610				3510	0	1610
Grp Volume(v), veh/h	0	1777	0	0	1275	0				557	0	382
Grp Sat Flow(s),veh/h/ln	0	1729	1610	0	1729	1610				1755	0	1610
Q Serve(g_s), s	0.0	14.7	0.0	0.0	9.2	0.0				7.9	0.0	13.1
Cycle Q Clear(g_c), s	0.0	14.7	0.0	0.0	9.2	0.0				7.9	0.0	13.1
Prop In Lane	0.00		1.00	0.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2791		0	2791					1092	0	501
V/C Ratio(X)	0.00	0.64		0.00	0.46					0.51	0.00	0.76
Avail Cap(c_a), veh/h	0	4367		0	4367					3416	0	1567
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	9.9	0.0	0.0	8.6	0.0				17.2	0.0	19.0
Incr Delay (d2), s/veh	0.0	0.2	0.0	0.0	0.1	0.0				0.4	0.0	2.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	3.7	0.0	0.0	2.3	0.0				3.0	0.0	4.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	10.1	0.0	0.0	8.8	0.0				17.6	0.0	21.4
LnGrp LOS	A	B		A	A					B	A	C
Approach Vol, veh/h		1777	A		1275	A					939	
Approach Delay, s/veh		10.1			8.8						19.1	
Approach LOS		B			A						B	

Timer - Assigned Phs			4		6		8					
Phs Duration (G+Y+Rc), s			37.4		23.6		37.4					
Change Period (Y+Rc), s			4.6		4.6		4.6					
Max Green Setting (Gmax), s			51.4		59.4		51.4					
Max Q Clear Time (g_c+I1), s			16.7		15.1		11.2					
Green Ext Time (p_c), s			16.2		3.9		10.4					

Intersection Summary		
HCM 6th Ctrl Delay		11.8
HCM 6th LOS		B

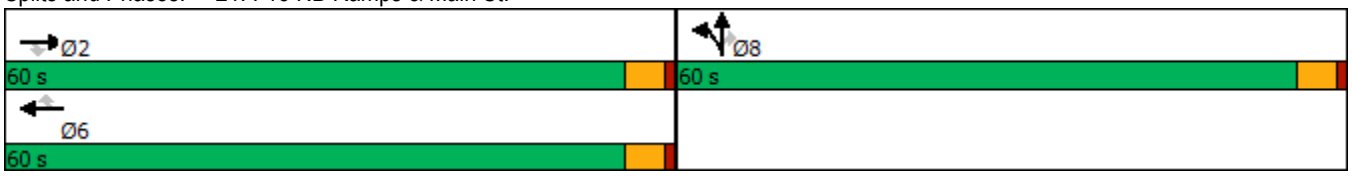
Notes

Unsignalized Delay for [EBR, WBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBT	EBR	WBT	WBR	NBL	NBT	NBR
Lane Configurations							
Traffic Volume (vph)	1628	636	1325	396	270	0	831
Future Volume (vph)	1628	636	1325	396	270	0	831
Turn Type	NA	Perm	NA	Perm	Split	NA	Perm
Protected Phases	2		6		8	8	
Permitted Phases		2		6			8
Detector Phase	2	2	6	6	8	8	8
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.6	22.6	22.6	22.6	9.6	9.6	9.6
Total Split (s)	60.0	60.0	60.0	60.0	60.0	60.0	60.0
Total Split (%)	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Lead/Lag							
Lead-Lag Optimize?							
Recall Mode	None	None	None	None	Min	Min	Min
Act Effct Green (s)	47.8	47.8	47.8	47.8	37.0	37.0	37.0
Actuated g/C Ratio	0.51	0.51	0.51	0.51	0.39	0.39	0.39
v/c Ratio	0.64	0.58	0.52	0.40	0.39	0.70	0.70
Control Delay	19.7	3.7	17.7	3.0	23.0	30.8	30.7
Queue Delay	0.0	0.0	0.2	0.3	0.0	0.0	0.0
Total Delay	19.7	3.7	18.0	3.3	23.0	30.8	30.7
LOS	B	A	B	A	C	C	C
Approach Delay	15.2		14.6			28.9	
Approach LOS	B		B			C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 94.6	
Natural Cycle: 45	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.70	
Intersection Signal Delay: 18.0	Intersection LOS: B
Intersection Capacity Utilization 73.4%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 21: I-15 NB Ramps & Main St.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↱		↑↑↑	↱	↰	↑	↱			
Traffic Volume (veh/h)	0	1628	636	0	1325	396	270	0	831	0	0	0
Future Volume (veh/h)	0	1628	636	0	1325	396	270	0	831	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	0	1900	1900	0	1900	1900	1900	1900	1900			
Adj Flow Rate, veh/h	0	1678	0	0	1366	261	278	0	710			
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	0	0	0	0	0	0	0	0			
Cap, veh/h	0	2759		0	2759	857	558	0	993			
Arrive On Green	0.00	0.53	0.00	0.00	0.53	0.53	0.31	0.00	0.31			
Sat Flow, veh/h	0	5358	1610	0	5358	1610	1810	0	3220			
Grp Volume(v), veh/h	0	1678	0	0	1366	261	278	0	710			
Grp Sat Flow(s),veh/h/ln	0	1729	1610	0	1729	1610	1810	0	1610			
Q Serve(g_s), s	0.0	12.9	0.0	0.0	9.6	5.2	7.2	0.0	11.3			
Cycle Q Clear(g_c), s	0.0	12.9	0.0	0.0	9.6	5.2	7.2	0.0	11.3			
Prop In Lane	0.00		1.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	0	2759		0	2759	857	558	0	993			
V/C Ratio(X)	0.00	0.61		0.00	0.50	0.30	0.50	0.00	0.72			
Avail Cap(c_a), veh/h	0	4991		0	4991	1549	1741	0	3099			
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	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	0.0	9.3	0.0	0.0	8.6	7.5	16.3	0.0	17.7			
Incr Delay (d2), s/veh	0.0	0.2	0.0	0.0	0.1	0.2	0.7	0.0	1.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.0	3.1	0.0	0.0	2.3	1.2	2.9	0.0	4.0			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	9.5	0.0	0.0	8.7	7.7	17.0	0.0	18.6			
LnGrp LOS	A	A		A	A	A	B	A	B			
Approach Vol, veh/h		1678	A		1627			988				
Approach Delay, s/veh		9.5			8.5			18.2				
Approach LOS		A			A			B				

Timer - Assigned Phs		2				6		8				
Phs Duration (G+Y+Rc), s		35.2				35.2		22.3				
Change Period (Y+Rc), s		4.6				4.6		4.6				
Max Green Setting (Gmax), s		55.4				55.4		55.4				
Max Q Clear Time (g_c+I1), s		14.9				11.6		13.3				
Green Ext Time (p_c), s		15.7				13.3		4.5				

Intersection Summary		
HCM 6th Ctrl Delay	11.1	
HCM 6th LOS	B	

Notes

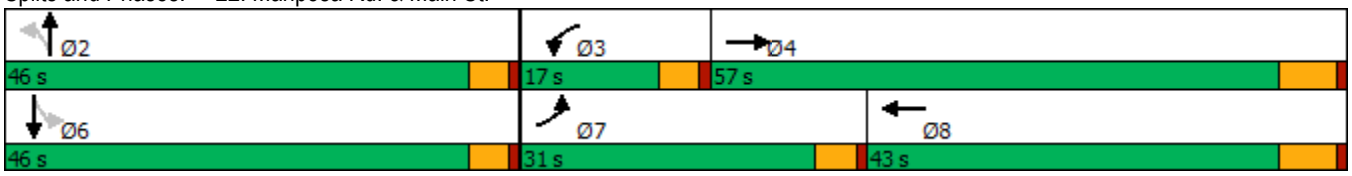
User approved volume balancing among the lanes for turning movement.

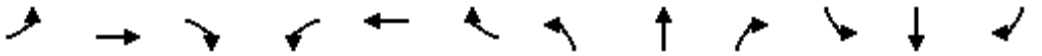
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	231	2076	84	1349	129	77	132	53
Future Volume (vph)	231	2076	84	1349	129	77	132	53
Turn Type	Prot	NA	Prot	NA	Perm	NA	Perm	NA
Protected Phases	7	4	3	8		2		6
Permitted Phases					2		6	
Detector Phase	7	4	3	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	24.2	9.6	24.2	44.6	44.6	44.6	44.6
Total Split (s)	31.0	57.0	17.0	43.0	46.0	46.0	46.0	46.0
Total Split (%)	25.8%	47.5%	14.2%	35.8%	38.3%	38.3%	38.3%	38.3%
Yellow Time (s)	3.6	5.2	3.6	5.2	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	4.6	6.2	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes				
Recall Mode	None	Max	Max	None	None	None	None	None
Act Effct Green (s)	18.2	51.3	12.5	45.5	21.8	21.8	21.8	21.8
Actuated g/C Ratio	0.18	0.51	0.12	0.45	0.22	0.22	0.22	0.22
v/c Ratio	0.81	0.73	0.43	0.54	0.92	0.38	0.63	0.52
Control Delay	61.8	22.6	51.5	23.6	94.8	25.8	48.5	15.8
Queue Delay	0.0	3.3	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	61.8	25.9	51.5	23.6	94.8	25.8	48.5	15.8
LOS	E	C	D	C	F	C	D	B
Approach Delay		29.3		25.1		58.2		27.5
Approach LOS		C		C		E		C

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 101.1	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.92	
Intersection Signal Delay: 29.5	Intersection LOS: C
Intersection Capacity Utilization 79.6%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 22: Mariposa Rd. & Main St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	231	2076	153	84	1349	102	129	77	69	132	53	184
Future Volume (veh/h)	231	2076	153	84	1349	102	129	77	69	132	53	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		0.99	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	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	236	2118	140	86	1377	88	132	79	43	135	54	117
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	266	2967	196	196	2717	173	234	253	138	280	117	255
Arrive On Green	0.16	0.50	0.50	0.12	0.45	0.45	0.23	0.23	0.23	0.23	0.23	0.23
Sat Flow, veh/h	1619	5978	395	1619	5993	382	1165	1090	594	1218	506	1097
Grp Volume(v), veh/h	236	1645	613	86	1067	398	132	0	122	135	0	171
Grp Sat Flow(s),veh/h/ln	1619	1548	1729	1619	1548	1731	1165	0	1684	1218	0	1603
Q Serve(g_s), s	14.6	28.3	28.3	5.0	16.7	16.7	11.2	0.0	6.1	10.6	0.0	9.4
Cycle Q Clear(g_c), s	14.6	28.3	28.3	5.0	16.7	16.7	20.6	0.0	6.1	16.7	0.0	9.4
Prop In Lane	1.00		0.23	1.00		0.22	1.00		0.35	1.00		0.68
Lane Grp Cap(c), veh/h	266	2305	858	196	2105	785	234	0	391	280	0	372
V/C Ratio(X)	0.89	0.71	0.71	0.44	0.51	0.51	0.56	0.00	0.31	0.48	0.00	0.46
Avail Cap(c_a), veh/h	418	2305	858	196	2105	785	435	0	681	490	0	648
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	41.9	20.1	20.1	41.8	19.9	19.9	42.6	0.0	32.5	39.4	0.0	33.8
Incr Delay (d2), s/veh	9.1	1.9	5.1	7.0	0.2	0.5	2.1	0.0	0.5	1.3	0.0	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.2	9.4	11.2	2.3	5.5	6.2	3.4	0.0	2.6	3.3	0.0	3.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	51.0	22.0	25.2	48.7	20.1	20.4	44.8	0.0	33.0	40.7	0.0	34.7
LnGrp LOS	D	C	C	D	C	C	D	A	C	D	A	C
Approach Vol, veh/h		2494			1551			254			306	
Approach Delay, s/veh		25.5			21.7			39.1			37.3	
Approach LOS		C			C			D			D	

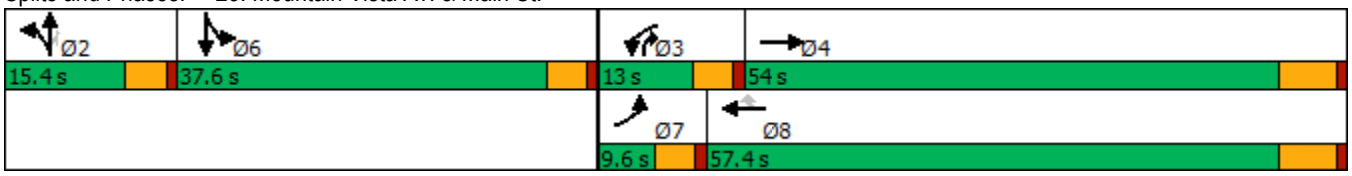
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		28.4	17.0	57.0		28.4	21.4	52.6				
Change Period (Y+Rc), s		4.6	4.6	6.2		4.6	4.6	6.2				
Max Green Setting (Gmax), s		41.4	12.4	50.8		41.4	26.4	36.8				
Max Q Clear Time (g_c+I1), s		22.6	7.0	30.3		18.7	16.6	18.7				
Green Ext Time (p_c), s		1.1	0.0	14.5		1.6	0.2	8.6				

Intersection Summary												
HCM 6th Ctrl Delay			25.8									
HCM 6th LOS			C									

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	48	2124	61	1598	68	32	5	27	77	7
Future Volume (vph)	48	2124	61	1598	68	32	5	27	77	7
Turn Type	Prot	NA	Prot	NA	Perm	Split	NA	pm+ov	Split	NA
Protected Phases	7	4	3	8		2	2	3	6	6
Permitted Phases					8			2		
Detector Phase	7	4	3	8	8	2	2	3	6	6
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	43.2	9.6	32.2	32.2	14.6	14.6	9.6	37.6	37.6
Total Split (s)	9.6	54.0	13.0	57.4	57.4	15.4	15.4	13.0	37.6	37.6
Total Split (%)	8.0%	45.0%	10.8%	47.8%	47.8%	12.8%	12.8%	10.8%	31.3%	31.3%
Yellow Time (s)	3.6	5.2	3.6	5.2	5.2	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	4.6	6.2	6.2	4.6	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lead	Lag	Lag			Lead		
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes			Yes		
Recall Mode	None	Max	None	Max	Max	None	None	None	None	None
Act Effct Green (s)	5.2	55.6	7.3	60.0	60.0	10.3	10.3	12.8	13.9	13.9
Actuated g/C Ratio	0.06	0.60	0.08	0.65	0.65	0.11	0.11	0.14	0.15	0.15
v/c Ratio	0.31	0.61	0.50	0.53	0.07	0.10	0.06	0.06	0.21	0.19
Control Delay	53.2	19.2	59.9	15.9	2.1	46.4	44.5	0.3	38.4	34.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	53.2	19.2	59.9	15.9	2.1	46.4	44.5	0.3	38.4	34.3
LOS	D	B	E	B	A	D	D	A	D	C
Approach Delay		20.0		16.9			26.5			36.4
Approach LOS		B		B			C			D

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 92.8	
Natural Cycle: 105	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.61	
Intersection Signal Delay: 19.1	Intersection LOS: B
Intersection Capacity Utilization 59.1%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 23: Mountain Vista Av. & Main St.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	48	2124	18	61	1598	68	32	5	27	77	7	6
Future Volume (veh/h)	48	2124	18	61	1598	68	32	5	27	77	7	6
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	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	1600	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	51	2236	17	64	1682	57	34	5	13	91	0	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	118	3527	27	79	2760	857	260	145	395	320	178	0
Arrive On Green	0.04	0.55	0.55	0.05	0.56	0.56	0.08	0.08	0.08	0.10	0.00	0.00
Sat Flow, veh/h	2956	6385	49	1619	4914	1525	3238	1800	3051	3238	1800	0
Grp Volume(v), veh/h	51	1626	627	64	1682	57	34	5	13	91	0	0
Grp Sat Flow(s),veh/h/ln	1478	1548	1790	1619	1638	1525	1619	1800	1525	1619	1800	0
Q Serve(g_s), s	1.5	22.0	22.0	3.6	20.8	1.6	0.9	0.2	0.3	2.4	0.0	0.0
Cycle Q Clear(g_c), s	1.5	22.0	22.0	3.6	20.8	1.6	0.9	0.2	0.3	2.4	0.0	0.0
Prop In Lane	1.00		0.03	1.00		1.00	1.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	118	2565	989	79	2760	857	260	145	395	320	178	0
V/C Ratio(X)	0.43	0.63	0.63	0.81	0.61	0.07	0.13	0.03	0.03	0.28	0.00	0.00
Avail Cap(c_a), veh/h	162	2565	989	149	2760	857	384	213	511	1172	652	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	42.8	14.0	14.1	42.9	13.3	9.1	39.0	38.7	34.7	38.1	0.0	0.0
Incr Delay (d2), s/veh	0.9	1.2	3.1	7.0	1.0	0.1	0.2	0.1	0.0	0.5	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	6.6	8.1	1.5	6.5	0.5	0.4	0.1	0.1	1.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	43.7	15.3	17.1	49.9	14.3	9.2	39.2	38.8	34.7	38.6	0.0	0.0
LnGrp LOS	D	B	B	D	B	A	D	D	C	D	A	A
Approach Vol, veh/h		2304			1803			52			91	
Approach Delay, s/veh		16.4			15.4			38.0			38.6	
Approach LOS		B			B			D			D	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		11.9	9.1	56.6		13.6	8.2	57.4				
Change Period (Y+Rc), s		4.6	4.6	6.2		4.6	4.6	6.2				
Max Green Setting (Gmax), s		10.8	8.4	47.8		33.0	5.0	51.2				
Max Q Clear Time (g_c+I1), s		2.9	5.6	24.0		4.4	3.5	22.8				
Green Ext Time (p_c), s		0.1	0.0	16.1		0.3	0.0	13.9				

Intersection Summary												
HCM 6th Ctrl Delay			16.7									
HCM 6th LOS			B									

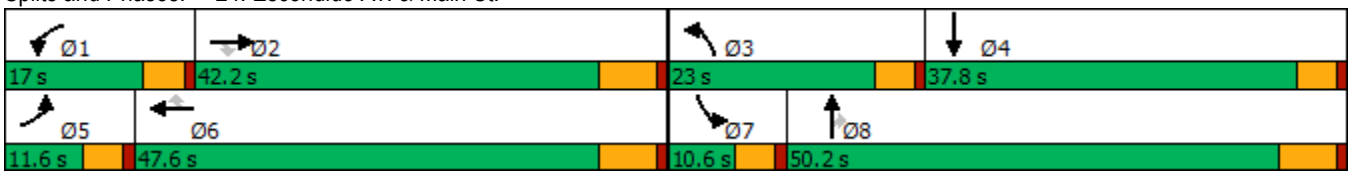
Notes

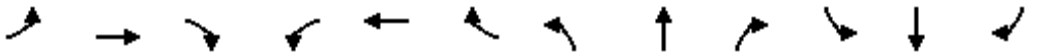
User approved volume balancing among the lanes for turning movement.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations											
Traffic Volume (vph)	53	1439	693	408	1074	10	600	50	196	55	37
Future Volume (vph)	53	1439	693	408	1074	10	600	50	196	55	37
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA
Protected Phases	5	2		1	6		3	8		7	4
Permitted Phases			2			6			8		
Detector Phase	5	2	2	1	6	6	3	8	8	7	4
Switch Phase											
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.6	41.2	41.2	9.6	31.2	31.2	9.6	49.2	49.2	9.6	37.6
Total Split (s)	11.6	42.2	42.2	17.0	47.6	47.6	23.0	50.2	50.2	10.6	37.8
Total Split (%)	9.7%	35.2%	35.2%	14.2%	39.7%	39.7%	19.2%	41.8%	41.8%	8.8%	31.5%
Yellow Time (s)	3.6	5.2	5.2	3.6	5.2	5.2	3.6	5.2	5.2	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	6.2	4.6	6.2	6.2	4.6	6.2	6.2	4.6	4.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Max	Max	None	Max	Max	None	None	None	None	None
Act Effct Green (s)	6.6	36.5	36.5	12.6	44.8	44.8	18.7	23.9	23.9	5.9	13.9
Actuated g/C Ratio	0.07	0.37	0.37	0.13	0.45	0.45	0.19	0.24	0.24	0.06	0.14
v/c Ratio	0.51	0.82	0.76	1.13	0.72	0.01	1.12	0.12	0.39	0.59	0.33
Control Delay	65.2	34.4	11.2	127.6	28.4	0.0	113.8	29.3	6.5	72.9	21.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	65.2	34.4	11.2	127.6	28.4	0.0	113.8	29.3	6.5	72.9	21.7
LOS	E	C	B	F	C	A	F	C	A	E	C
Approach Delay		27.8			55.4			84.0			41.1
Approach LOS		C			E			F			D

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 98.5	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.13	
Intersection Signal Delay: 47.2	Intersection LOS: D
Intersection Capacity Utilization 84.3%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 24: Escondido Av. & Main St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	53	1439	693	408	1074	10	600	50	196	55	37	52
Future Volume (veh/h)	53	1439	693	408	1074	10	600	50	196	55	37	52
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	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	1700	1800	1800	1600	1800	1800	1600	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	55	1499	532	425	1119	8	625	52	123	57	39	51
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	68	1814	562	376	1554	678	558	430	364	71	66	87
Arrive On Green	0.04	0.37	0.37	0.13	0.45	0.45	0.19	0.24	0.24	0.04	0.09	0.09
Sat Flow, veh/h	1619	4914	1523	2956	3420	1494	2956	1800	1525	1619	708	926
Grp Volume(v), veh/h	55	1499	532	425	1119	8	625	52	123	57	0	90
Grp Sat Flow(s),veh/h/ln	1619	1638	1523	1478	1710	1494	1478	1800	1525	1619	0	1633
Q Serve(g_s), s	3.3	27.0	33.0	12.4	25.9	0.3	18.4	2.2	6.5	3.4	0.0	5.2
Cycle Q Clear(g_c), s	3.3	27.0	33.0	12.4	25.9	0.3	18.4	2.2	6.5	3.4	0.0	5.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.57
Lane Grp Cap(c), veh/h	68	1814	562	376	1554	678	558	430	364	71	0	153
V/C Ratio(X)	0.81	0.83	0.95	1.13	0.72	0.01	1.12	0.12	0.34	0.81	0.00	0.59
Avail Cap(c_a), veh/h	116	1814	562	376	1554	678	558	812	688	100	0	556
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	46.3	27.9	29.8	42.6	21.6	14.6	39.6	29.1	30.7	46.2	0.0	42.4
Incr Delay (d2), s/veh	8.2	4.5	26.8	86.9	2.9	0.0	75.8	0.1	0.5	18.7	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	10.3	16.0	8.8	9.8	0.1	12.5	1.0	2.5	1.7	0.0	2.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	54.5	32.4	56.6	129.4	24.5	14.6	115.3	29.2	31.3	65.0	0.0	46.0
LnGrp LOS	D	C	E	F	C	B	F	C	C	E	A	D
Approach Vol, veh/h		2086			1552			800			147	
Approach Delay, s/veh		39.2			53.2			96.8			53.3	
Approach LOS		D			D			F			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.0	42.2	23.0	15.3	8.7	50.5	8.9	29.5
Change Period (Y+Rc), s	4.6	6.2	4.6	* 6.2	4.6	6.2	4.6	6.2
Max Green Setting (Gmax), s	12.4	36.0	18.4	* 33	7.0	41.4	6.0	44.0
Max Q Clear Time (g_c+I1), s	14.4	35.0	20.4	7.2	5.3	27.9	5.4	8.5
Green Ext Time (p_c), s	0.0	0.8	0.0	0.5	0.0	5.9	0.0	0.7

Intersection Summary	
HCM 6th Ctrl Delay	54.4
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	2.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	11	131	550	11	254	764
Future Vol, veh/h	11	131	550	11	254	764
Conflicting Peds, #/hr	0	0	0	4	1	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	100	0	-	-	195	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	11	136	573	11	265	796

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1511	296	0	0	588	0
Stage 1	583	-	-	-	-	-
Stage 2	928	-	-	-	-	-
Critical Hdwy	6.8	6.9	-	-	4.1	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	113	706	-	-	997	-
Stage 1	527	-	-	-	-	-
Stage 2	350	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	82	703	-	-	993	-
Mov Cap-2 Maneuver	189	-	-	-	-	-
Stage 1	525	-	-	-	-	-
Stage 2	257	-	-	-	-	-

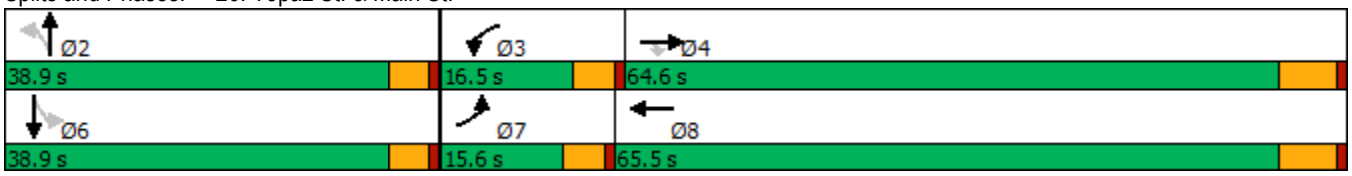
Approach	WB	NB	SB
HCM Control Delay, s	12.5	0	2.5
HCM LOS	B		

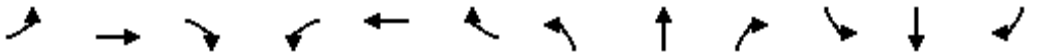
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	189	703	993	-
HCM Lane V/C Ratio	-	-	0.061	0.194	0.266	-
HCM Control Delay (s)	-	-	25.3	11.4	9.9	-
HCM Lane LOS	-	-	D	B	A	-
HCM 95th %tile Q(veh)	-	-	0.2	0.7	1.1	-

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	70	1411	233	102	1155	212	32	61	35
Future Volume (vph)	70	1411	233	102	1155	212	32	61	35
Turn Type	Prot	NA	Perm	Prot	NA	Perm	NA	Perm	NA
Protected Phases	7	4		3	8		2		6
Permitted Phases			4			2		6	
Detector Phase	7	4	4	3	8	2	2	6	6
Switch Phase									
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	25.2	25.2	9.6	23.2	32.6	32.6	38.6	38.6
Total Split (s)	15.6	64.6	64.6	16.5	65.5	38.9	38.9	38.9	38.9
Total Split (%)	13.0%	53.8%	53.8%	13.8%	54.6%	32.4%	32.4%	32.4%	32.4%
Yellow Time (s)	3.6	5.2	5.2	3.6	5.2	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	6.2	4.6	6.2	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes				
Recall Mode	None	None	None	Max	None	None	None	None	None
Act Effct Green (s)	8.6	51.0	51.0	12.2	57.2	24.1	24.1	24.1	24.1
Actuated g/C Ratio	0.08	0.49	0.49	0.12	0.55	0.23	0.23	0.23	0.23
v/c Ratio	0.53	0.86	0.28	0.55	0.67	0.78	0.29	0.25	0.20
Control Delay	64.4	29.9	4.6	59.6	20.7	58.3	12.9	36.4	18.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	64.4	29.9	4.6	59.6	20.7	58.3	12.9	36.4	18.2
LOS	E	C	A	E	C	E	B	D	B
Approach Delay		27.9			23.7		41.4		26.1
Approach LOS		C			C		D		C

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 103.1	
Natural Cycle: 100	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.86	
Intersection Signal Delay: 27.5	Intersection LOS: C
Intersection Capacity Utilization 90.8%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 26: Topaz St. & Main St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	70	1411	233	102	1155	67	212	32	94	61	35	45
Future Volume (veh/h)	70	1411	233	102	1155	67	212	32	94	61	35	45
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	0.99		1.00	1.00		0.99
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	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	72	1455	168	105	1191	62	219	33	66	63	36	15
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	90	1701	759	195	1859	97	333	121	243	291	272	114
Arrive On Green	0.06	0.50	0.50	0.12	0.56	0.56	0.23	0.23	0.23	0.23	0.23	0.23
Sat Flow, veh/h	1619	3420	1525	1619	3307	172	1285	536	1071	1243	1202	501
Grp Volume(v), veh/h	72	1455	168	105	615	638	219	0	99	63	0	51
Grp Sat Flow(s),veh/h/ln	1619	1710	1525	1619	1710	1769	1285	0	1607	1243	0	1703
Q Serve(g_s), s	4.4	36.8	6.2	6.0	24.4	24.4	16.2	0.0	5.0	4.4	0.0	2.4
Cycle Q Clear(g_c), s	4.4	36.8	6.2	6.0	24.4	24.4	18.6	0.0	5.0	9.4	0.0	2.4
Prop In Lane	1.00		1.00	1.00		0.10	1.00		0.67	1.00		0.29
Lane Grp Cap(c), veh/h	90	1701	759	195	961	995	333	0	364	291	0	386
V/C Ratio(X)	0.80	0.86	0.22	0.54	0.64	0.64	0.66	0.00	0.27	0.22	0.00	0.13
Avail Cap(c_a), veh/h	180	2018	900	195	1024	1060	487	0	557	441	0	590
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	46.2	21.7	14.0	41.0	14.8	14.8	37.9	0.0	31.5	35.4	0.0	30.5
Incr Delay (d2), s/veh	6.1	3.3	0.1	10.3	1.2	1.2	2.2	0.0	0.4	0.4	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	13.5	1.9	2.8	8.3	8.6	5.3	0.0	2.0	1.4	0.0	1.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	52.3	25.1	14.2	51.3	16.1	16.0	40.1	0.0	31.9	35.8	0.0	30.7
LnGrp LOS	D	C	B	D	B	B	D	A	C	D	A	C
Approach Vol, veh/h		1695			1358			318			114	
Approach Delay, s/veh		25.2			18.8			37.6			33.5	
Approach LOS		C			B			D			C	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		27.0	16.5	55.4		27.0	10.1	61.9				
Change Period (Y+Rc), s		4.6	4.6	6.2		4.6	4.6	6.2				
Max Green Setting (Gmax), s		34.3	11.9	58.4		34.3	11.0	59.3				
Max Q Clear Time (g_c+I1), s		20.6	8.0	38.8		11.4	6.4	26.4				
Green Ext Time (p_c), s		1.1	0.0	10.4		0.4	0.0	8.9				

Intersection Summary	
HCM 6th Ctrl Delay	24.1
HCM 6th LOS	C

APPENDIX 5.2:

E+P CONDITIONS TRAFFIC SIGNAL WARRANT ANALYSIS WORKSHEETS

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Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

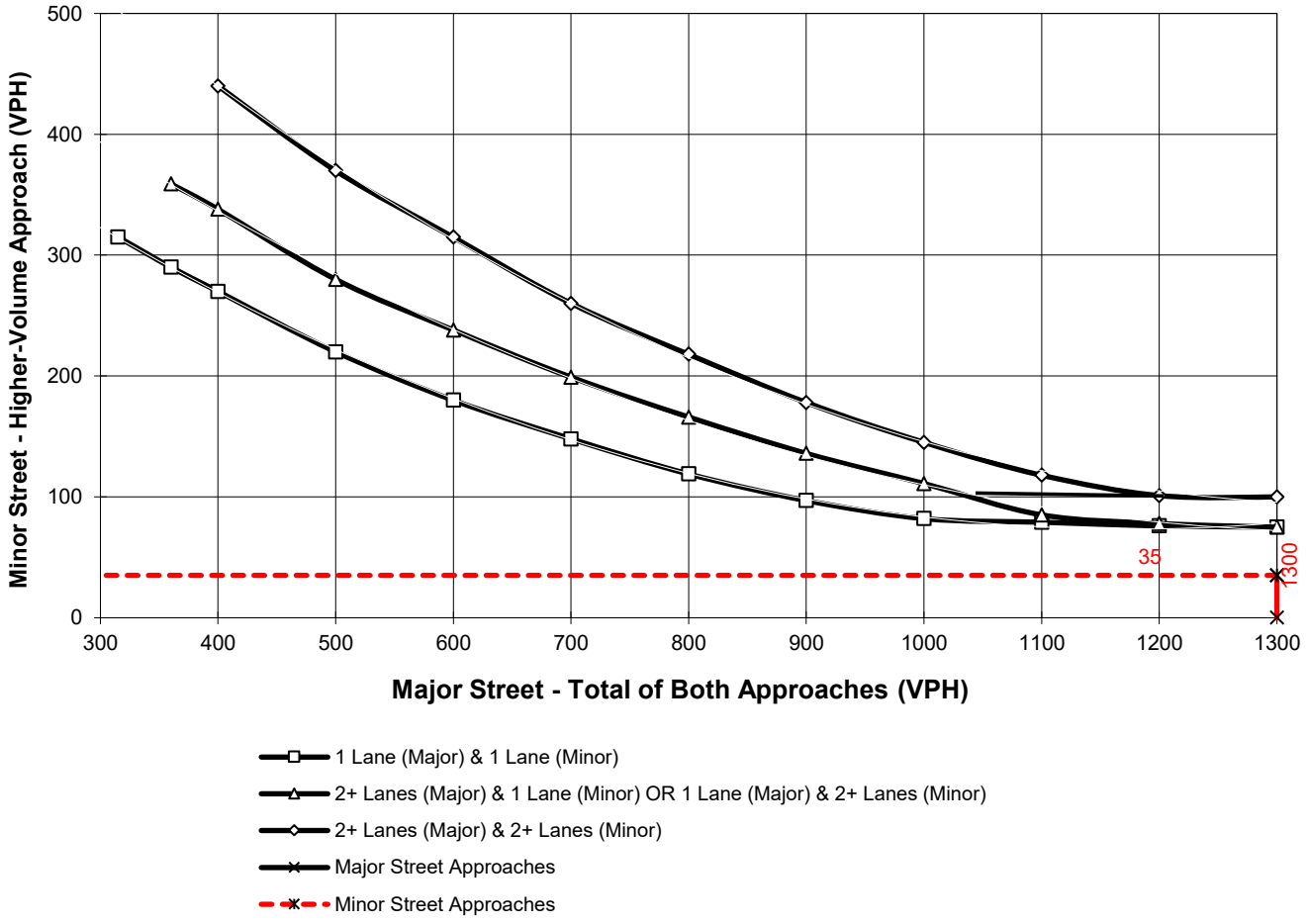
(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **E+P Conditions - Weekday AM Peak Hour**

Major Street Name = **Phelan Road**
Total of Both Approaches (VPH) = **1363**
Number of Approach Lanes Major Street = **1**

Minor Street Name = **Verbena Road**
High Volume Approach (VPH) = **35**
Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold for a minor-street approach with one lane

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

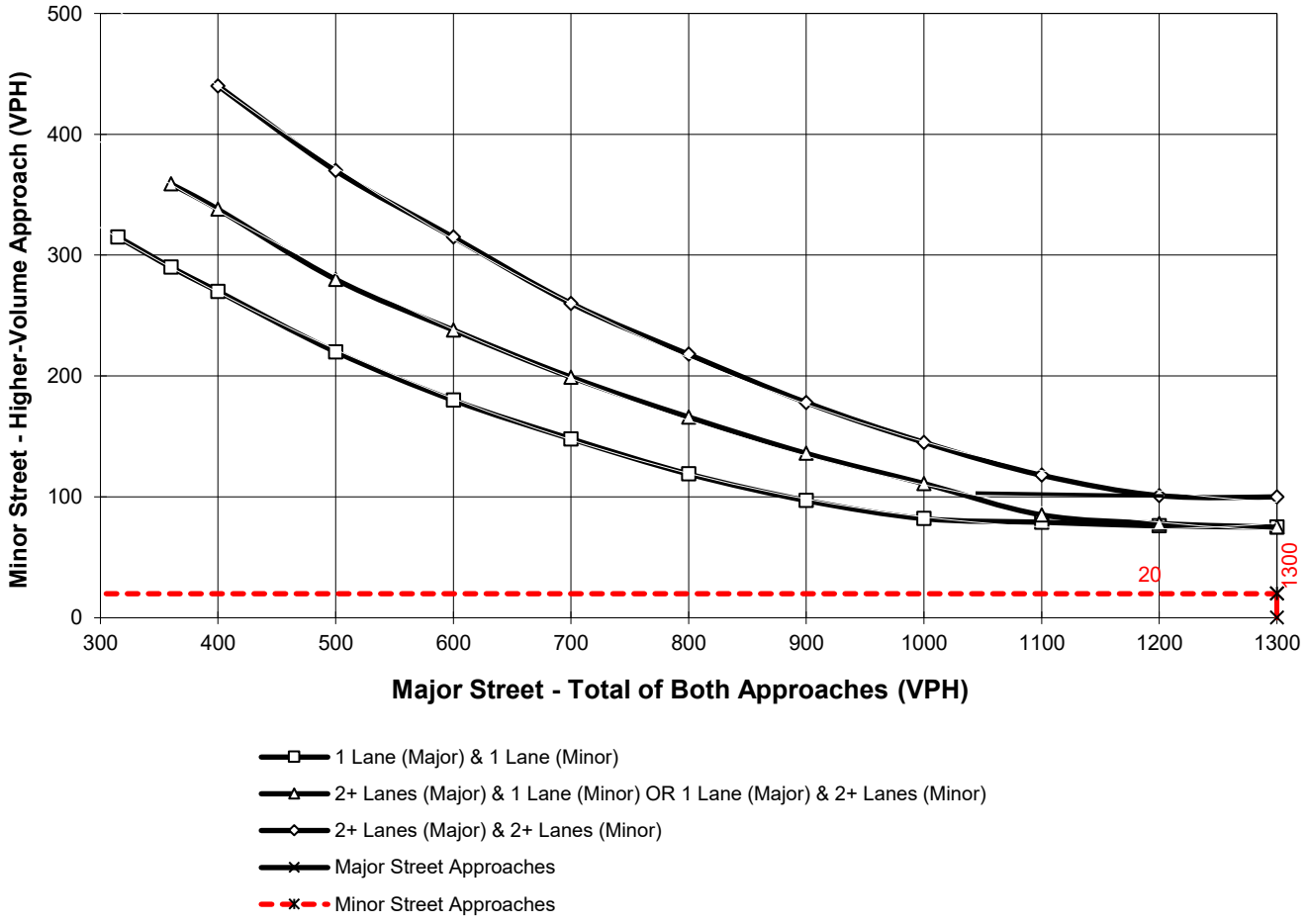
(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **E+P Conditions - Weekday AM Peak Hour**

Major Street Name = **Phelan Road**
Total of Both Approaches (VPH) = **1349**
Number of Approach Lanes Major Street = **1**

Minor Street Name = **Bellflower Street**
High Volume Approach (VPH) = **20**
Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold for a minor-street approach with one lane

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet
(Average Traffic Estimate Form)

DIST	CO	RTE	PM	TRAFFIC CONDITIONS	E+P
				CALC CH	DATE 01/23/20
Jurisdiction: **City of Hesperia**				CHK CH	DATE 01/23/20
Major Street: **Phelan Road**				Critical Approach Speed (Major)	45 mph
Minor Street: **Driveway 1**				Critical Approach Speed (Minor)	25 mph

Major Street Approach Lanes = **1** lane Minor Street Approach Lanes **1** lane

Major Street Future ADT = **18,465** vpd Minor Street Future ADT = **1,424** vpd

Speed limit or critical speed on major street traffic > 64 km/h (40 mph); …….. √

or

In built up area of isolated community of < 10,000 population ……..

RURAL (R)

(Based on Estimated Average Daily Traffic - See Note)

URBAN / RURAL	Minimum Requirements EADT: Vehicles Per Day on Major Street (Total of Both Approaches)		Minimum Requirements EADT: Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
CONDITION A - Minimum Vehicular Volume				
Satisfied / Not Satisfied: XX				
Number of lanes for moving traffic on each approach	Urban	Rural	Urban	Rural
Major Street / Minor Street				
1 **18,465** / *1* **1,424**	8,000	5,600 *	2,400	1,680
2 + / *1*	9,600	6,720	2,400	1,680
2 + / *2* +	9,600	6,720	3,200	2,240
1 / *2* +	8,000	5,600	3,200	2,240
CONDITION B - Interruption of Continuous Traffic				
Satisfied: XX / Not Satisfied				
Number of lanes for moving traffic on each approach	Urban	Rural	Urban	Rural
Major Street / Minor Street				
1 **18,465** / *1* **1,424**	12,000	8,400 *	1,200	850 *
2 + / *1*	14,400	10,080	1,200	850
2 + / *2* +	14,400	10,080	1,600	1,120
1 / *2* +	12,000	8,400	1,600	1,120
Combination of CONDITIONS A + B				
Satisfied: XX / Not Satisfied				
No one condition satisfied, but following conditions fulfilled 80% of more ….. A: 85% B: 100%	2 CONDITIONS 80%		2 CONDITIONS 80%	

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet
(Average Traffic Estimate Form)

DIST	CO	RTE	PM	TRAFFIC CONDITIONS		E+P
				CALC CH	DATE	01/23/20
Jurisdiction: **City of Hesperia**				CHK CH	DATE	01/23/20
Major Street: **Yucca Terrace Dr.**				Critical Approach Speed (Major)		45 mph
Minor Street: **Driveway 2**				Critical Approach Speed (Minor)		25 mph

Major Street Approach Lanes = **1** lane Minor Street Approach Lanes **1** lane

Major Street Future ADT = **1,339** vpd Minor Street Future ADT = **1,136** vpd

Speed limit or critical speed on major street traffic > 64 km/h (40 mph); …….. √

or

In built up area of isolated community of < 10,000 population ……..

RURAL (R)

(Based on Estimated Average Daily Traffic - See Note)

URBAN	RURAL	Minimum Requirements EADT			
	XX				
CONDITION A - Minimum Vehicular Volume		Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Satisfied	Not Satisfied				
	XX				
Number of lanes for moving traffic on each approach					
Major Street	Minor Street	Urban	Rural	Urban	Rural
1 **1,339**	*1* **1,136**	8,000	5,600	2,400	1,680
2 +	*1*	9,600	6,720	2,400	1,680
2 +	*2* +	9,600	6,720	3,200	2,240
1	*2* +	8,000	5,600	3,200	2,240
CONDITION B - Interruption of Continuous Traffic		Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Satisfied	Not Satisfied				
	XX				
Number of lanes for moving traffic on each approach					
Major Street	Minor Street	Urban	Rural	Urban	Rural
1 **1,339**	*1* **1,136**	12,000	8,400	1,200	850 *
2 +	*1*	14,400	10,080	1,200	850
2 +	*2* +	14,400	10,080	1,600	1,120
1	*2* +	12,000	8,400	1,600	1,120
Combination of CONDITIONS A + B					
Satisfied	Not Satisfied				
	XX	2 CONDITIONS 80%		2 CONDITIONS 80%	
No one condition satisfied, but following conditions fulfilled 80% of more …..	**A** 24% **B** 16%				

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet (Average Traffic Estimate Form)

DIST	CO	RTE	PM	TRAFFIC CONDITIONS	E+P
				CALC CH	DATE 01/23/20
Jurisdiction: City of Hesperia				CHK CH	DATE 01/23/20
Major Street: Yucca Terrace Drive				Critical Approach Speed (Major)	45 mph
Minor Street: Driveway 2				Critical Approach Speed (Minor)	25 mph

Major Street Approach Lanes = **1** lane Minor Street Approach Lanes = **1** lane

Major Street Future ADT = **3,963** vpd Minor Street Future ADT = **1,488** vpd

Speed limit or critical speed on major street traffic > 64 km/h (40 mph); …….. √

or

In built up area of isolated community of < 10,000 population ……..

RURAL (R)

(Based on Estimated Average Daily Traffic - See Note)

URBAN / RURAL	Minimum Requirements EADT			
CONDITION A - Minimum Vehicular Volume	Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Satisfied / Not Satisfied: XX / XX	Urban	Rural	Urban	Rural
Number of lanes for moving traffic on each approach: Major Street / Minor Street				
1 **3,963** / 1 **1,488**	8,000	5,600	2,400	1,680
2 + / 1	9,600	6,720	2,400	1,680
2 + / 2 +	9,600	6,720	3,200	2,240
1 / 2 +	8,000	5,600	3,200	2,240
CONDITION B - Interruption of Continuous Traffic	Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Satisfied / Not Satisfied: XX	Urban	Rural	Urban	Rural
Number of lanes for moving traffic on each approach: Major Street / Minor Street				
1 **3,963** / 1 **1,488**	12,000	8,400	1,200	850 *
2 + / 1	14,400	10,080	1,200	850
2 + / 2 +	14,400	10,080	1,600	1,120
1 / 2 +	12,000	8,400	1,600	1,120
Combination of CONDITIONS A + B				
Satisfied / Not Satisfied: XX	2 CONDITIONS 80%		2 CONDITIONS 80%	
No one condition satisfied, but following conditions fulfilled 80% of more ….. A: 71% B: 47%				

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet (Average Traffic Estimate Form)

DIST	CO	RTE	PM	TRAFFIC CONDITIONS		E+P
				CALC CH	DATE	01/23/20
Jurisdiction: City of Hesperia				CHK CH	DATE	01/23/20
Major Street: Phelan Road				Critical Approach Speed (Major)		45 mph
Minor Street: Driveway 4				Critical Approach Speed (Minor)		25 mph

Major Street Approach Lanes = **2** lane Minor Street Approach Lanes = **1** lane

Major Street Future ADT = **22,015** vpd Minor Street Future ADT = **3,079** vpd

Speed limit or critical speed on major street traffic > 64 km/h (40 mph); …….. √

or

In built up area of isolated community of < 10,000 population ……..

RURAL (R)

(Based on Estimated Average Daily Traffic - See Note)

URBAN	RURAL	Minimum Requirements EADT			
	XX				
CONDITION A - Minimum Vehicular Volume		Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Satisfied	Not Satisfied				
XX					
Number of lanes for moving traffic on each approach					
Major Street	Minor Street	Urban	Rural	Urban	Rural
1	*1*	8,000	5,600	2,400	1,680
2 + **22,015**	*1* **3,079**	9,600	6,720 *	2,400	1,680 *
2 +	*2* +	9,600	6,720	3,200	2,240
1	*2* +	8,000	5,600	3,200	2,240
CONDITION B - Interruption of Continuous Traffic		Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Satisfied	Not Satisfied				
XX					
Number of lanes for moving traffic on each approach					
Major Street	Minor Street	Urban	Rural	Urban	Rural
1	*1*	12,000	8,400	1,200	850
2 + **22,015**	*1* **3,079**	14,400	10,080 *	1,200	850 *
2 +	*2* +	14,400	10,080	1,600	1,120
1	*2* +	12,000	8,400	1,600	1,120
Combination of CONDITIONS A + B					
Satisfied	Not Satisfied				
XX					
No one condition satisfied, but following conditions fulfilled 80% of more …..	A 100% B 100%	2 CONDITIONS 80%		2 CONDITIONS 80%	

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

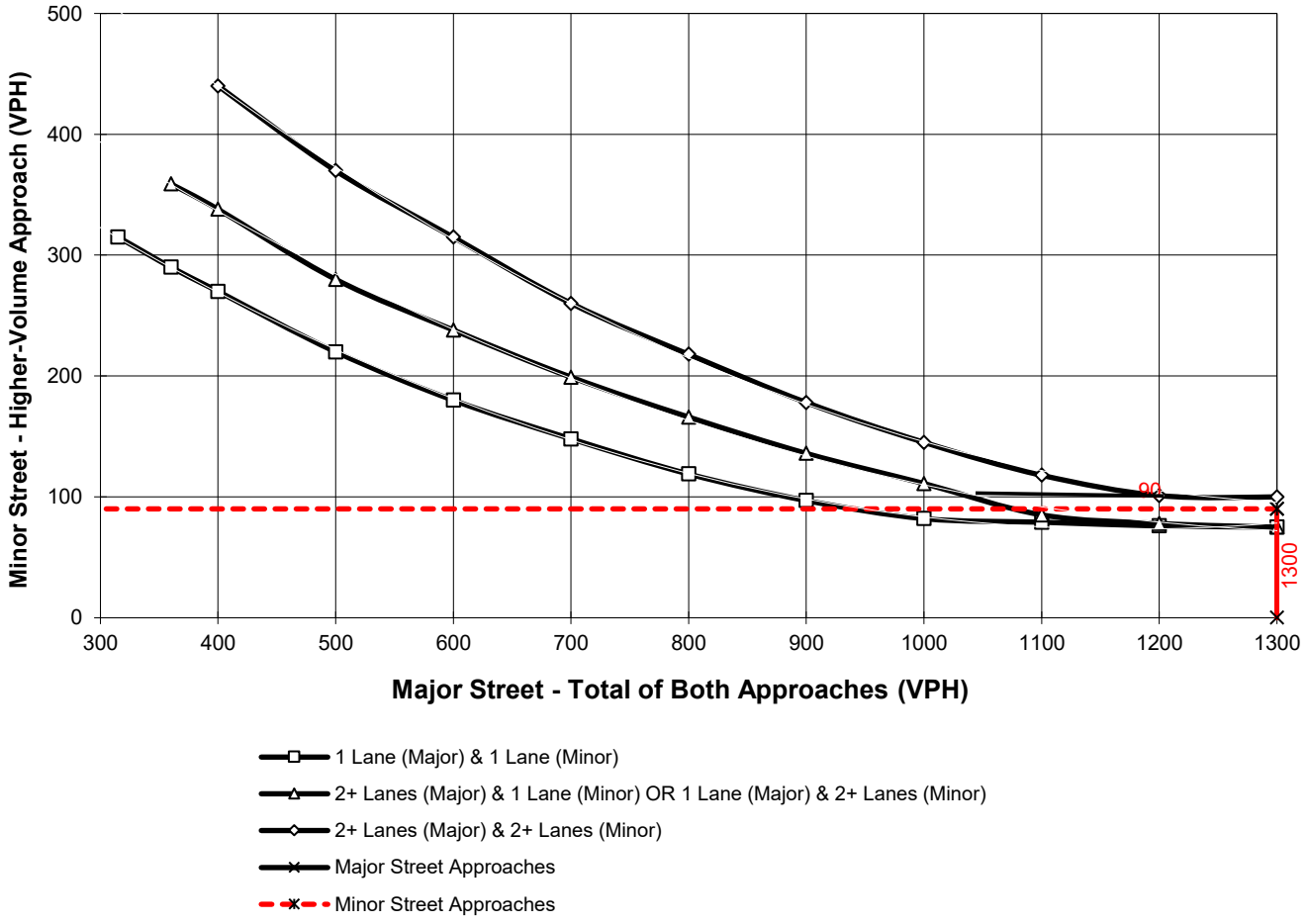
(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **E+P Conditions - Weekday PM Peak Hour**

Major Street Name = **US Highway 395** Total of Both Approaches (VPH) = **2582**
Number of Approach Lanes Major Street = **1**

Minor Street Name = **Yucca Terrace Drive** High Volume Approach (VPH) = **90**
Number of Approach Lanes Minor Street = **1**

WARRANTED FOR A SIGNAL



*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold for a minor-street approach with one lane

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet (Average Traffic Estimate Form)

DIST	CO	RTE	PM	TRAFFIC CONDITIONS		E+P
				CALC CH	DATE	01/23/20
Jurisdiction: **City of Hesperia**				CHK CH	DATE	01/23/20
Major Street: **US Highway 395**				Critical Approach Speed (Major)		45 mph
Minor Street: **Driveway 5**				Critical Approach Speed (Minor)		25 mph

Major Street Approach Lanes = **2** lane Minor Street Approach Lanes = **1** lane

Major Street Future ADT = **30,190** vpd Minor Street Future ADT = **449** vpd

Speed limit or critical speed on major street traffic > 64 km/h (40 mph); …….. √

or

In built up area of isolated community of < 10,000 population ……..

RURAL (R)

(Based on Estimated Average Daily Traffic - See Note)

URBAN / RURAL	Minimum Requirements EADT: Vehicles Per Day on Major Street (Total of Both Approaches)		Minimum Requirements EADT: Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
	Urban	Rural	Urban	Rural
CONDITION A - Minimum Vehicular Volume				
Satisfied / Not Satisfied: XX				
Number of lanes for moving traffic on each approach				
Major Street / Minor Street				
1 / *1*	8,000	5,600	2,400	1,680
2 + **30,190** / *1* **449**	9,600	6,720 *	2,400	1,680
2 + / *2* +	9,600	6,720	3,200	2,240
1 / *2* +	8,000	5,600	3,200	2,240
CONDITION B - Interruption of Continuous Traffic				
Satisfied / Not Satisfied: XX				
Number of lanes for moving traffic on each approach				
Major Street / Minor Street				
1 / *1*	12,000	8,400	1,200	850
2 + **30,190** / *1* **449**	14,400	10,080 *	1,200	850
2 + / *2* +	14,400	10,080	1,600	1,120
1 / *2* +	12,000	8,400	1,600	1,120
Combination of CONDITIONS A + B				
Satisfied / Not Satisfied: XX				
No one condition satisfied, but following conditions fulfilled 80% of more ….. A: 27% B: 53%	2 CONDITIONS 80%		2 CONDITIONS 80%	

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

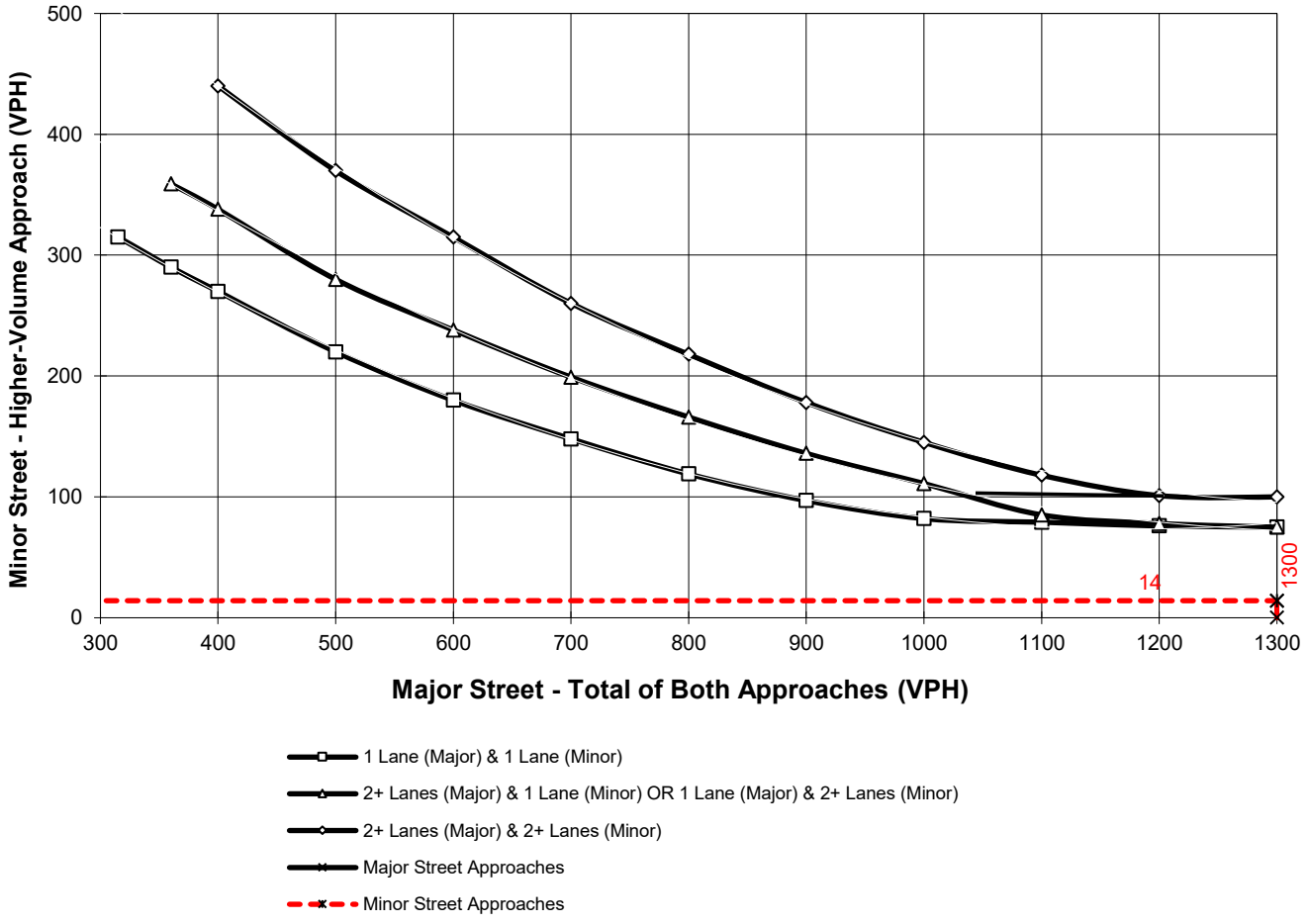
(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **E+P Conditions - Weekday PM Peak Hour**

Major Street Name = **US Highway 395**
Total of Both Approaches (VPH) = **2062**
Number of Approach Lanes Major Street = **2**

Minor Street Name = **Poplar Street**
High Volume Approach (VPH) = **14**
Number of Approach Lanes Minor Street = **2**

SIGNAL WARRANT NOT SATISFIED



*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold for a minor-street approach with one lane

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APPENDIX 5.3:

E+P CONDITIONS QUEUING ANALYSIS WORKSHEETS

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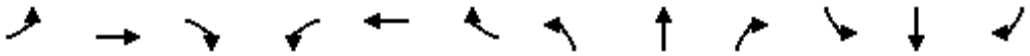
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	53	133	74	79	387	39	780	48	228	902	74
v/c Ratio	0.70	0.33	0.17	0.31	0.84	0.37	0.47	0.06	0.73	0.41	0.07
Control Delay	79.8	34.6	3.7	35.6	41.4	59.9	22.6	0.8	53.9	12.7	3.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	79.8	34.6	3.7	35.6	41.4	59.9	22.6	0.8	53.9	12.7	3.5
Queue Length 50th (ft)	32	75	0	44	169	25	173	0	143	159	0
Queue Length 95th (ft)	80	126	20	85	278	67	331	5	240	284	24
Internal Link Dist (ft)		549			898		7898			714	
Turn Bay Length (ft)	120		120	425		415		460	400		400
Base Capacity (vph)	143	761	707	479	747	111	1652	767	501	2227	1024
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.37	0.17	0.10	0.16	0.52	0.35	0.47	0.06	0.46	0.41	0.07

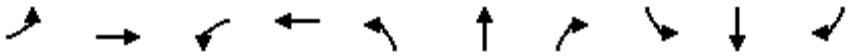
Intersection Summary



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	42	307	170	190	254	96	108	704	104	168	809	23
v/c Ratio	0.39	0.52	0.42	1.02	0.28	0.20	0.60	0.49	0.15	0.70	0.52	0.03
Control Delay	58.7	39.6	8.2	116.7	31.0	6.5	59.0	25.0	5.8	58.4	23.3	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	58.7	39.6	8.2	116.7	31.0	6.5	59.0	25.0	5.8	58.4	23.3	0.1
Queue Length 50th (ft)	25	92	0	115	71	0	62	157	0	95	175	0
Queue Length 95th (ft)	71	131	49	#335	104	34	#160	308	40	#232	343	0
Internal Link Dist (ft)		876			804			5210			7898	
Turn Bay Length (ft)	225		225	1000		250	220		280	230		160
Base Capacity (vph)	112	1421	738	187	1570	759	205	1450	710	280	1570	754
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.38	0.22	0.23	1.02	0.16	0.13	0.53	0.49	0.15	0.60	0.52	0.03

Intersection Summary

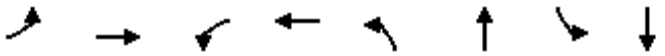
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	10	28	99	28	9	912	66	4	1238	9
v/c Ratio	0.09	0.09	0.48	0.07	0.08	0.41	0.06	0.04	0.56	0.01
Control Delay	46.1	13.3	47.6	11.4	46.0	13.6	1.9	45.8	15.7	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	46.1	13.3	47.6	11.4	46.0	13.6	1.9	45.8	15.7	0.0
Queue Length 50th (ft)	4	2	37	2	4	66	0	2	103	0
Queue Length 95th (ft)	26	23	#177	22	25	387	12	15	#626	0
Internal Link Dist (ft)		810		782		6483			5210	
Turn Bay Length (ft)	200		250		500		350	430		300
Base Capacity (vph)	110	891	206	948	110	2226	1034	110	2226	1034
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.09	0.03	0.48	0.03	0.08	0.41	0.06	0.04	0.56	0.01

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	49	919	4	1588	185	836	275	1027
v/c Ratio	0.43	0.67	0.05	1.39	0.89	0.84	0.85	0.84
Control Delay	65.9	32.3	56.8	210.1	90.1	48.0	69.6	41.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	65.9	32.3	56.8	210.1	90.1	48.0	69.6	41.6
Queue Length 50th (ft)	37	293	3	~882	145	322	205	372
Queue Length 95th (ft)	79	415	15	#1023	#289	402	#337	457
Internal Link Dist (ft)		1117		1265		3985		1763
Turn Bay Length (ft)	340		250		280		250	
Base Capacity (vph)	129	1394	80	1146	209	1062	370	1381
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.38	0.66	0.05	1.39	0.89	0.79	0.74	0.74

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Intersection	
Int Delay, s/veh	0.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	5	9	971	13	24	1054
Future Vol, veh/h	5	9	971	13	24	1054
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	375	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	5	10	1044	14	26	1133

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	2236	529	0	0	1058	0
Stage 1	1051	-	-	-	-	-
Stage 2	1185	-	-	-	-	-
Critical Hdwy	6.6	6.9	-	-	4.1	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	42	499	-	-	666	-
Stage 1	302	-	-	-	-	-
Stage 2	293	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	40	499	-	-	666	-
Mov Cap-2 Maneuver	40	-	-	-	-	-
Stage 1	302	-	-	-	-	-
Stage 2	282	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	46.7	0	0.2
HCM LOS	E		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	40	499	666	-
HCM Lane V/C Ratio	-	-	0.134	0.019	0.039	-
HCM Control Delay (s)	-	-	108.5	12.4	10.6	-
HCM Lane LOS	-	-	F	B	B	-
HCM 95th %tile Q(veh)	-	-	0.4	0.1	0.1	-



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	26	89	179	2	45	25	998	110	22	1050	79
v/c Ratio	0.10	0.24	0.73	0.01	0.13	0.22	0.43	0.10	0.20	0.45	0.07
Control Delay	33.4	9.4	54.8	32.0	3.7	50.5	10.8	2.6	50.8	11.3	3.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	33.4	9.4	54.8	32.0	3.7	50.5	10.8	2.6	50.8	11.3	3.0
Queue Length 50th (ft)	12	0	95	1	0	14	120	0	12	128	0
Queue Length 95th (ft)	38	40	187	8	13	45	282	25	41	308	22
Internal Link Dist (ft)		773		663			859			1974	
Turn Bay Length (ft)	50		400		400	190			225		225
Base Capacity (vph)	555	679	512	733	659	154	2323	1056	135	2314	1063
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.05	0.13	0.35	0.00	0.07	0.16	0.43	0.10	0.16	0.45	0.07

Intersection Summary



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	28	36	100	13	149	9	955	64	116	1166	36
v/c Ratio	0.11	0.10	0.39	0.04	0.36	0.09	0.47	0.07	0.54	0.46	0.03
Control Delay	29.6	27.4	35.3	28.2	7.3	48.4	15.5	2.2	48.4	9.1	1.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	29.6	27.4	35.3	28.2	7.3	48.4	15.5	2.2	48.4	9.1	1.9
Queue Length 50th (ft)	13	15	48	6	0	4	129	0	56	84	0
Queue Length 95th (ft)	35	40	96	21	44	24	382	14	143	407	10
Internal Link Dist (ft)		1110		807			892			859	
Turn Bay Length (ft)	100		65		65	190			195		230
Base Capacity (vph)	705	931	691	942	865	104	2011	939	353	2553	1158
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.04	0.04	0.14	0.01	0.17	0.09	0.47	0.07	0.33	0.46	0.03

Intersection Summary



Lane Group	EBT	EBR	WBT	SBL	SBR
Lane Group Flow (vph)	1127	82	1325	323	644
v/c Ratio	0.61	0.05	0.71	0.17	0.73
Control Delay	23.3	0.1	25.3	11.2	21.4
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	23.3	0.1	25.3	11.2	21.4
Queue Length 50th (ft)	172	0	213	41	225
Queue Length 95th (ft)	216	0	263	77	#454
Internal Link Dist (ft)	480		822		
Turn Bay Length (ft)		250		1000	540
Base Capacity (vph)	4148	1615	4148	1872	884
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.27	0.05	0.32	0.17	0.73

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

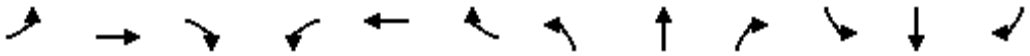


Lane Group	EBT	EBR	WBT	WBR	NBL	NBT	NBR
Lane Group Flow (vph)	1034	372	1303	462	553	200	201
v/c Ratio	0.46	0.41	0.58	0.48	0.68	0.26	0.27
Control Delay	16.3	3.0	17.9	3.2	23.8	7.9	8.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	16.3	3.0	17.9	3.3	23.8	7.9	8.0
Queue Length 50th (ft)	132	0	178	0	200	23	23
Queue Length 95th (ft)	166	44	219	48	402	80	81
Internal Link Dist (ft)	822		339			457	
Turn Bay Length (ft)		250			1000		615
Base Capacity (vph)	4767	1514	4767	1521	891	820	816
Starvation Cap Reductn	0	0	429	96	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.22	0.25	0.30	0.32	0.62	0.24	0.25

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	52	73	40	48	325	67	924	94	223	877	90
v/c Ratio	0.67	0.19	0.10	0.18	0.79	0.46	0.53	0.11	0.74	0.41	0.09
Control Delay	75.8	34.1	0.5	34.3	42.3	58.1	22.5	5.2	55.9	14.3	3.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	75.8	34.1	0.5	34.3	42.3	58.1	22.5	5.2	55.9	14.3	3.5
Queue Length 50th (ft)	32	40	0	26	151	42	205	0	138	155	0
Queue Length 95th (ft)	77	78	0	57	249	99	398	36	242	294	28
Internal Link Dist (ft)		549			898		7898			714	
Turn Bay Length (ft)	120		120	425		415		460	400		400
Base Capacity (vph)	147	713	669	506	690	183	1728	822	458	2126	988
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.35	0.10	0.06	0.09	0.47	0.37	0.53	0.11	0.49	0.41	0.09

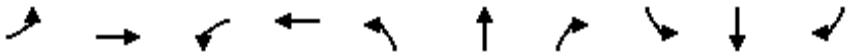
Intersection Summary



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	57	327	140	119	322	137	185	879	248	158	783	37
v/c Ratio	0.52	0.54	0.36	0.92	0.44	0.32	0.72	0.56	0.29	0.69	0.52	0.05
Control Delay	65.2	39.8	8.2	106.7	36.4	7.5	57.4	24.1	4.1	59.1	24.8	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	65.2	39.8	8.2	106.7	36.4	7.5	57.4	24.1	4.1	59.1	24.8	0.1
Queue Length 50th (ft)	34	99	0	72	96	0	106	197	0	90	172	0
Queue Length 95th (ft)	#109	139	46	#229	135	44	#228	379	55	#224	348	0
Internal Link Dist (ft)		876			804			5210			7898	
Turn Bay Length (ft)	225		225	1000		250	220		280	230		160
Base Capacity (vph)	112	1421	720	130	1458	725	336	1570	842	261	1511	720
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.51	0.23	0.19	0.92	0.22	0.19	0.55	0.56	0.29	0.61	0.52	0.05

Intersection Summary

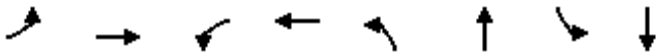
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	6	5	51	11	18	1338	107	12	976	12
v/c Ratio	0.05	0.01	0.28	0.04	0.16	0.52	0.09	0.11	0.38	0.01
Control Delay	45.5	0.0	44.8	15.8	47.1	13.0	3.7	46.2	11.1	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	45.5	0.0	44.8	15.8	47.1	13.0	3.7	46.2	11.1	0.0
Queue Length 50th (ft)	3	0	23	1	9	116	0	6	73	0
Queue Length 95th (ft)	19	0	#107	14	39	#673	36	30	403	0
Internal Link Dist (ft)		810		782		6483			5210	
Turn Bay Length (ft)	200		250		500		350	430		300
Base Capacity (vph)	111	924	180	887	111	2585	1187	111	2585	1185
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.05	0.01	0.28	0.01	0.16	0.52	0.09	0.11	0.38	0.01

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	47	1391	9	1164	189	1189	539	954
v/c Ratio	0.62	1.07	0.12	1.02	0.76	0.97	2.08	0.77
Control Delay	89.3	80.5	58.9	69.6	68.0	59.5	525.4	40.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	89.3	80.5	58.9	69.6	68.0	59.5	525.4	40.8
Queue Length 50th (ft)	37	556	7	~495	142	480	~663	351
Queue Length 95th (ft)	#97	#842	25	#633	218	#637	#879	#451
Internal Link Dist (ft)		1117		1265		3985		1763
Turn Bay Length (ft)	340		250		280		250	
Base Capacity (vph)	76	1305	76	1145	305	1220	259	1235
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.62	1.07	0.12	1.02	0.62	0.97	2.08	0.77

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Intersection	
Int Delay, s/veh	0.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	7	24	1286	26	11	1011
Future Vol, veh/h	7	24	1286	26	11	1011
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	375	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	98	98	98	98	98	98
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	7	24	1312	27	11	1032

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	2380	670	0	0	1339	0
Stage 1	1326	-	-	-	-	-
Stage 2	1054	-	-	-	-	-
Critical Hdwy	6.6	6.9	-	-	4.1	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	34	404	-	-	521	-
Stage 1	216	-	-	-	-	-
Stage 2	338	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	33	404	-	-	521	-
Mov Cap-2 Maneuver	33	-	-	-	-	-
Stage 1	216	-	-	-	-	-
Stage 2	331	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	43.3	0	0.1
HCM LOS	E		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	33	404	521	-
HCM Lane V/C Ratio	-	-	0.216	0.061	0.022	-
HCM Control Delay (s)	-	-	142	14.5	12.1	-
HCM Lane LOS	-	-	F	B	B	-
HCM 95th %tile Q(veh)	-	-	0.7	0.2	0.1	-



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	36	61	130	4	33	34	1271	150	34	947	58
v/c Ratio	0.18	0.22	0.67	0.01	0.11	0.31	0.52	0.13	0.31	0.39	0.05
Control Delay	42.1	12.7	60.5	39.0	1.0	56.8	11.0	1.9	56.8	9.4	1.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	42.1	12.7	60.5	39.0	1.0	56.8	11.0	1.9	56.8	9.4	1.6
Queue Length 50th (ft)	22	1	86	2	0	23	228	0	23	149	0
Queue Length 95th (ft)	53	38	153	12	3	58	358	26	58	238	12
Internal Link Dist (ft)		773		663			859			1974	
Turn Bay Length (ft)	50		400		400	190			225		225
Base Capacity (vph)	364	456	346	482	464	141	2434	1114	141	2434	1112
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.10	0.13	0.38	0.01	0.07	0.24	0.52	0.13	0.24	0.39	0.05

Intersection Summary



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	55	58	84	20	125	26	1290	90	105	1023	22
v/c Ratio	0.23	0.18	0.36	0.06	0.33	0.24	0.60	0.09	0.58	0.40	0.02
Control Delay	34.2	28.1	37.3	30.7	7.9	52.0	15.7	3.4	56.1	9.3	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	34.2	28.1	37.3	30.7	7.9	52.0	15.7	3.4	56.1	9.3	0.0
Queue Length 50th (ft)	28	24	44	10	0	14	199	0	56	68	0
Queue Length 95th (ft)	60	55	84	28	41	51	524	29	#152	346	1
Internal Link Dist (ft)		1110		807			892			859	
Turn Bay Length (ft)	100		65		65	190			195		230
Base Capacity (vph)	636	838	614	855	786	115	2157	1001	212	2535	1151
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.09	0.07	0.14	0.02	0.16	0.23	0.60	0.09	0.50	0.40	0.02

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBT	EBR	WBT	SBL	SBR
Lane Group Flow (vph)	1777	452	1275	557	495
v/c Ratio	0.72	0.28	0.51	0.39	0.75
Control Delay	20.0	0.4	16.6	19.0	29.1
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	20.0	0.4	16.6	19.0	29.1
Queue Length 50th (ft)	257	0	161	103	207
Queue Length 95th (ft)	423	0	271	171	383
Internal Link Dist (ft)	480		822		
Turn Bay Length (ft)		250		1000	540
Base Capacity (vph)	3406	1615	3406	2599	1203
Starvation Cap Reductn	132	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.54	0.28	0.37	0.21	0.41

Intersection Summary



Lane Group	EBT	EBR	WBT	WBR	NBL	NBT	NBR
Lane Group Flow (vph)	1678	656	1366	408	278	429	428
v/c Ratio	0.64	0.58	0.52	0.40	0.39	0.70	0.70
Control Delay	19.7	3.7	17.7	3.0	23.0	30.8	30.7
Queue Delay	0.0	0.0	0.2	0.3	0.0	0.0	0.0
Total Delay	19.7	3.7	18.0	3.3	23.0	30.8	30.7
Queue Length 50th (ft)	257	1	192	0	128	235	234
Queue Length 95th (ft)	425	64	323	54	199	360	358
Internal Link Dist (ft)	822		339			457	
Turn Bay Length (ft)		250			1000		615
Base Capacity (vph)	3224	1251	3224	1158	1121	959	959
Starvation Cap Reductn	0	0	941	271	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.52	0.52	0.60	0.46	0.25	0.45	0.45

Intersection Summary

APPENDIX 5.4:

E+P CONDITIONS FREEWAY FACILITY ANALYSIS WORKSHEETS

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HCS7 Freeway Facilities Report

Project Information

Analyst	CM	Date	1/23/2020
Agency	Urban Crossroads, Inc.	Analysis Year	E+P
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	Hesperia Commerce Center II (JN 12778) - I-15 SB at Main		

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	7
Total Time Periods	1	Time Period Duration, min	15

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	I-15 SB, North of Main St.	16360	3
2	Diverge	Diverge	I-15 SB, Off-Ramp at Main St.	1500	3
3	Basic	Basic	I-15 SB, Between Off and Loop On-Ramp	975	3
4	Merge	Merge	I-15 SB, Loop On-Ramp at Main St.	1500	3
5	Basic	Basic	I-15 SB, Between Loop On-Ramp and On-Ramp	1415	3
6	Merge	Merge	I-15 SB, On-Ramp at Main St.	1500	3
7	Basic	Basic	I-15 SB, South of Main St.	5900	3

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.943	4514	7146	0.63	67.5	22.3	C

Segment 2: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.943	0.826	4514	895	7200	2100	0.63	0.43	63.6	59.4	23.7	29.8	D

Segment 3: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.971	3623	7146	0.51	68.2	17.7	B

Segment 4: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.971	0.971	4172	549	7200	1900	0.58	0.29	62.1	59.9	22.4	24.0	C

Segment 5: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.971	4172	7146	0.58	68.0	20.5	C

Segment 6: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.971	0.847	4344	172	7200	2100	0.60	0.08	62.6	60.7	23.1	22.9	C

Segment 7: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.962	4363	7146	0.61	67.8	21.4	C

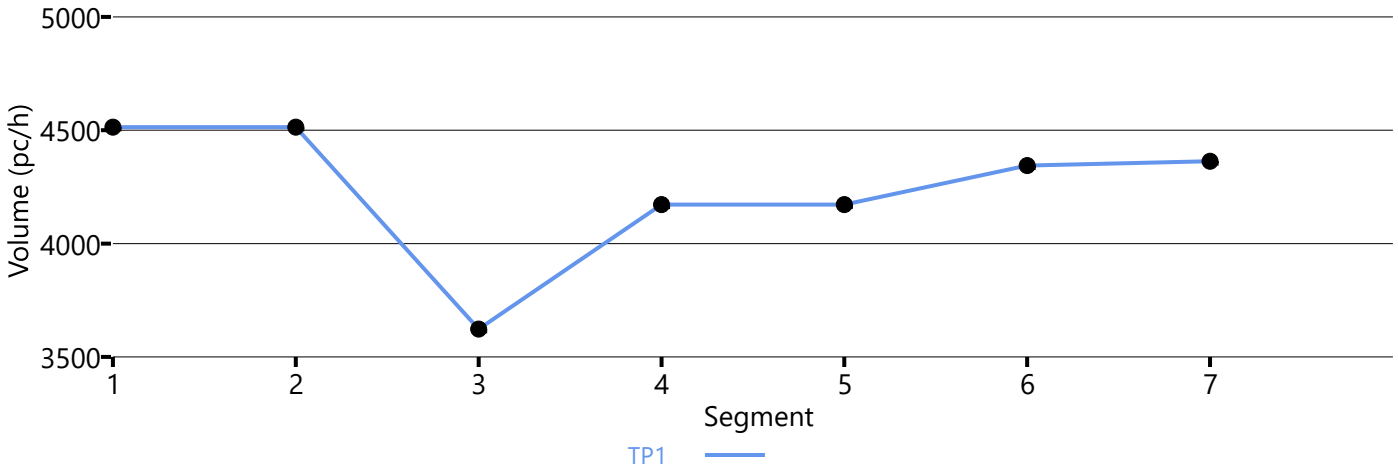
Facility Time Period Results

T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	66.8	22.0	20.9	5.0	C

Facility Overall Results

Space Mean Speed, mi/h	66.8	Density, veh/mi/ln	20.9
Average Travel Time, min	5.0	Density, pc/mi/ln	22.0

Volume Distribution



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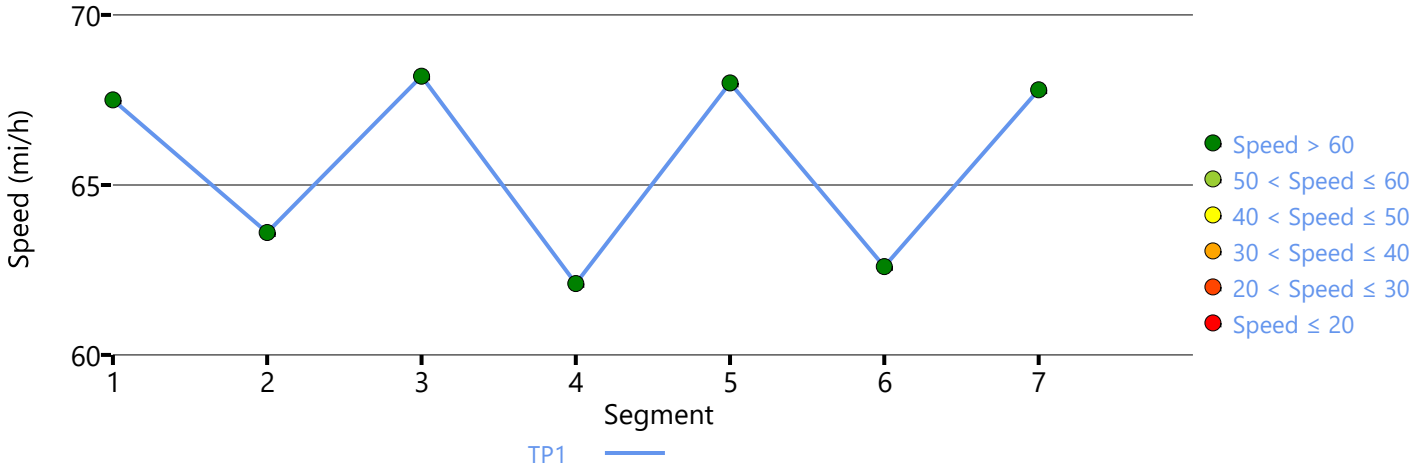
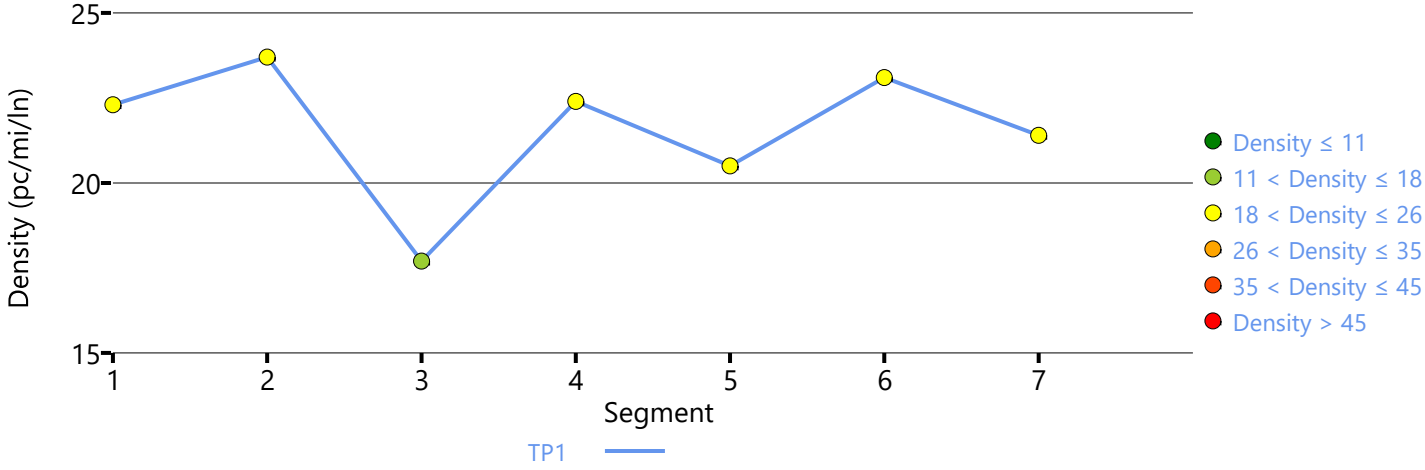


Density Distribution



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HCS7 Freeway Facilities Report

Project Information

Analyst	CP	Date	1/23/2020
Agency	Urban Crossroads, Inc.	Analysis Year	E+P
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	Hesperia Commerce Center II (JN:12778) - I-15 Southbound at US Highway 395		

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	3
Total Time Periods	1	Time Period Duration, min	15

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	North of US 395	4200	3
2	Merge	Basic	On-Ramp at US 395	1500	4
3	Basic	Basic	South of US 395	4200	4

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.952	3613	7179	0.50	69.3	17.4	B

Segment 2: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.952	0.840	4796	1183	9600	2100	0.38	0.56	70.0	-	12.9	-	B

Segment 3: Basic

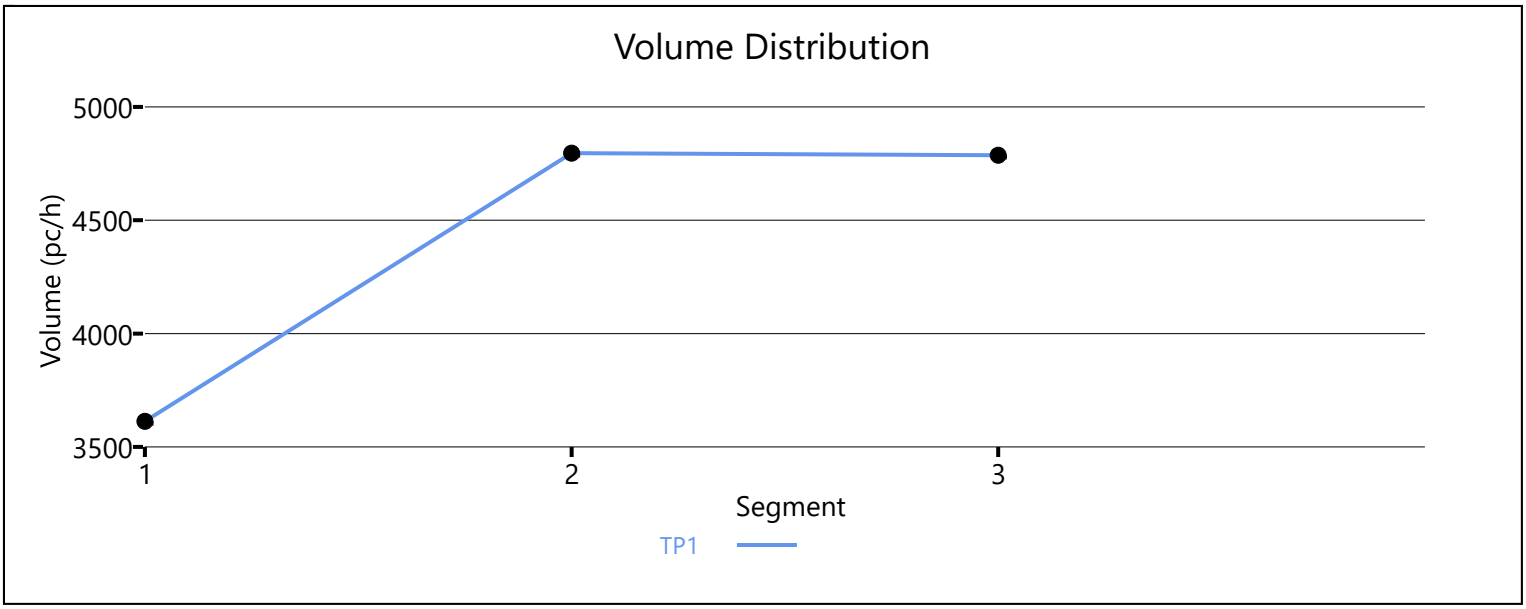
Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.926	4787	9572	0.50	69.3	17.3	B

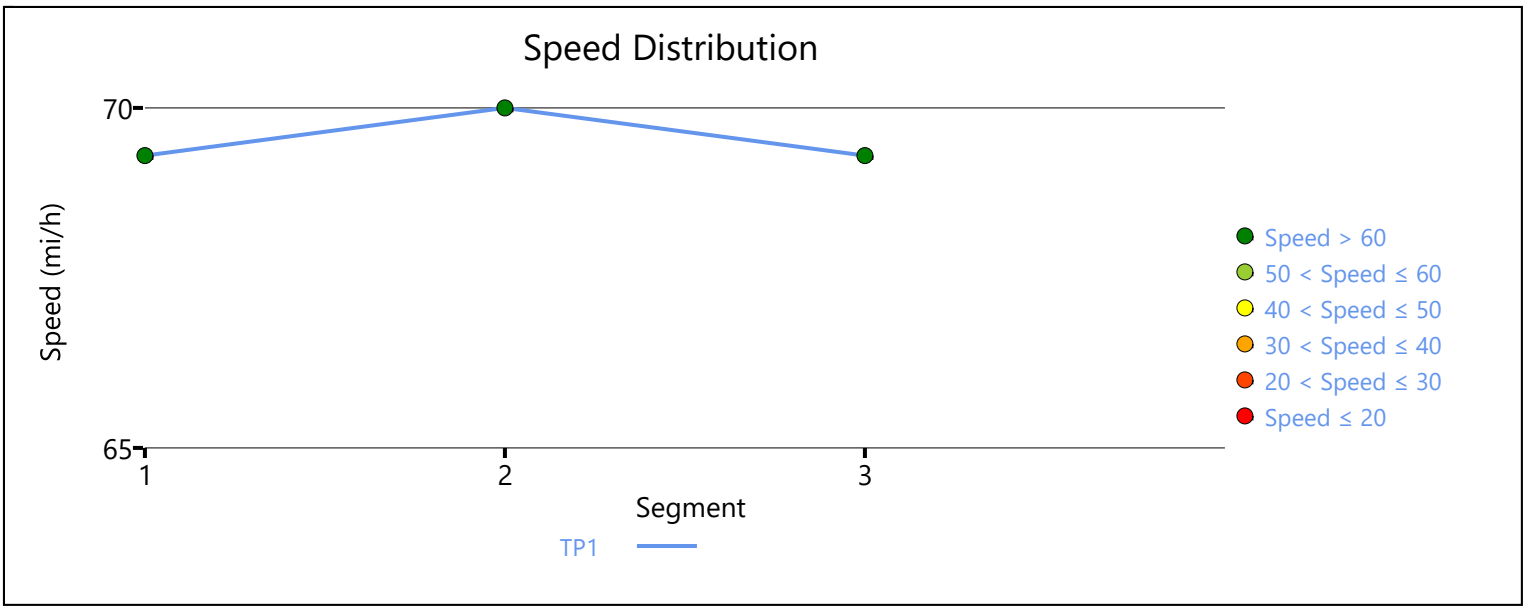
Facility Time Period Results

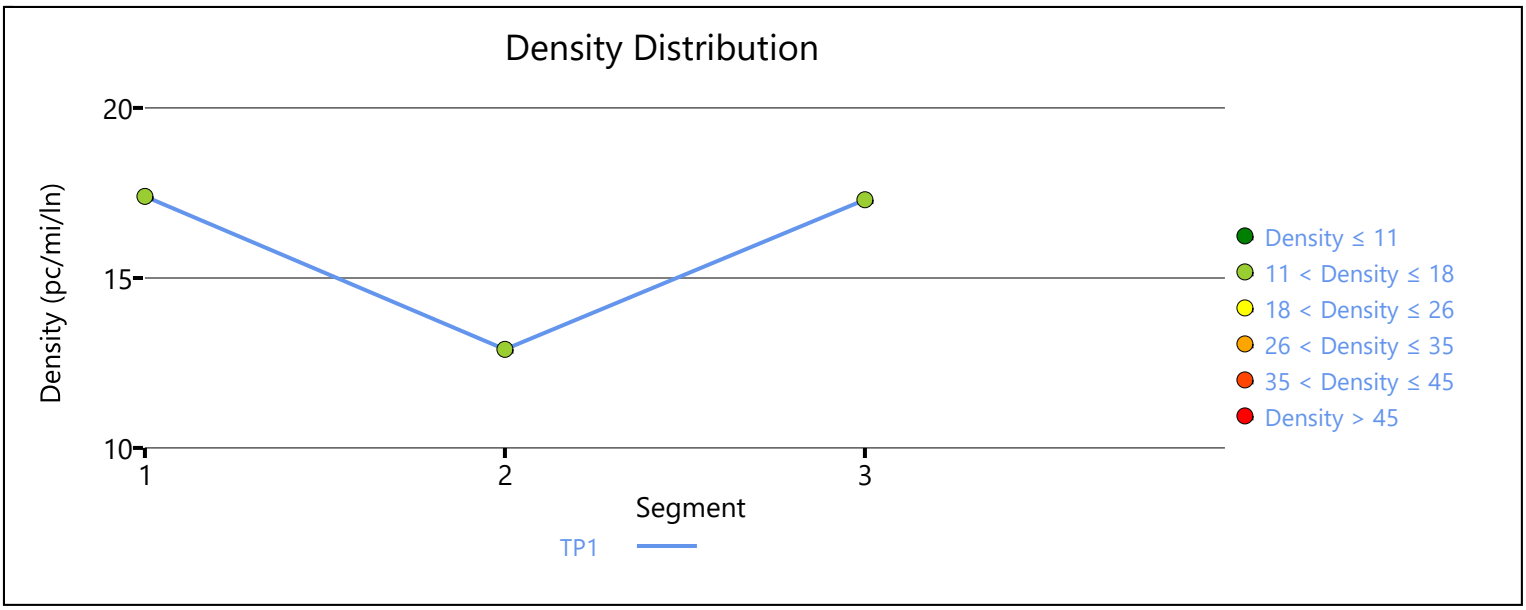
T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	69.4	16.6	15.6	1.6	B

Facility Overall Results

Space Mean Speed, mi/h	69.4	Density, veh/mi/ln	15.6
Average Travel Time, min	1.6	Density, pc/mi/ln	16.6







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HCS7 Freeway Facilities Report

Project Information

Analyst	CM	Date	1/23/2020
Agency	Urban Crossroads, Inc.	Analysis Year	E+P
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	Hesperia Commerce Center II (JN 12778) - I-15 NB at Main		

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	7
Total Time Periods	1	Time Period Duration, min	15

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	I-15 NB, South of Main St.	6140	3
2	Diverge	Diverge	I-15 NB, Off-Ramp at Main St.	1500	3
3	Basic	Basic	I-15 NB, Between Off-Ramp and Loop On-Ramp	1125	3
4	Merge	Merge	I-15 NB, Loop On-Ramp at Main St.	1500	3
5	Basic	Basic	I-15 NB, Between Loop On-Ramp and On-Ramp	1215	3
6	Merge	Merge	I-15 NB, On-Ramp at Main St.	1500	3
7	Basic	Basic	I-15 NB, North of Main St.	16370	3

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.943	3894	7146	0.54	68.2	19.0	C

Segment 2: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.943	0.833	3894	975	7200	2100	0.54	0.46	63.3	59.2	20.5	26.9	C

Segment 3: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.980	2918	7146	0.41	68.2	14.3	B

Segment 4: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.980	0.926	3302	384	7200	1900	0.46	0.20	63.1	60.8	17.4	18.7	B

Segment 5: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.971	3311	7146	0.46	68.2	16.2	B

Segment 6: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.971	0.971	3805	494	7200	2100	0.53	0.24	62.8	60.8	20.2	21.9	C

Segment 7: Basic

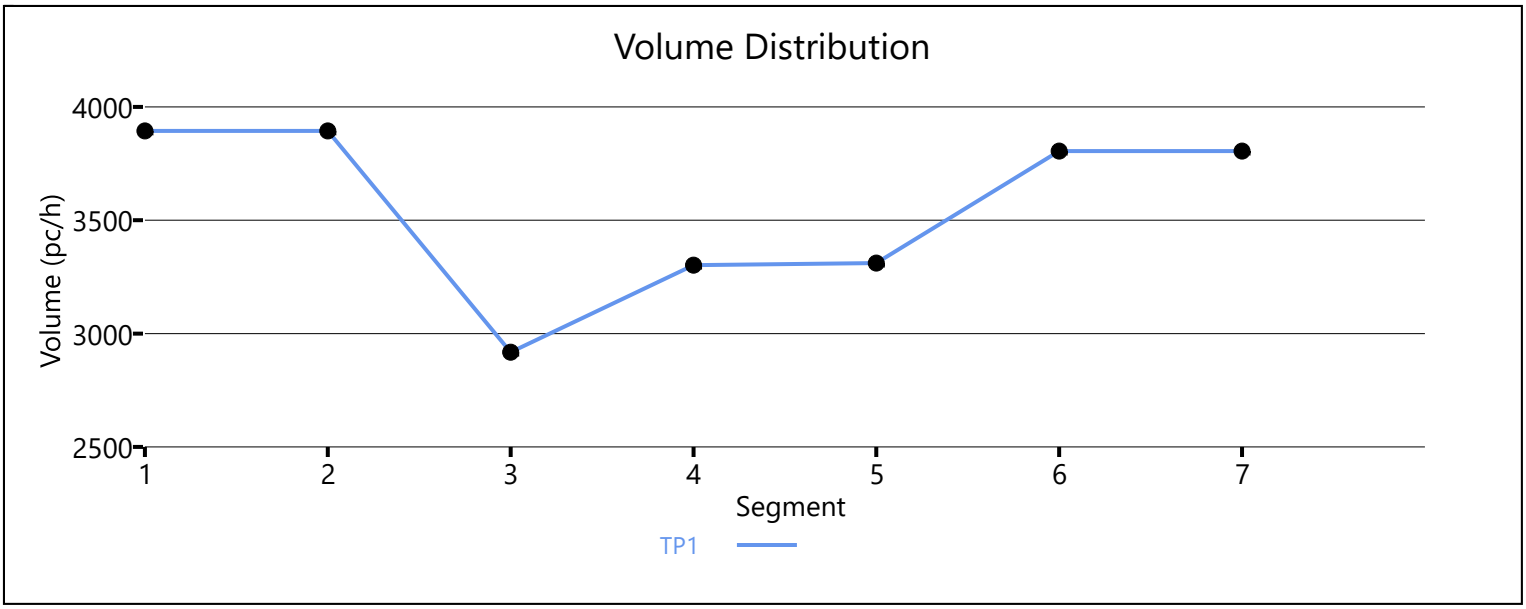
Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.971	3805	7146	0.53	68.2	18.6	C

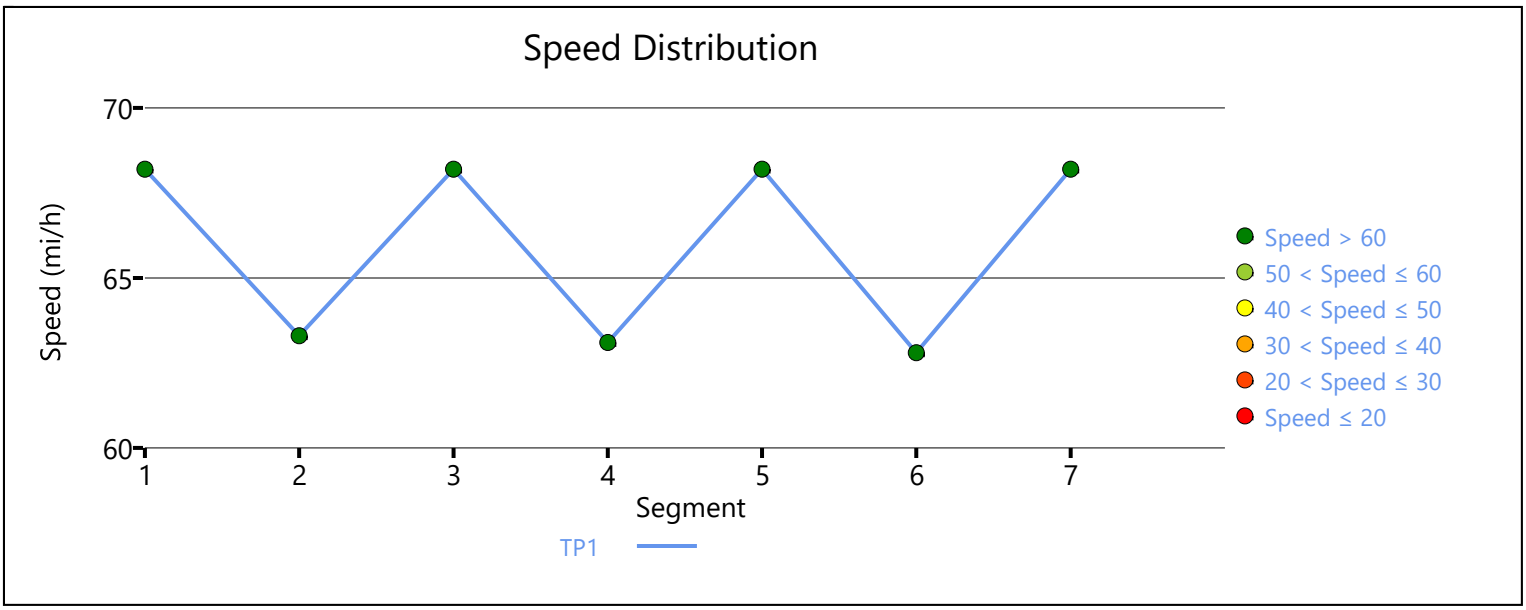
Facility Time Period Results

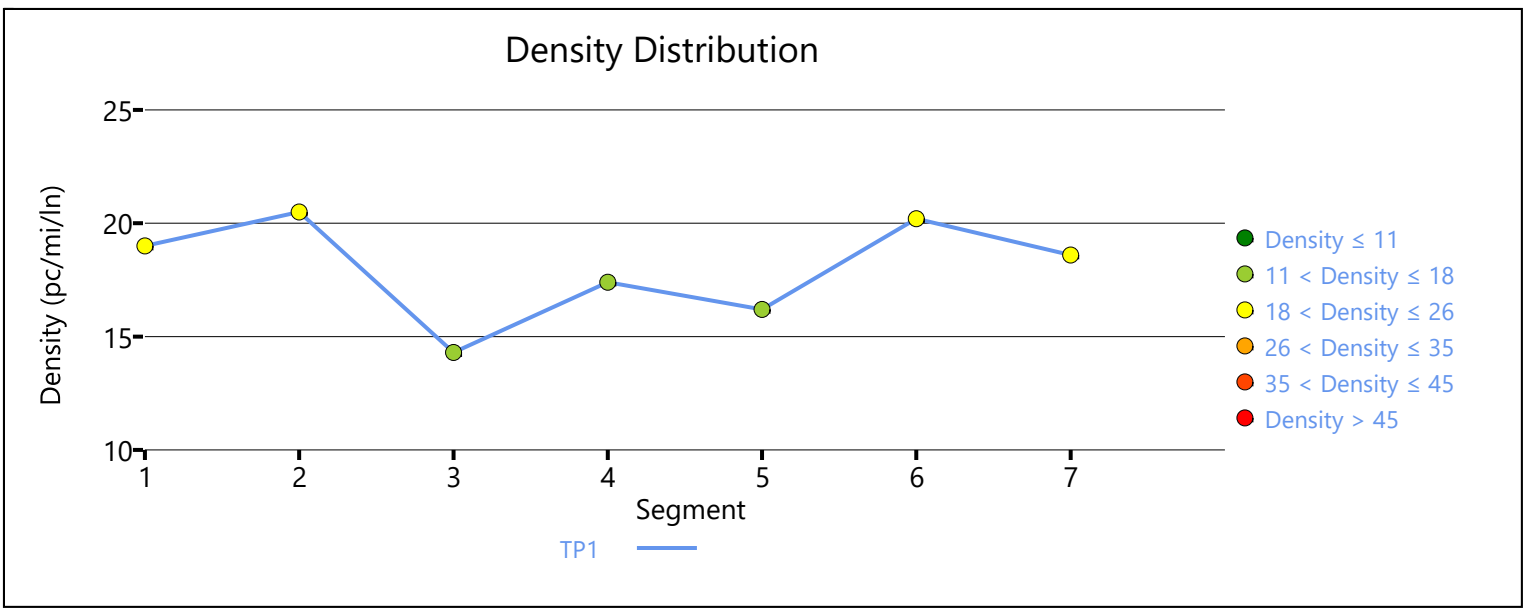
T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	67.4	18.5	17.9	4.9	C

Facility Overall Results

Space Mean Speed, mi/h	67.4	Density, veh/mi/ln	17.9
Average Travel Time, min	4.9	Density, pc/mi/ln	18.5







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HCS7 Freeway Facilities Report

Project Information

Analyst	CP	Date	1/23/2020
Agency	Urban Crossroads, Inc.	Analysis Year	E+P
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	Hesperia Commerce Center II (JN:12778) - I-15 NB at US 395		

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	3
Total Time Periods	1	Time Period Duration, min	15

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	South of US 395	2000	4
2	Diverge	Diverge	Off-Ramp at US 395	1500	4
3	Basic	Basic	North of US 395	6350	4

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.917	4605	9572	0.48	69.3	16.6	B

Segment 2: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.917	0.840	4605	982	9600	2100	0.48	0.47	65.9	59.2	17.5	21.0	C

Segment 3: Basic

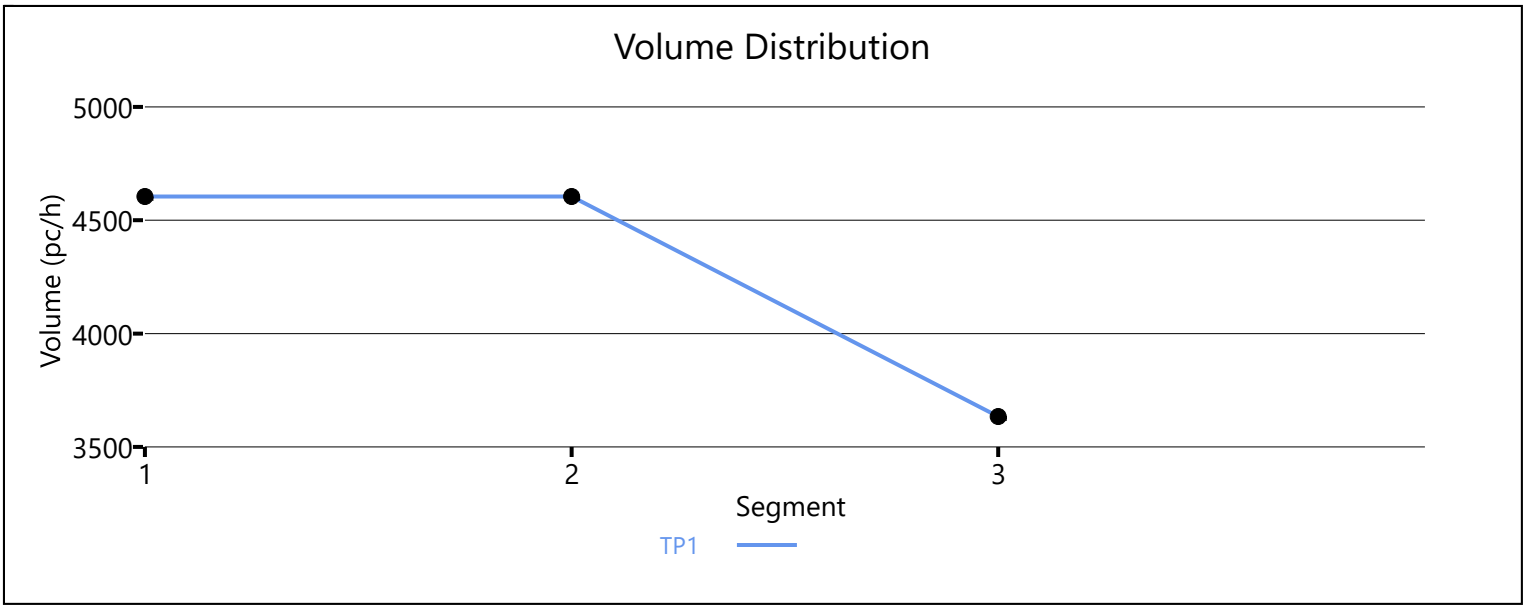
Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.935	3634	9572	0.38	69.3	13.1	B

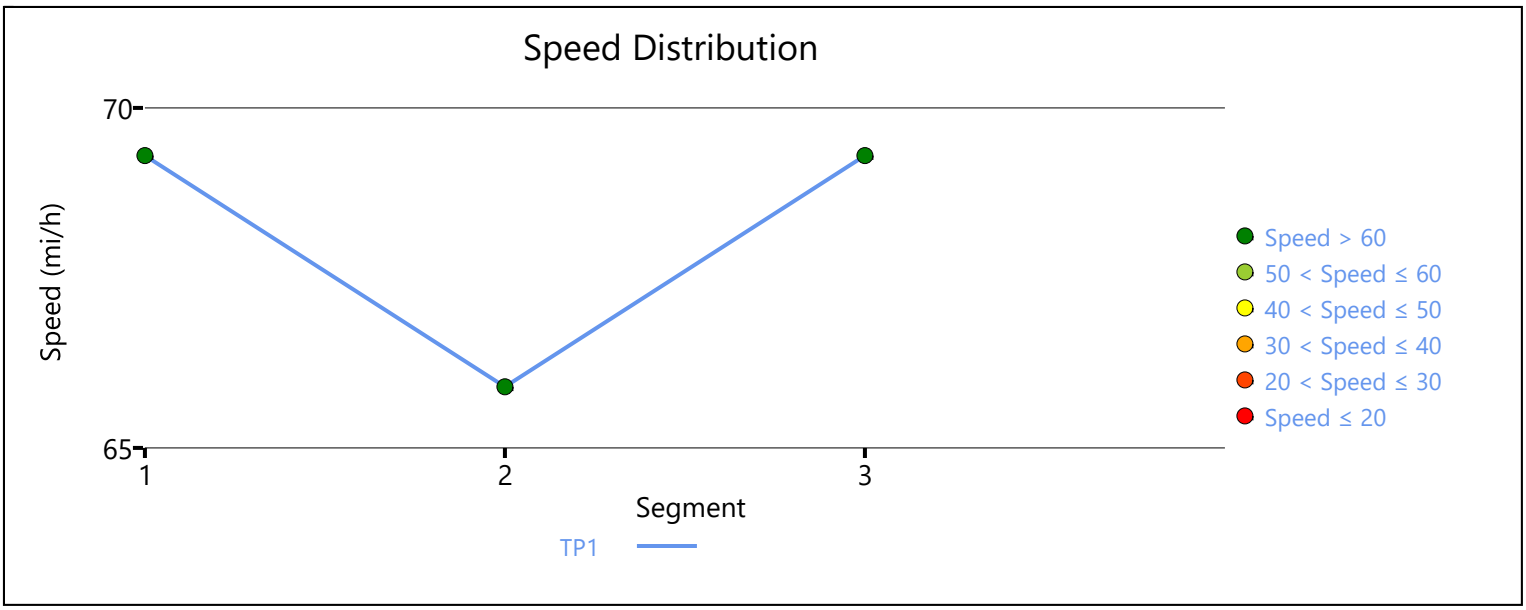
Facility Time Period Results

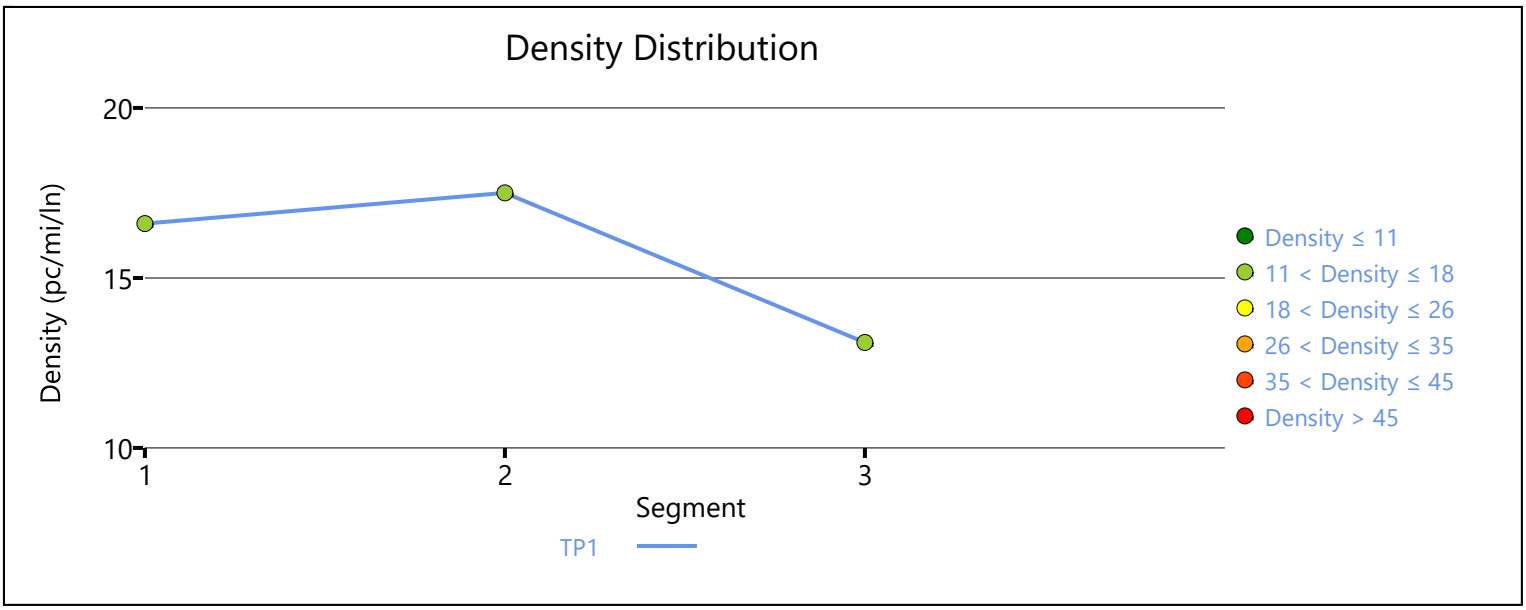
T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	68.7	14.5	13.4	1.6	B

Facility Overall Results

Space Mean Speed, mi/h	68.7	Density, veh/mi/ln	13.4
Average Travel Time, min	1.6	Density, pc/mi/ln	14.5







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HCS7 Freeway Facilities Report

Project Information

Analyst	CM	Date	1/23/2020
Agency	Urban Crossroads, Inc.	Analysis Year	E+P
Jurisdiction	Caltrans	Time Period Analyzed	PM Peak Hour
Project Description	Hesperia Commerce Center II (JN 12778) - I-15 SB at Main		

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	7
Total Time Periods	1	Time Period Duration, min	15

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	I-15 SB, North of Main St.	16360	3
2	Diverge	Diverge	I-15 SB, Off-Ramp at Main St.	1500	3
3	Basic	Basic	I-15 SB, Between Off and Loop On-Ramp	975	3
4	Merge	Merge	I-15 SB, Loop On-Ramp at Main St.	1500	3
5	Basic	Basic	I-15 SB, Between Loop On-Ramp and On-Ramp	1415	3
6	Merge	Merge	I-15 SB, On-Ramp at Main St.	1500	3
7	Basic	Basic	I-15 SB, South of Main St.	5900	3

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.962	4518	7146	0.63	67.5	22.3	C

Segment 2: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.962	0.952	4518	1012	7200	2100	0.63	0.48	63.3	59.1	23.8	30.1	D

Segment 3: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.962	3517	7146	0.49	68.2	17.2	B

Segment 4: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.962	0.952	3870	353	7200	1900	0.54	0.19	62.5	60.3	20.6	22.0	C

Segment 5: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.962	3866	7146	0.54	68.2	18.9	C

Segment 6: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.962	0.794	4401	535	7200	2100	0.61	0.25	62.3	60.4	23.5	24.2	C

Segment 7: Basic

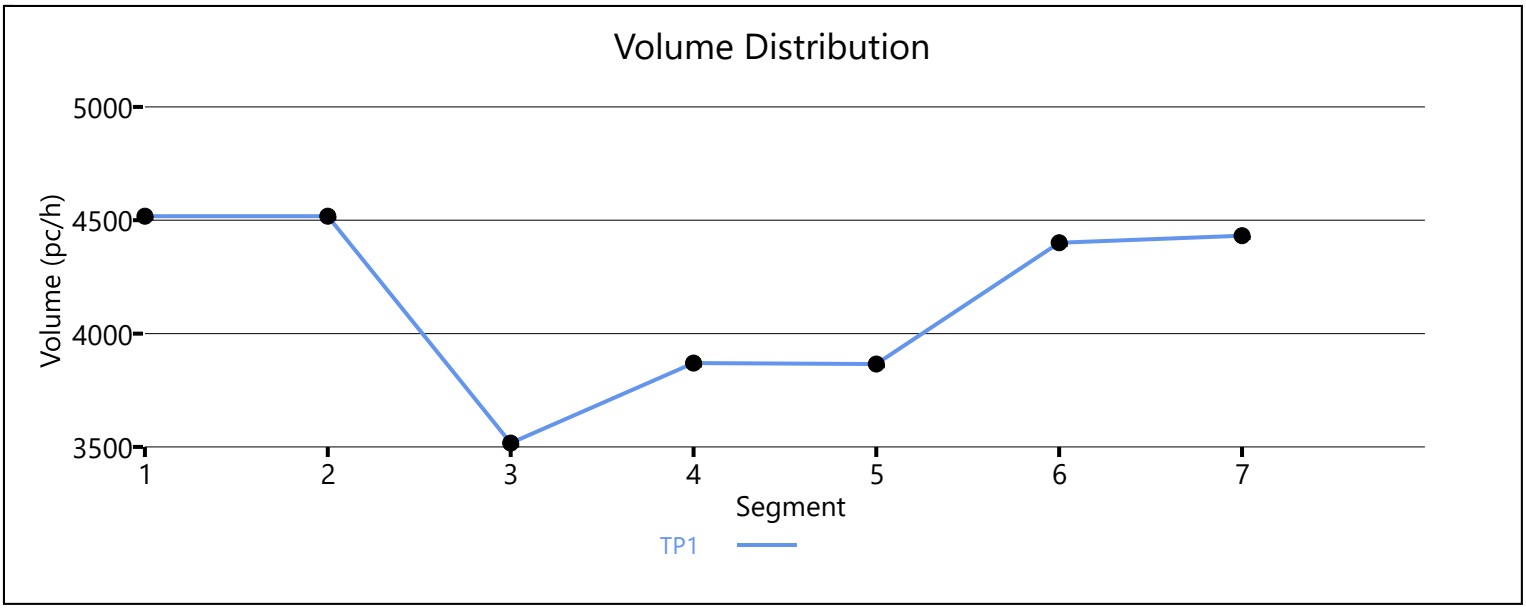
Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.935	4432	7146	0.62	67.7	21.8	C

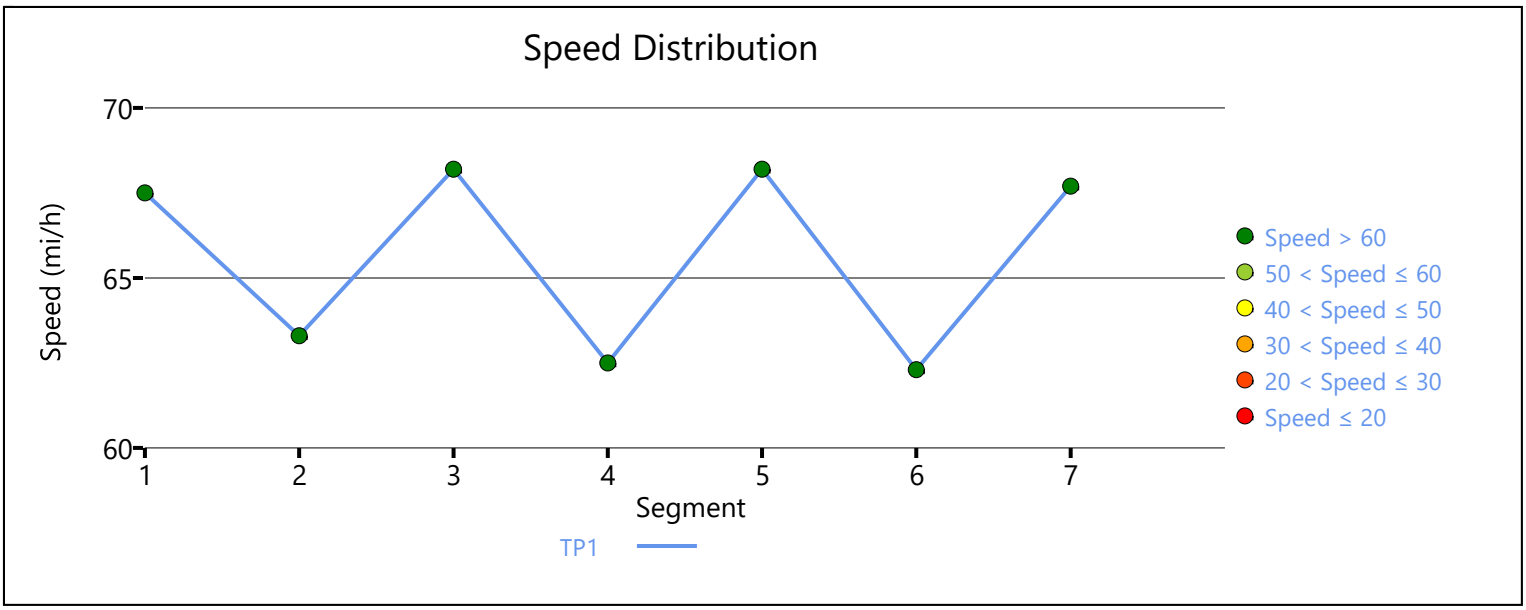
Facility Time Period Results

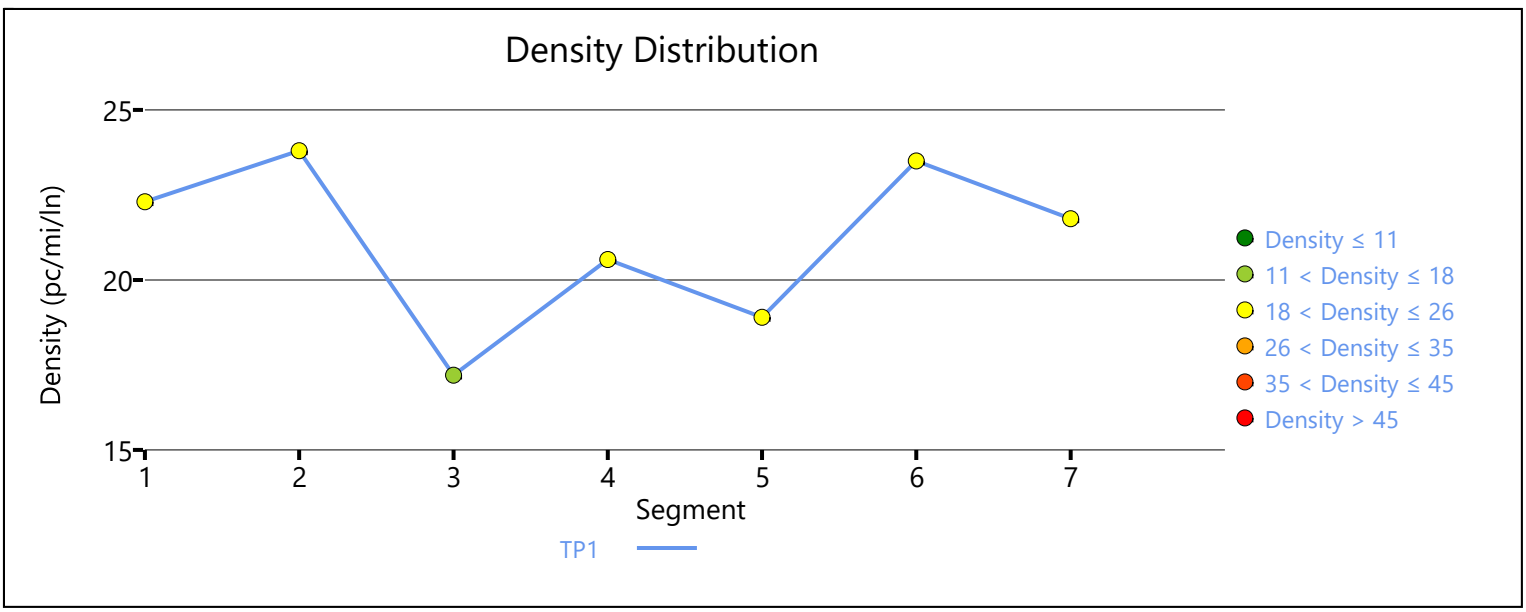
T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	66.8	21.9	21.0	5.0	C

Facility Overall Results

Space Mean Speed, mi/h	66.8	Density, veh/mi/ln	21.0
Average Travel Time, min	5.0	Density, pc/mi/ln	21.9







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HCS7 Freeway Facilities Report

Project Information

Analyst	CP	Date	1/23/2020
Agency	Urban Crossroads, Inc.	Analysis Year	E+P
Jurisdiction	Caltrans	Time Period Analyzed	PM Peak Hour
Project Description	Hesperia Commerce Center II (JN:12778) - I-15 Southbound at US Highway 395		

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	3
Total Time Periods	1	Time Period Duration, min	15

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	North of US 395	4200	3
2	Merge	Basic	On-Ramp at US 395	1500	4
3	Basic	Basic	South of US 395	4200	4

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.926	4115	7179	0.57	69.1	19.9	C

Segment 2: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.952	0.847	5099	1096	9600	2100	0.42	0.52	70.0	-	14.3	-	B

Segment 3: Basic

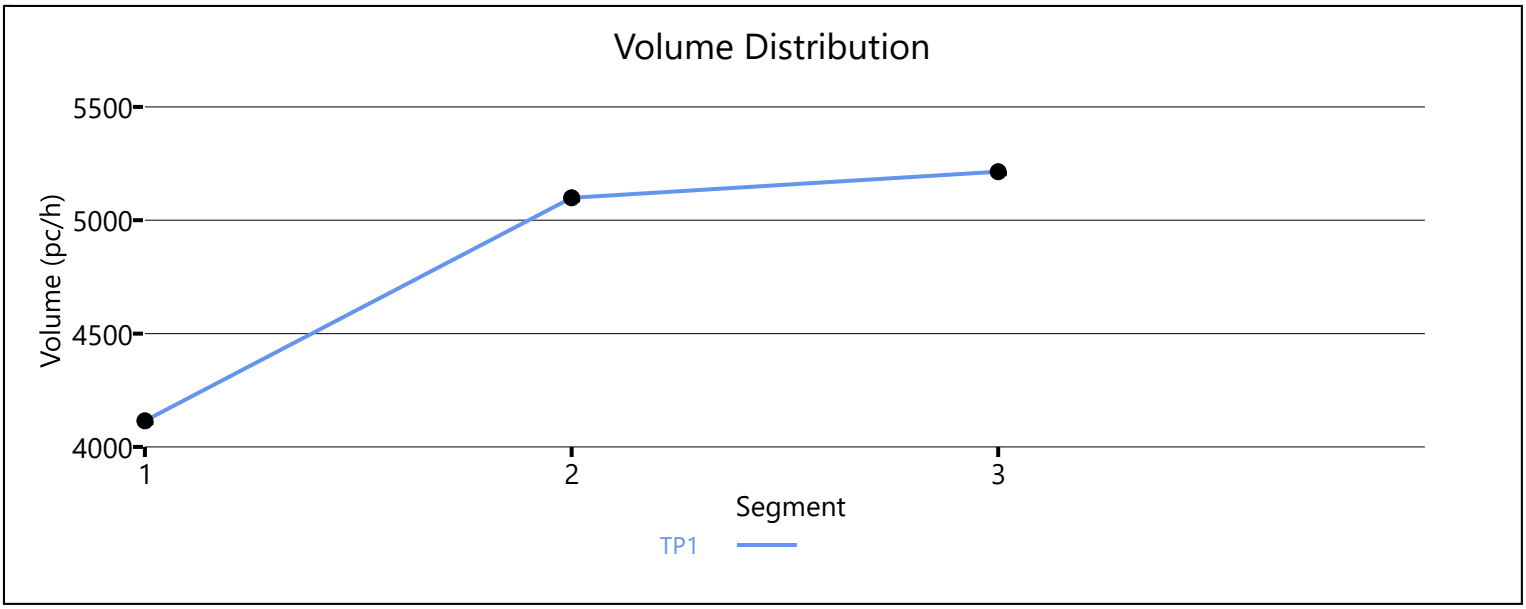
Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.909	5214	9572	0.54	69.2	18.8	C

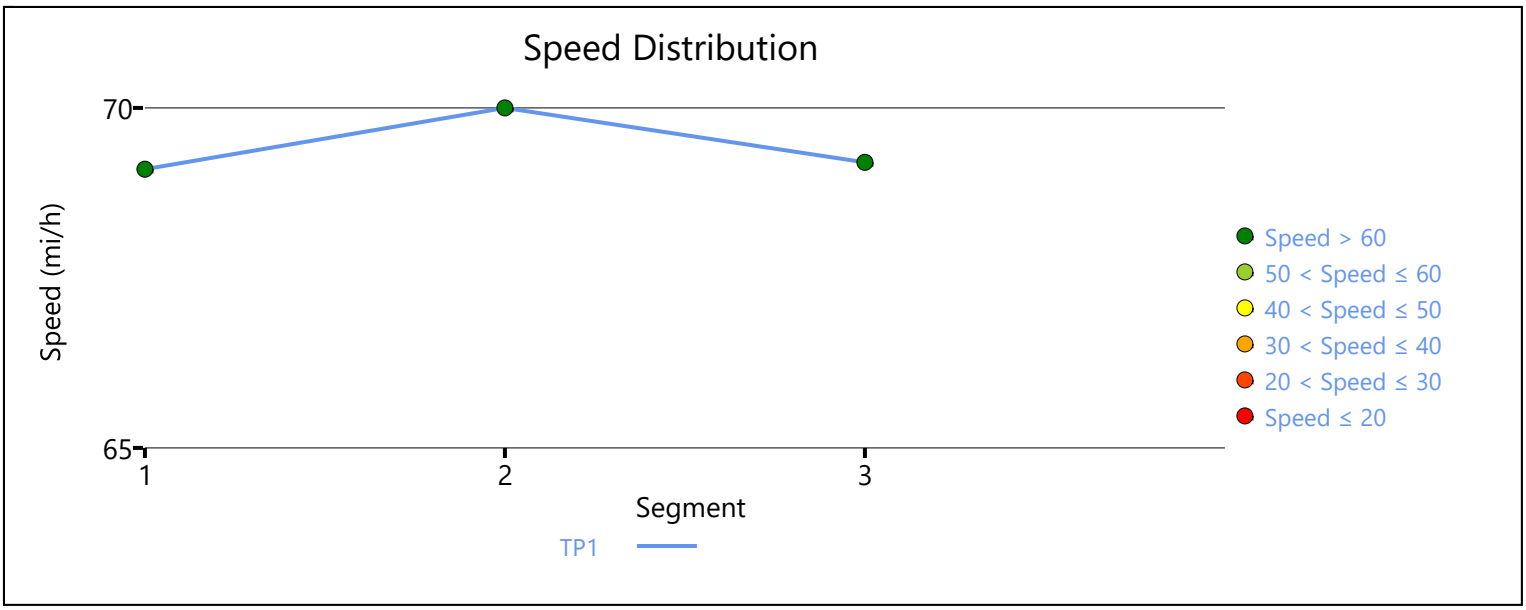
Facility Time Period Results

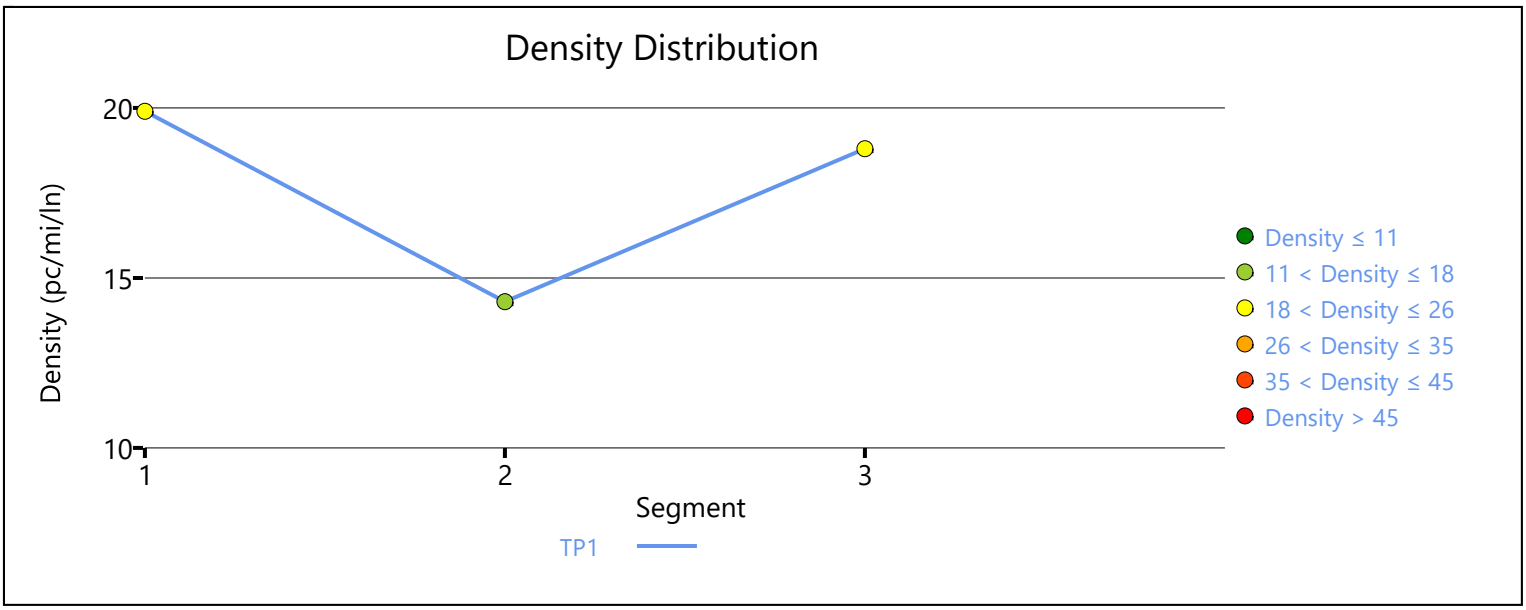
T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	69.3	18.4	17.0	1.6	C

Facility Overall Results

Space Mean Speed, mi/h	69.3	Density, veh/mi/ln	17.0
Average Travel Time, min	1.6	Density, pc/mi/ln	18.4







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HCS7 Freeway Facilities Report

Project Information

Analyst	CM	Date	1/23/2020
Agency	Urban Crossroads, Inc.	Analysis Year	E+P
Jurisdiction	Caltrans	Time Period Analyzed	PM Peak Hour
Project Description	Hesperia Commerce Center II (JN 12778) - I-15 NB at Main		

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	7
Total Time Periods	1	Time Period Duration, min	15

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	I-15 NB, South of Main St.	6140	3
2	Diverge	Diverge	I-15 NB, Off-Ramp at Main St.	1500	3
3	Basic	Basic	I-15 NB, Between Off-Ramp and Loop On-Ramp	1125	3
4	Merge	Merge	I-15 NB, Loop On-Ramp at Main St.	1500	3
5	Basic	Basic	I-15 NB, Between Loop On-Ramp and On-Ramp	1215	3
6	Merge	Merge	I-15 NB, On-Ramp at Main St.	1500	3
7	Basic	Basic	I-15 NB, North of Main St.	16370	3

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.971	6625	7146	0.93	57.3	38.5	E

Segment 2: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.971	0.917	6625	1184	7200	2100	0.92	0.56	62.8	58.7	35.2	38.4	E

Segment 3: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.980	5456	7146	0.76	64.5	28.2	D

Segment 4: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.980	0.840	6113	657	7200	1900	0.85	0.35	58.9	56.4	34.6	32.4	D

Segment 5: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.962	6132	7146	0.86	60.8	33.6	D

Segment 6: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.962	0.962	6559	427	7200	2100	0.91	0.20	58.1	55.8	37.6	34.3	D

Segment 7: Basic

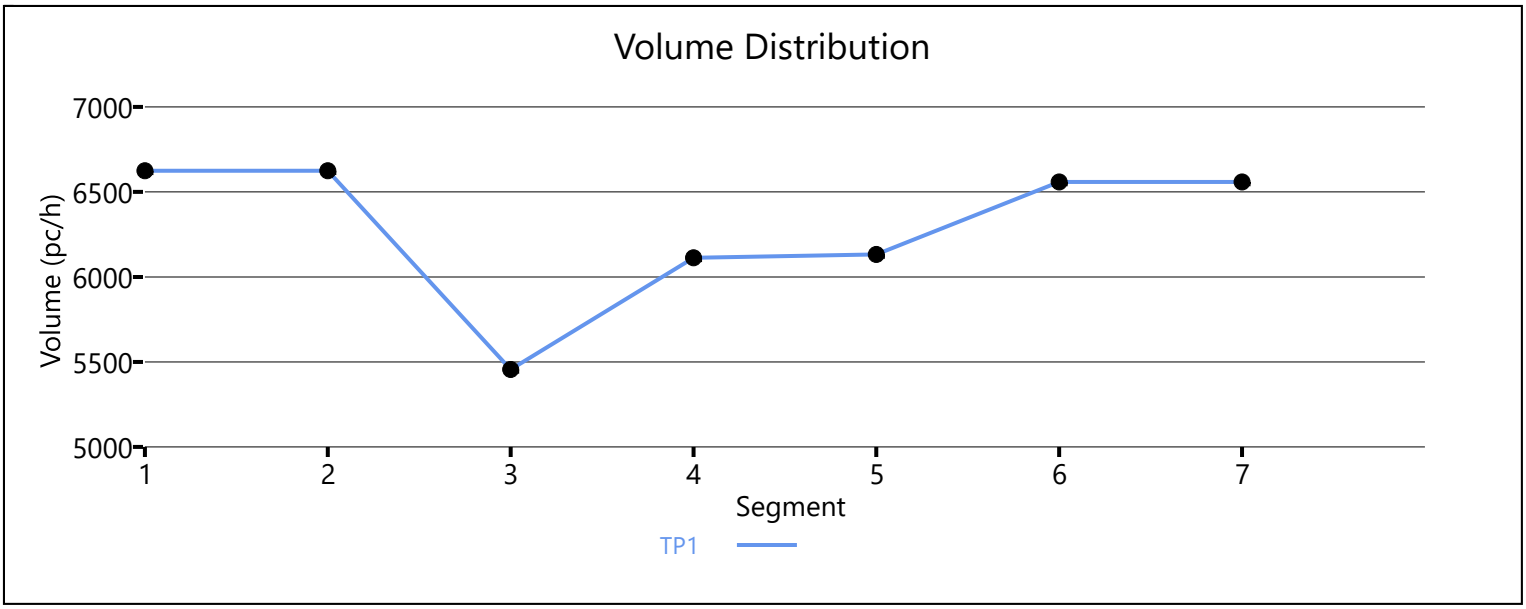
Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.962	6559	7146	0.92	57.8	37.8	E

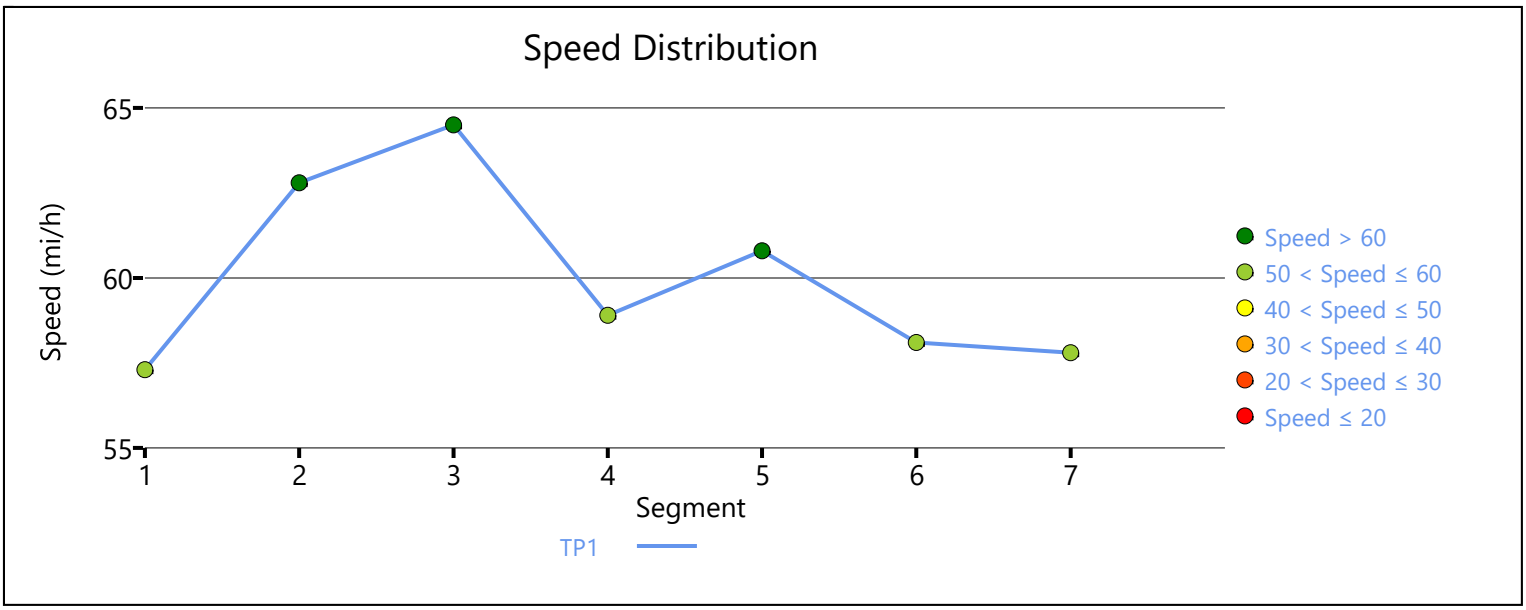
Facility Time Period Results

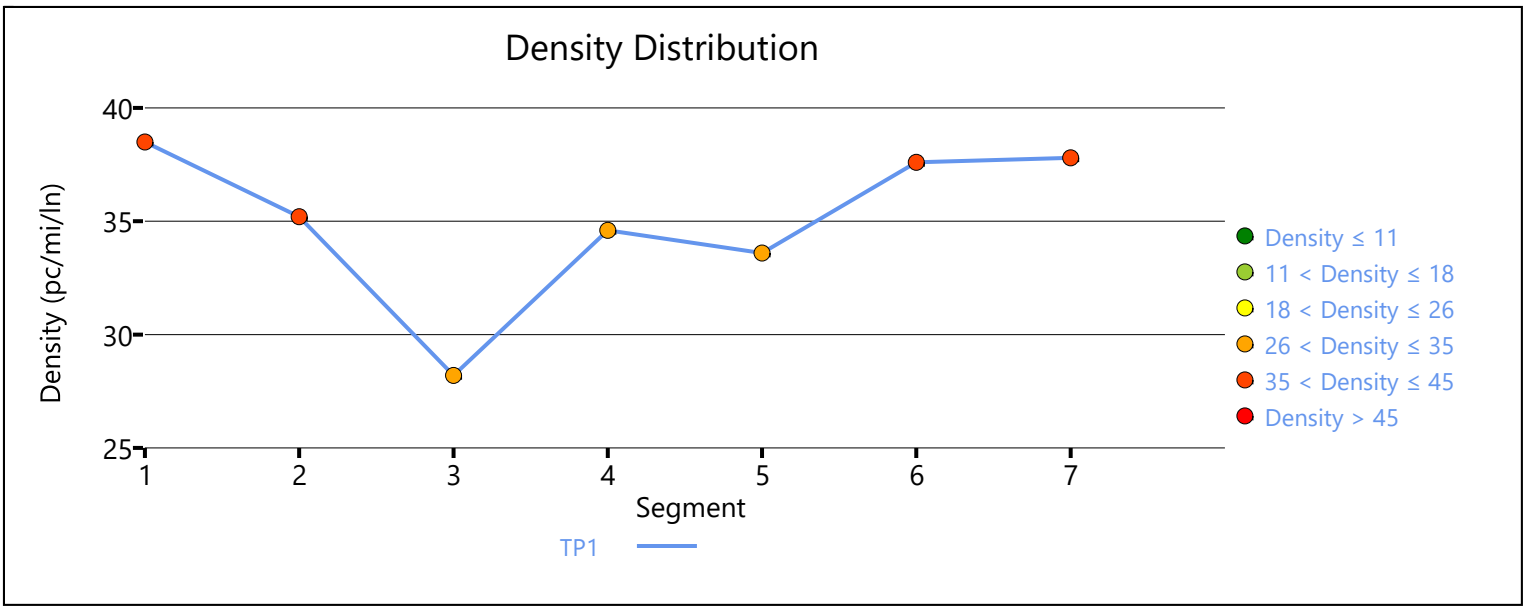
T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	58.3	37.1	35.9	5.7	E

Facility Overall Results

Space Mean Speed, mi/h	58.3	Density, veh/mi/ln	35.9
Average Travel Time, min	5.7	Density, pc/mi/ln	37.1







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HCS7 Freeway Facilities Report

Project Information

Analyst	CP	Date	1/23/2020
Agency	Urban Crossroads, Inc.	Analysis Year	E+P
Jurisdiction	Caltrans	Time Period Analyzed	PM Peak Hour
Project Description	Hesperia Commerce Center II (JN:12778) - I-15 NB at US 395		

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	3
Total Time Periods	1	Time Period Duration, min	15

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	South of US 395	2000	4
2	Diverge	Diverge	Off-Ramp at US 395	1500	4
3	Basic	Basic	North of US 395	6350	4

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.943	6507	9572	0.68	67.4	24.1	C

Segment 2: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.943	0.885	6507	1426	9600	2100	0.68	0.68	64.5	58.1	25.2	30.3	D

Segment 3: Basic

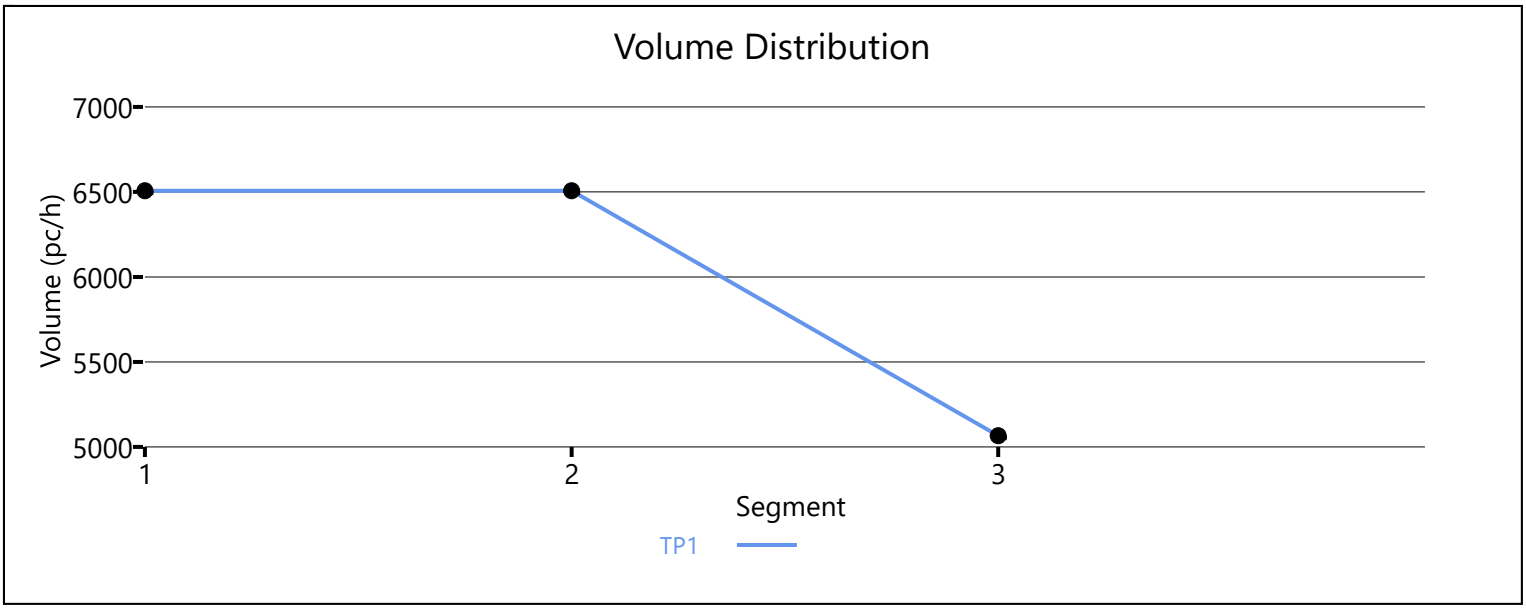
Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.962	5066	9572	0.53	69.3	18.3	C

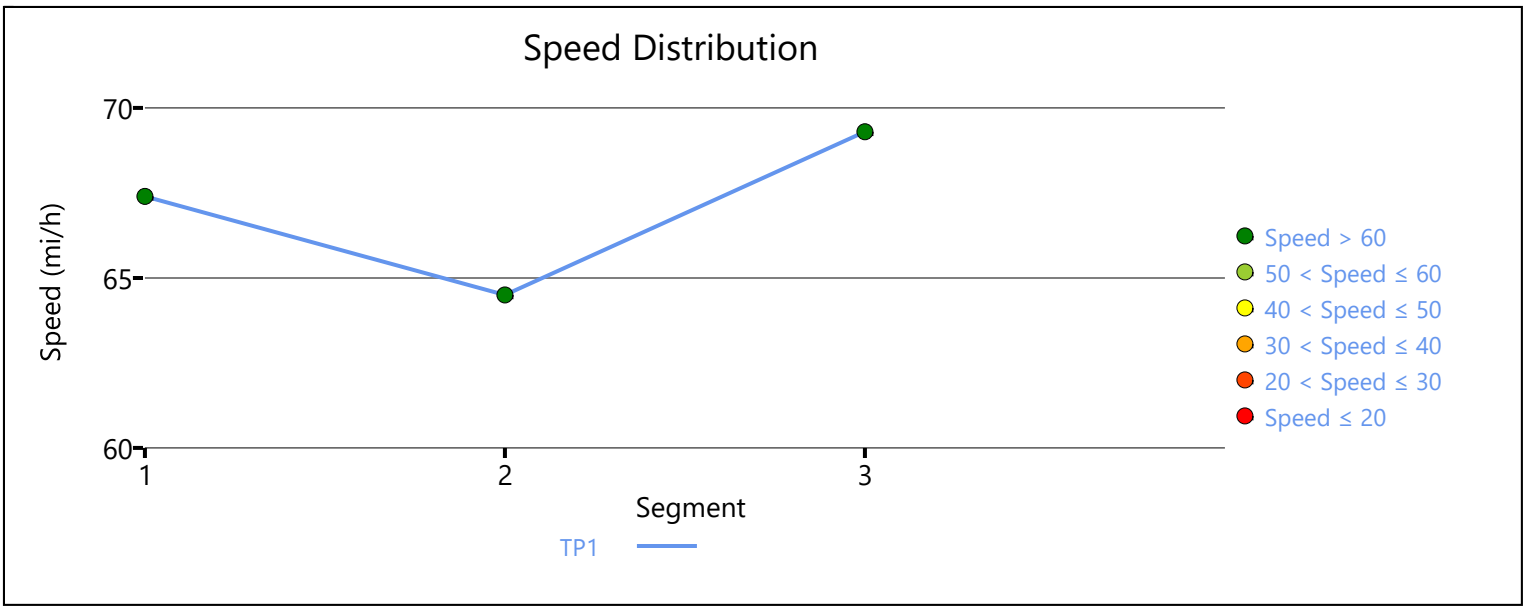
Facility Time Period Results

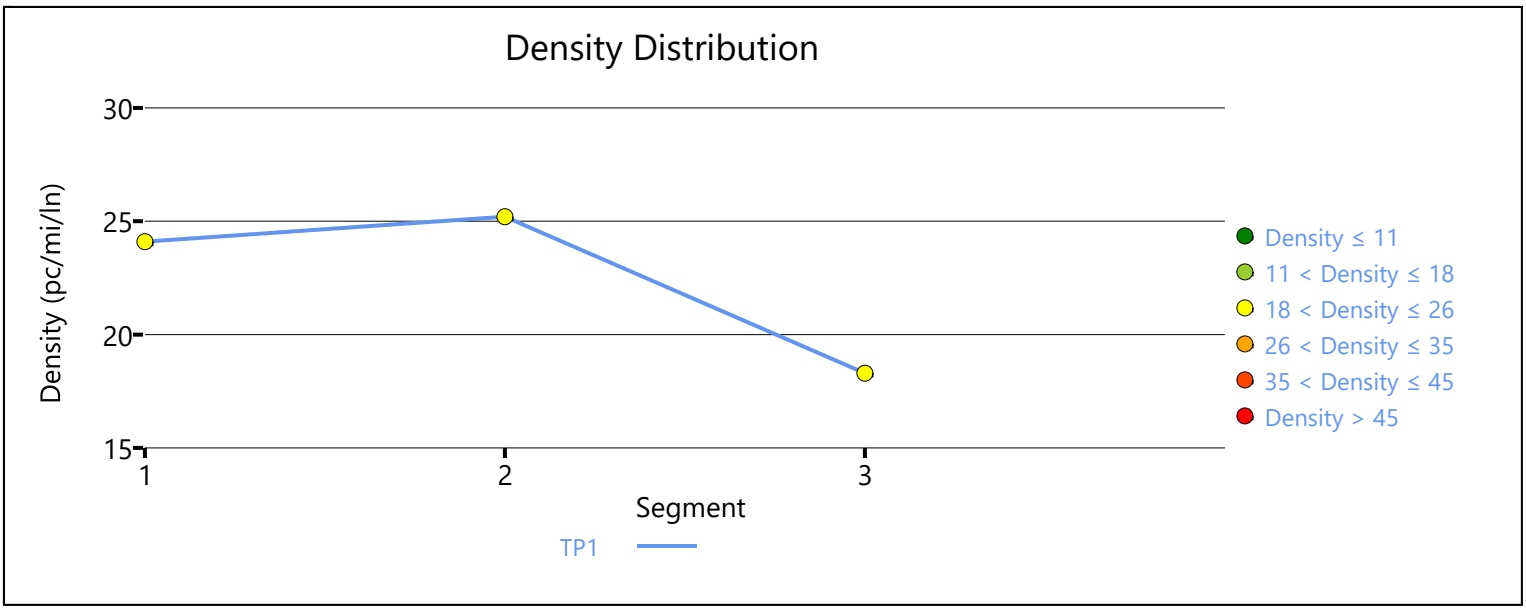
T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	68.0	20.5	19.6	1.6	C

Facility Overall Results

Space Mean Speed, mi/h	68.0	Density, veh/mi/ln	19.6
Average Travel Time, min	1.6	Density, pc/mi/ln	20.5







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APPENDIX 5.5:

E+P CONDITIONS INTERSECTION OPERATIONS ANALYSIS WORKSHEETS WITH IMPROVEMENTS

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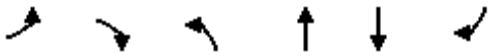
Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Configurations					
Traffic Volume (vph)	19	74	324	969	1175
Future Volume (vph)	19	74	324	969	1175
Turn Type	Prot	Perm	Prot	NA	NA
Protected Phases	4		5	2	6
Permitted Phases		4			
Detector Phase	4	4	5	2	6
Switch Phase					
Minimum Initial (s)	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	22.6	22.6	9.6	16.5	23.5
Total Split (s)	22.6	22.6	35.0	97.4	62.4
Total Split (%)	18.8%	18.8%	29.2%	81.2%	52.0%
Yellow Time (s)	3.6	3.6	3.6	5.5	5.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	6.5	6.5
Lead/Lag			Lead		Lag
Lead-Lag Optimize?			Yes		Yes
Recall Mode	None	None	None	Max	Max
Act Effct Green (s)	11.5	11.5	25.4	92.8	61.3
Actuated g/C Ratio	0.10	0.10	0.23	0.84	0.55
v/c Ratio	0.11	0.34	0.87	0.68	0.72
Control Delay	47.2	14.2	62.9	7.9	23.4
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	47.2	14.2	62.9	7.9	23.4
LOS	D	B	E	A	C
Approach Delay	20.9			21.7	23.4
Approach LOS	C			C	C

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 110.7	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.87	
Intersection Signal Delay: 22.5	Intersection LOS: C
Intersection Capacity Utilization 75.4%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 11: US-395 & Yucca Terrace Dr.





Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	19	74	324	969	1175	111
Future Volume (veh/h)	19	74	324	969	1175	111
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	21	60	360	1077	1306	123
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	149	133	390	1553	1870	176
Arrive On Green	0.08	0.08	0.22	0.82	0.56	0.56
Sat Flow, veh/h	1810	1610	1810	1900	3431	313
Grp Volume(v), veh/h	21	60	360	1077	705	724
Grp Sat Flow(s),veh/h/ln	1810	1610	1810	1900	1805	1844
Q Serve(g_s), s	1.2	3.9	21.7	26.5	31.3	31.6
Cycle Q Clear(g_c), s	1.2	3.9	21.7	26.5	31.3	31.6
Prop In Lane	1.00	1.00	1.00			0.17
Lane Grp Cap(c), veh/h	149	133	390	1553	1012	1034
V/C Ratio(X)	0.14	0.45	0.92	0.69	0.70	0.70
Avail Cap(c_a), veh/h	293	261	495	1553	1012	1034
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	47.3	48.6	42.7	4.3	17.6	17.7
Incr Delay (d2), s/veh	0.4	2.4	18.1	2.6	4.0	4.0
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	3.6	11.1	5.1	12.2	12.5
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	47.8	51.0	60.8	6.8	21.6	21.6
LnGrp LOS	D	D	E	A	C	C
Approach Vol, veh/h	81			1437	1429	
Approach Delay, s/veh	50.1			20.4	21.6	
Approach LOS	D			C	C	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		97.4		13.8	28.6	68.8
Change Period (Y+Rc), s		6.5		4.6	4.6	6.5
Max Green Setting (Gmax), s		90.9		18.0	30.4	55.9
Max Q Clear Time (g_c+I1), s		28.5		5.9	23.7	33.6
Green Ext Time (p_c), s		10.5		0.1	0.3	9.2

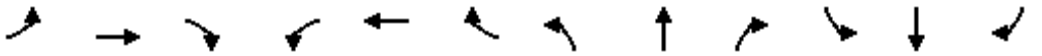
Intersection Summary		
HCM 6th Ctrl Delay		21.8
HCM 6th LOS		C

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	47	761	4	1072	178	794	264	955
Future Volume (vph)	47	761	4	1072	178	794	264	955
Turn Type	Prot	NA	Prot	NA	Prot	NA	Prot	NA
Protected Phases	5	2	1	6	3	8	7	4
Permitted Phases								
Detector Phase	5	2	1	6	3	8	7	4
Switch Phase								
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.0	16.0	9.0	16.0	9.0	16.0	9.0	16.0
Total Split (s)	9.0	60.0	9.0	60.0	11.0	37.0	14.0	40.0
Total Split (%)	7.5%	50.0%	7.5%	50.0%	9.2%	30.8%	11.7%	33.3%
Yellow Time (s)	3.0	5.0	3.0	5.0	3.0	5.0	3.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	6.0	4.0	6.0	4.0	6.0	4.0	6.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None
Act Effct Green (s)	5.0	59.4	5.0	54.1	7.0	31.0	10.0	34.0
Actuated g/C Ratio	0.04	0.50	0.04	0.46	0.06	0.26	0.08	0.29
v/c Ratio	0.64	0.52	0.05	0.98	0.89	0.88	0.93	0.99
Control Delay	92.3	20.9	56.8	49.6	95.7	54.3	91.5	68.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	92.3	20.9	56.8	49.6	95.7	54.3	91.5	68.4
LOS	F	C	E	D	F	D	F	E
Approach Delay		24.5		49.6		61.8		73.3
Approach LOS		C		D		E		E

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 118.2	
Natural Cycle: 110	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.99	
Intersection Signal Delay: 53.5	Intersection LOS: D
Intersection Capacity Utilization 89.9%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 13: US-395 & Phelan Rd./Main St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	47	761	121	4	1072	452	178	794	9	264	955	31
Future Volume (veh/h)	47	761	121	4	1072	452	178	794	9	264	955	31
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	49	793	81	4	1117	341	185	827	9	275	995	28
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	63	1567	160	9	1214	366	210	968	11	300	1041	29
Arrive On Green	0.04	0.47	0.47	0.01	0.44	0.44	0.06	0.26	0.26	0.09	0.29	0.29
Sat Flow, veh/h	1810	3307	338	1810	2733	824	3510	3658	40	3510	3586	101
Grp Volume(v), veh/h	49	433	441	4	733	725	185	408	428	275	501	522
Grp Sat Flow(s),veh/h/ln	1810	1805	1839	1810	1805	1752	1755	1805	1893	1755	1805	1882
Q Serve(g_s), s	3.1	19.4	19.4	0.3	44.5	46.0	6.1	25.1	25.1	9.1	31.9	31.9
Cycle Q Clear(g_c), s	3.1	19.4	19.4	0.3	44.5	46.0	6.1	25.1	25.1	9.1	31.9	31.9
Prop In Lane	1.00		0.18	1.00		0.47	1.00		0.02	1.00		0.05
Lane Grp Cap(c), veh/h	63	855	872	9	802	778	210	478	501	300	524	546
V/C Ratio(X)	0.77	0.51	0.51	0.42	0.91	0.93	0.88	0.85	0.85	0.92	0.96	0.96
Avail Cap(c_a), veh/h	77	855	872	77	833	808	210	478	501	300	524	547
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	56.0	21.3	21.3	58.0	30.4	30.9	54.6	40.9	40.9	53.1	40.8	40.8
Incr Delay (d2), s/veh	29.1	0.5	0.5	20.9	14.2	17.1	31.9	14.2	13.7	31.1	28.6	27.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	7.6	7.7	0.2	20.5	21.1	3.5	12.4	12.9	5.1	17.4	18.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	85.1	21.8	21.8	78.9	44.6	48.0	86.5	55.2	54.6	84.2	69.4	68.7
LnGrp LOS	F	C	C	E	D	D	F	E	D	F	E	E
Approach Vol, veh/h		923			1462			1021			1298	
Approach Delay, s/veh		25.1			46.4			60.6			72.2	
Approach LOS		C			D			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	4.6	61.5	11.0	40.0	8.1	58.0	14.0	37.0
Change Period (Y+Rc), s	4.0	6.0	4.0	6.0	4.0	6.0	4.0	6.0
Max Green Setting (Gmax), s	5.0	54.0	7.0	34.0	5.0	54.0	10.0	31.0
Max Q Clear Time (g_c+I1), s	2.3	21.4	8.1	33.9	5.1	48.0	11.1	27.1
Green Ext Time (p_c), s	0.0	5.1	0.0	0.1	0.0	4.0	0.0	1.8

Intersection Summary	
HCM 6th Ctrl Delay	52.4
HCM 6th LOS	D

Intersection	
Int Delay, s/veh	0.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	5	9	971	13	24	1054
Future Vol, veh/h	5	9	971	13	24	1054
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	375	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	5	10	1044	14	26	1133

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1670	529	0	0	1058	0
Stage 1	1051	-	-	-	-	-
Stage 2	619	-	-	-	-	-
Critical Hdwy	6.8	6.9	-	-	4.1	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	89	499	-	-	666	-
Stage 1	302	-	-	-	-	-
Stage 2	505	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	86	499	-	-	666	-
Mov Cap-2 Maneuver	206	-	-	-	-	-
Stage 1	302	-	-	-	-	-
Stage 2	485	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	16.2	0	0.2
HCM LOS	C		

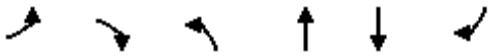
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	206	499	666	-
HCM Lane V/C Ratio	-	-	0.026	0.019	0.039	-
HCM Control Delay (s)	-	-	22.9	12.4	10.6	-
HCM Lane LOS	-	-	C	B	B	-
HCM 95th %tile Q(veh)	-	-	0.1	0.1	0.1	-

Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Configurations					
Traffic Volume (vph)	110	413	71	1377	1006
Future Volume (vph)	110	413	71	1377	1006
Turn Type	Prot	Perm	Prot	NA	NA
Protected Phases	4		5	2	6
Permitted Phases		4			
Detector Phase	4	4	5	2	6
Switch Phase					
Minimum Initial (s)	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	26.6	26.6	9.6	16.5	23.5
Total Split (s)	29.0	29.0	15.0	91.0	76.0
Total Split (%)	24.2%	24.2%	12.5%	75.8%	63.3%
Yellow Time (s)	3.6	3.6	3.6	5.5	5.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	6.5	6.5
Lead/Lag			Lead		Lag
Lead-Lag Optimize?			Yes		Yes
Recall Mode	None	None	None	Max	Max
Act Effct Green (s)	20.2	20.2	8.5	84.7	73.7
Actuated g/C Ratio	0.17	0.17	0.07	0.73	0.64
v/c Ratio	0.37	0.92	0.56	1.03	0.45
Control Delay	45.2	47.3	69.1	51.5	13.0
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	45.2	47.3	69.1	51.5	13.0
LOS	D	D	E	D	B
Approach Delay	46.9			52.4	13.0
Approach LOS	D			D	B

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 116	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.03	
Intersection Signal Delay: 37.9	Intersection LOS: D
Intersection Capacity Utilization 90.1%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 11: US-395 & Yucca Terrace Dr.





Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	110	413	71	1377	1006	27
Future Volume (veh/h)	110	413	71	1377	1006	27
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	115	356	74	1434	1048	28
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	368	327	95	1338	2260	60
Arrive On Green	0.20	0.20	0.05	1.00	0.92	0.61
Sat Flow, veh/h	1810	1610	1810	1900	3684	98
Grp Volume(v), veh/h	115	356	74	1434	540	536
Grp Sat Flow(s),veh/h/ln	1810	1610	1810	1900	1900	1882
Q Serve(g_s), s	6.5	24.4	4.8	84.5	4.8	5.6
Cycle Q Clear(g_c), s	6.5	24.4	4.8	84.5	4.8	5.6
Prop In Lane	1.00	1.00	1.00			0.05
Lane Grp Cap(c), veh/h	368	327	95	1338	1166	1155
V/C Ratio(X)	0.31	1.09	0.78	1.07	0.46	0.46
Avail Cap(c_a), veh/h	368	327	157	1338	1166	1155
HCM Platoon Ratio	1.00	1.00	1.00	1.50	1.50	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.7	47.8	56.2	0.0	2.0	2.5
Incr Delay (d2), s/veh	0.5	75.1	5.2	46.3	1.3	1.3
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	26.4	2.3	17.2	1.5	1.7
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	41.1	122.9	61.3	46.3	3.4	3.8
LnGrp LOS	D	F	E	F	A	A
Approach Vol, veh/h	471			1508	1076	
Approach Delay, s/veh	103.0			47.1	3.6	
Approach LOS	F			D	A	

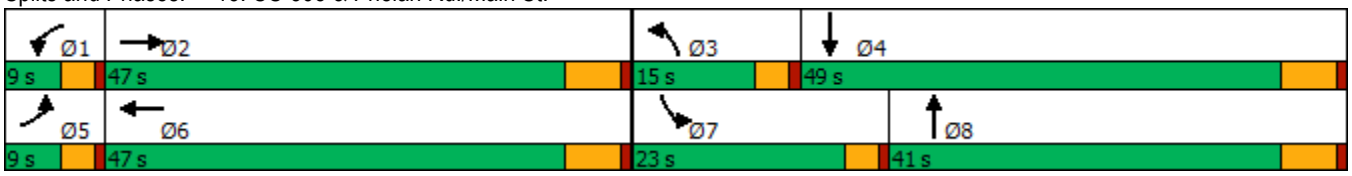
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		91.0		29.0	10.9	80.1
Change Period (Y+Rc), s		6.5		4.6	4.6	6.5
Max Green Setting (Gmax), s		84.5		24.4	10.4	69.5
Max Q Clear Time (g_c+I1), s		86.5		26.4	6.8	7.6
Green Ext Time (p_c), s		0.0		0.0	0.0	7.1

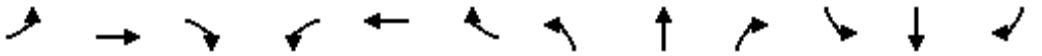
Intersection Summary		
HCM 6th Ctrl Delay		40.4
HCM 6th LOS		D

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	45	1169	9	807	180	1104	512	861
Future Volume (vph)	45	1169	9	807	180	1104	512	861
Turn Type	Prot	NA	Prot	NA	Prot	NA	Prot	NA
Protected Phases	5	2	1	6	3	8	7	4
Permitted Phases								
Detector Phase	5	2	1	6	3	8	7	4
Switch Phase								
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.0	16.0	9.0	16.0	9.0	16.0	9.0	16.0
Total Split (s)	9.0	47.0	9.0	47.0	15.0	41.0	23.0	49.0
Total Split (%)	7.5%	39.2%	7.5%	39.2%	12.5%	34.2%	19.2%	40.8%
Yellow Time (s)	3.0	5.0	3.0	5.0	3.0	5.0	3.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	-2.0	0.0	-2.0	0.0	-2.0	0.0	-2.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None
Act Effct Green (s)	5.0	48.4	5.0	43.1	10.1	37.0	18.9	45.9
Actuated g/C Ratio	0.04	0.41	0.04	0.36	0.09	0.31	0.16	0.39
v/c Ratio	0.62	0.91	0.12	0.85	0.62	1.00	0.93	0.65
Control Delay	89.3	42.2	58.9	40.7	61.5	67.0	73.9	32.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	89.3	42.2	58.9	40.7	61.5	67.0	73.9	32.5
LOS	F	D	E	D	E	E	E	C
Approach Delay		43.8		40.8		66.3		47.5
Approach LOS		D		D		E		D

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 118.1	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.00	
Intersection Signal Delay: 49.8	Intersection LOS: D
Intersection Capacity Utilization 93.3%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 13: US-395 & Phelan Rd./Main St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	45	1169	152	9	807	299	180	1104	26	512	861	46
Future Volume (veh/h)	45	1169	152	9	807	299	180	1104	26	512	861	46
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	47	1231	107	9	849	168	189	1162	20	539	906	33
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	61	1273	110	20	1069	212	251	1185	20	591	1502	55
Arrive On Green	0.03	0.37	0.35	0.01	0.35	0.33	0.07	0.32	0.30	0.16	0.41	0.40
Sat Flow, veh/h	1810	3443	299	1810	3081	610	3619	3724	64	3619	3643	133
Grp Volume(v), veh/h	47	678	660	9	524	493	189	593	589	539	472	467
Grp Sat Flow(s),veh/h/ln	1810	1900	1842	1810	1900	1790	1810	1900	1888	1810	1900	1876
Q Serve(g_s), s	3.0	40.6	40.9	0.6	28.9	29.0	6.0	35.9	36.0	17.0	22.6	22.6
Cycle Q Clear(g_c), s	3.0	40.6	40.9	0.6	28.9	29.0	6.0	35.9	36.0	17.0	22.6	22.6
Prop In Lane	1.00		0.16	1.00		0.34	1.00		0.03	1.00		0.07
Lane Grp Cap(c), veh/h	61	703	681	20	660	621	251	605	601	591	783	774
V/C Ratio(X)	0.77	0.96	0.97	0.46	0.79	0.79	0.75	0.98	0.98	0.91	0.60	0.60
Avail Cap(c_a), veh/h	78	703	681	78	703	662	342	605	601	591	783	774
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	55.7	35.9	36.1	57.2	34.2	34.5	53.1	39.3	39.3	47.8	26.7	26.8
Incr Delay (d2), s/veh	26.8	25.4	26.8	11.9	5.9	6.3	5.2	31.5	31.7	18.3	1.4	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	22.2	21.9	0.3	13.4	12.8	2.8	20.8	20.7	8.8	9.7	9.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	82.6	61.3	63.0	69.0	40.1	40.8	58.3	70.8	71.0	66.1	28.2	28.2
LnGrp LOS	F	E	E	E	D	D	E	E	E	E	C	C
Approach Vol, veh/h		1385			1026			1371			1478	
Approach Delay, s/veh		62.8			40.7			69.2			42.0	
Approach LOS		E			D			E			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.3	47.0	12.1	51.9	7.9	44.4	23.0	41.0
Change Period (Y+Rc), s	4.0	6.0	4.0	6.0	4.0	6.0	4.0	6.0
Max Green Setting (Gmax), s	5.0	41.0	11.0	43.0	5.0	41.0	19.0	35.0
Max Q Clear Time (g_c+I1), s	2.6	42.9	8.0	24.6	5.0	31.0	19.0	38.0
Green Ext Time (p_c), s	0.0	0.0	0.1	5.9	0.0	4.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	54.3
HCM 6th LOS	D

Intersection	
Int Delay, s/veh	0.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	7	24	1286	26	11	1011
Future Vol, veh/h	7	24	1286	26	11	1011
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	375	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	98	98	98	98	98	98
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	7	24	1312	27	11	1032

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1864	670	0	0	1339	0
Stage 1	1326	-	-	-	-	-
Stage 2	538	-	-	-	-	-
Critical Hdwy	6.8	6.9	-	-	4.1	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	66	404	-	-	521	-
Stage 1	216	-	-	-	-	-
Stage 2	555	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	65	404	-	-	521	-
Mov Cap-2 Maneuver	164	-	-	-	-	-
Stage 1	216	-	-	-	-	-
Stage 2	543	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	17.5	0	0.1
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	164	404	521	-
HCM Lane V/C Ratio	-	-	0.044	0.061	0.022	-
HCM Control Delay (s)	-	-	27.9	14.5	12.1	-
HCM Lane LOS	-	-	D	B	B	-
HCM 95th %tile Q(veh)	-	-	0.1	0.2	0.1	-

APPENDIX 5.6:

E+P CONDITIONS QUEUING ANALYSIS WORKSHEETS WITH IMPROVEMENTS

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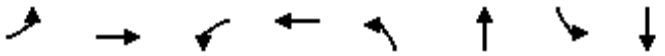
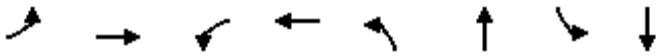


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	49	919	4	1588	185	836	275	1027
v/c Ratio	0.64	0.52	0.05	0.98	0.89	0.88	0.93	0.99
Control Delay	92.3	20.9	56.8	49.6	95.7	54.3	91.5	68.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	92.3	20.9	56.8	49.6	95.7	54.3	91.5	68.4
Queue Length 50th (ft)	38	226	3	614	74	330	111	~423
Queue Length 95th (ft)	#102	331	15	#796	#145	#442	#196	#573
Internal Link Dist (ft)		1117		1265		3985		1763
Turn Bay Length (ft)	340		250		280		250	
Base Capacity (vph)	76	1784	76	1616	207	946	296	1036
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.64	0.52	0.05	0.98	0.89	0.88	0.93	0.99

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	47	1391	9	1164	189	1189	539	954
v/c Ratio	0.62	0.91	0.12	0.85	0.62	1.00	0.93	0.65
Control Delay	89.3	42.2	58.9	40.7	61.5	67.0	73.9	32.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	89.3	42.2	58.9	40.7	61.5	67.0	73.9	32.5
Queue Length 50th (ft)	37	472	7	400	71	~474	209	304
Queue Length 95th (ft)	#97	#709	25	490	109	#618	#312	374
Internal Link Dist (ft)		1117		1265		3985		1763
Turn Bay Length (ft)	340		250		280		250	
Base Capacity (vph)	76	1536	76	1363	336	1189	581	1467
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.62	0.91	0.12	0.85	0.56	1.00	0.93	0.65

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

APPENDIX 6.1:

OPENING YEAR CUMULATIVE (2021) WITHOUT PROJECT CONDITIONS INTERSECTION OPERATIONS ANALYSIS WORKSHEETS

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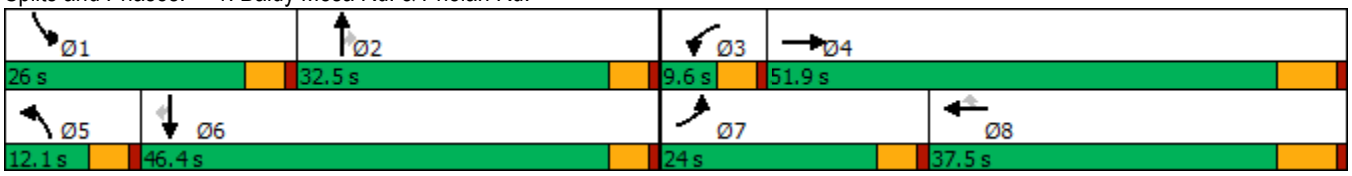
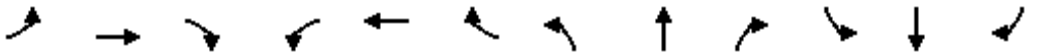
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	161	738	12	470	147	37	75	54	189	50	192
Future Volume (vph)	161	738	12	470	147	37	75	54	189	50	192
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4	3	8		5	2		1	6	
Permitted Phases					8			2			6
Detector Phase	7	4	3	8	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	30.5	9.6	37.5	37.5	9.6	31.6	31.6	9.6	40.6	40.6
Total Split (s)	24.0	51.9	9.6	37.5	37.5	12.1	32.5	32.5	26.0	46.4	46.4
Total Split (%)	20.0%	43.3%	8.0%	31.3%	31.3%	10.1%	27.1%	27.1%	21.7%	38.7%	38.7%
Yellow Time (s)	3.6	5.5	3.6	5.5	5.5	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.5	4.6	6.5	6.5	4.6	4.6	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Max	None	Max	Max	None	None	None	None	None	None
Act Effct Green (s)	15.3	50.7	5.2	32.2	32.2	6.6	13.5	13.5	17.2	24.9	24.9
Actuated g/C Ratio	0.16	0.53	0.05	0.34	0.34	0.07	0.14	0.14	0.18	0.26	0.26
v/c Ratio	0.72	0.49	0.16	0.47	0.27	0.38	0.34	0.16	0.75	0.12	0.40
Control Delay	57.2	18.5	54.7	30.0	5.4	58.3	43.7	0.9	56.4	28.6	6.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	57.2	18.5	54.7	30.0	5.4	58.3	43.7	0.9	56.4	28.6	6.1
LOS	E	B	D	C	A	E	D	A	E	C	A
Approach Delay		25.3		24.7			33.0			30.8	
Approach LOS		C		C			C			C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 95.1	
Natural Cycle: 100	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.75	
Intersection Signal Delay: 26.8	Intersection LOS: C
Intersection Capacity Utilization 58.0%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 1: Baldy Mesa Rd. & Phelan Rd.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	161	738	24	12	470	147	37	75	54	189	50	192
Future Volume (veh/h)	161	738	24	12	470	147	37	75	54	189	50	192
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	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	187	858	18	14	547	115	43	87	35	220	58	116
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	217	1628	34	85	1345	600	58	188	160	251	404	342
Arrive On Green	0.13	0.48	0.48	0.05	0.39	0.39	0.04	0.10	0.10	0.16	0.22	0.22
Sat Flow, veh/h	1619	3425	72	1619	3420	1525	1619	1800	1525	1619	1800	1525
Grp Volume(v), veh/h	187	428	448	14	547	115	43	87	35	220	58	116
Grp Sat Flow(s),veh/h/ln	1619	1710	1787	1619	1710	1525	1619	1800	1525	1619	1800	1525
Q Serve(g_s), s	10.8	16.8	16.8	0.8	11.0	4.7	2.5	4.3	2.0	12.7	2.5	6.1
Cycle Q Clear(g_c), s	10.8	16.8	16.8	0.8	11.0	4.7	2.5	4.3	2.0	12.7	2.5	6.1
Prop In Lane	1.00		0.04	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	217	813	849	85	1345	600	58	188	160	251	404	342
V/C Ratio(X)	0.86	0.53	0.53	0.17	0.41	0.19	0.75	0.46	0.22	0.88	0.14	0.34
Avail Cap(c_a), veh/h	329	813	849	85	1345	600	127	526	446	363	788	667
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.5	17.5	17.5	43.3	20.9	19.0	45.6	40.2	39.2	39.4	29.7	31.1
Incr Delay (d2), s/veh	9.2	2.4	2.3	0.3	0.9	0.7	6.9	1.8	0.7	11.5	0.2	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.6	6.2	6.5	0.3	4.1	1.6	1.1	2.0	0.7	5.8	1.1	2.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	49.6	20.0	19.9	43.6	21.8	19.7	52.6	42.0	39.9	51.0	29.9	31.7
LnGrp LOS	D	B	B	D	C	B	D	D	D	D	C	C
Approach Vol, veh/h		1063			676			165			394	
Approach Delay, s/veh		25.2			21.9			44.3			42.2	
Approach LOS		C			C			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	19.4	14.6	9.6	51.9	8.0	26.0	17.4	44.1
Change Period (Y+Rc), s	4.6	4.6	4.6	6.5	4.6	4.6	4.6	6.5
Max Green Setting (Gmax), s	21.4	27.9	5.0	45.4	7.5	41.8	19.4	31.0
Max Q Clear Time (g_c+I1), s	14.7	6.3	2.8	18.8	4.5	8.1	12.8	13.0
Green Ext Time (p_c), s	0.2	0.5	0.0	4.9	0.0	0.7	0.1	3.3

Intersection Summary	
HCM 6th Ctrl Delay	28.5
HCM 6th LOS	C

Intersection	
Int Delay, s/veh	0.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	3	1008	6	5	584	0	17	0	19	6	0	9
Future Vol, veh/h	3	1008	6	5	584	0	17	0	19	6	0	9
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	105	-	105	110	-	110	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	86	86	86	86	86	86	86	86	86	86	86	86
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	3	1172	7	6	679	0	20	0	22	7	0	10

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	679	0	0	1179	0	0	1874	1869	1172	1884	1876	679
Stage 1	-	-	-	-	-	-	1178	1178	-	691	691	-
Stage 2	-	-	-	-	-	-	696	691	-	1193	1185	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
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	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	923	-	-	600	-	-	55	73	236	55	72	455
Stage 1	-	-	-	-	-	-	235	267	-	438	449	-
Stage 2	-	-	-	-	-	-	435	449	-	230	265	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	923	-	-	600	-	-	53	72	236	49	71	455
Mov Cap-2 Maneuver	-	-	-	-	-	-	159	182	-	145	179	-
Stage 1	-	-	-	-	-	-	234	266	-	437	445	-
Stage 2	-	-	-	-	-	-	421	445	-	208	264	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0.1	28.9	20.8
HCM LOS			D	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	192	923	-	-	600	-	-	245
HCM Lane V/C Ratio	0.218	0.004	-	-	0.01	-	-	0.071
HCM Control Delay (s)	28.9	8.9	-	-	11.1	-	-	20.8
HCM Lane LOS	D	A	-	-	B	-	-	C
HCM 95th %tile Q(veh)	0.8	0	-	-	0	-	-	0.2

Intersection	
Int Delay, s/veh	0.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	992	10	3	577	15	6
Future Vol, veh/h	992	10	3	577	15	6
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	110	-	0	-
Veh in Median Storage, #	0	-	-	0	1	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	1140	11	3	663	17	7

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1151	0	1815	1146
Stage 1	-	-	-	-	1146	-
Stage 2	-	-	-	-	669	-
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	-	-	614	-	87	245
Stage 1	-	-	-	-	306	-
Stage 2	-	-	-	-	513	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	614	-	87	245
Mov Cap-2 Maneuver	-	-	-	-	211	-
Stage 1	-	-	-	-	306	-
Stage 2	-	-	-	-	510	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	23.4
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	220	-	-	614	-
HCM Lane V/C Ratio	0.11	-	-	0.006	-
HCM Control Delay (s)	23.4	-	-	10.9	-
HCM Lane LOS	C	-	-	B	-
HCM 95th %tile Q(veh)	0.4	-	-	0	-

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	11	998	580	23	22	11
Future Vol, veh/h	11	998	580	23	22	11
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	1	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	12	1085	630	25	24	12

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	655	0	-	0	1210	328
Stage 1	-	-	-	-	643	-
Stage 2	-	-	-	-	567	-
Critical Hdwy	4.1	-	-	-	6.8	6.9
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	942	-	-	-	178	674
Stage 1	-	-	-	-	491	-
Stage 2	-	-	-	-	537	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	942	-	-	-	176	674
Mov Cap-2 Maneuver	-	-	-	-	313	-
Stage 1	-	-	-	-	485	-
Stage 2	-	-	-	-	537	-

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	15.4
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	942	-	-	-	381
HCM Lane V/C Ratio	0.013	-	-	-	0.094
HCM Control Delay (s)	8.9	-	-	-	15.4
HCM Lane LOS	A	-	-	-	C
HCM 95th %tile Q(veh)	0	-	-	-	0.3

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	50	126	70	67	95	37	874	45	218	975	71
Future Volume (vph)	50	126	70	67	95	37	874	45	218	975	71
Turn Type	Perm	NA	Perm	Perm	NA	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		4			8	5	2		1	6	
Permitted Phases	4		4	8				2			6
Detector Phase	4	4	4	8	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	15.0	15.0	15.0	42.0	42.0	9.0	28.0	28.0	9.0	37.0	37.0
Total Split (s)	44.0	44.0	44.0	44.0	44.0	10.0	45.0	45.0	31.0	66.0	66.0
Total Split (%)	36.7%	36.7%	36.7%	36.7%	36.7%	8.3%	37.5%	37.5%	25.8%	55.0%	55.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	3.0	5.0	5.0	3.0	5.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	4.0	6.0	6.0	4.0	6.0	6.0
Lead/Lag						Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?						Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Max	Max	None	Max	Max
Act Effct Green (s)	22.4	22.4	22.4	22.4	22.4	5.9	44.5	44.5	18.0	61.0	61.0
Actuated g/C Ratio	0.22	0.22	0.22	0.22	0.22	0.06	0.44	0.44	0.18	0.61	0.61
v/c Ratio	0.71	0.32	0.17	0.28	0.85	0.38	0.59	0.07	0.73	0.48	0.08
Control Delay	82.7	34.3	4.0	34.7	41.7	60.9	25.7	1.0	53.6	14.0	3.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	82.7	34.3	4.0	34.7	41.7	60.9	25.7	1.0	53.6	14.0	3.4
LOS	F	C	A	C	D	E	C	A	D	B	A
Approach Delay		35.4			40.7		25.9			20.3	
Approach LOS		D			D		C			C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 100.1	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.85	
Intersection Signal Delay: 26.5	Intersection LOS: C
Intersection Capacity Utilization 83.8%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 8: US-395 & Luna Rd.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	50	126	70	67	95	274	37	874	45	218	975	71
Future Volume (veh/h)	50	126	70	67	95	274	37	874	45	218	975	71
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	54	137	43	73	103	232	40	950	33	237	1060	59
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	147	485	411	323	132	298	59	1633	726	272	2056	917
Arrive On Green	0.26	0.26	0.26	0.26	0.26	0.26	0.03	0.45	0.45	0.15	0.57	0.57
Sat Flow, veh/h	1120	1900	1610	1291	519	1168	1810	3610	1605	1810	3610	1610
Grp Volume(v), veh/h	54	137	43	73	0	335	40	950	33	237	1060	59
Grp Sat Flow(s),veh/h/ln	1120	1900	1610	1291	0	1687	1810	1805	1605	1810	1805	1610
Q Serve(g_s), s	5.0	6.1	2.2	5.1	0.0	19.4	2.3	20.6	1.2	13.5	18.8	1.7
Cycle Q Clear(g_c), s	24.4	6.1	2.2	11.2	0.0	19.4	2.3	20.6	1.2	13.5	18.8	1.7
Prop In Lane	1.00		1.00	1.00		0.69	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	147	485	411	323	0	430	59	1633	726	272	2056	917
V/C Ratio(X)	0.37	0.28	0.10	0.23	0.00	0.78	0.68	0.58	0.05	0.87	0.52	0.06
Avail Cap(c_a), veh/h	276	704	596	472	0	624	103	1633	726	464	2056	917
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.8	31.5	30.0	36.0	0.0	36.5	50.4	21.4	16.1	43.8	13.8	10.1
Incr Delay (d2), s/veh	0.6	0.1	0.0	0.1	0.0	2.1	9.5	1.5	0.1	7.2	0.9	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	2.7	0.8	1.6	0.0	8.0	1.1	8.1	0.4	6.2	6.7	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	48.4	31.6	30.1	36.1	0.0	38.6	59.9	23.0	16.3	50.9	14.7	10.3
LnGrp LOS	D	C	C	D	A	D	E	C	B	D	B	B
Approach Vol, veh/h		234			408			1023			1356	
Approach Delay, s/veh		35.2			38.1			24.2			20.9	
Approach LOS		D			D			C			C	

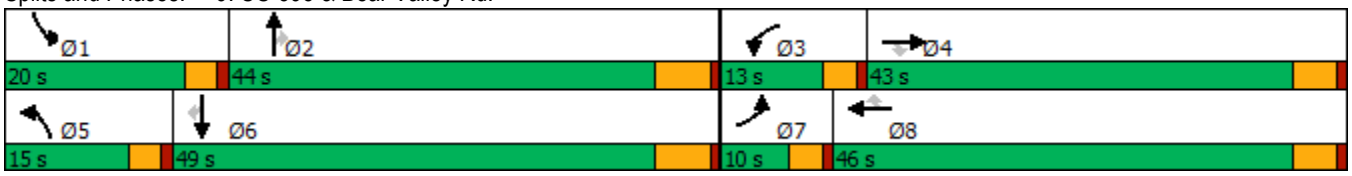
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	19.8	53.6		31.9	7.4	66.0		31.9				
Change Period (Y+Rc), s	4.0	6.0		5.0	4.0	6.0		5.0				
Max Green Setting (Gmax), s	27.0	39.0		39.0	6.0	60.0		39.0				
Max Q Clear Time (g_c+I1), s	15.5	22.6		26.4	4.3	20.8		21.4				
Green Ext Time (p_c), s	0.3	4.4		0.5	0.0	6.3		1.3				

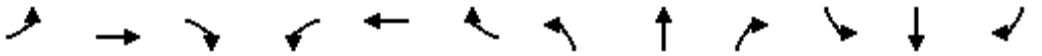
Intersection Summary			
HCM 6th Ctrl Delay		25.4	
HCM 6th LOS		C	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	42	312	172	165	260	106	109	827	101	172	916	23
Future Volume (vph)	42	312	172	165	260	106	109	827	101	172	916	23
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.0	43.0	43.0	9.0	43.0	43.0	9.0	44.0	44.0	9.0	44.0	44.0
Total Split (s)	10.0	43.0	43.0	13.0	46.0	46.0	15.0	44.0	44.0	20.0	49.0	49.0
Total Split (%)	8.3%	35.8%	35.8%	10.8%	38.3%	38.3%	12.5%	36.7%	36.7%	16.7%	40.8%	40.8%
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0	4.0	3.0	5.0	5.0	3.0	5.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	5.0	5.0	4.0	5.0	5.0	4.0	6.0	6.0	4.0	6.0	6.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Max	Max	None	Max	Max
Act Effct Green (s)	5.8	16.4	16.4	9.1	23.8	23.8	9.9	39.9	39.9	13.5	43.5	43.5
Actuated g/C Ratio	0.06	0.17	0.17	0.09	0.24	0.24	0.10	0.41	0.41	0.14	0.44	0.44
v/c Ratio	0.40	0.53	0.43	1.02	0.31	0.22	0.62	0.58	0.14	0.71	0.59	0.03
Control Delay	59.5	40.0	8.2	121.2	32.0	3.8	59.6	26.6	3.6	58.2	24.2	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	59.5	40.0	8.2	121.2	32.0	3.8	59.6	26.6	3.6	58.2	24.2	0.1
LOS	E	D	A	F	C	A	E	C	A	E	C	A
Approach Delay		31.1			54.1			27.9			29.0	
Approach LOS		C			D			C			C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 98.1	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.02	
Intersection Signal Delay: 33.1	Intersection LOS: C
Intersection Capacity Utilization 66.0%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 9: US-395 & Bear Valley Rd.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	42	312	172	165	260	106	109	827	101	172	916	23
Future Volume (veh/h)	42	312	172	165	260	106	109	827	101	172	916	23
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	43	322	96	170	268	75	112	853	77	177	944	18
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	67	441	197	183	674	301	142	1604	715	214	1747	779
Arrive On Green	0.04	0.12	0.12	0.10	0.19	0.19	0.08	0.44	0.44	0.12	0.48	0.48
Sat Flow, veh/h	1810	3610	1610	1810	3610	1610	1810	3610	1610	1810	3610	1610
Grp Volume(v), veh/h	43	322	96	170	268	75	112	853	77	177	944	18
Grp Sat Flow(s),veh/h/ln	1810	1805	1610	1810	1805	1610	1810	1805	1610	1810	1805	1610
Q Serve(g_s), s	2.1	7.6	4.9	8.3	5.8	3.5	5.4	15.3	2.5	8.5	16.2	0.5
Cycle Q Clear(g_c), s	2.1	7.6	4.9	8.3	5.8	3.5	5.4	15.3	2.5	8.5	16.2	0.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	67	441	197	183	674	301	142	1604	715	214	1747	779
V/C Ratio(X)	0.65	0.73	0.49	0.93	0.40	0.25	0.79	0.53	0.11	0.83	0.54	0.02
Avail Cap(c_a), veh/h	122	1544	689	183	1666	743	224	1604	715	326	1747	779
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.2	37.6	36.4	39.6	31.7	30.8	40.2	18.0	14.4	38.3	16.0	12.0
Incr Delay (d2), s/veh	7.5	0.9	0.7	45.8	0.1	0.2	7.0	1.3	0.3	8.5	1.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	3.2	1.8	5.7	2.3	1.3	2.5	5.7	0.8	4.0	5.9	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	49.8	38.5	37.1	85.4	31.9	31.0	47.2	19.2	14.7	46.7	17.2	12.0
LnGrp LOS	D	D	D	F	C	C	D	B	B	D	B	B
Approach Vol, veh/h		461			513			1042			1139	
Approach Delay, s/veh		39.2			49.5			21.9			21.7	
Approach LOS		D			D			C			C	

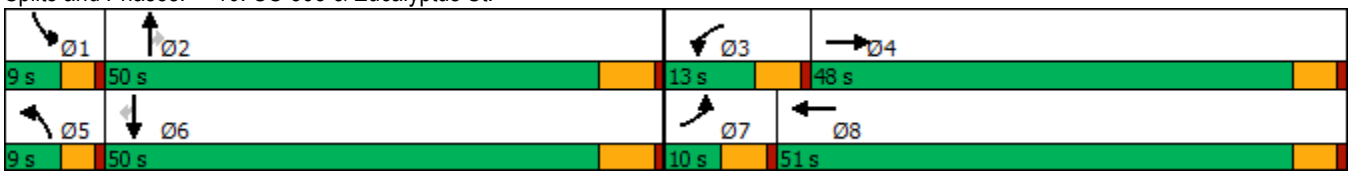
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.5	45.5	13.0	15.9	11.0	49.0	7.3	21.6
Change Period (Y+Rc), s	4.0	6.0	4.0	5.0	4.0	6.0	4.0	5.0
Max Green Setting (Gmax), s	16.0	38.0	9.0	38.0	11.0	43.0	6.0	41.0
Max Q Clear Time (g_c+I1), s	10.5	17.3	10.3	9.6	7.4	18.2	4.1	7.8
Green Ext Time (p_c), s	0.1	3.3	0.0	1.2	0.1	3.8	0.0	1.0

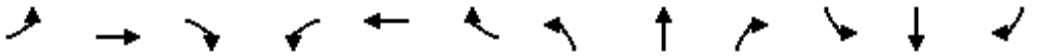
Intersection Summary	
HCM 6th Ctrl Delay	28.9
HCM 6th LOS	C

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	9	5	78	6	7	995	60	4	1270	8
Future Volume (vph)	9	5	78	6	7	995	60	4	1270	8
Turn Type	Prot	NA	Prot	NA	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4	3	8	5	2		1	6	
Permitted Phases							2			6
Detector Phase	7	4	3	8	5	2	2	1	6	6
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	10.0	48.0	10.0	48.0	9.0	41.0	41.0	9.0	41.0	41.0
Total Split (s)	10.0	48.0	13.0	51.0	9.0	50.0	50.0	9.0	50.0	50.0
Total Split (%)	8.3%	40.0%	10.8%	42.5%	7.5%	41.7%	41.7%	7.5%	41.7%	41.7%
Yellow Time (s)	4.0	4.0	4.0	4.0	3.0	5.0	5.0	3.0	5.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	4.0	6.0	6.0	4.0	6.0	6.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	Max	Max	None	Max	Max
Act Effct Green (s)	5.2	15.0	8.7	18.2	5.2	55.3	55.3	5.2	55.3	55.3
Actuated g/C Ratio	0.06	0.18	0.11	0.22	0.06	0.67	0.67	0.06	0.67	0.67
v/c Ratio	0.09	0.06	0.44	0.07	0.07	0.44	0.06	0.04	0.56	0.01
Control Delay	46.2	16.1	47.6	11.4	46.1	13.9	1.8	46.0	15.7	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	46.2	16.1	47.6	11.4	46.1	13.9	1.8	46.0	15.7	0.0
LOS	D	B	D	B	D	B	A	D	B	A
Approach Delay		26.9		38.5		13.5			15.7	
Approach LOS		C		D		B			B	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 82.3	
Natural Cycle: 110	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.56	
Intersection Signal Delay: 15.8	Intersection LOS: B
Intersection Capacity Utilization 56.1%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 10: US-395 & Eucalyptus St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	9	5	12	78	6	20	7	995	60	4	1270	8
Future Volume (veh/h)	9	5	12	78	6	20	7	995	60	4	1270	8
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	10	5	5	84	6	11	8	1070	61	4	1366	8
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	23	67	67	109	75	137	19	2133	952	10	2116	944
Arrive On Green	0.01	0.08	0.08	0.06	0.12	0.12	0.01	0.59	0.59	0.01	0.59	0.59
Sat Flow, veh/h	1810	872	872	1810	600	1099	1810	3610	1610	1810	3610	1610
Grp Volume(v), veh/h	10	0	10	84	0	17	8	1070	61	4	1366	8
Grp Sat Flow(s),veh/h/ln	1810	0	1743	1810	0	1699	1810	1805	1610	1810	1805	1610
Q Serve(g_s), s	0.4	0.0	0.4	3.4	0.0	0.7	0.3	12.9	1.2	0.2	18.9	0.2
Cycle Q Clear(g_c), s	0.4	0.0	0.4	3.4	0.0	0.7	0.3	12.9	1.2	0.2	18.9	0.2
Prop In Lane	1.00		0.50	1.00		0.65	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	23	0	135	109	0	212	19	2133	952	10	2116	944
V/C Ratio(X)	0.44	0.00	0.07	0.77	0.00	0.08	0.43	0.50	0.06	0.41	0.65	0.01
Avail Cap(c_a), veh/h	121	0	998	193	0	1041	121	2133	952	121	2116	944
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.8	0.0	32.1	34.8	0.0	29.0	36.9	8.9	6.5	37.2	10.3	6.5
Incr Delay (d2), s/veh	4.9	0.0	0.2	4.3	0.0	0.2	5.8	0.8	0.1	10.2	1.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	0.2	1.6	0.0	0.3	0.2	3.7	0.4	0.1	7.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	41.7	0.0	32.4	39.1	0.0	29.2	42.7	9.8	6.7	47.4	11.9	6.5
LnGrp LOS	D	A	C	D	A	C	D	A	A	D	B	A
Approach Vol, veh/h		20			101			1139			1378	
Approach Delay, s/veh		37.1			37.5			9.8			12.0	
Approach LOS		D			D			A			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	4.4	50.4	9.5	10.8	4.8	50.0	5.9	14.4
Change Period (Y+Rc), s	4.0	6.0	5.0	5.0	4.0	6.0	5.0	5.0
Max Green Setting (Gmax), s	5.0	44.0	8.0	43.0	5.0	44.0	5.0	46.0
Max Q Clear Time (g_c+I1), s	2.2	14.9	5.4	2.4	2.3	20.9	2.4	2.7
Green Ext Time (p_c), s	0.0	7.7	0.0	0.0	0.0	11.9	0.0	0.1

Intersection Summary	
HCM 6th Ctrl Delay	12.2
HCM 6th LOS	B

Intersection	
Int Delay, s/veh	3.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	0	0	1	9	0	1	3	1161	81	6	1399	0
Future Vol, veh/h	0	0	1	9	0	1	3	1161	81	6	1399	0
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	-	-	-	-	-	-	-	-	-	-	-	-
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	0	0	0	0	0
Mvmt Flow	0	0	1	10	0	1	3	1290	90	7	1554	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2910	2954	1554	2910	2909	1335	1554	0	0	1380	0	0
Stage 1	1568	1568	-	1341	1341	-	-	-	-	-	-	-
Stage 2	1342	1386	-	1569	1568	-	-	-	-	-	-	-
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	10	15	141	10	16	190	432	-	-	503	-	-
Stage 1	141	173	-	190	223	-	-	-	-	-	-	-
Stage 2	190	212	-	140	173	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	9	13	141	~ 9	14	190	432	-	-	503	-	-
Mov Cap-2 Maneuver	9	13	-	~ 9	14	-	-	-	-	-	-	-
Stage 1	137	155	-	184	216	-	-	-	-	-	-	-
Stage 2	183	205	-	125	155	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	30.7	$ 815	0	0.1
HCM LOS	D	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	432	-	-	141	10	503	-	-
HCM Lane V/C Ratio	0.008	-	-	0.008	1.111	0.013	-	-
HCM Control Delay (s)	13.4	0	-	30.7	$ 815	12.3	0	-
HCM Lane LOS	B	A	-	D	F	B	A	-
HCM 95th %tile Q(veh)	0	-	-	0	2.1	0	-	-

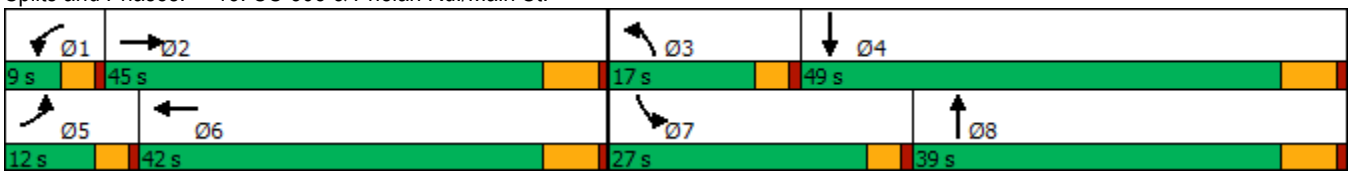
Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

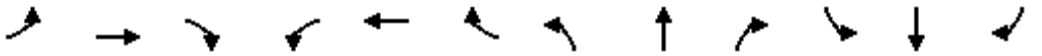
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	94	739	21	380	137	795	288	1047
Future Volume (vph)	94	739	21	380	137	795	288	1047
Turn Type	Prot	NA	Prot	NA	Prot	NA	Prot	NA
Protected Phases	5	2	1	6	3	8	7	4
Permitted Phases								
Detector Phase	5	2	1	6	3	8	7	4
Switch Phase								
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.0	16.0	9.0	16.0	9.0	16.0	9.0	16.0
Total Split (s)	12.0	45.0	9.0	42.0	17.0	39.0	27.0	49.0
Total Split (%)	10.0%	37.5%	7.5%	35.0%	14.2%	32.5%	22.5%	40.8%
Yellow Time (s)	3.0	5.0	3.0	5.0	3.0	5.0	3.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	6.0	4.0	6.0	4.0	6.0	4.0	6.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None
Act Effct Green (s)	8.0	35.4	5.1	28.1	11.8	30.6	21.0	39.8
Actuated g/C Ratio	0.07	0.33	0.05	0.26	0.11	0.28	0.19	0.37
v/c Ratio	0.73	0.80	0.26	0.75	0.73	0.84	0.86	0.89
Control Delay	83.5	39.6	62.9	31.9	71.2	46.2	67.5	42.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	83.5	39.6	62.9	31.9	71.2	46.2	67.5	42.3
LOS	F	D	E	C	E	D	E	D
Approach Delay		43.8		32.8		49.8		47.4
Approach LOS		D		C		D		D

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 108.2
Natural Cycle: 90
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.89
Intersection Signal Delay: 44.4 — Intersection LOS: D
Intersection Capacity Utilization 85.1% — ICU Level of Service E
Analysis Period (min) 15

Splits and Phases: 13: US-395 & Phelan Rd./Main St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	94	739	155	21	380	356	137	795	23	288	1047	74
Future Volume (veh/h)	94	739	155	21	380	356	137	795	23	288	1047	74
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	98	770	116	22	396	291	143	828	24	300	1091	73
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	125	925	139	42	495	360	175	1034	30	336	1296	87
Arrive On Green	0.07	0.29	0.29	0.02	0.25	0.25	0.10	0.29	0.29	0.19	0.38	0.38
Sat Flow, veh/h	1810	3146	474	1810	1994	1450	1810	3582	104	1810	3434	230
Grp Volume(v), veh/h	98	442	444	22	358	329	143	417	435	300	573	591
Grp Sat Flow(s),veh/h/ln	1810	1805	1815	1810	1805	1639	1810	1805	1881	1810	1805	1859
Q Serve(g_s), s	5.1	21.9	22.0	1.2	17.8	18.1	7.4	20.5	20.5	15.5	27.8	27.8
Cycle Q Clear(g_c), s	5.1	21.9	22.0	1.2	17.8	18.1	7.4	20.5	20.5	15.5	27.8	27.8
Prop In Lane	1.00		0.26	1.00		0.88	1.00		0.06	1.00		0.12
Lane Grp Cap(c), veh/h	125	531	534	42	448	407	175	521	543	336	681	702
V/C Ratio(X)	0.79	0.83	0.83	0.53	0.80	0.81	0.82	0.80	0.80	0.89	0.84	0.84
Avail Cap(c_a), veh/h	151	734	738	94	677	615	245	621	647	434	809	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	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.0	31.7	31.7	46.3	33.8	33.9	42.5	31.6	31.6	38.1	27.2	27.3
Incr Delay (d2), s/veh	18.4	5.9	5.9	7.4	4.0	4.8	11.9	6.7	6.4	16.1	7.2	7.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.8	9.5	9.6	0.6	7.7	7.1	3.7	9.1	9.4	7.9	11.9	12.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	62.4	37.5	37.5	53.7	37.8	38.7	54.4	38.2	38.0	54.2	34.5	34.3
LnGrp LOS	E	D	D	D	D	D	D	D	D	D	C	C
Approach Vol, veh/h		984			709			995			1464	
Approach Delay, s/veh		40.0			38.7			40.4			38.5	
Approach LOS		D			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.2	34.2	13.3	42.2	10.6	29.8	21.8	33.7
Change Period (Y+Rc), s	4.0	6.0	4.0	6.0	4.0	6.0	4.0	6.0
Max Green Setting (Gmax), s	5.0	39.0	13.0	43.0	8.0	36.0	23.0	33.0
Max Q Clear Time (g_c+I1), s	3.2	24.0	9.4	29.8	7.1	20.1	17.5	22.5
Green Ext Time (p_c), s	0.0	4.2	0.1	6.4	0.0	3.4	0.3	3.9

Intersection Summary	
HCM 6th Ctrl Delay	39.3
HCM 6th LOS	D

Intersection	
Int Delay, s/veh	0.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	10	9	947	17	25	1199
Future Vol, veh/h	10	9	947	17	25	1199
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	375	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	11	10	1018	18	27	1289

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	2370	518	0	0	1036	0
Stage 1	1027	-	-	-	-	-
Stage 2	1343	-	-	-	-	-
Critical Hdwy	6.6	6.9	-	-	4.1	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	34	508	-	-	679	-
Stage 1	311	-	-	-	-	-
Stage 2	246	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	33	508	-	-	679	-
Mov Cap-2 Maneuver	33	-	-	-	-	-
Stage 1	311	-	-	-	-	-
Stage 2	236	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	89.9	0	0.2
HCM LOS	F		

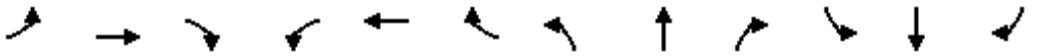
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	33	508	679	-
HCM Lane V/C Ratio	-	-	0.326	0.019	0.04	-
HCM Control Delay (s)	-	-	159.9	12.2	10.5	-
HCM Lane LOS	-	-	F	B	B	-
HCM 95th %tile Q(veh)	-	-	1.1	0.1	0.1	-

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	64	1	171	2	43	225	858	105	21	1067	121
Future Volume (vph)	64	1	171	2	43	225	858	105	21	1067	121
Turn Type	Perm	NA	Perm	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		4		8		5	2		1	6	
Permitted Phases	4		8		8			2			6
Detector Phase	4	4	8	8	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	16.0	16.0	16.0	16.0	16.0	10.0	16.0	16.0	10.0	16.0	16.0
Total Split (s)	41.0	41.0	41.0	41.0	41.0	31.0	69.0	69.0	10.0	48.0	48.0
Total Split (%)	34.2%	34.2%	34.2%	34.2%	34.2%	25.8%	57.5%	57.5%	8.3%	40.0%	40.0%
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	5.0	6.0	6.0	5.0	6.0	6.0
Lead/Lag						Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?						Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Max	Max	None	Max	Max
Act Effct Green (s)	27.4	27.4	27.4	27.4	27.4	18.8	63.9	63.9	5.1	45.5	45.5
Actuated g/C Ratio	0.25	0.25	0.25	0.25	0.25	0.17	0.59	0.59	0.05	0.42	0.42
v/c Ratio	0.19	0.45	0.97	0.00	0.10	0.79	0.44	0.12	0.27	0.77	0.18
Control Delay	33.5	6.4	100.3	30.5	0.4	62.1	15.3	2.9	63.3	33.9	6.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	33.5	6.4	100.3	30.5	0.4	62.1	15.3	2.9	63.3	33.9	6.7
LOS	C	A	F	C	A	E	B	A	E	C	A
Approach Delay		12.0		79.7			23.1			31.7	
Approach LOS		B		E			C			C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 108.9	
Natural Cycle: 70	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.97	
Intersection Signal Delay: 29.6	Intersection LOS: C
Intersection Capacity Utilization 86.0%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 15: US-395 & Three Flags Rd.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	64	1	248	171	2	43	225	858	105	21	1067	121
Future Volume (veh/h)	64	1	248	171	2	43	225	858	105	21	1067	121
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	70	1	233	186	2	38	245	933	102	23	1160	111
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	482	2	461	267	546	462	275	1961	874	41	1495	667
Arrive On Green	0.29	0.29	0.29	0.29	0.29	0.29	0.15	0.54	0.54	0.02	0.41	0.41
Sat Flow, veh/h	1463	7	1604	1229	1900	1607	1810	3610	1609	1810	3610	1610
Grp Volume(v), veh/h	70	0	234	186	2	38	245	933	102	23	1160	111
Grp Sat Flow(s),veh/h/ln	1463	0	1611	1229	1900	1607	1810	1805	1609	1810	1805	1610
Q Serve(g_s), s	4.2	0.0	14.0	17.2	0.1	2.0	15.4	18.5	3.6	1.5	32.2	5.0
Cycle Q Clear(g_c), s	4.2	0.0	14.0	31.3	0.1	2.0	15.4	18.5	3.6	1.5	32.2	5.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	482	0	463	267	546	462	275	1961	874	41	1495	667
V/C Ratio(X)	0.15	0.00	0.51	0.70	0.00	0.08	0.89	0.48	0.12	0.56	0.78	0.17
Avail Cap(c_a), veh/h	503	0	486	284	573	485	406	1961	874	78	1495	667
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	31.0	0.0	34.4	47.5	29.5	30.1	48.2	16.3	12.9	56.1	29.3	21.4
Incr Delay (d2), s/veh	0.1	0.0	0.3	5.4	0.0	0.0	11.8	0.8	0.3	4.5	4.0	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	0.0	5.5	5.7	0.0	0.8	7.5	7.0	1.2	0.7	13.5	1.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	31.0	0.0	34.7	52.9	29.5	30.2	60.0	17.1	13.2	60.6	33.4	21.9
LnGrp LOS	C	A	C	D	C	C	E	B	B	E	C	C
Approach Vol, veh/h		304			226			1280			1294	
Approach Delay, s/veh		33.9			48.9			25.0			32.9	
Approach LOS		C			D			C			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.6	69.0		39.3	22.6	54.0		39.3				
Change Period (Y+Rc), s	5.0	6.0		6.0	5.0	6.0		6.0				
Max Green Setting (Gmax), s	5.0	63.0		35.0	26.0	42.0		35.0				
Max Q Clear Time (g_c+I1), s	3.5	20.5		16.0	17.4	34.2		33.3				
Green Ext Time (p_c), s	0.0	7.0		1.0	0.2	4.4		0.1				

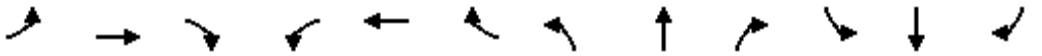
Intersection Summary			
HCM 6th Ctrl Delay		30.9	
HCM 6th LOS		C	

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	36	67	95	81	216	12	937	61	198	1232	57
Future Volume (vph)	36	67	95	81	216	12	937	61	198	1232	57
Turn Type	Perm	NA	Perm	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		4		8		5	2		1	6	
Permitted Phases	4		8		8			2			6
Detector Phase	4	4	8	8	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	15.0	15.0	46.0	46.0	46.0	9.0	34.0	34.0	9.0	34.0	34.0
Total Split (s)	47.0	47.0	47.0	47.0	47.0	9.0	42.0	42.0	31.0	64.0	64.0
Total Split (%)	39.2%	39.2%	39.2%	39.2%	39.2%	7.5%	35.0%	35.0%	25.8%	53.3%	53.3%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	3.0	5.0	5.0	3.0	5.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	0.0	-2.0	-2.0	0.0	-2.0	-2.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag						Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?						Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Max	Max	None	Max	Max
Act Effct Green (s)	16.6	16.6	16.6	16.6	16.6	5.1	43.5	43.5	15.2	61.5	61.5
Actuated g/C Ratio	0.19	0.19	0.19	0.19	0.19	0.06	0.50	0.50	0.17	0.70	0.70
v/c Ratio	0.15	0.21	0.41	0.24	0.48	0.12	0.57	0.08	0.69	0.53	0.05
Control Delay	29.7	29.1	35.0	30.7	7.2	48.2	20.6	3.0	46.6	10.1	3.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	29.7	29.1	35.0	30.7	7.2	48.2	20.6	3.0	46.6	10.1	3.6
LOS	C	C	D	C	A	D	C	A	D	B	A
Approach Delay		29.3		18.8			19.8			14.7	
Approach LOS		C		B			B			B	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 87.7	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.69	
Intersection Signal Delay: 17.5	Intersection LOS: B
Intersection Capacity Utilization 60.9%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 16: US-395 & Joshua St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	36	67	4	95	81	216	12	937	61	198	1232	57
Future Volume (veh/h)	36	67	4	95	81	216	12	937	61	198	1232	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	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	39	73	1	103	88	181	13	1018	52	215	1339	57
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	218	289	4	254	294	248	28	2041	910	257	2497	1114
Arrive On Green	0.15	0.15	0.14	0.15	0.15	0.15	0.02	0.57	0.57	0.14	0.69	0.69
Sat Flow, veh/h	1189	1870	26	1422	1900	1607	1810	3610	1610	1810	3610	1610
Grp Volume(v), veh/h	39	0	74	103	88	181	13	1018	52	215	1339	57
Grp Sat Flow(s),veh/h/ln	1189	0	1895	1422	1900	1607	1810	1805	1610	1810	1805	1610
Q Serve(g_s), s	2.6	0.0	3.0	6.0	3.6	9.3	0.6	14.8	1.3	10.0	15.8	1.0
Cycle Q Clear(g_c), s	6.2	0.0	3.0	8.9	3.6	9.3	0.6	14.8	1.3	10.0	15.8	1.0
Prop In Lane	1.00		0.01	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	218	0	293	254	294	248	28	2041	910	257	2497	1114
V/C Ratio(X)	0.18	0.00	0.25	0.41	0.30	0.73	0.46	0.50	0.06	0.84	0.54	0.05
Avail Cap(c_a), veh/h	624	0	939	739	942	797	104	2041	910	563	2497	1114
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	35.2	0.0	32.3	36.2	32.5	34.9	42.3	11.4	8.5	36.3	6.6	4.3
Incr Delay (d2), s/veh	0.1	0.0	0.2	0.4	0.2	1.5	8.6	0.9	0.1	5.4	0.8	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.0	1.4	2.1	1.6	3.7	0.3	4.8	0.4	4.5	3.9	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	35.4	0.0	32.4	36.6	32.7	36.5	50.9	12.3	8.6	41.7	7.4	4.4
LnGrp LOS	D	A	C	D	C	D	D	B	A	D	A	A
Approach Vol, veh/h		113			372			1083			1611	
Approach Delay, s/veh		33.5			35.6			12.6			11.9	
Approach LOS		C			D			B			B	

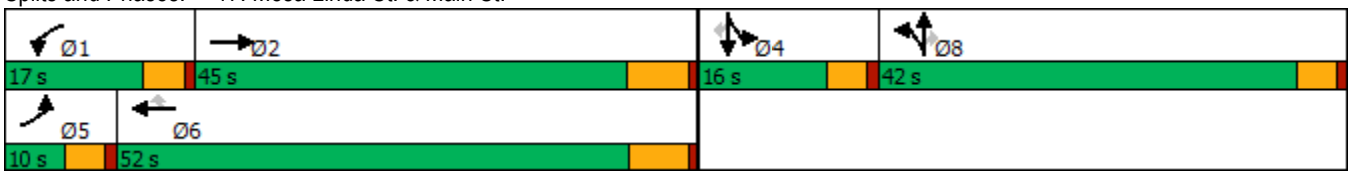
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	16.3	53.0		17.4	5.3	64.0		17.4				
Change Period (Y+Rc), s	4.0	6.0		5.0	4.0	6.0		5.0				
Max Green Setting (Gmax), s	27.0	36.0		42.0	5.0	58.0		42.0				
Max Q Clear Time (g_c+I1), s	12.0	16.8		8.2	2.6	17.8		11.3				
Green Ext Time (p_c), s	0.3	10.8		0.3	0.0	23.0		0.7				

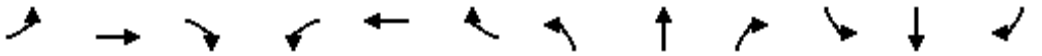
Intersection Summary			
HCM 6th Ctrl Delay		15.6	
HCM 6th LOS		B	

Lane Group	EBL	EBT	WBL	WBT	WBR	NBT	NBR	SBT	SBR
Lane Configurations									
Traffic Volume (vph)	5	1023	50	1503	17	2	126	2	14
Future Volume (vph)	5	1023	50	1503	17	2	126	2	14
Turn Type	Prot	NA	Prot	NA	Perm	NA	Perm	NA	Perm
Protected Phases	5	2	1	6		8		4	
Permitted Phases					6		8		4
Detector Phase	5	2	1	6	6	8	8	4	4
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	16.5	9.6	23.2	23.2	40.6	40.6	14.6	14.6
Total Split (s)	10.0	45.0	17.0	52.0	52.0	42.0	42.0	16.0	16.0
Total Split (%)	8.3%	37.5%	14.2%	43.3%	43.3%	35.0%	35.0%	13.3%	13.3%
Yellow Time (s)	3.6	5.5	3.6	5.2	5.2	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.5	4.6	6.2	6.2	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lead	Lag	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes				
Recall Mode	None	Max	None	Max	Max	None	None	None	None
Act Effct Green (s)	5.3	41.7	7.9	50.6	50.6	14.2	14.2	10.6	10.6
Actuated g/C Ratio	0.06	0.47	0.09	0.57	0.57	0.16	0.16	0.12	0.12
v/c Ratio	0.06	0.52	0.42	0.63	0.02	0.01	0.39	0.28	0.05
Control Delay	48.6	21.6	51.3	17.7	0.1	31.5	8.0	45.1	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	48.6	21.6	51.3	17.7	0.1	31.5	8.0	45.1	0.3
LOS	D	C	D	B	A	C	A	D	A
Approach Delay		21.7		18.6		8.3		35.3	
Approach LOS		C		B		A		D	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 88.9	
Natural Cycle: 110	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.63	
Intersection Signal Delay: 19.7	Intersection LOS: B
Intersection Capacity Utilization 60.2%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 17: Mesa Linda St. & Main St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	1023	3	50	1503	17	0	2	126	47	2	14
Future Volume (veh/h)	5	1023	3	50	1503	17	0	2	126	47	2	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	6	1204	4	59	1768	12	0	2	127	55	2	2
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	13	2578	9	73	2688	835	0	204	173	148	5	136
Arrive On Green	0.01	0.51	0.51	0.05	0.55	0.55	0.00	0.11	0.11	0.09	0.09	0.09
Sat Flow, veh/h	1619	5056	17	1619	4914	1525	0	1800	1525	1657	60	1525
Grp Volume(v), veh/h	6	780	428	59	1768	12	0	2	127	57	0	2
Grp Sat Flow(s),veh/h/ln	1619	1638	1797	1619	1638	1525	0	1800	1525	1717	0	1525
Q Serve(g_s), s	0.3	12.8	12.8	3.0	21.3	0.3	0.0	0.1	6.7	2.6	0.0	0.1
Cycle Q Clear(g_c), s	0.3	12.8	12.8	3.0	21.3	0.3	0.0	0.1	6.7	2.6	0.0	0.1
Prop In Lane	1.00		0.01	1.00		1.00	0.00		1.00	0.96		1.00
Lane Grp Cap(c), veh/h	13	1670	916	73	2688	835	0	204	173	153	0	136
V/C Ratio(X)	0.48	0.47	0.47	0.81	0.66	0.01	0.00	0.01	0.73	0.37	0.00	0.01
Avail Cap(c_a), veh/h	104	1670	916	240	2688	835	0	804	681	234	0	208
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	41.4	13.2	13.2	39.6	13.4	8.7	0.0	32.9	35.9	35.9	0.0	34.8
Incr Delay (d2), s/veh	10.0	0.9	1.7	7.7	1.3	0.0	0.0	0.0	5.9	1.5	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	4.0	4.6	1.3	6.5	0.1	0.0	0.0	2.8	1.2	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	51.4	14.1	14.9	47.4	14.7	8.7	0.0	33.0	41.8	37.4	0.0	34.8
LnGrp LOS	D	B	B	D	B	A	A	C	D	D	A	C
Approach Vol, veh/h		1214			1839			129			59	
Approach Delay, s/veh		14.6			15.7			41.6			37.3	
Approach LOS		B			B			D			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.4	49.2		12.1	5.3	52.3		14.1				
Change Period (Y+Rc), s	4.6	6.5		4.6	4.6	* 6.5		4.6				
Max Green Setting (Gmax), s	12.4	38.5		11.4	5.4	* 46		37.4				
Max Q Clear Time (g_c+I1), s	5.0	14.8		4.6	2.3	23.3		8.7				
Green Ext Time (p_c), s	0.0	7.4		0.1	0.0	12.8		0.4				

Intersection Summary			
HCM 6th Ctrl Delay		16.7	
HCM 6th LOS		B	

Notes

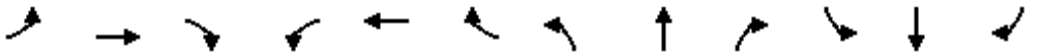
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	70	945	78	258	628	19	163	13	140	35	13	27
Future Volume (vph)	70	945	78	258	628	19	163	13	140	35	13	27
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Split	NA	Perm	Split	NA	Perm
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases			2			6			8			4
Detector Phase	5	2	2	1	6	6	8	8	8	4	4	4
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	32.2	32.2	9.6	32.2	32.2	43.6	43.6	43.6	41.6	41.6	41.6
Total Split (s)	11.0	33.8	33.8	11.0	33.8	33.8	43.6	43.6	43.6	41.6	41.6	41.6
Total Split (%)	8.5%	26.0%	26.0%	8.5%	26.0%	26.0%	33.5%	33.5%	33.5%	32.0%	32.0%	32.0%
Yellow Time (s)	3.6	5.2	5.2	3.6	5.2	5.2	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	6.2	4.6	6.2	6.2	4.6	4.6	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes						
Recall Mode	None	Max	Max	None	Max	Max	None	None	None	None	None	None
Act Effct Green (s)	6.9	29.5	29.5	6.9	29.5	29.5	14.9	14.9	14.9	14.1	14.1	14.1
Actuated g/C Ratio	0.08	0.36	0.36	0.08	0.36	0.36	0.18	0.18	0.18	0.17	0.17	0.17
v/c Ratio	0.59	0.61	0.15	1.19	0.40	0.04	0.36	0.34	0.39	0.14	0.05	0.09
Control Delay	61.5	27.7	7.8	155.2	25.3	0.1	35.2	34.5	8.4	32.6	31.6	0.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	61.5	27.7	7.8	155.2	25.3	0.1	35.2	34.5	8.4	32.6	31.6	0.5
LOS	E	C	A	F	C	A	D	C	A	C	C	A
Approach Delay		28.4			61.8			23.2			21.0	
Approach LOS		C			E			C			C	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 82.8	
Natural Cycle: 130	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.19	
Intersection Signal Delay: 40.1	Intersection LOS: D
Intersection Capacity Utilization 55.7%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 18: Cataba Av. & Main St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	70	945	78	258	628	19	163	13	140	35	13	27
Future Volume (veh/h)	70	945	78	258	628	19	163	13	140	35	13	27
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	1700	1800	1800	1600	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	79	1062	81	290	706	14	194	0	137	39	15	1
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	98	1913	593	267	2060	639	469	0	221	151	168	142
Arrive On Green	0.06	0.39	0.39	0.09	0.42	0.42	0.14	0.00	0.14	0.09	0.09	0.09
Sat Flow, veh/h	1619	4914	1524	2956	4914	1524	3238	0	1522	1619	1800	1525
Grp Volume(v), veh/h	79	1062	81	290	706	14	194	0	137	39	15	1
Grp Sat Flow(s),veh/h/ln	1619	1638	1524	1478	1638	1524	1619	0	1522	1619	1800	1525
Q Serve(g_s), s	3.4	11.9	2.4	6.4	6.9	0.4	3.9	0.0	6.0	1.6	0.5	0.0
Cycle Q Clear(g_c), s	3.4	11.9	2.4	6.4	6.9	0.4	3.9	0.0	6.0	1.6	0.5	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	98	1913	593	267	2060	639	469	0	221	151	168	142
V/C Ratio(X)	0.81	0.56	0.14	1.09	0.34	0.02	0.41	0.00	0.62	0.26	0.09	0.01
Avail Cap(c_a), veh/h	146	1913	593	267	2060	639	1781	0	837	845	939	796
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.9	16.9	14.0	32.2	14.0	12.1	27.6	0.0	28.5	29.9	29.4	29.2
Incr Delay (d2), s/veh	10.7	1.2	0.5	80.1	0.5	0.1	0.6	0.0	2.8	0.9	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	3.8	0.8	5.0	2.2	0.1	1.5	0.0	2.3	0.6	0.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	43.6	18.0	14.4	112.4	14.4	12.1	28.1	0.0	31.3	30.8	29.6	29.2
LnGrp LOS	D	B	B	F	B	B	C	A	C	C	C	C
Approach Vol, veh/h		1222			1010			331			55	
Approach Delay, s/veh		19.4			42.5			29.5			30.4	
Approach LOS		B			D			C			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	11.0	33.8		11.2	8.9	35.9		14.9				
Change Period (Y+Rc), s	4.6	6.2		4.6	4.6	6.2		4.6				
Max Green Setting (Gmax), s	6.4	27.6		37.0	6.4	27.6		39.0				
Max Q Clear Time (g_c+I1), s	8.4	13.9		3.6	5.4	8.9		8.0				
Green Ext Time (p_c), s	0.0	5.6		0.2	0.0	4.1		1.2				

Intersection Summary			
HCM 6th Ctrl Delay		29.8	
HCM 6th LOS		C	

Notes

User approved pedestrian interval to be less than phase max green.

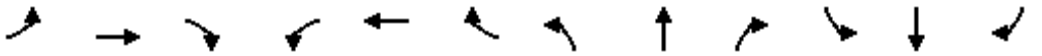
User approved volume balancing among the lanes for turning movement.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	31	1086	12	144	944	11	11	81	149	27
Future Volume (vph)	31	1086	12	144	944	11	11	81	149	27
Turn Type	Prot	NA	Perm	Prot	NA	Perm	NA	Perm	Perm	NA
Protected Phases	5	2		1	6		8			4
Permitted Phases			2			8		8	4	
Detector Phase	5	2	2	1	6	8	8	8	4	4
Switch Phase										
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	29.2	29.2	9.6	30.2	38.6	38.6	38.6	41.6	41.6
Total Split (s)	14.0	45.0	45.0	29.0	60.0	46.0	46.0	46.0	46.0	46.0
Total Split (%)	11.7%	37.5%	37.5%	24.2%	50.0%	38.3%	38.3%	38.3%	38.3%	38.3%
Yellow Time (s)	3.6	5.2	5.2	3.6	5.2	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	6.2	4.6	6.2	4.6	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes					
Recall Mode	None	Max	Max	None	Max	None	None	None	None	None
Act Effct Green (s)	6.5	44.4	44.4	12.6	55.1	18.0	18.0	18.0	18.0	18.0
Actuated g/C Ratio	0.07	0.49	0.49	0.14	0.61	0.20	0.20	0.20	0.20	0.20
v/c Ratio	0.28	0.46	0.02	0.66	0.37	0.04	0.03	0.21	0.60	0.12
Control Delay	50.9	18.4	0.0	53.2	11.7	29.6	29.3	3.7	43.7	22.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	50.9	18.4	0.0	53.2	11.7	29.6	29.3	3.7	43.7	22.2
LOS	D	B	A	D	B	C	C	A	D	C
Approach Delay		19.1			16.7		9.1			38.9
Approach LOS		B			B		A			D

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 90.8	
Natural Cycle: 85	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.66	
Intersection Signal Delay: 19.0	Intersection LOS: B
Intersection Capacity Utilization 59.8%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 19: Key Point Av. & Main St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	31	1086	12	144	944	111	11	11	81	149	27	15
Future Volume (veh/h)	31	1086	12	144	944	111	11	11	81	149	27	15
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	32	1108	9	147	963	79	11	11	23	152	28	10
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	51	2733	848	179	2942	241	259	272	230	277	192	68
Arrive On Green	0.03	0.56	0.56	0.11	0.64	0.64	0.15	0.15	0.15	0.15	0.15	0.15
Sat Flow, veh/h	1619	4914	1524	1619	4629	379	1314	1800	1522	1316	1266	452
Grp Volume(v), veh/h	32	1108	9	147	681	361	11	11	23	152	0	38
Grp Sat Flow(s),veh/h/ln	1619	1638	1524	1619	1638	1732	1314	1800	1522	1316	0	1719
Q Serve(g_s), s	1.7	10.9	0.2	7.5	8.1	8.1	0.6	0.4	1.1	9.4	0.0	1.6
Cycle Q Clear(g_c), s	1.7	10.9	0.2	7.5	8.1	8.1	2.2	0.4	1.1	9.9	0.0	1.6
Prop In Lane	1.00		1.00	1.00		0.22	1.00		1.00	1.00		0.26
Lane Grp Cap(c), veh/h	51	2733	848	179	2082	1101	259	272	230	277	0	260
V/C Ratio(X)	0.63	0.41	0.01	0.82	0.33	0.33	0.04	0.04	0.10	0.55	0.00	0.15
Avail Cap(c_a), veh/h	180	2733	848	467	2082	1101	702	880	745	722	0	840
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	40.5	10.8	8.4	36.8	7.1	7.1	32.1	30.7	31.0	34.9	0.0	31.2
Incr Delay (d2), s/veh	4.8	0.4	0.0	3.6	0.4	0.8	0.1	0.1	0.2	1.7	0.0	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	0.7	3.3	0.1	2.9	2.2	2.4	0.2	0.2	0.4	3.1	0.0	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	45.3	11.2	8.4	40.4	7.5	7.9	32.2	30.7	31.1	36.6	0.0	31.4
LnGrp LOS	D	B	A	D	A	A	C	C	C	D	A	C
Approach Vol, veh/h		1149			1189			45			190	
Approach Delay, s/veh		12.1			11.7			31.3			35.5	
Approach LOS		B			B			C			D	

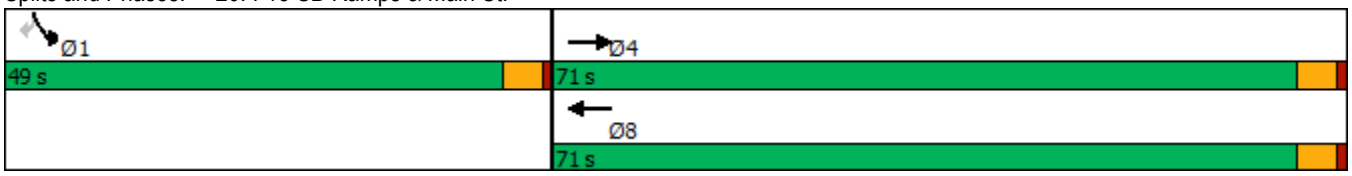
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	14.0	53.3		17.4	7.2	60.0		17.4				
Change Period (Y+Rc), s	4.6	6.2		4.6	4.6	6.2		4.6				
Max Green Setting (Gmax), s	24.4	38.8		41.4	9.4	53.8		41.4				
Max Q Clear Time (g_c+I1), s	9.5	12.9		11.9	3.7	10.1		4.2				
Green Ext Time (p_c), s	0.1	7.7		0.7	0.0	7.3		0.1				

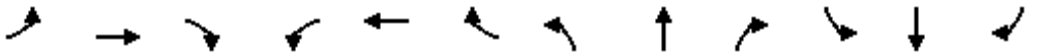
Intersection Summary			
HCM 6th Ctrl Delay		14.0	
HCM 6th LOS		B	

Lane Group	EBT	EBR	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	1176	32	920	21	358	266
Future Volume (vph)	1176	32	920	21	358	266
Turn Type	NA	Free	NA	Free	Prot	Perm
Protected Phases	4		8		1	
Permitted Phases		Free		Free		1
Detector Phase	4		8		1	1
Switch Phase						
Minimum Initial (s)	5.0		5.0		5.0	5.0
Minimum Split (s)	9.6		22.6		9.6	9.6
Total Split (s)	71.0		71.0		49.0	49.0
Total Split (%)	59.2%		59.2%		40.8%	40.8%
Yellow Time (s)	3.6		3.6		3.6	3.6
All-Red Time (s)	1.0		1.0		1.0	1.0
Lost Time Adjust (s)	0.0		0.0		0.0	0.0
Total Lost Time (s)	4.6		4.6		4.6	4.6
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None		None		None	None
Act Effct Green (s)	19.7	40.8	19.7	40.8	11.6	11.6
Actuated g/C Ratio	0.48	1.00	0.48	1.00	0.28	0.28
v/c Ratio	0.50	0.02	0.39	0.01	0.38	0.52
Control Delay	8.2	0.0	7.4	0.0	13.5	12.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	8.2	0.0	7.4	0.0	13.5	12.2
LOS	A	A	A	A	B	B
Approach Delay	7.9		7.3			
Approach LOS	A		A			

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 40.8	
Natural Cycle: 40	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.52	
Intersection Signal Delay: 8.8	Intersection LOS: A
Intersection Capacity Utilization 41.9%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 20: I-15 SB Ramps & Main St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↱		↑↑↑	↱				↰↰		↱
Traffic Volume (veh/h)	0	1176	32	0	920	21	0	0	0	358	0	266
Future Volume (veh/h)	0	1176	32	0	920	21	0	0	0	358	0	266
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	1900	1900	0	1900	1900				1900	0	1900
Adj Flow Rate, veh/h	0	1238	0	0	968	0				377	0	199
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95				0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0				0	0	0
Cap, veh/h	0	2639		0	2639					801	0	367
Arrive On Green	0.00	0.51	0.00	0.00	0.51	0.00				0.23	0.00	0.23
Sat Flow, veh/h	0	5358	1610	0	5358	1610				3510	0	1610
Grp Volume(v), veh/h	0	1238	0	0	968	0				377	0	199
Grp Sat Flow(s),veh/h/ln	0	1729	1610	0	1729	1610				1755	0	1610
Q Serve(g_s), s	0.0	5.4	0.0	0.0	3.9	0.0				3.2	0.0	3.8
Cycle Q Clear(g_c), s	0.0	5.4	0.0	0.0	3.9	0.0				3.2	0.0	3.8
Prop In Lane	0.00		1.00	0.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2639		0	2639					801	0	367
V/C Ratio(X)	0.00	0.47		0.00	0.37					0.47	0.00	0.54
Avail Cap(c_a), veh/h	0	9855		0	9855					4460	0	2046
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	5.5	0.0	0.0	5.2	0.0				11.7	0.0	11.9
Incr Delay (d2), s/veh	0.0	0.1	0.0	0.0	0.1	0.0				0.4	0.0	1.2
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	0.4	0.0				1.1	0.0	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	5.7	0.0	0.0	5.3	0.0				12.1	0.0	13.1
LnGrp LOS	A	A		A	A					B	A	B
Approach Vol, veh/h		1238	A		968	A					576	
Approach Delay, s/veh		5.7			5.3						12.5	
Approach LOS		A			A						B	

Timer - Assigned Phs			4		6		8				
Phs Duration (G+Y+Rc), s			22.4		12.6		22.4				
Change Period (Y+Rc), s			4.6		4.6		4.6				
Max Green Setting (Gmax), s			66.4		44.4		66.4				
Max Q Clear Time (g_c+I1), s			7.4		5.8		5.9				
Green Ext Time (p_c), s			10.4		2.2		7.3				

Intersection Summary												
HCM 6th Ctrl Delay			6.9									
HCM 6th LOS			A									

Notes

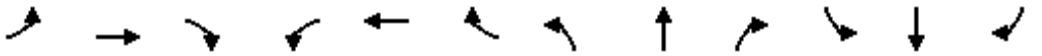
Unsignalized Delay for [EBR, WBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBT	EBR	WBT	WBR	NBL	NBT	NBR
Lane Configurations							
Traffic Volume (vph)	1180	355	1375	492	147	6	442
Future Volume (vph)	1180	355	1375	492	147	6	442
Turn Type	NA	Perm	NA	Perm	Split	NA	Perm
Protected Phases	2		6		8	8	
Permitted Phases		2		6			8
Detector Phase	2	2	6	6	8	8	8
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.6	22.6	22.6	22.6	9.6	9.6	9.6
Total Split (s)	78.0	78.0	78.0	78.0	42.0	42.0	42.0
Total Split (%)	65.0%	65.0%	65.0%	65.0%	35.0%	35.0%	35.0%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Lead/Lag							
Lead-Lag Optimize?							
Recall Mode	None	None	None	None	Min	Min	Min
Act Effct Green (s)	30.7	30.7	30.7	30.7	13.5	13.5	13.5
Actuated g/C Ratio	0.57	0.57	0.57	0.57	0.25	0.25	0.25
v/c Ratio	0.41	0.34	0.48	0.44	0.33	0.51	0.52
Control Delay	7.3	1.8	7.8	2.1	21.1	17.6	17.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	7.3	1.8	7.8	2.1	21.1	17.6	17.9
LOS	A	A	A	A	C	B	B
Approach Delay	6.0		6.3			18.6	
Approach LOS	A		A			B	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 54.3	
Natural Cycle: 40	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.52	
Intersection Signal Delay: 8.0	Intersection LOS: A
Intersection Capacity Utilization 48.7%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 21: I-15 NB Ramps & Main St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↱		↑↑↑	↱	↰	↑	↱			
Traffic Volume (veh/h)	0	1180	355	0	1375	492	147	6	442	0	0	0
Future Volume (veh/h)	0	1180	355	0	1375	492	147	6	442	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	0	1900	1900	0	1900	1900	1900	1900	1900			
Adj Flow Rate, veh/h	0	1204	0	0	1403	470	150	0	245			
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98			
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0			
Cap, veh/h	0	3199		0	3199	993	290	0	516			
Arrive On Green	0.00	0.62	0.00	0.00	0.62	0.62	0.16	0.00	0.16			
Sat Flow, veh/h	0	5358	1610	0	5358	1610	1810	0	3220			
Grp Volume(v), veh/h	0	1204	0	0	1403	470	150	0	245			
Grp Sat Flow(s),veh/h/ln	0	1729	1610	0	1729	1610	1810	0	1610			
Q Serve(g_s), s	0.0	4.8	0.0	0.0	5.9	6.5	3.1	0.0	2.9			
Cycle Q Clear(g_c), s	0.0	4.8	0.0	0.0	5.9	6.5	3.1	0.0	2.9			
Prop In Lane	0.00		1.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	0	3199		0	3199	993	290	0	516			
V/C Ratio(X)	0.00	0.38		0.00	0.44	0.47	0.52	0.00	0.47			
Avail Cap(c_a), veh/h	0	9222		0	9222	2863	1639	0	2917			
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	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	0.0	3.9	0.0	0.0	4.2	4.3	15.9	0.0	15.8			
Incr Delay (d2), s/veh	0.0	0.1	0.0	0.0	0.1	0.4	1.4	0.0	0.7			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.0	0.3	0.0	0.0	0.4	0.5	1.3	0.0	1.0			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	4.0	0.0	0.0	4.2	4.6	17.3	0.0	16.4			
LnGrp LOS	A	A		A	A	A	B	A	B			
Approach Vol, veh/h		1204	A		1873			395				
Approach Delay, s/veh		4.0			4.3			16.8				
Approach LOS		A			A			B				
Timer - Assigned Phs		2				6		8				
Phs Duration (G+Y+Rc), s		30.1				30.1		11.2				
Change Period (Y+Rc), s		4.6				4.6		4.6				
Max Green Setting (Gmax), s		73.4				73.4		37.4				
Max Q Clear Time (g_c+I1), s		6.8				8.5		5.1				
Green Ext Time (p_c), s		10.0				16.9		1.5				

Intersection Summary	
HCM 6th Ctrl Delay	5.6
HCM 6th LOS	A

Notes

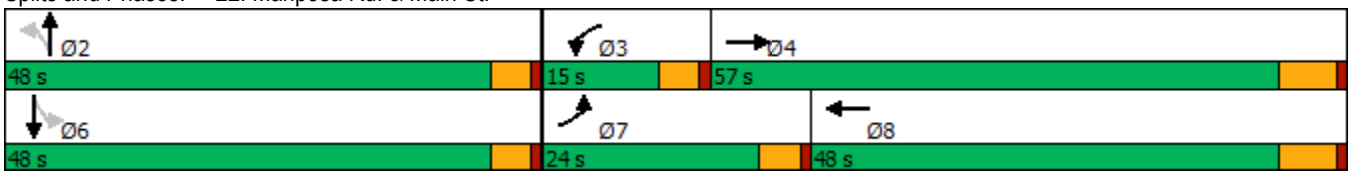
User approved volume balancing among the lanes for turning movement.

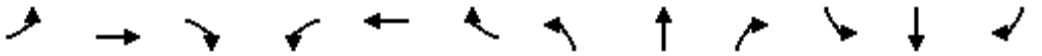
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	142	1377	45	1665	73	40	36	50
Future Volume (vph)	142	1377	45	1665	73	40	36	50
Turn Type	Prot	NA	Prot	NA	Perm	NA	Perm	NA
Protected Phases	7	4	3	8		2		6
Permitted Phases					2		6	
Detector Phase	7	4	3	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	24.2	9.6	24.2	44.6	44.6	44.6	44.6
Total Split (s)	24.0	57.0	15.0	48.0	48.0	48.0	48.0	48.0
Total Split (%)	20.0%	47.5%	12.5%	40.0%	40.0%	40.0%	40.0%	40.0%
Yellow Time (s)	3.6	5.2	3.6	5.2	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	4.6	6.2	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes				
Recall Mode	None	Max	Max	None	None	None	None	None
Act Effct Green (s)	12.8	51.4	10.5	49.2	17.3	17.3	17.3	17.3
Actuated g/C Ratio	0.13	0.54	0.11	0.52	0.18	0.18	0.18	0.18
v/c Ratio	0.71	0.48	0.27	0.57	0.80	0.24	0.18	0.59
Control Delay	57.8	15.3	46.5	19.1	86.5	19.7	32.5	16.8
Queue Delay	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	57.8	15.6	46.5	19.1	86.5	19.7	32.5	16.8
LOS	E	B	D	B	F	B	C	B
Approach Delay		19.3		19.8		52.2		18.9
Approach LOS		B		B		D		B

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 94.9	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.80	
Intersection Signal Delay: 20.8	Intersection LOS: C
Intersection Capacity Utilization 74.8%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 22: Mariposa Rd. & Main St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	142	1377	103	45	1665	29	73	40	36	36	50	189
Future Volume (veh/h)	142	1377	103	45	1665	29	73	40	36	36	50	189
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	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	153	1481	98	48	1790	30	78	43	17	39	54	120
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	183	3206	212	178	3370	56	184	235	93	285	95	211
Arrive On Green	0.11	0.54	0.54	0.11	0.53	0.53	0.19	0.19	0.19	0.19	0.19	0.19
Sat Flow, veh/h	1619	5978	395	1619	6319	106	1162	1227	485	1288	497	1104
Grp Volume(v), veh/h	153	1150	429	48	1315	505	78	0	60	39	0	174
Grp Sat Flow(s),veh/h/ln	1619	1548	1729	1619	1548	1781	1162	0	1713	1288	0	1601
Q Serve(g_s), s	8.8	14.5	14.5	2.6	17.5	17.5	6.2	0.0	2.8	2.5	0.0	9.3
Cycle Q Clear(g_c), s	8.8	14.5	14.5	2.6	17.5	17.5	15.5	0.0	2.8	5.3	0.0	9.3
Prop In Lane	1.00		0.23	1.00		0.06	1.00		0.28	1.00		0.69
Lane Grp Cap(c), veh/h	183	2491	927	178	2477	950	184	0	328	285	0	306
V/C Ratio(X)	0.84	0.46	0.46	0.27	0.53	0.53	0.42	0.00	0.18	0.14	0.00	0.57
Avail Cap(c_a), veh/h	332	2491	927	178	2477	950	494	0	785	628	0	734
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	41.2	13.5	13.5	38.7	14.4	14.4	41.8	0.0	32.1	34.3	0.0	34.7
Incr Delay (d2), s/veh	3.9	0.6	1.7	3.7	0.2	0.6	1.6	0.0	0.3	0.2	0.0	1.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.5	4.4	5.2	1.2	5.3	6.1	1.9	0.0	1.2	0.8	0.0	3.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	45.0	14.2	15.2	42.4	14.6	15.0	43.3	0.0	32.4	34.5	0.0	36.4
LnGrp LOS	D	B	B	D	B	B	D	A	C	C	A	D
Approach Vol, veh/h		1732			1868			138			213	
Approach Delay, s/veh		17.1			15.4			38.6			36.1	
Approach LOS		B			B			D			D	

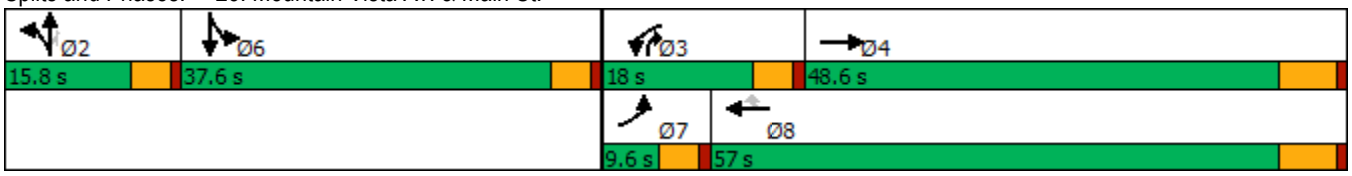
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		22.7	15.0	57.0		22.7	15.3	56.7				
Change Period (Y+Rc), s		4.6	4.6	6.2		4.6	4.6	6.2				
Max Green Setting (Gmax), s		43.4	10.4	50.8		43.4	19.4	41.8				
Max Q Clear Time (g_c+I1), s		17.5	4.6	16.5		11.3	10.8	19.5				
Green Ext Time (p_c), s		0.6	0.0	12.5		1.3	0.1	12.3				

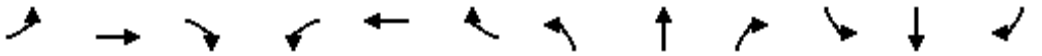
Intersection Summary												
HCM 6th Ctrl Delay			18.1									
HCM 6th LOS			B									

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	16	1278	74	1722	59	16	1	30	50	2
Future Volume (vph)	16	1278	74	1722	59	16	1	30	50	2
Turn Type	Prot	NA	Prot	NA	Perm	Split	NA	pm+ov	Split	NA
Protected Phases	7	4	3	8		2	2	3	6	6
Permitted Phases					8			2		
Detector Phase	7	4	3	8	8	2	2	3	6	6
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	43.2	9.6	32.2	32.2	14.6	14.6	9.6	37.6	37.6
Total Split (s)	9.6	48.6	18.0	57.0	57.0	15.8	15.8	18.0	37.6	37.6
Total Split (%)	8.0%	40.5%	15.0%	47.5%	47.5%	13.2%	13.2%	15.0%	31.3%	31.3%
Yellow Time (s)	3.6	5.2	3.6	5.2	5.2	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	4.6	6.2	6.2	4.6	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lead	Lag	Lag			Lead		
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes			Yes		
Recall Mode	None	Max	None	Max	Max	None	None	None	None	None
Act Effct Green (s)	5.2	54.3	8.6	63.7	63.7	10.4	10.4	11.8	13.8	13.8
Actuated g/C Ratio	0.06	0.63	0.10	0.74	0.74	0.12	0.12	0.14	0.16	0.16
v/c Ratio	0.09	0.35	0.48	0.49	0.05	0.05	0.02	0.07	0.13	0.12
Control Delay	48.2	14.4	51.4	13.1	1.3	44.1	43.2	0.3	34.7	27.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	48.2	14.4	51.4	13.1	1.3	44.1	43.2	0.3	34.7	27.2
LOS	D	B	D	B	A	D	D	A	C	C
Approach Delay		14.8		14.2			15.7			31.0
Approach LOS		B		B			B			C

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 86.5	
Natural Cycle: 105	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.49	
Intersection Signal Delay: 14.8	Intersection LOS: B
Intersection Capacity Utilization 61.2%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 23: Mountain Vista Av. & Main St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	16	1278	21	74	1722	59	16	1	30	50	2	9
Future Volume (veh/h)	16	1278	21	74	1722	59	16	1	30	50	2	9
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1600	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	16	1318	21	76	1775	58	16	1	11	57	0	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	55	3531	56	95	2940	912	184	102	353	294	163	0
Arrive On Green	0.02	0.56	0.56	0.06	0.60	0.60	0.06	0.06	0.06	0.09	0.00	0.00
Sat Flow, veh/h	2956	6325	101	1619	4914	1525	3238	1800	3051	3238	1800	0
Grp Volume(v), veh/h	16	967	372	76	1775	58	16	1	11	57	0	0
Grp Sat Flow(s),veh/h/ln	1478	1548	1782	1619	1638	1525	1619	1800	1525	1619	1800	0
Q Serve(g_s), s	0.5	9.9	9.9	3.9	19.3	1.3	0.4	0.0	0.3	1.4	0.0	0.0
Cycle Q Clear(g_c), s	0.5	9.9	9.9	3.9	19.3	1.3	0.4	0.0	0.3	1.4	0.0	0.0
Prop In Lane	1.00		0.06	1.00		1.00	1.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	55	2592	995	95	2940	912	184	102	353	294	163	0
V/C Ratio(X)	0.29	0.37	0.37	0.80	0.60	0.06	0.09	0.01	0.03	0.19	0.00	0.00
Avail Cap(c_a), veh/h	174	2592	995	256	2940	912	427	237	581	1259	700	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	41.1	10.5	10.5	39.5	10.7	7.1	37.9	37.8	33.3	35.7	0.0	0.0
Incr Delay (d2), s/veh	1.1	0.4	1.1	5.7	0.9	0.1	0.2	0.0	0.0	0.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	2.8	3.4	1.6	5.5	0.4	0.2	0.0	0.1	0.6	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	42.2	10.9	11.5	45.2	11.7	7.3	38.1	37.8	33.4	36.0	0.0	0.0
LnGrp LOS	D	B	B	D	B	A	D	D	C	D	A	A
Approach Vol, veh/h		1355			1909			28			57	
Approach Delay, s/veh		11.4			12.9			36.3			36.0	
Approach LOS		B			B			D			D	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		9.4	9.6	53.6		12.3	6.2	57.0				
Change Period (Y+Rc), s		4.6	4.6	6.2		4.6	4.6	6.2				
Max Green Setting (Gmax), s		11.2	13.4	42.4		33.0	5.0	50.8				
Max Q Clear Time (g_c+I1), s		2.4	5.9	11.9		3.4	2.5	21.3				
Green Ext Time (p_c), s		0.0	0.0	9.6		0.2	0.0	15.2				

Intersection Summary	
HCM 6th Ctrl Delay	12.9
HCM 6th LOS	B

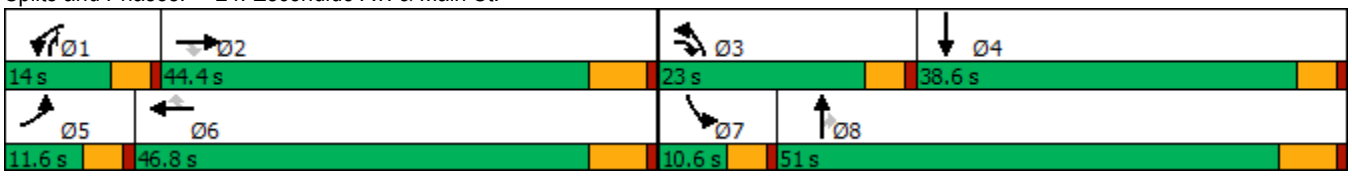
Notes

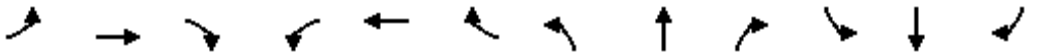
User approved volume balancing among the lanes for turning movement.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations											
Traffic Volume (vph)	4	906	439	327	1104	3	740	22	345	1	3
Future Volume (vph)	4	906	439	327	1104	3	740	22	345	1	3
Turn Type	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA
Protected Phases	5	2	3	1	6		3	8	1	7	4
Permitted Phases			2			6			8		
Detector Phase	5	2	3	1	6	6	3	8	1	7	4
Switch Phase											
Minimum Initial (s)	5.0	10.0	5.0	5.0	10.0	10.0	5.0	10.0	5.0	5.0	10.0
Minimum Split (s)	9.6	41.2	9.6	9.6	31.2	31.2	9.6	49.2	9.6	9.6	37.6
Total Split (s)	11.6	44.4	23.0	14.0	46.8	46.8	23.0	51.0	14.0	10.6	38.6
Total Split (%)	9.7%	37.0%	19.2%	11.7%	39.0%	39.0%	19.2%	42.5%	11.7%	8.8%	32.2%
Yellow Time (s)	3.6	5.2	3.6	3.6	5.2	5.2	3.6	5.2	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	4.6	4.6	6.2	6.2	4.6	6.2	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Min	None	None	Min
Act Effct Green (s)	5.2	24.8	50.0	9.6	37.6	37.6	18.9	34.2	50.2	5.1	13.7
Actuated g/C Ratio	0.06	0.28	0.57	0.11	0.43	0.43	0.22	0.39	0.57	0.06	0.16
v/c Ratio	0.04	0.67	0.42	1.04	0.77	0.00	1.20	0.03	0.38	0.01	0.06
Control Delay	47.0	30.6	2.5	101.1	27.4	0.0	137.6	19.4	7.6	48.0	18.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	47.0	30.6	2.5	101.1	27.4	0.0	137.6	19.4	7.6	48.0	18.5
LOS	D	C	A	F	C	A	F	B	A	D	B
Approach Delay		21.5			44.2			94.7			20.3
Approach LOS		C			D			F			C

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 87.5	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.20	
Intersection Signal Delay: 50.6	Intersection LOS: D
Intersection Capacity Utilization 82.3%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 24: Escondido Av. & Main St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	4	906	439	327	1104	3	740	22	345	1	3	12
Future Volume (veh/h)	4	906	439	327	1104	3	740	22	345	1	3	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1700	1800	1800	1600	1800	1800	1600	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	4	934	339	337	1138	3	763	23	194	1	3	11
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	9	1423	777	332	1357	605	651	609	687	2	40	148
Arrive On Green	0.01	0.29	0.29	0.11	0.40	0.40	0.22	0.34	0.34	0.00	0.12	0.12
Sat Flow, veh/h	1619	4914	1525	2956	3420	1525	2956	1800	1525	1619	338	1239
Grp Volume(v), veh/h	4	934	339	337	1138	3	763	23	194	1	0	14
Grp Sat Flow(s),veh/h/ln	1619	1638	1525	1478	1710	1525	1478	1800	1525	1619	0	1577
Q Serve(g_s), s	0.2	13.9	11.7	9.4	25.2	0.1	18.4	0.7	6.7	0.1	0.0	0.7
Cycle Q Clear(g_c), s	0.2	13.9	11.7	9.4	25.2	0.1	18.4	0.7	6.7	0.1	0.0	0.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.79
Lane Grp Cap(c), veh/h	9	1423	777	332	1357	605	651	609	687	2	0	189
V/C Ratio(X)	0.47	0.66	0.44	1.01	0.84	0.00	1.17	0.04	0.28	0.45	0.00	0.07
Avail Cap(c_a), veh/h	136	2245	1033	332	1661	741	651	964	989	116	0	641
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	41.5	26.0	12.9	37.1	22.8	15.2	32.6	18.5	14.5	41.7	0.0	32.7
Incr Delay (d2), s/veh	13.9	0.5	0.4	53.0	3.3	0.0	93.5	0.0	0.2	45.0	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	5.0	3.9	5.6	9.4	0.0	14.9	0.3	2.3	0.0	0.0	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	55.3	26.6	13.3	90.1	26.1	15.2	126.1	18.6	14.7	86.7	0.0	32.9
LnGrp LOS	E	C	B	F	C	B	F	B	B	F	A	C
Approach Vol, veh/h		1277			1478			980			15	
Approach Delay, s/veh		23.1			40.7			101.5			36.5	
Approach LOS		C			D			F			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.0	30.4	23.0	16.2	5.0	39.4	4.7	34.5
Change Period (Y+Rc), s	4.6	6.2	4.6	* 6.2	4.6	6.2	4.6	6.2
Max Green Setting (Gmax), s	9.4	38.2	18.4	* 34	7.0	40.6	6.0	44.8
Max Q Clear Time (g_c+I1), s	11.4	15.9	20.4	2.7	2.2	27.2	2.1	8.7
Green Ext Time (p_c), s	0.0	7.3	0.0	0.0	0.0	6.0	0.0	0.8

Intersection Summary	
HCM 6th Ctrl Delay	50.6
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	3.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	24	224	876	33	93	538
Future Vol, veh/h	24	224	876	33	93	538
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	100	0	-	-	195	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	27	249	973	37	103	598

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1497	505	0	0	1010	0
Stage 1	992	-	-	-	-	-
Stage 2	505	-	-	-	-	-
Critical Hdwy	6.8	6.9	-	-	4.1	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	115	518	-	-	694	-
Stage 1	324	-	-	-	-	-
Stage 2	577	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	98	518	-	-	694	-
Mov Cap-2 Maneuver	221	-	-	-	-	-
Stage 1	324	-	-	-	-	-
Stage 2	492	-	-	-	-	-

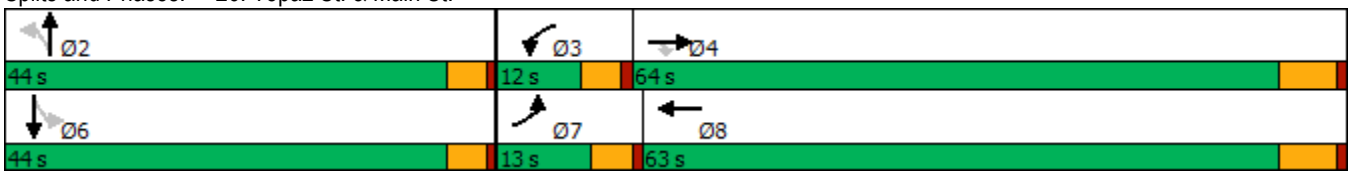
Approach	WB	NB	SB
HCM Control Delay, s	18.7	0	1.6
HCM LOS	C		

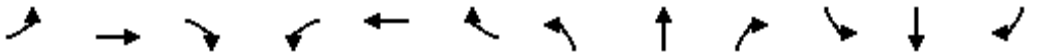
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	221	518	694	-
HCM Lane V/C Ratio	-	-	0.121	0.48	0.149	-
HCM Control Delay (s)	-	-	23.5	18.2	11.1	-
HCM Lane LOS	-	-	C	C	B	-
HCM 95th %tile Q(veh)	-	-	0.4	2.6	0.5	-

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	42	1098	84	33	1140	173	83	98	64
Future Volume (vph)	42	1098	84	33	1140	173	83	98	64
Turn Type	Prot	NA	Perm	Prot	NA	Perm	NA	Perm	NA
Protected Phases	7	4		3	8		2		6
Permitted Phases			4			2		6	
Detector Phase	7	4	4	3	8	2	2	6	6
Switch Phase									
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	25.2	25.2	9.6	23.2	32.6	32.6	38.6	38.6
Total Split (s)	13.0	64.0	64.0	12.0	63.0	44.0	44.0	44.0	44.0
Total Split (%)	10.8%	53.3%	53.3%	10.0%	52.5%	36.7%	36.7%	36.7%	36.7%
Yellow Time (s)	3.6	5.2	5.2	3.6	5.2	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	6.2	4.6	6.2	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes				
Recall Mode	None	None	None	Max	None	None	None	None	None
Act Effct Green (s)	7.1	42.5	42.5	7.9	48.9	23.5	23.5	23.5	23.5
Actuated g/C Ratio	0.08	0.47	0.47	0.09	0.54	0.26	0.26	0.26	0.26
v/c Ratio	0.37	0.76	0.12	0.26	0.75	0.71	0.35	0.41	0.33
Control Delay	55.9	23.5	3.9	52.9	22.1	48.0	25.1	35.4	21.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	55.9	23.5	3.9	52.9	22.1	48.0	25.1	35.4	21.5
LOS	E	C	A	D	C	D	C	D	C
Approach Delay		23.3			22.9		37.6		27.3
Approach LOS		C			C		D		C

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 90.4	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.76	
Intersection Signal Delay: 25.0	Intersection LOS: C
Intersection Capacity Utilization 70.9%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 26: Topaz St. & Main St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	42	1098	84	33	1140	96	173	83	60	98	64	74
Future Volume (veh/h)	42	1098	84	33	1140	96	173	83	60	98	64	74
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	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	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	47	1220	80	37	1267	104	192	92	48	109	71	34
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, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	67	1563	683	156	1639	134	337	274	143	307	284	136
Arrive On Green	0.04	0.46	0.46	0.10	0.51	0.51	0.25	0.25	0.25	0.25	0.25	0.25
Sat Flow, veh/h	1619	3420	1494	1619	3200	262	1237	1113	580	1195	1150	551
Grp Volume(v), veh/h	47	1220	80	37	676	695	192	0	140	109	0	105
Grp Sat Flow(s),veh/h/ln	1619	1710	1494	1619	1710	1753	1237	0	1693	1195	0	1701
Q Serve(g_s), s	2.2	23.2	2.4	1.6	24.5	24.7	11.4	0.0	5.2	6.3	0.0	3.8
Cycle Q Clear(g_c), s	2.2	23.2	2.4	1.6	24.5	24.7	15.2	0.0	5.2	11.6	0.0	3.8
Prop In Lane	1.00		1.00	1.00		0.15	1.00		0.34	1.00		0.32
Lane Grp Cap(c), veh/h	67	1563	683	156	876	897	337	0	417	307	0	419
V/C Ratio(X)	0.70	0.78	0.12	0.24	0.77	0.77	0.57	0.00	0.34	0.35	0.00	0.25
Avail Cap(c_a), veh/h	177	2569	1122	156	1262	1294	666	0	867	624	0	871
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	36.4	17.6	12.0	32.2	15.1	15.2	29.4	0.0	23.8	28.6	0.0	23.3
Incr Delay (d2), s/veh	5.0	0.9	0.1	3.6	1.8	1.9	1.5	0.0	0.5	0.7	0.0	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	0.9	7.6	0.7	0.7	7.9	8.1	3.4	0.0	2.1	1.8	0.0	1.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	41.4	18.5	12.1	35.7	17.0	17.0	30.9	0.0	24.3	29.3	0.0	23.6
LnGrp LOS	D	B	B	D	B	B	C	A	C	C	A	C
Approach Vol, veh/h		1347			1408			332			214	
Approach Delay, s/veh		18.9			17.5			28.1			26.5	
Approach LOS		B			B			C			C	

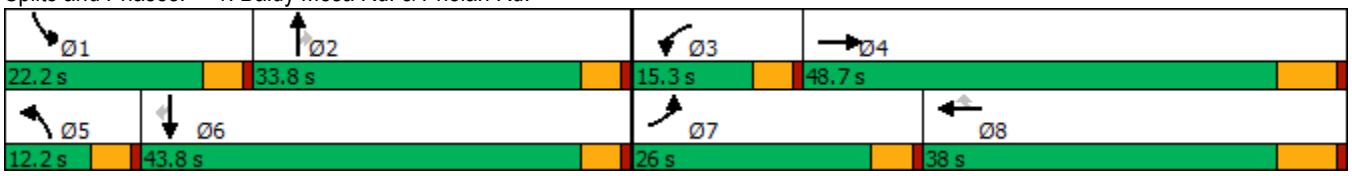
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		23.6	12.0	41.4		23.6	7.8	45.6				
Change Period (Y+Rc), s		4.6	4.6	6.2		4.6	4.6	6.2				
Max Green Setting (Gmax), s		39.4	7.4	57.8		39.4	8.4	56.8				
Max Q Clear Time (g_c+I1), s		17.2	3.6	25.2		13.6	4.2	26.7				
Green Ext Time (p_c), s		1.5	0.0	10.0		1.0	0.0	10.1				

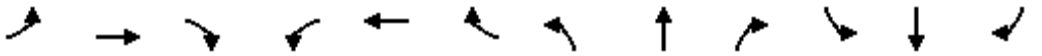
Intersection Summary	
HCM 6th Ctrl Delay	19.7
HCM 6th LOS	B

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	157	710	60	736	124	39	30	27	122	38	140
Future Volume (vph)	157	710	60	736	124	39	30	27	122	38	140
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4	3	8		5	2		1	6	
Permitted Phases					8			2			6
Detector Phase	7	4	3	8	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	30.5	9.6	37.5	37.5	9.6	31.6	31.6	9.6	40.6	40.6
Total Split (s)	26.0	48.7	15.3	38.0	38.0	12.2	33.8	33.8	22.2	43.8	43.8
Total Split (%)	21.7%	40.6%	12.8%	31.7%	31.7%	10.2%	28.2%	28.2%	18.5%	36.5%	36.5%
Yellow Time (s)	3.6	5.5	3.6	5.5	5.5	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.5	4.6	6.5	6.5	4.6	4.6	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Max	None	Max	Max	None	None	None	None	None	None
Act Effct Green (s)	13.8	44.2	8.0	35.6	35.6	6.6	13.0	13.0	12.7	19.8	19.8
Actuated g/C Ratio	0.15	0.48	0.09	0.39	0.39	0.07	0.14	0.14	0.14	0.21	0.21
v/c Ratio	0.70	0.49	0.46	0.60	0.19	0.36	0.13	0.08	0.59	0.11	0.33
Control Delay	55.2	21.4	55.9	28.5	2.3	55.4	38.5	0.4	52.5	31.5	6.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	55.2	21.4	55.9	28.5	2.3	55.4	38.5	0.4	52.5	31.5	6.8
LOS	E	C	E	C	A	E	D	A	D	C	A
Approach Delay		27.3		26.8			34.7			28.5	
Approach LOS		C		C			C			C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 92.1	
Natural Cycle: 100	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.70	
Intersection Signal Delay: 27.5	Intersection LOS: C
Intersection Capacity Utilization 62.9%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 1: Baldy Mesa Rd. & Phelan Rd.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	157	710	38	60	736	124	39	30	27	122	38	140
Future Volume (veh/h)	157	710	38	60	736	124	39	30	27	122	38	140
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		0.99	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	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	169	763	32	65	791	93	42	32	18	131	41	89
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	202	1624	68	101	1448	642	59	215	180	161	327	277
Arrive On Green	0.12	0.49	0.49	0.06	0.42	0.42	0.04	0.12	0.12	0.10	0.18	0.18
Sat Flow, veh/h	1619	3345	140	1619	3420	1516	1619	1800	1513	1619	1800	1525
Grp Volume(v), veh/h	169	390	405	65	791	93	42	32	18	131	41	89
Grp Sat Flow(s),veh/h/ln	1619	1710	1775	1619	1710	1516	1619	1800	1513	1619	1800	1525
Q Serve(g_s), s	8.9	13.2	13.2	3.4	15.1	3.3	2.2	1.4	0.9	6.9	1.7	4.4
Cycle Q Clear(g_c), s	8.9	13.2	13.2	3.4	15.1	3.3	2.2	1.4	0.9	6.9	1.7	4.4
Prop In Lane	1.00		0.08	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	202	830	862	101	1448	642	59	215	180	161	327	277
V/C Ratio(X)	0.84	0.47	0.47	0.64	0.55	0.14	0.71	0.15	0.10	0.82	0.13	0.32
Avail Cap(c_a), veh/h	399	830	862	199	1448	642	142	605	508	328	812	688
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.2	14.9	14.9	39.8	18.8	15.4	41.4	34.3	34.1	38.4	29.8	30.9
Incr Delay (d2), s/veh	3.5	1.9	1.8	2.5	1.5	0.5	5.6	0.3	0.2	3.8	0.2	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.4	4.7	4.8	1.3	5.4	1.1	1.0	0.6	0.3	2.9	0.7	1.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	40.7	16.8	16.7	42.3	20.3	15.9	47.1	34.6	34.4	42.2	29.9	31.6
LnGrp LOS	D	B	B	D	C	B	D	C	C	D	C	C
Approach Vol, veh/h		964			949			92			261	
Approach Delay, s/veh		21.0			21.4			40.2			36.6	
Approach LOS		C			C			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.2	15.0	10.0	48.7	7.8	20.4	15.4	43.3
Change Period (Y+Rc), s	4.6	4.6	4.6	6.5	4.6	4.6	4.6	6.5
Max Green Setting (Gmax), s	17.6	29.2	10.7	42.2	7.6	39.2	21.4	31.5
Max Q Clear Time (g_c+I1), s	8.9	3.4	5.4	15.2	4.2	6.4	10.9	17.1
Green Ext Time (p_c), s	0.1	0.2	0.0	4.4	0.0	0.5	0.1	4.3

Intersection Summary	
HCM 6th Ctrl Delay	23.7
HCM 6th LOS	C

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	4	840	4	29	956	5	3	0	15	6	0	3
Future Vol, veh/h	4	840	4	29	956	5	3	0	15	6	0	3
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	105	-	105	110	-	110	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	4	884	4	31	1006	5	3	0	16	6	0	3

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1011	0	0	888	0	0	1964	1965	884	1970	1964	1006
Stage 1	-	-	-	-	-	-	892	892	-	1068	1068	-
Stage 2	-	-	-	-	-	-	1072	1073	-	902	896	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
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	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	694	-	-	771	-	-	48	64	347	47	64	295
Stage 1	-	-	-	-	-	-	339	363	-	271	301	-
Stage 2	-	-	-	-	-	-	269	299	-	335	362	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	694	-	-	771	-	-	46	61	347	43	61	295
Mov Cap-2 Maneuver	-	-	-	-	-	-	152	172	-	146	168	-
Stage 1	-	-	-	-	-	-	337	361	-	269	289	-
Stage 2	-	-	-	-	-	-	255	287	-	318	360	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0.3	18.5	26.6
HCM LOS			C	D

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	286	694	-	-	771	-	-	176
HCM Lane V/C Ratio	0.066	0.006	-	-	0.04	-	-	0.054
HCM Control Delay (s)	18.5	10.2	-	-	9.9	-	-	26.6
HCM Lane LOS	C	B	-	-	A	-	-	D
HCM 95th %tile Q(veh)	0.2	0	-	-	0.1	-	-	0.2

Intersection	
Int Delay, s/veh	0.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	842	2	4	1045	6	5
Future Vol, veh/h	842	2	4	1045	6	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	110	-	0	-
Veh in Median Storage, #	0	-	-	0	1	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	877	2	4	1089	6	5

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	879	0	1975	878
Stage 1	-	-	-	-	878	-
Stage 2	-	-	-	-	1097	-
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	-	-	777	-	69	350
Stage 1	-	-	-	-	410	-
Stage 2	-	-	-	-	323	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	777	-	69	350
Mov Cap-2 Maneuver	-	-	-	-	195	-
Stage 1	-	-	-	-	410	-
Stage 2	-	-	-	-	321	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	20.5
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	244	-	-	777	-
HCM Lane V/C Ratio	0.047	-	-	0.005	-
HCM Control Delay (s)	20.5	-	-	9.7	-
HCM Lane LOS	C	-	-	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	13	847	1049	25	23	12
Future Vol, veh/h	13	847	1049	25	23	12
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	1	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	14	921	1140	27	25	13

Major/Minor	Major1			Major2			Minor2		
Conflicting Flow All	1167	0	-	0	1643	584			
Stage 1	-	-	-	-	1154	-			
Stage 2	-	-	-	-	489	-			
Critical Hdwy	4.1	-	-	-	6.8	6.9			
Critical Hdwy Stg 1	-	-	-	-	5.8	-			
Critical Hdwy Stg 2	-	-	-	-	5.8	-			
Follow-up Hdwy	2.2	-	-	-	3.5	3.3			
Pot Cap-1 Maneuver	606	-	-	-	92	460			
Stage 1	-	-	-	-	267	-			
Stage 2	-	-	-	-	588	-			
Platoon blocked, %		-	-	-					
Mov Cap-1 Maneuver	606	-	-	-	90	460			
Mov Cap-2 Maneuver	-	-	-	-	198	-			
Stage 1	-	-	-	-	261	-			
Stage 2	-	-	-	-	588	-			

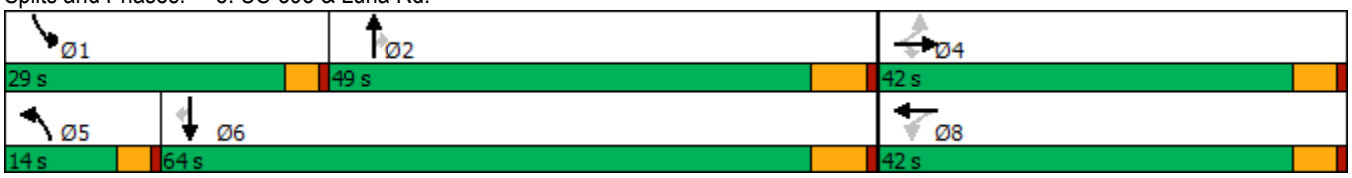
Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	22.3
HCM LOS			C

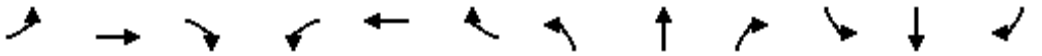
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	606	-	-	-	246
HCM Lane V/C Ratio	0.023	-	-	-	0.155
HCM Control Delay (s)	11.1	-	-	-	22.3
HCM Lane LOS	B	-	-	-	C
HCM 95th %tile Q(veh)	0.1	-	-	-	0.5

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	53	72	40	45	109	67	1043	85	224	1036	90
Future Volume (vph)	53	72	40	45	109	67	1043	85	224	1036	90
Turn Type	Perm	NA	Perm	Perm	NA	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		4			8	5	2		1	6	
Permitted Phases	4		4	8				2			6
Detector Phase	4	4	4	8	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	15.0	15.0	15.0	42.0	42.0	9.0	28.0	28.0	9.0	37.0	37.0
Total Split (s)	42.0	42.0	42.0	42.0	42.0	14.0	49.0	49.0	29.0	64.0	64.0
Total Split (%)	35.0%	35.0%	35.0%	35.0%	35.0%	11.7%	40.8%	40.8%	24.2%	53.3%	53.3%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	3.0	5.0	5.0	3.0	5.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	4.0	6.0	6.0	4.0	6.0	6.0
Lead/Lag						Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?						Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Max	Max	None	Max	Max
Act Effct Green (s)	21.0	21.0	21.0	21.0	21.0	8.2	47.6	47.6	17.4	59.1	59.1
Actuated g/C Ratio	0.21	0.21	0.21	0.21	0.21	0.08	0.47	0.47	0.17	0.58	0.58
v/c Ratio	0.73	0.19	0.10	0.17	0.81	0.48	0.64	0.11	0.75	0.51	0.10
Control Delay	87.9	33.9	0.5	34.0	43.6	59.3	25.2	5.2	56.8	16.0	3.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	87.9	33.9	0.5	34.0	43.6	59.3	25.2	5.2	56.8	16.0	3.5
LOS	F	C	A	C	D	E	C	A	E	B	A
Approach Delay		43.0			42.5		25.7			22.0	
Approach LOS		D			D		C			C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 101.2	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.81	
Intersection Signal Delay: 27.0	Intersection LOS: C
Intersection Capacity Utilization 85.7%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 8: US-395 & Luna Rd.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	53	72	40	45	109	216	67	1043	85	224	1036	90
Future Volume (veh/h)	53	72	40	45	109	216	67	1043	85	224	1036	90
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	55	75	23	47	114	163	70	1086	64	233	1079	75
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	153	416	352	332	155	221	91	1741	777	269	2097	935
Arrive On Green	0.22	0.22	0.22	0.22	0.22	0.22	0.05	0.48	0.48	0.15	0.58	0.58
Sat Flow, veh/h	1181	1900	1610	1391	706	1010	1810	3610	1610	1810	3610	1610
Grp Volume(v), veh/h	55	75	23	47	0	277	70	1086	64	233	1079	75
Grp Sat Flow(s),veh/h/ln	1181	1900	1610	1391	0	1717	1810	1805	1610	1810	1805	1610
Q Serve(g_s), s	4.5	3.2	1.1	2.8	0.0	15.0	3.8	22.2	2.1	12.6	17.8	2.0
Cycle Q Clear(g_c), s	19.6	3.2	1.1	6.0	0.0	15.0	3.8	22.2	2.1	12.6	17.8	2.0
Prop In Lane	1.00		1.00	1.00		0.59	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	153	416	352	332	0	375	91	1741	777	269	2097	935
V/C Ratio(X)	0.36	0.18	0.07	0.14	0.00	0.74	0.77	0.62	0.08	0.87	0.51	0.08
Avail Cap(c_a), veh/h	332	704	597	543	0	636	181	1741	777	453	2097	935
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.4	31.7	30.9	34.2	0.0	36.3	46.9	19.1	13.9	41.5	12.5	9.2
Incr Delay (d2), s/veh	0.5	0.1	0.0	0.1	0.0	1.1	9.8	1.7	0.2	7.1	0.9	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	1.3	1.4	0.4	0.9	0.0	6.2	1.9	8.4	0.7	5.8	6.1	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	46.0	31.8	30.9	34.3	0.0	37.4	56.7	20.8	14.1	48.6	13.4	9.4
LnGrp LOS	D	C	C	C	A	D	E	C	B	D	B	A
Approach Vol, veh/h		153			324			1220			1387	
Approach Delay, s/veh		36.8			37.0			22.5			19.1	
Approach LOS		D			D			C			B	

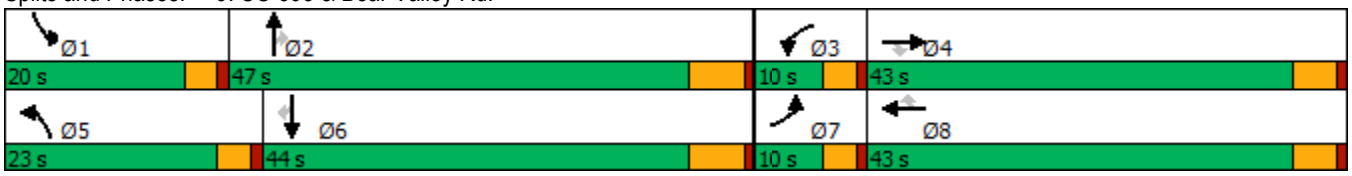
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	18.9	54.2		26.8	9.0	64.0		26.8				
Change Period (Y+Rc), s	4.0	6.0		5.0	4.0	6.0		5.0				
Max Green Setting (Gmax), s	25.0	43.0		37.0	10.0	58.0		37.0				
Max Q Clear Time (g_c+I1), s	14.6	24.2		21.6	5.8	19.8		17.0				
Green Ext Time (p_c), s	0.3	5.5		0.3	0.0	6.5		1.0				

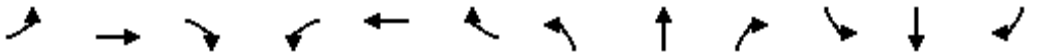
Intersection Summary		
HCM 6th Ctrl Delay		23.2
HCM 6th LOS		C

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	56	329	138	116	321	142	183	973	221	167	919	36
Future Volume (vph)	56	329	138	116	321	142	183	973	221	167	919	36
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.0	43.0	43.0	9.0	43.0	43.0	9.0	44.0	44.0	9.0	44.0	44.0
Total Split (s)	10.0	43.0	43.0	10.0	43.0	43.0	23.0	47.0	47.0	20.0	44.0	44.0
Total Split (%)	8.3%	35.8%	35.8%	8.3%	35.8%	35.8%	19.2%	39.2%	39.2%	16.7%	36.7%	36.7%
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0	4.0	3.0	5.0	5.0	3.0	5.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	5.0	5.0	4.0	5.0	5.0	4.0	6.0	6.0	4.0	6.0	6.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Max	Max	None	Max	Max
Act Effct Green (s)	6.0	16.8	16.8	6.1	19.1	19.1	14.4	41.6	41.6	13.5	40.7	40.7
Actuated g/C Ratio	0.06	0.17	0.17	0.06	0.20	0.20	0.15	0.43	0.43	0.14	0.42	0.42
v/c Ratio	0.53	0.56	0.36	1.08	0.48	0.34	0.72	0.66	0.28	0.70	0.64	0.05
Control Delay	65.8	39.7	8.1	155.0	37.4	7.6	56.9	26.8	4.2	57.6	27.2	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	65.8	39.7	8.1	155.0	37.4	7.6	56.9	26.8	4.2	57.6	27.2	0.1
LOS	E	D	A	F	D	A	E	C	A	E	C	A
Approach Delay		34.1			53.7			27.2			30.8	
Approach LOS		C			D			C			C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 97.2	
Natural Cycle: 105	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.08	
Intersection Signal Delay: 33.6	Intersection LOS: C
Intersection Capacity Utilization 73.2%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 9: US-395 & Bear Valley Rd.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	56	329	138	116	321	142	183	973	221	167	919	36
Future Volume (veh/h)	56	329	138	116	321	142	183	973	221	167	919	36
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	59	346	63	122	338	80	193	1024	172	176	967	25
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	78	491	219	123	580	258	232	1674	746	213	1637	730
Arrive On Green	0.04	0.14	0.14	0.07	0.16	0.16	0.13	0.46	0.46	0.12	0.45	0.45
Sat Flow, veh/h	1810	3610	1610	1810	3610	1604	1810	3610	1610	1810	3610	1609
Grp Volume(v), veh/h	59	346	63	122	338	80	193	1024	172	176	967	25
Grp Sat Flow(s),veh/h/ln	1810	1805	1610	1810	1805	1604	1810	1805	1610	1810	1805	1609
Q Serve(g_s), s	2.9	8.1	3.1	6.0	7.7	3.9	9.2	18.8	5.7	8.4	17.7	0.8
Cycle Q Clear(g_c), s	2.9	8.1	3.1	6.0	7.7	3.9	9.2	18.8	5.7	8.4	17.7	0.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	78	491	219	123	580	258	232	1674	746	213	1637	730
V/C Ratio(X)	0.75	0.70	0.29	0.99	0.58	0.31	0.83	0.61	0.23	0.83	0.59	0.03
Avail Cap(c_a), veh/h	123	1551	692	123	1551	689	389	1674	746	327	1637	730
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.8	36.5	34.4	41.2	34.4	32.8	37.6	17.8	14.2	38.1	18.0	13.4
Incr Delay (d2), s/veh	10.3	0.7	0.3	79.2	0.3	0.3	5.8	1.7	0.7	8.1	1.6	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	3.3	1.1	5.2	3.1	1.4	4.1	6.9	1.9	3.9	6.6	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	52.2	37.2	34.6	120.4	34.7	33.0	43.4	19.4	15.0	46.3	19.6	13.5
LnGrp LOS	D	D	C	F	C	C	D	B	B	D	B	B
Approach Vol, veh/h		468			540			1389			1168	
Approach Delay, s/veh		38.7			53.8			22.2			23.5	
Approach LOS		D			D			C			C	

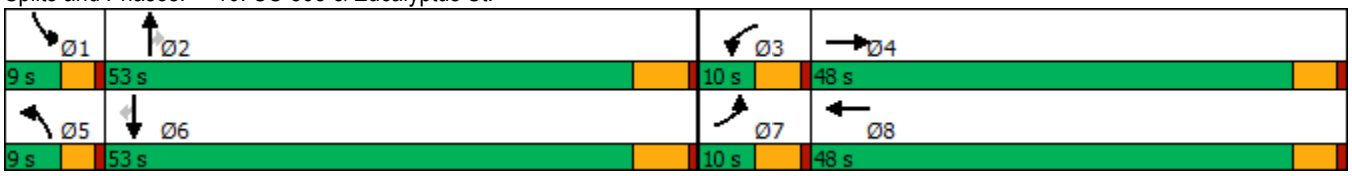
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.4	47.0	10.0	17.0	15.3	46.1	7.8	19.2
Change Period (Y+Rc), s	4.0	6.0	4.0	5.0	4.0	6.0	4.0	5.0
Max Green Setting (Gmax), s	16.0	41.0	6.0	38.0	19.0	38.0	6.0	38.0
Max Q Clear Time (g_c+I1), s	10.4	20.8	8.0	10.1	11.2	19.7	4.9	9.7
Green Ext Time (p_c), s	0.1	4.3	0.0	1.3	0.2	3.7	0.0	1.3

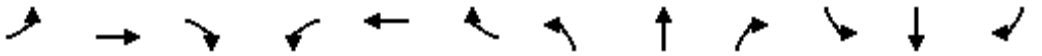
Intersection Summary	
HCM 6th Ctrl Delay	29.6
HCM 6th LOS	C

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	6	0	46	2	9	1401	88	12	1107	11
Future Volume (vph)	6	0	46	2	9	1401	88	12	1107	11
Turn Type	Prot	NA	Prot	NA	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4	3	8	5	2		1	6	
Permitted Phases							2			6
Detector Phase	7	4	3	8	5	2	2	1	6	6
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	10.0	48.0	10.0	48.0	9.0	41.0	41.0	9.0	41.0	41.0
Total Split (s)	10.0	48.0	10.0	48.0	9.0	53.0	53.0	9.0	53.0	53.0
Total Split (%)	8.3%	40.0%	8.3%	40.0%	7.5%	44.2%	44.2%	7.5%	44.2%	44.2%
Yellow Time (s)	4.0	4.0	4.0	4.0	3.0	5.0	5.0	3.0	5.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	4.0	6.0	6.0	4.0	6.0	6.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	Max	Max	None	Max	Max
Act Effct Green (s)	5.2	15.1	8.4	15.1	5.2	61.2	61.2	5.2	61.2	61.2
Actuated g/C Ratio	0.06	0.18	0.10	0.18	0.06	0.72	0.72	0.06	0.72	0.72
v/c Ratio	0.05	0.01	0.27	0.04	0.08	0.57	0.08	0.12	0.45	0.01
Control Delay	45.8	0.0	45.0	14.9	46.2	13.6	3.5	46.8	12.0	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	45.8	0.0	45.0	14.9	46.2	13.6	3.5	46.8	12.0	0.0
LOS	D	A	D	B	D	B	A	D	B	A
Approach Delay		30.6		38.6		13.2			12.2	
Approach LOS		C		D		B			B	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 85.2	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.57	
Intersection Signal Delay: 13.4	Intersection LOS: B
Intersection Capacity Utilization 57.1%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 10: US-395 & Eucalyptus St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	6	0	3	46	2	10	9	1401	88	12	1107	11
Future Volume (veh/h)	6	0	3	46	2	10	9	1401	88	12	1107	11
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	6	0	0	48	2	3	9	1475	90	13	1165	11
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	14	104	0	76	61	91	21	2247	1002	29	2263	1010
Arrive On Green	0.01	0.00	0.00	0.04	0.09	0.09	0.01	0.62	0.62	0.02	0.63	0.63
Sat Flow, veh/h	1810	1900	0	1810	686	1029	1810	3610	1610	1810	3610	1610
Grp Volume(v), veh/h	6	0	0	48	0	5	9	1475	90	13	1165	11
Grp Sat Flow(s),veh/h/ln	1810	1900	0	1810	0	1715	1810	1805	1610	1810	1805	1610
Q Serve(g_s), s	0.2	0.0	0.0	2.0	0.0	0.2	0.4	19.7	1.7	0.5	13.4	0.2
Cycle Q Clear(g_c), s	0.2	0.0	0.0	2.0	0.0	0.2	0.4	19.7	1.7	0.5	13.4	0.2
Prop In Lane	1.00		0.00	1.00		0.60	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	14	104	0	76	0	152	21	2247	1002	29	2263	1010
V/C Ratio(X)	0.42	0.00	0.00	0.63	0.00	0.03	0.44	0.66	0.09	0.45	0.51	0.01
Avail Cap(c_a), veh/h	120	1082	0	120	0	977	120	2247	1002	120	2263	1010
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.3	0.0	0.0	35.6	0.0	31.4	37.1	9.1	5.7	36.8	7.8	5.3
Incr Delay (d2), s/veh	7.3	0.0	0.0	3.2	0.0	0.1	5.3	1.5	0.2	4.1	0.8	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	0.0	0.9	0.0	0.1	0.2	5.3	0.5	0.3	4.7	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	44.6	0.0	0.0	38.8	0.0	31.5	42.4	10.6	5.9	41.0	8.6	5.3
LnGrp LOS	D	A	A	D	A	C	D	B	A	D	A	A
Approach Vol, veh/h		6			53			1574			1189	
Approach Delay, s/veh		44.6			38.1			10.5			8.9	
Approach LOS		D			D			B			A	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.2	53.0	8.2	9.1	4.9	53.3	5.6	11.7
Change Period (Y+Rc), s	4.0	6.0	5.0	5.0	4.0	6.0	5.0	5.0
Max Green Setting (Gmax), s	5.0	47.0	5.0	43.0	5.0	47.0	5.0	43.0
Max Q Clear Time (g_c+I1), s	2.5	21.7	4.0	0.0	2.4	15.4	2.2	2.2
Green Ext Time (p_c), s	0.0	11.5	0.0	0.0	0.0	11.2	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	10.4
HCM 6th LOS	B

Intersection	
Int Delay, s/veh	33.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	3	0	4	31	0	3	8	1598	28	2	1281	4
Future Vol, veh/h	3	0	4	31	0	3	8	1598	28	2	1281	4
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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	3	0	4	32	0	3	8	1665	29	2	1334	4

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	3037	3050	1336	3038	3038	1680	1338	0	0	1694	0	0
Stage 1	1340	1340	-	1696	1696	-	-	-	-	-	-	-
Stage 2	1697	1710	-	1342	1342	-	-	-	-	-	-	-
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	8	13	190	~ 8	13	118	522	-	-	382	-	-
Stage 1	190	223	-	119	150	-	-	-	-	-	-	-
Stage 2	118	147	-	190	223	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	6	9	190	~ 6	9	118	522	-	-	382	-	-
Mov Cap-2 Maneuver	6	9	-	~ 6	9	-	-	-	-	-	-	-
Stage 1	138	219	-	86	109	-	-	-	-	-	-	-
Stage 2	83	107	-	182	219	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	$ 465.4	$ 2848.7	0.1	0
HCM LOS	F	F		

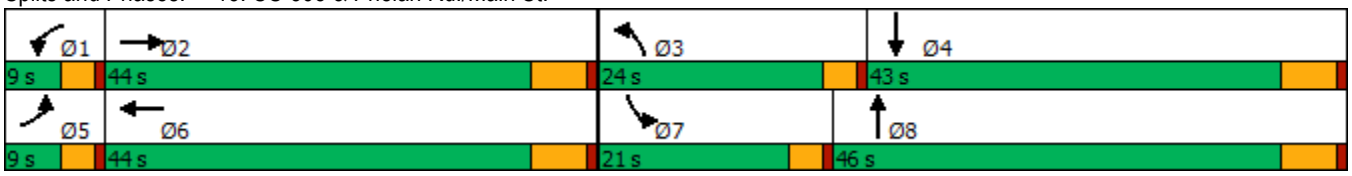
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	522	-	-	13	7	382	-	-
HCM Lane V/C Ratio	0.016	-	-	0.561	5.06	0.005	-	-
HCM Control Delay (s)	12	0	-	$ 465.4	$ 2848.7	14.5	0	-
HCM Lane LOS	B	A	-	F	F	B	A	-
HCM 95th %tile Q(veh)	0	-	-	1.3	5.8	0	-	-

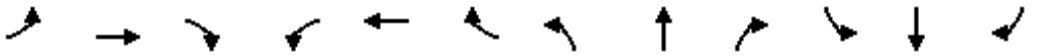
Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	90	632	24	743	220	1210	321	895
Future Volume (vph)	90	632	24	743	220	1210	321	895
Turn Type	Prot	NA	Prot	NA	Prot	NA	Prot	NA
Protected Phases	5	2	1	6	3	8	7	4
Permitted Phases								
Detector Phase	5	2	1	6	3	8	7	4
Switch Phase								
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.0	16.0	9.0	16.0	9.0	16.0	9.0	16.0
Total Split (s)	9.0	44.0	9.0	44.0	24.0	46.0	21.0	43.0
Total Split (%)	7.5%	36.7%	7.5%	36.7%	20.0%	38.3%	17.5%	35.8%
Yellow Time (s)	3.0	5.0	3.0	5.0	3.0	5.0	3.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	6.0	4.0	6.0	4.0	6.0	4.0	6.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None
Act Effct Green (s)	5.0	41.6	5.0	38.0	18.3	40.0	17.0	38.7
Actuated g/C Ratio	0.04	0.35	0.04	0.32	0.15	0.33	0.14	0.32
v/c Ratio	1.27	0.64	0.33	1.00	0.84	1.10	1.33	0.91
Control Delay	237.4	35.7	68.0	66.1	75.2	97.4	211.5	51.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	237.4	35.7	68.0	66.1	75.2	97.4	211.5	51.3
LOS	F	D	E	E	E	F	F	D
Approach Delay		57.5		66.1		94.1		90.4
Approach LOS		E		E		F		F

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.33	
Intersection Signal Delay: 80.1	Intersection LOS: F
Intersection Capacity Utilization 105.6%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 13: US-395 & Phelan Rd./Main St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	90	632	114	24	743	335	220	1210	47	321	895	99
Future Volume (veh/h)	90	632	114	24	743	335	220	1210	47	321	895	99
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	95	665	92	25	782	269	232	1274	42	338	942	89
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	76	1054	146	43	826	284	260	1194	39	258	1112	105
Arrive On Green	0.04	0.33	0.33	0.02	0.31	0.31	0.14	0.33	0.33	0.14	0.33	0.33
Sat Flow, veh/h	1810	3176	439	1810	2636	906	1810	3566	117	1810	3333	315
Grp Volume(v), veh/h	95	378	379	25	535	516	232	644	672	338	510	521
Grp Sat Flow(s),veh/h/ln	1810	1805	1810	1810	1805	1737	1810	1805	1879	1810	1805	1843
Q Serve(g_s), s	5.0	21.1	21.2	1.6	34.6	34.6	15.0	40.0	40.0	17.0	31.4	31.4
Cycle Q Clear(g_c), s	5.0	21.1	21.2	1.6	34.6	34.6	15.0	40.0	40.0	17.0	31.4	31.4
Prop In Lane	1.00		0.24	1.00		0.52	1.00		0.06	1.00		0.17
Lane Grp Cap(c), veh/h	76	599	600	43	566	544	260	604	629	258	602	615
V/C Ratio(X)	1.25	0.63	0.63	0.59	0.95	0.95	0.89	1.07	1.07	1.31	0.85	0.85
Avail Cap(c_a), veh/h	76	599	600	76	574	553	303	604	629	258	602	615
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	57.2	33.7	33.7	57.7	40.0	40.0	50.2	39.7	39.7	51.2	37.0	37.0
Incr Delay (d2), s/veh	186.3	2.1	2.2	9.1	24.8	25.5	23.4	55.4	55.2	165.5	11.1	10.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.1	9.0	9.1	0.8	18.2	17.6	8.2	25.7	26.7	19.2	14.7	15.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	243.6	35.9	35.9	66.8	64.8	65.5	73.6	95.2	95.0	216.7	48.0	47.9
LnGrp LOS	F	D	D	E	E	E	E	F	F	F	D	D
Approach Vol, veh/h		852			1076			1548			1369	
Approach Delay, s/veh		59.0			65.2			91.8			89.6	
Approach LOS		E			E			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.8	45.6	21.2	45.8	9.0	43.4	21.0	46.0
Change Period (Y+Rc), s	4.0	6.0	4.0	6.0	4.0	6.0	4.0	6.0
Max Green Setting (Gmax), s	5.0	38.0	20.0	37.0	5.0	38.0	17.0	40.0
Max Q Clear Time (g_c+I1), s	3.6	23.2	17.0	33.4	7.0	36.6	19.0	42.0
Green Ext Time (p_c), s	0.0	3.5	0.1	2.1	0.0	0.8	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	79.5
HCM 6th LOS	E

Intersection	
Int Delay, s/veh	1.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	14	24	1452	33	11	1026
Future Vol, veh/h	14	24	1452	33	11	1026
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	375	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	98	98	98	98	98	98
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	14	24	1482	34	11	1047

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	2568	758	0	0	1516	0
Stage 1	1499	-	-	-	-	-
Stage 2	1069	-	-	-	-	-
Critical Hdwy	6.6	6.9	-	-	4.1	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	25	354	-	-	446	-
Stage 1	175	-	-	-	-	-
Stage 2	333	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	24	354	-	-	446	-
Mov Cap-2 Maneuver	24	-	-	-	-	-
Stage 1	175	-	-	-	-	-
Stage 2	325	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	114.7	0	0.1
HCM LOS	F		

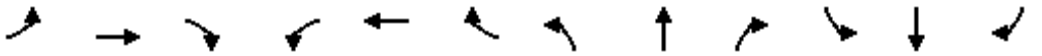
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	24	354	446	-
HCM Lane V/C Ratio	-	-	0.595	0.069	0.025	-
HCM Control Delay (s)	-	-	284.1	15.9	13.3	-
HCM Lane LOS	-	-	F	C	B	-
HCM 95th %tile Q(veh)	-	-	1.8	0.2	0.1	-

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	80	1	132	4	33	210	1374	153	34	905	101
Future Volume (vph)	80	1	132	4	33	210	1374	153	34	905	101
Turn Type	Perm	NA	Perm	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		4		8		5	2		1	6	
Permitted Phases	4		8		8			2			6
Detector Phase	4	4	8	8	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	16.0	16.0	16.0	16.0	16.0	10.0	16.0	16.0	10.0	16.0	16.0
Total Split (s)	41.0	41.0	41.0	41.0	41.0	26.0	69.0	69.0	10.0	53.0	53.0
Total Split (%)	34.2%	34.2%	34.2%	34.2%	34.2%	21.7%	57.5%	57.5%	8.3%	44.2%	44.2%
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	5.0	6.0	6.0	5.0	6.0	6.0
Lead/Lag						Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?						Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Max	Max	None	Max	Max
Act Effct Green (s)	20.6	20.6	20.6	20.6	20.6	15.7	64.4	64.4	5.1	49.2	49.2
Actuated g/C Ratio	0.20	0.20	0.20	0.20	0.20	0.15	0.63	0.63	0.05	0.48	0.48
v/c Ratio	0.29	0.49	1.02	0.01	0.08	0.78	0.62	0.15	0.39	0.53	0.12
Control Delay	37.1	7.5	123.6	31.8	0.4	62.5	15.7	2.9	65.3	22.4	3.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	37.1	7.5	123.6	31.8	0.4	62.5	15.7	2.9	65.3	22.4	3.4
LOS	D	A	F	C	A	E	B	A	E	C	A
Approach Delay		14.5		97.2			20.2			22.0	
Approach LOS		B		F			C			C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 102.7	
Natural Cycle: 60	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.02	
Intersection Signal Delay: 24.2	Intersection LOS: C
Intersection Capacity Utilization 85.7%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 15: US-395 & Three Flags Rd.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	80	1	258	132	4	33	210	1374	153	34	905	101
Future Volume (veh/h)	80	1	258	132	4	33	210	1374	153	34	905	101
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	82	1	222	135	4	28	214	1402	150	35	923	86
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	428	2	396	222	470	398	245	2056	916	54	1675	747
Arrive On Green	0.25	0.25	0.25	0.25	0.25	0.25	0.14	0.57	0.57	0.03	0.46	0.46
Sat Flow, veh/h	1477	7	1604	1242	1900	1610	1810	3610	1609	1810	3610	1610
Grp Volume(v), veh/h	82	0	223	135	4	28	214	1402	150	35	923	86
Grp Sat Flow(s),veh/h/ln	1477	0	1611	1242	1900	1610	1810	1805	1609	1810	1805	1610
Q Serve(g_s), s	4.9	0.0	13.4	11.8	0.2	1.5	12.8	30.2	4.9	2.1	20.4	3.3
Cycle Q Clear(g_c), s	5.1	0.0	13.4	25.2	0.2	1.5	12.8	30.2	4.9	2.1	20.4	3.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	428	0	398	222	470	398	245	2056	916	54	1675	747
V/C Ratio(X)	0.19	0.00	0.56	0.61	0.01	0.07	0.87	0.68	0.16	0.65	0.55	0.12
Avail Cap(c_a), veh/h	530	0	510	308	601	509	343	2056	916	82	1675	747
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	33.3	0.0	36.4	47.4	31.4	31.9	46.9	16.8	11.3	53.1	21.3	16.8
Incr Delay (d2), s/veh	0.1	0.0	0.5	1.0	0.0	0.0	12.9	1.9	0.4	4.8	1.3	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	5.3	3.7	0.1	0.6	6.3	11.1	1.6	1.0	8.0	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	33.4	0.0	36.9	48.4	31.4	31.9	59.8	18.6	11.7	57.9	22.7	17.1
LnGrp LOS	C	A	D	D	C	C	E	B	B	E	C	B
Approach Vol, veh/h		305			167			1766			1044	
Approach Delay, s/veh		35.9			45.2			23.0			23.4	
Approach LOS		D			D			C			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.3	69.0		33.3	20.0	57.3		33.3				
Change Period (Y+Rc), s	5.0	6.0		6.0	5.0	6.0		6.0				
Max Green Setting (Gmax), s	5.0	63.0		35.0	21.0	47.0		35.0				
Max Q Clear Time (g_c+I1), s	4.1	32.2		15.4	14.8	22.4		27.2				
Green Ext Time (p_c), s	0.0	11.9		1.0	0.1	6.2		0.2				

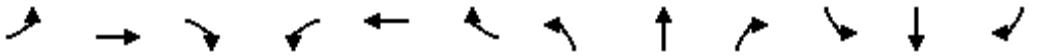
Intersection Summary			
HCM 6th Ctrl Delay		25.5	
HCM 6th LOS		C	

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	91	135	84	69	221	27	1427	90	182	1057	56
Future Volume (vph)	91	135	84	69	221	27	1427	90	182	1057	56
Turn Type	Perm	NA	Perm	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		4		8		5	2		1	6	
Permitted Phases	4		8		8			2			6
Detector Phase	4	4	8	8	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	15.0	15.0	46.0	46.0	46.0	9.0	34.0	34.0	9.0	34.0	34.0
Total Split (s)	47.0	47.0	47.0	47.0	47.0	9.0	41.0	41.0	32.0	64.0	64.0
Total Split (%)	39.2%	39.2%	39.2%	39.2%	39.2%	7.5%	34.2%	34.2%	26.7%	53.3%	53.3%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	3.0	5.0	5.0	3.0	5.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	0.0	-2.0	-2.0	0.0	-2.0	-2.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag						Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?						Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Max	Max	None	Max	Max
Act Effct Green (s)	17.0	17.0	17.0	17.0	17.0	5.1	46.3	46.3	14.2	61.5	61.5
Actuated g/C Ratio	0.19	0.19	0.19	0.19	0.19	0.06	0.52	0.52	0.16	0.68	0.68
v/c Ratio	0.37	0.43	0.45	0.20	0.47	0.27	0.79	0.11	0.66	0.44	0.05
Control Delay	35.3	34.3	39.4	31.2	7.3	53.3	24.7	5.2	48.2	9.8	3.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	35.3	34.3	39.4	31.2	7.3	53.3	24.7	5.2	48.2	9.8	3.4
LOS	D	C	D	C	A	D	C	A	D	A	A
Approach Delay		34.7		18.9			24.1			14.9	
Approach LOS		C		B			C			B	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 89.8	
Natural Cycle: 100	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.79	
Intersection Signal Delay: 20.8	Intersection LOS: C
Intersection Capacity Utilization 80.4%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 16: US-395 & Joshua St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	91	135	16	84	69	221	27	1427	90	182	1057	56
Future Volume (veh/h)	91	135	16	84	69	221	27	1427	90	182	1057	56
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	94	139	13	87	71	170	28	1471	81	188	1090	51
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	259	307	29	221	341	288	50	2032	906	227	2385	1064
Arrive On Green	0.18	0.18	0.17	0.18	0.18	0.18	0.03	0.56	0.56	0.13	0.66	0.66
Sat Flow, veh/h	1220	1711	160	1324	1900	1607	1810	3610	1610	1810	3610	1610
Grp Volume(v), veh/h	94	0	152	87	71	170	28	1471	81	188	1090	51
Grp Sat Flow(s),veh/h/ln	1220	0	1871	1324	1900	1607	1810	1805	1610	1810	1805	1610
Q Serve(g_s), s	6.5	0.0	6.6	5.7	2.9	8.8	1.4	27.3	2.1	9.2	13.3	1.0
Cycle Q Clear(g_c), s	9.4	0.0	6.6	12.3	2.9	8.8	1.4	27.3	2.1	9.2	13.3	1.0
Prop In Lane	1.00		0.09	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	259	0	336	221	341	288	50	2032	906	227	2385	1064
V/C Ratio(X)	0.36	0.00	0.45	0.39	0.21	0.59	0.55	0.72	0.09	0.83	0.46	0.05
Avail Cap(c_a), veh/h	618	0	886	610	900	761	100	2032	906	558	2385	1064
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	35.8	0.0	33.3	38.8	31.8	34.2	43.6	14.6	9.1	38.8	7.5	5.4
Incr Delay (d2), s/veh	0.3	0.0	0.4	0.4	0.1	0.7	6.9	2.3	0.2	5.7	0.6	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	0.0	3.0	1.9	1.3	3.4	0.7	9.3	0.6	4.1	3.8	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	36.1	0.0	33.7	39.2	31.9	34.9	50.5	16.9	9.3	44.4	8.1	5.5
LnGrp LOS	D	A	C	D	C	C	D	B	A	D	A	A
Approach Vol, veh/h		246			328			1580			1329	
Approach Delay, s/veh		34.6			35.4			17.1			13.2	
Approach LOS		C			D			B			B	

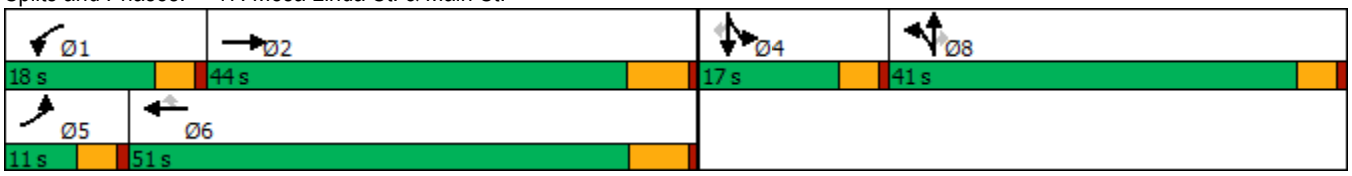
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	15.4	55.1		20.3	6.5	64.0		20.3				
Change Period (Y+Rc), s	4.0	6.0		5.0	4.0	6.0		5.0				
Max Green Setting (Gmax), s	28.0	35.0		42.0	5.0	58.0		42.0				
Max Q Clear Time (g_c+I1), s	11.2	29.3		11.4	3.4	15.3		14.3				
Green Ext Time (p_c), s	0.3	5.0		0.7	0.0	18.1		0.7				

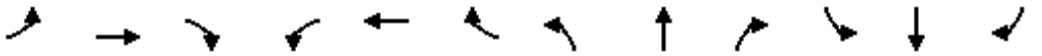
Intersection Summary			
HCM 6th Ctrl Delay		18.6	
HCM 6th LOS		B	

Lane Group	EBL	EBT	WBL	WBT	WBR	NBT	NBR	SBT	SBR
Lane Configurations									
Traffic Volume (vph)	5	1696	47	1102	54	7	81	0	3
Future Volume (vph)	5	1696	47	1102	54	7	81	0	3
Turn Type	Prot	NA	Prot	NA	Perm	NA	Perm	NA	Perm
Protected Phases	5	2	1	6		8		4	
Permitted Phases					6		8		4
Detector Phase	5	2	1	6	6	8	8	4	4
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	16.5	9.6	23.2	23.2	40.6	40.6	14.6	14.6
Total Split (s)	11.0	44.0	18.0	51.0	51.0	41.0	41.0	17.0	17.0
Total Split (%)	9.2%	36.7%	15.0%	42.5%	42.5%	34.2%	34.2%	14.2%	14.2%
Yellow Time (s)	3.6	5.5	3.6	5.2	5.2	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.5	4.6	6.2	6.2	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lead	Lag	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes				
Recall Mode	None	Max	None	Max	Max	None	None	None	None
Act Effct Green (s)	5.4	48.5	7.3	54.2	54.2	14.2	14.2	10.5	10.5
Actuated g/C Ratio	0.06	0.58	0.09	0.65	0.65	0.17	0.17	0.13	0.13
v/c Ratio	0.05	0.62	0.35	0.36	0.05	0.06	0.22	0.15	0.01
Control Delay	47.2	21.3	48.4	12.9	1.0	31.6	1.3	42.2	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	47.2	21.3	48.4	12.9	1.0	31.6	1.3	42.2	0.0
LOS	D	C	D	B	A	C	A	D	A
Approach Delay		21.4		13.7		6.4		38.6	
Approach LOS		C		B		A		D	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 83.8	
Natural Cycle: 110	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.62	
Intersection Signal Delay: 18.1	Intersection LOS: B
Intersection Capacity Utilization 64.5%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 17: Mesa Linda St. & Main St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	1696	6	47	1102	54	10	7	81	31	0	3
Future Volume (veh/h)	5	1696	6	47	1102	54	10	7	81	31	0	3
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	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	5	1767	5	49	1148	48	10	7	25	32	0	1
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	11	2780	8	68	2876	893	79	56	118	113	0	100
Arrive On Green	0.01	0.55	0.55	0.04	0.59	0.59	0.08	0.08	0.08	0.07	0.00	0.07
Sat Flow, veh/h	1619	5059	14	1619	4914	1525	1029	720	1525	1714	0	1525
Grp Volume(v), veh/h	5	1144	628	49	1148	48	17	0	25	32	0	1
Grp Sat Flow(s),veh/h/ln	1619	1638	1797	1619	1638	1525	1749	0	1525	1714	0	1525
Q Serve(g_s), s	0.2	18.5	18.5	2.3	9.7	1.0	0.7	0.0	1.2	1.4	0.0	0.0
Cycle Q Clear(g_c), s	0.2	18.5	18.5	2.3	9.7	1.0	0.7	0.0	1.2	1.4	0.0	0.0
Prop In Lane	1.00		0.01	1.00		1.00	0.59		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	11	1800	988	68	2876	893	135	0	118	113	0	100
V/C Ratio(X)	0.47	0.64	0.64	0.72	0.40	0.05	0.13	0.00	0.21	0.28	0.00	0.01
Avail Cap(c_a), veh/h	135	1800	988	283	2876	893	831	0	725	278	0	247
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	37.9	11.9	11.9	36.2	8.6	6.8	32.9	0.0	33.1	34.0	0.0	33.4
Incr Delay (d2), s/veh	11.4	1.7	3.1	5.1	0.4	0.1	0.4	0.0	0.9	1.4	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	5.3	6.2	0.9	2.6	0.3	0.3	0.0	0.5	0.6	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	49.3	13.7	15.1	41.3	9.0	6.9	33.3	0.0	34.0	35.4	0.0	33.5
LnGrp LOS	D	B	B	D	A	A	C	A	C	D	A	C
Approach Vol, veh/h		1777			1245			42			33	
Approach Delay, s/veh		14.3			10.2			33.7			35.3	
Approach LOS		B			B			C			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.8	48.6		9.6	5.1	51.3		10.5				
Change Period (Y+Rc), s	4.6	6.5		4.6	4.6	* 6.5		4.6				
Max Green Setting (Gmax), s	13.4	37.5		12.4	6.4	* 45		36.4				
Max Q Clear Time (g_c+I1), s	4.3	20.5		3.4	2.2	11.7		3.2				
Green Ext Time (p_c), s	0.0	10.0		0.0	0.0	8.8		0.1				

Intersection Summary		
HCM 6th Ctrl Delay		13.1
HCM 6th LOS		B

Notes

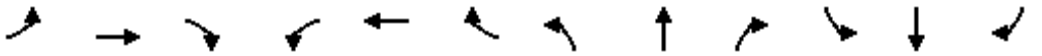
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	91	909	99	295	898	46	198	56	188	73	33	115
Future Volume (vph)	91	909	99	295	898	46	198	56	188	73	33	115
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Split	NA	Perm	Split	NA	Perm
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases			2			6			8			4
Detector Phase	5	2	2	1	6	6	8	8	8	4	4	4
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	32.2	32.2	9.6	32.2	32.2	43.6	43.6	43.6	41.6	41.6	41.6
Total Split (s)	11.0	32.8	32.8	12.0	33.8	33.8	43.6	43.6	43.6	41.6	41.6	41.6
Total Split (%)	8.5%	25.2%	25.2%	9.2%	26.0%	26.0%	33.5%	33.5%	33.5%	32.0%	32.0%	32.0%
Yellow Time (s)	3.6	5.2	5.2	3.6	5.2	5.2	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	6.2	4.6	6.2	6.2	4.6	4.6	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes						
Recall Mode	None	Max	Max	None	Max	Max	None	None	None	None	None	None
Act Effct Green (s)	6.7	27.9	27.9	7.8	28.9	28.9	15.9	15.9	15.9	14.1	14.1	14.1
Actuated g/C Ratio	0.08	0.32	0.32	0.09	0.33	0.33	0.18	0.18	0.18	0.16	0.16	0.16
v/c Ratio	0.74	0.59	0.18	1.14	0.56	0.08	0.45	0.43	0.44	0.28	0.12	0.34
Control Delay	76.8	29.4	8.1	137.4	28.4	0.6	36.9	36.0	8.2	35.4	32.7	9.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	76.8	29.4	8.1	137.4	28.4	0.6	36.9	36.0	8.2	35.4	32.7	9.3
LOS	E	C	A	F	C	A	D	D	A	D	C	A
Approach Delay		31.4			53.3			24.4			21.4	
Approach LOS		C			D			C			C	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 86.6	
Natural Cycle: 130	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.14	
Intersection Signal Delay: 38.7	Intersection LOS: D
Intersection Capacity Utilization 61.3%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 18: Cataba Av. & Main St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	91	909	99	295	898	46	198	56	188	73	33	115
Future Volume (veh/h)	91	909	99	295	898	46	198	56	188	73	33	115
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		0.99	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	1700	1800	1800	1600	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	93	928	62	301	916	35	130	158	89	74	34	27
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	115	1745	541	292	1881	583	248	276	232	203	226	191
Arrive On Green	0.07	0.36	0.36	0.10	0.38	0.38	0.15	0.15	0.15	0.13	0.13	0.13
Sat Flow, veh/h	1619	4914	1524	2956	4914	1523	1619	1800	1511	1619	1800	1525
Grp Volume(v), veh/h	93	928	62	301	916	35	130	158	89	74	34	27
Grp Sat Flow(s),veh/h/ln	1619	1638	1524	1478	1638	1523	1619	1800	1511	1619	1800	1525
Q Serve(g_s), s	4.2	11.2	2.0	7.4	10.6	1.1	5.5	6.1	4.0	3.1	1.3	1.2
Cycle Q Clear(g_c), s	4.2	11.2	2.0	7.4	10.6	1.1	5.5	6.1	4.0	3.1	1.3	1.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	115	1745	541	292	1881	583	248	276	232	203	226	191
V/C Ratio(X)	0.81	0.53	0.11	1.03	0.49	0.06	0.52	0.57	0.38	0.36	0.15	0.14
Avail Cap(c_a), veh/h	138	1745	541	292	1881	583	843	937	787	800	889	754
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.3	19.2	16.2	33.7	17.5	14.6	29.2	29.4	28.5	30.0	29.2	29.2
Incr Delay (d2), s/veh	20.8	1.2	0.4	60.7	0.9	0.2	1.7	1.9	1.0	1.1	0.3	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	2.2	3.8	0.7	4.9	3.6	0.4	2.2	2.7	1.5	1.3	0.6	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	55.0	20.4	16.7	94.5	18.4	14.8	30.9	31.3	29.6	31.1	29.5	29.5
LnGrp LOS	E	C	B	F	B	B	C	C	C	C	C	C
Approach Vol, veh/h		1083			1252			377			135	
Approach Delay, s/veh		23.1			36.6			30.7			30.4	
Approach LOS		C			D			C			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	12.0	32.8		14.0	9.9	34.9		16.1				
Change Period (Y+Rc), s	4.6	6.2		4.6	4.6	6.2		4.6				
Max Green Setting (Gmax), s	7.4	26.6		37.0	6.4	27.6		39.0				
Max Q Clear Time (g_c+I1), s	9.4	13.2		5.1	6.2	12.6		8.1				
Green Ext Time (p_c), s	0.0	4.8		0.5	0.0	5.1		1.7				

Intersection Summary		
HCM 6th Ctrl Delay		30.4
HCM 6th LOS		C

Notes

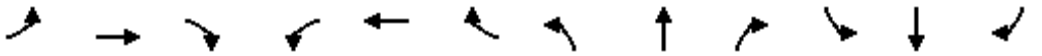
User approved pedestrian interval to be less than phase max green.
User approved volume balancing among the lanes for turning movement.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	57	1208	25	224	1363	30	74	240	231	87
Future Volume (vph)	57	1208	25	224	1363	30	74	240	231	87
Turn Type	Prot	NA	Perm	Prot	NA	Perm	NA	Perm	Perm	NA
Protected Phases	5	2		1	6		8			4
Permitted Phases			2			8		8	4	
Detector Phase	5	2	2	1	6	8	8	8	4	4
Switch Phase										
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	29.2	29.2	9.6	30.2	38.6	38.6	38.6	41.6	41.6
Total Split (s)	16.0	42.0	42.0	34.0	60.0	44.0	44.0	44.0	44.0	44.0
Total Split (%)	13.3%	35.0%	35.0%	28.3%	50.0%	36.7%	36.7%	36.7%	36.7%	36.7%
Yellow Time (s)	3.6	5.2	5.2	3.6	5.2	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	6.2	4.6	6.2	4.6	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes					
Recall Mode	None	Max	Max	None	Max	None	None	None	None	None
Act Effct Green (s)	8.0	41.9	41.9	18.6	55.0	25.0	25.0	25.0	25.0	25.0
Actuated g/C Ratio	0.08	0.41	0.41	0.18	0.54	0.25	0.25	0.25	0.25	0.25
v/c Ratio	0.46	0.61	0.04	0.77	0.62	0.11	0.17	0.44	0.79	0.28
Control Delay	59.8	27.6	0.1	57.8	19.4	30.3	30.8	6.4	55.7	27.9
Queue Delay	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0
Total Delay	59.8	27.6	0.1	57.8	19.6	30.3	30.8	6.4	55.7	27.9
LOS	E	C	A	E	B	C	C	A	E	C
Approach Delay		28.5			24.3		13.8			46.2
Approach LOS		C			C		B			D

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 101.2	
Natural Cycle: 85	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.79	
Intersection Signal Delay: 26.8	Intersection LOS: C
Intersection Capacity Utilization 73.5%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 19: Key Point Av. & Main St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	57	1208	25	224	1363	221	30	74	240	231	87	32
Future Volume (veh/h)	57	1208	25	224	1363	221	30	74	240	231	87	32
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		0.98	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	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	58	1233	22	229	1391	150	31	76	104	236	89	12
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	72	2051	637	259	2400	259	350	486	405	345	419	56
Arrive On Green	0.04	0.42	0.42	0.16	0.53	0.53	0.27	0.27	0.27	0.27	0.27	0.27
Sat Flow, veh/h	1619	4914	1525	1619	4502	485	1237	1800	1501	1153	1552	209
Grp Volume(v), veh/h	58	1233	22	229	1012	529	31	76	104	236	0	101
Grp Sat Flow(s),veh/h/ln	1619	1638	1525	1619	1638	1712	1237	1800	1501	1153	0	1761
Q Serve(g_s), s	3.6	19.7	0.9	14.0	21.1	21.1	2.0	3.2	5.5	19.8	0.0	4.5
Cycle Q Clear(g_c), s	3.6	19.7	0.9	14.0	21.1	21.1	6.5	3.2	5.5	23.0	0.0	4.5
Prop In Lane	1.00		1.00	1.00		0.28	1.00		1.00	1.00		0.12
Lane Grp Cap(c), veh/h	72	2051	637	259	1746	913	350	486	405	345	0	475
V/C Ratio(X)	0.80	0.60	0.03	0.88	0.58	0.58	0.09	0.16	0.26	0.68	0.00	0.21
Avail Cap(c_a), veh/h	183	2051	637	472	1746	913	499	703	586	484	0	688
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	47.8	22.9	17.4	41.4	15.9	15.9	31.1	28.1	28.9	36.9	0.0	28.5
Incr Delay (d2), s/veh	7.5	1.3	0.1	3.9	1.4	2.7	0.1	0.1	0.3	2.4	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	7.1	0.3	5.5	7.2	7.8	0.6	1.4	2.0	5.8	0.0	1.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	55.3	24.2	17.5	45.3	17.3	18.6	31.2	28.2	29.2	39.3	0.0	28.8
LnGrp LOS	E	C	B	D	B	B	C	C	C	D	A	C
Approach Vol, veh/h		1313			1770			211			337	
Approach Delay, s/veh		25.4			21.3			29.2			36.1	
Approach LOS		C			C			C			D	

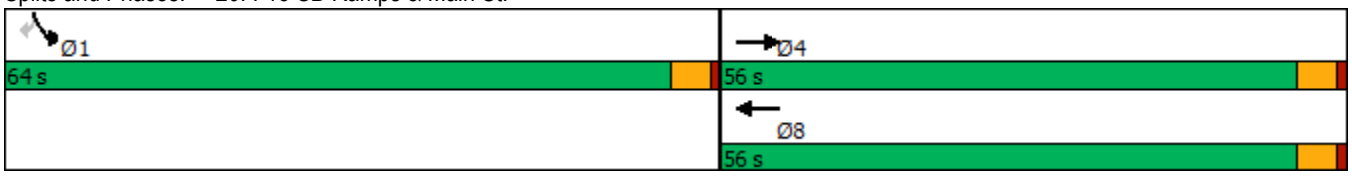
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	20.8	48.3		31.8	9.1	60.0		31.8				
Change Period (Y+Rc), s	4.6	6.2		4.6	4.6	6.2		4.6				
Max Green Setting (Gmax), s	29.4	35.8		39.4	11.4	53.8		39.4				
Max Q Clear Time (g_c+I1), s	16.0	21.7		25.0	5.6	23.1		8.5				
Green Ext Time (p_c), s	0.2	6.6		1.3	0.0	11.8		0.9				

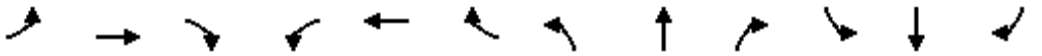
Intersection Summary			
HCM 6th Ctrl Delay		24.6	
HCM 6th LOS		C	

Lane Group	EBT	EBR	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	1459	60	1323	42	587	462
Future Volume (vph)	1459	60	1323	42	587	462
Turn Type	NA	Free	NA	Free	Prot	Perm
Protected Phases	4		8		1	
Permitted Phases		Free		Free		1
Detector Phase	4		8		1	1
Switch Phase						
Minimum Initial (s)	5.0		5.0		5.0	5.0
Minimum Split (s)	9.6		22.6		9.6	9.6
Total Split (s)	56.0		56.0		64.0	64.0
Total Split (%)	46.7%		46.7%		53.3%	53.3%
Yellow Time (s)	3.6		3.6		3.6	3.6
All-Red Time (s)	1.0		1.0		1.0	1.0
Lost Time Adjust (s)	0.0		0.0		0.0	0.0
Total Lost Time (s)	4.6		4.6		4.6	4.6
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None		None		None	None
Act Effct Green (s)	32.4	72.3	32.4	72.3	30.0	30.0
Actuated g/C Ratio	0.45	1.00	0.45	1.00	0.41	0.41
v/c Ratio	0.65	0.04	0.59	0.03	0.42	0.70
Control Delay	17.9	0.1	17.0	0.0	16.3	24.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	17.9	0.1	17.0	0.0	16.3	24.0
LOS	B	A	B	A	B	C
Approach Delay	17.2		16.5			
Approach LOS	B		B			

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 72.3	
Natural Cycle: 40	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.70	
Intersection Signal Delay: 17.6	Intersection LOS: B
Intersection Capacity Utilization 61.8%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 20: I-15 SB Ramps & Main St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↱		↑↑↑	↱				↰↰		↱
Traffic Volume (veh/h)	0	1459	60	0	1323	42	0	0	0	587	0	462
Future Volume (veh/h)	0	1459	60	0	1323	42	0	0	0	587	0	462
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	1900	1900	0	1900	1900				1900	0	1900
Adj Flow Rate, veh/h	0	1504	0	0	1364	0				605	0	363
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	0	0	0	0	0				0	0	0
Cap, veh/h	0	2600		0	2600					1116	0	512
Arrive On Green	0.00	0.50	0.00	0.00	0.50	0.00				0.32	0.00	0.32
Sat Flow, veh/h	0	5358	1610	0	5358	1610				3510	0	1610
Grp Volume(v), veh/h	0	1504	0	0	1364	0				605	0	363
Grp Sat Flow(s),veh/h/ln	0	1729	1610	0	1729	1610				1755	0	1610
Q Serve(g_s), s	0.0	10.4	0.0	0.0	9.1	0.0				7.2	0.0	10.1
Cycle Q Clear(g_c), s	0.0	10.4	0.0	0.0	9.1	0.0				7.2	0.0	10.1
Prop In Lane	0.00		1.00	0.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2600		0	2600					1116	0	512
V/C Ratio(X)	0.00	0.58		0.00	0.52					0.54	0.00	0.71
Avail Cap(c_a), veh/h	0	5239		0	5239					4098	0	1880
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	8.9	0.0	0.0	8.6	0.0				14.3	0.0	15.3
Incr Delay (d2), s/veh	0.0	0.2	0.0	0.0	0.2	0.0				0.4	0.0	1.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	2.4	0.0	0.0	2.1	0.0				2.6	0.0	3.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	9.1	0.0	0.0	8.8	0.0				14.7	0.0	17.1
LnGrp LOS	A	A		A	A					B	A	B
Approach Vol, veh/h		1504	A		1364	A					968	
Approach Delay, s/veh		9.1			8.8						15.6	
Approach LOS		A			A						B	

Timer - Assigned Phs		4		6		8						
Phs Duration (G+Y+Rc), s		30.1		20.8		30.1						
Change Period (Y+Rc), s		4.6		4.6		4.6						
Max Green Setting (Gmax), s		51.4		59.4		51.4						
Max Q Clear Time (g_c+I1), s		12.4		12.1		11.1						
Green Ext Time (p_c), s		13.1		4.1		11.4						

Intersection Summary												
HCM 6th Ctrl Delay		10.6										
HCM 6th LOS		B										

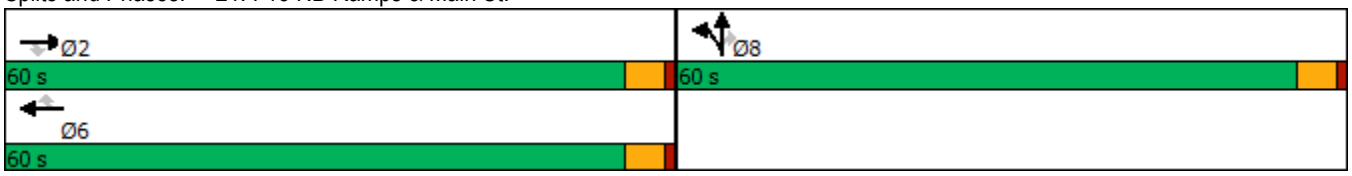
Notes

Unsignalized Delay for [EBR, WBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBT	EBR	WBT	WBR	NBL	NBT	NBR
Lane Configurations							
Traffic Volume (vph)	1740	306	1515	454	221	0	889
Future Volume (vph)	1740	306	1515	454	221	0	889
Turn Type	NA	Perm	NA	Perm	Split	NA	Perm
Protected Phases	2		6		8	8	
Permitted Phases		2		6			8
Detector Phase	2	2	6	6	8	8	8
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.6	22.6	22.6	22.6	9.6	9.6	9.6
Total Split (s)	60.0	60.0	60.0	60.0	60.0	60.0	60.0
Total Split (%)	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Lead/Lag							
Lead-Lag Optimize?							
Recall Mode	None	None	None	None	Min	Min	Min
Act Effct Green (s)	46.7	46.7	46.7	46.7	38.7	38.7	38.7
Actuated g/C Ratio	0.49	0.49	0.49	0.49	0.41	0.41	0.41
v/c Ratio	0.71	0.33	0.61	0.45	0.31	0.72	0.72
Control Delay	21.9	3.8	20.1	3.2	21.0	31.0	31.0
Queue Delay	0.0	0.0	0.3	0.3	0.0	0.0	0.0
Total Delay	21.9	3.8	20.3	3.5	21.0	31.0	31.0
LOS	C	A	C	A	C	C	C
Approach Delay	19.2		16.5			29.0	
Approach LOS	B		B			C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 95.2	
Natural Cycle: 50	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.72	
Intersection Signal Delay: 20.3	Intersection LOS: C
Intersection Capacity Utilization 78.0%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 21: I-15 NB Ramps & Main St.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↱		↑↑↑	↱	↰	↑	↱			
Traffic Volume (veh/h)	0	1740	306	0	1515	454	221	0	889	0	0	0
Future Volume (veh/h)	0	1740	306	0	1515	454	221	0	889	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	0	1900	1900	0	1900	1900	1900	1900	1900			
Adj Flow Rate, veh/h	0	1794	0	0	1562	321	228	0	769			
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	0	0	0	0	0	0	0	0			
Cap, veh/h	0	2798		0	2798	868	574	0	1022			
Arrive On Green	0.00	0.54	0.00	0.00	0.54	0.54	0.32	0.00	0.32			
Sat Flow, veh/h	0	5358	1610	0	5358	1610	1810	0	3220			
Grp Volume(v), veh/h	0	1794	0	0	1562	321	228	0	769			
Grp Sat Flow(s),veh/h/ln	0	1729	1610	0	1729	1610	1810	0	1610			
Q Serve(g_s), s	0.0	15.6	0.0	0.0	12.7	7.4	6.3	0.0	13.8			
Cycle Q Clear(g_c), s	0.0	15.6	0.0	0.0	12.7	7.4	6.3	0.0	13.8			
Prop In Lane	0.00		1.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	0	2798		0	2798	868	574	0	1022			
V/C Ratio(X)	0.00	0.64		0.00	0.56	0.37	0.40	0.00	0.75			
Avail Cap(c_a), veh/h	0	4475		0	4475	1389	1561	0	2779			
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	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	0.0	10.4	0.0	0.0	9.7	8.5	17.1	0.0	19.7			
Incr Delay (d2), s/veh	0.0	0.2	0.0	0.0	0.2	0.3	0.4	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	0.0	4.1	0.0	0.0	3.3	1.8	2.6	0.0	5.0			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	10.7	0.0	0.0	9.9	8.8	17.6	0.0	20.8			
LnGrp LOS	A	B		A	A	A	B	A	C			
Approach Vol, veh/h		1794	A		1883			997				
Approach Delay, s/veh		10.7			9.7			20.1				
Approach LOS		B			A			C				

Timer - Assigned Phs	2				6		8					
Phs Duration (G+Y+Rc), s	39.2				39.2		25.0					
Change Period (Y+Rc), s	4.6				4.6		4.6					
Max Green Setting (Gmax), s	55.4				55.4		55.4					
Max Q Clear Time (g_c+I1), s	17.6				14.7		15.8					
Green Ext Time (p_c), s	17.0				16.3		4.6					

Intersection Summary												
HCM 6th Ctrl Delay		12.3										
HCM 6th LOS		B										

Notes

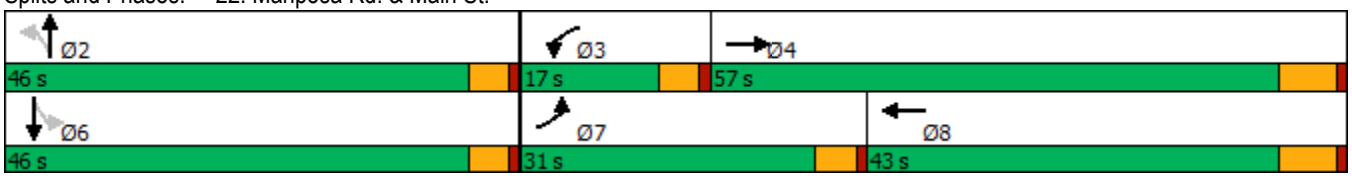
User approved volume balancing among the lanes for turning movement.

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	249	2221	87	1572	134	80	137	55
Future Volume (vph)	249	2221	87	1572	134	80	137	55
Turn Type	Prot	NA	Prot	NA	Perm	NA	Perm	NA
Protected Phases	7	4	3	8		2		6
Permitted Phases					2		6	
Detector Phase	7	4	3	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	24.2	9.6	24.2	44.6	44.6	44.6	44.6
Total Split (s)	31.0	57.0	17.0	43.0	46.0	46.0	46.0	46.0
Total Split (%)	25.8%	47.5%	14.2%	35.8%	38.3%	38.3%	38.3%	38.3%
Yellow Time (s)	3.6	5.2	3.6	5.2	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	4.6	6.2	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes				
Recall Mode	None	Max	Max	None	None	None	None	None
Act Effct Green (s)	19.4	51.2	12.5	44.3	23.0	23.0	23.0	23.0
Actuated g/C Ratio	0.19	0.50	0.12	0.43	0.22	0.22	0.22	0.22
v/c Ratio	0.83	0.79	0.45	0.64	0.98	0.38	0.63	0.54
Control Delay	63.0	24.8	52.8	26.7	110.2	26.0	48.1	16.2
Queue Delay	0.0	13.7	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	63.0	38.5	52.8	26.7	110.2	26.0	48.1	16.2
LOS	E	D	D	C	F	C	D	B
Approach Delay		40.8		28.0		65.6		27.3
Approach LOS		D		C		E		C

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 102.3	
Natural Cycle: 100	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.98	
Intersection Signal Delay: 36.7	Intersection LOS: D
Intersection Capacity Utilization 83.3%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 22: Mariposa Rd. & Main St.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	249	2221	159	87	1572	106	134	80	71	137	55	202
Future Volume (veh/h)	249	2221	159	87	1572	106	134	80	71	137	55	202
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		0.99	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	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	254	2266	146	89	1604	92	137	82	45	140	56	135
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	283	2910	187	192	2594	149	236	270	148	296	116	280
Arrive On Green	0.17	0.49	0.49	0.12	0.43	0.43	0.25	0.25	0.25	0.25	0.25	0.25
Sat Flow, veh/h	1619	5989	385	1619	6036	346	1144	1087	596	1212	468	1129
Grp Volume(v), veh/h	254	1756	656	89	1234	462	137	0	127	140	0	191
Grp Sat Flow(s),veh/h/ln	1619	1548	1731	1619	1548	1738	1144	0	1683	1212	0	1597
Q Serve(g_s), s	16.1	32.7	32.8	5.4	21.6	21.6	12.1	0.0	6.4	11.1	0.0	10.7
Cycle Q Clear(g_c), s	16.1	32.7	32.8	5.4	21.6	21.6	22.8	0.0	6.4	17.5	0.0	10.7
Prop In Lane	1.00		0.22	1.00		0.20	1.00		0.35	1.00		0.71
Lane Grp Cap(c), veh/h	283	2256	841	192	1996	747	236	0	418	296	0	397
V/C Ratio(X)	0.90	0.78	0.78	0.46	0.62	0.62	0.58	0.00	0.30	0.47	0.00	0.48
Avail Cap(c_a), veh/h	409	2256	841	192	1996	747	405	0	667	474	0	632
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	42.2	22.2	22.3	43.0	23.2	23.2	43.3	0.0	32.0	39.1	0.0	33.6
Incr Delay (d2), s/veh	13.2	2.7	7.1	7.8	0.6	1.6	2.3	0.0	0.4	1.2	0.0	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	7.1	11.1	13.4	2.5	7.3	8.4	3.6	0.0	2.7	3.4	0.0	4.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	55.5	25.0	29.3	50.8	23.7	24.7	45.6	0.0	32.4	40.2	0.0	34.5
LnGrp LOS	E	C	C	D	C	C	D	A	C	D	A	C
Approach Vol, veh/h		2666			1785			264			331	
Approach Delay, s/veh		28.9			25.3			39.2			36.9	
Approach LOS		C			C			D			D	

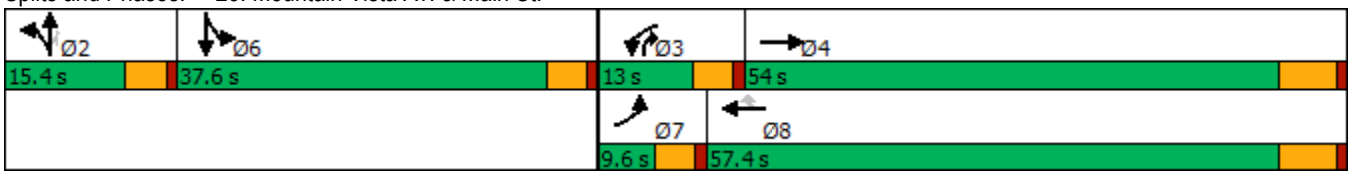
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		30.6	17.0	57.0		30.6	22.9	51.1				
Change Period (Y+Rc), s		4.6	4.6	6.2		4.6	4.6	6.2				
Max Green Setting (Gmax), s		41.4	12.4	50.8		41.4	26.4	36.8				
Max Q Clear Time (g_c+I1), s		24.8	7.4	34.8		19.5	18.1	23.6				
Green Ext Time (p_c), s		1.1	0.0	12.6		1.7	0.2	8.2				

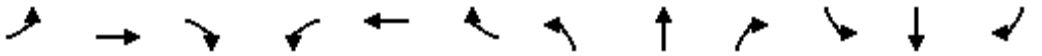
Intersection Summary												
HCM 6th Ctrl Delay			28.7									
HCM 6th LOS			C									

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	49	2271	63	1831	71	33	5	28	80	7
Future Volume (vph)	49	2271	63	1831	71	33	5	28	80	7
Turn Type	Prot	NA	Prot	NA	Perm	Split	NA	pm+ov	Split	NA
Protected Phases	7	4	3	8		2	2	3	6	6
Permitted Phases					8			2		
Detector Phase	7	4	3	8	8	2	2	3	6	6
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	43.2	9.6	32.2	32.2	14.6	14.6	9.6	37.6	37.6
Total Split (s)	9.6	54.0	13.0	57.4	57.4	15.4	15.4	13.0	37.6	37.6
Total Split (%)	8.0%	45.0%	10.8%	47.8%	47.8%	12.8%	12.8%	10.8%	31.3%	31.3%
Yellow Time (s)	3.6	5.2	3.6	5.2	5.2	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	4.6	6.2	6.2	4.6	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lead	Lag	Lag			Lead		
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes			Yes		
Recall Mode	None	Max	None	Max	Max	None	None	None	None	None
Act Effct Green (s)	5.2	55.6	7.4	60.0	60.0	10.3	10.3	12.8	13.9	13.9
Actuated g/C Ratio	0.06	0.60	0.08	0.65	0.65	0.11	0.11	0.14	0.15	0.15
v/c Ratio	0.32	0.65	0.52	0.61	0.07	0.10	0.07	0.07	0.21	0.20
Control Delay	53.3	20.1	60.5	17.4	2.4	46.4	44.5	0.3	38.6	34.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	53.3	20.1	60.5	17.4	2.4	46.4	44.5	0.3	38.6	34.4
LOS	D	C	E	B	A	D	D	A	D	C
Approach Delay		20.8		18.2			26.4			36.5
Approach LOS		C		B			C			D

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 92.8	
Natural Cycle: 105	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.65	
Intersection Signal Delay: 20.1	Intersection LOS: C
Intersection Capacity Utilization 63.7%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 23: Mountain Vista Av. & Main St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	49	2271	19	63	1831	71	33	5	28	80	7	6
Future Volume (veh/h)	49	2271	19	63	1831	71	33	5	28	80	7	6
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	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	1600	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	52	2391	18	66	1927	60	35	5	14	94	0	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	119	3509	26	82	2752	854	264	147	404	322	179	0
Arrive On Green	0.04	0.55	0.55	0.05	0.56	0.56	0.08	0.08	0.08	0.10	0.00	0.00
Sat Flow, veh/h	2956	6386	48	1619	4914	1525	3238	1800	3051	3238	1800	0
Grp Volume(v), veh/h	52	1739	670	66	1927	60	35	5	14	94	0	0
Grp Sat Flow(s),veh/h/ln	1478	1548	1790	1619	1638	1525	1619	1800	1525	1619	1800	0
Q Serve(g_s), s	1.6	24.6	24.7	3.7	25.9	1.6	0.9	0.2	0.4	2.5	0.0	0.0
Cycle Q Clear(g_c), s	1.6	24.6	24.7	3.7	25.9	1.6	0.9	0.2	0.4	2.5	0.0	0.0
Prop In Lane	1.00		0.03	1.00		1.00	1.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	119	2552	984	82	2752	854	264	147	404	322	179	0
V/C Ratio(X)	0.44	0.68	0.68	0.80	0.70	0.07	0.13	0.03	0.03	0.29	0.00	0.00
Avail Cap(c_a), veh/h	162	2552	984	149	2752	854	383	213	515	1169	650	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	42.9	14.8	14.8	42.9	14.5	9.2	39.0	38.7	34.6	38.2	0.0	0.0
Incr Delay (d2), s/veh	0.9	1.5	3.8	6.7	1.5	0.2	0.2	0.1	0.0	0.5	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	7.4	9.2	1.6	8.2	0.5	0.4	0.1	0.1	1.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	43.8	16.3	18.6	49.7	16.1	9.4	39.2	38.7	34.6	38.7	0.0	0.0
LnGrp LOS	D	B	B	D	B	A	D	D	C	D	A	A
Approach Vol, veh/h		2461			2053			54			94	
Approach Delay, s/veh		17.5			16.9			38.0			38.7	
Approach LOS		B			B			D			D	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		12.1	9.2	56.4		13.7	8.3	57.4				
Change Period (Y+Rc), s		4.6	4.6	6.2		4.6	4.6	6.2				
Max Green Setting (Gmax), s		10.8	8.4	47.8		33.0	5.0	51.2				
Max Q Clear Time (g_c+I1), s		2.9	5.7	26.7		4.5	3.6	27.9				
Green Ext Time (p_c), s		0.1	0.0	15.7		0.3	0.0	14.6				

Intersection Summary												
HCM 6th Ctrl Delay			17.9									
HCM 6th LOS			B									

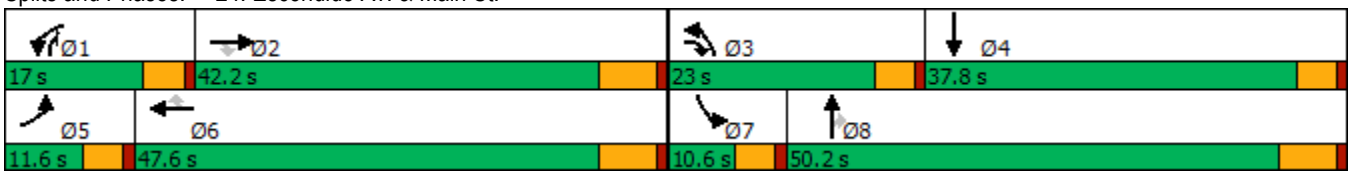
Notes

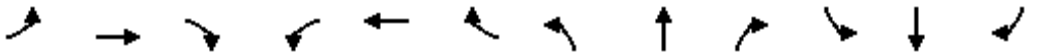
User approved volume balancing among the lanes for turning movement.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations											
Traffic Volume (vph)	55	1557	724	458	1198	10	713	52	240	57	38
Future Volume (vph)	55	1557	724	458	1198	10	713	52	240	57	38
Turn Type	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA
Protected Phases	5	2	3	1	6		3	8	1	7	4
Permitted Phases			2			6			8		
Detector Phase	5	2	3	1	6	6	3	8	1	7	4
Switch Phase											
Minimum Initial (s)	5.0	10.0	5.0	5.0	10.0	10.0	5.0	10.0	5.0	5.0	10.0
Minimum Split (s)	9.6	41.2	9.6	9.6	31.2	31.2	9.6	49.2	9.6	9.6	37.6
Total Split (s)	11.6	42.2	23.0	17.0	47.6	47.6	23.0	50.2	17.0	10.6	37.8
Total Split (%)	9.7%	35.2%	19.2%	14.2%	39.7%	39.7%	19.2%	41.8%	14.2%	8.8%	31.5%
Yellow Time (s)	3.6	5.2	3.6	3.6	5.2	5.2	3.6	5.2	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	4.6	4.6	6.2	6.2	4.6	6.2	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Max	None	None	Max	Max	None	None	None	None	None
Act Effct Green (s)	6.6	36.5	56.8	12.6	44.8	44.8	18.7	23.9	42.8	6.0	13.9
Actuated g/C Ratio	0.07	0.37	0.58	0.13	0.45	0.45	0.19	0.24	0.43	0.06	0.14
v/c Ratio	0.53	0.89	0.64	1.27	0.80	0.01	1.33	0.12	0.36	0.60	0.34
Control Delay	66.2	38.0	4.1	177.6	31.2	0.0	194.7	29.4	14.5	74.4	21.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	66.2	38.0	4.1	177.6	31.2	0.0	194.7	29.4	14.5	74.4	21.6
LOS	E	D	A	F	C	A	F	C	B	E	C
Approach Delay		28.1			71.3			143.1			41.7
Approach LOS		C			E			F			D

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 98.5	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.33	
Intersection Signal Delay: 64.9	Intersection LOS: E
Intersection Capacity Utilization 92.3%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 24: Escondido Av. & Main St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	55	1557	724	458	1198	10	713	52	240	57	38	54
Future Volume (veh/h)	55	1557	724	458	1198	10	713	52	240	57	38	54
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	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	1700	1800	1800	1600	1800	1800	1600	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	57	1622	564	477	1248	8	743	54	169	59	40	53
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	71	1813	849	376	1547	676	557	428	556	73	66	88
Arrive On Green	0.04	0.37	0.37	0.13	0.45	0.45	0.19	0.24	0.24	0.05	0.09	0.09
Sat Flow, veh/h	1619	4914	1523	2956	3420	1494	2956	1800	1525	1619	702	930
Grp Volume(v), veh/h	57	1622	564	477	1248	8	743	54	169	59	0	93
Grp Sat Flow(s),veh/h/ln	1619	1638	1523	1478	1710	1494	1478	1800	1525	1619	0	1633
Q Serve(g_s), s	3.4	30.3	25.4	12.4	30.7	0.3	18.4	2.3	7.7	3.5	0.0	5.3
Cycle Q Clear(g_c), s	3.4	30.3	25.4	12.4	30.7	0.3	18.4	2.3	7.7	3.5	0.0	5.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.57
Lane Grp Cap(c), veh/h	71	1813	849	376	1547	676	557	428	556	73	0	154
V/C Ratio(X)	0.81	0.89	0.66	1.27	0.81	0.01	1.33	0.13	0.30	0.81	0.00	0.60
Avail Cap(c_a), veh/h	116	1813	849	376	1547	676	557	812	882	100	0	555
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	46.3	29.0	15.2	42.6	23.0	14.7	39.6	29.2	22.2	46.2	0.0	42.5
Incr Delay (d2), s/veh	7.8	7.3	4.1	140.9	4.6	0.0	161.9	0.1	0.3	20.8	0.0	3.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	12.0	9.3	11.6	11.9	0.1	19.2	1.0	2.8	1.8	0.0	2.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	54.1	36.3	19.3	183.5	27.7	14.7	201.5	29.4	22.5	66.9	0.0	46.2
LnGrp LOS	D	D	B	F	C	B	F	C	C	E	A	D
Approach Vol, veh/h		2243			1733			966			152	
Approach Delay, s/veh		32.5			70.5			160.5			54.3	
Approach LOS		C			E			F			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.0	42.2	23.0	15.4	8.9	50.3	9.0	29.4
Change Period (Y+Rc), s	4.6	6.2	4.6	* 6.2	4.6	6.2	4.6	6.2
Max Green Setting (Gmax), s	12.4	36.0	18.4	* 33	7.0	41.4	6.0	44.0
Max Q Clear Time (g_c+I1), s	14.4	32.3	20.4	7.3	5.4	32.7	5.5	9.7
Green Ext Time (p_c), s	0.0	3.1	0.0	0.5	0.0	4.9	0.0	0.9

Intersection Summary	
HCM 6th Ctrl Delay	70.4
HCM 6th LOS	E

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	2.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	11	137	601	11	257	828
Future Vol, veh/h	11	137	601	11	257	828
Conflicting Peds, #/hr	0	0	0	4	1	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	100	0	-	-	195	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	11	143	626	11	268	863

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1604	323	0	0	641	0
Stage 1	636	-	-	-	-	-
Stage 2	968	-	-	-	-	-
Critical Hdwy	6.8	6.9	-	-	4.1	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	98	679	-	-	953	-
Stage 1	495	-	-	-	-	-
Stage 2	334	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	70	676	-	-	949	-
Mov Cap-2 Maneuver	175	-	-	-	-	-
Stage 1	493	-	-	-	-	-
Stage 2	240	-	-	-	-	-

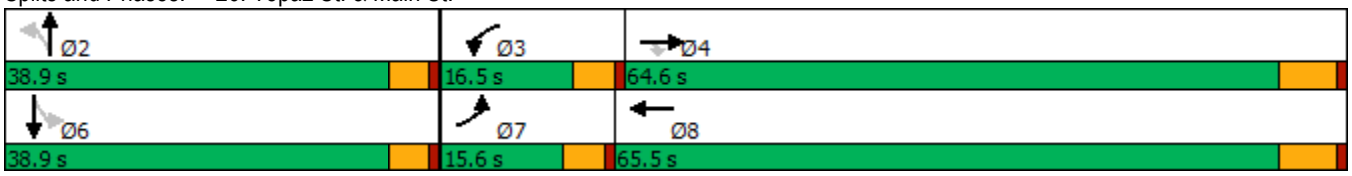
Approach	WB	NB	SB
HCM Control Delay, s	12.8	0	2.4
HCM LOS	B		

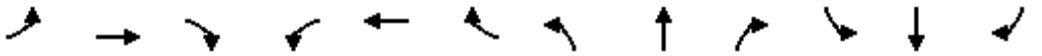
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	175	676	949	-
HCM Lane V/C Ratio	-	-	0.065	0.211	0.282	-
HCM Control Delay (s)	-	-	27	11.7	10.3	-
HCM Lane LOS	-	-	D	B	B	-
HCM 95th %tile Q(veh)	-	-	0.2	0.8	1.2	-

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	66	1576	226	106	1305	216	33	63	36
Future Volume (vph)	66	1576	226	106	1305	216	33	63	36
Turn Type	Prot	NA	Perm	Prot	NA	Perm	NA	Perm	NA
Protected Phases	7	4		3	8		2		6
Permitted Phases			4			2		6	
Detector Phase	7	4	4	3	8	2	2	6	6
Switch Phase									
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	25.2	25.2	9.6	23.2	32.6	32.6	38.6	38.6
Total Split (s)	15.6	64.6	64.6	16.5	65.5	38.9	38.9	38.9	38.9
Total Split (%)	13.0%	53.8%	53.8%	13.8%	54.6%	32.4%	32.4%	32.4%	32.4%
Yellow Time (s)	3.6	5.2	5.2	3.6	5.2	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	6.2	4.6	6.2	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes				
Recall Mode	None	None	None	Max	None	None	None	None	None
Act Effct Green (s)	8.5	56.8	56.8	12.0	62.6	25.0	25.0	25.0	25.0
Actuated g/C Ratio	0.08	0.52	0.52	0.11	0.57	0.23	0.23	0.23	0.23
v/c Ratio	0.54	0.91	0.27	0.62	0.73	0.82	0.30	0.27	0.20
Control Delay	66.7	34.3	5.5	65.0	22.5	63.6	12.7	37.7	18.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	66.7	34.3	5.5	65.0	22.5	63.6	12.7	37.7	18.3
LOS	E	C	A	E	C	E	B	D	B
Approach Delay		32.0			25.6		44.5		26.8
Approach LOS		C			C		D		C

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 109.3	
Natural Cycle: 110	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.91	
Intersection Signal Delay: 30.5	Intersection LOS: C
Intersection Capacity Utilization 96.1%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 26: Topaz St. & Main St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	66	1576	226	106	1305	70	216	33	97	63	36	45
Future Volume (veh/h)	66	1576	226	106	1305	70	216	33	97	63	36	45
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	0.99		1.00	1.00		0.99
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	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	68	1625	161	109	1345	65	223	34	69	65	37	15
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	85	1776	792	180	1919	93	326	120	243	281	274	111
Arrive On Green	0.05	0.52	0.52	0.11	0.58	0.58	0.23	0.23	0.23	0.23	0.23	0.23
Sat Flow, veh/h	1619	3420	1525	1619	3321	160	1284	530	1076	1239	1213	492
Grp Volume(v), veh/h	68	1625	161	109	691	719	223	0	103	65	0	52
Grp Sat Flow(s),veh/h/ln	1619	1710	1525	1619	1710	1771	1284	0	1606	1239	0	1704
Q Serve(g_s), s	4.5	46.6	6.1	6.9	30.7	30.9	18.0	0.0	5.7	4.9	0.0	2.6
Cycle Q Clear(g_c), s	4.5	46.6	6.1	6.9	30.7	30.9	20.6	0.0	5.7	10.6	0.0	2.6
Prop In Lane	1.00		1.00	1.00		0.09	1.00		0.67	1.00		0.29
Lane Grp Cap(c), veh/h	85	1776	792	180	988	1024	326	0	363	281	0	385
V/C Ratio(X)	0.80	0.91	0.20	0.61	0.70	0.70	0.68	0.00	0.28	0.23	0.00	0.14
Avail Cap(c_a), veh/h	166	1863	831	180	988	1024	447	0	514	398	0	545
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	50.2	23.6	13.8	45.4	16.0	16.1	41.4	0.0	34.3	38.7	0.0	33.1
Incr Delay (d2), s/veh	6.4	7.3	0.1	14.3	2.2	2.2	2.5	0.0	0.4	0.4	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	18.1	1.9	3.4	10.8	11.2	5.9	0.0	2.3	1.5	0.0	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	56.6	30.9	14.0	59.7	18.2	18.2	43.9	0.0	34.7	39.1	0.0	33.3
LnGrp LOS	E	C	B	E	B	B	D	A	C	D	A	C
Approach Vol, veh/h		1854			1519			326			117	
Approach Delay, s/veh		30.4			21.2			41.0			36.5	
Approach LOS		C			C			D			D	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		28.8	16.5	61.9		28.8	10.2	68.2				
Change Period (Y+Rc), s		4.6	4.6	6.2		4.6	4.6	6.2				
Max Green Setting (Gmax), s		34.3	11.9	58.4		34.3	11.0	59.3				
Max Q Clear Time (g_c+I1), s		22.6	8.9	48.6		12.6	6.5	32.9				
Green Ext Time (p_c), s		1.1	0.0	7.0		0.4	0.0	10.0				

Intersection Summary	
HCM 6th Ctrl Delay	27.8
HCM 6th LOS	C

APPENDIX 6.2:

OPENING YEAR CUMULATIVE (2021) WITH PROJECT CONDITIONS INTERSECTION OPERATIONS ANALYSIS WORKSHEETS

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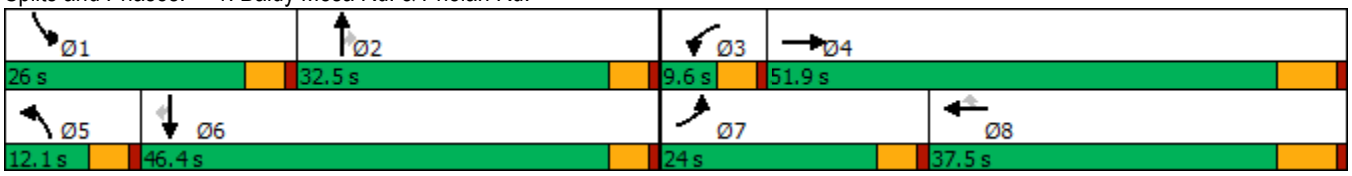
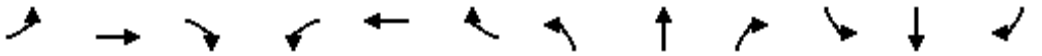
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	161	772	15	476	151	37	75	71	215	50	192
Future Volume (vph)	161	772	15	476	151	37	75	71	215	50	192
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4	3	8		5	2		1	6	
Permitted Phases					8			2			6
Detector Phase	7	4	3	8	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	30.5	9.6	37.5	37.5	9.6	31.6	31.6	9.6	40.6	40.6
Total Split (s)	24.0	51.9	9.6	37.5	37.5	12.1	32.5	32.5	26.0	46.4	46.4
Total Split (%)	20.0%	43.3%	8.0%	31.3%	31.3%	10.1%	27.1%	27.1%	21.7%	38.7%	38.7%
Yellow Time (s)	3.6	5.5	3.6	5.5	5.5	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.5	4.6	6.5	6.5	4.6	4.6	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Max	None	Max	Max	None	None	None	None	None	None
Act Effct Green (s)	15.4	48.1	5.1	31.5	31.5	6.6	13.4	13.4	19.2	30.5	30.5
Actuated g/C Ratio	0.15	0.48	0.05	0.32	0.32	0.07	0.13	0.13	0.19	0.30	0.30
v/c Ratio	0.75	0.57	0.21	0.51	0.29	0.41	0.36	0.22	0.81	0.11	0.36
Control Delay	61.4	22.4	56.9	32.0	5.8	60.3	44.8	1.4	60.7	28.2	5.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	61.4	22.4	56.9	32.0	5.8	60.3	44.8	1.4	60.7	28.2	5.6
LOS	E	C	E	C	A	E	D	A	E	C	A
Approach Delay		28.9		26.4			31.0			34.0	
Approach LOS		C		C			C			C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 100	
Natural Cycle: 100	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.81	
Intersection Signal Delay: 29.4	Intersection LOS: C
Intersection Capacity Utilization 60.6%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 1: Baldy Mesa Rd. & Phelan Rd.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	161	772	24	15	476	151	37	75	71	215	50	192
Future Volume (veh/h)	161	772	24	15	476	151	37	75	71	215	50	192
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	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	187	898	18	17	553	120	43	87	55	250	58	116
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	217	1595	32	83	1308	583	57	184	156	280	432	367
Arrive On Green	0.13	0.47	0.47	0.05	0.38	0.38	0.04	0.10	0.10	0.17	0.24	0.24
Sat Flow, veh/h	1619	3429	69	1619	3420	1525	1619	1800	1525	1619	1800	1525
Grp Volume(v), veh/h	187	448	468	17	553	120	43	87	55	250	58	116
Grp Sat Flow(s),veh/h/ln	1619	1710	1788	1619	1710	1525	1619	1800	1525	1619	1800	1525
Q Serve(g_s), s	11.0	18.5	18.5	1.0	11.6	5.1	2.6	4.4	3.3	14.7	2.5	6.1
Cycle Q Clear(g_c), s	11.0	18.5	18.5	1.0	11.6	5.1	2.6	4.4	3.3	14.7	2.5	6.1
Prop In Lane	1.00		0.04	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	217	796	832	83	1308	583	57	184	156	280	432	367
V/C Ratio(X)	0.86	0.56	0.56	0.20	0.42	0.21	0.75	0.47	0.35	0.89	0.13	0.32
Avail Cap(c_a), veh/h	322	796	832	83	1308	583	124	515	436	355	771	653
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.4	18.9	18.9	44.4	22.2	20.2	46.7	41.3	40.8	39.5	29.1	30.5
Incr Delay (d2), s/veh	10.2	2.9	2.7	0.4	1.0	0.8	7.2	1.9	1.3	17.7	0.1	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.7	7.0	7.3	0.4	4.4	1.8	1.2	2.1	1.2	7.2	1.1	2.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	51.6	21.8	21.7	44.8	23.2	21.0	53.9	43.2	42.1	57.2	29.2	31.0
LnGrp LOS	D	C	C	D	C	C	D	D	D	E	C	C
Approach Vol, veh/h		1103			690			185			424	
Approach Delay, s/veh		26.8			23.3			45.4			46.2	
Approach LOS		C			C			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	21.5	14.6	9.6	51.9	8.0	28.0	17.7	43.8
Change Period (Y+Rc), s	4.6	4.6	4.6	6.5	4.6	4.6	4.6	6.5
Max Green Setting (Gmax), s	21.4	27.9	5.0	45.4	7.5	41.8	19.4	31.0
Max Q Clear Time (g_c+I1), s	16.7	6.4	3.0	20.5	4.6	8.1	13.0	13.6
Green Ext Time (p_c), s	0.2	0.6	0.0	5.1	0.0	0.7	0.1	3.3

Intersection Summary	
HCM 6th Ctrl Delay	30.7
HCM 6th LOS	C

Intersection	
Int Delay, s/veh	1.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	3	1085	6	5	597	1	17	0	19	15	0	9
Future Vol, veh/h	3	1085	6	5	597	1	17	0	19	15	0	9
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	105	-	105	110	-	110	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	86	86	86	86	86	86	86	86	86	86	86	86
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	3	1262	7	6	694	1	20	0	22	17	0	10

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	695	0	0	1269	0	0	1980	1975	1262	1989	1981	694
Stage 1	-	-	-	-	-	-	1268	1268	-	706	706	-
Stage 2	-	-	-	-	-	-	712	707	-	1283	1275	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
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	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	910	-	-	554	-	-	47	63	209	46	62	446
Stage 1	-	-	-	-	-	-	209	242	-	430	442	-
Stage 2	-	-	-	-	-	-	427	441	-	205	240	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	910	-	-	554	-	-	45	62	209	41	61	446
Mov Cap-2 Maneuver	-	-	-	-	-	-	144	167	-	129	163	-
Stage 1	-	-	-	-	-	-	208	241	-	429	437	-
Stage 2	-	-	-	-	-	-	412	436	-	183	239	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0.1	32.5	29.3
HCM LOS			D	D

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	172	910	-	-	554	-	-	176
HCM Lane V/C Ratio	0.243	0.004	-	-	0.01	-	-	0.159
HCM Control Delay (s)	32.5	9	-	-	11.6	-	-	29.3
HCM Lane LOS	D	A	-	-	B	-	-	D
HCM 95th %tile Q(veh)	0.9	0	-	-	0	-	-	0.5

Intersection	
Int Delay, s/veh	0.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1072	10	3	590	15	6
Future Vol, veh/h	1072	10	3	590	15	6
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	110	-	0	-
Veh in Median Storage, #	0	-	-	0	1	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	1232	11	3	678	17	7

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1243	0	1922	1238
Stage 1	-	-	-	-	1238	-
Stage 2	-	-	-	-	684	-
Critical Hdwy	-	-	4.1	-	6.2	6.2
Critical Hdwy Stg 1	-	-	-	-	5.3	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	567	-	83	216
Stage 1	-	-	-	-	286	-
Stage 2	-	-	-	-	505	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	567	-	83	216
Mov Cap-2 Maneuver	-	-	-	-	201	-
Stage 1	-	-	-	-	286	-
Stage 2	-	-	-	-	502	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	24.9
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	205	-	-	567	-
HCM Lane V/C Ratio	0.118	-	-	0.006	-
HCM Control Delay (s)	24.9	-	-	11.4	-
HCM Lane LOS	C	-	-	B	-
HCM 95th %tile Q(veh)	0.4	-	-	0	-

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑	↱	↰	
Traffic Vol, veh/h	0	1084	587	400	12	7
Future Vol, veh/h	0	1084	587	400	12	7
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	0	-
Veh in Median Storage, #	-	0	0	-	1	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	1178	638	435	13	8

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	1816	638
Stage 1	-	-	-	-	638	-
Stage 2	-	-	-	-	1178	-
Critical Hdwy	-	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	0	-	-	-	87	480
Stage 1	0	-	-	-	530	-
Stage 2	0	-	-	-	295	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	87	480
Mov Cap-2 Maneuver	-	-	-	-	209	-
Stage 1	-	-	-	-	530	-
Stage 2	-	-	-	-	295	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	19.8
HCM LOS			C

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	264
HCM Lane V/C Ratio	-	-	-	0.078
HCM Control Delay (s)	-	-	-	19.8
HCM Lane LOS	-	-	-	C
HCM 95th %tile Q(veh)	-	-	-	0.3

Intersection	
Int Delay, s/veh	7.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1	0	161	3	0	42
Future Vol, veh/h	1	0	161	3	0	42
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	100	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	1	0	175	3	0	46

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1	0	354	1
Stage 1	-	-	-	-	1	-
Stage 2	-	-	-	-	353	-
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	-	-	1635	-	648	1090
Stage 1	-	-	-	-	1028	-
Stage 2	-	-	-	-	716	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1635	-	579	1090
Mov Cap-2 Maneuver	-	-	-	-	579	-
Stage 1	-	-	-	-	1028	-
Stage 2	-	-	-	-	639	-

Approach	EB	WB	NB
HCM Control Delay, s	0	7.3	8.4
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1090	-	-	1635	-
HCM Lane V/C Ratio	0.042	-	-	0.107	-
HCM Control Delay (s)	8.4	-	-	7.5	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0.4	-

Intersection	
Int Delay, s/veh	4.9

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	43	0	271	164	0	50
Future Vol, veh/h	43	0	271	164	0	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	-	-	100	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	47	0	295	178	0	54

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	47	0	815	47
Stage 1	-	-	-	-	47	-
Stage 2	-	-	-	-	768	-
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	-	-	1573	-	350	1028
Stage 1	-	-	-	-	981	-
Stage 2	-	-	-	-	461	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1573	-	284	1028
Mov Cap-2 Maneuver	-	-	-	-	332	-
Stage 1	-	-	-	-	981	-
Stage 2	-	-	-	-	374	-

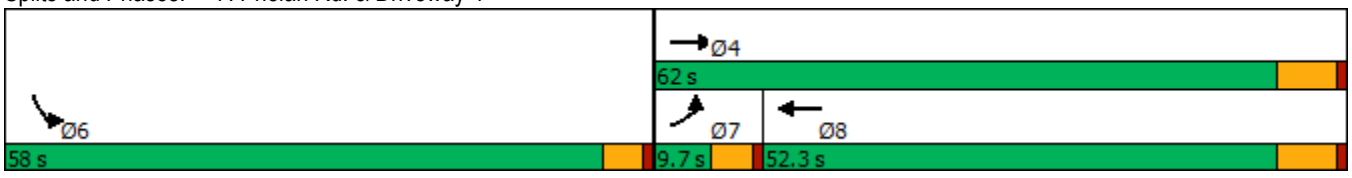
Approach	EB	WB	NB
HCM Control Delay, s	0	4.9	8.7
HCM LOS			A

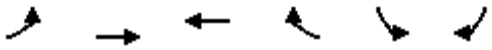
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1028	-	-	1573	-
HCM Lane V/C Ratio	0.053	-	-	0.187	-
HCM Control Delay (s)	8.7	-	-	7.8	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0.2	-	-	0.7	-

Lane Group	EBL	EBT	WBT	SBL
Lane Configurations				
Traffic Volume (vph)	97	1010	980	134
Future Volume (vph)	97	1010	980	134
Turn Type	Prot	NA	NA	Prot
Protected Phases	7	4	8	6
Permitted Phases				
Detector Phase	7	4	8	6
Switch Phase				
Minimum Initial (s)	5.0	10.0	10.0	10.0
Minimum Split (s)	9.6	16.5	23.5	26.6
Total Split (s)	9.7	62.0	52.3	58.0
Total Split (%)	8.1%	51.7%	43.6%	48.3%
Yellow Time (s)	3.6	5.5	5.5	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.5	6.5	4.6
Lead/Lag	Lead		Lag	
Lead-Lag Optimize?	Yes		Yes	
Recall Mode	None	Max	Max	None
Act Effct Green (s)	5.1	55.7	45.9	14.1
Actuated g/C Ratio	0.06	0.69	0.57	0.17
v/c Ratio	1.04	0.47	0.88	0.58
Control Delay	141.8	7.1	22.9	37.7
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	141.8	7.1	22.9	37.7
LOS	F	A	C	D
Approach Delay		18.9	22.9	37.7
Approach LOS		B	C	D

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 80.9	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.04	
Intersection Signal Delay: 22.1	Intersection LOS: C
Intersection Capacity Utilization 75.4%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 7: Phelan Rd. & Driveway 4





Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	97	1010	980	463	134	18
Future Volume (veh/h)	97	1010	980	463	134	18
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	1700	1800	1700	1800	1700	1800
Adj Flow Rate, veh/h	105	1098	1065	503	146	20
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	108	2478	1286	590	182	25
Arrive On Green	0.07	0.72	0.60	0.60	0.13	0.13
Sat Flow, veh/h	1619	3510	2236	986	1395	191
Grp Volume(v), veh/h	105	1098	792	776	167	0
Grp Sat Flow(s),veh/h/ln	1619	1710	1615	1522	1596	0
Q Serve(g_s), s	5.0	10.0	29.6	32.1	7.8	0.0
Cycle Q Clear(g_c), s	5.0	10.0	29.6	32.1	7.8	0.0
Prop In Lane	1.00			0.65	0.87	0.12
Lane Grp Cap(c), veh/h	108	2478	966	910	208	0
V/C Ratio(X)	0.97	0.44	0.82	0.85	0.80	0.00
Avail Cap(c_a), veh/h	108	2478	966	910	1112	0
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	0.00
Uniform Delay (d), s/veh	35.7	4.3	12.1	12.6	32.3	0.0
Incr Delay (d2), s/veh	77.9	0.6	7.7	10.0	7.0	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	4.1	1.7	9.2	9.7	3.4	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	113.6	4.9	19.9	22.6	39.3	0.0
LnGrp LOS	F	A	B	C	D	A
Approach Vol, veh/h		1203	1568		167	
Approach Delay, s/veh		14.3	21.2		39.3	
Approach LOS		B	C		D	

Timer - Assigned Phs	4	6	7	8
Phs Duration (G+Y+Rc), s	62.0	14.6	9.7	52.3
Change Period (Y+Rc), s	6.5	4.6	4.6	6.5
Max Green Setting (Gmax), s	55.5	53.4	5.1	45.8
Max Q Clear Time (g_c+I1), s	12.0	9.8	7.0	34.1
Green Ext Time (p_c), s	8.4	0.5	0.0	7.3

Intersection Summary	
HCM 6th Ctrl Delay	19.4
HCM 6th LOS	B

Notes

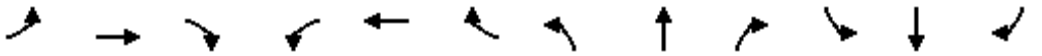
User approved volume balancing among the lanes for turning movement.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	50	126	70	76	95	37	881	46	218	1017	71
Future Volume (vph)	50	126	70	76	95	37	881	46	218	1017	71
Turn Type	Perm	NA	Perm	Perm	NA	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		4			8	5	2		1	6	
Permitted Phases	4		4	8				2			6
Detector Phase	4	4	4	8	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	15.0	15.0	15.0	42.0	42.0	9.0	28.0	28.0	9.0	37.0	37.0
Total Split (s)	44.0	44.0	44.0	44.0	44.0	10.0	45.0	45.0	31.0	66.0	66.0
Total Split (%)	36.7%	36.7%	36.7%	36.7%	36.7%	8.3%	37.5%	37.5%	25.8%	55.0%	55.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	3.0	5.0	5.0	3.0	5.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	4.0	6.0	6.0	4.0	6.0	6.0
Lead/Lag						Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?						Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Max	Max	None	Max	Max
Act Effct Green (s)	22.4	22.4	22.4	22.4	22.4	5.9	44.5	44.5	18.0	61.0	61.0
Actuated g/C Ratio	0.22	0.22	0.22	0.22	0.22	0.06	0.44	0.44	0.18	0.61	0.61
v/c Ratio	0.71	0.32	0.17	0.31	0.85	0.38	0.60	0.07	0.73	0.50	0.08
Control Delay	82.7	34.3	4.0	35.5	41.7	60.9	25.8	1.1	53.6	14.3	3.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	82.7	34.3	4.0	35.5	41.7	60.9	25.8	1.1	53.6	14.3	3.4
LOS	F	C	A	D	D	E	C	A	D	B	A
Approach Delay		35.4			40.7		26.0			20.3	
Approach LOS		D			D		C			C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 100.1	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.85	
Intersection Signal Delay: 26.5	Intersection LOS: C
Intersection Capacity Utilization 84.0%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 8: US-395 & Luna Rd.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	50	126	70	76	95	274	37	881	46	218	1017	71
Future Volume (veh/h)	50	126	70	76	95	274	37	881	46	218	1017	71
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	54	137	43	83	103	232	40	958	34	237	1105	59
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	147	485	411	323	132	298	59	1633	726	272	2056	917
Arrive On Green	0.26	0.26	0.26	0.26	0.26	0.26	0.03	0.45	0.45	0.15	0.57	0.57
Sat Flow, veh/h	1120	1900	1610	1291	519	1168	1810	3610	1605	1810	3610	1610
Grp Volume(v), veh/h	54	137	43	83	0	335	40	958	34	237	1105	59
Grp Sat Flow(s),veh/h/ln	1120	1900	1610	1291	0	1687	1810	1805	1605	1810	1805	1610
Q Serve(g_s), s	5.0	6.1	2.2	5.8	0.0	19.4	2.3	20.8	1.2	13.5	20.0	1.7
Cycle Q Clear(g_c), s	24.4	6.1	2.2	11.9	0.0	19.4	2.3	20.8	1.2	13.5	20.0	1.7
Prop In Lane	1.00		1.00	1.00		0.69	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	147	485	411	323	0	430	59	1633	726	272	2056	917
V/C Ratio(X)	0.37	0.28	0.10	0.26	0.00	0.78	0.68	0.59	0.05	0.87	0.54	0.06
Avail Cap(c_a), veh/h	276	704	596	472	0	624	103	1633	726	464	2056	917
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.8	31.5	30.0	36.3	0.0	36.5	50.4	21.5	16.1	43.8	14.1	10.1
Incr Delay (d2), s/veh	0.6	0.1	0.0	0.2	0.0	2.1	9.5	1.6	0.1	7.2	1.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	2.7	0.8	1.8	0.0	8.0	1.1	8.2	0.4	6.2	7.1	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	48.4	31.6	30.1	36.4	0.0	38.6	59.9	23.1	16.3	50.9	15.1	10.3
LnGrp LOS	D	C	C	D	A	D	E	C	B	D	B	B
Approach Vol, veh/h		234			418			1032			1401	
Approach Delay, s/veh		35.2			38.1			24.3			20.9	
Approach LOS		D			D			C			C	

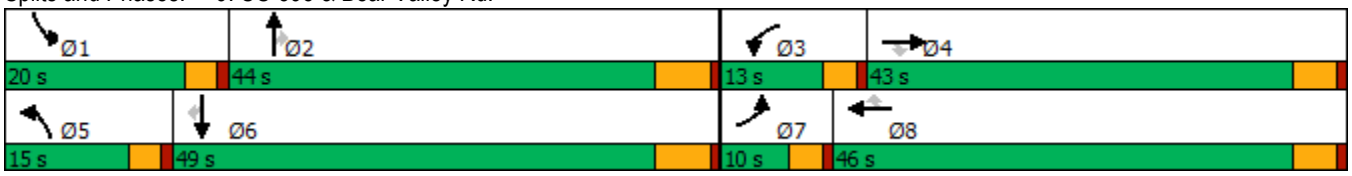
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	19.8	53.6		31.9	7.4	66.0		31.9				
Change Period (Y+Rc), s	4.0	6.0		5.0	4.0	6.0		5.0				
Max Green Setting (Gmax), s	27.0	39.0		39.0	6.0	60.0		39.0				
Max Q Clear Time (g_c+I1), s	15.5	22.8		26.4	4.3	22.0		21.4				
Green Ext Time (p_c), s	0.3	4.4		0.5	0.0	6.6		1.3				

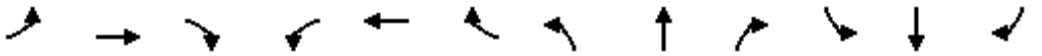
Intersection Summary			
HCM 6th Ctrl Delay		25.5	
HCM 6th LOS		C	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	42	312	172	199	260	106	109	836	107	172	967	23
Future Volume (vph)	42	312	172	199	260	106	109	836	107	172	967	23
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.0	43.0	43.0	9.0	43.0	43.0	9.0	44.0	44.0	9.0	44.0	44.0
Total Split (s)	10.0	43.0	43.0	13.0	46.0	46.0	15.0	44.0	44.0	20.0	49.0	49.0
Total Split (%)	8.3%	35.8%	35.8%	10.8%	38.3%	38.3%	12.5%	36.7%	36.7%	16.7%	40.8%	40.8%
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0	4.0	3.0	5.0	5.0	3.0	5.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	5.0	5.0	4.0	5.0	5.0	4.0	6.0	6.0	4.0	6.0	6.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Max	Max	None	Max	Max
Act Effct Green (s)	5.8	16.4	16.4	9.1	23.8	23.8	9.9	39.9	39.9	13.5	43.5	43.5
Actuated g/C Ratio	0.06	0.17	0.17	0.09	0.24	0.24	0.10	0.41	0.41	0.14	0.44	0.44
v/c Ratio	0.40	0.53	0.43	1.23	0.31	0.22	0.62	0.59	0.15	0.71	0.62	0.03
Control Delay	59.5	40.0	8.2	183.5	32.0	3.8	59.6	26.8	4.1	58.2	24.9	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	59.5	40.0	8.2	183.5	32.0	3.8	59.6	26.8	4.1	58.2	24.9	0.1
LOS	E	D	A	F	C	A	E	C	A	E	C	A
Approach Delay		31.1			80.1			27.9			29.3	
Approach LOS		C			F			C			C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 98.1	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.23	
Intersection Signal Delay: 37.8	Intersection LOS: D
Intersection Capacity Utilization 68.3%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 9: US-395 & Bear Valley Rd.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	42	312	172	199	260	106	109	836	107	172	967	23
Future Volume (veh/h)	42	312	172	199	260	106	109	836	107	172	967	23
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	43	322	96	205	268	75	112	862	83	177	997	18
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	67	441	197	183	674	301	142	1604	715	214	1747	779
Arrive On Green	0.04	0.12	0.12	0.10	0.19	0.19	0.08	0.44	0.44	0.12	0.48	0.48
Sat Flow, veh/h	1810	3610	1610	1810	3610	1610	1810	3610	1610	1810	3610	1610
Grp Volume(v), veh/h	43	322	96	205	268	75	112	862	83	177	997	18
Grp Sat Flow(s),veh/h/ln	1810	1805	1610	1810	1805	1610	1810	1805	1610	1810	1805	1610
Q Serve(g_s), s	2.1	7.6	4.9	9.0	5.8	3.5	5.4	15.5	2.7	8.5	17.5	0.5
Cycle Q Clear(g_c), s	2.1	7.6	4.9	9.0	5.8	3.5	5.4	15.5	2.7	8.5	17.5	0.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	67	441	197	183	674	301	142	1604	715	214	1747	779
V/C Ratio(X)	0.65	0.73	0.49	1.12	0.40	0.25	0.79	0.54	0.12	0.83	0.57	0.02
Avail Cap(c_a), veh/h	122	1544	689	183	1666	743	224	1604	715	326	1747	779
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.2	37.6	36.4	39.9	31.7	30.8	40.2	18.0	14.5	38.3	16.3	12.0
Incr Delay (d2), s/veh	7.5	0.9	0.7	101.8	0.1	0.2	7.0	1.3	0.3	8.5	1.4	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	3.2	1.8	8.9	2.3	1.3	2.5	5.8	0.9	4.0	6.3	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	49.8	38.5	37.1	141.7	31.9	31.0	47.2	19.3	14.8	46.7	17.7	12.0
LnGrp LOS	D	D	D	F	C	C	D	B	B	D	B	B
Approach Vol, veh/h		461			548			1057			1192	
Approach Delay, s/veh		39.2			72.9			21.9			21.9	
Approach LOS		D			E			C			C	

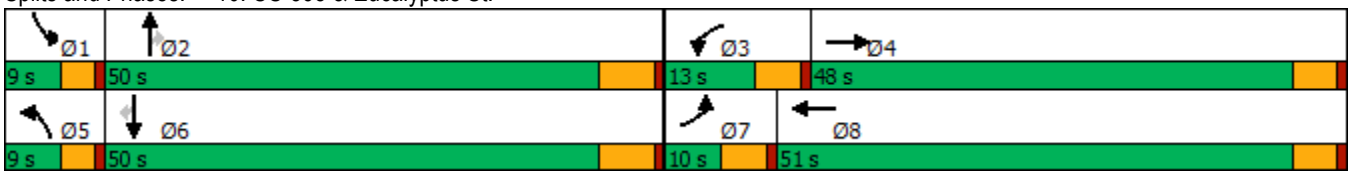
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.5	45.5	13.0	15.9	11.0	49.0	7.3	21.6
Change Period (Y+Rc), s	4.0	6.0	4.0	5.0	4.0	6.0	4.0	5.0
Max Green Setting (Gmax), s	16.0	38.0	9.0	38.0	11.0	43.0	6.0	41.0
Max Q Clear Time (g_c+I1), s	10.5	17.5	11.0	9.6	7.4	19.5	4.1	7.8
Green Ext Time (p_c), s	0.1	3.4	0.0	1.2	0.1	4.0	0.0	1.0

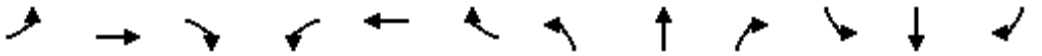
Intersection Summary	
HCM 6th Ctrl Delay	32.9
HCM 6th LOS	C

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	9	5	95	6	8	1009	63	4	1355	8
Future Volume (vph)	9	5	95	6	8	1009	63	4	1355	8
Turn Type	Prot	NA	Prot	NA	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4	3	8	5	2		1	6	
Permitted Phases							2			6
Detector Phase	7	4	3	8	5	2	2	1	6	6
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	10.0	48.0	10.0	48.0	9.0	41.0	41.0	9.0	41.0	41.0
Total Split (s)	10.0	48.0	13.0	51.0	9.0	50.0	50.0	9.0	50.0	50.0
Total Split (%)	8.3%	40.0%	10.8%	42.5%	7.5%	41.7%	41.7%	7.5%	41.7%	41.7%
Yellow Time (s)	4.0	4.0	4.0	4.0	3.0	5.0	5.0	3.0	5.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	4.0	6.0	6.0	4.0	6.0	6.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	Max	Max	None	Max	Max
Act Effct Green (s)	5.2	15.0	9.7	18.3	5.2	51.9	51.9	5.2	51.9	51.9
Actuated g/C Ratio	0.06	0.18	0.12	0.22	0.06	0.62	0.62	0.06	0.62	0.62
v/c Ratio	0.09	0.09	0.49	0.07	0.08	0.49	0.07	0.04	0.66	0.01
Control Delay	46.1	13.3	47.9	11.4	46.0	14.7	2.1	45.8	17.3	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	46.1	13.3	47.9	11.4	46.0	14.7	2.1	45.8	17.3	0.0
LOS	D	B	D	B	D	B	A	D	B	A
Approach Delay		22.0		40.0		14.2			17.3	
Approach LOS		C		D		B			B	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 84.3	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.66	
Intersection Signal Delay: 17.1	Intersection LOS: B
Intersection Capacity Utilization 59.3%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 10: US-395 & Eucalyptus St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	9	5	21	95	6	20	8	1009	63	4	1355	8
Future Volume (veh/h)	9	5	21	95	6	20	8	1009	63	4	1355	8
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	10	5	15	102	6	11	9	1085	64	4	1457	8
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	23	37	110	131	88	162	21	2079	927	10	2057	918
Arrive On Green	0.01	0.09	0.09	0.07	0.15	0.15	0.01	0.58	0.58	0.01	0.57	0.57
Sat Flow, veh/h	1810	419	1256	1810	600	1100	1810	3610	1610	1810	3610	1610
Grp Volume(v), veh/h	10	0	20	102	0	17	9	1085	64	4	1457	8
Grp Sat Flow(s),veh/h/ln	1810	0	1674	1810	0	1699	1810	1805	1610	1810	1805	1610
Q Serve(g_s), s	0.4	0.0	0.9	4.3	0.0	0.7	0.4	14.1	1.4	0.2	22.5	0.2
Cycle Q Clear(g_c), s	0.4	0.0	0.9	4.3	0.0	0.7	0.4	14.1	1.4	0.2	22.5	0.2
Prop In Lane	1.00		0.75	1.00		0.65	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	23	0	146	131	0	250	21	2079	927	10	2057	918
V/C Ratio(X)	0.44	0.00	0.14	0.78	0.00	0.07	0.44	0.52	0.07	0.42	0.71	0.01
Avail Cap(c_a), veh/h	117	0	932	187	0	1012	117	2079	927	117	2057	918
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.9	0.0	32.5	35.2	0.0	28.4	37.9	9.9	7.2	38.3	12.0	7.2
Incr Delay (d2), s/veh	5.0	0.0	0.4	7.3	0.0	0.1	5.3	0.9	0.1	10.2	2.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	0.3	2.1	0.0	0.3	0.2	4.2	0.4	0.1	8.6	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	42.8	0.0	33.0	42.5	0.0	28.5	43.3	10.9	7.4	48.5	14.1	7.2
LnGrp LOS	D	A	C	D	A	C	D	B	A	D	B	A
Approach Vol, veh/h		30			119			1158			1469	
Approach Delay, s/veh		36.2			40.5			10.9			14.1	
Approach LOS		D			D			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	4.4	50.5	10.6	11.7	4.9	50.0	6.0	16.4
Change Period (Y+Rc), s	4.0	6.0	5.0	5.0	4.0	6.0	5.0	5.0
Max Green Setting (Gmax), s	5.0	44.0	8.0	43.0	5.0	44.0	5.0	46.0
Max Q Clear Time (g_c+I1), s	2.2	16.1	6.3	2.9	2.4	24.5	2.4	2.7
Green Ext Time (p_c), s	0.0	7.8	0.0	0.1	0.0	11.5	0.0	0.1

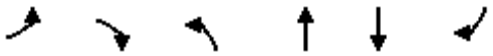
Intersection Summary	
HCM 6th Ctrl Delay	14.2
HCM 6th LOS	B

Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Configurations					
Traffic Volume (vph)	19	74	324	1161	1399
Future Volume (vph)	19	74	324	1161	1399
Turn Type	Prot	Perm	Prot	NA	NA
Protected Phases	4		5	2	6
Permitted Phases		4			
Detector Phase	4	4	5	2	6
Switch Phase					
Minimum Initial (s)	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	26.6	26.6	9.6	16.5	23.5
Total Split (s)	26.6	26.6	35.0	93.4	58.4
Total Split (%)	22.2%	22.2%	29.2%	77.8%	48.7%
Yellow Time (s)	3.6	3.6	3.6	5.5	5.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	6.5	6.5
Lead/Lag			Lead		Lag
Lead-Lag Optimize?			Yes		Yes
Recall Mode	None	None	None	Max	Max
Act Effct Green (s)	12.2	12.2	24.6	89.0	58.2
Actuated g/C Ratio	0.11	0.11	0.23	0.83	0.54
v/c Ratio	0.10	0.32	0.87	0.82	1.64
Control Delay	44.3	13.0	61.8	14.0	317.6
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	44.3	13.0	61.8	14.0	317.6
LOS	D	B	E	B	F
Approach Delay	19.4			24.5	317.6
Approach LOS	B			C	F

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 107.5	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.64	
Intersection Signal Delay: 167.6	Intersection LOS: F
Intersection Capacity Utilization 119.7%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 11: US-395 & Yucca Terrace Dr.





Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	19	74	324	1161	1399	111
Future Volume (veh/h)	19	74	324	1161	1399	111
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	21	60	360	1290	1554	123
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	154	137	391	1542	959	76
Arrive On Green	0.08	0.08	0.22	0.81	0.55	0.55
Sat Flow, veh/h	1810	1610	1810	1900	1738	138
Grp Volume(v), veh/h	21	60	360	1290	0	1677
Grp Sat Flow(s),veh/h/ln	1810	1610	1810	1900	0	1875
Q Serve(g_s), s	1.2	3.8	20.8	42.7	0.0	59.1
Cycle Q Clear(g_c), s	1.2	3.8	20.8	42.7	0.0	59.1
Prop In Lane	1.00	1.00	1.00			0.07
Lane Grp Cap(c), veh/h	154	137	391	1542	0	1035
V/C Ratio(X)	0.14	0.44	0.92	0.84	0.00	1.62
Avail Cap(c_a), veh/h	372	331	514	1542	0	1035
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	0.00	1.00
Uniform Delay (d), s/veh	45.4	46.6	41.1	5.9	0.0	24.0
Incr Delay (d2), s/veh	0.4	2.2	16.3	5.6	0.0	283.4
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	0.1	10.4	8.9	0.0	103.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	45.8	48.8	57.4	11.5	0.0	307.4
LnGrp LOS	D	D	E	B	A	F
Approach Vol, veh/h	81			1650	1677	
Approach Delay, s/veh	48.0			21.5	307.4	
Approach LOS	D			C	F	

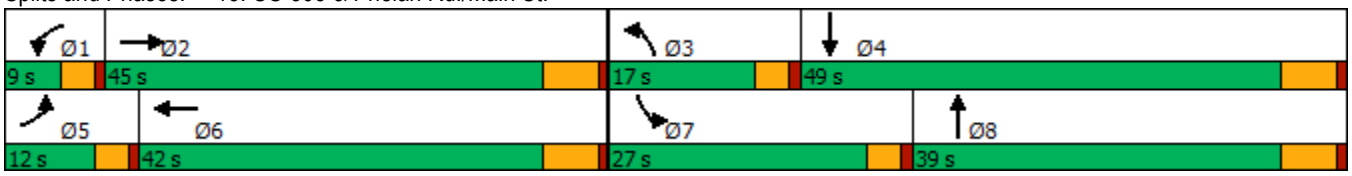
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		93.4		13.7	27.8	65.6
Change Period (Y+Rc), s		6.5		4.6	4.6	6.5
Max Green Setting (Gmax), s		86.9		22.0	30.4	51.9
Max Q Clear Time (g_c+I1), s		44.7		5.8	22.8	61.1
Green Ext Time (p_c), s		15.6		0.2	0.3	0.0

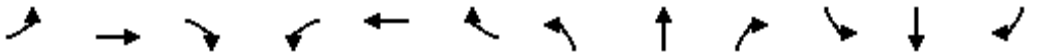
Intersection Summary		
HCM 6th Ctrl Delay		162.8
HCM 6th LOS		F

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	94	848	21	1134	223	881	346	1062
Future Volume (vph)	94	848	21	1134	223	881	346	1062
Turn Type	Prot	NA	Prot	NA	Prot	NA	Prot	NA
Protected Phases	5	2	1	6	3	8	7	4
Permitted Phases								
Detector Phase	5	2	1	6	3	8	7	4
Switch Phase								
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.0	16.0	9.0	16.0	9.0	16.0	9.0	16.0
Total Split (s)	12.0	45.0	9.0	42.0	17.0	39.0	27.0	49.0
Total Split (%)	10.0%	37.5%	7.5%	35.0%	14.2%	32.5%	22.5%	40.8%
Yellow Time (s)	3.0	5.0	3.0	5.0	3.0	5.0	3.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	6.0	4.0	6.0	4.0	6.0	4.0	6.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None
Act Effct Green (s)	8.0	42.6	5.0	36.0	13.0	33.0	23.0	43.0
Actuated g/C Ratio	0.07	0.36	0.04	0.30	0.11	0.28	0.19	0.36
v/c Ratio	0.82	0.84	0.29	1.66	1.19	0.95	1.04	0.92
Control Delay	99.6	42.8	66.0	329.3	170.9	62.0	107.5	49.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	99.6	42.8	66.0	329.3	170.9	62.0	107.5	49.2
LOS	F	D	E	F	F	E	F	D
Approach Delay		47.6		326.1		83.5		62.8
Approach LOS		D		F		F		E

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.66	
Intersection Signal Delay: 148.1	Intersection LOS: F
Intersection Capacity Utilization 116.4%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 13: US-395 & Phelan Rd./Main St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	94	848	170	21	1134	591	223	881	23	346	1062	74
Future Volume (veh/h)	94	848	170	21	1134	591	223	881	23	346	1062	74
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	98	883	132	22	1181	536	232	918	24	360	1106	73
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	121	1091	163	39	738	320	197	978	26	348	1223	81
Arrive On Green	0.07	0.35	0.35	0.02	0.30	0.30	0.11	0.27	0.27	0.19	0.36	0.36
Sat Flow, veh/h	1810	3149	471	1810	2450	1064	1810	3594	94	1810	3437	227
Grp Volume(v), veh/h	98	506	509	22	856	861	232	461	481	360	580	599
Grp Sat Flow(s),veh/h/ln	1810	1805	1815	1810	1805	1709	1810	1805	1883	1810	1805	1859
Q Serve(g_s), s	6.4	30.4	30.4	1.4	36.0	36.0	13.0	29.8	29.8	23.0	36.5	36.6
Cycle Q Clear(g_c), s	6.4	30.4	30.4	1.4	36.0	36.0	13.0	29.8	29.8	23.0	36.5	36.6
Prop In Lane	1.00		0.26	1.00		0.62	1.00		0.05	1.00		0.12
Lane Grp Cap(c), veh/h	121	625	629	39	544	515	197	491	512	348	642	662
V/C Ratio(X)	0.81	0.81	0.81	0.56	1.57	1.67	1.18	0.94	0.94	1.03	0.90	0.90
Avail Cap(c_a), veh/h	121	625	629	76	544	515	197	498	520	348	649	669
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	55.0	35.5	35.5	57.9	41.8	41.8	53.3	42.5	42.5	48.3	36.6	36.6
Incr Delay (d2), s/veh	31.4	7.8	7.8	9.0	267.4	311.4	120.7	25.8	25.0	57.3	16.2	15.9
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	3.8	13.8	13.9	0.7	55.3	58.6	12.2	16.0	16.6	15.4	17.7	18.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	86.4	43.3	43.3	66.9	309.1	353.2	174.0	68.3	67.5	105.5	52.7	52.5
LnGrp LOS	F	D	D	E	F	F	F	E	E	F	D	D
Approach Vol, veh/h		1113			1739			1174			1539	
Approach Delay, s/veh		47.1			327.9			88.9			65.0	
Approach LOS		D			F			F			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.6	47.4	17.0	48.5	12.0	42.0	27.0	38.5
Change Period (Y+Rc), s	4.0	6.0	4.0	6.0	4.0	6.0	4.0	6.0
Max Green Setting (Gmax), s	5.0	39.0	13.0	43.0	8.0	36.0	23.0	33.0
Max Q Clear Time (g_c+I1), s	3.4	32.4	15.0	38.6	8.4	38.0	25.0	31.8
Green Ext Time (p_c), s	0.0	3.0	0.0	2.8	0.0	0.0	0.0	0.7

Intersection Summary	
HCM 6th Ctrl Delay	148.6
HCM 6th LOS	F

Intersection	
Int Delay, s/veh	1.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	10	9	1118	17	25	1228
Future Vol, veh/h	10	9	1118	17	25	1228
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	375	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	11	10	1202	18	27	1320

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	2585	610	0	0	1220	0
Stage 1	1211	-	-	-	-	-
Stage 2	1374	-	-	-	-	-
Critical Hdwy	6.6	6.9	-	-	4.1	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	25	442	-	-	579	-
Stage 1	249	-	-	-	-	-
Stage 2	237	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	24	442	-	-	579	-
Mov Cap-2 Maneuver	24	-	-	-	-	-
Stage 1	249	-	-	-	-	-
Stage 2	226	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	135	0	0.2
HCM LOS	F		

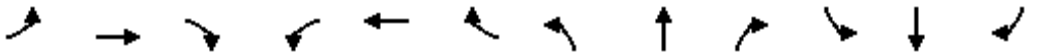
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	24	442	579	-
HCM Lane V/C Ratio	-	-	0.448	0.022	0.046	-
HCM Control Delay (s)	-	-	244.5	13.3	11.5	-
HCM Lane LOS	-	-	F	B	B	-
HCM 95th %tile Q(veh)	-	-	1.3	0.1	0.1	-

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	64	1	171	2	43	225	1029	105	21	1096	121
Future Volume (vph)	64	1	171	2	43	225	1029	105	21	1096	121
Turn Type	Perm	NA	Perm	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		4		8		5	2		1	6	
Permitted Phases	4		8		8			2			6
Detector Phase	4	4	8	8	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	16.0	16.0	16.0	16.0	16.0	10.0	16.0	16.0	10.0	16.0	16.0
Total Split (s)	41.0	41.0	41.0	41.0	41.0	31.0	69.0	69.0	10.0	48.0	48.0
Total Split (%)	34.2%	34.2%	34.2%	34.2%	34.2%	25.8%	57.5%	57.5%	8.3%	40.0%	40.0%
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	5.0	6.0	6.0	5.0	6.0	6.0
Lead/Lag						Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?						Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Max	Max	None	Max	Max
Act Effct Green (s)	27.4	27.4	27.4	27.4	27.4	18.8	63.9	63.9	5.1	45.5	45.5
Actuated g/C Ratio	0.25	0.25	0.25	0.25	0.25	0.17	0.59	0.59	0.05	0.42	0.42
v/c Ratio	0.19	0.45	0.97	0.00	0.10	0.79	0.53	0.12	0.27	0.79	0.18
Control Delay	33.5	6.4	100.3	30.5	0.4	62.1	16.7	2.9	63.3	34.7	6.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	33.5	6.4	100.3	30.5	0.4	62.1	16.7	2.9	63.3	34.7	6.7
LOS	C	A	F	C	A	E	B	A	E	C	A
Approach Delay		12.0		79.7			23.1			32.4	
Approach LOS		B		E			C			C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 108.9	
Natural Cycle: 80	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.97	
Intersection Signal Delay: 29.6	Intersection LOS: C
Intersection Capacity Utilization 86.8%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 15: US-395 & Three Flags Rd.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	64	1	248	171	2	43	225	1029	105	21	1096	121
Future Volume (veh/h)	64	1	248	171	2	43	225	1029	105	21	1096	121
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	70	1	233	186	2	38	245	1118	102	23	1191	111
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	482	2	461	267	546	462	275	1961	874	41	1495	667
Arrive On Green	0.29	0.29	0.29	0.29	0.29	0.29	0.15	0.54	0.54	0.02	0.41	0.41
Sat Flow, veh/h	1463	7	1604	1229	1900	1607	1810	3610	1609	1810	3610	1610
Grp Volume(v), veh/h	70	0	234	186	2	38	245	1118	102	23	1191	111
Grp Sat Flow(s),veh/h/ln	1463	0	1611	1229	1900	1607	1810	1805	1609	1810	1805	1610
Q Serve(g_s), s	4.2	0.0	14.0	17.2	0.1	2.0	15.4	23.8	3.6	1.5	33.5	5.0
Cycle Q Clear(g_c), s	4.2	0.0	14.0	31.3	0.1	2.0	15.4	23.8	3.6	1.5	33.5	5.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	482	0	463	267	546	462	275	1961	874	41	1495	667
V/C Ratio(X)	0.15	0.00	0.51	0.70	0.00	0.08	0.89	0.57	0.12	0.56	0.80	0.17
Avail Cap(c_a), veh/h	503	0	486	284	573	485	406	1961	874	78	1495	667
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	31.0	0.0	34.4	47.5	29.5	30.1	48.2	17.5	12.9	56.1	29.7	21.4
Incr Delay (d2), s/veh	0.1	0.0	0.3	5.4	0.0	0.0	11.8	1.2	0.3	4.5	4.5	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	0.0	5.5	5.7	0.0	0.8	7.5	9.0	1.2	0.7	14.1	1.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	31.0	0.0	34.7	52.9	29.5	30.2	60.0	18.7	13.2	60.6	34.2	21.9
LnGrp LOS	C	A	C	D	C	C	E	B	B	E	C	C
Approach Vol, veh/h		304			226			1465			1325	
Approach Delay, s/veh		33.9			48.9			25.3			33.6	
Approach LOS		C			D			C			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.6	69.0		39.3	22.6	54.0		39.3				
Change Period (Y+Rc), s	5.0	6.0		6.0	5.0	6.0		6.0				
Max Green Setting (Gmax), s	5.0	63.0		35.0	26.0	42.0		35.0				
Max Q Clear Time (g_c+I1), s	3.5	25.8		16.0	17.4	35.5		33.3				
Green Ext Time (p_c), s	0.0	8.9		1.0	0.2	3.9		0.1				

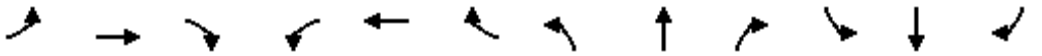
Intersection Summary			
HCM 6th Ctrl Delay		31.0	
HCM 6th LOS		C	

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	36	67	95	81	250	12	1074	61	204	1256	57
Future Volume (vph)	36	67	95	81	250	12	1074	61	204	1256	57
Turn Type	Perm	NA	Perm	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		4		8		5	2		1	6	
Permitted Phases	4		8		8			2			6
Detector Phase	4	4	8	8	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	15.0	15.0	46.0	46.0	46.0	9.0	34.0	34.0	9.0	34.0	34.0
Total Split (s)	47.0	47.0	47.0	47.0	47.0	9.0	39.0	39.0	34.0	64.0	64.0
Total Split (%)	39.2%	39.2%	39.2%	39.2%	39.2%	7.5%	32.5%	32.5%	28.3%	53.3%	53.3%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	3.0	5.0	5.0	3.0	5.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	0.0	-2.0	-2.0	0.0	-2.0	-2.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag						Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?						Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Max	Max	None	Max	Max
Act Effct Green (s)	16.6	16.6	16.6	16.6	16.6	5.1	43.2	43.2	15.6	61.5	61.5
Actuated g/C Ratio	0.19	0.19	0.19	0.19	0.19	0.06	0.49	0.49	0.18	0.70	0.70
v/c Ratio	0.15	0.21	0.41	0.24	0.52	0.12	0.66	0.08	0.69	0.54	0.05
Control Delay	29.7	29.1	35.0	30.7	7.3	48.2	22.5	3.0	46.4	10.2	3.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	29.7	29.1	35.0	30.7	7.3	48.2	22.5	3.0	46.4	10.2	3.6
LOS	C	C	D	C	A	D	C	A	D	B	A
Approach Delay		29.3		17.9			21.7			14.9	
Approach LOS		C		B			C			B	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 87.7	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.69	
Intersection Signal Delay: 18.2	Intersection LOS: B
Intersection Capacity Utilization 64.2%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 16: US-395 & Joshua St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	36	67	4	95	81	250	12	1074	61	204	1256	57
Future Volume (veh/h)	36	67	4	95	81	250	12	1074	61	204	1256	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	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	39	73	1	103	88	218	13	1167	52	222	1365	57
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	237	329	5	283	334	283	28	1963	876	263	2433	1085
Arrive On Green	0.18	0.18	0.16	0.18	0.18	0.18	0.02	0.54	0.54	0.15	0.67	0.67
Sat Flow, veh/h	1150	1870	26	1422	1900	1607	1810	3610	1610	1810	3610	1610
Grp Volume(v), veh/h	39	0	74	103	88	218	13	1167	52	222	1365	57
Grp Sat Flow(s),veh/h/ln	1150	0	1895	1422	1900	1607	1810	1805	1610	1810	1805	1610
Q Serve(g_s), s	2.7	0.0	3.0	6.0	3.6	11.5	0.6	19.4	1.4	10.6	17.7	1.1
Cycle Q Clear(g_c), s	6.3	0.0	3.0	8.9	3.6	11.5	0.6	19.4	1.4	10.6	17.7	1.1
Prop In Lane	1.00		0.01	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	237	0	333	283	334	283	28	1963	876	263	2433	1085
V/C Ratio(X)	0.16	0.00	0.22	0.36	0.26	0.77	0.47	0.59	0.06	0.84	0.56	0.05
Avail Cap(c_a), veh/h	590	0	915	720	918	776	102	1963	876	610	2433	1085
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	34.4	0.0	31.5	35.3	31.7	35.0	43.5	13.7	9.6	37.1	7.6	4.9
Incr Delay (d2), s/veh	0.1	0.0	0.1	0.3	0.2	1.7	8.7	1.3	0.1	5.5	0.9	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.0	1.4	2.1	1.6	4.5	0.3	6.6	0.4	4.7	4.8	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	34.5	0.0	31.6	35.6	31.9	36.7	52.1	15.0	9.7	42.5	8.6	5.0
LnGrp LOS	C	A	C	D	C	D	D	B	A	D	A	A
Approach Vol, veh/h		113			409			1232			1644	
Approach Delay, s/veh		32.6			35.4			15.2			13.0	
Approach LOS		C			D			B			B	

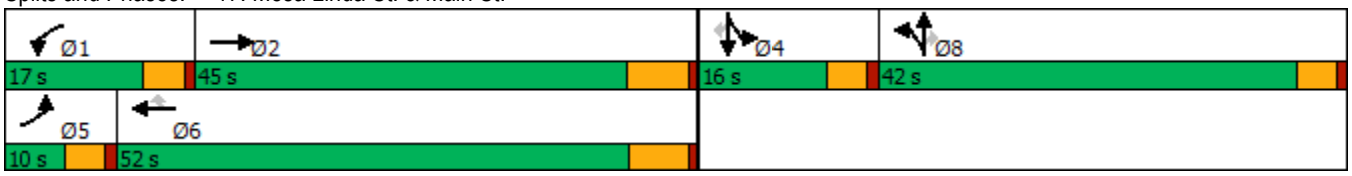
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	17.0	52.4		19.7	5.4	64.0		19.7				
Change Period (Y+Rc), s	4.0	6.0		5.0	4.0	6.0		5.0				
Max Green Setting (Gmax), s	30.0	33.0		42.0	5.0	58.0		42.0				
Max Q Clear Time (g_c+I1), s	12.6	21.4		8.3	2.6	19.7		13.5				
Green Ext Time (p_c), s	0.4	8.3		0.3	0.0	22.8		0.8				

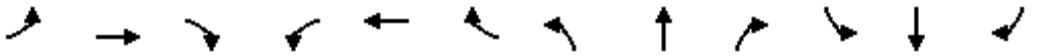
Intersection Summary			
HCM 6th Ctrl Delay		17.1	
HCM 6th LOS		B	

Lane Group	EBL	EBT	WBL	WBT	WBR	NBT	NBR	SBT	SBR
Lane Configurations									
Traffic Volume (vph)	5	1040	110	730	18	2	131	2	15
Future Volume (vph)	5	1040	110	730	18	2	131	2	15
Turn Type	Prot	NA	Prot	NA	Perm	NA	Perm	NA	Perm
Protected Phases	5	2	1	6		8		4	
Permitted Phases					6		8		4
Detector Phase	5	2	1	6	6	8	8	4	4
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	16.5	9.6	23.2	23.2	40.6	40.6	14.6	14.6
Total Split (s)	10.0	45.0	17.0	52.0	52.0	42.0	42.0	16.0	16.0
Total Split (%)	8.3%	37.5%	14.2%	43.3%	43.3%	35.0%	35.0%	13.3%	13.3%
Yellow Time (s)	3.6	5.5	3.6	5.2	5.2	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.5	4.6	6.2	6.2	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lead	Lag	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes				
Recall Mode	None	Max	None	Max	Max	None	None	None	None
Act Effct Green (s)	5.2	39.5	11.1	54.0	54.0	14.3	14.3	10.5	10.5
Actuated g/C Ratio	0.06	0.43	0.12	0.58	0.58	0.15	0.15	0.11	0.11
v/c Ratio	0.07	0.59	0.67	0.30	0.02	0.01	0.42	0.31	0.06
Control Delay	49.6	24.2	59.6	13.0	0.1	32.0	8.8	47.2	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	49.6	24.2	59.6	13.0	0.1	32.0	8.8	47.2	0.3
LOS	D	C	E	B	A	C	A	D	A
Approach Delay		24.3		18.7		9.1		36.4	
Approach LOS		C		B		A		D	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 92.4	
Natural Cycle: 100	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.67	
Intersection Signal Delay: 21.4	Intersection LOS: C
Intersection Capacity Utilization 51.3%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 17: Mesa Linda St. & Main St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	1040	3	110	730	18	0	2	131	49	2	15
Future Volume (veh/h)	5	1040	3	110	730	18	0	2	131	49	2	15
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	6	1224	4	129	859	13	0	2	133	58	2	4
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	13	2308	8	158	2683	833	0	204	173	153	5	140
Arrive On Green	0.01	0.46	0.46	0.10	0.55	0.55	0.00	0.11	0.11	0.09	0.09	0.09
Sat Flow, veh/h	1619	5057	17	1619	4914	1525	0	1800	1525	1660	57	1525
Grp Volume(v), veh/h	6	793	435	129	859	13	0	2	133	60	0	4
Grp Sat Flow(s),veh/h/ln	1619	1638	1797	1619	1638	1525	0	1800	1525	1717	0	1525
Q Serve(g_s), s	0.3	14.6	14.6	6.6	8.1	0.3	0.0	0.1	7.1	2.8	0.0	0.2
Cycle Q Clear(g_c), s	0.3	14.6	14.6	6.6	8.1	0.3	0.0	0.1	7.1	2.8	0.0	0.2
Prop In Lane	1.00		0.01	1.00		1.00	0.00		1.00	0.97		1.00
Lane Grp Cap(c), veh/h	13	1495	820	158	2683	833	0	204	173	158	0	140
V/C Ratio(X)	0.48	0.53	0.53	0.82	0.32	0.02	0.00	0.01	0.77	0.38	0.00	0.03
Avail Cap(c_a), veh/h	104	1495	820	238	2683	833	0	798	676	232	0	206
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	41.7	16.4	16.4	37.3	10.5	8.8	0.0	33.2	36.3	36.0	0.0	34.9
Incr Delay (d2), s/veh	10.0	1.4	2.5	7.4	0.3	0.0	0.0	0.0	7.0	1.5	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	4.8	5.6	2.8	2.5	0.1	0.0	0.0	3.0	1.2	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	51.7	17.8	18.9	44.7	10.9	8.8	0.0	33.2	43.3	37.5	0.0	34.9
LnGrp LOS	D	B	B	D	B	A	A	C	D	D	A	C
Approach Vol, veh/h		1234			1001			135			64	
Approach Delay, s/veh		18.4			15.2			43.1			37.4	
Approach LOS		B			B			D			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	12.8	45.0		12.4	5.3	52.6		14.2				
Change Period (Y+Rc), s	4.6	6.5		4.6	4.6	* 6.5		4.6				
Max Green Setting (Gmax), s	12.4	38.5		11.4	5.4	* 46		37.4				
Max Q Clear Time (g_c+I1), s	8.6	16.6		4.8	2.3	10.1		9.1				
Green Ext Time (p_c), s	0.0	7.4		0.1	0.0	6.0		0.4				

Intersection Summary		
HCM 6th Ctrl Delay		18.9
HCM 6th LOS		B

Notes

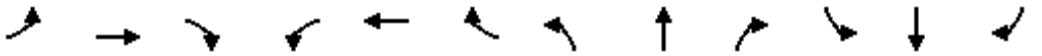
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	70	1112	78	258	1617	19	163	13	140	35	13	27
Future Volume (vph)	70	1112	78	258	1617	19	163	13	140	35	13	27
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Split	NA	Perm	Split	NA	Perm
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases			2			6			8			4
Detector Phase	5	2	2	1	6	6	8	8	8	4	4	4
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	32.2	32.2	9.6	32.2	32.2	43.6	43.6	43.6	41.6	41.6	41.6
Total Split (s)	12.0	34.7	34.7	10.1	32.8	32.8	43.6	43.6	43.6	41.6	41.6	41.6
Total Split (%)	9.2%	26.7%	26.7%	7.8%	25.2%	25.2%	33.5%	33.5%	33.5%	32.0%	32.0%	32.0%
Yellow Time (s)	3.6	5.2	5.2	3.6	5.2	5.2	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	6.2	4.6	6.2	6.2	4.6	4.6	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes						
Recall Mode	None	Max	Max	None	Max	Max	None	None	None	None	None	None
Act Effct Green (s)	7.8	30.5	30.5	5.9	28.6	28.6	14.9	14.9	14.9	14.1	14.1	14.1
Actuated g/C Ratio	0.09	0.37	0.37	0.07	0.35	0.35	0.18	0.18	0.18	0.17	0.17	0.17
v/c Ratio	0.52	0.69	0.14	1.39	1.07	0.04	0.36	0.34	0.39	0.14	0.05	0.09
Control Delay	54.9	28.4	7.6	232.8	73.0	0.1	35.2	34.5	8.4	32.6	31.6	0.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	54.9	28.4	7.6	232.8	73.0	0.1	35.2	34.5	8.4	32.6	31.6	0.5
LOS	D	C	A	F	E	A	D	C	A	C	C	A
Approach Delay		28.5			94.0			23.2			21.0	
Approach LOS		C			F			C			C	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 82.8	
Natural Cycle: 130	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.39	
Intersection Signal Delay: 62.9	Intersection LOS: E
Intersection Capacity Utilization 63.3%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 18: Cataba Av. & Main St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	70	1112	78	258	1617	19	163	13	140	35	13	27
Future Volume (veh/h)	70	1112	78	258	1617	19	163	13	140	35	13	27
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	1700	1800	1800	1600	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	79	1249	81	290	1817	14	194	0	137	39	15	1
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	98	1976	613	229	2060	639	469	0	221	151	168	142
Arrive On Green	0.06	0.40	0.40	0.08	0.42	0.42	0.14	0.00	0.14	0.09	0.09	0.09
Sat Flow, veh/h	1619	4914	1524	2956	4914	1524	3238	0	1522	1619	1800	1525
Grp Volume(v), veh/h	79	1249	81	290	1817	14	194	0	137	39	15	1
Grp Sat Flow(s),veh/h/ln	1619	1638	1524	1478	1638	1524	1619	0	1522	1619	1800	1525
Q Serve(g_s), s	3.4	14.4	2.4	5.5	24.2	0.4	3.9	0.0	6.0	1.6	0.5	0.0
Cycle Q Clear(g_c), s	3.4	14.4	2.4	5.5	24.2	0.4	3.9	0.0	6.0	1.6	0.5	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	98	1976	613	229	2060	639	469	0	221	151	168	142
V/C Ratio(X)	0.81	0.63	0.13	1.26	0.88	0.02	0.41	0.00	0.62	0.26	0.09	0.01
Avail Cap(c_a), veh/h	169	1976	613	229	2060	639	1781	0	837	845	939	796
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.9	17.0	13.4	32.7	19.0	12.1	27.6	0.0	28.5	29.9	29.4	29.2
Incr Delay (d2), s/veh	5.8	1.6	0.4	149.0	5.9	0.1	0.6	0.0	2.8	0.9	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	4.6	0.7	6.5	8.5	0.1	1.5	0.0	2.3	0.6	0.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	38.7	18.5	13.8	181.7	24.9	12.1	28.1	0.0	31.3	30.8	29.6	29.2
LnGrp LOS	D	B	B	F	C	B	C	A	C	C	C	C
Approach Vol, veh/h		1409			2121			331			55	
Approach Delay, s/veh		19.4			46.2			29.5			30.4	
Approach LOS		B			D			C			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.1	34.7		11.2	8.9	35.9		14.9				
Change Period (Y+Rc), s	4.6	6.2		4.6	4.6	6.2		4.6				
Max Green Setting (Gmax), s	5.5	28.5		37.0	7.4	26.6		39.0				
Max Q Clear Time (g_c+I1), s	7.5	16.4		3.6	5.4	26.2		8.0				
Green Ext Time (p_c), s	0.0	6.1		0.2	0.0	0.4		1.2				

Intersection Summary		
HCM 6th Ctrl Delay		34.9
HCM 6th LOS		C

Notes

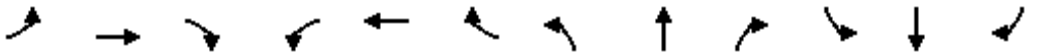
User approved pedestrian interval to be less than phase max green.
User approved volume balancing among the lanes for turning movement.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	31	1253	12	144	1933	11	11	81	149	27
Future Volume (vph)	31	1253	12	144	1933	11	11	81	149	27
Turn Type	Prot	NA	Perm	Prot	NA	Perm	NA	Perm	Perm	NA
Protected Phases	5	2		1	6		8			4
Permitted Phases			2			8		8	4	
Detector Phase	5	2	2	1	6	8	8	8	4	4
Switch Phase										
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	29.2	29.2	9.6	30.2	38.6	38.6	38.6	41.6	41.6
Total Split (s)	14.0	45.0	45.0	29.0	60.0	46.0	46.0	46.0	46.0	46.0
Total Split (%)	11.7%	37.5%	37.5%	24.2%	50.0%	38.3%	38.3%	38.3%	38.3%	38.3%
Yellow Time (s)	3.6	5.2	5.2	3.6	5.2	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	6.2	4.6	6.2	4.6	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes					
Recall Mode	None	Max	Max	None	Max	None	None	None	None	None
Act Effct Green (s)	6.5	44.4	44.4	12.6	55.1	18.0	18.0	18.0	18.0	18.0
Actuated g/C Ratio	0.07	0.49	0.49	0.14	0.61	0.20	0.20	0.20	0.20	0.20
v/c Ratio	0.28	0.53	0.02	0.66	0.70	0.04	0.03	0.21	0.60	0.12
Control Delay	50.9	19.4	0.0	53.2	17.1	29.6	29.3	3.7	43.7	22.2
Queue Delay	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0
Total Delay	50.9	19.4	0.0	53.2	17.4	29.6	29.3	3.7	43.7	22.2
LOS	D	B	A	D	B	C	C	A	D	C
Approach Delay		20.0			19.8		9.1			38.9
Approach LOS		B			B		A			D

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 90.8	
Natural Cycle: 95	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.70	
Intersection Signal Delay: 20.5	Intersection LOS: C
Intersection Capacity Utilization 74.9%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 19: Key Point Av. & Main St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	31	1253	12	144	1933	111	11	11	81	149	27	15
Future Volume (veh/h)	31	1253	12	144	1933	111	11	11	81	149	27	15
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	32	1279	9	147	1972	79	11	11	23	152	28	10
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	51	2733	848	179	3081	123	259	272	230	277	192	68
Arrive On Green	0.03	0.56	0.56	0.11	0.64	0.64	0.15	0.15	0.15	0.15	0.15	0.15
Sat Flow, veh/h	1619	4914	1524	1619	4847	194	1314	1800	1522	1316	1266	452
Grp Volume(v), veh/h	32	1279	9	147	1331	720	11	11	23	152	0	38
Grp Sat Flow(s),veh/h/ln	1619	1638	1524	1619	1638	1765	1314	1800	1522	1316	0	1719
Q Serve(g_s), s	1.7	13.2	0.2	7.5	21.1	21.2	0.6	0.4	1.1	9.4	0.0	1.6
Cycle Q Clear(g_c), s	1.7	13.2	0.2	7.5	21.1	21.2	2.2	0.4	1.1	9.9	0.0	1.6
Prop In Lane	1.00		1.00	1.00		0.11	1.00		1.00	1.00		0.26
Lane Grp Cap(c), veh/h	51	2733	848	179	2082	1122	259	272	230	277	0	260
V/C Ratio(X)	0.63	0.47	0.01	0.82	0.64	0.64	0.04	0.04	0.10	0.55	0.00	0.15
Avail Cap(c_a), veh/h	180	2733	848	467	2082	1122	702	880	745	722	0	840
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	40.5	11.3	8.4	36.8	9.5	9.5	32.1	30.7	31.0	34.9	0.0	31.2
Incr Delay (d2), s/veh	4.8	0.6	0.0	3.6	1.5	2.8	0.1	0.1	0.2	1.7	0.0	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	0.7	4.0	0.1	2.9	5.8	6.7	0.2	0.2	0.4	3.1	0.0	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	45.3	11.8	8.4	40.4	11.0	12.3	32.2	30.7	31.1	36.6	0.0	31.4
LnGrp LOS	D	B	A	D	B	B	C	C	C	D	A	C
Approach Vol, veh/h		1320			2198			45			190	
Approach Delay, s/veh		12.6			13.4			31.3			35.5	
Approach LOS		B			B			C			D	

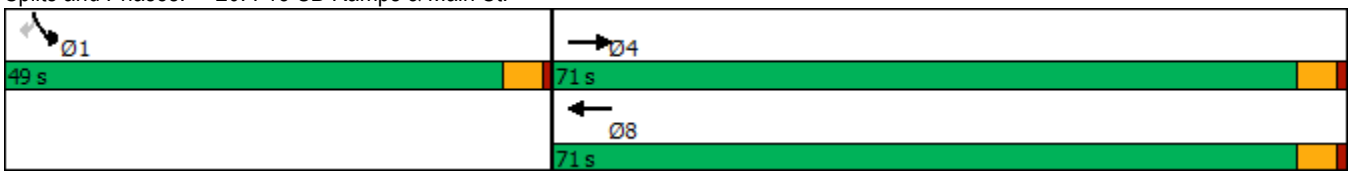
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	14.0	53.3		17.4	7.2	60.0		17.4				
Change Period (Y+Rc), s	4.6	6.2		4.6	4.6	6.2		4.6				
Max Green Setting (Gmax), s	24.4	38.8		41.4	9.4	53.8		41.4				
Max Q Clear Time (g_c+I1), s	9.5	15.2		11.9	3.7	23.2		4.2				
Green Ext Time (p_c), s	0.1	8.9		0.7	0.0	17.4		0.1				

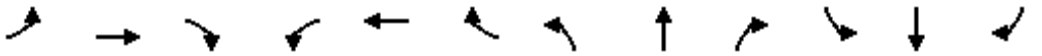
Intersection Summary												
HCM 6th Ctrl Delay			14.5									
HCM 6th LOS			B									

Lane Group	EBT	EBR	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	1265	110	1470	21	358	705
Future Volume (vph)	1265	110	1470	21	358	705
Turn Type	NA	Free	NA	Free	Prot	Perm
Protected Phases	4		8		1	
Permitted Phases		Free		Free		1
Detector Phase	4		8		1	1
Switch Phase						
Minimum Initial (s)	5.0		5.0		5.0	5.0
Minimum Split (s)	9.6		22.6		9.6	9.6
Total Split (s)	71.0		71.0		49.0	49.0
Total Split (%)	59.2%		59.2%		40.8%	40.8%
Yellow Time (s)	3.6		3.6		3.6	3.6
All-Red Time (s)	1.0		1.0		1.0	1.0
Lost Time Adjust (s)	0.0		0.0		0.0	0.0
Total Lost Time (s)	4.6		4.6		4.6	4.6
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None		None		None	None
Act Effct Green (s)	37.5	91.3	37.5	91.3	44.6	44.6
Actuated g/C Ratio	0.41	1.00	0.41	1.00	0.49	0.49
v/c Ratio	0.63	0.07	0.73	0.01	0.22	0.93
Control Delay	22.5	0.1	24.6	0.0	14.9	42.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	22.5	0.1	24.6	0.0	14.9	42.2
LOS	C	A	C	A	B	D
Approach Delay	20.7		24.3			
Approach LOS	C		C			

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 91.3	
Natural Cycle: 50	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.93	
Intersection Signal Delay: 25.4	Intersection LOS: C
Intersection Capacity Utilization 79.7%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 20: I-15 SB Ramps & Main St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↱		↑↑↑	↱				↰↰		↱
Traffic Volume (veh/h)	0	1265	110	0	1470	21	0	0	0	358	0	705
Future Volume (veh/h)	0	1265	110	0	1470	21	0	0	0	358	0	705
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	1900	1900	0	1900	1900				1900	0	1900
Adj Flow Rate, veh/h	0	1332	0	0	1547	0				377	0	661
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95				0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0				0	0	0
Cap, veh/h	0	2271		0	2271					1578	0	724
Arrive On Green	0.00	0.44	0.00	0.00	0.44	0.00				0.45	0.00	0.45
Sat Flow, veh/h	0	5358	1610	0	5358	1610				3510	0	1610
Grp Volume(v), veh/h	0	1332	0	0	1547	0				377	0	661
Grp Sat Flow(s),veh/h/ln	0	1729	1610	0	1729	1610				1755	0	1610
Q Serve(g_s), s	0.0	15.9	0.0	0.0	19.5	0.0				5.4	0.0	31.3
Cycle Q Clear(g_c), s	0.0	15.9	0.0	0.0	19.5	0.0				5.4	0.0	31.3
Prop In Lane	0.00		1.00	0.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2271		0	2271					1578	0	724
V/C Ratio(X)	0.00	0.59		0.00	0.68					0.24	0.00	0.91
Avail Cap(c_a), veh/h	0	4214		0	4214					1907	0	875
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	17.4	0.0	0.0	18.4	0.0				13.9	0.0	21.0
Incr Delay (d2), s/veh	0.0	0.2	0.0	0.0	0.4	0.0				0.1	0.0	12.3
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	0.0	5.4	0.0	0.0	6.7	0.0				2.1	0.0	13.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	17.6	0.0	0.0	18.8	0.0				13.9	0.0	33.3
LnGrp LOS	A	B		A	B					B	A	C
Approach Vol, veh/h		1332	A		1547	A					1038	
Approach Delay, s/veh		17.6			18.8						26.2	
Approach LOS		B			B						C	

Timer - Assigned Phs				4		6		8				
Phs Duration (G+Y+Rc), s				40.4		41.3		40.4				
Change Period (Y+Rc), s				4.6		4.6		4.6				
Max Green Setting (Gmax), s				66.4		44.4		66.4				
Max Q Clear Time (g_c+I1), s				17.9		33.3		21.5				
Green Ext Time (p_c), s				11.4		3.4		14.2				

Intersection Summary												
HCM 6th Ctrl Delay			20.4									
HCM 6th LOS			C									

Notes

Unsignalized Delay for [EBR, WBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBT	EBR	WBT	WBR	NBL	NBT	NBR
Lane Configurations							
Traffic Volume (vph)	1195	429	1461	492	611	6	442
Future Volume (vph)	1195	429	1461	492	611	6	442
Turn Type	NA	Perm	NA	Perm	Split	NA	Perm
Protected Phases	2		6		8	8	
Permitted Phases		2		6			8
Detector Phase	2	2	6	6	8	8	8
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.6	22.6	22.6	22.6	9.6	9.6	9.6
Total Split (s)	78.0	78.0	78.0	78.0	42.0	42.0	42.0
Total Split (%)	65.0%	65.0%	65.0%	65.0%	35.0%	35.0%	35.0%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Lead/Lag							
Lead-Lag Optimize?							
Recall Mode	None	None	None	None	Min	Min	Min
Act Effct Green (s)	41.0	41.0	41.0	41.0	37.8	37.8	37.8
Actuated g/C Ratio	0.46	0.46	0.46	0.46	0.43	0.43	0.43
v/c Ratio	0.51	0.44	0.62	0.49	0.80	0.32	0.33
Control Delay	16.8	2.7	18.4	2.9	34.1	14.2	14.4
Queue Delay	0.0	0.0	0.0	0.1	0.0	0.0	0.0
Total Delay	16.8	2.7	18.5	3.0	34.1	14.2	14.4
LOS	B	A	B	A	C	B	B
Approach Delay	13.1		14.6			25.7	
Approach LOS	B		B			C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 88.2	
Natural Cycle: 45	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.80	
Intersection Signal Delay: 16.6	Intersection LOS: B
Intersection Capacity Utilization 69.7%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 21: I-15 NB Ramps & Main St.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↱		↑↑↑	↱	↰	↑	↱			
Traffic Volume (veh/h)	0	1195	429	0	1461	492	611	6	442	0	0	0
Future Volume (veh/h)	0	1195	429	0	1461	492	611	6	442	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	0	1900	1900	0	1900	1900	1900	1900	1900			
Adj Flow Rate, veh/h	0	1219	0	0	1491	470	623	0	245			
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98			
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0			
Cap, veh/h	0	2526		0	2526	784	700	0	1246			
Arrive On Green	0.00	0.49	0.00	0.00	0.49	0.49	0.39	0.00	0.39			
Sat Flow, veh/h	0	5358	1610	0	5358	1610	1810	0	3220			
Grp Volume(v), veh/h	0	1219	0	0	1491	470	623	0	245			
Grp Sat Flow(s),veh/h/ln	0	1729	1610	0	1729	1610	1810	0	1610			
Q Serve(g_s), s	0.0	11.5	0.0	0.0	15.1	15.4	23.5	0.0	3.7			
Cycle Q Clear(g_c), s	0.0	11.5	0.0	0.0	15.1	15.4	23.5	0.0	3.7			
Prop In Lane	0.00		1.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	0	2526		0	2526	784	700	0	1246			
V/C Ratio(X)	0.00	0.48		0.00	0.59	0.60	0.89	0.00	0.20			
Avail Cap(c_a), veh/h	0	5213		0	5213	1618	927	0	1649			
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	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	0.0	12.6	0.0	0.0	13.5	13.6	20.9	0.0	14.9			
Incr Delay (d2), s/veh	0.0	0.1	0.0	0.0	0.2	0.7	8.6	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	3.5	0.0	0.0	4.7	4.5	10.9	0.0	1.3			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	12.7	0.0	0.0	13.7	14.3	29.5	0.0	14.9			
LnGrp LOS	A	B		A	B	B	C	A	B			
Approach Vol, veh/h		1219	A		1961			868				
Approach Delay, s/veh		12.7			13.8			25.4				
Approach LOS		B			B			C				

Timer - Assigned Phs	2				6		8					
Phs Duration (G+Y+Rc), s	40.2				40.2		32.9					
Change Period (Y+Rc), s	4.6				4.6		4.6					
Max Green Setting (Gmax), s	73.4				73.4		37.4					
Max Q Clear Time (g_c+I1), s	13.5				17.4		25.5					
Green Ext Time (p_c), s	10.2				18.1		2.8					

Intersection Summary		
HCM 6th Ctrl Delay	16.0	
HCM 6th LOS	B	

Notes

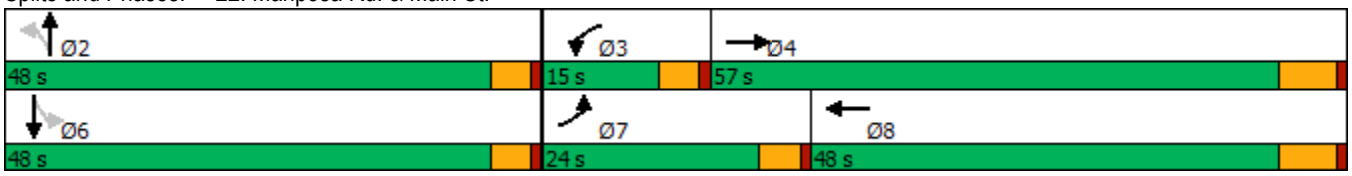
User approved volume balancing among the lanes for turning movement.

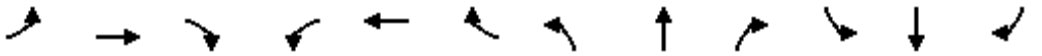
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	142	1392	45	1751	73	40	36	50
Future Volume (vph)	142	1392	45	1751	73	40	36	50
Turn Type	Prot	NA	Prot	NA	Perm	NA	Perm	NA
Protected Phases	7	4	3	8		2		6
Permitted Phases					2		6	
Detector Phase	7	4	3	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	24.2	9.6	24.2	44.6	44.6	44.6	44.6
Total Split (s)	24.0	57.0	15.0	48.0	48.0	48.0	48.0	48.0
Total Split (%)	20.0%	47.5%	12.5%	40.0%	40.0%	40.0%	40.0%	40.0%
Yellow Time (s)	3.6	5.2	3.6	5.2	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	4.6	6.2	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes				
Recall Mode	None	Max	Max	None	None	None	None	None
Act Effct Green (s)	12.8	51.4	10.5	49.2	17.3	17.3	17.3	17.3
Actuated g/C Ratio	0.13	0.54	0.11	0.52	0.18	0.18	0.18	0.18
v/c Ratio	0.71	0.48	0.27	0.60	0.80	0.24	0.18	0.59
Control Delay	57.8	15.3	46.5	19.6	86.5	19.7	32.5	16.8
Queue Delay	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	57.8	15.6	46.5	19.6	86.5	19.7	32.5	16.8
LOS	E	B	D	B	F	B	C	B
Approach Delay		19.3		20.2		52.2		18.9
Approach LOS		B		C		D		B

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 94.9	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.80	
Intersection Signal Delay: 21.0	Intersection LOS: C
Intersection Capacity Utilization 76.2%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 22: Mariposa Rd. & Main St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	142	1392	103	45	1751	29	73	40	36	36	50	189
Future Volume (veh/h)	142	1392	103	45	1751	29	73	40	36	36	50	189
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	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	153	1497	98	48	1883	30	78	43	17	39	54	120
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	183	3208	210	178	3373	54	184	235	93	285	95	211
Arrive On Green	0.11	0.54	0.54	0.11	0.53	0.53	0.19	0.19	0.19	0.19	0.19	0.19
Sat Flow, veh/h	1619	5982	391	1619	6325	101	1162	1227	485	1288	497	1104
Grp Volume(v), veh/h	153	1162	433	48	1383	530	78	0	60	39	0	174
Grp Sat Flow(s),veh/h/ln	1619	1548	1730	1619	1548	1782	1162	0	1713	1288	0	1601
Q Serve(g_s), s	8.8	14.7	14.7	2.6	18.7	18.7	6.2	0.0	2.8	2.5	0.0	9.3
Cycle Q Clear(g_c), s	8.8	14.7	14.7	2.6	18.7	18.7	15.5	0.0	2.8	5.3	0.0	9.3
Prop In Lane	1.00		0.23	1.00		0.06	1.00		0.28	1.00		0.69
Lane Grp Cap(c), veh/h	183	2491	928	178	2477	950	184	0	328	285	0	306
V/C Ratio(X)	0.84	0.47	0.47	0.27	0.56	0.56	0.42	0.00	0.18	0.14	0.00	0.57
Avail Cap(c_a), veh/h	332	2491	928	178	2477	950	494	0	785	628	0	734
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	41.2	13.6	13.6	38.7	14.7	14.7	41.8	0.0	32.1	34.3	0.0	34.7
Incr Delay (d2), s/veh	3.9	0.6	1.7	3.7	0.3	0.7	1.6	0.0	0.3	0.2	0.0	1.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.5	4.5	5.3	1.2	5.6	6.6	1.9	0.0	1.2	0.8	0.0	3.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	45.0	14.2	15.3	42.4	15.0	15.4	43.3	0.0	32.4	34.5	0.0	36.4
LnGrp LOS	D	B	B	D	B	B	D	A	C	C	A	D
Approach Vol, veh/h		1748			1961			138			213	
Approach Delay, s/veh		17.2			15.8			38.6			36.1	
Approach LOS		B			B			D			D	

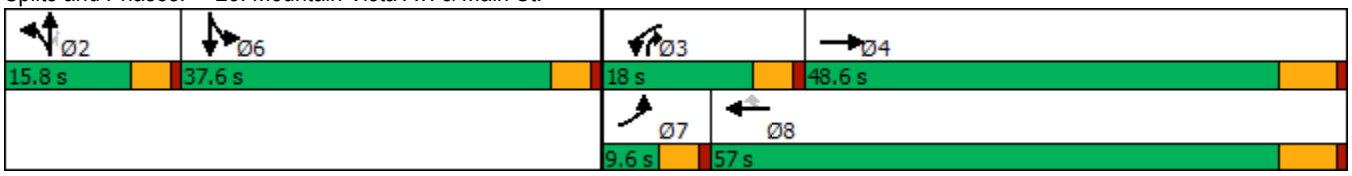
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		22.7	15.0	57.0		22.7	15.3	56.7				
Change Period (Y+Rc), s		4.6	4.6	6.2		4.6	4.6	6.2				
Max Green Setting (Gmax), s		43.4	10.4	50.8		43.4	19.4	41.8				
Max Q Clear Time (g_c+I1), s		17.5	4.6	16.7		11.3	10.8	20.7				
Green Ext Time (p_c), s		0.6	0.0	12.7		1.3	0.1	12.5				

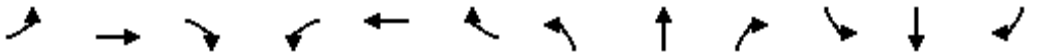
Intersection Summary												
HCM 6th Ctrl Delay			18.2									
HCM 6th LOS			B									

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	16	1293	74	1808	59	16	1	30	50	2
Future Volume (vph)	16	1293	74	1808	59	16	1	30	50	2
Turn Type	Prot	NA	Prot	NA	Perm	Split	NA	pm+ov	Split	NA
Protected Phases	7	4	3	8		2	2	3	6	6
Permitted Phases					8			2		
Detector Phase	7	4	3	8	8	2	2	3	6	6
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	43.2	9.6	32.2	32.2	14.6	14.6	9.6	37.6	37.6
Total Split (s)	9.6	48.6	18.0	57.0	57.0	15.8	15.8	18.0	37.6	37.6
Total Split (%)	8.0%	40.5%	15.0%	47.5%	47.5%	13.2%	13.2%	15.0%	31.3%	31.3%
Yellow Time (s)	3.6	5.2	3.6	5.2	5.2	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	4.6	6.2	6.2	4.6	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lead	Lag	Lag			Lead		
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes			Yes		
Recall Mode	None	Max	None	Max	Max	None	None	None	None	None
Act Effct Green (s)	5.2	54.3	8.6	63.7	63.7	10.4	10.4	11.8	13.8	13.8
Actuated g/C Ratio	0.06	0.63	0.10	0.74	0.74	0.12	0.12	0.14	0.16	0.16
v/c Ratio	0.09	0.35	0.48	0.52	0.05	0.05	0.02	0.07	0.13	0.12
Control Delay	48.2	14.5	51.4	13.5	1.3	44.1	43.2	0.3	34.7	27.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	48.2	14.5	51.4	13.5	1.3	44.1	43.2	0.3	34.7	27.2
LOS	D	B	D	B	A	D	D	A	C	C
Approach Delay		14.9		14.6			15.7			31.0
Approach LOS		B		B			B			C

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 86.5	
Natural Cycle: 105	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.52	
Intersection Signal Delay: 15.0	Intersection LOS: B
Intersection Capacity Utilization 63.0%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 23: Mountain Vista Av. & Main St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	16	1293	21	74	1808	59	16	1	30	50	2	9
Future Volume (veh/h)	16	1293	21	74	1808	59	16	1	30	50	2	9
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1600	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	16	1333	21	76	1864	58	16	1	11	57	0	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	55	3531	56	95	2940	912	184	102	353	294	163	0
Arrive On Green	0.02	0.56	0.56	0.06	0.60	0.60	0.06	0.06	0.06	0.09	0.00	0.00
Sat Flow, veh/h	2956	6326	100	1619	4914	1525	3238	1800	3051	3238	1800	0
Grp Volume(v), veh/h	16	978	376	76	1864	58	16	1	11	57	0	0
Grp Sat Flow(s),veh/h/ln	1478	1548	1782	1619	1638	1525	1619	1800	1525	1619	1800	0
Q Serve(g_s), s	0.5	10.0	10.0	3.9	20.8	1.3	0.4	0.0	0.3	1.4	0.0	0.0
Cycle Q Clear(g_c), s	0.5	10.0	10.0	3.9	20.8	1.3	0.4	0.0	0.3	1.4	0.0	0.0
Prop In Lane	1.00		0.06	1.00		1.00	1.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	55	2592	995	95	2940	912	184	102	353	294	163	0
V/C Ratio(X)	0.29	0.38	0.38	0.80	0.63	0.06	0.09	0.01	0.03	0.19	0.00	0.00
Avail Cap(c_a), veh/h	174	2592	995	256	2940	912	427	237	581	1259	700	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	41.1	10.5	10.5	39.5	11.0	7.1	37.9	37.8	33.3	35.7	0.0	0.0
Incr Delay (d2), s/veh	1.1	0.4	1.1	5.7	1.1	0.1	0.2	0.0	0.0	0.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	2.8	3.5	1.6	6.0	0.4	0.2	0.0	0.1	0.6	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	42.2	10.9	11.6	45.2	12.1	7.3	38.1	37.8	33.4	36.0	0.0	0.0
LnGrp LOS	D	B	B	D	B	A	D	D	C	D	A	A
Approach Vol, veh/h		1370			1998			28			57	
Approach Delay, s/veh		11.5			13.2			36.3			36.0	
Approach LOS		B			B			D			D	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		9.4	9.6	53.6		12.3	6.2	57.0				
Change Period (Y+Rc), s		4.6	4.6	6.2		4.6	4.6	6.2				
Max Green Setting (Gmax), s		11.2	13.4	42.4		33.0	5.0	50.8				
Max Q Clear Time (g_c+I1), s		2.4	5.9	12.0		3.4	2.5	22.8				
Green Ext Time (p_c), s		0.0	0.0	9.7		0.2	0.0	15.7				

Intersection Summary												
HCM 6th Ctrl Delay			13.1									
HCM 6th LOS			B									

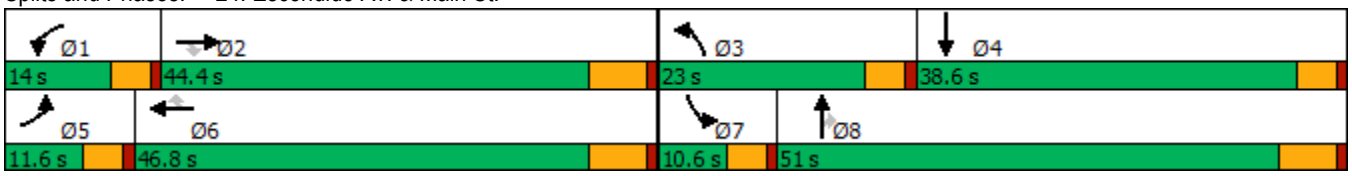
Notes

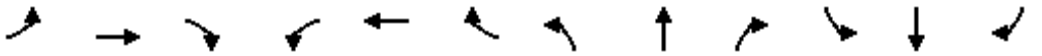
User approved volume balancing among the lanes for turning movement.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations											
Traffic Volume (vph)	4	915	445	327	1155	3	774	22	345	1	3
Future Volume (vph)	4	915	445	327	1155	3	774	22	345	1	3
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA
Protected Phases	5	2		1	6		3	8		7	4
Permitted Phases			2			6			8		
Detector Phase	5	2	2	1	6	6	3	8	8	7	4
Switch Phase											
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.6	41.2	41.2	9.6	31.2	31.2	9.6	49.2	49.2	9.6	37.6
Total Split (s)	11.6	44.4	44.4	14.0	46.8	46.8	23.0	51.0	51.0	10.6	38.6
Total Split (%)	9.7%	37.0%	37.0%	11.7%	39.0%	39.0%	19.2%	42.5%	42.5%	8.8%	32.2%
Yellow Time (s)	3.6	5.2	5.2	3.6	5.2	5.2	3.6	5.2	5.2	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	6.2	4.6	6.2	6.2	4.6	6.2	6.2	4.6	4.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Min	Min	None	Min
Act Effct Green (s)	5.2	29.5	29.5	9.6	42.1	42.1	18.7	34.0	34.0	5.1	13.7
Actuated g/C Ratio	0.06	0.32	0.32	0.10	0.46	0.46	0.20	0.37	0.37	0.06	0.15
v/c Ratio	0.04	0.60	0.57	1.10	0.76	0.00	1.33	0.03	0.48	0.01	0.06
Control Delay	48.0	28.6	5.7	120.9	26.5	0.0	191.0	20.5	7.5	49.0	18.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	48.0	28.6	5.7	120.9	26.5	0.0	191.0	20.5	7.5	49.0	18.9
LOS	D	C	A	F	C	A	F	C	A	D	B
Approach Delay		21.2			47.2			132.2			20.8
Approach LOS		C			D			F			C

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 91.9	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.33	
Intersection Signal Delay: 62.5	Intersection LOS: E
Intersection Capacity Utilization 84.9%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 24: Escondido Av. & Main St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	4	915	445	327	1155	3	774	22	345	1	3	12
Future Volume (veh/h)	4	915	445	327	1155	3	774	22	345	1	3	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1700	1800	1800	1600	1800	1800	1600	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	4	943	345	337	1191	3	798	23	194	1	3	11
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	9	1509	468	324	1407	628	635	594	503	2	39	145
Arrive On Green	0.01	0.31	0.31	0.11	0.41	0.41	0.21	0.33	0.33	0.00	0.12	0.12
Sat Flow, veh/h	1619	4914	1525	2956	3420	1525	2956	1800	1525	1619	338	1239
Grp Volume(v), veh/h	4	943	345	337	1191	3	798	23	194	1	0	14
Grp Sat Flow(s),veh/h/ln	1619	1638	1525	1478	1710	1525	1478	1800	1525	1619	0	1577
Q Serve(g_s), s	0.2	14.1	17.4	9.4	27.0	0.1	18.4	0.7	8.4	0.1	0.0	0.7
Cycle Q Clear(g_c), s	0.2	14.1	17.4	9.4	27.0	0.1	18.4	0.7	8.4	0.1	0.0	0.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.79
Lane Grp Cap(c), veh/h	9	1509	468	324	1407	628	635	594	503	2	0	184
V/C Ratio(X)	0.47	0.63	0.74	1.04	0.85	0.00	1.26	0.04	0.39	0.45	0.00	0.08
Avail Cap(c_a), veh/h	132	2190	680	324	1620	723	635	941	797	113	0	626
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	42.5	25.5	26.6	38.2	22.8	14.9	33.7	19.5	22.0	42.8	0.0	33.7
Incr Delay (d2), s/veh	13.9	0.4	2.4	60.6	3.9	0.0	128.4	0.0	0.5	45.0	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	5.0	6.5	5.9	10.1	0.0	17.8	0.3	3.0	0.0	0.0	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	56.4	25.9	29.0	98.8	26.7	14.9	162.0	19.5	22.5	87.8	0.0	33.9
LnGrp LOS	E	C	C	F	C	B	F	B	C	F	A	C
Approach Vol, veh/h		1292			1531			1015			15	
Approach Delay, s/veh		26.8			42.5			132.1			37.5	
Approach LOS		C			D			F			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.0	32.5	23.0	16.2	5.1	41.5	4.7	34.5
Change Period (Y+Rc), s	4.6	6.2	4.6	* 6.2	4.6	6.2	4.6	6.2
Max Green Setting (Gmax), s	9.4	38.2	18.4	* 34	7.0	40.6	6.0	44.8
Max Q Clear Time (g_c+I1), s	11.4	19.4	20.4	2.7	2.2	29.0	2.1	10.4
Green Ext Time (p_c), s	0.0	7.0	0.0	0.0	0.0	5.8	0.0	0.8

Intersection Summary	
HCM 6th Ctrl Delay	60.9
HCM 6th LOS	E

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	3.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	24	241	893	33	96	541
Future Vol, veh/h	24	241	893	33	96	541
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	100	0	-	-	195	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	27	268	992	37	107	601

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1526	515	0	0	1029	0
Stage 1	1011	-	-	-	-	-
Stage 2	515	-	-	-	-	-
Critical Hdwy	6.8	6.9	-	-	4.1	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	111	510	-	-	683	-
Stage 1	317	-	-	-	-	-
Stage 2	570	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	94	510	-	-	683	-
Mov Cap-2 Maneuver	215	-	-	-	-	-
Stage 1	317	-	-	-	-	-
Stage 2	481	-	-	-	-	-

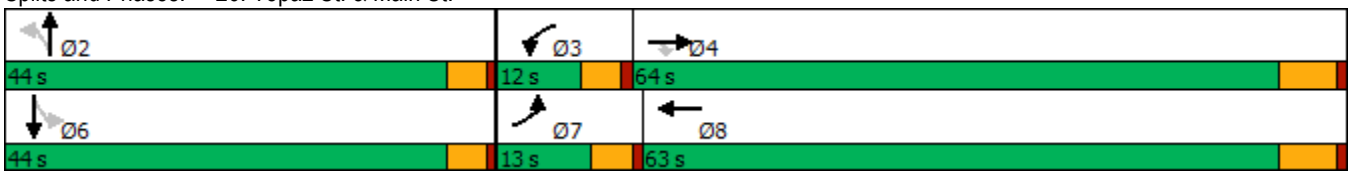
Approach	WB	NB	SB
HCM Control Delay, s	20	0	1.7
HCM LOS	C		

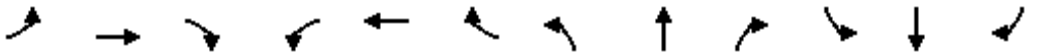
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	215	510	683	-
HCM Lane V/C Ratio	-	-	0.124	0.525	0.156	-
HCM Control Delay (s)	-	-	24.1	19.6	11.2	-
HCM Lane LOS	-	-	C	C	B	-
HCM 95th %tile Q(veh)	-	-	0.4	3	0.6	-

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	43	1102	87	33	1166	190	83	98	64
Future Volume (vph)	43	1102	87	33	1166	190	83	98	64
Turn Type	Prot	NA	Perm	Prot	NA	Perm	NA	Perm	NA
Protected Phases	7	4		3	8		2		6
Permitted Phases			4			2		6	
Detector Phase	7	4	4	3	8	2	2	6	6
Switch Phase									
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	25.2	25.2	9.6	23.2	32.6	32.6	38.6	38.6
Total Split (s)	13.0	64.0	64.0	12.0	63.0	44.0	44.0	44.0	44.0
Total Split (%)	10.8%	53.3%	53.3%	10.0%	52.5%	36.7%	36.7%	36.7%	36.7%
Yellow Time (s)	3.6	5.2	5.2	3.6	5.2	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	6.2	4.6	6.2	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes				
Recall Mode	None	None	None	Max	None	None	None	None	None
Act Effct Green (s)	7.2	45.2	45.2	7.9	49.0	25.9	25.9	25.9	25.9
Actuated g/C Ratio	0.08	0.47	0.47	0.08	0.51	0.27	0.27	0.27	0.27
v/c Ratio	0.40	0.76	0.13	0.28	0.81	0.77	0.33	0.39	0.33
Control Delay	59.3	24.4	4.0	55.5	26.2	53.3	25.1	35.1	21.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	59.3	24.4	4.0	55.5	26.2	53.3	25.1	35.1	21.1
LOS	E	C	A	E	C	D	C	D	C
Approach Delay		24.2			27.0		41.2		26.7
Approach LOS		C			C		D		C

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 95.4	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.81	
Intersection Signal Delay: 27.4	Intersection LOS: C
Intersection Capacity Utilization 73.5%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 26: Topaz St. & Main St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	43	1102	87	33	1166	96	190	83	60	98	64	83
Future Volume (veh/h)	43	1102	87	33	1166	96	190	83	60	98	64	83
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	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	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	48	1224	84	37	1296	104	211	92	48	109	71	44
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, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	66	1549	676	148	1615	129	348	295	154	326	275	171
Arrive On Green	0.04	0.45	0.45	0.09	0.50	0.50	0.26	0.26	0.26	0.26	0.26	0.26
Sat Flow, veh/h	1619	3420	1494	1619	3207	257	1226	1113	581	1195	1040	644
Grp Volume(v), veh/h	48	1224	84	37	689	711	211	0	140	109	0	115
Grp Sat Flow(s),veh/h/ln	1619	1710	1494	1619	1710	1754	1226	0	1693	1195	0	1684
Q Serve(g_s), s	2.4	24.6	2.6	1.7	27.1	27.3	13.2	0.0	5.4	6.5	0.0	4.4
Cycle Q Clear(g_c), s	2.4	24.6	2.6	1.7	27.1	27.3	17.6	0.0	5.4	11.8	0.0	4.4
Prop In Lane	1.00		1.00	1.00		0.15	1.00		0.34	1.00		0.38
Lane Grp Cap(c), veh/h	66	1549	676	148	861	883	348	0	448	326	0	446
V/C Ratio(X)	0.73	0.79	0.12	0.25	0.80	0.80	0.61	0.00	0.31	0.33	0.00	0.26
Avail Cap(c_a), veh/h	168	2449	1069	148	1203	1234	621	0	826	593	0	822
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	38.3	18.8	12.8	34.1	16.7	16.7	30.4	0.0	23.8	28.5	0.0	23.4
Incr Delay (d2), s/veh	5.5	0.9	0.1	4.0	2.7	2.7	1.7	0.0	0.4	0.6	0.0	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	1.0	8.3	0.8	0.8	9.1	9.4	4.0	0.0	2.2	1.9	0.0	1.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	43.8	19.8	12.9	38.1	19.4	19.4	32.1	0.0	24.2	29.1	0.0	23.7
LnGrp LOS	D	B	B	D	B	B	C	A	C	C	A	C
Approach Vol, veh/h		1356			1437			351			224	
Approach Delay, s/veh		20.2			19.9			28.9			26.4	
Approach LOS		C			B			C			C	

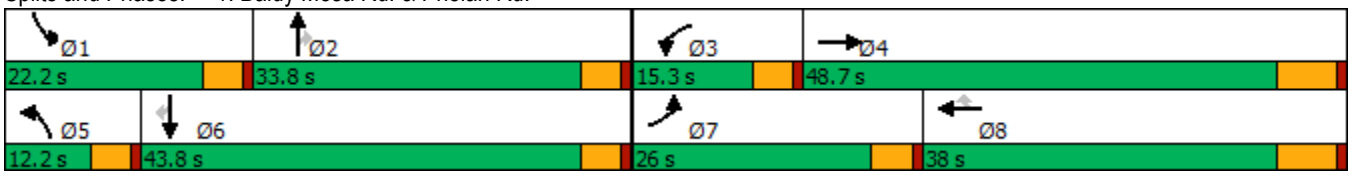
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		26.0	12.0	42.8		26.0	7.9	46.9				
Change Period (Y+Rc), s		4.6	4.6	6.2		4.6	4.6	6.2				
Max Green Setting (Gmax), s		39.4	7.4	57.8		39.4	8.4	56.8				
Max Q Clear Time (g_c+I1), s		19.6	3.7	26.6		13.8	4.4	29.3				
Green Ext Time (p_c), s		1.5	0.0	9.9		1.1	0.0	10.1				

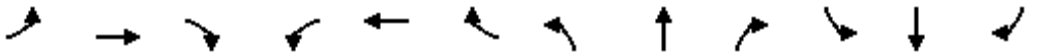
Intersection Summary	
HCM 6th Ctrl Delay	21.4
HCM 6th LOS	C

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	157	717	77	770	149	39	30	31	128	38	140
Future Volume (vph)	157	717	77	770	149	39	30	31	128	38	140
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4	3	8		5	2		1	6	
Permitted Phases					8			2			6
Detector Phase	7	4	3	8	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	30.5	9.6	37.5	37.5	9.6	31.6	31.6	9.6	40.6	40.6
Total Split (s)	26.0	48.7	15.3	38.0	38.0	12.2	33.8	33.8	22.2	43.8	43.8
Total Split (%)	21.7%	40.6%	12.8%	31.7%	31.7%	10.2%	28.2%	28.2%	18.5%	36.5%	36.5%
Yellow Time (s)	3.6	5.5	3.6	5.5	5.5	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.5	4.6	6.5	6.5	4.6	4.6	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Max	None	Max	Max	None	None	None	None	None	None
Act Effct Green (s)	13.9	44.2	8.7	36.1	36.1	6.6	13.1	13.1	13.0	20.1	20.1
Actuated g/C Ratio	0.15	0.48	0.09	0.39	0.39	0.07	0.14	0.14	0.14	0.22	0.22
v/c Ratio	0.70	0.50	0.55	0.62	0.23	0.37	0.13	0.09	0.61	0.11	0.33
Control Delay	55.9	22.0	59.4	29.1	4.2	56.1	39.0	0.5	53.7	31.6	6.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	55.9	22.0	59.4	29.1	4.2	56.1	39.0	0.5	53.7	31.6	6.8
LOS	E	C	E	C	A	E	D	A	D	C	A
Approach Delay		27.8		27.7			33.8			29.5	
Approach LOS		C		C			C			C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 93	
Natural Cycle: 100	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.70	
Intersection Signal Delay: 28.3	Intersection LOS: C
Intersection Capacity Utilization 63.2%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 1: Baldy Mesa Rd. & Phelan Rd.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	157	717	38	77	770	149	39	30	31	128	38	140
Future Volume (veh/h)	157	717	38	77	770	149	39	30	31	128	38	140
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		0.99	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	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	169	771	32	83	828	120	42	32	22	138	41	89
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	201	1595	66	118	1455	645	59	211	177	168	332	282
Arrive On Green	0.12	0.48	0.48	0.07	0.43	0.43	0.04	0.12	0.12	0.10	0.18	0.18
Sat Flow, veh/h	1619	3346	139	1619	3420	1516	1619	1800	1512	1619	1800	1525
Grp Volume(v), veh/h	169	394	409	83	828	120	42	32	22	138	41	89
Grp Sat Flow(s),veh/h/ln	1619	1710	1775	1619	1710	1516	1619	1800	1512	1619	1800	1525
Q Serve(g_s), s	9.0	13.9	13.9	4.4	16.2	4.4	2.3	1.4	1.2	7.4	1.7	4.5
Cycle Q Clear(g_c), s	9.0	13.9	13.9	4.4	16.2	4.4	2.3	1.4	1.2	7.4	1.7	4.5
Prop In Lane	1.00		0.08	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	201	815	846	118	1455	645	59	211	177	168	332	282
V/C Ratio(X)	0.84	0.48	0.48	0.70	0.57	0.19	0.71	0.15	0.12	0.82	0.12	0.32
Avail Cap(c_a), veh/h	391	815	846	196	1455	645	139	594	499	322	797	675
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.9	15.7	15.8	40.1	19.3	15.9	42.2	35.1	35.0	38.9	30.1	31.2
Incr Delay (d2), s/veh	3.6	2.0	2.0	2.8	1.6	0.6	5.8	0.3	0.3	3.8	0.2	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.5	5.0	5.2	1.7	5.8	1.4	1.0	0.6	0.4	3.1	0.7	1.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	41.5	17.8	17.7	42.9	20.9	16.5	48.0	35.4	35.3	42.7	30.3	31.9
LnGrp LOS	D	B	B	D	C	B	D	D	D	D	C	C
Approach Vol, veh/h		972			1031			96			268	
Approach Delay, s/veh		21.9			22.2			40.9			37.2	
Approach LOS		C			C			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.8	15.0	11.1	48.7	7.8	20.9	15.6	44.2
Change Period (Y+Rc), s	4.6	4.6	4.6	6.5	4.6	4.6	4.6	6.5
Max Green Setting (Gmax), s	17.6	29.2	10.7	42.2	7.6	39.2	21.4	31.5
Max Q Clear Time (g_c+I1), s	9.4	3.4	6.4	15.9	4.3	6.5	11.0	18.2
Green Ext Time (p_c), s	0.1	0.2	0.0	4.4	0.0	0.5	0.1	4.4

Intersection Summary	
HCM 6th Ctrl Delay	24.5
HCM 6th LOS	C

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	4	857	4	29	1032	13	3	0	15	8	0	3
Future Vol, veh/h	4	857	4	29	1032	13	3	0	15	8	0	3
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	105	-	105	110	-	110	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	4	902	4	31	1086	14	3	0	16	8	0	3

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1100	0	0	906	0	0	2067	2072	902	2068	2062	1086
Stage 1	-	-	-	-	-	-	910	910	-	1148	1148	-
Stage 2	-	-	-	-	-	-	1157	1162	-	920	914	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
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	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	642	-	-	759	-	-	40	55	339	40	55	265
Stage 1	-	-	-	-	-	-	332	356	-	244	276	-
Stage 2	-	-	-	-	-	-	241	272	-	327	355	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	642	-	-	759	-	-	38	52	339	37	52	265
Mov Cap-2 Maneuver	-	-	-	-	-	-	138	159	-	135	156	-
Stage 1	-	-	-	-	-	-	330	354	-	243	265	-
Stage 2	-	-	-	-	-	-	228	261	-	310	353	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0.3	19.2	29.9
HCM LOS			C	D

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	273	642	-	-	759	-	-	156
HCM Lane V/C Ratio	0.069	0.007	-	-	0.04	-	-	0.074
HCM Control Delay (s)	19.2	10.6	-	-	9.9	-	-	29.9
HCM Lane LOS	C	B	-	-	A	-	-	D
HCM 95th %tile Q(veh)	0.2	0	-	-	0.1	-	-	0.2

Intersection	
Int Delay, s/veh	0.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	860	2	4	1129	6	5
Future Vol, veh/h	860	2	4	1129	6	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	110	-	0	-
Veh in Median Storage, #	0	-	-	0	1	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	896	2	4	1176	6	5

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	898	0	2081	897
Stage 1	-	-	-	-	897	-
Stage 2	-	-	-	-	1184	-
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	-	-	765	-	59	341
Stage 1	-	-	-	-	401	-
Stage 2	-	-	-	-	293	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	765	-	59	341
Mov Cap-2 Maneuver	-	-	-	-	180	-
Stage 1	-	-	-	-	401	-
Stage 2	-	-	-	-	292	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	21.5
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	229	-	-	765	-
HCM Lane V/C Ratio	0.05	-	-	0.005	-
HCM Control Delay (s)	21.5	-	-	9.7	-
HCM Lane LOS	C	-	-	A	-
HCM 95th %tile Q(veh)	0.2	-	-	0	-

Intersection	
Int Delay, s/veh	1.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑	↱	⋔	
Traffic Vol, veh/h	0	865	1091	82	65	42
Future Vol, veh/h	0	865	1091	82	65	42
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	0	-
Veh in Median Storage, #	-	0	0	-	2	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	940	1186	89	71	46

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	2126	1186
Stage 1	-	-	-	-	1186	-
Stage 2	-	-	-	-	940	-
Critical Hdwy	-	-	-	-	5.5	6
Critical Hdwy Stg 1	-	-	-	-	5.5	-
Critical Hdwy Stg 2	-	-	-	-	5.5	-
Follow-up Hdwy	-	-	-	-	3	3
Pot Cap-1 Maneuver	0	-	-	-	100	262
Stage 1	0	-	-	-	309	-
Stage 2	0	-	-	-	412	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	100	262
Mov Cap-2 Maneuver	-	-	-	-	251	-
Stage 1	-	-	-	-	309	-
Stage 2	-	-	-	-	412	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	30.4
HCM LOS			D

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	255
HCM Lane V/C Ratio	-	-	-	0.456
HCM Control Delay (s)	-	-	-	30.4
HCM Lane LOS	-	-	-	D
HCM 95th %tile Q(veh)	-	-	-	2.2

Intersection	
Int Delay, s/veh	8.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	7	0	32	12	0	236
Future Vol, veh/h	7	0	32	12	0	236
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	100	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	8	0	35	13	0	257

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	8	0	91	8
Stage 1	-	-	-	-	8	-
Stage 2	-	-	-	-	83	-
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	-	-	1625	-	914	1080
Stage 1	-	-	-	-	1020	-
Stage 2	-	-	-	-	945	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1625	-	894	1080
Mov Cap-2 Maneuver	-	-	-	-	894	-
Stage 1	-	-	-	-	1020	-
Stage 2	-	-	-	-	924	-

Approach	EB	WB	NB
HCM Control Delay, s	0	5.3	9.4
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1080	-	-	1625	-
HCM Lane V/C Ratio	0.238	-	-	0.021	-
HCM Control Delay (s)	9.4	-	-	7.3	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0.9	-	-	0.1	-

Intersection	
Int Delay, s/veh	6.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	243	0	54	44	0	280
Future Vol, veh/h	243	0	54	44	0	280
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	100	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	264	0	59	48	0	304

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	264	0	430	264
Stage 1	-	-	-	-	264	-
Stage 2	-	-	-	-	166	-
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	-	-	1312	-	586	780
Stage 1	-	-	-	-	785	-
Stage 2	-	-	-	-	868	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1312	-	560	780
Mov Cap-2 Maneuver	-	-	-	-	623	-
Stage 1	-	-	-	-	785	-
Stage 2	-	-	-	-	829	-

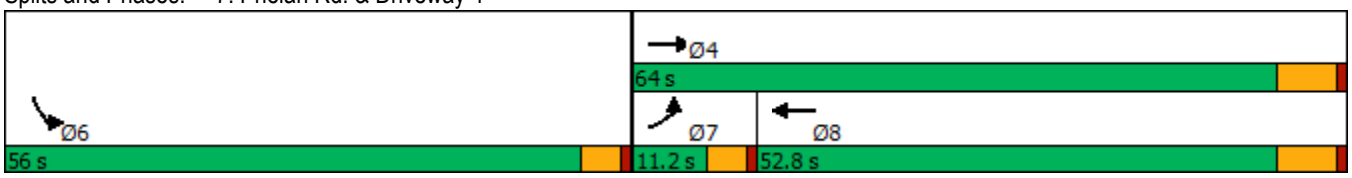
Approach	EB	WB	NB
HCM Control Delay, s	0	4.3	12.5
HCM LOS			B

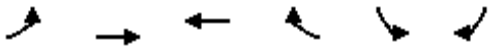
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	780	-	-	1312	-
HCM Lane V/C Ratio	0.39	-	-	0.045	-
HCM Control Delay (s)	12.5	-	-	7.9	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	1.9	-	-	0.1	-

Lane Group	EBL	EBT	WBT	SBL
Lane Configurations				
Traffic Volume (vph)	31	912	1131	654
Future Volume (vph)	31	912	1131	654
Turn Type	Prot	NA	NA	Prot
Protected Phases	7	4	8	6
Permitted Phases				
Detector Phase	7	4	8	6
Switch Phase				
Minimum Initial (s)	5.0	10.0	10.0	10.0
Minimum Split (s)	9.6	16.5	23.5	26.6
Total Split (s)	11.2	64.0	52.8	56.0
Total Split (%)	9.3%	53.3%	44.0%	46.7%
Yellow Time (s)	3.6	5.5	5.5	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.5	6.5	4.6
Lead/Lag	Lead		Lag	
Lead-Lag Optimize?	Yes		Yes	
Recall Mode	None	Max	Max	None
Act Effct Green (s)	6.1	57.5	50.8	51.4
Actuated g/C Ratio	0.05	0.48	0.42	0.43
v/c Ratio	0.42	0.57	0.95	1.11
Control Delay	70.5	24.1	48.7	103.2
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	70.5	24.1	48.7	103.2
LOS	E	C	D	F
Approach Delay		25.7	48.7	103.2
Approach LOS		C	D	F

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.11	
Intersection Signal Delay: 54.5	Intersection LOS: D
Intersection Capacity Utilization 92.4%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 7: Phelan Rd. & Driveway 4





Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	31	912	1131	113	654	54
Future Volume (veh/h)	31	912	1131	113	654	54
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	1700	1800	1700	1800	1700	1800
Adj Flow Rate, veh/h	34	991	1229	74	711	33
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	46	1725	1310	79	658	31
Arrive On Green	0.03	0.48	0.41	0.41	0.43	0.43
Sat Flow, veh/h	1619	3600	3175	191	1537	71
Grp Volume(v), veh/h	34	991	657	646	745	0
Grp Sat Flow(s),veh/h/ln	1619	1800	1700	1666	1610	0
Q Serve(g_s), s	2.5	23.7	44.4	44.6	51.4	0.0
Cycle Q Clear(g_c), s	2.5	23.7	44.4	44.6	51.4	0.0
Prop In Lane	1.00			0.11	0.95	0.04
Lane Grp Cap(c), veh/h	46	1725	701	687	690	0
V/C Ratio(X)	0.74	0.57	0.94	0.94	1.08	0.00
Avail Cap(c_a), veh/h	89	1725	701	687	690	0
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	0.00
Uniform Delay (d), s/veh	57.9	22.5	33.8	33.8	34.3	0.0
Incr Delay (d2), s/veh	8.5	1.4	21.7	22.3	57.9	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	1.1	9.4	20.9	20.7	30.9	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	66.4	23.9	55.4	56.1	92.2	0.0
LnGrp LOS	E	C	E	E	F	A
Approach Vol, veh/h		1025	1303		745	
Approach Delay, s/veh		25.3	55.8		92.2	
Approach LOS		C	E		F	

Timer - Assigned Phs			4		6	7	8
Phs Duration (G+Y+Rc), s			64.0		56.0	8.0	56.0
Change Period (Y+Rc), s			6.5		4.6	4.6	6.5
Max Green Setting (Gmax), s			57.5		51.4	6.6	46.3
Max Q Clear Time (g_c+I1), s			25.7		53.4	4.5	46.6
Green Ext Time (p_c), s			6.9		0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	54.4
HCM 6th LOS	D

Notes

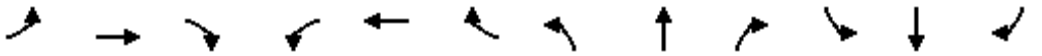
User approved volume balancing among the lanes for turning movement.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	53	72	40	47	109	67	1083	93	224	1044	90
Future Volume (vph)	53	72	40	47	109	67	1083	93	224	1044	90
Turn Type	Perm	NA	Perm	Perm	NA	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		4			8	5	2		1	6	
Permitted Phases	4		4	8				2			6
Detector Phase	4	4	4	8	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	15.0	15.0	15.0	42.0	42.0	9.0	28.0	28.0	9.0	37.0	37.0
Total Split (s)	42.0	42.0	42.0	42.0	42.0	14.0	49.0	49.0	29.0	64.0	64.0
Total Split (%)	35.0%	35.0%	35.0%	35.0%	35.0%	11.7%	40.8%	40.8%	24.2%	53.3%	53.3%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	3.0	5.0	5.0	3.0	5.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	4.0	6.0	6.0	4.0	6.0	6.0
Lead/Lag						Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?						Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Max	Max	None	Max	Max
Act Effct Green (s)	21.0	21.0	21.0	21.0	21.0	8.2	47.6	47.6	17.4	59.1	59.1
Actuated g/C Ratio	0.21	0.21	0.21	0.21	0.21	0.08	0.47	0.47	0.17	0.58	0.58
v/c Ratio	0.73	0.19	0.10	0.18	0.81	0.48	0.66	0.12	0.75	0.52	0.10
Control Delay	87.9	33.9	0.5	34.1	43.6	59.3	25.8	5.2	56.8	16.1	3.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	87.9	33.9	0.5	34.1	43.6	59.3	25.8	5.2	56.8	16.1	3.5
LOS	F	C	A	C	D	E	C	A	E	B	A
Approach Delay		43.0			42.4		26.1			22.0	
Approach LOS		D			D		C			C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 101.2	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.81	
Intersection Signal Delay: 27.1	Intersection LOS: C
Intersection Capacity Utilization 86.8%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 8: US-395 & Luna Rd.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	53	72	40	47	109	216	67	1083	93	224	1044	90
Future Volume (veh/h)	53	72	40	47	109	216	67	1083	93	224	1044	90
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	55	75	23	49	114	163	70	1128	72	233	1088	75
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	153	416	352	332	155	221	91	1741	777	269	2097	935
Arrive On Green	0.22	0.22	0.22	0.22	0.22	0.22	0.05	0.48	0.48	0.15	0.58	0.58
Sat Flow, veh/h	1181	1900	1610	1391	706	1010	1810	3610	1610	1810	3610	1610
Grp Volume(v), veh/h	55	75	23	49	0	277	70	1128	72	233	1088	75
Grp Sat Flow(s),veh/h/ln	1181	1900	1610	1391	0	1717	1810	1805	1610	1810	1805	1610
Q Serve(g_s), s	4.5	3.2	1.1	3.0	0.0	15.0	3.8	23.5	2.4	12.6	18.1	2.0
Cycle Q Clear(g_c), s	19.6	3.2	1.1	6.2	0.0	15.0	3.8	23.5	2.4	12.6	18.1	2.0
Prop In Lane	1.00		1.00	1.00		0.59	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	153	416	352	332	0	375	91	1741	777	269	2097	935
V/C Ratio(X)	0.36	0.18	0.07	0.15	0.00	0.74	0.77	0.65	0.09	0.87	0.52	0.08
Avail Cap(c_a), veh/h	332	704	597	543	0	636	181	1741	777	453	2097	935
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.4	31.7	30.9	34.2	0.0	36.3	46.9	19.5	14.0	41.5	12.5	9.2
Incr Delay (d2), s/veh	0.5	0.1	0.0	0.1	0.0	1.1	9.8	1.9	0.2	7.1	0.9	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	1.3	1.4	0.4	1.0	0.0	6.2	1.9	8.9	0.8	5.8	6.2	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	46.0	31.8	30.9	34.3	0.0	37.4	56.7	21.3	14.2	48.6	13.5	9.4
LnGrp LOS	D	C	C	C	A	D	E	C	B	D	B	A
Approach Vol, veh/h		153			326			1270			1396	
Approach Delay, s/veh		36.8			36.9			22.9			19.1	
Approach LOS		D			D			C			B	

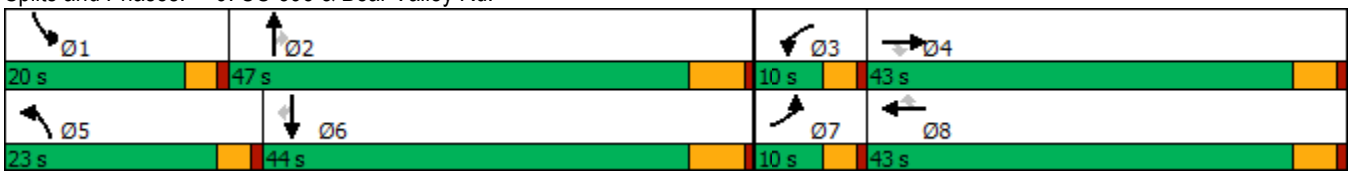
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	18.9	54.2		26.8	9.0	64.0		26.8				
Change Period (Y+Rc), s	4.0	6.0		5.0	4.0	6.0		5.0				
Max Green Setting (Gmax), s	25.0	43.0		37.0	10.0	58.0		37.0				
Max Q Clear Time (g_c+I1), s	14.6	25.5		21.6	5.8	20.1		17.0				
Green Ext Time (p_c), s	0.3	5.7		0.3	0.0	6.5		1.0				

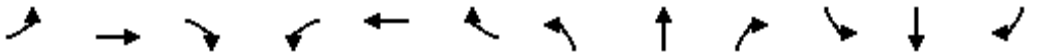
Intersection Summary			
HCM 6th Ctrl Delay		23.3	
HCM 6th LOS		C	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	56	329	138	123	321	142	183	1021	255	167	929	36
Future Volume (vph)	56	329	138	123	321	142	183	1021	255	167	929	36
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.0	43.0	43.0	9.0	43.0	43.0	9.0	44.0	44.0	9.0	44.0	44.0
Total Split (s)	10.0	43.0	43.0	10.0	43.0	43.0	23.0	47.0	47.0	20.0	44.0	44.0
Total Split (%)	8.3%	35.8%	35.8%	8.3%	35.8%	35.8%	19.2%	39.2%	39.2%	16.7%	36.7%	36.7%
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0	4.0	3.0	5.0	5.0	3.0	5.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	5.0	5.0	4.0	5.0	5.0	4.0	6.0	6.0	4.0	6.0	6.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Max	Max	None	Max	Max
Act Effct Green (s)	6.0	16.8	16.8	6.1	19.1	19.1	14.4	41.6	41.6	13.5	40.7	40.7
Actuated g/C Ratio	0.06	0.17	0.17	0.06	0.20	0.20	0.15	0.43	0.43	0.14	0.42	0.42
v/c Ratio	0.53	0.56	0.36	1.14	0.48	0.34	0.72	0.70	0.32	0.70	0.65	0.05
Control Delay	65.8	39.7	8.1	173.0	37.4	7.6	56.9	27.6	4.4	57.6	27.3	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	65.8	39.7	8.1	173.0	37.4	7.6	56.9	27.6	4.4	57.6	27.3	0.1
LOS	E	D	A	F	D	A	E	C	A	E	C	A
Approach Delay		34.1			58.6			27.3			30.9	
Approach LOS		C			E			C			C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 97.2	
Natural Cycle: 105	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.14	
Intersection Signal Delay: 34.3	Intersection LOS: C
Intersection Capacity Utilization 73.5%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 9: US-395 & Bear Valley Rd.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	56	329	138	123	321	142	183	1021	255	167	929	36
Future Volume (veh/h)	56	329	138	123	321	142	183	1021	255	167	929	36
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	59	346	63	129	338	80	193	1075	207	176	978	25
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	78	491	219	123	580	258	232	1674	746	213	1637	730
Arrive On Green	0.04	0.14	0.14	0.07	0.16	0.16	0.13	0.46	0.46	0.12	0.45	0.45
Sat Flow, veh/h	1810	3610	1610	1810	3610	1604	1810	3610	1610	1810	3610	1609
Grp Volume(v), veh/h	59	346	63	129	338	80	193	1075	207	176	978	25
Grp Sat Flow(s),veh/h/ln	1810	1805	1610	1810	1805	1604	1810	1805	1610	1810	1805	1609
Q Serve(g_s), s	2.9	8.1	3.1	6.0	7.7	3.9	9.2	20.1	7.0	8.4	18.0	0.8
Cycle Q Clear(g_c), s	2.9	8.1	3.1	6.0	7.7	3.9	9.2	20.1	7.0	8.4	18.0	0.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	78	491	219	123	580	258	232	1674	746	213	1637	730
V/C Ratio(X)	0.75	0.70	0.29	1.05	0.58	0.31	0.83	0.64	0.28	0.83	0.60	0.03
Avail Cap(c_a), veh/h	123	1551	692	123	1551	689	389	1674	746	327	1637	730
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.8	36.5	34.4	41.2	34.4	32.8	37.6	18.1	14.6	38.1	18.1	13.4
Incr Delay (d2), s/veh	10.3	0.7	0.3	95.5	0.3	0.3	5.8	1.9	0.9	8.1	1.6	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	3.3	1.1	5.7	3.1	1.4	4.1	7.5	2.4	3.9	6.7	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	52.2	37.2	34.6	136.7	34.7	33.0	43.4	20.0	15.5	46.3	19.7	13.5
LnGrp LOS	D	D	C	F	C	C	D	C	B	D	B	B
Approach Vol, veh/h		468			547			1475			1179	
Approach Delay, s/veh		38.7			58.5			22.5			23.6	
Approach LOS		D			E			C			C	

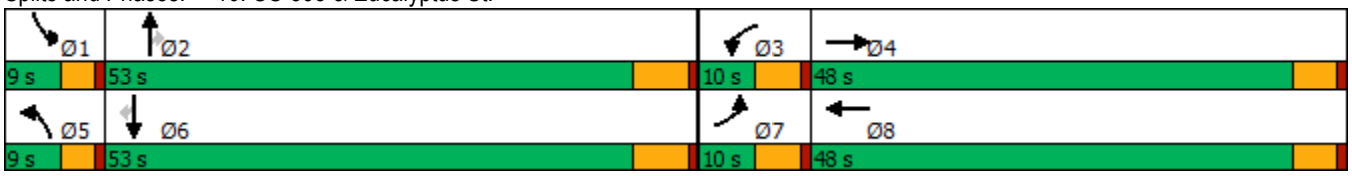
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.4	47.0	10.0	17.0	15.3	46.1	7.8	19.2
Change Period (Y+Rc), s	4.0	6.0	4.0	5.0	4.0	6.0	4.0	5.0
Max Green Setting (Gmax), s	16.0	41.0	6.0	38.0	19.0	38.0	6.0	38.0
Max Q Clear Time (g_c+I1), s	10.4	22.1	8.0	10.1	11.2	20.0	4.9	9.7
Green Ext Time (p_c), s	0.1	4.5	0.0	1.3	0.2	3.7	0.0	1.3

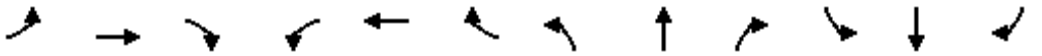
Intersection Summary	
HCM 6th Ctrl Delay	30.3
HCM 6th LOS	C

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	6	0	50	2	17	1483	105	12	1124	11
Future Volume (vph)	6	0	50	2	17	1483	105	12	1124	11
Turn Type	Prot	NA	Prot	NA	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4	3	8	5	2		1	6	
Permitted Phases							2			6
Detector Phase	7	4	3	8	5	2	2	1	6	6
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	10.0	48.0	10.0	48.0	9.0	41.0	41.0	9.0	41.0	41.0
Total Split (s)	10.0	48.0	10.0	48.0	9.0	53.0	53.0	9.0	53.0	53.0
Total Split (%)	8.3%	40.0%	8.3%	40.0%	7.5%	44.2%	44.2%	7.5%	44.2%	44.2%
Yellow Time (s)	4.0	4.0	4.0	4.0	3.0	5.0	5.0	3.0	5.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	4.0	6.0	6.0	4.0	6.0	6.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	Max	Max	None	Max	Max
Act Effct Green (s)	5.2	15.0	8.5	15.0	5.2	60.1	60.1	5.2	60.1	60.1
Actuated g/C Ratio	0.06	0.18	0.10	0.18	0.06	0.71	0.71	0.06	0.71	0.71
v/c Ratio	0.05	0.01	0.29	0.04	0.16	0.60	0.09	0.12	0.46	0.01
Control Delay	45.3	0.0	44.7	14.9	46.9	14.1	4.3	45.9	12.1	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	45.3	0.0	44.7	14.9	46.9	14.1	4.3	45.9	12.1	0.0
LOS	D	A	D	B	D	B	A	D	B	A
Approach Delay		24.7		38.8		13.8			12.4	
Approach LOS		C		D		B			B	

Intersection Summary		
Cycle Length: 120		
Actuated Cycle Length: 84.1		
Natural Cycle: 120		
Control Type: Actuated-Uncoordinated		
Maximum v/c Ratio: 0.60		
Intersection Signal Delay: 13.8	Intersection LOS: B	
Intersection Capacity Utilization 59.6%	ICU Level of Service B	
Analysis Period (min) 15		

Splits and Phases: 10: US-395 & Eucalyptus St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	6	0	5	50	2	10	17	1483	105	12	1124	11
Future Volume (veh/h)	6	0	5	50	2	10	17	1483	105	12	1124	11
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	6	0	2	53	2	3	18	1561	108	13	1183	11
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	14	0	93	80	65	97	38	2239	999	29	2221	991
Arrive On Green	0.01	0.00	0.06	0.04	0.09	0.09	0.02	0.62	0.62	0.02	0.62	0.62
Sat Flow, veh/h	1810	0	1610	1810	686	1029	1810	3610	1610	1810	3610	1610
Grp Volume(v), veh/h	6	0	2	53	0	5	18	1561	108	13	1183	11
Grp Sat Flow(s),veh/h/ln	1810	0	1610	1810	0	1715	1810	1805	1610	1810	1805	1610
Q Serve(g_s), s	0.3	0.0	0.1	2.2	0.0	0.2	0.8	22.1	2.1	0.5	14.3	0.2
Cycle Q Clear(g_c), s	0.3	0.0	0.1	2.2	0.0	0.2	0.8	22.1	2.1	0.5	14.3	0.2
Prop In Lane	1.00		1.00	1.00		0.60	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	14	0	93	80	0	162	38	2239	999	29	2221	991
V/C Ratio(X)	0.42	0.00	0.02	0.66	0.00	0.03	0.48	0.70	0.11	0.46	0.53	0.01
Avail Cap(c_a), veh/h	118	0	906	118	0	965	118	2239	999	118	2221	991
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.7	0.0	33.9	35.9	0.0	31.4	37.0	9.7	5.9	37.3	8.4	5.7
Incr Delay (d2), s/veh	7.3	0.0	0.1	3.5	0.0	0.1	3.5	1.8	0.2	4.2	0.9	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	0.0	1.0	0.0	0.1	0.3	6.1	0.6	0.3	5.1	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	45.0	0.0	34.0	39.4	0.0	31.5	40.5	11.5	6.1	41.4	9.3	5.7
LnGrp LOS	D	A	C	D	A	C	D	B	A	D	A	A
Approach Vol, veh/h		8			58			1687			1207	
Approach Delay, s/veh		42.3			38.7			11.5			9.6	
Approach LOS		D			D			B			A	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.2	53.4	8.4	9.4	5.6	53.0	5.6	12.2
Change Period (Y+Rc), s	4.0	6.0	5.0	5.0	4.0	6.0	5.0	5.0
Max Green Setting (Gmax), s	5.0	47.0	5.0	43.0	5.0	47.0	5.0	43.0
Max Q Clear Time (g_c+I1), s	2.5	24.1	4.2	2.1	2.8	16.3	2.3	2.2
Green Ext Time (p_c), s	0.0	11.8	0.0	0.0	0.0	11.3	0.0	0.0

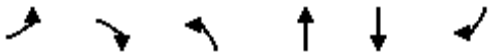
Intersection Summary	
HCM 6th Ctrl Delay	11.4
HCM 6th LOS	B

Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Configurations					
Traffic Volume (vph)	110	413	71	1598	1281
Future Volume (vph)	110	413	71	1598	1281
Turn Type	Prot	Perm	Prot	NA	NA
Protected Phases	4		5	2	6
Permitted Phases		4			
Detector Phase	4	4	5	2	6
Switch Phase					
Minimum Initial (s)	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	26.6	26.6	9.6	16.5	23.5
Total Split (s)	29.0	29.0	15.0	91.0	76.0
Total Split (%)	24.2%	24.2%	12.5%	75.8%	63.3%
Yellow Time (s)	3.6	3.6	3.6	5.5	5.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	6.5	6.5
Lead/Lag			Lead		Lag
Lead-Lag Optimize?			Yes		Yes
Recall Mode	None	None	None	Max	Max
Act Effct Green (s)	22.6	22.6	8.6	84.5	73.5
Actuated g/C Ratio	0.19	0.19	0.07	0.71	0.62
v/c Ratio	0.33	0.94	0.57	1.23	1.16
Control Delay	44.1	56.6	70.3	128.6	105.1
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	44.1	56.6	70.3	128.6	105.1
LOS	D	E	E	F	F
Approach Delay	54.0			126.1	105.1
Approach LOS	D			F	F

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 118.2	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.23	
Intersection Signal Delay: 107.5	Intersection LOS: F
Intersection Capacity Utilization 103.9%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 11: US-395 & Yucca Terrace Dr.





Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	110	413	71	1598	1281	27
Future Volume (veh/h)	110	413	71	1598	1281	27
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	115	356	74	1665	1334	28
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	368	327	95	1338	1137	24
Arrive On Green	0.20	0.20	0.05	1.00	0.92	0.61
Sat Flow, veh/h	1810	1610	1810	1900	1854	39
Grp Volume(v), veh/h	115	356	74	1665	0	1362
Grp Sat Flow(s),veh/h/ln	1810	1610	1810	1900	0	1893
Q Serve(g_s), s	6.5	24.4	4.8	84.5	0.0	73.6
Cycle Q Clear(g_c), s	6.5	24.4	4.8	84.5	0.0	73.6
Prop In Lane	1.00	1.00	1.00			0.02
Lane Grp Cap(c), veh/h	368	327	95	1338	0	1161
V/C Ratio(X)	0.31	1.09	0.78	1.24	0.00	1.17
Avail Cap(c_a), veh/h	368	327	157	1338	0	1161
HCM Platoon Ratio	1.00	1.00	1.00	1.50	1.50	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	40.7	47.8	56.2	0.0	0.0	5.2
Incr Delay (d2), s/veh	0.5	75.1	5.2	116.5	0.0	87.2
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	26.4	2.3	43.3	0.0	30.8
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	41.1	122.9	61.3	116.5	0.0	92.3
LnGrp LOS	D	F	E	F	A	F
Approach Vol, veh/h	471			1739	1362	
Approach Delay, s/veh	103.0			114.1	92.3	
Approach LOS	F			F	F	

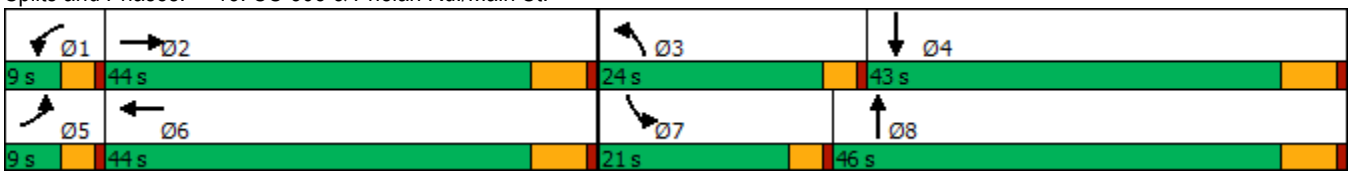
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		91.0		29.0	10.9	80.1
Change Period (Y+Rc), s		6.5		4.6	4.6	6.5
Max Green Setting (Gmax), s		84.5		24.4	10.4	69.5
Max Q Clear Time (g_c+I1), s		86.5		26.4	6.8	75.6
Green Ext Time (p_c), s		0.0		0.0	0.0	0.0

Intersection Summary		
HCM 6th Ctrl Delay		104.3
HCM 6th LOS		F

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	90	1244	24	895	238	1228	646	979
Future Volume (vph)	90	1244	24	895	238	1228	646	979
Turn Type	Prot	NA	Prot	NA	Prot	NA	Prot	NA
Protected Phases	5	2	1	6	3	8	7	4
Permitted Phases								
Detector Phase	5	2	1	6	3	8	7	4
Switch Phase								
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.0	16.0	9.0	16.0	9.0	16.0	9.0	16.0
Total Split (s)	9.0	44.0	9.0	44.0	24.0	46.0	21.0	43.0
Total Split (%)	7.5%	36.7%	7.5%	36.7%	20.0%	38.3%	17.5%	35.8%
Yellow Time (s)	3.0	5.0	3.0	5.0	3.0	5.0	3.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	6.0	4.0	6.0	4.0	6.0	4.0	6.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None
Act Effct Green (s)	5.0	41.6	5.0	38.0	19.0	40.0	17.0	38.0
Actuated g/C Ratio	0.04	0.35	0.04	0.32	0.16	0.33	0.14	0.32
v/c Ratio	1.27	1.23	0.33	1.19	0.88	1.12	2.67	1.00
Control Delay	237.4	146.3	68.0	128.7	79.6	102.8	782.4	68.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	237.4	146.3	68.0	128.7	79.6	102.8	782.4	68.3
LOS	F	F	E	F	E	F	F	E
Approach Delay		151.7		127.6		99.2		335.8
Approach LOS		F		F		F		F

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 2.67	
Intersection Signal Delay: 185.8	Intersection LOS: F
Intersection Capacity Utilization 132.8%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 13: US-395 & Phelan Rd./Main St.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	90	1244	198	24	895	379	238	1228	47	646	979	99
Future Volume (veh/h)	90	1244	198	24	895	379	238	1228	47	646	979	99
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	95	1309	180	25	942	315	251	1293	42	680	1031	89
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	75	1065	145	43	842	280	278	1189	39	256	1080	93
Arrive On Green	0.04	0.33	0.33	0.02	0.32	0.32	0.15	0.33	0.33	0.14	0.32	0.32
Sat Flow, veh/h	1810	3182	434	1810	2660	885	1810	3568	116	1810	3363	290
Grp Volume(v), veh/h	95	738	751	25	638	619	251	654	681	680	553	567
Grp Sat Flow(s),veh/h/ln	1810	1805	1811	1810	1805	1741	1810	1805	1879	1810	1805	1848
Q Serve(g_s), s	5.0	40.2	40.2	1.6	38.0	38.0	16.4	40.0	40.0	17.0	36.0	36.0
Cycle Q Clear(g_c), s	5.0	40.2	40.2	1.6	38.0	38.0	16.4	40.0	40.0	17.0	36.0	36.0
Prop In Lane	1.00		0.24	1.00		0.51	1.00		0.06	1.00		0.16
Lane Grp Cap(c), veh/h	75	604	606	43	572	551	278	602	626	256	580	594
V/C Ratio(X)	1.26	1.22	1.24	0.59	1.12	1.12	0.90	1.09	1.09	2.65	0.95	0.95
Avail Cap(c_a), veh/h	75	604	606	75	572	551	302	602	626	256	580	594
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	57.5	39.9	39.9	58.0	41.0	41.0	49.9	40.0	40.0	51.5	39.9	39.9
Incr Delay (d2), s/veh	188.7	114.2	120.9	9.1	73.5	77.1	26.8	62.3	62.2	754.8	26.4	26.1
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	6.1	35.7	36.9	0.8	27.4	26.9	9.1	26.8	27.9	61.1	19.1	19.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	246.2	154.1	160.8	67.2	114.5	118.1	76.7	102.3	102.2	806.3	66.2	66.0
LnGrp LOS	F	F	F	E	F	F	E	F	F	F	E	E
Approach Vol, veh/h		1584			1282			1586			1800	
Approach Delay, s/veh		162.8			115.3			98.2			345.7	
Approach LOS		F			F			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.8	46.2	22.4	44.6	9.0	44.0	21.0	46.0
Change Period (Y+Rc), s	4.0	6.0	4.0	6.0	4.0	6.0	4.0	6.0
Max Green Setting (Gmax), s	5.0	38.0	20.0	37.0	5.0	38.0	17.0	40.0
Max Q Clear Time (g_c+I1), s	3.6	42.2	18.4	38.0	7.0	40.0	19.0	42.0
Green Ext Time (p_c), s	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	189.3
HCM 6th LOS	F

Intersection	
Int Delay, s/veh	2.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	14	24	1489	33	11	1194
Future Vol, veh/h	14	24	1489	33	11	1194
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	375	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	98	98	98	98	98	98
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	14	24	1519	34	11	1218

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	2776	777	0	0	1553	0
Stage 1	1536	-	-	-	-	-
Stage 2	1240	-	-	-	-	-
Critical Hdwy	6.6	6.9	-	-	4.1	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	18	344	-	-	432	-
Stage 1	167	-	-	-	-	-
Stage 2	276	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	18	344	-	-	432	-
Mov Cap-2 Maneuver	18	-	-	-	-	-
Stage 1	167	-	-	-	-	-
Stage 2	269	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	168.6	0	0.1
HCM LOS	F		

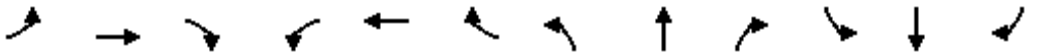
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	18	344	432	-
HCM Lane V/C Ratio	-	-	0.794	0.071	0.026	-
HCM Control Delay (s)	-	-	$ 429.8	16.3	13.6	-
HCM Lane LOS	-	-	F	C	B	-
HCM 95th %tile Q(veh)	-	-	2.1	0.2	0.1	-

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	80	1	132	4	33	210	1411	153	34	1073	101
Future Volume (vph)	80	1	132	4	33	210	1411	153	34	1073	101
Turn Type	Perm	NA	Perm	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		4		8		5	2		1	6	
Permitted Phases	4		8		8			2			6
Detector Phase	4	4	8	8	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	16.0	16.0	16.0	16.0	16.0	10.0	16.0	16.0	10.0	16.0	16.0
Total Split (s)	41.0	41.0	41.0	41.0	41.0	26.0	69.0	69.0	10.0	53.0	53.0
Total Split (%)	34.2%	34.2%	34.2%	34.2%	34.2%	21.7%	57.5%	57.5%	8.3%	44.2%	44.2%
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	5.0	6.0	6.0	5.0	6.0	6.0
Lead/Lag						Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?						Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Max	Max	None	Max	Max
Act Effct Green (s)	20.6	20.6	20.6	20.6	20.6	15.7	64.4	64.4	5.1	49.2	49.2
Actuated g/C Ratio	0.20	0.20	0.20	0.20	0.20	0.15	0.63	0.63	0.05	0.48	0.48
v/c Ratio	0.29	0.49	1.02	0.01	0.08	0.78	0.64	0.15	0.39	0.63	0.12
Control Delay	37.1	7.5	123.6	31.8	0.4	62.5	16.1	3.0	65.3	24.5	3.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	37.1	7.5	123.6	31.8	0.4	62.5	16.1	3.0	65.3	24.5	3.4
LOS	D	A	F	C	A	E	B	A	E	C	A
Approach Delay		14.5		97.2			20.4			23.9	
Approach LOS		B		F			C			C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 102.7	
Natural Cycle: 60	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.02	
Intersection Signal Delay: 24.8	Intersection LOS: C
Intersection Capacity Utilization 86.7%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 15: US-395 & Three Flags Rd.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	80	1	258	132	4	33	210	1411	153	34	1073	101
Future Volume (veh/h)	80	1	258	132	4	33	210	1411	153	34	1073	101
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	82	1	222	135	4	28	214	1440	150	35	1095	86
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	428	2	396	222	470	398	245	2056	916	54	1675	747
Arrive On Green	0.25	0.25	0.25	0.25	0.25	0.25	0.14	0.57	0.57	0.03	0.46	0.46
Sat Flow, veh/h	1477	7	1604	1242	1900	1610	1810	3610	1609	1810	3610	1610
Grp Volume(v), veh/h	82	0	223	135	4	28	214	1440	150	35	1095	86
Grp Sat Flow(s),veh/h/ln	1477	0	1611	1242	1900	1610	1810	1805	1609	1810	1805	1610
Q Serve(g_s), s	4.9	0.0	13.4	11.8	0.2	1.5	12.8	31.6	4.9	2.1	25.8	3.3
Cycle Q Clear(g_c), s	5.1	0.0	13.4	25.2	0.2	1.5	12.8	31.6	4.9	2.1	25.8	3.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	428	0	398	222	470	398	245	2056	916	54	1675	747
V/C Ratio(X)	0.19	0.00	0.56	0.61	0.01	0.07	0.87	0.70	0.16	0.65	0.65	0.12
Avail Cap(c_a), veh/h	530	0	510	308	601	509	343	2056	916	82	1675	747
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	33.3	0.0	36.4	47.4	31.4	31.9	46.9	17.1	11.3	53.1	22.8	16.8
Incr Delay (d2), s/veh	0.1	0.0	0.5	1.0	0.0	0.0	12.9	2.0	0.4	4.8	2.0	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	5.3	3.7	0.1	0.6	6.3	11.6	1.6	1.0	10.2	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	33.4	0.0	36.9	48.4	31.4	31.9	59.8	19.1	11.7	57.9	24.8	17.1
LnGrp LOS	C	A	D	D	C	C	E	B	B	E	C	B
Approach Vol, veh/h		305			167			1804			1216	
Approach Delay, s/veh		35.9			45.2			23.3			25.2	
Approach LOS		D			D			C			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.3	69.0		33.3	20.0	57.3		33.3				
Change Period (Y+Rc), s	5.0	6.0		6.0	5.0	6.0		6.0				
Max Green Setting (Gmax), s	5.0	63.0		35.0	21.0	47.0		35.0				
Max Q Clear Time (g_c+I1), s	4.1	33.6		15.4	14.8	27.8		27.2				
Green Ext Time (p_c), s	0.0	12.1		1.0	0.1	7.0		0.2				

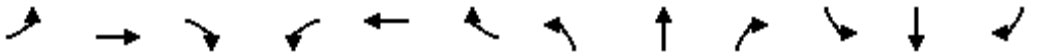
Intersection Summary			
HCM 6th Ctrl Delay		26.1	
HCM 6th LOS		C	

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	91	135	84	69	228	27	1456	90	216	1192	56
Future Volume (vph)	91	135	84	69	228	27	1456	90	216	1192	56
Turn Type	Perm	NA	Perm	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		4		8		5	2		1	6	
Permitted Phases	4		8		8			2			6
Detector Phase	4	4	8	8	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	15.0	15.0	46.0	46.0	46.0	9.0	34.0	34.0	9.0	34.0	34.0
Total Split (s)	46.0	46.0	46.0	46.0	46.0	10.0	34.0	34.0	40.0	64.0	64.0
Total Split (%)	38.3%	38.3%	38.3%	38.3%	38.3%	8.3%	28.3%	28.3%	33.3%	53.3%	53.3%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	3.0	5.0	5.0	3.0	5.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	0.0	-2.0	-2.0	-1.0	-2.0	-2.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	3.0	4.0	4.0
Lead/Lag						Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?						Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Max	Max	None	Max	Max
Act Effct Green (s)	17.0	17.0	17.0	17.0	17.0	5.8	44.8	44.8	17.2	61.6	61.6
Actuated g/C Ratio	0.19	0.19	0.19	0.19	0.19	0.06	0.50	0.50	0.19	0.68	0.68
v/c Ratio	0.37	0.44	0.45	0.20	0.48	0.24	0.84	0.11	0.65	0.50	0.05
Control Delay	35.6	34.6	39.9	31.5	7.4	51.1	27.7	5.6	44.2	10.8	3.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	35.6	34.6	39.9	31.5	7.4	51.1	27.7	5.6	44.2	10.8	3.8
LOS	D	C	D	C	A	D	C	A	D	B	A
Approach Delay		35.0		18.9			26.8			15.4	
Approach LOS		C		B			C			B	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 90.2	
Natural Cycle: 110	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.84	
Intersection Signal Delay: 22.0	Intersection LOS: C
Intersection Capacity Utilization 83.1%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 16: US-395 & Joshua St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	91	135	16	84	69	228	27	1456	90	216	1192	56
Future Volume (veh/h)	91	135	16	84	69	228	27	1456	90	216	1192	56
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	94	139	13	87	71	177	28	1501	81	223	1229	51
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	258	307	29	221	341	289	50	1963	876	281	2384	1064
Arrive On Green	0.18	0.18	0.17	0.18	0.18	0.18	0.03	0.54	0.54	0.16	0.66	0.66
Sat Flow, veh/h	1212	1711	160	1324	1900	1607	1810	3610	1610	1810	3610	1610
Grp Volume(v), veh/h	94	0	152	87	71	177	28	1501	81	223	1229	51
Grp Sat Flow(s),veh/h/ln	1212	0	1871	1324	1900	1607	1810	1805	1610	1810	1805	1610
Q Serve(g_s), s	6.5	0.0	6.6	5.7	2.9	9.2	1.4	29.5	2.2	10.8	15.9	1.0
Cycle Q Clear(g_c), s	9.4	0.0	6.6	12.3	2.9	9.2	1.4	29.5	2.2	10.8	15.9	1.0
Prop In Lane	1.00		0.09	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	258	0	336	221	341	289	50	1963	876	281	2384	1064
V/C Ratio(X)	0.36	0.00	0.45	0.39	0.21	0.61	0.55	0.76	0.09	0.79	0.52	0.05
Avail Cap(c_a), veh/h	601	0	865	596	878	743	120	1963	876	737	2384	1064
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	35.8	0.0	33.3	38.8	31.8	34.4	43.6	16.2	10.0	36.9	7.9	5.4
Incr Delay (d2), s/veh	0.3	0.0	0.4	0.4	0.1	0.8	6.9	2.9	0.2	3.8	0.8	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	0.0	3.0	1.9	1.3	3.6	0.7	10.4	0.7	4.7	4.5	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	36.1	0.0	33.7	39.2	31.9	35.2	50.5	19.1	10.2	40.7	8.7	5.5
LnGrp LOS	D	A	C	D	C	D	D	B	B	D	A	A
Approach Vol, veh/h		246			335			1610			1503	
Approach Delay, s/veh		34.6			35.5			19.2			13.4	
Approach LOS		C			D			B			B	

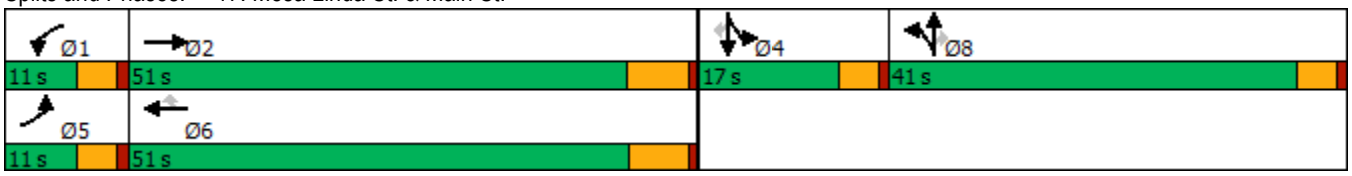
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	17.1	53.4		20.3	6.5	64.0		20.3				
Change Period (Y+Rc), s	4.0	6.0		5.0	4.0	6.0		5.0				
Max Green Setting (Gmax), s	36.0	28.0		41.0	6.0	58.0		41.0				
Max Q Clear Time (g_c+I1), s	12.8	31.5		11.4	3.4	17.9		14.3				
Green Ext Time (p_c), s	0.4	0.0		0.7	0.0	20.5		0.7				

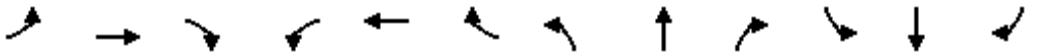
Intersection Summary			
HCM 6th Ctrl Delay		19.3	
HCM 6th LOS		B	

Lane Group	EBL	EBT	WBL	WBT	WBR	NBT	NBR	SBT	SBR
Lane Configurations									
Traffic Volume (vph)	5	988	89	1089	56	7	84	0	3
Future Volume (vph)	5	988	89	1089	56	7	84	0	3
Turn Type	Prot	NA	Prot	NA	Perm	NA	Perm	NA	Perm
Protected Phases	5	2	1	6		8		4	
Permitted Phases					6		8		4
Detector Phase	5	2	1	6	6	8	8	4	4
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	16.5	9.6	23.2	23.2	40.6	40.6	14.6	14.6
Total Split (s)	11.0	51.0	11.0	51.0	51.0	41.0	41.0	17.0	17.0
Total Split (%)	9.2%	42.5%	9.2%	42.5%	42.5%	34.2%	34.2%	14.2%	14.2%
Yellow Time (s)	3.6	5.5	3.6	5.2	5.2	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.5	4.6	6.2	6.2	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lead	Lag	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes				
Recall Mode	None	Max	None	Max	Max	None	None	None	None
Act Effct Green (s)	5.4	46.6	6.7	58.6	58.6	14.3	14.3	10.5	10.5
Actuated g/C Ratio	0.06	0.53	0.08	0.67	0.67	0.16	0.16	0.12	0.12
v/c Ratio	0.05	0.40	0.76	0.35	0.06	0.06	0.25	0.16	0.01
Control Delay	48.8	16.5	82.2	12.4	1.2	33.2	4.9	44.3	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	48.8	16.5	82.2	12.4	1.2	33.2	4.9	44.3	0.0
LOS	D	B	F	B	A	C	A	D	A
Approach Delay		16.7		17.0		9.5		40.6	
Approach LOS		B		B		A		D	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 87.8	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.76	
Intersection Signal Delay: 16.9	Intersection LOS: B
Intersection Capacity Utilization 51.7%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 17: Mesa Linda St. & Main St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	988	6	89	1089	56	10	7	84	32	0	3
Future Volume (veh/h)	5	988	6	89	1089	56	10	7	84	32	0	3
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	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	5	1029	5	93	1134	50	10	7	29	33	0	1
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	11	2718	13	115	2964	920	81	57	120	112	0	100
Arrive On Green	0.01	0.54	0.54	0.07	0.60	0.60	0.08	0.08	0.08	0.07	0.00	0.07
Sat Flow, veh/h	1619	5047	25	1619	4914	1525	1029	720	1525	1714	0	1525
Grp Volume(v), veh/h	5	668	366	93	1134	50	17	0	29	33	0	1
Grp Sat Flow(s),veh/h/ln	1619	1638	1796	1619	1638	1525	1749	0	1525	1714	0	1525
Q Serve(g_s), s	0.3	9.8	9.8	4.7	9.8	1.1	0.7	0.0	1.5	1.5	0.0	0.1
Cycle Q Clear(g_c), s	0.3	9.8	9.8	4.7	9.8	1.1	0.7	0.0	1.5	1.5	0.0	0.1
Prop In Lane	1.00		0.01	1.00		1.00	0.59		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	11	1764	967	115	2964	920	138	0	120	112	0	100
V/C Ratio(X)	0.47	0.38	0.38	0.81	0.38	0.05	0.12	0.00	0.24	0.29	0.00	0.01
Avail Cap(c_a), veh/h	125	1764	967	125	2964	920	770	0	672	257	0	229
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	40.9	11.0	11.0	37.8	8.5	6.7	35.4	0.0	35.7	36.8	0.0	36.1
Incr Delay (d2), s/veh	11.5	0.6	1.1	26.2	0.4	0.1	0.4	0.0	1.0	1.4	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	2.9	3.3	2.6	2.7	0.3	0.3	0.0	0.6	0.7	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	52.4	11.7	12.2	64.0	8.8	6.8	35.8	0.0	36.8	38.2	0.0	36.1
LnGrp LOS	D	B	B	E	A	A	D	A	D	D	A	D
Approach Vol, veh/h		1039			1277			46			34	
Approach Delay, s/veh		12.0			12.8			36.4			38.2	
Approach LOS		B			B			D			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.5	51.0		10.0	5.1	56.3		11.1				
Change Period (Y+Rc), s	4.6	6.5		4.6	4.6	* 6.5		4.6				
Max Green Setting (Gmax), s	6.4	44.5		12.4	6.4	* 45		36.4				
Max Q Clear Time (g_c+I1), s	6.7	11.8		3.5	2.3	11.8		3.5				
Green Ext Time (p_c), s	0.0	6.6		0.1	0.0	8.7		0.1				

Intersection Summary			
HCM 6th Ctrl Delay		13.3	
HCM 6th LOS		B	

Notes

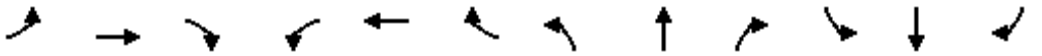
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	91	1846	99	295	1094	46	198	56	188	73	33	115
Future Volume (vph)	91	1846	99	295	1094	46	198	56	188	73	33	115
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Split	NA	Perm	Split	NA	Perm
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases			2			6			8			4
Detector Phase	5	2	2	1	6	6	8	8	8	4	4	4
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	32.2	32.2	9.6	32.2	32.2	43.6	43.6	43.6	41.6	41.6	41.6
Total Split (s)	11.0	32.8	32.8	12.0	33.8	33.8	43.6	43.6	43.6	41.6	41.6	41.6
Total Split (%)	8.5%	25.2%	25.2%	9.2%	26.0%	26.0%	33.5%	33.5%	33.5%	32.0%	32.0%	32.0%
Yellow Time (s)	3.6	5.2	5.2	3.6	5.2	5.2	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	6.2	4.6	6.2	6.2	4.6	4.6	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes						
Recall Mode	None	Max	Max	None	Max	Max	None	None	None	None	None	None
Act Effct Green (s)	6.7	27.9	27.9	7.8	28.9	28.9	15.9	15.9	15.9	14.1	14.1	14.1
Actuated g/C Ratio	0.08	0.32	0.32	0.09	0.33	0.33	0.18	0.18	0.18	0.16	0.16	0.16
v/c Ratio	0.74	1.19	0.18	1.14	0.68	0.08	0.45	0.43	0.44	0.28	0.12	0.34
Control Delay	76.8	120.8	9.8	137.4	30.2	0.6	36.9	36.0	8.2	35.4	32.7	9.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	76.8	120.8	9.8	137.4	30.2	0.6	36.9	36.0	8.2	35.4	32.7	9.3
LOS	E	F	A	F	C	A	D	D	A	D	C	A
Approach Delay		113.4			51.3			24.4			21.4	
Approach LOS		F			D			C			C	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 86.6	
Natural Cycle: 130	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.19	
Intersection Signal Delay: 77.4	Intersection LOS: E
Intersection Capacity Utilization 77.3%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 18: Cataba Av. & Main St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	91	1846	99	295	1094	46	198	56	188	73	33	115
Future Volume (veh/h)	91	1846	99	295	1094	46	198	56	188	73	33	115
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		0.99	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	1700	1800	1800	1600	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	93	1884	62	301	1116	35	130	158	89	74	34	27
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	115	1745	541	292	1881	583	248	276	232	203	226	191
Arrive On Green	0.07	0.36	0.36	0.10	0.38	0.38	0.15	0.15	0.15	0.13	0.13	0.13
Sat Flow, veh/h	1619	4914	1524	2956	4914	1523	1619	1800	1511	1619	1800	1525
Grp Volume(v), veh/h	93	1884	62	301	1116	35	130	158	89	74	34	27
Grp Sat Flow(s),veh/h/ln	1619	1638	1524	1478	1638	1523	1619	1800	1511	1619	1800	1525
Q Serve(g_s), s	4.2	26.6	2.0	7.4	13.6	1.1	5.5	6.1	4.0	3.1	1.3	1.2
Cycle Q Clear(g_c), s	4.2	26.6	2.0	7.4	13.6	1.1	5.5	6.1	4.0	3.1	1.3	1.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	115	1745	541	292	1881	583	248	276	232	203	226	191
V/C Ratio(X)	0.81	1.08	0.11	1.03	0.59	0.06	0.52	0.57	0.38	0.36	0.15	0.14
Avail Cap(c_a), veh/h	138	1745	541	292	1881	583	843	937	787	800	889	754
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.3	24.1	16.2	33.7	18.5	14.6	29.2	29.4	28.5	30.0	29.2	29.2
Incr Delay (d2), s/veh	20.8	46.5	0.4	60.7	1.4	0.2	1.7	1.9	1.0	1.1	0.3	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	2.2	16.0	0.7	4.9	4.6	0.4	2.2	2.7	1.5	1.3	0.6	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	55.0	70.7	16.7	94.5	19.8	14.8	30.9	31.3	29.6	31.1	29.5	29.5
LnGrp LOS	E	F	B	F	B	B	C	C	C	C	C	C
Approach Vol, veh/h		2039			1452			377			135	
Approach Delay, s/veh		68.3			35.2			30.7			30.4	
Approach LOS		E			D			C			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	12.0	32.8		14.0	9.9	34.9		16.1				
Change Period (Y+Rc), s	4.6	6.2		4.6	4.6	6.2		4.6				
Max Green Setting (Gmax), s	7.4	26.6		37.0	6.4	27.6		39.0				
Max Q Clear Time (g_c+I1), s	9.4	28.6		5.1	6.2	15.6		8.1				
Green Ext Time (p_c), s	0.0	0.0		0.5	0.0	5.5		1.7				

Intersection Summary			
HCM 6th Ctrl Delay		51.5	
HCM 6th LOS		D	

Notes

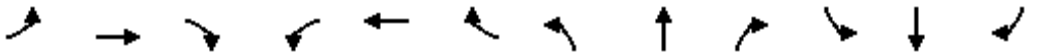
User approved pedestrian interval to be less than phase max green.
User approved volume balancing among the lanes for turning movement.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	57	2145	25	224	1559	30	74	240	231	87
Future Volume (vph)	57	2145	25	224	1559	30	74	240	231	87
Turn Type	Prot	NA	Perm	Prot	NA	Perm	NA	Perm	Perm	NA
Protected Phases	5	2		1	6		8			4
Permitted Phases			2			8		8	4	
Detector Phase	5	2	2	1	6	8	8	8	4	4
Switch Phase										
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	29.2	29.2	9.6	30.2	38.6	38.6	38.6	41.6	41.6
Total Split (s)	16.0	42.0	42.0	34.0	60.0	44.0	44.0	44.0	44.0	44.0
Total Split (%)	13.3%	35.0%	35.0%	28.3%	50.0%	36.7%	36.7%	36.7%	36.7%	36.7%
Yellow Time (s)	3.6	5.2	5.2	3.6	5.2	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	6.2	4.6	6.2	4.6	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes					
Recall Mode	None	Max	Max	None	Max	None	None	None	None	None
Act Effct Green (s)	8.0	41.9	41.9	18.6	55.0	25.0	25.0	25.0	25.0	25.0
Actuated g/C Ratio	0.08	0.41	0.41	0.18	0.54	0.25	0.25	0.25	0.25	0.25
v/c Ratio	0.46	1.08	0.04	0.77	0.69	0.11	0.17	0.44	0.79	0.28
Control Delay	59.8	74.9	0.1	57.8	21.1	30.3	30.8	6.4	55.7	27.9
Queue Delay	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0
Total Delay	59.8	74.9	0.1	57.8	21.5	30.3	30.8	6.4	55.7	27.9
LOS	E	E	A	E	C	C	C	A	E	C
Approach Delay		73.7			25.6		13.8			46.2
Approach LOS		E			C		B			D

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 101.2	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.08	
Intersection Signal Delay: 48.0	Intersection LOS: D
Intersection Capacity Utilization 92.7%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 19: Key Point Av. & Main St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	57	2145	25	224	1559	221	30	74	240	231	87	32
Future Volume (veh/h)	57	2145	25	224	1559	221	30	74	240	231	87	32
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		0.98	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	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	58	2189	22	229	1591	150	31	76	104	236	89	12
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	72	2051	637	259	2435	229	350	486	405	345	419	56
Arrive On Green	0.04	0.42	0.42	0.16	0.53	0.53	0.27	0.27	0.27	0.27	0.27	0.27
Sat Flow, veh/h	1619	4914	1525	1619	4568	430	1237	1800	1501	1153	1552	209
Grp Volume(v), veh/h	58	2189	22	229	1141	600	31	76	104	236	0	101
Grp Sat Flow(s),veh/h/ln	1619	1638	1525	1619	1638	1722	1237	1800	1501	1153	0	1761
Q Serve(g_s), s	3.6	42.1	0.9	14.0	25.2	25.2	2.0	3.2	5.5	19.8	0.0	4.5
Cycle Q Clear(g_c), s	3.6	42.1	0.9	14.0	25.2	25.2	6.5	3.2	5.5	23.0	0.0	4.5
Prop In Lane	1.00		1.00	1.00		0.25	1.00		1.00	1.00		0.12
Lane Grp Cap(c), veh/h	72	2051	637	259	1746	918	350	486	405	345	0	475
V/C Ratio(X)	0.80	1.07	0.03	0.88	0.65	0.65	0.09	0.16	0.26	0.68	0.00	0.21
Avail Cap(c_a), veh/h	183	2051	637	472	1746	918	499	703	586	484	0	688
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	47.8	29.4	17.4	41.4	16.9	16.9	31.1	28.1	28.9	36.9	0.0	28.5
Incr Delay (d2), s/veh	7.5	40.6	0.1	3.9	1.9	3.6	0.1	0.1	0.3	2.4	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	22.4	0.3	5.5	8.6	9.5	0.6	1.4	2.0	5.8	0.0	1.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	55.3	70.0	17.5	45.3	18.8	20.5	31.2	28.2	29.2	39.3	0.0	28.8
LnGrp LOS	E	F	B	D	B	C	C	C	C	D	A	C
Approach Vol, veh/h		2269			1970			211			337	
Approach Delay, s/veh		69.1			22.4			29.2			36.1	
Approach LOS		E			C			C			D	

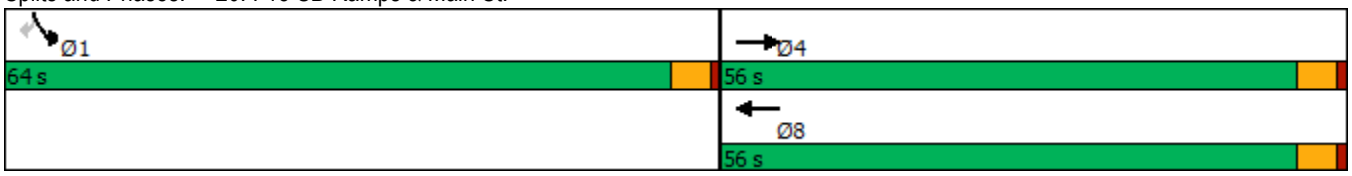
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	20.8	48.3		31.8	9.1	60.0		31.8				
Change Period (Y+Rc), s	4.6	6.2		4.6	4.6	6.2		4.6				
Max Green Setting (Gmax), s	29.4	35.8		39.4	11.4	53.8		39.4				
Max Q Clear Time (g_c+I1), s	16.0	44.1		25.0	5.6	27.2		8.5				
Green Ext Time (p_c), s	0.2	0.0		1.3	0.0	13.1		0.9				

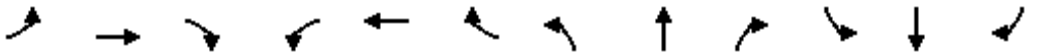
Intersection Summary			
HCM 6th Ctrl Delay		45.8	
HCM 6th LOS		D	

Lane Group	EBT	EBR	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	1958	498	1432	42	587	549
Future Volume (vph)	1958	498	1432	42	587	549
Turn Type	NA	Free	NA	Free	Prot	Perm
Protected Phases	4		8		1	
Permitted Phases		Free		Free		1
Detector Phase	4		8		1	1
Switch Phase						
Minimum Initial (s)	5.0		5.0		5.0	5.0
Minimum Split (s)	9.6		22.6		9.6	9.6
Total Split (s)	56.0		56.0		64.0	64.0
Total Split (%)	46.7%		46.7%		53.3%	53.3%
Yellow Time (s)	3.6		3.6		3.6	3.6
All-Red Time (s)	1.0		1.0		1.0	1.0
Lost Time Adjust (s)	0.0		0.0		0.0	0.0
Total Lost Time (s)	4.6		4.6		4.6	4.6
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None		None		None	None
Act Effct Green (s)	47.4	98.1	47.4	98.1	41.2	41.2
Actuated g/C Ratio	0.48	1.00	0.48	1.00	0.42	0.42
v/c Ratio	0.81	0.32	0.59	0.03	0.41	0.83
Control Delay	26.0	0.5	20.8	0.0	20.8	36.0
Queue Delay	0.5	0.0	0.0	0.0	0.0	0.0
Total Delay	26.5	0.5	20.8	0.0	20.8	36.0
LOS	C	A	C	A	C	D
Approach Delay	21.3		20.2			
Approach LOS	C		C			

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 98.1	
Natural Cycle: 50	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.83	
Intersection Signal Delay: 22.5	Intersection LOS: C
Intersection Capacity Utilization 69.3%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 20: I-15 SB Ramps & Main St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↱		↑↑↑	↱				↰↰		↱
Traffic Volume (veh/h)	0	1958	498	0	1432	42	0	0	0	587	0	549
Future Volume (veh/h)	0	1958	498	0	1432	42	0	0	0	587	0	549
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	1900	1900	0	1900	1900				1900	0	1900
Adj Flow Rate, veh/h	0	2019	0	0	1476	0				605	0	453
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	0	0	0	0	0				0	0	0
Cap, veh/h	0	2787		0	2787					1203	0	552
Arrive On Green	0.00	0.54	0.00	0.00	0.54	0.00				0.34	0.00	0.34
Sat Flow, veh/h	0	5358	1610	0	5358	1610				3510	0	1610
Grp Volume(v), veh/h	0	2019	0	0	1476	0				605	0	453
Grp Sat Flow(s),veh/h/ln	0	1729	1610	0	1729	1610				1755	0	1610
Q Serve(g_s), s	0.0	22.6	0.0	0.0	14.1	0.0				10.5	0.0	19.7
Cycle Q Clear(g_c), s	0.0	22.6	0.0	0.0	14.1	0.0				10.5	0.0	19.7
Prop In Lane	0.00		1.00	0.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2787		0	2787					1203	0	552
V/C Ratio(X)	0.00	0.72		0.00	0.53					0.50	0.00	0.82
Avail Cap(c_a), veh/h	0	3475		0	3475					2718	0	1247
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	13.4	0.0	0.0	11.5	0.0				20.0	0.0	23.1
Incr Delay (d2), s/veh	0.0	0.6	0.0	0.0	0.2	0.0				0.3	0.0	3.1
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	6.8	0.0	0.0	4.2	0.0				4.2	0.0	7.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	14.0	0.0	0.0	11.6	0.0				20.4	0.0	26.2
LnGrp LOS	A	B		A	B					C	A	C
Approach Vol, veh/h		2019	A		1476	A					1058	
Approach Delay, s/veh		14.0			11.6						22.8	
Approach LOS		B			B						C	

Timer - Assigned Phs			4		6		8					
Phs Duration (G+Y+Rc), s			45.8		30.9		45.8					
Change Period (Y+Rc), s			4.6		4.6		4.6					
Max Green Setting (Gmax), s			51.4		59.4		51.4					
Max Q Clear Time (g_c+I1), s			24.6		21.7		16.1					
Green Ext Time (p_c), s			16.6		4.6		12.4					

Intersection Summary												
HCM 6th Ctrl Delay			15.3									
HCM 6th LOS			B									

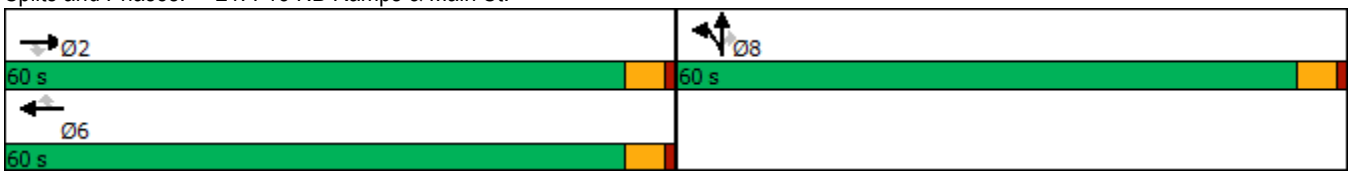
Notes

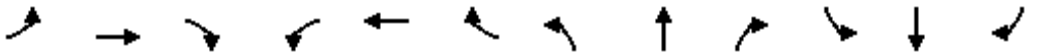
Unsignalized Delay for [EBR, WBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBT	EBR	WBT	WBR	NBL	NBT	NBR
Lane Configurations							
Traffic Volume (vph)	1824	721	1533	454	312	0	889
Future Volume (vph)	1824	721	1533	454	312	0	889
Turn Type	NA	Perm	NA	Perm	Split	NA	Perm
Protected Phases	2		6		8	8	
Permitted Phases		2		6			8
Detector Phase	2	2	6	6	8	8	8
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.6	22.6	22.6	22.6	9.6	9.6	9.6
Total Split (s)	60.0	60.0	60.0	60.0	60.0	60.0	60.0
Total Split (%)	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Lead/Lag							
Lead-Lag Optimize?							
Recall Mode	None	None	None	None	Min	Min	Min
Act Effct Green (s)	52.7	52.7	52.7	52.7	40.6	40.6	40.6
Actuated g/C Ratio	0.51	0.51	0.51	0.51	0.39	0.39	0.39
v/c Ratio	0.71	0.65	0.59	0.44	0.45	0.74	0.74
Control Delay	22.6	5.8	20.2	3.1	24.9	33.9	33.9
Queue Delay	0.0	0.0	0.8	0.4	0.0	0.0	0.0
Total Delay	22.6	5.8	21.0	3.6	24.9	33.9	33.9
LOS	C	A	C	A	C	C	C
Approach Delay	17.8		17.0			31.6	
Approach LOS	B		B			C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 102.8	
Natural Cycle: 45	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.74	
Intersection Signal Delay: 20.4	Intersection LOS: C
Intersection Capacity Utilization 79.6%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 21: I-15 NB Ramps & Main St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↱		↑↑↑	↱	↰	↑	↱			
Traffic Volume (veh/h)	0	1824	721	0	1533	454	312	0	889	0	0	0
Future Volume (veh/h)	0	1824	721	0	1533	454	312	0	889	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	0	1900	1900	0	1900	1900	1900	1900	1900			
Adj Flow Rate, veh/h	0	1880	0	0	1580	321	322	0	769			
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	0	0	0	0	0	0	0	0			
Cap, veh/h	0	2840		0	2840	882	575	0	1023			
Arrive On Green	0.00	0.55	0.00	0.00	0.55	0.55	0.32	0.00	0.32			
Sat Flow, veh/h	0	5358	1610	0	5358	1610	1810	0	3220			
Grp Volume(v), veh/h	0	1880	0	0	1580	321	322	0	769			
Grp Sat Flow(s),veh/h/ln	0	1729	1610	0	1729	1610	1810	0	1610			
Q Serve(g_s), s	0.0	17.5	0.0	0.0	13.5	7.7	10.1	0.0	14.6			
Cycle Q Clear(g_c), s	0.0	17.5	0.0	0.0	13.5	7.7	10.1	0.0	14.6			
Prop In Lane	0.00		1.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	0	2840		0	2840	882	575	0	1023			
V/C Ratio(X)	0.00	0.66		0.00	0.56	0.36	0.56	0.00	0.75			
Avail Cap(c_a), veh/h	0	4214		0	4214	1308	1470	0	2616			
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	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	0.0	10.9	0.0	0.0	10.0	8.7	19.3	0.0	20.9			
Incr Delay (d2), s/veh	0.0	0.3	0.0	0.0	0.2	0.3	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	0.0	4.8	0.0	0.0	3.7	2.0	4.2	0.0	5.4			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	11.2	0.0	0.0	10.2	9.0	20.2	0.0	22.0			
LnGrp LOS	A	B		A	B	A	C	A	C			
Approach Vol, veh/h		1880	A		1901			1091				
Approach Delay, s/veh		11.2			10.0			21.5				
Approach LOS		B			A			C				

Timer - Assigned Phs	2				6		8					
Phs Duration (G+Y+Rc), s	41.9				41.9		26.3					
Change Period (Y+Rc), s	4.6				4.6		4.6					
Max Green Setting (Gmax), s	55.4				55.4		55.4					
Max Q Clear Time (g_c+I1), s	19.5				15.5		16.6					
Green Ext Time (p_c), s	17.8				16.5		5.1					

Intersection Summary												
HCM 6th Ctrl Delay			13.0									
HCM 6th LOS			B									

Notes

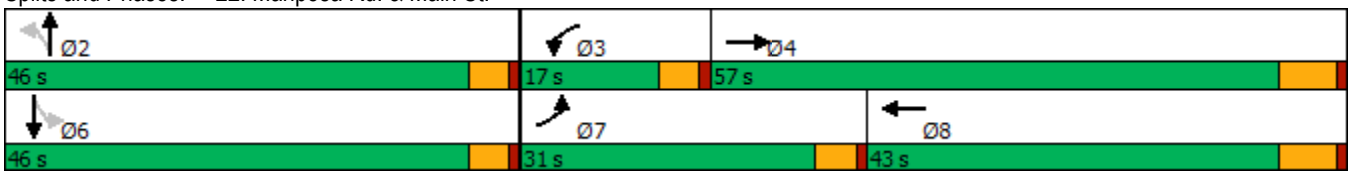
User approved volume balancing among the lanes for turning movement.

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	249	2305	87	1590	134	80	137	55
Future Volume (vph)	249	2305	87	1590	134	80	137	55
Turn Type	Prot	NA	Prot	NA	Perm	NA	Perm	NA
Protected Phases	7	4	3	8		2		6
Permitted Phases					2		6	
Detector Phase	7	4	3	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	24.2	9.6	24.2	44.6	44.6	44.6	44.6
Total Split (s)	31.0	57.0	17.0	43.0	46.0	46.0	46.0	46.0
Total Split (%)	25.8%	47.5%	14.2%	35.8%	38.3%	38.3%	38.3%	38.3%
Yellow Time (s)	3.6	5.2	3.6	5.2	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	4.6	6.2	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes				
Recall Mode	None	Max	Max	None	None	None	None	None
Act Effct Green (s)	19.4	51.2	12.5	44.3	23.0	23.0	23.0	23.0
Actuated g/C Ratio	0.19	0.50	0.12	0.43	0.22	0.22	0.22	0.22
v/c Ratio	0.83	0.82	0.45	0.65	0.98	0.38	0.63	0.54
Control Delay	63.0	25.7	52.8	26.9	110.2	26.0	48.1	16.2
Queue Delay	0.0	23.6	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	63.0	49.3	52.8	26.9	110.2	26.0	48.1	16.2
LOS	E	D	D	C	F	C	D	B
Approach Delay		50.5		28.1		65.6		27.3
Approach LOS		D		C		E		C

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 102.3	
Natural Cycle: 100	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.98	
Intersection Signal Delay: 41.9	Intersection LOS: D
Intersection Capacity Utilization 84.6%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 22: Mariposa Rd. & Main St.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	249	2305	159	87	1590	106	134	80	71	137	55	202
Future Volume (veh/h)	249	2305	159	87	1590	106	134	80	71	137	55	202
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		0.99	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	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	254	2352	146	89	1622	92	137	82	45	140	56	135
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	283	2917	181	192	2595	147	236	270	148	296	116	280
Arrive On Green	0.17	0.49	0.49	0.12	0.43	0.43	0.25	0.25	0.25	0.25	0.25	0.25
Sat Flow, veh/h	1619	6005	372	1619	6040	342	1144	1087	596	1212	468	1129
Grp Volume(v), veh/h	254	1818	680	89	1247	467	137	0	127	140	0	191
Grp Sat Flow(s),veh/h/ln	1619	1548	1733	1619	1548	1738	1144	0	1683	1212	0	1597
Q Serve(g_s), s	16.1	34.6	34.7	5.4	21.9	21.9	12.1	0.0	6.4	11.1	0.0	10.7
Cycle Q Clear(g_c), s	16.1	34.6	34.7	5.4	21.9	21.9	22.8	0.0	6.4	17.5	0.0	10.7
Prop In Lane	1.00		0.21	1.00		0.20	1.00		0.35	1.00		0.71
Lane Grp Cap(c), veh/h	283	2256	842	192	1996	747	236	0	418	296	0	397
V/C Ratio(X)	0.90	0.81	0.81	0.46	0.62	0.63	0.58	0.00	0.30	0.47	0.00	0.48
Avail Cap(c_a), veh/h	409	2256	842	192	1996	747	405	0	667	474	0	632
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	42.2	22.7	22.8	43.0	23.2	23.3	43.3	0.0	32.0	39.1	0.0	33.6
Incr Delay (d2), s/veh	13.2	3.2	8.2	7.8	0.6	1.6	2.3	0.0	0.4	1.2	0.0	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	7.1	11.8	14.4	2.5	7.4	8.5	3.6	0.0	2.7	3.4	0.0	4.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	55.5	25.9	31.0	50.8	23.9	24.9	45.6	0.0	32.4	40.2	0.0	34.5
LnGrp LOS	E	C	C	D	C	C	D	A	C	D	A	C
Approach Vol, veh/h		2752			1803			264			331	
Approach Delay, s/veh		29.9			25.5			39.2			36.9	
Approach LOS		C			C			D			D	

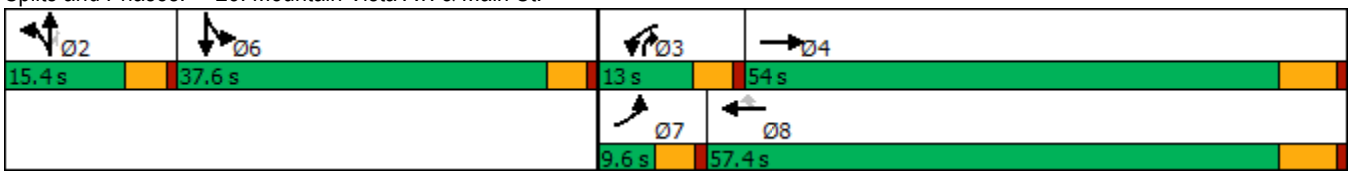
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		30.6	17.0	57.0		30.6	22.9	51.1				
Change Period (Y+Rc), s		4.6	4.6	6.2		4.6	4.6	6.2				
Max Green Setting (Gmax), s		41.4	12.4	50.8		41.4	26.4	36.8				
Max Q Clear Time (g_c+I1), s		24.8	7.4	36.7		19.5	18.1	23.9				
Green Ext Time (p_c), s		1.1	0.0	11.6		1.7	0.2	8.1				

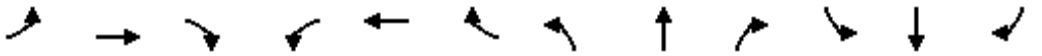
Intersection Summary	
HCM 6th Ctrl Delay	29.3
HCM 6th LOS	C

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	49	2355	63	1849	71	33	5	28	80	7
Future Volume (vph)	49	2355	63	1849	71	33	5	28	80	7
Turn Type	Prot	NA	Prot	NA	Perm	Split	NA	pm+ov	Split	NA
Protected Phases	7	4	3	8		2	2	3	6	6
Permitted Phases					8			2		
Detector Phase	7	4	3	8	8	2	2	3	6	6
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	43.2	9.6	32.2	32.2	14.6	14.6	9.6	37.6	37.6
Total Split (s)	9.6	54.0	13.0	57.4	57.4	15.4	15.4	13.0	37.6	37.6
Total Split (%)	8.0%	45.0%	10.8%	47.8%	47.8%	12.8%	12.8%	10.8%	31.3%	31.3%
Yellow Time (s)	3.6	5.2	3.6	5.2	5.2	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	4.6	6.2	6.2	4.6	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lead	Lag	Lag			Lead		
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes			Yes		
Recall Mode	None	Max	None	Max	Max	None	None	None	None	None
Act Effct Green (s)	5.2	55.6	7.4	60.0	60.0	10.3	10.3	12.8	13.9	13.9
Actuated g/C Ratio	0.06	0.60	0.08	0.65	0.65	0.11	0.11	0.14	0.15	0.15
v/c Ratio	0.32	0.68	0.52	0.61	0.07	0.10	0.07	0.07	0.21	0.20
Control Delay	53.3	20.6	60.5	17.5	2.4	46.4	44.5	0.3	38.6	34.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	53.3	20.6	60.5	17.5	2.4	46.4	44.5	0.3	38.6	34.4
LOS	D	C	E	B	A	D	D	A	D	C
Approach Delay		21.3		18.3			26.4			36.5
Approach LOS		C		B			C			D

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 92.8	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.68	
Intersection Signal Delay: 20.4	Intersection LOS: C
Intersection Capacity Utilization 64.1%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 23: Mountain Vista Av. & Main St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	49	2355	19	63	1849	71	33	5	28	80	7	6
Future Volume (veh/h)	49	2355	19	63	1849	71	33	5	28	80	7	6
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	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	1600	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	52	2479	18	66	1946	60	35	5	14	94	0	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	119	3510	25	82	2752	854	264	147	404	322	179	0
Arrive On Green	0.04	0.55	0.55	0.05	0.56	0.56	0.08	0.08	0.08	0.10	0.00	0.00
Sat Flow, veh/h	2956	6388	46	1619	4914	1525	3238	1800	3051	3238	1800	0
Grp Volume(v), veh/h	52	1802	695	66	1946	60	35	5	14	94	0	0
Grp Sat Flow(s),veh/h/ln	1478	1548	1790	1619	1638	1525	1619	1800	1525	1619	1800	0
Q Serve(g_s), s	1.6	26.1	26.1	3.7	26.4	1.6	0.9	0.2	0.4	2.5	0.0	0.0
Cycle Q Clear(g_c), s	1.6	26.1	26.1	3.7	26.4	1.6	0.9	0.2	0.4	2.5	0.0	0.0
Prop In Lane	1.00		0.03	1.00		1.00	1.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	119	2552	984	82	2752	854	264	147	404	322	179	0
V/C Ratio(X)	0.44	0.71	0.71	0.80	0.71	0.07	0.13	0.03	0.03	0.29	0.00	0.00
Avail Cap(c_a), veh/h	162	2552	984	149	2752	854	383	213	515	1169	650	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	42.9	15.2	15.2	42.9	14.6	9.2	39.0	38.7	34.6	38.2	0.0	0.0
Incr Delay (d2), s/veh	0.9	1.7	4.3	6.7	1.6	0.2	0.2	0.1	0.0	0.5	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	7.9	9.9	1.6	8.3	0.5	0.4	0.1	0.1	1.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	43.8	16.8	19.4	49.7	16.2	9.4	39.2	38.7	34.6	38.7	0.0	0.0
LnGrp LOS	D	B	B	D	B	A	D	D	C	D	A	A
Approach Vol, veh/h		2549			2072			54			94	
Approach Delay, s/veh		18.1			17.1			38.0			38.7	
Approach LOS		B			B			D			D	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		12.1	9.2	56.4		13.7	8.3	57.4				
Change Period (Y+Rc), s		4.6	4.6	6.2		4.6	4.6	6.2				
Max Green Setting (Gmax), s		10.8	8.4	47.8		33.0	5.0	51.2				
Max Q Clear Time (g_c+I1), s		2.9	5.7	28.1		4.5	3.6	28.4				
Green Ext Time (p_c), s		0.1	0.0	15.3		0.3	0.0	14.6				

Intersection Summary												
HCM 6th Ctrl Delay			18.3									
HCM 6th LOS			B									

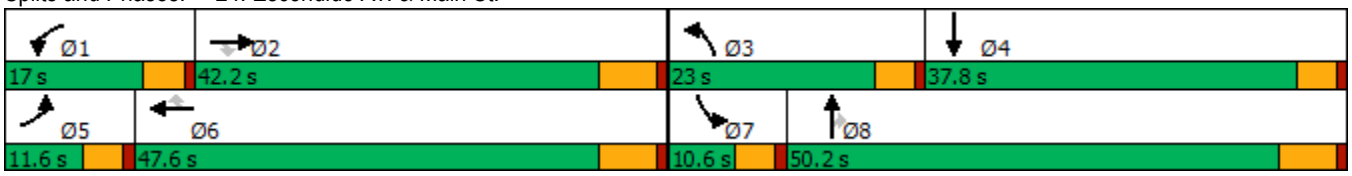
Notes

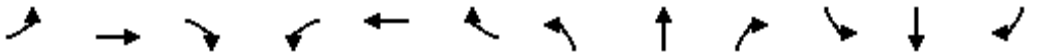
User approved volume balancing among the lanes for turning movement.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations											
Traffic Volume (vph)	55	1607	758	458	1209	10	720	52	240	57	38
Future Volume (vph)	55	1607	758	458	1209	10	720	52	240	57	38
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA
Protected Phases	5	2		1	6		3	8		7	4
Permitted Phases			2			6			8		
Detector Phase	5	2	2	1	6	6	3	8	8	7	4
Switch Phase											
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.6	41.2	41.2	9.6	31.2	31.2	9.6	49.2	49.2	9.6	37.6
Total Split (s)	11.6	42.2	42.2	17.0	47.6	47.6	23.0	50.2	50.2	10.6	37.8
Total Split (%)	9.7%	35.2%	35.2%	14.2%	39.7%	39.7%	19.2%	41.8%	41.8%	8.8%	31.5%
Yellow Time (s)	3.6	5.2	5.2	3.6	5.2	5.2	3.6	5.2	5.2	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	6.2	4.6	6.2	6.2	4.6	6.2	6.2	4.6	4.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Max	Max	None	Max	Max	None	None	None	None	None
Act Effct Green (s)	6.6	36.5	36.5	12.6	44.8	44.8	18.7	23.9	23.9	6.0	13.9
Actuated g/C Ratio	0.07	0.37	0.37	0.13	0.45	0.45	0.19	0.24	0.24	0.06	0.14
v/c Ratio	0.53	0.92	0.84	1.27	0.81	0.01	1.34	0.12	0.48	0.60	0.34
Control Delay	66.2	40.3	17.0	177.6	31.5	0.0	199.8	29.4	10.7	74.4	21.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	66.2	40.3	17.0	177.6	31.5	0.0	199.8	29.4	10.7	74.4	21.6
LOS	E	D	B	F	C	A	F	C	B	E	C
Approach Delay		33.6			71.2			146.2			41.7
Approach LOS		C			E			F			D

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 98.5	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.34	
Intersection Signal Delay: 67.5	Intersection LOS: E
Intersection Capacity Utilization 93.5%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 24: Escondido Av. & Main St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	55	1607	758	458	1209	10	720	52	240	57	38	54
Future Volume (veh/h)	55	1607	758	458	1209	10	720	52	240	57	38	54
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	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	1700	1800	1800	1600	1800	1800	1600	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	57	1674	600	477	1259	8	750	54	169	59	40	53
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	71	1813	562	376	1547	676	557	428	362	73	66	88
Arrive On Green	0.04	0.37	0.37	0.13	0.45	0.45	0.19	0.24	0.24	0.05	0.09	0.09
Sat Flow, veh/h	1619	4914	1523	2956	3420	1494	2956	1800	1525	1619	702	930
Grp Volume(v), veh/h	57	1674	600	477	1259	8	750	54	169	59	0	93
Grp Sat Flow(s),veh/h/ln	1619	1638	1523	1478	1710	1494	1478	1800	1525	1619	0	1633
Q Serve(g_s), s	3.4	31.8	36.0	12.4	31.1	0.3	18.4	2.3	9.3	3.5	0.0	5.3
Cycle Q Clear(g_c), s	3.4	31.8	36.0	12.4	31.1	0.3	18.4	2.3	9.3	3.5	0.0	5.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.57
Lane Grp Cap(c), veh/h	71	1813	562	376	1547	676	557	428	362	73	0	154
V/C Ratio(X)	0.81	0.92	1.07	1.27	0.81	0.01	1.35	0.13	0.47	0.81	0.00	0.60
Avail Cap(c_a), veh/h	116	1813	562	376	1547	676	557	812	688	100	0	555
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	46.3	29.5	30.8	42.6	23.2	14.7	39.6	29.2	31.9	46.2	0.0	42.5
Incr Delay (d2), s/veh	7.8	9.4	57.4	140.9	4.8	0.0	167.3	0.1	0.9	20.8	0.0	3.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	12.9	21.8	11.6	12.1	0.1	19.6	1.0	3.5	1.8	0.0	2.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	54.1	38.9	88.2	183.5	28.0	14.7	206.9	29.4	32.8	66.9	0.0	46.2
LnGrp LOS	D	D	F	F	C	B	F	C	C	E	A	D
Approach Vol, veh/h		2331			1744			973			152	
Approach Delay, s/veh		52.0			70.5			166.8			54.3	
Approach LOS		D			E			F			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.0	42.2	23.0	15.4	8.9	50.3	9.0	29.4
Change Period (Y+Rc), s	4.6	6.2	4.6	* 6.2	4.6	6.2	4.6	6.2
Max Green Setting (Gmax), s	12.4	36.0	18.4	* 33	7.0	41.4	6.0	44.0
Max Q Clear Time (g_c+I1), s	14.4	38.0	20.4	7.3	5.4	33.1	5.5	11.3
Green Ext Time (p_c), s	0.0	0.0	0.0	0.5	0.0	4.8	0.0	0.9

Intersection Summary	
HCM 6th Ctrl Delay	79.7
HCM 6th LOS	E

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	2.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	11	141	605	11	274	845
Future Vol, veh/h	11	141	605	11	274	845
Conflicting Peds, #/hr	0	0	0	4	1	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	100	0	-	-	195	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	11	147	630	11	285	880

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1650	325	0	0	645	0
Stage 1	640	-	-	-	-	-
Stage 2	1010	-	-	-	-	-
Critical Hdwy	6.8	6.9	-	-	4.1	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	91	677	-	-	950	-
Stage 1	493	-	-	-	-	-
Stage 2	317	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	63	674	-	-	946	-
Mov Cap-2 Maneuver	163	-	-	-	-	-
Stage 1	491	-	-	-	-	-
Stage 2	222	-	-	-	-	-

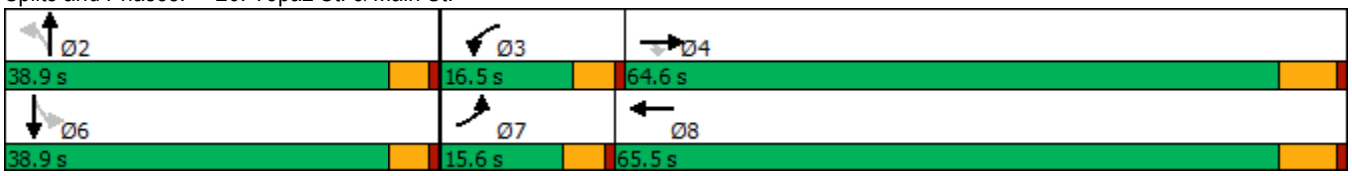
Approach	WB	NB	SB
HCM Control Delay, s	13	0	2.6
HCM LOS	B		

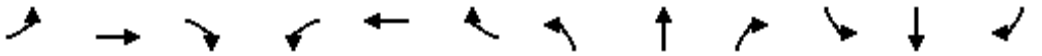
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	163	674	946	-
HCM Lane V/C Ratio	-	-	0.07	0.218	0.302	-
HCM Control Delay (s)	-	-	28.7	11.8	10.4	-
HCM Lane LOS	-	-	D	B	B	-
HCM 95th %tile Q(veh)	-	-	0.2	0.8	1.3	-

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	74	1601	243	106	1311	220	33	63	36
Future Volume (vph)	74	1601	243	106	1311	220	33	63	36
Turn Type	Prot	NA	Perm	Prot	NA	Perm	NA	Perm	NA
Protected Phases	7	4		3	8		2		6
Permitted Phases			4			2		6	
Detector Phase	7	4	4	3	8	2	2	6	6
Switch Phase									
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	25.2	25.2	9.6	23.2	32.6	32.6	38.6	38.6
Total Split (s)	15.6	64.6	64.6	16.5	65.5	38.9	38.9	38.9	38.9
Total Split (%)	13.0%	53.8%	53.8%	13.8%	54.6%	32.4%	32.4%	32.4%	32.4%
Yellow Time (s)	3.6	5.2	5.2	3.6	5.2	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	6.2	4.6	6.2	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes				
Recall Mode	None	None	None	Max	None	None	None	None	None
Act Effct Green (s)	8.9	58.2	58.2	12.0	63.5	25.6	25.6	25.6	25.6
Actuated g/C Ratio	0.08	0.52	0.52	0.11	0.57	0.23	0.23	0.23	0.23
v/c Ratio	0.59	0.92	0.28	0.63	0.73	0.83	0.30	0.27	0.21
Control Delay	69.9	35.5	5.7	66.5	23.1	65.1	12.6	37.5	17.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	69.9	35.5	5.7	66.5	23.1	65.1	12.6	37.5	17.8
LOS	E	D	A	E	C	E	B	D	B
Approach Delay		33.1			26.2		45.6		26.3
Approach LOS		C			C		D		C

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 111.2	
Natural Cycle: 110	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.92	
Intersection Signal Delay: 31.3	Intersection LOS: C
Intersection Capacity Utilization 97.1%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 26: Topaz St. & Main St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	74	1601	243	106	1311	70	220	33	97	63	36	47
Future Volume (veh/h)	74	1601	243	106	1311	70	220	33	97	63	36	47
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	0.99		1.00	1.00		0.99
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	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	76	1651	179	109	1352	65	227	34	69	65	37	17
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	95	1779	793	177	1897	91	327	121	246	284	266	122
Arrive On Green	0.06	0.52	0.52	0.11	0.57	0.57	0.23	0.23	0.23	0.23	0.23	0.23
Sat Flow, veh/h	1619	3420	1525	1619	3322	159	1282	530	1076	1239	1162	534
Grp Volume(v), veh/h	76	1651	179	109	695	722	227	0	103	65	0	54
Grp Sat Flow(s),veh/h/ln	1619	1710	1525	1619	1710	1771	1282	0	1606	1239	0	1696
Q Serve(g_s), s	5.0	48.7	6.9	7.0	31.9	32.1	18.6	0.0	5.7	5.0	0.0	2.8
Cycle Q Clear(g_c), s	5.0	48.7	6.9	7.0	31.9	32.1	21.4	0.0	5.7	10.7	0.0	2.8
Prop In Lane	1.00		1.00	1.00		0.09	1.00		0.67	1.00		0.31
Lane Grp Cap(c), veh/h	95	1779	793	177	976	1011	327	0	368	284	0	388
V/C Ratio(X)	0.80	0.93	0.23	0.62	0.71	0.71	0.69	0.00	0.28	0.23	0.00	0.14
Avail Cap(c_a), veh/h	164	1836	819	177	976	1011	438	0	506	391	0	535
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	50.6	24.2	14.2	46.3	16.9	16.9	41.9	0.0	34.6	39.0	0.0	33.4
Incr Delay (d2), s/veh	5.9	8.7	0.1	15.0	2.4	2.4	3.0	0.0	0.4	0.4	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	19.3	2.2	3.4	11.4	11.9	6.2	0.0	2.3	1.6	0.0	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	56.5	32.9	14.3	61.2	19.3	19.3	44.9	0.0	35.0	39.4	0.0	33.6
LnGrp LOS	E	C	B	E	B	B	D	A	C	D	A	C
Approach Vol, veh/h		1906			1526			330			119	
Approach Delay, s/veh		32.1			22.3			41.8			36.7	
Approach LOS		C			C			D			D	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		29.5	16.5	62.8		29.5	11.0	68.3				
Change Period (Y+Rc), s		4.6	4.6	6.2		4.6	4.6	6.2				
Max Green Setting (Gmax), s		34.3	11.9	58.4		34.3	11.0	59.3				
Max Q Clear Time (g_c+I1), s		23.4	9.0	50.7		12.7	7.0	34.1				
Green Ext Time (p_c), s		1.0	0.0	5.9		0.4	0.0	9.9				

Intersection Summary												
HCM 6th Ctrl Delay			29.2									
HCM 6th LOS			C									

APPENDIX 6.3:

OPENING YEAR CUMULATIVE (2021) WITHOUT PROJECT CONDITIONS TRAFFIC SIGNAL WARRANT ANALYSIS WORKSHEETS

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Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

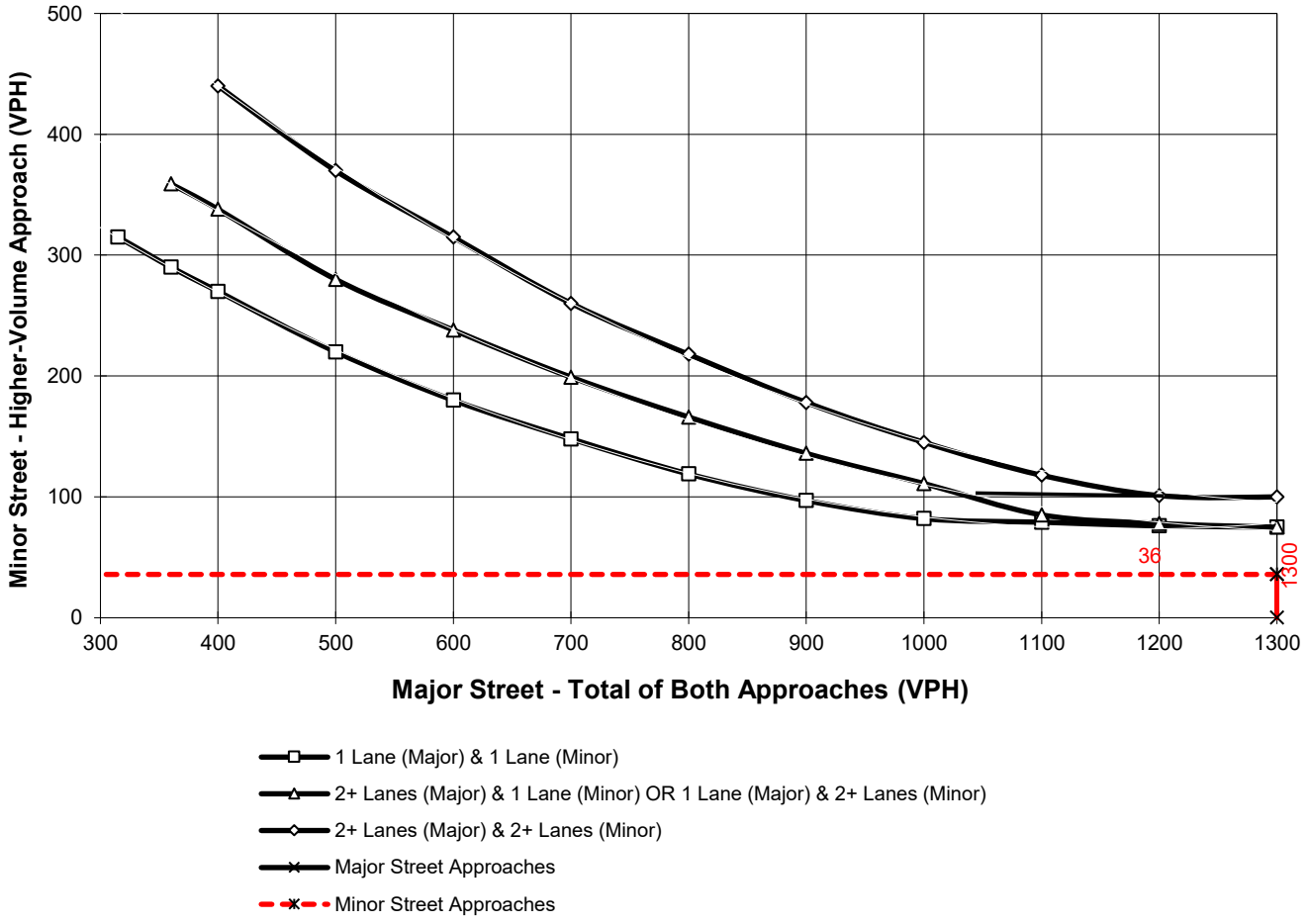
(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **Opening Year Cumulative (2021) Without Project Conditions - Weekday AM Peak Hou**

Major Street Name = **Phelan Road**
Total of Both Approaches (VPH) = **1606**
Number of Approach Lanes Major Street = **1**

Minor Street Name = **Verbena Road**
High Volume Approach (VPH) = **36**
Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold for a minor-street approach with one lane

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

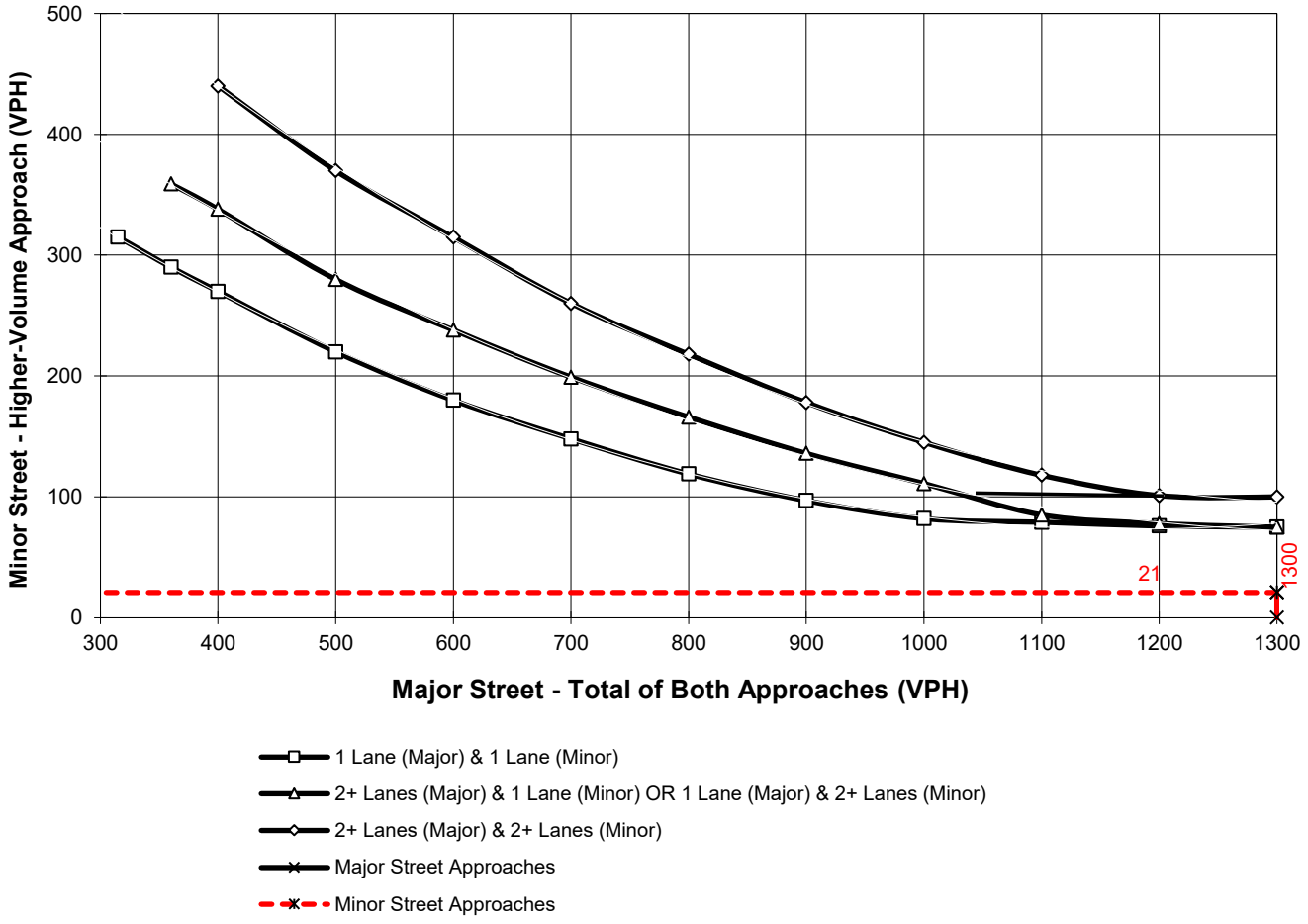
(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **Opening Year Cumulative (2021) Without Project Conditions - Weekday AM Peak Hou**

Major Street Name = **Phelan Road**
Total of Both Approaches (VPH) = **1582**
Number of Approach Lanes Major Street = **1**

Minor Street Name = **Bellflower Street**
High Volume Approach (VPH) = **21**
Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold for a minor-street approach with one lane

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet
(Average Traffic Estimate Form)

DIST ___ CO ___ RTE ___ PM ___

TRAFFIC CONDITIONS

Opening Year Cumulative (2021) Without Project

CALC CH DATE 01/23/20

Jurisdiction: **City of Hesperia** CHK CH DATE 01/23/20

Major Street: **Yucca Terrace Dr.** Critical Approach Speed (Major) 45 mph

Minor Street: **Driveway 2** Critical Approach Speed (Minor) 25 mph

Major Street Approach Lanes = **1** lane Minor Street Approach Lanes **1** lane

Major Street Future ADT = **211** vpd Minor Street Future ADT = **0** vpd

Speed limit or critical speed on major street traffic > 64 km/h (40 mph); …….. √

or

In built up area of isolated community of < 10,000 population ……..

RURAL (R)

(Based on Estimated Average Daily Traffic - See Note)

URBAN / RURAL	Minimum Requirements EADT			
CONDITION A - Minimum Vehicular Volume	Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Satisfied / Not Satisfied: XX / XX	Urban	Rural	Urban	Rural
Number of lanes for moving traffic on each approach: Major Street / Minor Street				
1 **211** / *1* **0**	8,000	5,600	2,400	1,680
2 + / *1*	9,600	6,720	2,400	1,680
2 + / *2* +	9,600	6,720	3,200	2,240
1 / *2* +	8,000	5,600	3,200	2,240
CONDITION B - Interruption of Continuous Traffic	Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Satisfied / Not Satisfied: XX	Urban	Rural	Urban	Rural
Number of lanes for moving traffic on each approach: Major Street / Minor Street				
1 **211** / *1* **0**	12,000	8,400	1,200	850
2 + / *1*	14,400	10,080	1,200	850
2 + / *2* +	14,400	10,080	1,600	1,120
1 / *2* +	12,000	8,400	1,600	1,120
Combination of CONDITIONS A + B				
Satisfied / Not Satisfied: XX	2 CONDITIONS 80%		2 CONDITIONS 80%	
No one condition satisfied, but following conditions fulfilled 80% of more ….. A: 4% B: 3%				

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet
(Average Traffic Estimate Form)

DIST	CO	RTE	PM	TRAFFIC CONDITIONS	Opening Year Cumulative (2021) Without Project
				CALC CH	DATE 01/23/20
Jurisdiction: City of Hesperia				CHK CH	DATE 01/23/20
Major Street: Yucca Terrace Drive				Critical Approach Speed (Major)	45 mph
Minor Street: Driveway 3				Critical Approach Speed (Minor)	25 mph

Major Street Approach Lanes = **1** lane Minor Street Approach Lanes **1** lane

Major Street Future ADT = **211** vpd Minor Street Future ADT = **0** vpd

Speed limit or critical speed on major street traffic > 64 km/h (40 mph); …….. √

or

In built up area of isolated community of < 10,000 population ……..

RURAL (R)

(Based on Estimated Average Daily Traffic - See Note)

URBAN / RURAL: XX

CONDITION A - Minimum Vehicular Volume

Satisfied / Not Satisfied: XX

Number of lanes for moving traffic on each approach		Minimum Requirements EADT			
Major Street	Minor Street	Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
		Urban	Rural	Urban	Rural
1 **211**	1 **0**	8,000	5,600	2,400	1,680
2 +	1	9,600	6,720	2,400	1,680
2 +	2 +	9,600	6,720	3,200	2,240
1	2 +	8,000	5,600	3,200	2,240

CONDITION B - Interruption of Continuous Traffic

Satisfied / Not Satisfied: XX

Number of lanes for moving traffic on each approach		Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Major Street	Minor Street	Urban	Rural	Urban	Rural
1 **211**	1 **0**	12,000	8,400	1,200	850
2 +	1	14,400	10,080	1,200	850
2 +	2 +	14,400	10,080	1,600	1,120
1	2 +	12,000	8,400	1,600	1,120

Combination of CONDITIONS A + B

Satisfied / Not Satisfied: XX

No one condition satisfied, but following conditions fulfilled 80% of more ….. **A** 4% **B** 3%

2 CONDITIONS 80%

2 CONDITIONS 80%

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

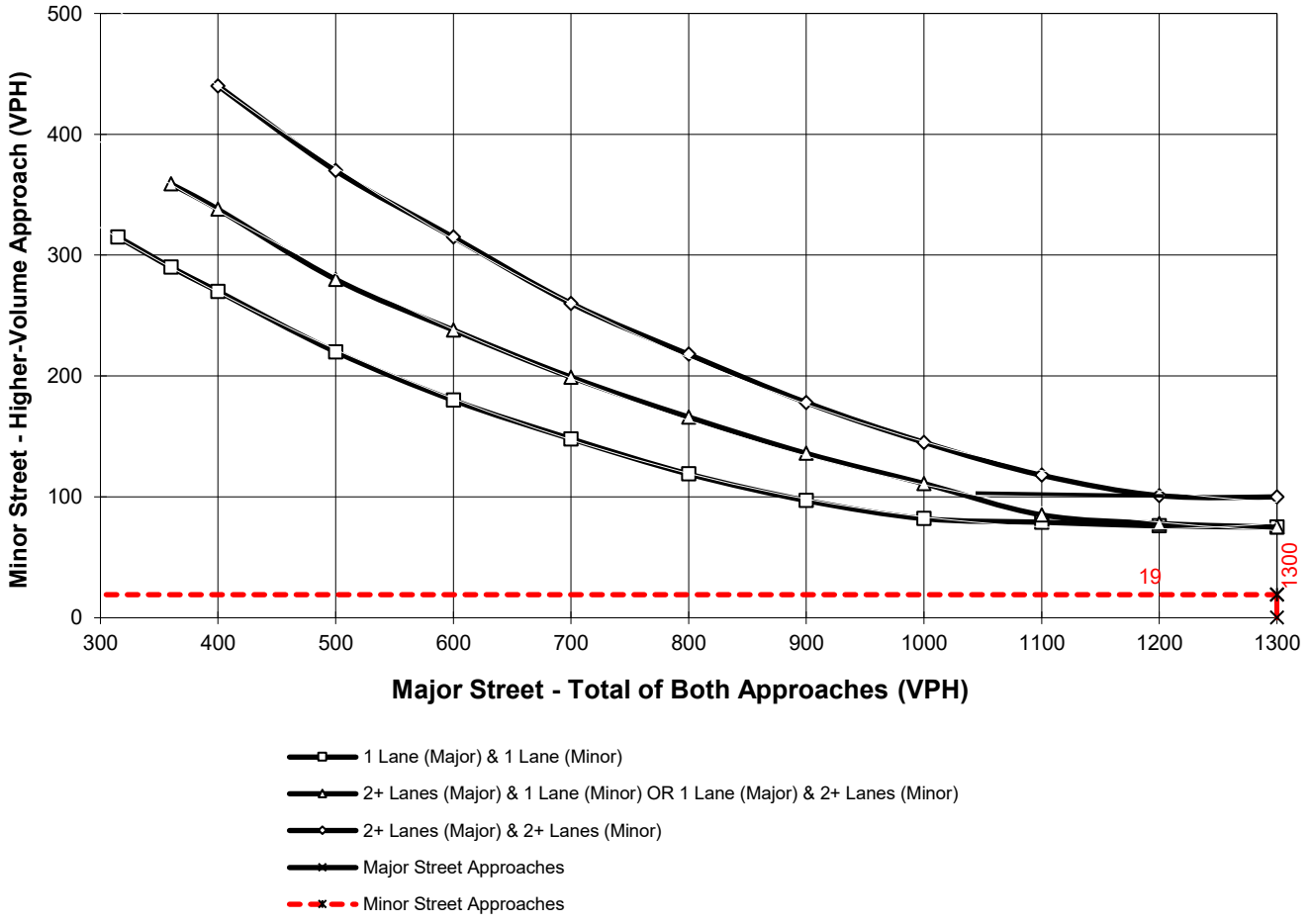
(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **Opening Year Cumulative (2021) Without Project Conditions - Weekday PM Peak Hou**

Major Street Name = **US Highway 395** Total of Both Approaches (VPH) = **2188**
Number of Approach Lanes Major Street = **2**

Minor Street Name = **Poplar Street** High Volume Approach (VPH) = **19**
Number of Approach Lanes Minor Street = **2**

SIGNAL WARRANT NOT SATISFIED



*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold for a minor-street approach with one lane

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APPENDIX 6.4:

OPENING YEAR CUMULATIVE (2021) WITH PROJECT CONDITIONS TRAFFIC SIGNAL WARRANT ANALYSIS WORKSHEETS

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Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

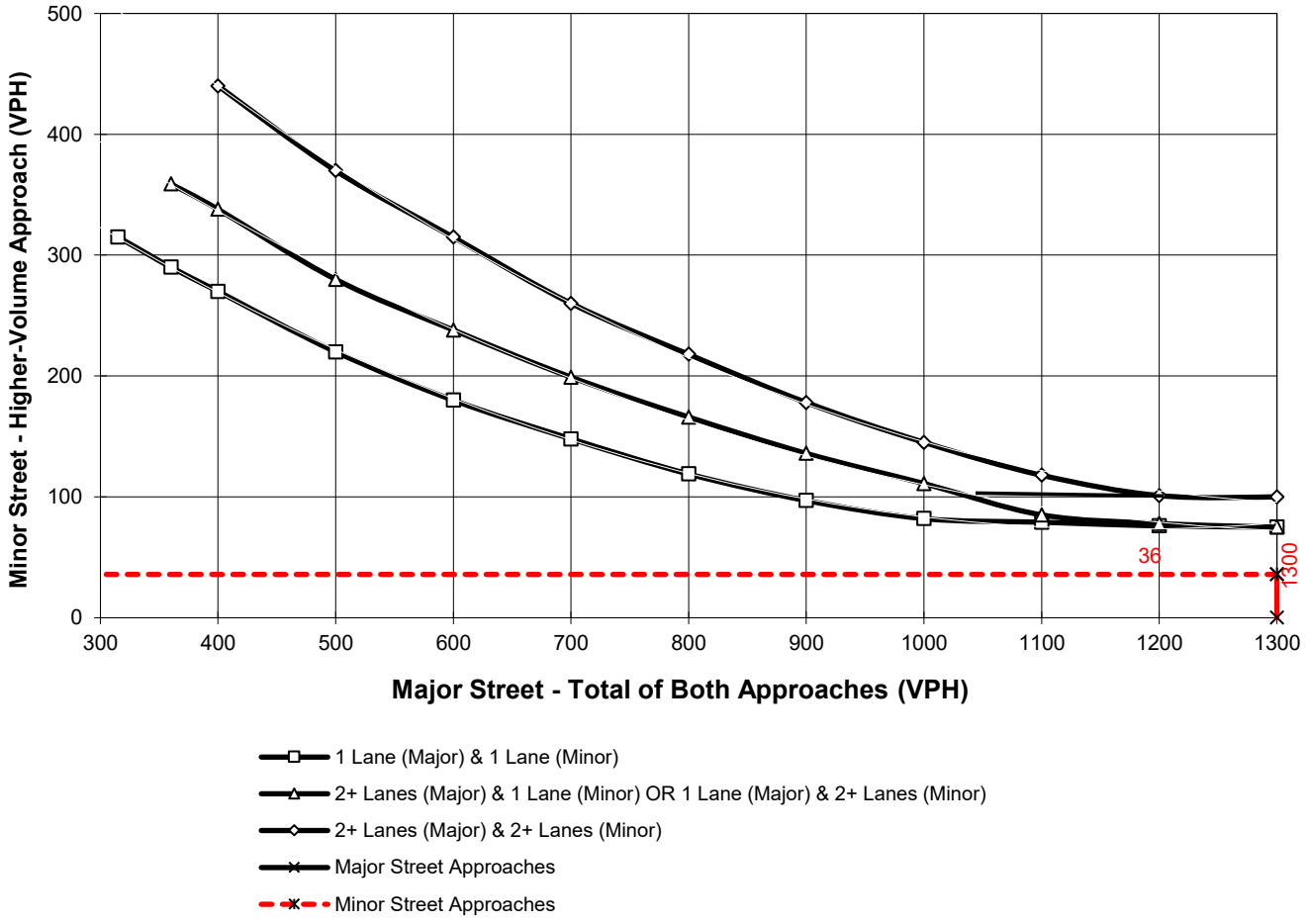
(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **Opening Year Cumulative (2021) With Project Conditions - Weekday AM Peak Hour**

Major Street Name = **Phelan Road** — Total of Both Approaches (VPH) = **1697**
Number of Approach Lanes Major Street = **1**

Minor Street Name = **Verbena Road** — High Volume Approach (VPH) = **36**
Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold for a minor-street approach with one lane

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

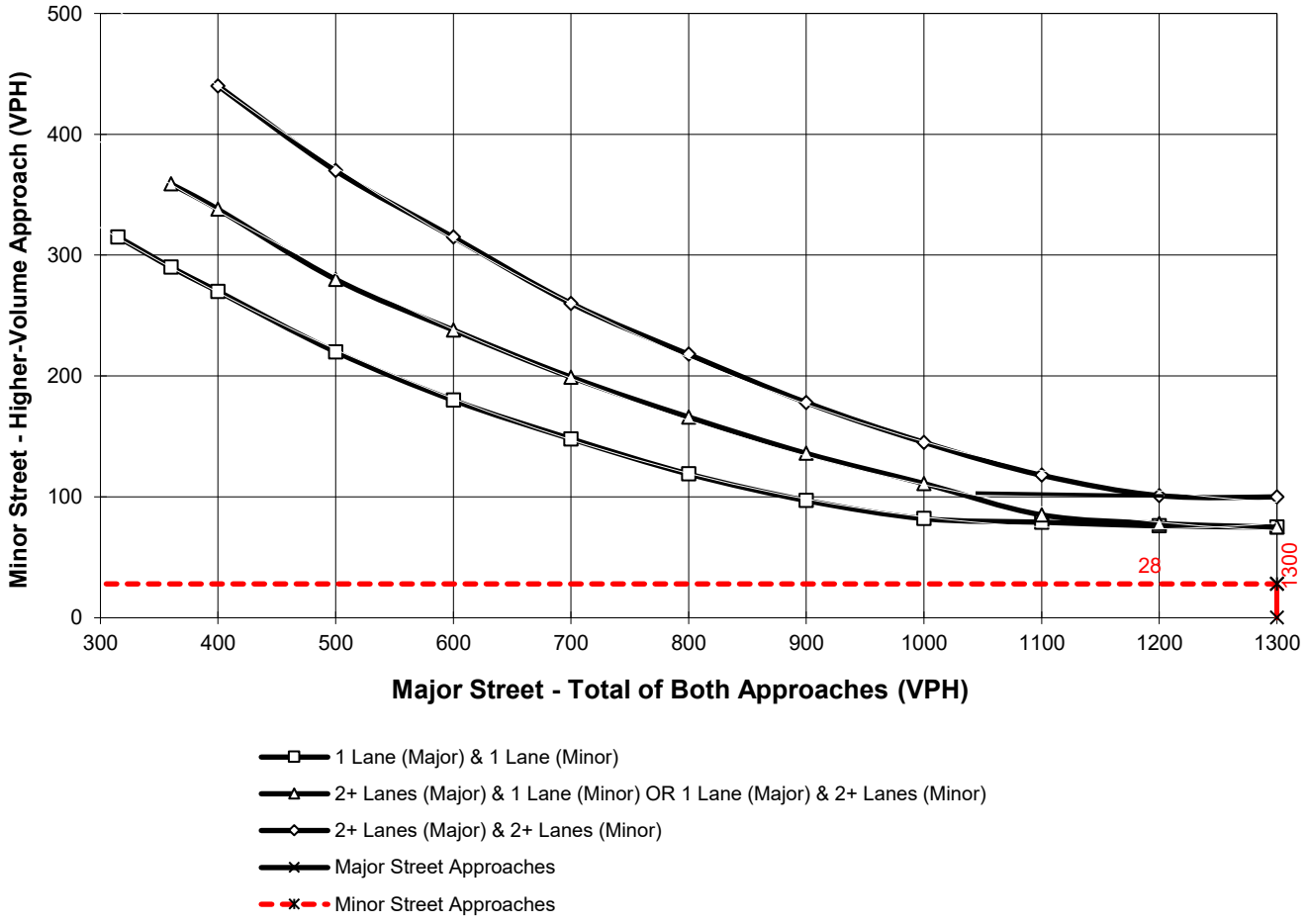
(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **Opening Year Cumulative (2021) With Project Conditions - Weekday AM Peak Hour**

Major Street Name = **Phelan Road** — Total of Both Approaches (VPH) = **1992**
Number of Approach Lanes Major Street = **1**

Minor Street Name = **Bellflower Street** — High Volume Approach (VPH) = **28**
Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold for a minor-street approach with one lane

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet
(Average Traffic Estimate Form)

Opening Year Cumulative (2021) With Project

DIST	CO	RTE	PM	TRAFFIC CONDITIONS		
				CALC CH	DATE	01/23/20
Jurisdiction: **City of Hesperia**				CHK CH	DATE	01/23/20
Major Street: **Yucca Terrace Dr.**				Critical Approach Speed (Major)		45 mph
Minor Street: **Driveway 2**				Critical Approach Speed (Minor)		25 mph

Major Street Approach Lanes = **1** lane Minor Street Approach Lanes = **1** lane

Major Street Future ADT = **1,347** vpd Minor Street Future ADT = **1,136** vpd

Speed limit or critical speed on major street traffic > 64 km/h (40 mph); …….. √

or

In built up area of isolated community of < 10,000 population ……..

RURAL (R)

(Based on Estimated Average Daily Traffic - See Note)

URBAN	RURAL	Minimum Requirements EADT			
	XX				
CONDITION A - Minimum Vehicular Volume		Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Satisfied	Not Satisfied				
	XX				
Number of lanes for moving traffic on each approach					
Major Street	Minor Street	Urban	Rural	Urban	Rural
1 **1,347**	*1* **1,136**	8,000	5,600	2,400	1,680
2 +	*1*	9,600	6,720	2,400	1,680
2 +	*2* +	9,600	6,720	3,200	2,240
1	*2* +	8,000	5,600	3,200	2,240
CONDITION B - Interruption of Continuous Traffic		Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Satisfied	Not Satisfied				
	XX				
Number of lanes for moving traffic on each approach					
Major Street	Minor Street	Urban	Rural	Urban	Rural
1 **1,347**	*1* **1,136**	12,000	8,400	1,200	850 *
2 +	*1*	14,400	10,080	1,200	850
2 +	*2* +	14,400	10,080	1,600	1,120
1	*2* +	12,000	8,400	1,600	1,120
Combination of CONDITIONS A + B					
Satisfied	Not Satisfied				
	XX	2 CONDITIONS 80%		2 CONDITIONS 80%	
No one condition satisfied, but following conditions fulfilled 80% of more …..	**A** 24%	**B** 16%			

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet
(Average Traffic Estimate Form)

TRAFFIC CONDITIONS **Opening Year Cumulative (2021) With Project**

DIST ___ CO ___ RTE ___ PM ___

CALC CH DATE 01/23/20

Jurisdiction: **City of Hesperia** CHK CH DATE 01/23/20

Major Street: **Yucca Terrace Drive** Critical Approach Speed (Major) 45 mph

Minor Street: **Driveway 3** Critical Approach Speed (Minor) 25 mph

Major Street Approach Lanes = **1** lane Minor Street Approach Lanes **1** lane

Major Street Future ADT = **3,971** vpd Minor Street Future ADT = **1,488** vpd

Speed limit or critical speed on major street traffic > 64 km/h (40 mph); ……... √

or **RURAL (R)**

In built up area of isolated community of < 10,000 population ……..

(Based on Estimated Average Daily Traffic - See Note)

URBAN / RURAL	Minimum Requirements EADT			
CONDITION A - Minimum Vehicular Volume	Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Satisfied / Not Satisfied (XX)	Urban	Rural	Urban	Rural
Number of lanes for moving traffic on each approach				
Major Street / Minor Street				
1 **3,971** / 1 **1,488**	8,000	5,600	2,400	1,680
2 + / 1	9,600	6,720	2,400	1,680
2 + / 2 +	9,600	6,720	3,200	2,240
1 / 2 +	8,000	5,600	3,200	2,240
CONDITION B - Interruption of Continuous Traffic	Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Satisfied / Not Satisfied (XX)	Urban	Rural	Urban	Rural
Number of lanes for moving traffic on each approach				
Major Street / Minor Street				
1 **3,971** / 1 **1,488**	12,000	8,400	1,200	850 *
2 + / 1	14,400	10,080	1,200	850
2 + / 2 +	14,400	10,080	1,600	1,120
1 / 2 +	12,000	8,400	1,600	1,120
Combination of CONDITIONS A + B				
Satisfied / Not Satisfied (XX)	2 CONDITIONS 80%		2 CONDITIONS 80%	
No one condition satisfied, but following conditions fulfilled 80% of more ….. A 71% B 47%				

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet
(Average Traffic Estimate Form)

TRAFFIC CONDITIONS — **Opening Year Cumulative (2021) With Project**

DIST ___ CO ___ RTE ___ PM ___

CALC CH DATE 01/23/20

Jurisdiction: **City of Hesperia** CHK CH DATE 01/23/20

Major Street: **US Highway 395** Critical Approach Speed (Major) 45 mph

Minor Street: **Driveway 5** Critical Approach Speed (Minor) 25 mph

Major Street Approach Lanes = **2** lane Minor Street Approach Lanes **1** lane

Major Street Future ADT = **34,448** vpd Minor Street Future ADT = **449** vpd

Speed limit or critical speed on major street traffic > 64 km/h (40 mph); ……... [√]

or **RURAL (R)**

In built up area of isolated community of < 10,000 population …….. [ ]

(Based on Estimated Average Daily Traffic - See Note)

URBAN	RURAL	Minimum Requirements EADT			
	XX				
CONDITION A - Minimum Vehicular Volume		Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Satisfied	Not Satisfied XX				
Number of lanes for moving traffic on each approach					
Major Street	Minor Street	Urban	Rural	Urban	Rural
1	*1*	8,000	5,600	2,400	1,680
2 + **34,448**	*1* **449**	9,600	6,720 *	2,400	1,680
2 +	*2* +	9,600	6,720	3,200	2,240
1	*2* +	8,000	5,600	3,200	2,240
CONDITION B - Interruption of Continuous Traffic		Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Satisfied	Not Satisfied XX				
Number of lanes for moving traffic on each approach					
Major Street	Minor Street	Urban	Rural	Urban	Rural
1	*1*	12,000	8,400	1,200	850
2 + **34,448**	*1* **449**	14,400	10,080 *	1,200	850
2 +	*2* +	14,400	10,080	1,600	1,120
1	*2* +	12,000	8,400	1,600	1,120
Combination of CONDITIONS A + B					
Satisfied	Not Satisfied XX	2 CONDITIONS 80%		2 CONDITIONS 80%	
No one condition satisfied, but following conditions fulfilled 80% of more …..	A 27% B 53%				

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

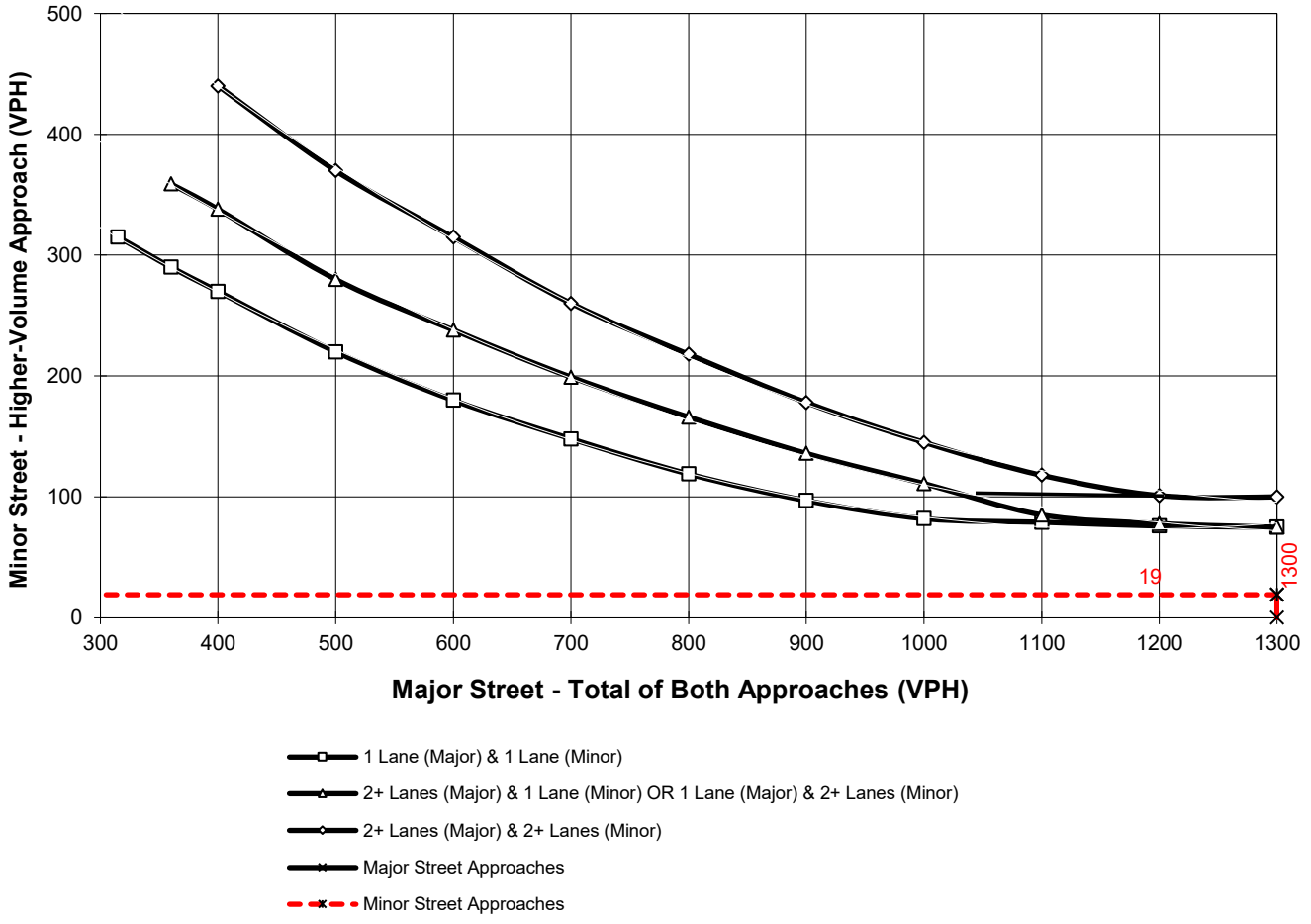
(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **Opening Year Cumulative (2021) Without Project Conditions - Weekday PM Peak Hou**

Major Street Name = **US Highway 395** Total of Both Approaches (VPH) = **2388**
Number of Approach Lanes Major Street = **2**

Minor Street Name = **Poplar Street** High Volume Approach (VPH) = **19**
Number of Approach Lanes Minor Street = **2**

SIGNAL WARRANT NOT SATISFIED



*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold for a minor-street approach with one lane

APPENDIX 6.5:

OPENING YEAR CUMULATIVE (2021) WITHOUT PROJECT CONDITIONS QUEUING ANALYSIS WORKSHEETS

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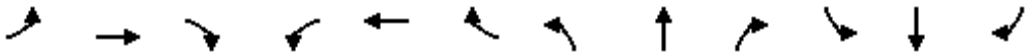
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	54	137	76	73	401	40	950	49	237	1060	77
v/c Ratio	0.71	0.32	0.17	0.28	0.85	0.38	0.59	0.07	0.73	0.48	0.08
Control Delay	82.7	34.3	4.0	34.7	41.7	60.9	25.7	1.0	53.6	14.0	3.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	82.7	34.3	4.0	34.7	41.7	60.9	25.7	1.0	53.6	14.0	3.4
Queue Length 50th (ft)	33	77	0	41	179	26	232	0	150	204	0
Queue Length 95th (ft)	#86	129	21	80	293	67	426	6	246	350	24
Internal Link Dist (ft)		549			898		7898			714	
Turn Bay Length (ft)	120		120	425		415		460	400		400
Base Capacity (vph)	134	752	700	469	740	109	1603	747	495	2200	1014
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.40	0.18	0.11	0.16	0.54	0.37	0.59	0.07	0.48	0.48	0.08

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	43	322	177	170	268	109	112	853	104	177	944	24
v/c Ratio	0.40	0.53	0.43	1.02	0.31	0.22	0.62	0.58	0.14	0.71	0.59	0.03
Control Delay	59.5	40.0	8.2	121.2	32.0	3.8	59.6	26.6	3.6	58.2	24.2	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	59.5	40.0	8.2	121.2	32.0	3.8	59.6	26.6	3.6	58.2	24.2	0.1
Queue Length 50th (ft)	25	98	0	104	77	0	64	200	0	102	213	0
Queue Length 95th (ft)	#76	137	50	#307	111	25	#166	386	27	#236	410	0
Internal Link Dist (ft)		876			804			5210			7898	
Turn Bay Length (ft)	225		225	1000		250	220		280	230		160
Base Capacity (vph)	111	1414	740	167	1526	761	204	1466	731	297	1600	766
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.39	0.23	0.24	1.02	0.18	0.14	0.55	0.58	0.14	0.60	0.59	0.03

Intersection Summary

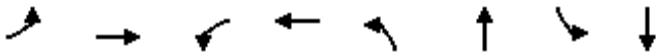
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	10	18	84	28	8	1070	65	4	1366	9
v/c Ratio	0.09	0.06	0.44	0.07	0.07	0.44	0.06	0.04	0.56	0.01
Control Delay	46.2	16.1	47.6	11.4	46.1	13.9	1.8	46.0	15.7	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	46.2	16.1	47.6	11.4	46.1	13.9	1.8	46.0	15.7	0.0
Queue Length 50th (ft)	4	2	32	2	3	83	0	2	120	0
Queue Length 95th (ft)	26	19	#145	22	23	477	12	15	#735	0
Internal Link Dist (ft)		810		782		6483			5210	
Turn Bay Length (ft)	200		250		500		350	430		300
Base Capacity (vph)	114	933	203	980	114	2427	1118	114	2427	1118
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.09	0.02	0.41	0.03	0.07	0.44	0.06	0.04	0.56	0.01

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	98	931	22	767	143	852	300	1168
v/c Ratio	0.73	0.80	0.26	0.75	0.73	0.84	0.86	0.89
Control Delay	83.5	39.6	62.9	31.9	71.2	46.2	67.5	42.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	83.5	39.6	62.9	31.9	71.2	46.2	67.5	42.3
Queue Length 50th (ft)	75	338	17	203	107	321	222	433
Queue Length 95th (ft)	#174	421	45	274	#207	#420	#382	#580
Internal Link Dist (ft)		1117		1265		3985		1763
Turn Bay Length (ft)	340		250		280		250	
Base Capacity (vph)	136	1308	85	1270	221	1121	391	1455
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.72	0.71	0.26	0.60	0.65	0.76	0.77	0.80

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Intersection	
Int Delay, s/veh	0.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	10	9	947	17	25	1199
Future Vol, veh/h	10	9	947	17	25	1199
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	375	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	11	10	1018	18	27	1289

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	2370	518	0	0	1036	0
Stage 1	1027	-	-	-	-	-
Stage 2	1343	-	-	-	-	-
Critical Hdwy	6.6	6.9	-	-	4.1	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	34	508	-	-	679	-
Stage 1	311	-	-	-	-	-
Stage 2	246	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	33	508	-	-	679	-
Mov Cap-2 Maneuver	33	-	-	-	-	-
Stage 1	311	-	-	-	-	-
Stage 2	236	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	89.9	0	0.2
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	33	508	679	-
HCM Lane V/C Ratio	-	-	0.326	0.019	0.04	-
HCM Control Delay (s)	-	-	159.9	12.2	10.5	-
HCM Lane LOS	-	-	F	B	B	-
HCM 95th %tile Q(veh)	-	-	1.1	0.1	0.1	-



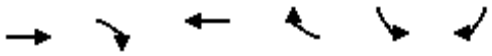
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	70	271	186	2	47	245	933	114	23	1160	132
v/c Ratio	0.19	0.45	0.97	0.00	0.10	0.79	0.44	0.12	0.27	0.77	0.18
Control Delay	33.5	6.4	100.3	30.5	0.4	62.1	15.3	2.9	63.3	33.9	6.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	33.5	6.4	100.3	30.5	0.4	62.1	15.3	2.9	63.3	33.9	6.7
Queue Length 50th (ft)	40	1	135	1	0	178	217	0	17	390	6
Queue Length 95th (ft)	79	63	#269	8	0	263	290	28	46	#583	50
Internal Link Dist (ft)		773		663			859			1974	
Turn Bay Length (ft)	50		400		400	190			225		225
Base Capacity (vph)	468	708	248	619	598	437	2117	974	84	1508	743
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.15	0.38	0.75	0.00	0.08	0.56	0.44	0.12	0.27	0.77	0.18

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	39	77	103	88	235	13	1018	66	215	1339	62
v/c Ratio	0.15	0.21	0.41	0.24	0.48	0.12	0.57	0.08	0.69	0.53	0.05
Control Delay	29.7	29.1	35.0	30.7	7.2	48.2	20.6	3.0	46.6	10.1	3.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	29.7	29.1	35.0	30.7	7.2	48.2	20.6	3.0	46.6	10.1	3.6
Queue Length 50th (ft)	17	33	48	40	0	6	161	0	101	104	1
Queue Length 95th (ft)	45	73	100	84	54	32	468	18	230	498	25
Internal Link Dist (ft)		1110		807			892			859	
Turn Bay Length (ft)	100		65		65	190			195		230
Base Capacity (vph)	668	949	675	955	918	105	1792	847	569	2533	1149
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.06	0.08	0.15	0.09	0.26	0.12	0.57	0.08	0.38	0.53	0.05

Intersection Summary



Lane Group	EBT	EBR	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	1238	34	968	22	377	280
v/c Ratio	0.50	0.02	0.39	0.01	0.38	0.52
Control Delay	8.2	0.0	7.4	0.0	13.5	12.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	8.2	0.0	7.4	0.0	13.5	12.2
Queue Length 50th (ft)	57	0	42	0	33	30
Queue Length 95th (ft)	115	0	86	0	74	96
Internal Link Dist (ft)	480		822			
Turn Bay Length (ft)		250		150	1000	540
Base Capacity (vph)	5187	1615	5187	1615	3364	1556
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.24	0.02	0.19	0.01	0.11	0.18

Intersection Summary



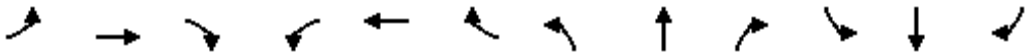
Lane Group	EBT	EBR	WBT	WBR	NBL	NBT	NBR
Lane Group Flow (vph)	1204	362	1403	502	150	227	230
v/c Ratio	0.41	0.34	0.48	0.44	0.33	0.51	0.52
Control Delay	7.3	1.8	7.8	2.1	21.1	17.6	17.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	7.3	1.8	7.8	2.1	21.1	17.6	17.9
Queue Length 50th (ft)	65	0	79	0	37	38	40
Queue Length 95th (ft)	132	31	161	35	107	129	131
Internal Link Dist (ft)	822		339			457	
Turn Bay Length (ft)		250			1000		615
Base Capacity (vph)	5094	1593	5094	1595	1323	1150	1145
Starvation Cap Reductn	0	0	403	75	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.24	0.23	0.30	0.33	0.11	0.20	0.20

Intersection Summary



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	55	75	42	47	339	70	1086	89	233	1079	94
v/c Ratio	0.73	0.19	0.10	0.17	0.81	0.48	0.64	0.11	0.75	0.51	0.10
Control Delay	87.9	33.9	0.5	34.0	43.6	59.3	25.2	5.2	56.8	16.0	3.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	87.9	33.9	0.5	34.0	43.6	59.3	25.2	5.2	56.8	16.0	3.5
Queue Length 50th (ft)	34	41	0	26	162	44	267	0	146	214	0
Queue Length 95th (ft)	84	80	0	57	265	102	493	34	253	385	28
Internal Link Dist (ft)		549			898		7898			714	
Turn Bay Length (ft)	120		120	425		415		460	400		400
Base Capacity (vph)	134	707	664	500	685	181	1697	807	454	2108	982
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.41	0.11	0.06	0.09	0.49	0.39	0.64	0.11	0.51	0.51	0.10

Intersection Summary



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	59	346	145	122	338	149	193	1024	233	176	967	38
v/c Ratio	0.53	0.56	0.36	1.08	0.48	0.34	0.72	0.66	0.28	0.70	0.64	0.05
Control Delay	65.8	39.7	8.1	155.0	37.4	7.6	56.9	26.8	4.2	57.6	27.2	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	65.8	39.7	8.1	155.0	37.4	7.6	56.9	26.8	4.2	57.6	27.2	0.1
Queue Length 50th (ft)	35	104	0	~80	101	0	110	244	0	99	227	0
Queue Length 95th (ft)	#113	147	46	#250	144	47	#225	468	55	#235	452	0
Internal Link Dist (ft)		876			804			5210			7898	
Turn Bay Length (ft)	225		225	1000		250	220		280	230		160
Base Capacity (vph)	113	1431	727	113	1431	721	357	1544	824	301	1511	719
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.52	0.24	0.20	1.08	0.24	0.21	0.54	0.66	0.28	0.58	0.64	0.05

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

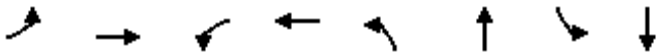
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	6	3	48	13	9	1475	93	13	1165	12
v/c Ratio	0.05	0.01	0.27	0.04	0.08	0.57	0.08	0.12	0.45	0.01
Control Delay	45.8	0.0	45.0	14.9	46.2	13.6	3.5	46.8	12.0	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	45.8	0.0	45.0	14.9	46.2	13.6	3.5	46.8	12.0	0.0
Queue Length 50th (ft)	3	0	23	1	5	137	0	7	94	0
Queue Length 95th (ft)	19	0	#99	15	25	#790	30	32	513	0
Internal Link Dist (ft)		810		782		6483			5210	
Turn Bay Length (ft)	200		250		500		350	430		300
Base Capacity (vph)	110	910	178	875	110	2594	1189	110	2594	1189
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.05	0.00	0.27	0.01	0.08	0.57	0.08	0.12	0.45	0.01

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	95	785	25	1135	232	1323	338	1046
v/c Ratio	1.27	0.64	0.33	1.00	0.84	1.10	1.33	0.91
Control Delay	237.4	35.7	68.0	66.1	75.2	97.4	211.5	51.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	237.4	35.7	68.0	66.1	75.2	97.4	211.5	51.3
Queue Length 50th (ft)	~93	273	19	~443	174	~615	~339	412
Queue Length 95th (ft)	#205	345	49	#601	#293	#755	#526	#551
Internal Link Dist (ft)		1117		1265		3985		1763
Turn Bay Length (ft)	340		250		280		250	
Base Capacity (vph)	75	1230	75	1133	300	1198	255	1152
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.27	0.64	0.33	1.00	0.77	1.10	1.33	0.91

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Intersection	
Int Delay, s/veh	1.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	14	24	1452	33	11	1026
Future Vol, veh/h	14	24	1452	33	11	1026
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	375	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	98	98	98	98	98	98
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	14	24	1482	34	11	1047

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	2568	758	0	0	1516	0
Stage 1	1499	-	-	-	-	-
Stage 2	1069	-	-	-	-	-
Critical Hdwy	6.6	6.9	-	-	4.1	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	25	354	-	-	446	-
Stage 1	175	-	-	-	-	-
Stage 2	333	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	24	354	-	-	446	-
Mov Cap-2 Maneuver	24	-	-	-	-	-
Stage 1	175	-	-	-	-	-
Stage 2	325	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	114.7	0	0.1
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	24	354	446	-
HCM Lane V/C Ratio	-	-	0.595	0.069	0.025	-
HCM Control Delay (s)	-	-	284.1	15.9	13.3	-
HCM Lane LOS	-	-	F	C	B	-
HCM 95th %tile Q(veh)	-	-	1.8	0.2	0.1	-



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	82	264	135	4	34	214	1402	156	35	923	103
v/c Ratio	0.29	0.49	1.02	0.01	0.08	0.78	0.62	0.15	0.39	0.53	0.12
Control Delay	37.1	7.5	123.6	31.8	0.4	62.5	15.7	2.9	65.3	22.4	3.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	37.1	7.5	123.6	31.8	0.4	62.5	15.7	2.9	65.3	22.4	3.4
Queue Length 50th (ft)	48	1	~98	2	0	141	309	2	24	220	0
Queue Length 95th (ft)	91	63	#193	11	0	241	507	35	#66	372	28
Internal Link Dist (ft)		773		663			859			1974	
Turn Bay Length (ft)	50		400		400	190			225		225
Base Capacity (vph)	495	731	230	657	635	374	2264	1046	89	1727	834
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.17	0.36	0.59	0.01	0.05	0.57	0.62	0.15	0.39	0.53	0.12

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

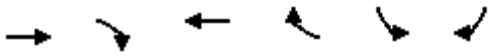
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	94	155	87	71	228	28	1471	93	188	1090	58
v/c Ratio	0.37	0.43	0.45	0.20	0.47	0.27	0.79	0.11	0.66	0.44	0.05
Control Delay	35.3	34.3	39.4	31.2	7.3	53.3	24.7	5.2	48.2	9.8	3.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	35.3	34.3	39.4	31.2	7.3	53.3	24.7	5.2	48.2	9.8	3.4
Queue Length 50th (ft)	44	70	41	32	0	14	293	1	88	83	0
Queue Length 95th (ft)	92	133	89	70	53	53	#845	37	207	370	21
Internal Link Dist (ft)		1110		807			892			859	
Turn Bay Length (ft)	100		65		65	190			195		230
Base Capacity (vph)	663	921	502	932	898	103	1861	876	576	2472	1124
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.14	0.17	0.17	0.08	0.25	0.27	0.79	0.11	0.33	0.44	0.05

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBT	EBR	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	1504	62	1364	43	605	476
v/c Ratio	0.65	0.04	0.59	0.03	0.42	0.70
Control Delay	17.9	0.1	17.0	0.0	16.3	24.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	17.9	0.1	17.0	0.0	16.3	24.0
Queue Length 50th (ft)	173	0	151	0	88	153
Queue Length 95th (ft)	324	0	286	0	175	342
Internal Link Dist (ft)	480		822			
Turn Bay Length (ft)		250		150	1000	540
Base Capacity (vph)	3885	1615	3885	1582	2902	1341
Starvation Cap Reductn	84	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.40	0.04	0.35	0.03	0.21	0.35

Intersection Summary



Lane Group	EBT	EBR	WBT	WBR	NBL	NBT	NBR
Lane Group Flow (vph)	1794	315	1562	468	228	458	458
v/c Ratio	0.71	0.33	0.61	0.45	0.31	0.72	0.72
Control Delay	21.9	3.8	20.1	3.2	21.0	31.0	31.0
Queue Delay	0.0	0.0	0.3	0.3	0.0	0.0	0.0
Total Delay	21.9	3.8	20.3	3.5	21.0	31.0	31.0
Queue Length 50th (ft)	301	6	246	0	98	248	248
Queue Length 95th (ft)	468	60	385	57	163	394	394
Internal Link Dist (ft)	822		339			457	
Turn Bay Length (ft)		250			1000		615
Base Capacity (vph)	3209	1111	3209	1177	1116	955	955
Starvation Cap Reductn	0	0	836	239	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.56	0.28	0.66	0.50	0.20	0.48	0.48

Intersection Summary

APPENDIX 6.6:

OPENING YEAR CUMULATIVE (2021) WITH PROJECT CONDITIONS QUEUING ANALYSIS WORKSHEETS

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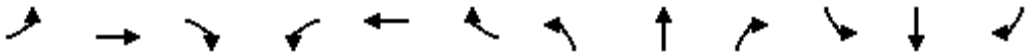
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	54	137	76	83	401	40	958	50	237	1105	77
v/c Ratio	0.71	0.32	0.17	0.31	0.85	0.38	0.60	0.07	0.73	0.50	0.08
Control Delay	82.7	34.3	4.0	35.5	41.7	60.9	25.8	1.1	53.6	14.3	3.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	82.7	34.3	4.0	35.5	41.7	60.9	25.8	1.1	53.6	14.3	3.4
Queue Length 50th (ft)	33	77	0	47	179	26	234	0	150	217	0
Queue Length 95th (ft)	#86	129	21	89	293	67	430	6	246	371	24
Internal Link Dist (ft)		549			898		7898			714	
Turn Bay Length (ft)	120		120	425		415		460	400		400
Base Capacity (vph)	134	752	700	469	740	109	1603	747	495	2200	1014
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.40	0.18	0.11	0.18	0.54	0.37	0.60	0.07	0.48	0.50	0.08

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	43	322	177	205	268	109	112	862	110	177	997	24
v/c Ratio	0.40	0.53	0.43	1.23	0.31	0.22	0.62	0.59	0.15	0.71	0.62	0.03
Control Delay	59.5	40.0	8.2	183.5	32.0	3.8	59.6	26.8	4.1	58.2	24.9	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	59.5	40.0	8.2	183.5	32.0	3.8	59.6	26.8	4.1	58.2	24.9	0.1
Queue Length 50th (ft)	25	98	0	~150	77	0	64	202	0	102	230	0
Queue Length 95th (ft)	#76	137	50	#376	111	25	#166	392	31	#236	440	0
Internal Link Dist (ft)		876			804			5210			7898	
Turn Bay Length (ft)	225		225	1000		250	220		280	230		160
Base Capacity (vph)	111	1414	740	167	1526	761	204	1466	731	297	1600	766
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.39	0.23	0.24	1.23	0.18	0.14	0.55	0.59	0.15	0.60	0.62	0.03

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

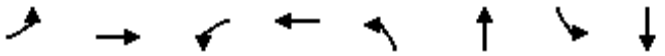
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	10	28	102	28	9	1085	68	4	1457	9
v/c Ratio	0.09	0.09	0.49	0.07	0.08	0.49	0.07	0.04	0.66	0.01
Control Delay	46.1	13.3	47.9	11.4	46.0	14.7	2.1	45.8	17.3	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	46.1	13.3	47.9	11.4	46.0	14.7	2.1	45.8	17.3	0.0
Queue Length 50th (ft)	4	2	38	2	3	85	0	2	134	0
Queue Length 95th (ft)	26	23	#184	22	25	485	14	15	#813	0
Internal Link Dist (ft)		810		782		6483			5210	
Turn Bay Length (ft)	200		250		500		350	430		300
Base Capacity (vph)	111	894	207	950	111	2223	1033	111	2223	1033
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.09	0.03	0.49	0.03	0.08	0.49	0.07	0.04	0.66	0.01

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	98	1060	22	1797	232	942	360	1183
v/c Ratio	0.82	0.84	0.29	1.66	1.19	0.95	1.04	0.92
Control Delay	99.6	42.8	66.0	329.3	170.9	62.0	107.5	49.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	99.6	42.8	66.0	329.3	170.9	62.0	107.5	49.2
Queue Length 50th (ft)	76	406	17	~1050	~216	377	~301	456
Queue Length 95th (ft)	#174	#536	45	#1192	#378	#511	#492	#593
Internal Link Dist (ft)		1117		1265		3985		1763
Turn Bay Length (ft)	340		250		280		250	
Base Capacity (vph)	120	1263	75	1083	195	990	345	1285
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.82	0.84	0.29	1.66	1.19	0.95	1.04	0.92

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Intersection	
Int Delay, s/veh	1.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	10	9	1118	17	25	1228
Future Vol, veh/h	10	9	1118	17	25	1228
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	375	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	11	10	1202	18	27	1320

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	2585	610	0	0	1220	0
Stage 1	1211	-	-	-	-	-
Stage 2	1374	-	-	-	-	-
Critical Hdwy	6.6	6.9	-	-	4.1	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	25	442	-	-	579	-
Stage 1	249	-	-	-	-	-
Stage 2	237	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	24	442	-	-	579	-
Mov Cap-2 Maneuver	24	-	-	-	-	-
Stage 1	249	-	-	-	-	-
Stage 2	226	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	135	0	0.2
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	24	442	579	-
HCM Lane V/C Ratio	-	-	0.448	0.022	0.046	-
HCM Control Delay (s)	-	-	244.5	13.3	11.5	-
HCM Lane LOS	-	-	F	B	B	-
HCM 95th %tile Q(veh)	-	-	1.3	0.1	0.1	-



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	70	271	186	2	47	245	1118	114	23	1191	132
v/c Ratio	0.19	0.45	0.97	0.00	0.10	0.79	0.53	0.12	0.27	0.79	0.18
Control Delay	33.5	6.4	100.3	30.5	0.4	62.1	16.7	2.9	63.3	34.7	6.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	33.5	6.4	100.3	30.5	0.4	62.1	16.7	2.9	63.3	34.7	6.7
Queue Length 50th (ft)	40	1	135	1	0	178	280	0	17	405	6
Queue Length 95th (ft)	79	63	#269	8	0	263	367	28	46	#611	50
Internal Link Dist (ft)		773		663			859			1974	
Turn Bay Length (ft)	50		400		400	190			225		225
Base Capacity (vph)	468	708	248	619	598	437	2117	974	84	1508	743
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.15	0.38	0.75	0.00	0.08	0.56	0.53	0.12	0.27	0.79	0.18

Intersection Summary

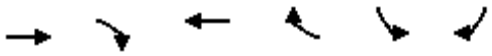
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	39	77	103	88	272	13	1167	66	222	1365	62
v/c Ratio	0.15	0.21	0.41	0.24	0.52	0.12	0.66	0.08	0.69	0.54	0.05
Control Delay	29.7	29.1	35.0	30.7	7.3	48.2	22.5	3.0	46.4	10.2	3.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	29.7	29.1	35.0	30.7	7.3	48.2	22.5	3.0	46.4	10.2	3.6
Queue Length 50th (ft)	17	33	48	40	0	6	197	0	104	107	1
Queue Length 95th (ft)	45	73	100	84	57	32	#622	18	235	513	25
Internal Link Dist (ft)		1110		807			892			859	
Turn Bay Length (ft)	100		65		65	190			195		230
Base Capacity (vph)	668	949	675	955	936	105	1777	841	633	2533	1149
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.06	0.08	0.15	0.09	0.29	0.12	0.66	0.08	0.35	0.54	0.05

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBT	EBR	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	1332	116	1547	22	377	742
v/c Ratio	0.63	0.07	0.73	0.01	0.22	0.93
Control Delay	22.5	0.1	24.6	0.0	14.9	42.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	22.5	0.1	24.6	0.0	14.9	42.2
Queue Length 50th (ft)	217	0	267	0	61	371
Queue Length 95th (ft)	260	0	316	0	109	#737
Internal Link Dist (ft)	480		822			
Turn Bay Length (ft)		250		150	1000	540
Base Capacity (vph)	3789	1615	3789	1615	1710	801
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.35	0.07	0.41	0.01	0.22	0.93

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBT	EBR	WBT	WBR	NBL	NBT	NBR
Lane Group Flow (vph)	1219	438	1491	502	623	227	230
v/c Ratio	0.51	0.44	0.62	0.49	0.80	0.32	0.33
Control Delay	16.8	2.7	18.4	2.9	34.1	14.2	14.4
Queue Delay	0.0	0.0	0.0	0.1	0.0	0.0	0.0
Total Delay	16.8	2.7	18.5	3.0	34.1	14.2	14.4
Queue Length 50th (ft)	164	0	216	0	288	52	53
Queue Length 95th (ft)	198	43	256	45	#633	143	145
Internal Link Dist (ft)	822		339			457	
Turn Bay Length (ft)		250			1000		615
Base Capacity (vph)	4368	1429	4368	1439	774	705	702
Starvation Cap Reductn	0	0	707	183	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.28	0.31	0.41	0.40	0.80	0.32	0.33

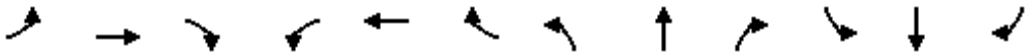
Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	55	75	42	49	339	70	1128	97	233	1088	94
v/c Ratio	0.73	0.19	0.10	0.18	0.81	0.48	0.66	0.12	0.75	0.52	0.10
Control Delay	87.9	33.9	0.5	34.1	43.6	59.3	25.8	5.2	56.8	16.1	3.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	87.9	33.9	0.5	34.1	43.6	59.3	25.8	5.2	56.8	16.1	3.5
Queue Length 50th (ft)	34	41	0	27	162	44	281	0	146	217	0
Queue Length 95th (ft)	84	80	0	58	265	102	520	36	253	390	28
Internal Link Dist (ft)		549			898		7898			714	
Turn Bay Length (ft)	120		120	425		415		460	400		400
Base Capacity (vph)	134	707	664	500	685	181	1697	810	454	2108	982
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.41	0.11	0.06	0.10	0.49	0.39	0.66	0.12	0.51	0.52	0.10

Intersection Summary



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	59	346	145	129	338	149	193	1075	268	176	978	38
v/c Ratio	0.53	0.56	0.36	1.14	0.48	0.34	0.72	0.70	0.32	0.70	0.65	0.05
Control Delay	65.8	39.7	8.1	173.0	37.4	7.6	56.9	27.6	4.4	57.6	27.3	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	65.8	39.7	8.1	173.0	37.4	7.6	56.9	27.6	4.4	57.6	27.3	0.1
Queue Length 50th (ft)	35	104	0	~89	101	0	110	261	2	99	231	0
Queue Length 95th (ft)	#113	147	46	#263	144	47	#225	499	61	#235	459	0
Internal Link Dist (ft)		876			804			5210			7898	
Turn Bay Length (ft)	225		225	1000		250	220		280	230		160
Base Capacity (vph)	113	1431	727	113	1431	721	357	1544	841	301	1511	719
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.52	0.24	0.20	1.14	0.24	0.21	0.54	0.70	0.32	0.58	0.65	0.05

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

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Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	6	5	53	13	18	1561	111	13	1183	12
v/c Ratio	0.05	0.01	0.29	0.04	0.16	0.60	0.09	0.12	0.46	0.01
Control Delay	45.3	0.0	44.7	14.9	46.9	14.1	4.3	45.9	12.1	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	45.3	0.0	44.7	14.9	46.9	14.1	4.3	45.9	12.1	0.0
Queue Length 50th (ft)	3	0	24	1	9	151	1	6	96	0
Queue Length 95th (ft)	19	0	#112	15	39	#863	42	32	524	0
Internal Link Dist (ft)		810		782		6483			5210	
Turn Bay Length (ft)	200		250		500		350	430		300
Base Capacity (vph)	111	919	181	888	111	2581	1183	111	2581	1183
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.05	0.01	0.29	0.01	0.16	0.60	0.09	0.12	0.46	0.01

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
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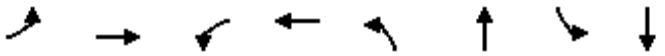

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	95	1517	25	1341	251	1342	680	1135
v/c Ratio	1.27	1.23	0.33	1.19	0.88	1.12	2.67	1.00
Control Delay	237.4	146.3	68.0	128.7	79.6	102.8	782.4	68.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	237.4	146.3	68.0	128.7	79.6	102.8	782.4	68.3
Queue Length 50th (ft)	~93	~810	19	~643	190	~631	~890	~492
Queue Length 95th (ft)	#205	#952	49	#784	#330	#771	#1122	#630
Internal Link Dist (ft)		1117		1265		3985		1763
Turn Bay Length (ft)	340		250		280		250	
Base Capacity (vph)	75	1231	75	1130	300	1199	255	1133
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.27	1.23	0.33	1.19	0.84	1.12	2.67	1.00

Intersection Summary

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Queue shown is maximum after two cycles.

Intersection	
Int Delay, s/veh	2.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	14	24	1489	33	11	1194
Future Vol, veh/h	14	24	1489	33	11	1194
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	375	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	98	98	98	98	98	98
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	14	24	1519	34	11	1218

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	2776	777	0	0	1553	0
Stage 1	1536	-	-	-	-	-
Stage 2	1240	-	-	-	-	-
Critical Hdwy	6.6	6.9	-	-	4.1	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	18	344	-	-	432	-
Stage 1	167	-	-	-	-	-
Stage 2	276	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	18	344	-	-	432	-
Mov Cap-2 Maneuver	18	-	-	-	-	-
Stage 1	167	-	-	-	-	-
Stage 2	269	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	168.6	0	0.1
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	18	344	432	-
HCM Lane V/C Ratio	-	-	0.794	0.071	0.026	-
HCM Control Delay (s)	-	-	$ 429.8	16.3	13.6	-
HCM Lane LOS	-	-	F	C	B	-
HCM 95th %tile Q(veh)	-	-	2.1	0.2	0.1	-



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	82	264	135	4	34	214	1440	156	35	1095	103
v/c Ratio	0.29	0.49	1.02	0.01	0.08	0.78	0.64	0.15	0.39	0.63	0.12
Control Delay	37.1	7.5	123.6	31.8	0.4	62.5	16.1	3.0	65.3	24.5	3.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	37.1	7.5	123.6	31.8	0.4	62.5	16.1	3.0	65.3	24.5	3.4
Queue Length 50th (ft)	48	1	~98	2	0	141	323	3	24	278	0
Queue Length 95th (ft)	91	63	#193	11	0	241	530	37	#66	465	28
Internal Link Dist (ft)		773		663			859			1974	
Turn Bay Length (ft)	50		400		400	190			225		225
Base Capacity (vph)	495	731	230	657	635	374	2264	1045	89	1727	834
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.17	0.36	0.59	0.01	0.05	0.57	0.64	0.15	0.39	0.63	0.12

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
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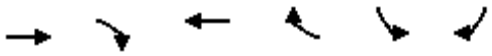
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	94	155	87	71	235	28	1501	93	223	1229	58
v/c Ratio	0.37	0.44	0.45	0.20	0.48	0.24	0.84	0.11	0.65	0.50	0.05
Control Delay	35.6	34.6	39.9	31.5	7.4	51.1	27.7	5.6	44.2	10.8	3.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	35.6	34.6	39.9	31.5	7.4	51.1	27.7	5.6	44.2	10.8	3.8
Queue Length 50th (ft)	44	70	41	32	0	14	322	1	102	100	0
Queue Length 95th (ft)	93	135	91	71	54	53	#912	39	235	447	23
Internal Link Dist (ft)		1110		807			892			859	
Turn Bay Length (ft)	100		65		65	190			195		230
Base Capacity (vph)	645	896	488	907	884	123	1792	847	759	2463	1119
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.15	0.17	0.18	0.08	0.27	0.23	0.84	0.11	0.29	0.50	0.05

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBT	EBR	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	2019	513	1476	43	605	566
v/c Ratio	0.81	0.32	0.59	0.03	0.41	0.83
Control Delay	26.0	0.5	20.8	0.0	20.8	36.0
Queue Delay	0.5	0.0	0.0	0.0	0.0	0.0
Total Delay	26.5	0.5	20.8	0.0	20.8	36.0
Queue Length 50th (ft)	368	0	230	0	143	321
Queue Length 95th (ft)	600	0	382	0	184	460
Internal Link Dist (ft)	480		822			
Turn Bay Length (ft)		250		150	1000	540
Base Capacity (vph)	2808	1615	2808	1582	2191	1016
Starvation Cap Reductn	339	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.82	0.32	0.53	0.03	0.28	0.56

Intersection Summary



Lane Group	EBT	EBR	WBT	WBR	NBL	NBT	NBR
Lane Group Flow (vph)	1880	743	1580	468	322	458	458
v/c Ratio	0.71	0.65	0.59	0.44	0.45	0.74	0.74
Control Delay	22.6	5.8	20.2	3.1	24.9	33.9	33.9
Queue Delay	0.0	0.0	0.8	0.4	0.0	0.0	0.0
Total Delay	22.6	5.8	21.0	3.6	24.9	33.9	33.9
Queue Length 50th (ft)	340	27	261	0	160	269	269
Queue Length 95th (ft)	502	147	391	57	234	394	394
Internal Link Dist (ft)	822		339			457	
Turn Bay Length (ft)		250			1000		615
Base Capacity (vph)	2890	1192	2890	1107	1006	861	861
Starvation Cap Reductn	0	0	899	262	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.65	0.62	0.79	0.55	0.32	0.53	0.53

Intersection Summary

APPENDIX 6.7:

OPENING YEAR CUMULATIVE (2021) WITHOUT PROJECT CONDITIONS FREEWAY FACILITY ANALYSIS WORKSHEETS

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HCS7 Freeway Facilities Report

Project Information

Analyst	JB	Date	6/30/2020
Agency	Urban Crossroads, Inc.	Analysis Year	Opening Year (2021) Without Project
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	Hesperia Commerce Center II (JN 12778) - I-15 SB at Main		

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	7
Total Time Periods	1	Time Period Duration, min	15

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	I-15 SB, North of Main St.	16360	3
2	Diverge	Diverge	I-15 SB, Off-Ramp at Main St.	1500	3
3	Basic	Basic	I-15 SB, Between Off and Loop On-Ramp	975	3
4	Merge	Merge	I-15 SB, Loop On-Ramp at Main St.	1500	3
5	Basic	Basic	I-15 SB, Between Loop On-Ramp and On-Ramp	1415	3
6	Merge	Merge	I-15 SB, On-Ramp at Main St.	1500	3
7	Basic	Basic	I-15 SB, South of Main St.	5900	3

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.962	4334	7146	0.61	67.8	21.3	C

Segment 2: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.962	0.885	4334	575	7200	2100	0.60	0.27	64.4	60.2	22.4	28.4	D

Segment 3: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.971	3769	7146	0.53	68.2	18.4	C

Segment 4: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.971	0.971	4362	593	7200	1900	0.61	0.31	61.9	59.7	23.5	25.0	C

Segment 5: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.971	4363	7146	0.61	67.8	21.4	C

Segment 6: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.971	0.893	4479	116	7200	2100	0.62	0.06	62.4	60.6	23.9	23.4	C

Segment 7: Basic

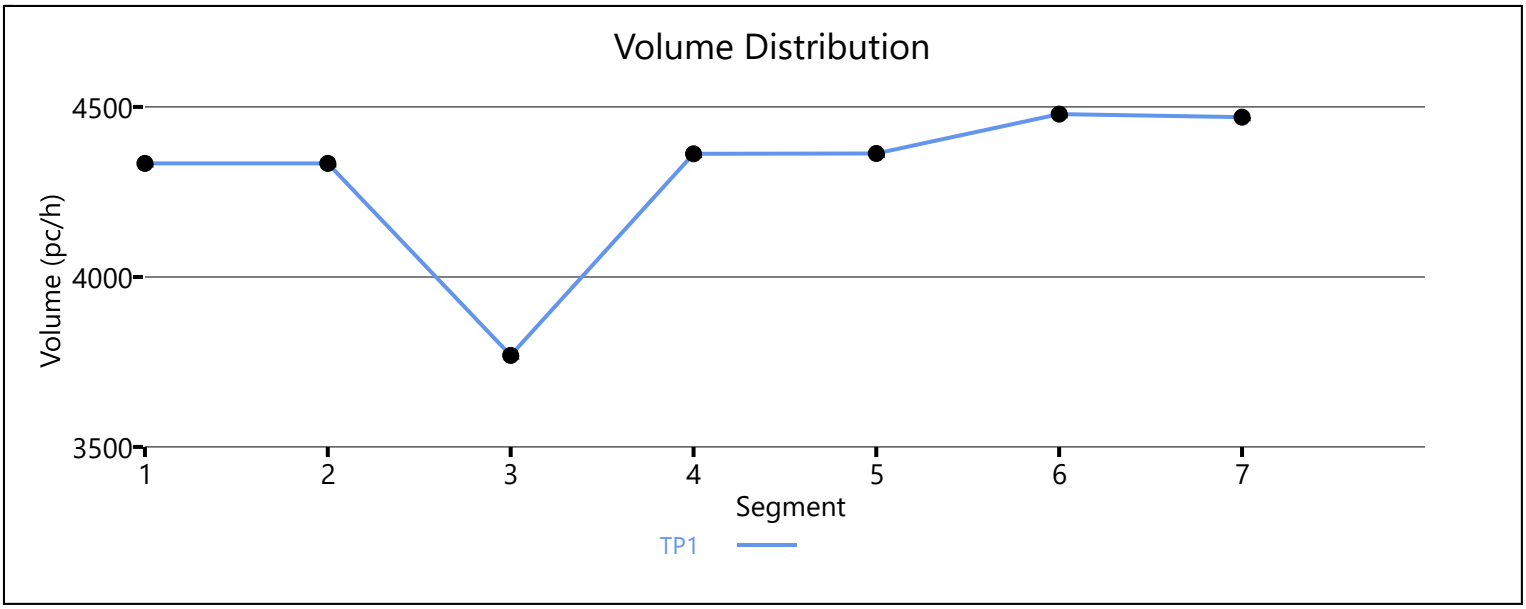
Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.971	4470	7146	0.63	67.6	22.0	C

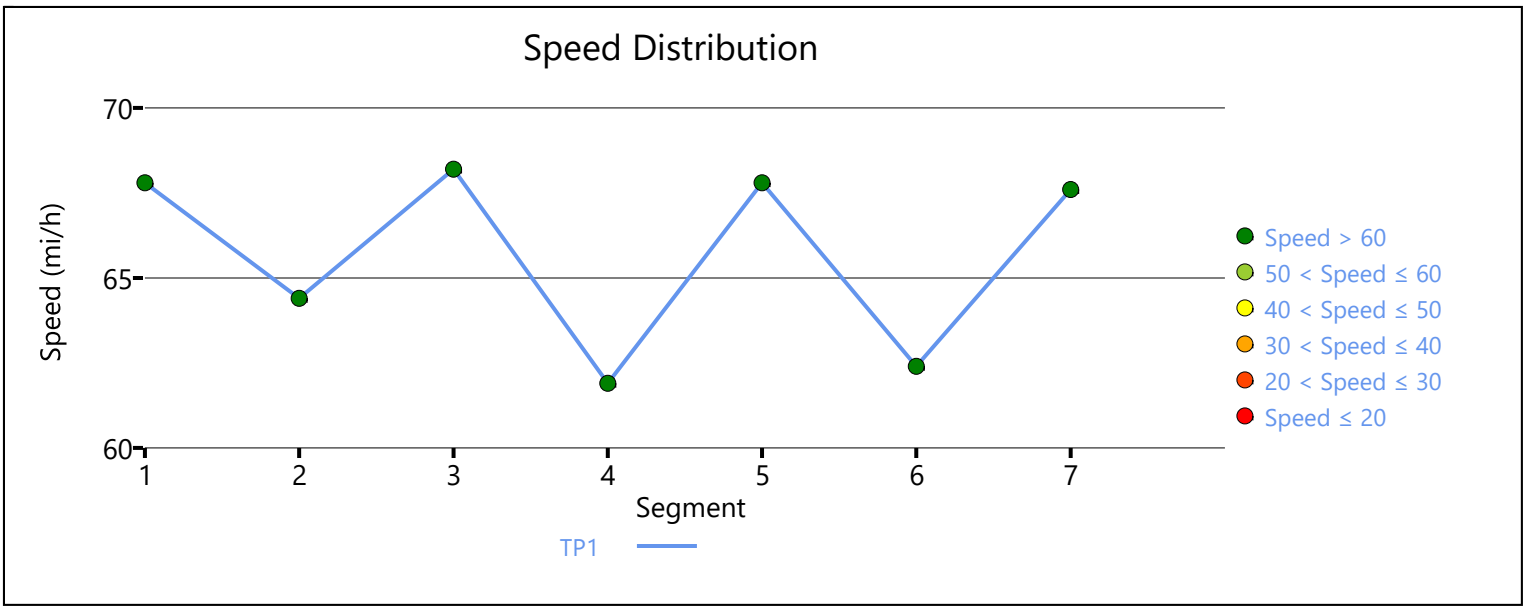
Facility Time Period Results

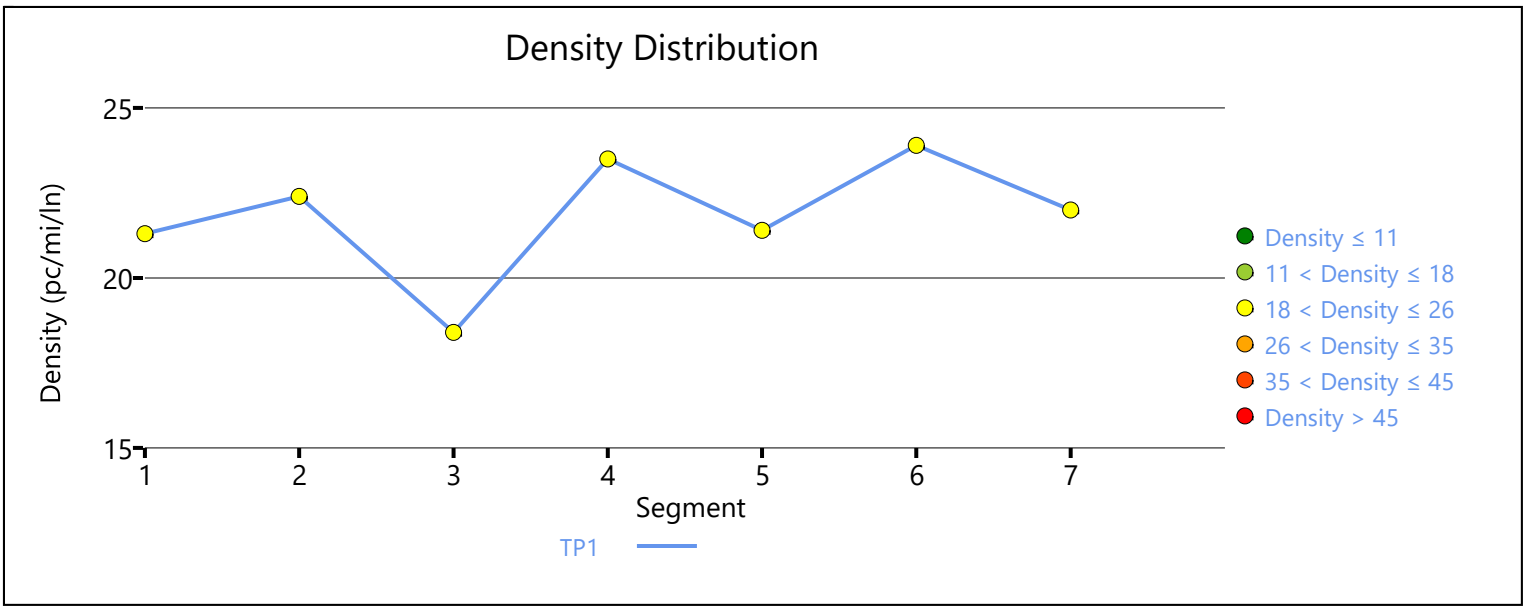
T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	67.0	21.7	20.9	4.9	C

Facility Overall Results

Space Mean Speed, mi/h	67.0	Density, veh/mi/ln	20.9
Average Travel Time, min	4.9	Density, pc/mi/ln	21.7







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HCS7 Freeway Facilities Report

Project Information

Analyst	JB	Date	6/30/2020
Agency	Urban Crossroads, Inc.	Analysis Year	Opening Year (2021) Without Project
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	Hesperia Commerce Center II (JN:12778) - I-15 Southbound at US Highway 395		

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	3
Total Time Periods	1	Time Period Duration, min	15

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	North of US 395	4200	3
2	Merge	Basic	On-Ramp at US 395	1500	4
3	Basic	Basic	South of US 395	4200	4

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.962	3689	7179	0.51	69.3	17.7	B

Segment 2: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.943	0.840	4978	1215	9600	2100	0.39	0.58	70.0	-	13.4	-	B

Segment 3: Basic

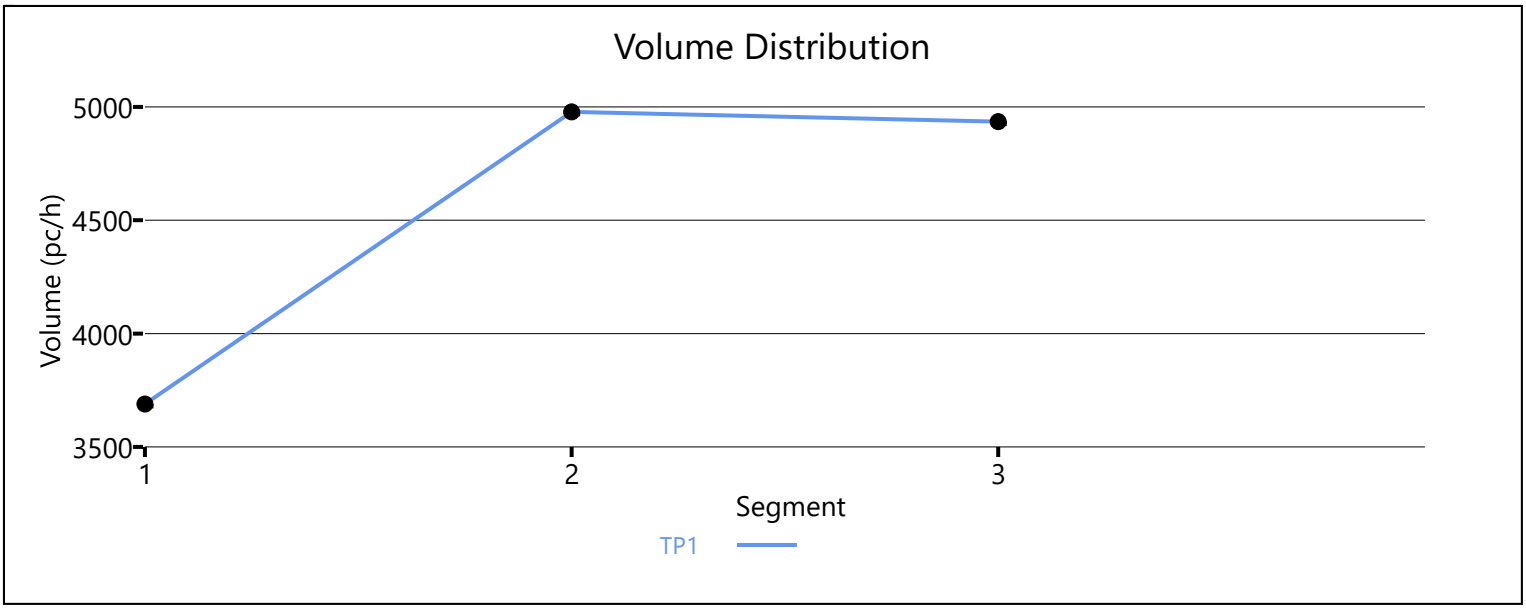
Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.926	4935	9572	0.52	69.3	17.8	B

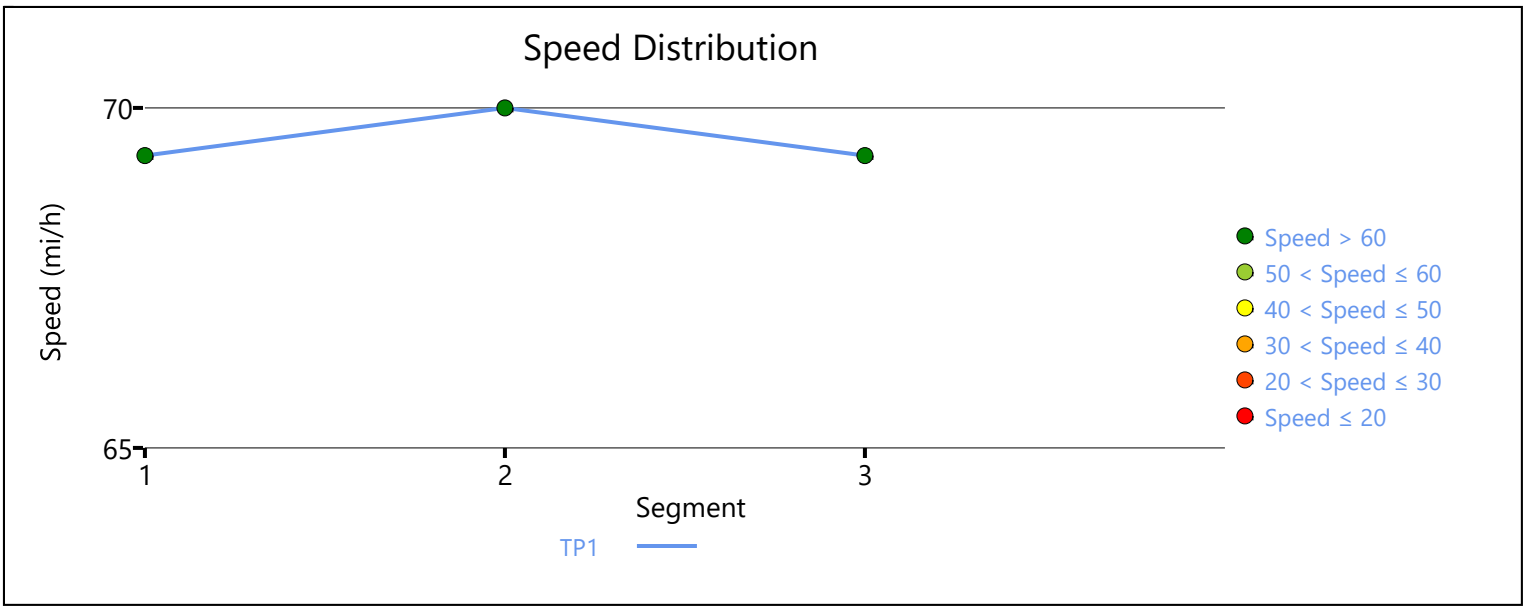
Facility Time Period Results

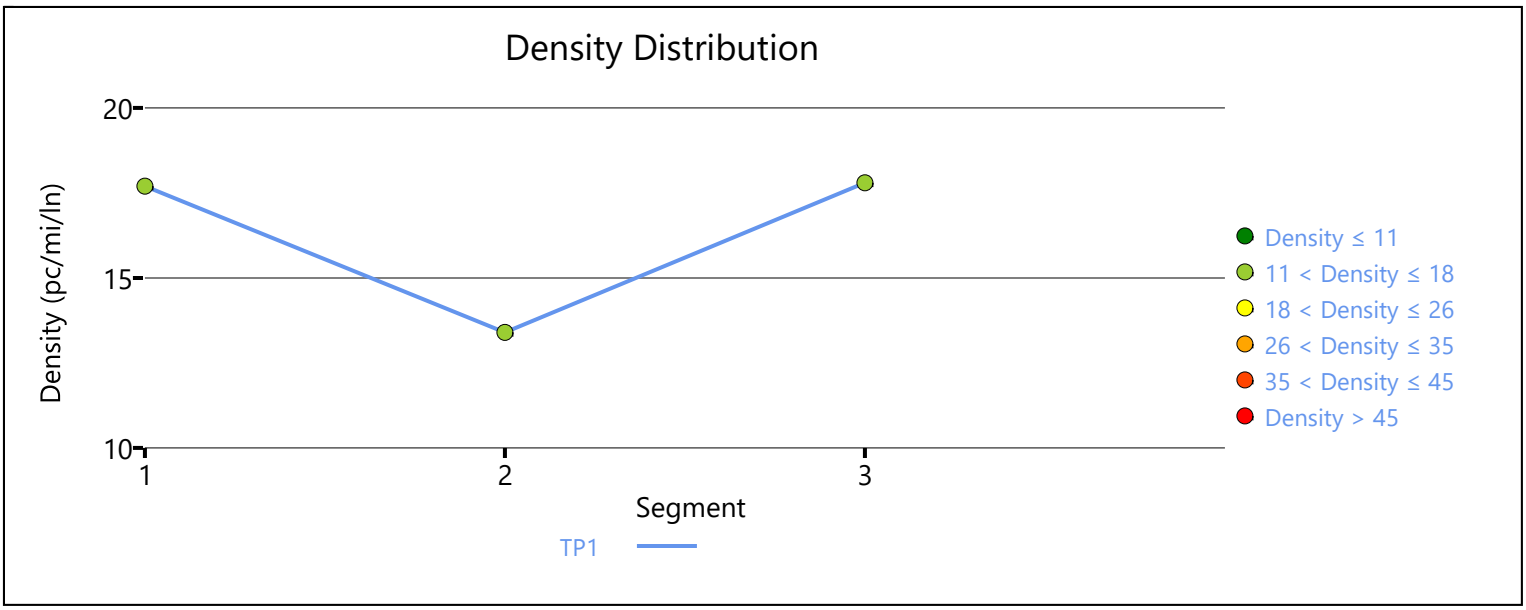
T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	69.4	17.0	16.0	1.6	B

Facility Overall Results

Space Mean Speed, mi/h	69.4	Density, veh/mi/ln	16.0
Average Travel Time, min	1.6	Density, pc/mi/ln	17.0







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HCS7 Freeway Facilities Report

Project Information

Analyst	JB	Date	6/30/2020
Agency	Urban Crossroads, Inc.	Analysis Year	Opening Year (2021) Without Project
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	Hesperia Commerce Center II (JN 12778) - I-15 NB at Main		

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	7
Total Time Periods	1	Time Period Duration, min	15

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	I-15 NB, South of Main St.	6140	3
2	Diverge	Diverge	I-15 NB, Off-Ramp at Main St.	1500	3
3	Basic	Basic	I-15 NB, Between Off-Ramp and Loop On-Ramp	1125	3
4	Merge	Merge	I-15 NB, Loop On-Ramp at Main St.	1500	3
5	Basic	Basic	I-15 NB, Between Loop On-Ramp and On-Ramp	1215	3
6	Merge	Merge	I-15 NB, On-Ramp at Main St.	1500	3
7	Basic	Basic	I-15 NB, North of Main St.	16370	3

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.962	3665	7146	0.51	68.2	17.9	B

Segment 2: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.962	0.901	3665	612	7200	2100	0.51	0.29	64.2	60.1	19.0	25.1	C

Segment 3: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.980	3036	7146	0.42	68.2	14.8	B

Segment 4: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.980	0.952	3371	335	7200	1900	0.47	0.18	63.0	60.8	17.8	18.9	B

Segment 5: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.971	3392	7146	0.47	68.2	16.6	B

Segment 6: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.971	0.971	3929	537	7200	2100	0.55	0.26	62.7	60.6	20.9	22.6	C

Segment 7: Basic

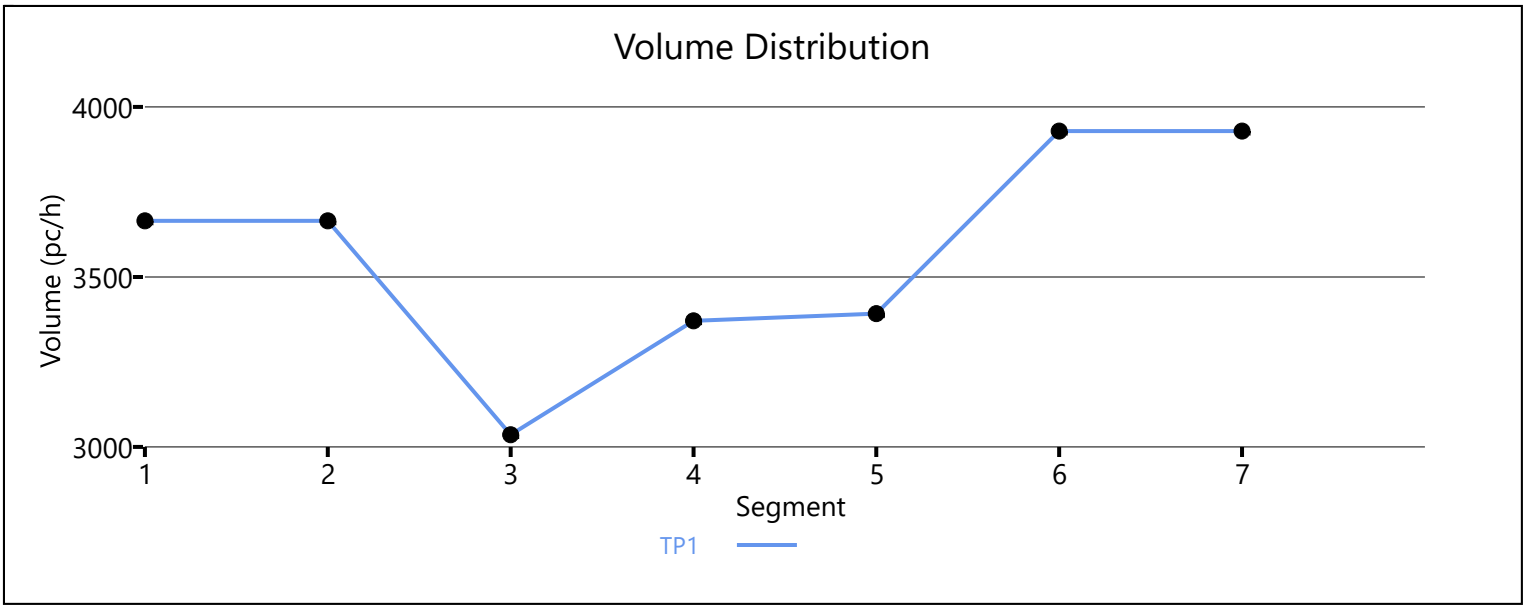
Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.971	3929	7146	0.55	68.2	19.2	C

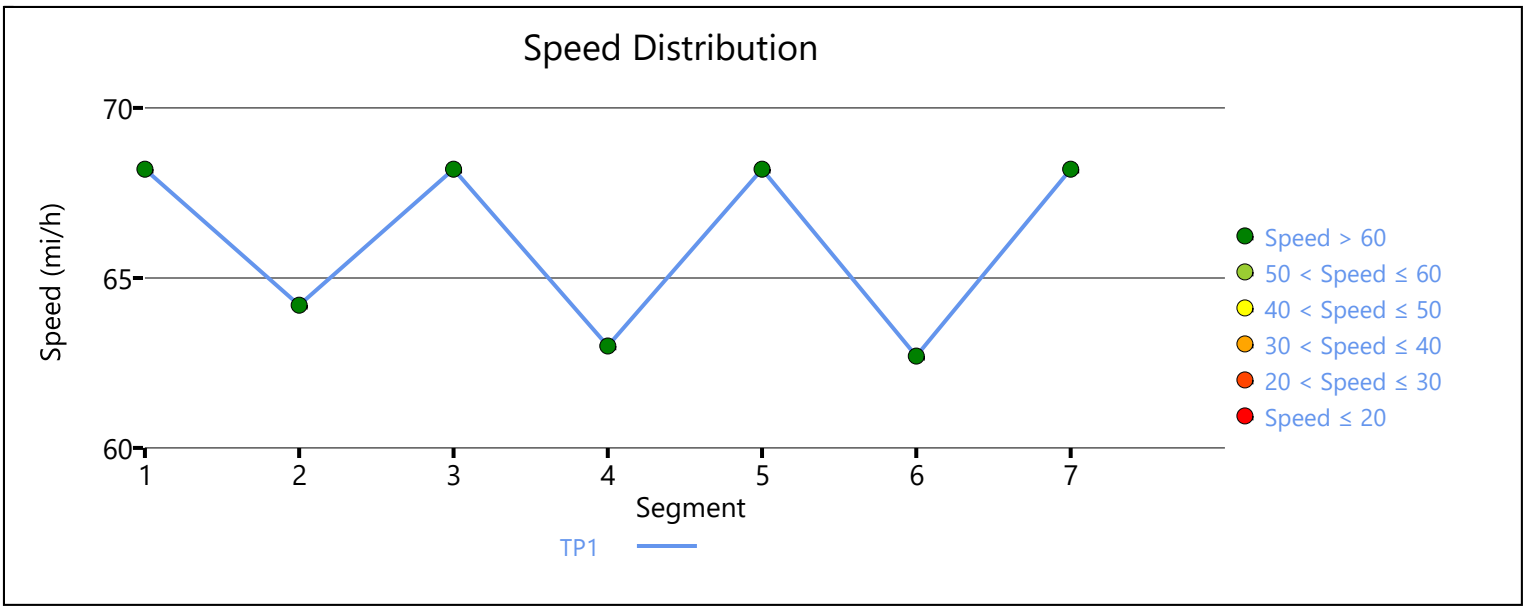
Facility Time Period Results

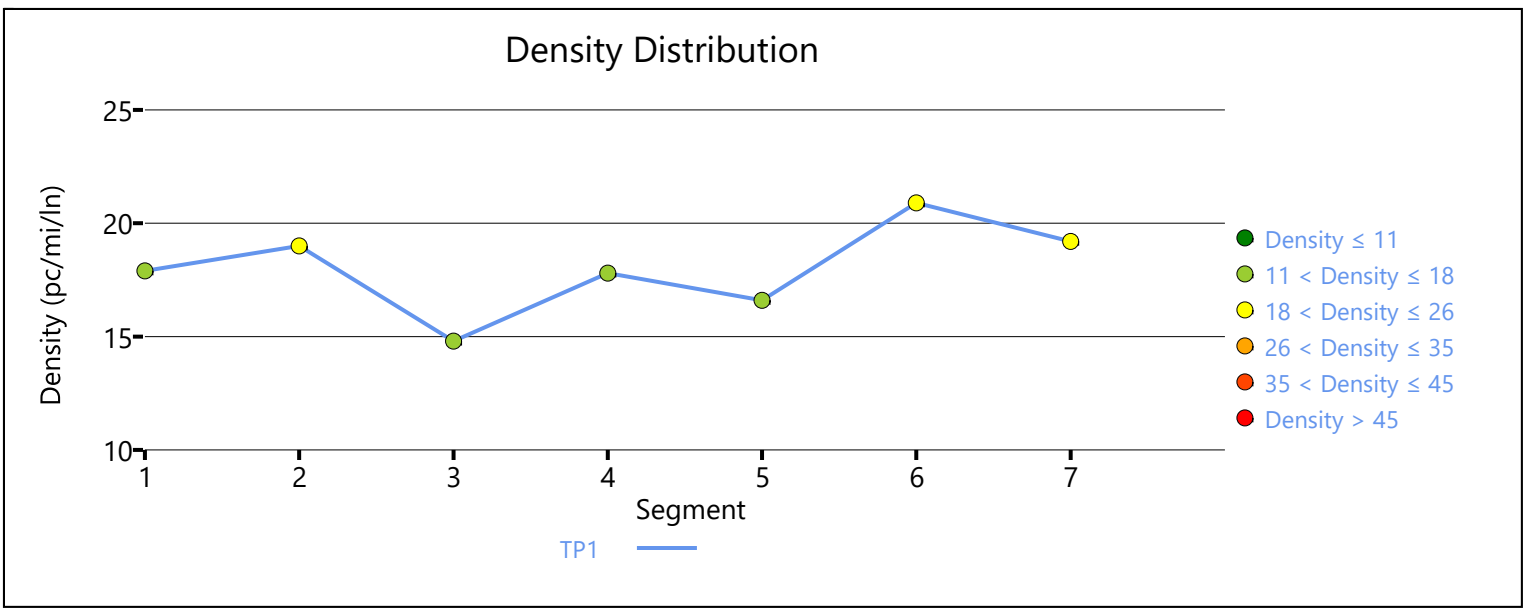
T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	67.4	18.7	18.1	4.9	C

Facility Overall Results

Space Mean Speed, mi/h	67.4	Density, veh/mi/ln	18.1
Average Travel Time, min	4.9	Density, pc/mi/ln	18.7







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HCS7 Freeway Facilities Report

Project Information

Analyst	JB	Date	6/30/2020
Agency	Urban Crossroads, Inc.	Analysis Year	Opening Year (2021) Without Project
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	Hesperia Commerce Center II (JN:12778) - I-15 NB at US 395		

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	3
Total Time Periods	1	Time Period Duration, min	15

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	South of US 395	2000	4
2	Diverge	Diverge	Off-Ramp at US 395	1500	4
3	Basic	Basic	North of US 395	6350	4

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.935	4237	9572	0.44	69.3	15.3	B

Segment 2: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.917	0.820	4321	879	9600	2100	0.45	0.42	66.1	59.4	16.3	19.5	B

Segment 3: Basic

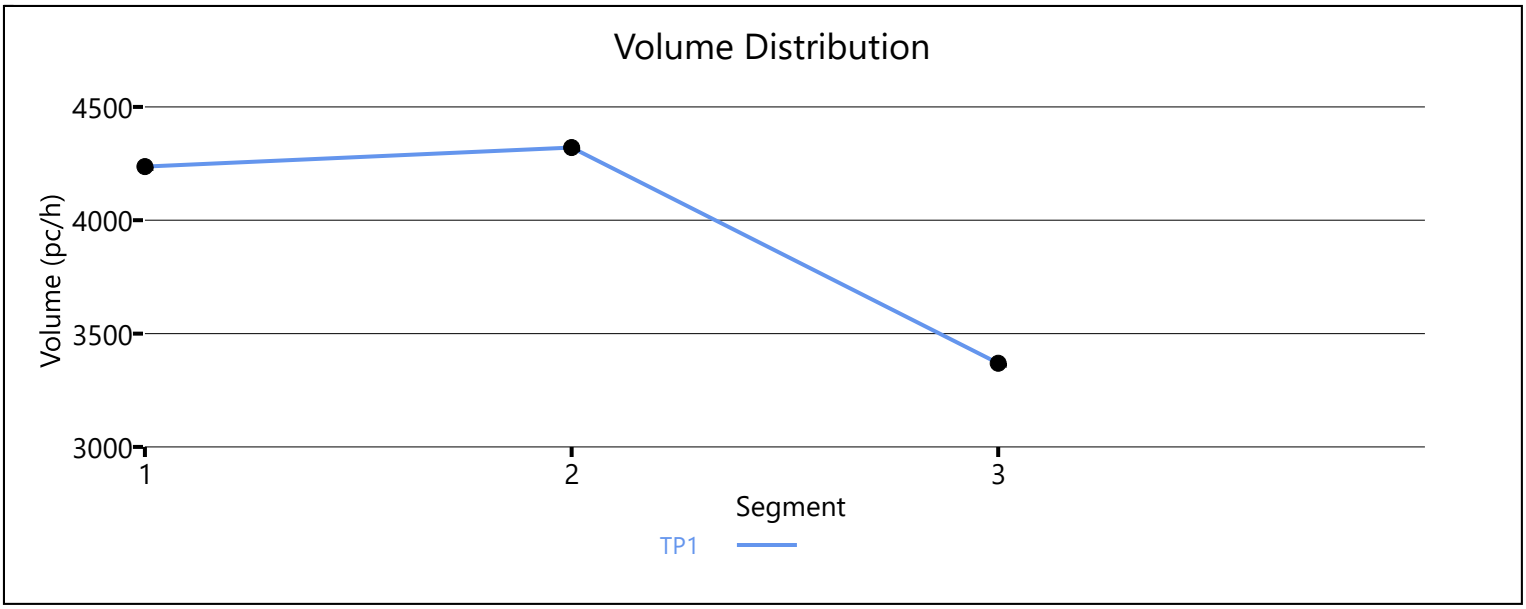
Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.962	3369	9572	0.35	69.3	12.2	B

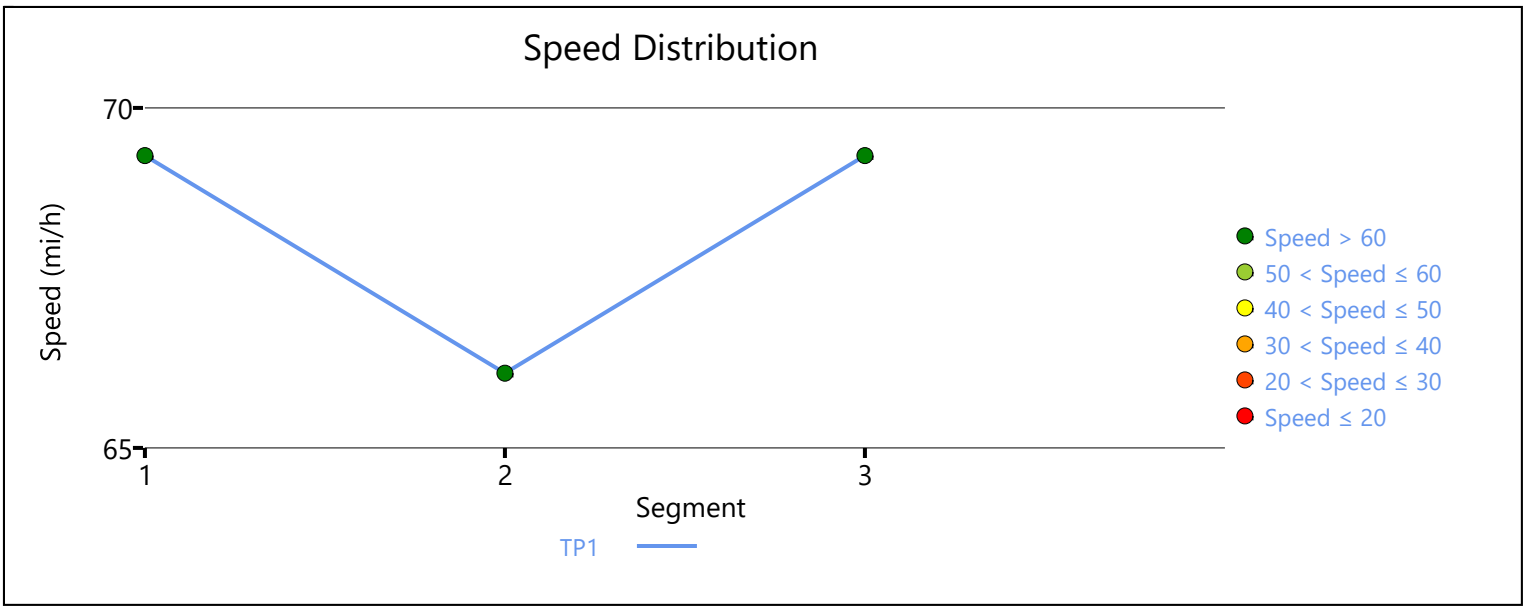
Facility Time Period Results

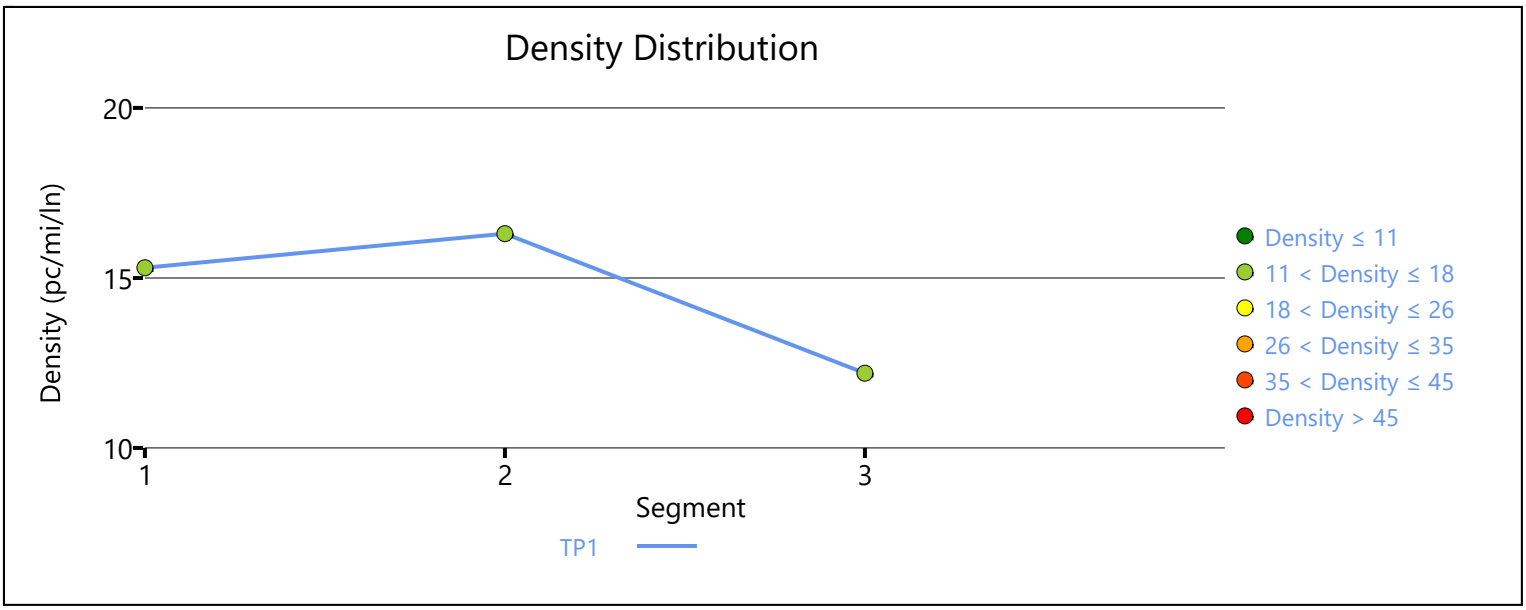
T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	68.7	13.5	12.7	1.6	B

Facility Overall Results

Space Mean Speed, mi/h	68.7	Density, veh/mi/ln	12.7
Average Travel Time, min	1.6	Density, pc/mi/ln	13.5







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HCS7 Freeway Facilities Report

Project Information

Analyst	JB	Date	6/30/2020
Agency	Urban Crossroads, Inc.	Analysis Year	Opening Year (2021) Without Project
Jurisdiction	Caltrans	Time Period Analyzed	PM Peak Hour
Project Description	Hesperia Commerce Center II (JN 12778) - I-15 SB at Main		

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	7
Total Time Periods	1	Time Period Duration, min	15

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	I-15 SB, North of Main St.	16360	3
2	Diverge	Diverge	I-15 SB, Off-Ramp at Main St.	1500	3
3	Basic	Basic	I-15 SB, Between Off and Loop On-Ramp	975	3
4	Merge	Merge	I-15 SB, Loop On-Ramp at Main St.	1500	3
5	Basic	Basic	I-15 SB, Between Loop On-Ramp and On-Ramp	1415	3
6	Merge	Merge	I-15 SB, On-Ramp at Main St.	1500	3
7	Basic	Basic	I-15 SB, South of Main St.	5900	3

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.962	4668	7146	0.65	67.2	23.2	C

Segment 2: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.962	0.962	4668	1009	7200	2100	0.65	0.48	63.3	59.1	24.6	30.7	D

Segment 3: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.962	3659	7146	0.51	68.2	17.9	B

Segment 4: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.962	0.952	4071	412	7200	1900	0.57	0.22	62.3	60.1	21.8	23.1	C

Segment 5: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.962	4067	7146	0.57	68.1	19.9	C

Segment 6: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.962	0.862	4239	172	7200	2100	0.59	0.08	62.7	60.8	22.5	22.5	C

Segment 7: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.952	4265	7146	0.60	67.9	20.9	C

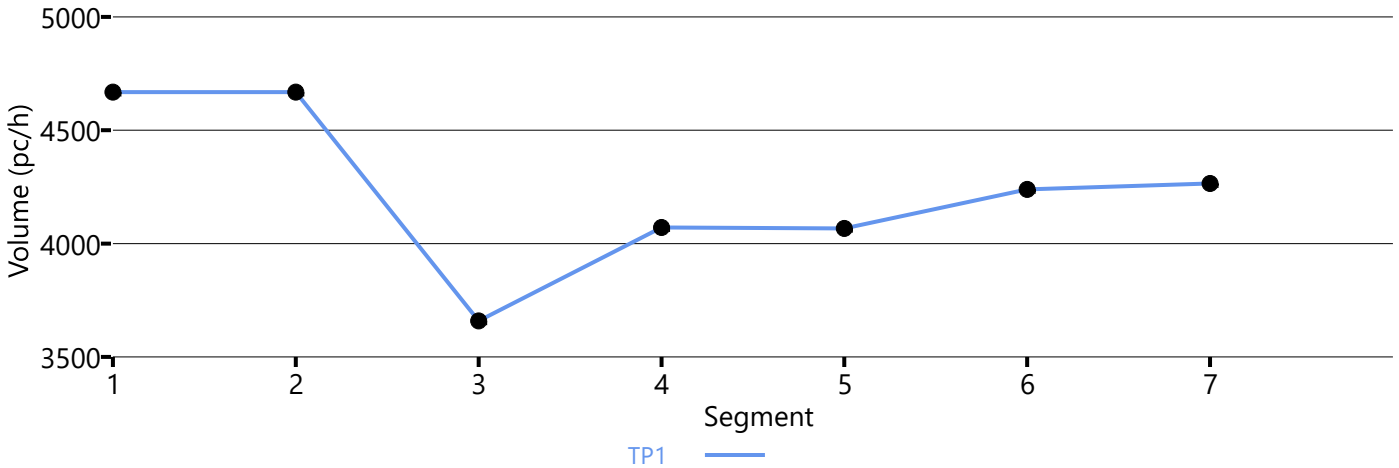
Facility Time Period Results

T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	66.7	22.4	21.5	5.0	C

Facility Overall Results

Space Mean Speed, mi/h	66.7	Density, veh/mi/ln	21.5
Average Travel Time, min	5.0	Density, pc/mi/ln	22.4

Volume Distribution



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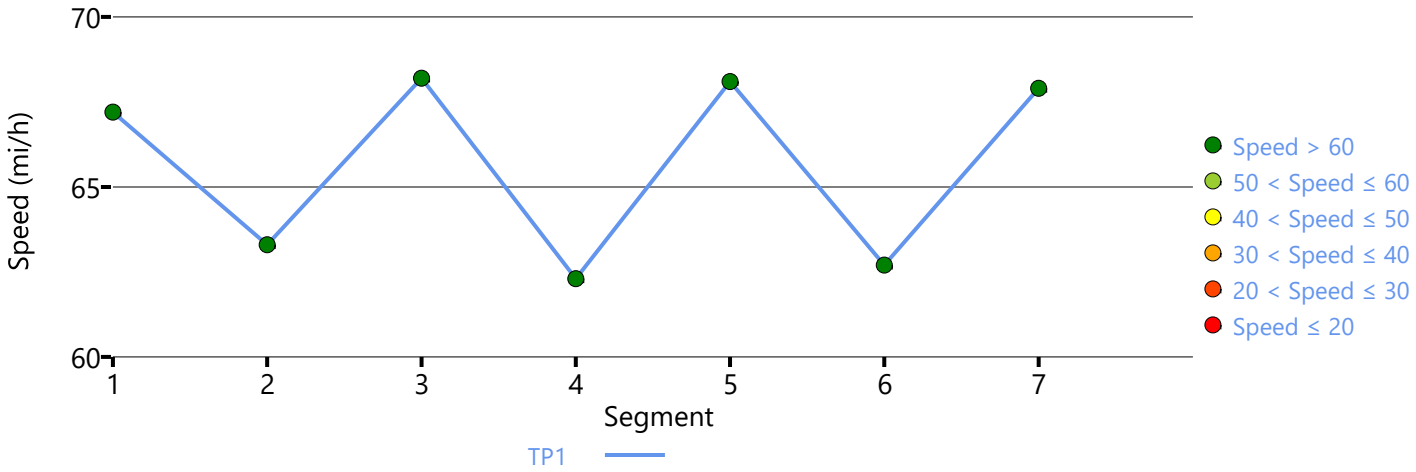
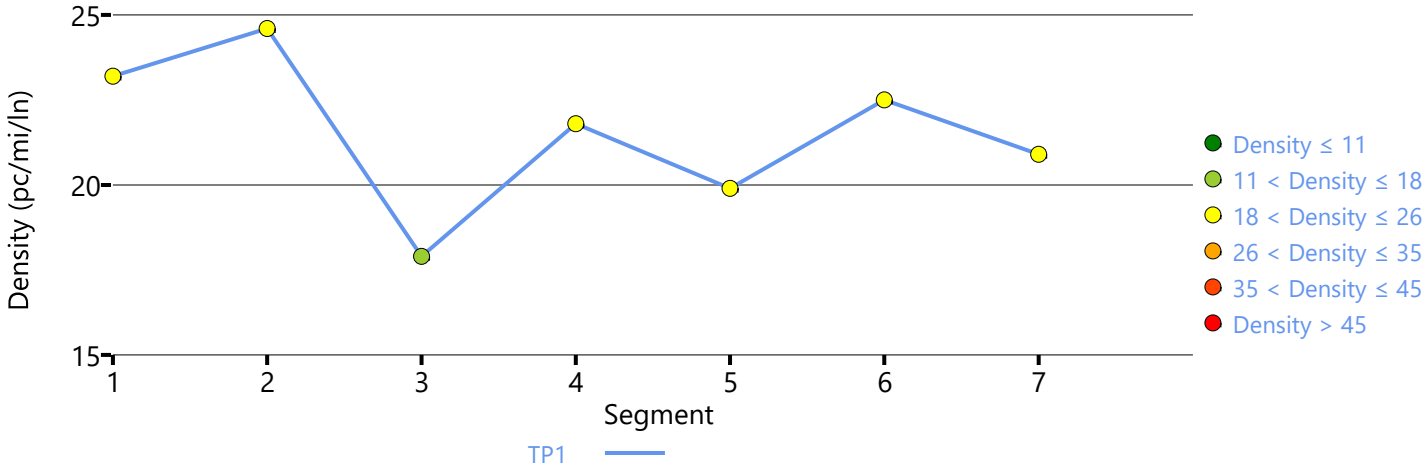


Density Distribution



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HCS7 Freeway Facilities Report

Project Information

Analyst	JB	Date	6/30/2020
Agency	Urban Crossroads, Inc.	Analysis Year	Opening Year (2021) Without Project
Jurisdiction	Caltrans	Time Period Analyzed	PM Peak Hour
Project Description	Hesperia Commerce Center II (JN:12778) - I-15 Southbound at US Highway 395		

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	3
Total Time Periods	1	Time Period Duration, min	15

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	North of US 395	4200	3
2	Merge	Basic	On-Ramp at US 395	1500	4
3	Basic	Basic	South of US 395	4200	4

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.943	3913	7179	0.55	69.2	18.8	C

Segment 2: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.943	0.826	4924	1011	9600	2100	0.41	0.48	70.0	-	14.0	-	B

Segment 3: Basic

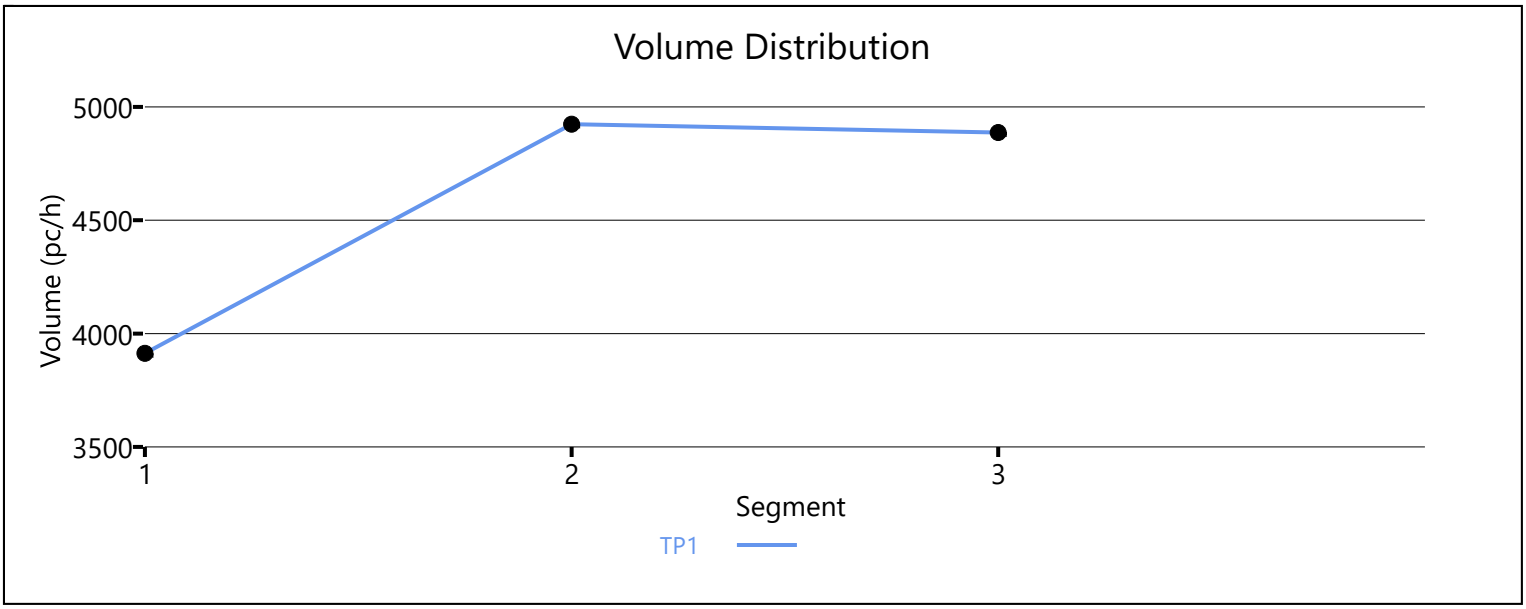
Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.926	4887	9572	0.51	69.3	17.6	B

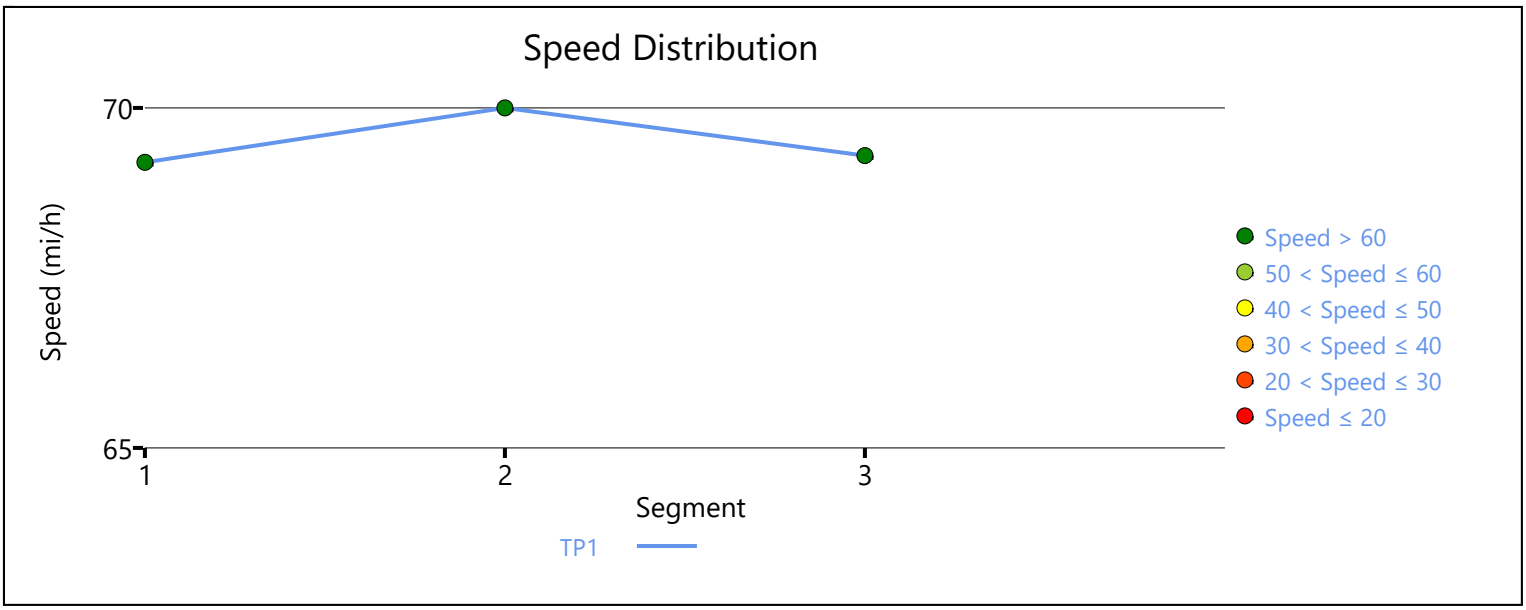
Facility Time Period Results

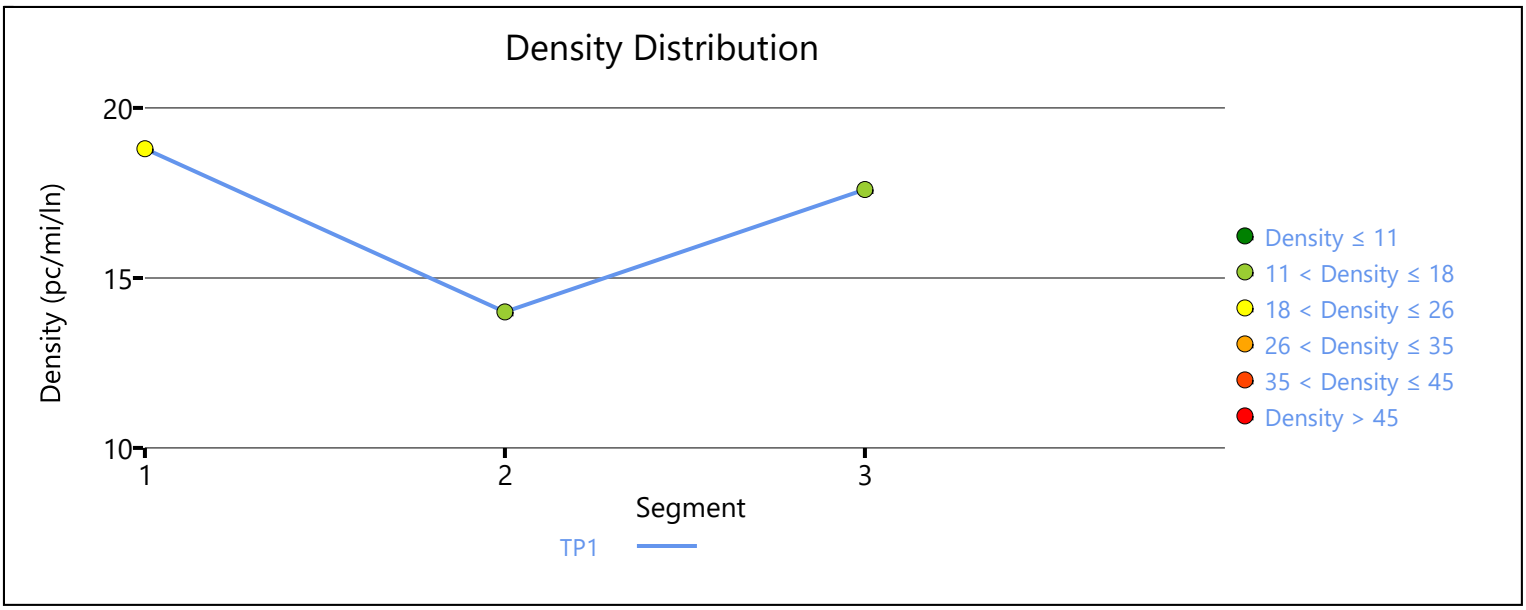
T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	69.4	17.4	16.3	1.6	B

Facility Overall Results

Space Mean Speed, mi/h	69.4	Density, veh/mi/ln	16.3
Average Travel Time, min	1.6	Density, pc/mi/ln	17.4







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HCS7 Freeway Facilities Report

Project Information

Analyst	JB	Date	6/30/2020
Agency	Urban Crossroads, Inc.	Analysis Year	Opening Year (2021) Without Project
Jurisdiction	Caltrans	Time Period Analyzed	PM Peak Hour
Project Description	Hesperia Commerce Center II (JN 12778) - I-15 NB at Main		

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	7
Total Time Periods	1	Time Period Duration, min	15

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	I-15 NB, South of Main St.	6140	3
2	Diverge	Diverge	I-15 NB, Off-Ramp at Main St.	1500	3
3	Basic	Basic	I-15 NB, Between Off-Ramp and Loop On-Ramp	1125	3
4	Merge	Merge	I-15 NB, Loop On-Ramp at Main St.	1500	3
5	Basic	Basic	I-15 NB, Between Loop On-Ramp and On-Ramp	1215	3
6	Merge	Merge	I-15 NB, On-Ramp at Main St.	1500	3
7	Basic	Basic	I-15 NB, North of Main St.	16370	3

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.971	6855	7146	0.96	55.5	41.2	E

Segment 2: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.971	0.926	6855	1182	7200	2100	0.95	0.56	62.7	58.7	36.4	39.2	E

Segment 3: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.980	5675	7146	0.79	63.4	29.8	D

Segment 4: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.980	0.935	5957	282	7200	1900	0.83	0.15	59.7	57.5	33.3	30.7	D

Segment 5: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.980	5945	7146	0.83	62.0	32.0	D

Segment 6: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.980	0.962	6437	492	7200	2100	0.89	0.23	58.4	56.1	36.7	34.0	D

Segment 7: Basic

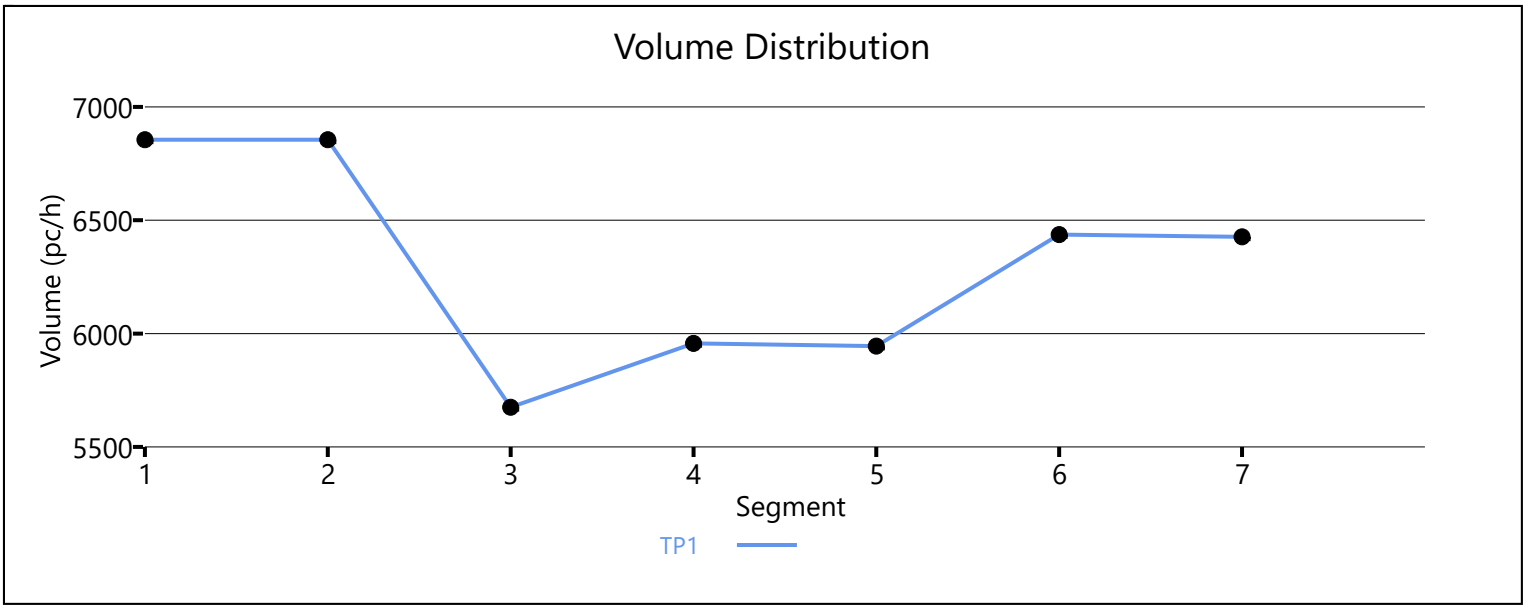
Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.980	6427	7146	0.90	58.8	36.4	E

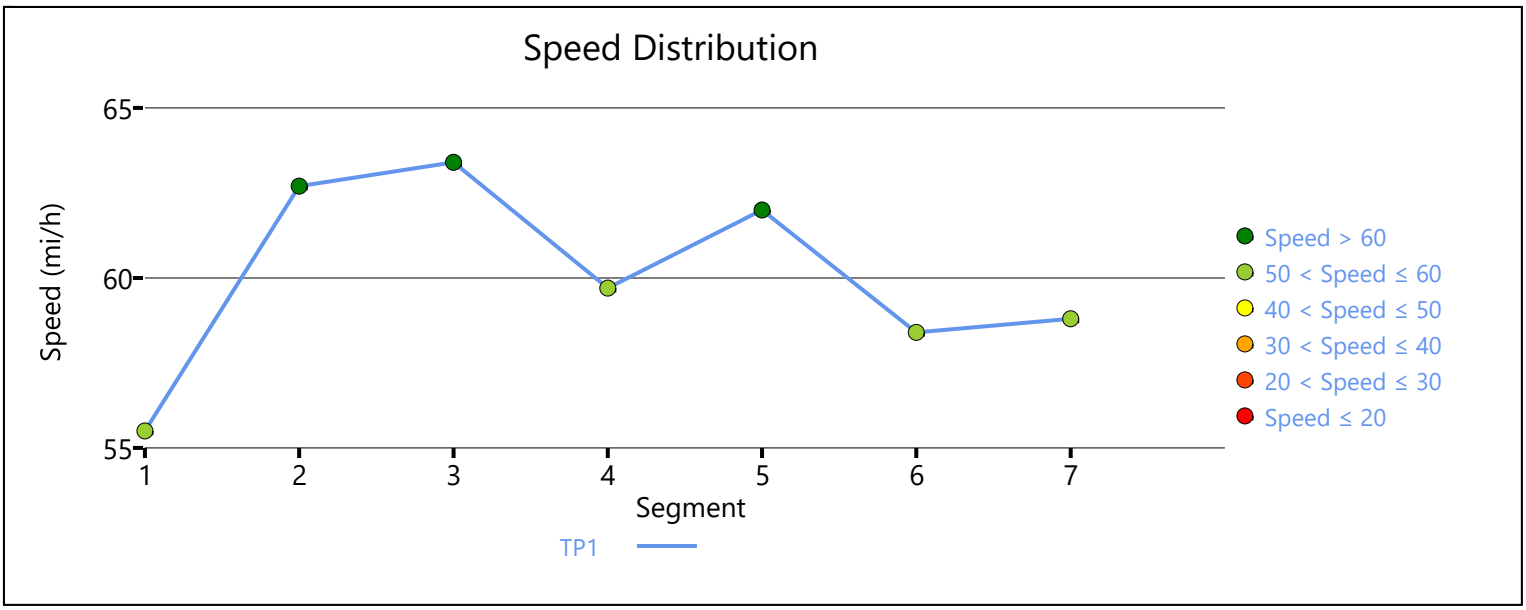
Facility Time Period Results

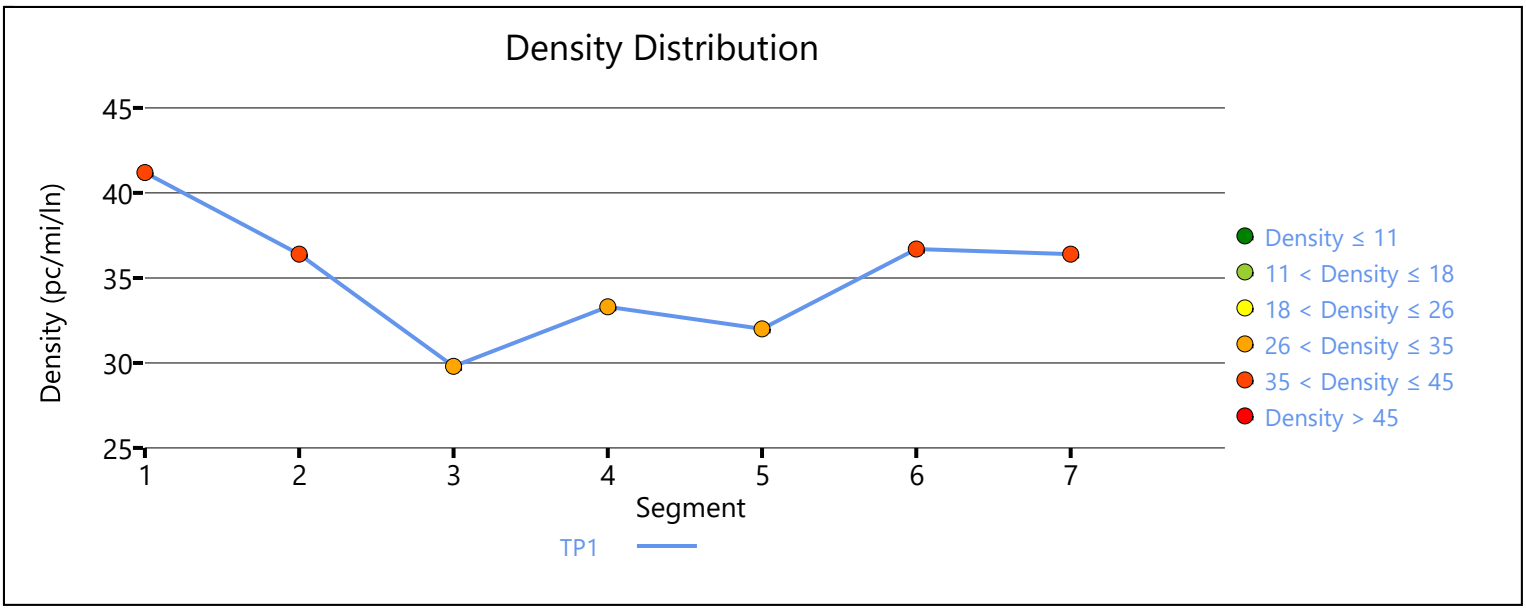
T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	58.5	36.8	36.0	5.7	E

Facility Overall Results

Space Mean Speed, mi/h	58.5	Density, veh/mi/ln	36.0
Average Travel Time, min	5.7	Density, pc/mi/ln	36.8







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HCS7 Freeway Facilities Report

Project Information

Analyst	JB	Date	6/30/2020
Agency	Urban Crossroads, Inc.	Analysis Year	Horizon Year (2040) Without Project
Jurisdiction	Caltrans	Time Period Analyzed	PM Peak Hour
Project Description	Hesperia Commerce Center II (JN:12778) - I-15 NB at US 395		

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	3
Total Time Periods	1	Time Period Duration, min	15

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	South of US 395	2000	4
2	Diverge	Diverge	Off-Ramp at US 395	1500	4
3	Basic	Basic	North of US 395	6350	4

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.943	6715	9572	0.70	66.9	25.1	C

Segment 2: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.943	0.885	6715	1466	9600	2100	0.70	0.70	64.4	58.0	26.1	31.3	D

Segment 3: Basic

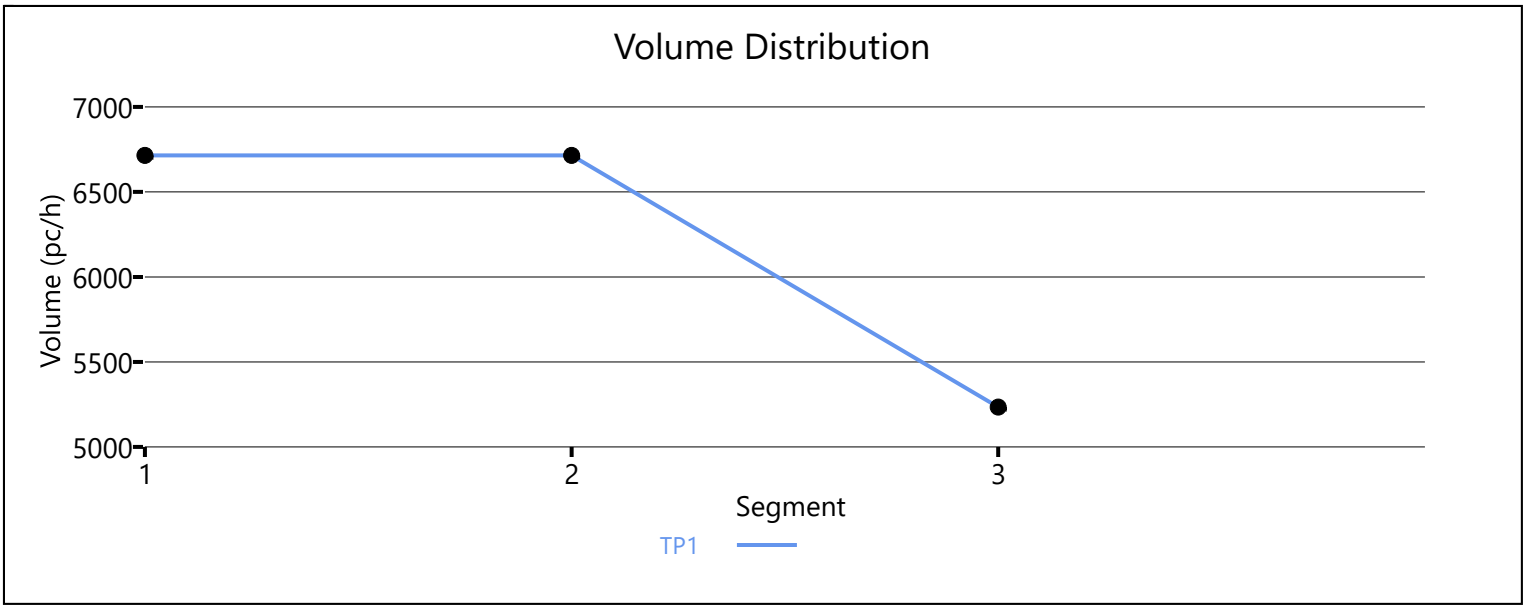
Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.962	5234	9572	0.55	69.2	18.9	C

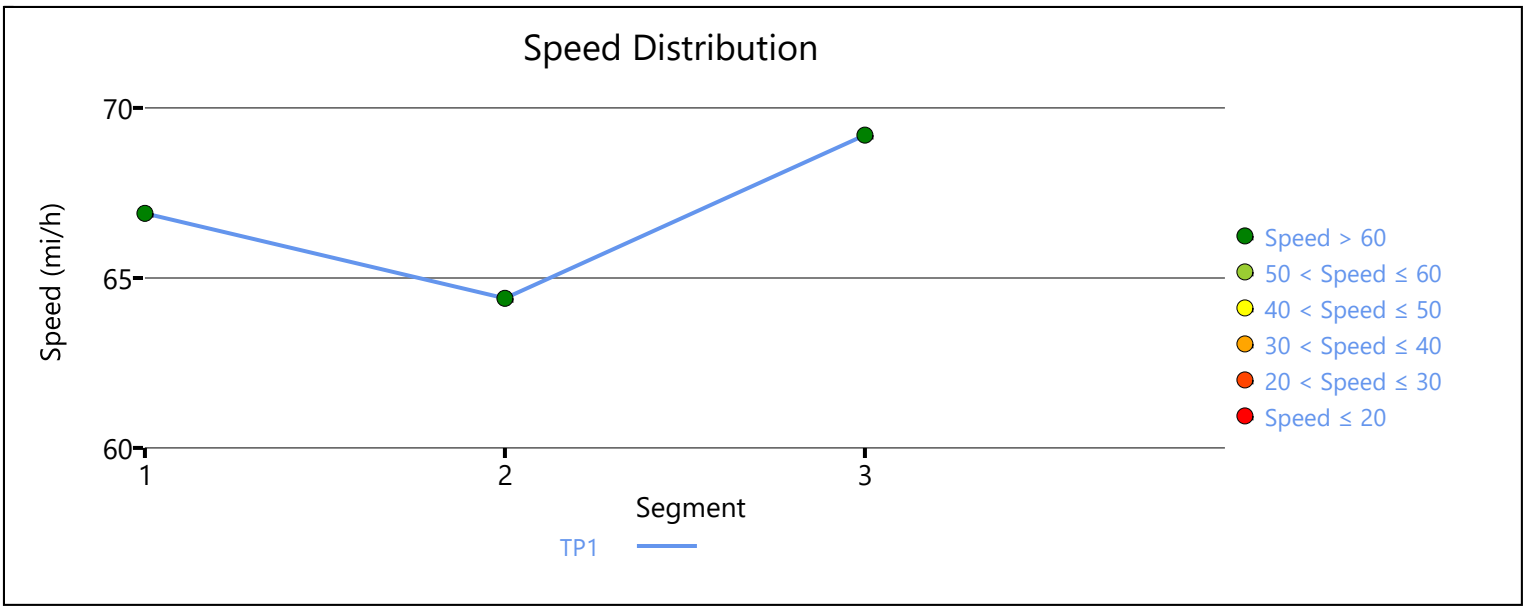
Facility Time Period Results

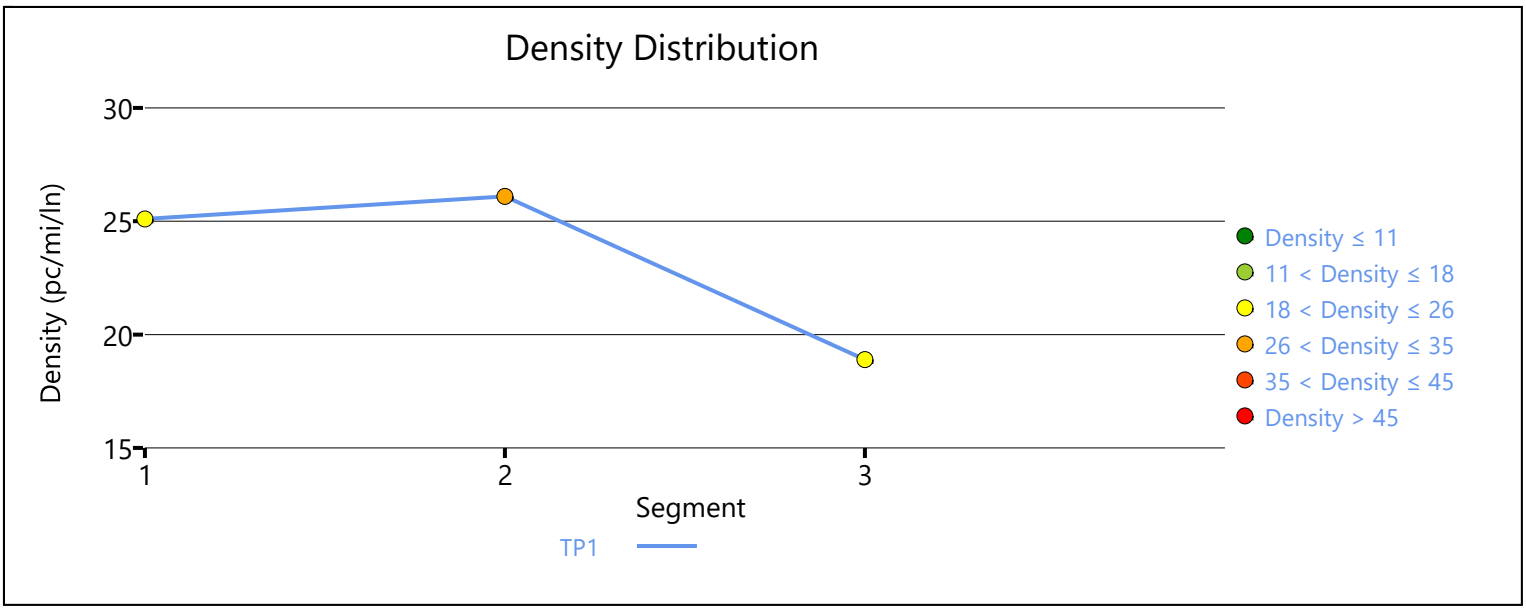
T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	67.8	21.3	20.3	1.7	C

Facility Overall Results

Space Mean Speed, mi/h	67.8	Density, veh/mi/ln	20.3
Average Travel Time, min	1.7	Density, pc/mi/ln	21.3







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APPENDIX 6.8:

OPENING YEAR CUMULATIVE (2021) WITH PROJECT CONDITIONS FREEWAY FACILITY ANALYSIS WORKSHEETS

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HCS7 Freeway Facilities Report

Project Information

Analyst	JB	Date	6/30/2020
Agency	Urban Crossroads, Inc.	Analysis Year	Opening Year (2021) With Project
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	Hesperia Commerce Center II (JN 12778) - I-15 SB at Main		

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	7
Total Time Periods	1	Time Period Duration, min	15

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	I-15 SB, North of Main St.	16360	3
2	Diverge	Diverge	I-15 SB, Off-Ramp at Main St.	1500	3
3	Basic	Basic	I-15 SB, Between Off and Loop On-Ramp	975	3
4	Merge	Merge	I-15 SB, Loop On-Ramp at Main St.	1500	3
5	Basic	Basic	I-15 SB, Between Loop On-Ramp and On-Ramp	1415	3
6	Merge	Merge	I-15 SB, On-Ramp at Main St.	1500	3
7	Basic	Basic	I-15 SB, South of Main St.	5900	3

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.943	4753	7146	0.67	67.0	23.6	C

Segment 2: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.943	0.833	4753	987	7200	2100	0.66	0.47	63.4	59.2	25.0	31.1	D

Segment 3: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.971	3769	7146	0.53	68.2	18.4	C

Segment 4: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.971	0.971	4362	593	7200	1900	0.61	0.31	61.9	59.7	23.5	25.0	C

Segment 5: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.971	4363	7146	0.61	67.8	21.4	C

Segment 6: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.971	0.840	4551	188	7200	2100	0.63	0.09	62.3	60.5	24.3	23.9	C

Segment 7: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.962	4568	7146	0.64	67.4	22.6	C

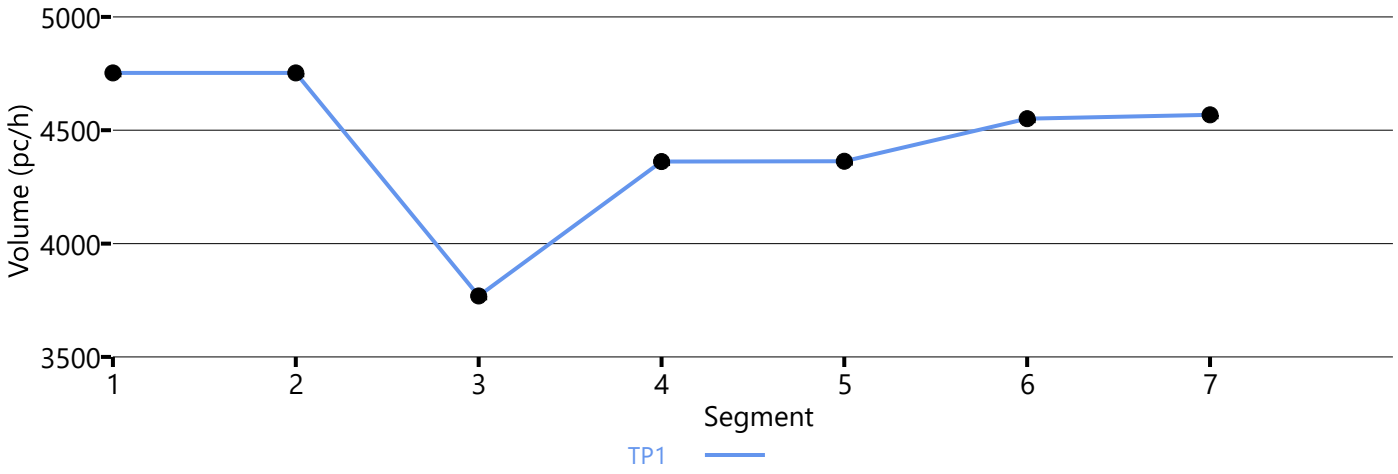
Facility Time Period Results

T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	66.4	23.2	22.1	5.0	C

Facility Overall Results

Space Mean Speed, mi/h	66.4	Density, veh/mi/ln	22.1
Average Travel Time, min	5.0	Density, pc/mi/ln	23.2

Volume Distribution



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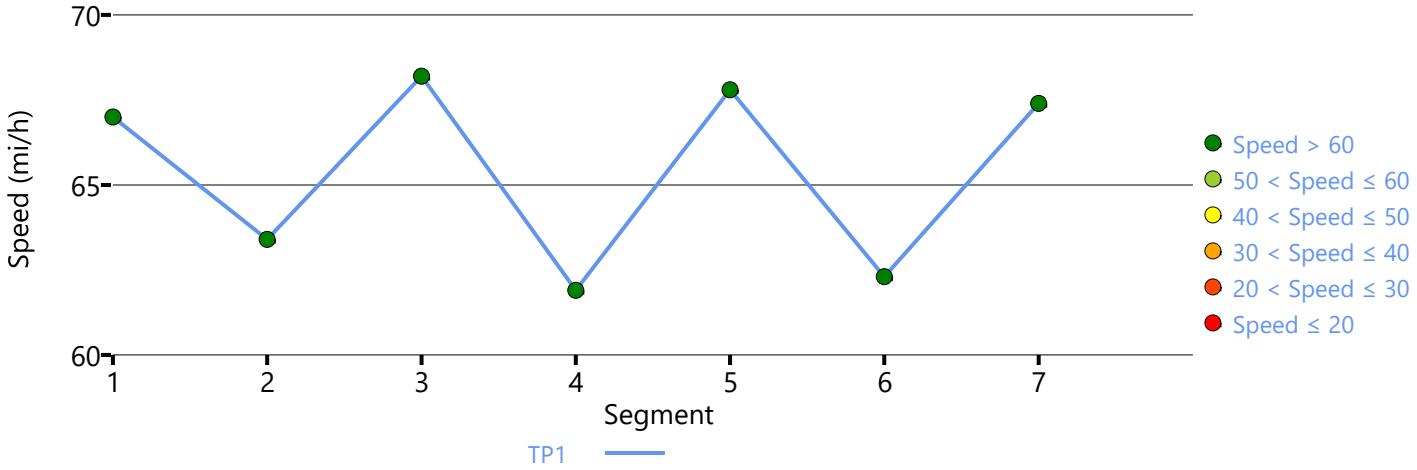
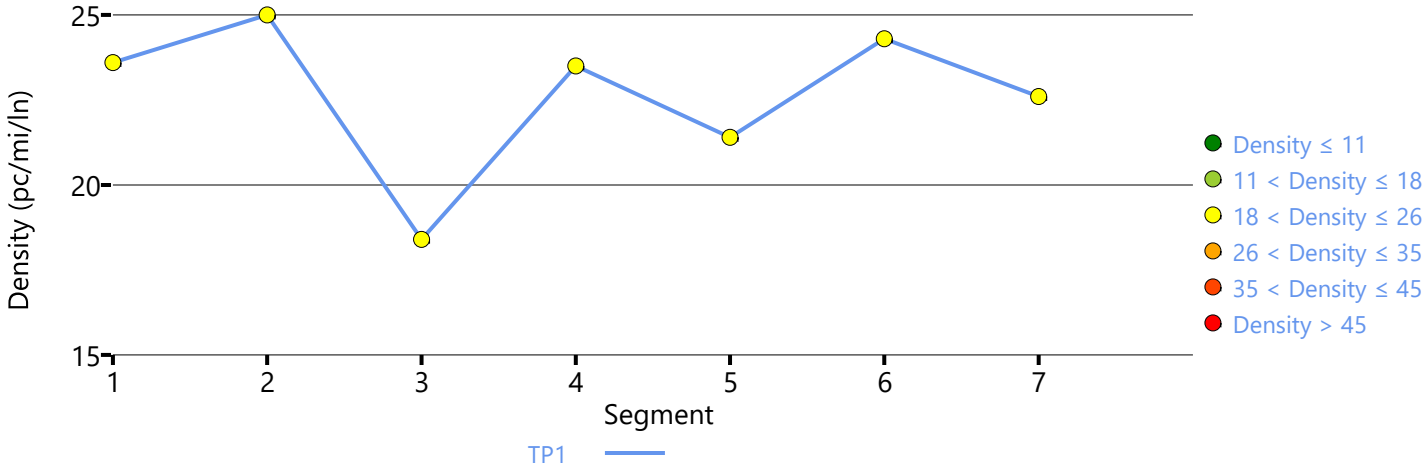


Density Distribution



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HCS7 Freeway Facilities Report

Project Information

Analyst	JB	Date	6/30/2020
Agency	Urban Crossroads, Inc.	Analysis Year	Opening Year (2021) With Project
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	Hesperia Commerce Center II (JN:12778) - I-15 Southbound at US Highway 395		

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	3
Total Time Periods	1	Time Period Duration, min	15

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	North of US 395	4200	3
2	Merge	Basic	On-Ramp at US 395	1500	4
3	Basic	Basic	South of US 395	4200	4

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.952	3790	7179	0.53	69.3	18.2	C

Segment 2: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.952	0.847	5026	1236	9600	2100	0.39	0.59	70.0	-	13.5	-	B

Segment 3: Basic

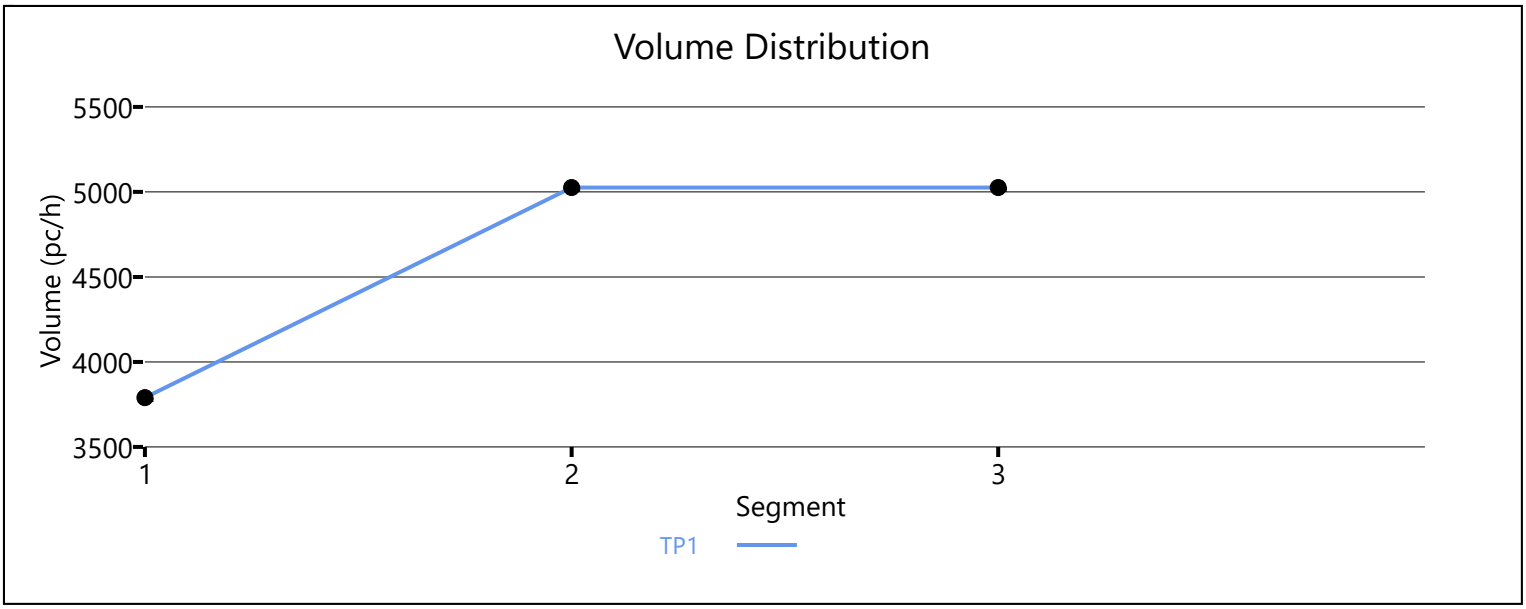
Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.926	5026	9572	0.53	69.3	18.1	C

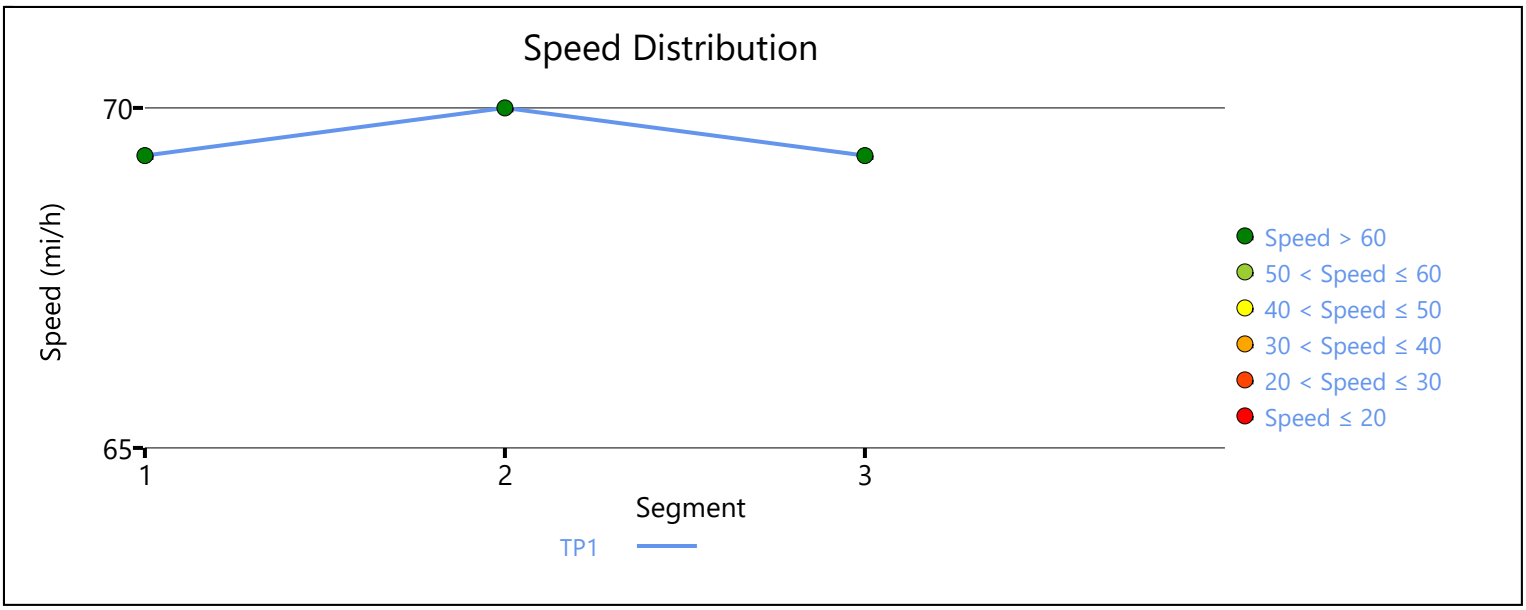
Facility Time Period Results

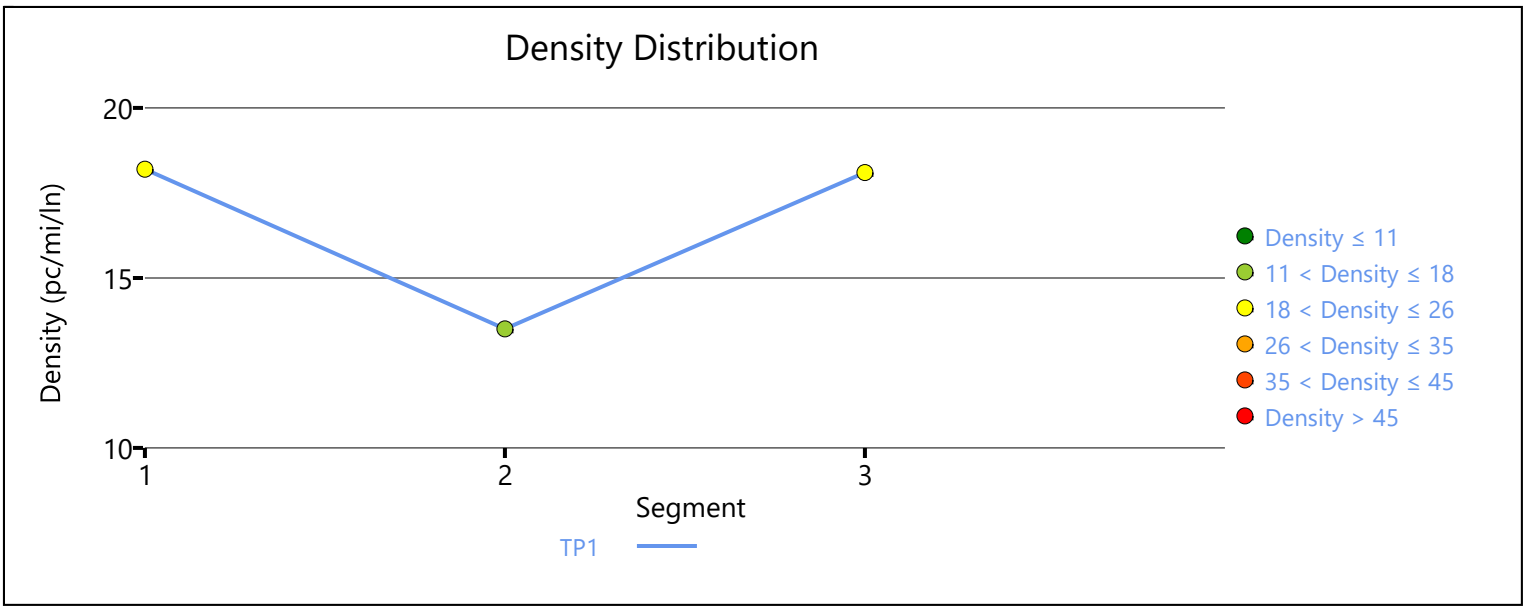
T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	69.4	17.4	16.3	1.6	B

Facility Overall Results

Space Mean Speed, mi/h	69.4	Density, veh/mi/ln	16.3
Average Travel Time, min	1.6	Density, pc/mi/ln	17.4







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HCS7 Freeway Facilities Report

Project Information

Analyst	JB	Date	6/30/2020
Agency	Urban Crossroads, Inc.	Analysis Year	Opening Year (2021) With Project
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	Hesperia Commerce Center II (JN 12778) - I-15 NB at Main		

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	7
Total Time Periods	1	Time Period Duration, min	15

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	I-15 NB, South of Main St.	6140	3
2	Diverge	Diverge	I-15 NB, Off-Ramp at Main St.	1500	3
3	Basic	Basic	I-15 NB, Between Off-Ramp and Loop On-Ramp	1125	3
4	Merge	Merge	I-15 NB, Loop On-Ramp at Main St.	1500	3
5	Basic	Basic	I-15 NB, Between Loop On-Ramp and On-Ramp	1215	3
6	Merge	Merge	I-15 NB, On-Ramp at Main St.	1500	3
7	Basic	Basic	I-15 NB, North of Main St.	16370	3

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.943	4113	7146	0.58	68.1	20.1	C

Segment 2: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.943	0.833	4113	1084	7200	2100	0.57	0.52	63.0	58.9	21.8	28.1	D

Segment 3: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.980	3036	7146	0.42	68.2	14.8	B

Segment 4: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.980	0.917	3446	410	7200	1900	0.48	0.22	62.9	60.7	18.3	19.4	B

Segment 5: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.971	3451	7146	0.48	68.2	16.9	B

Segment 6: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.971	0.971	3988	537	7200	2100	0.55	0.26	62.6	60.6	21.2	22.8	C

Segment 7: Basic

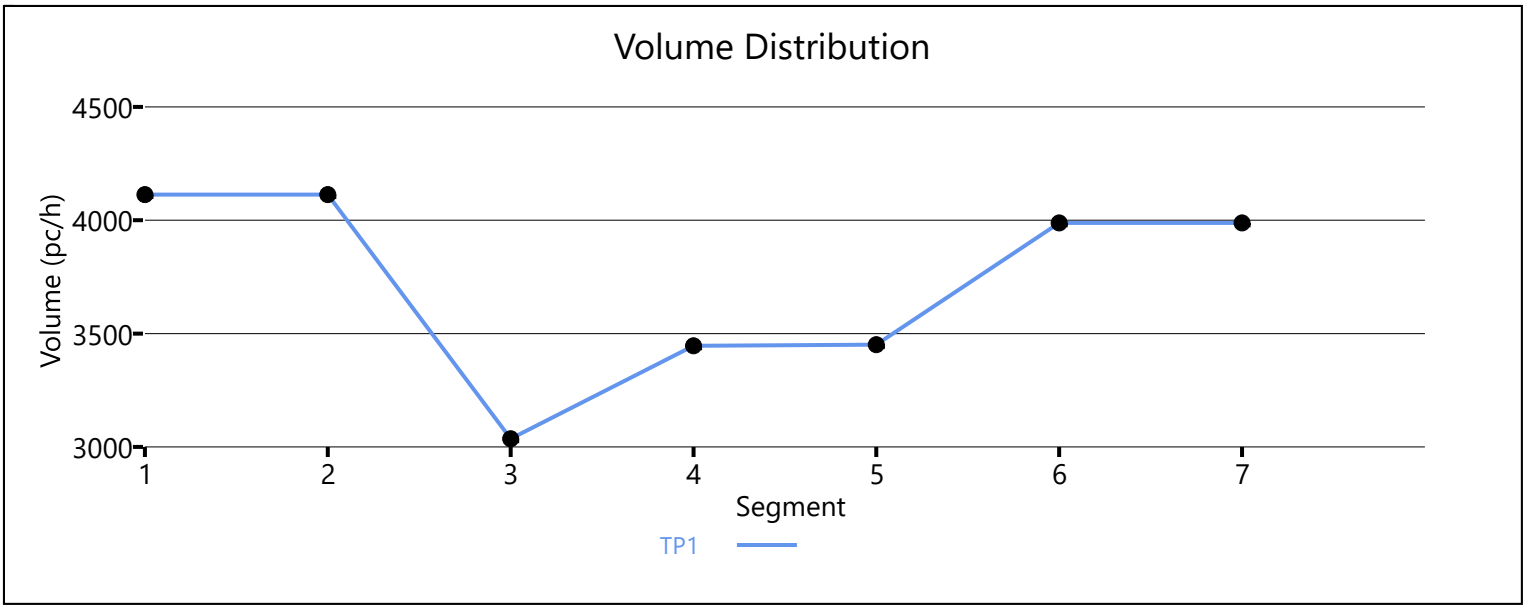
Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.971	3988	7146	0.56	68.2	19.5	C

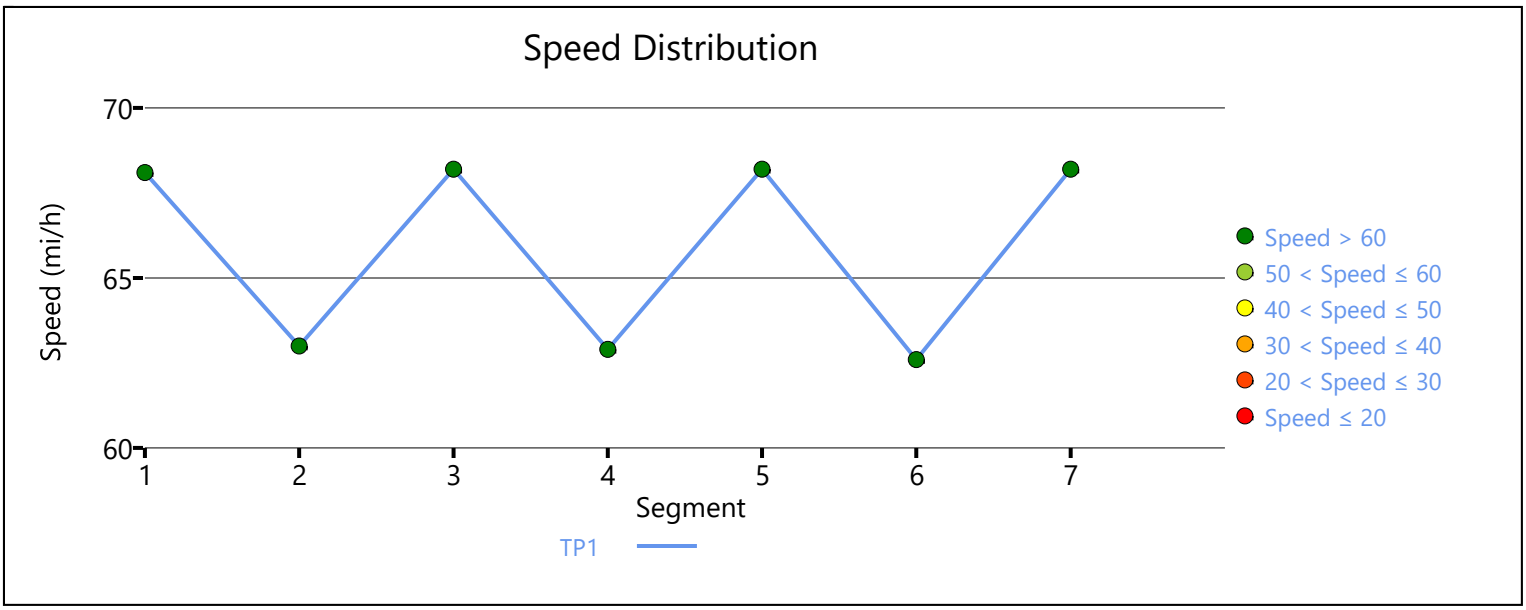
Facility Time Period Results

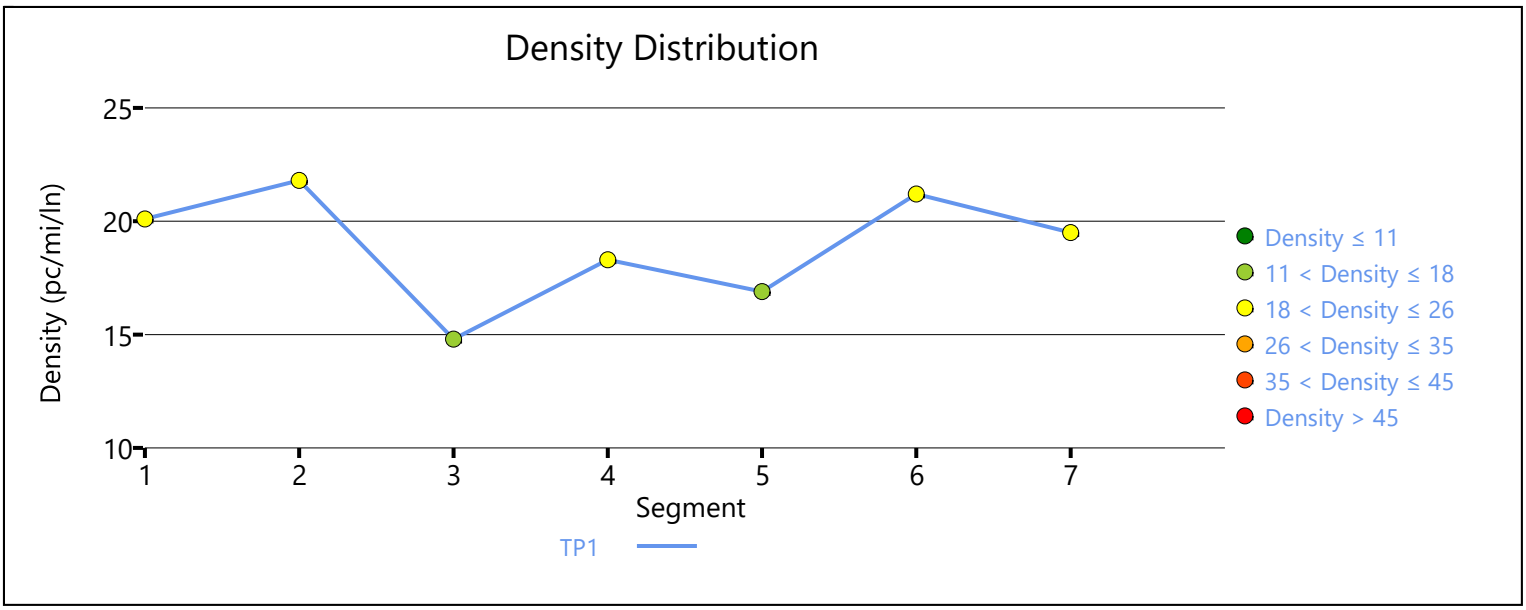
T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	67.3	19.5	18.8	5.0	C

Facility Overall Results

Space Mean Speed, mi/h	67.3	Density, veh/mi/ln	18.8
Average Travel Time, min	5.0	Density, pc/mi/ln	19.5







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HCS7 Freeway Facilities Report

Project Information

Analyst	JB	Date	6/30/2020
Agency	Urban Crossroads, Inc.	Analysis Year	Opening Year (2021) With Project
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	Hesperia Commerce Center II (JN:12778) - I-15 NB at US 395		

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	3
Total Time Periods	1	Time Period Duration, min	15

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	South of US 395	2000	4
2	Diverge	Diverge	Off-Ramp at US 395	1500	4
3	Basic	Basic	North of US 395	6350	4

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.917	4867	9572	0.51	69.3	17.6	B

Segment 2: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.917	0.840	4867	1035	9600	2100	0.51	0.49	65.7	59.1	18.5	22.3	C

Segment 3: Basic

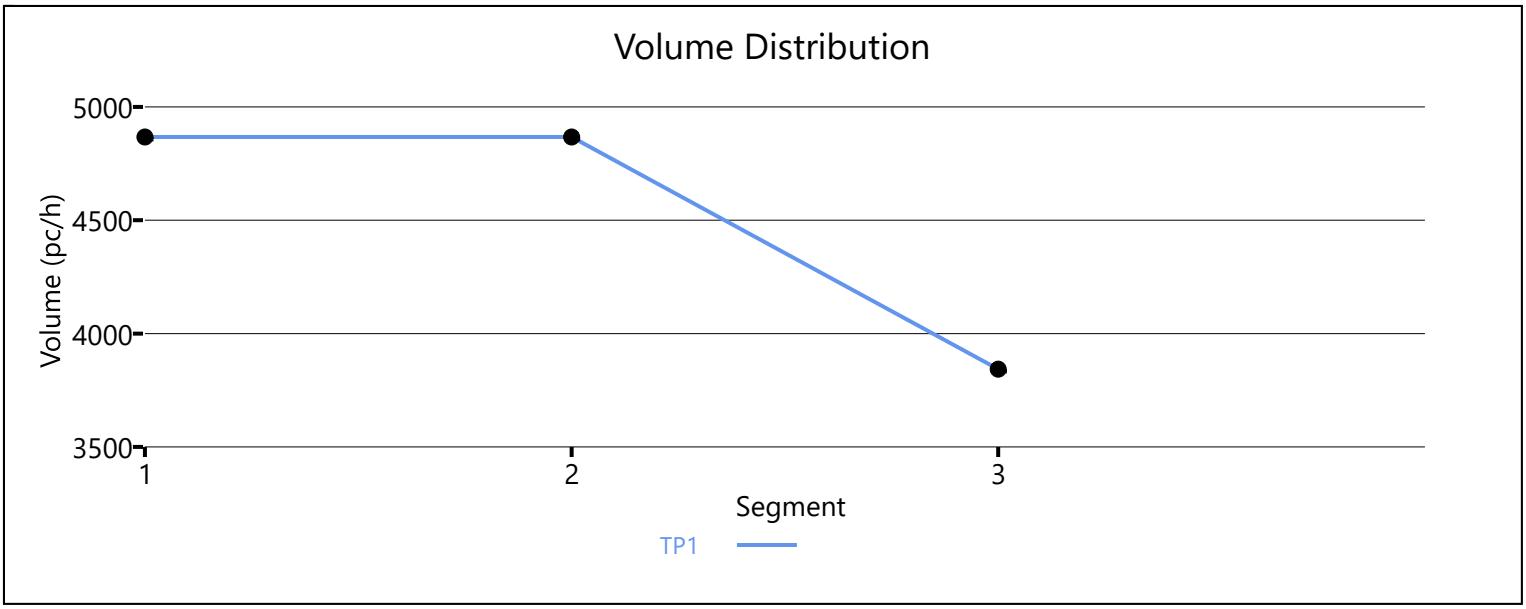
Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.935	3843	9572	0.40	69.3	13.9	B

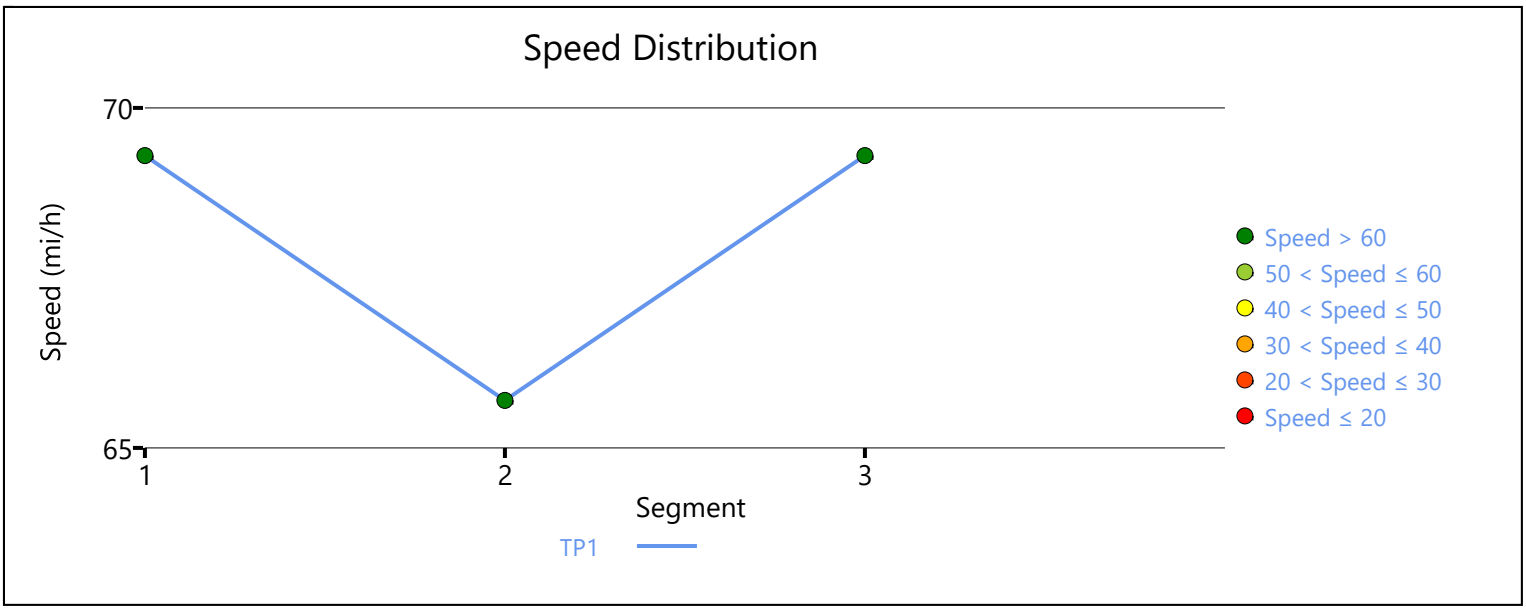
Facility Time Period Results

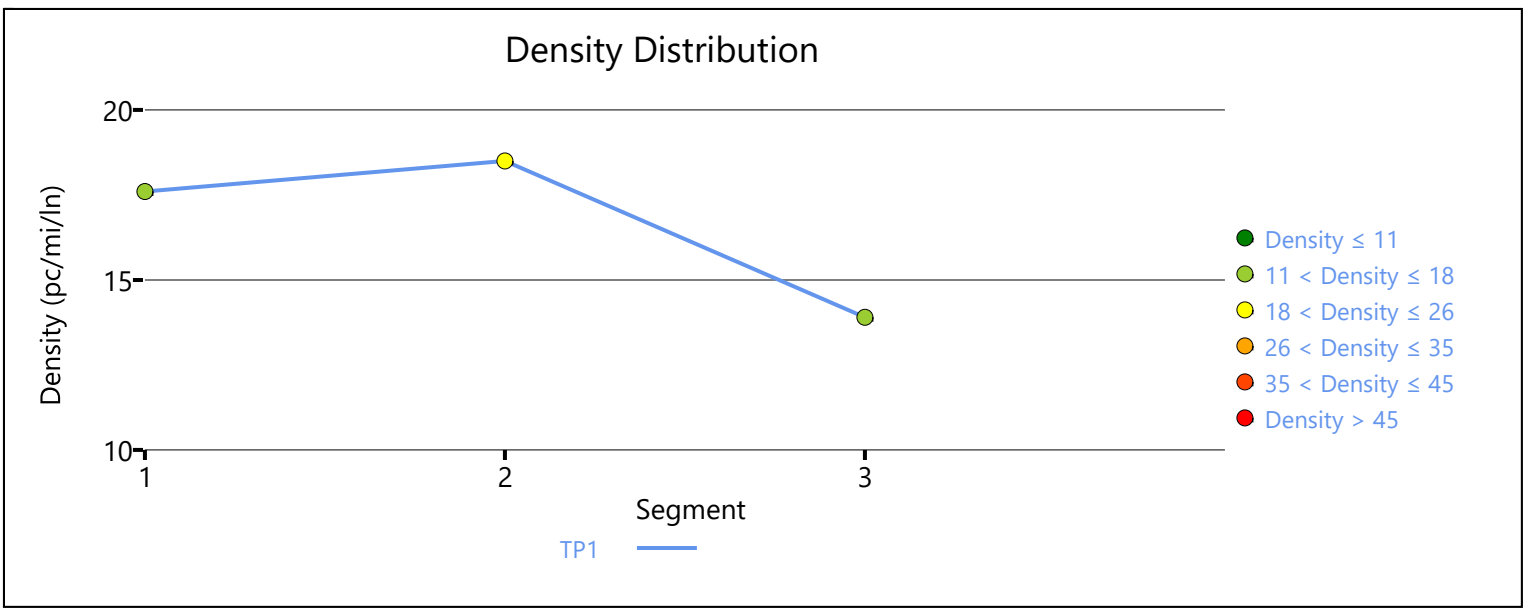
T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	68.6	15.4	14.2	1.6	B

Facility Overall Results

Space Mean Speed, mi/h	68.6	Density, veh/mi/ln	14.2
Average Travel Time, min	1.6	Density, pc/mi/ln	15.4







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HCS7 Freeway Facilities Report

Project Information

Analyst	JB	Date	6/30/2020
Agency	Urban Crossroads, Inc.	Analysis Year	Opening Year (2021) With Project
Jurisdiction	Caltrans	Time Period Analyzed	PM Peak Hour
Project Description	Hesperia Commerce Center II (JN 12778) - I-15 SB at Main		

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	7
Total Time Periods	1	Time Period Duration, min	15

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	I-15 SB, North of Main St.	16360	3
2	Diverge	Diverge	I-15 SB, Off-Ramp at Main St.	1500	3
3	Basic	Basic	I-15 SB, Between Off and Loop On-Ramp	975	3
4	Merge	Merge	I-15 SB, Loop On-Ramp at Main St.	1500	3
5	Basic	Basic	I-15 SB, Between Loop On-Ramp and On-Ramp	1415	3
6	Merge	Merge	I-15 SB, On-Ramp at Main St.	1500	3
7	Basic	Basic	I-15 SB, South of Main St.	5900	3

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.962	4723	7146	0.66	67.1	23.5	C

Segment 2: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.962	0.952	4723	1076	7200	2100	0.66	0.51	63.2	58.9	24.9	31.1	D

Segment 3: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.962	3659	7146	0.51	68.2	17.9	B

Segment 4: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.962	0.952	4071	412	7200	1900	0.57	0.22	62.3	60.1	21.8	23.1	C

Segment 5: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.962	4067	7146	0.57	68.1	19.9	C

Segment 6: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.962	0.787	4648	581	7200	2100	0.65	0.28	62.0	60.1	25.0	25.5	C

Segment 7: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.943	4633	7146	0.65	67.3	22.9	C

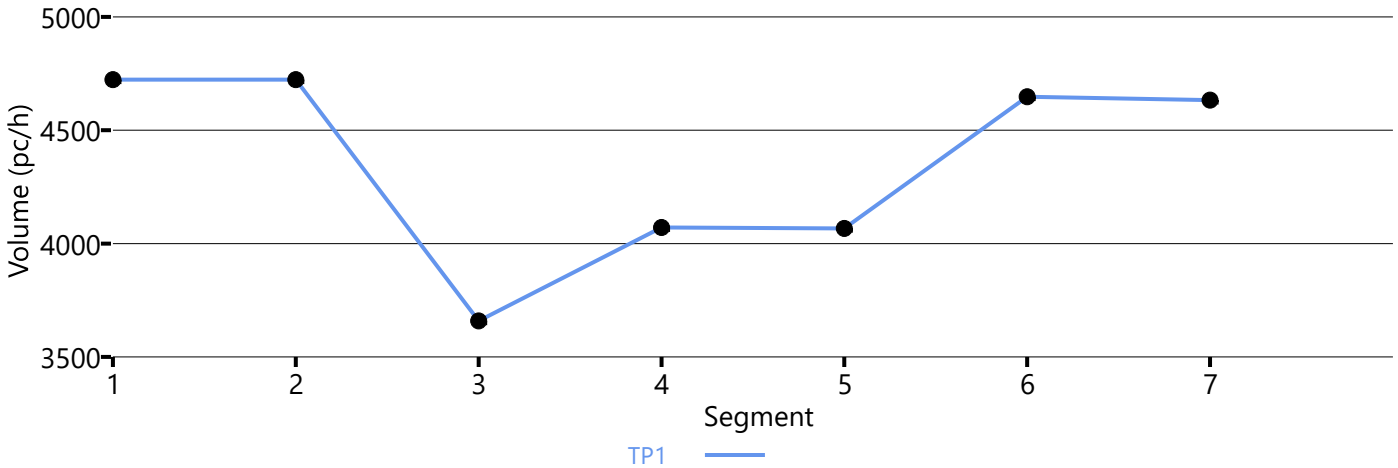
Facility Time Period Results

T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	66.5	23.1	22.1	5.0	C

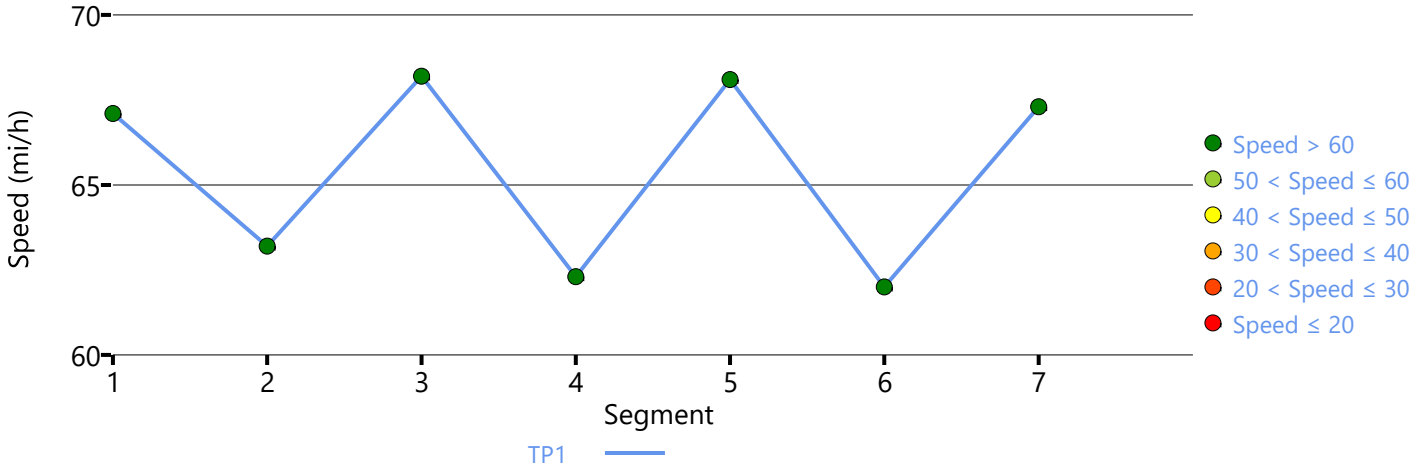
Facility Overall Results

Space Mean Speed, mi/h	66.5	Density, veh/mi/ln	22.1
Average Travel Time, min	5.0	Density, pc/mi/ln	23.1

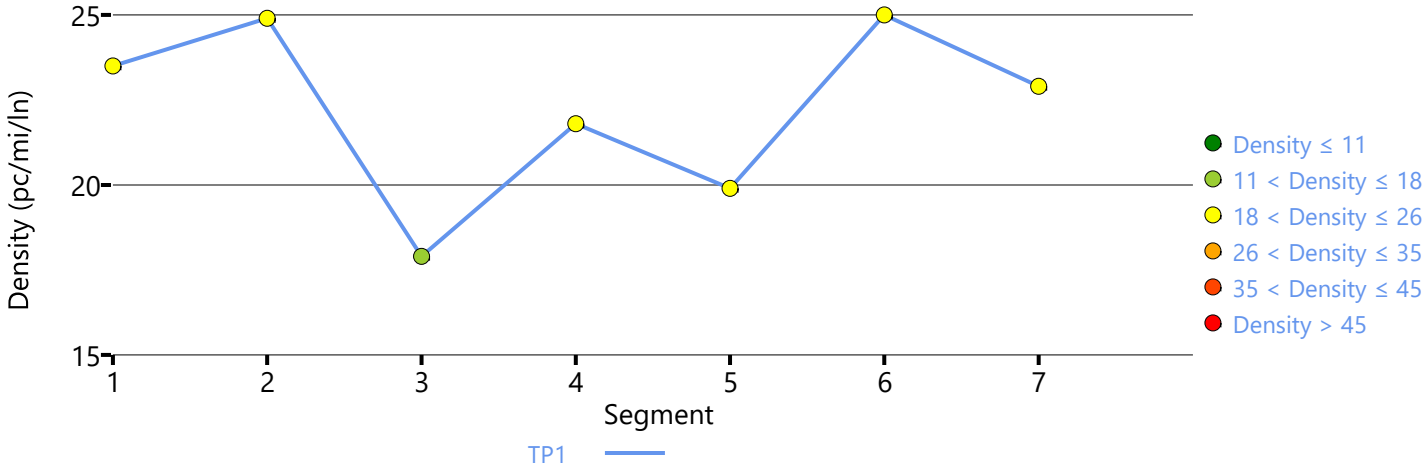
Volume Distribution



Speed Distribution



Density Distribution



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HCS7 Freeway Facilities Report

Project Information

Analyst	JB	Date	6/30/2020
Agency	Urban Crossroads, Inc.	Analysis Year	Opening Year (2021) With Project
Jurisdiction	Caltrans	Time Period Analyzed	PM Peak Hour
Project Description	Hesperia Commerce Center II (JN:12778) - I-15 Southbound at US Highway 395		

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	3
Total Time Periods	1	Time Period Duration, min	15

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	North of US 395	4200	3
2	Merge	Basic	On-Ramp at US 395	1500	4
3	Basic	Basic	South of US 395	4200	4

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.926	4348	7179	0.61	68.7	21.1	C

Segment 2: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.926	0.847	5507	1159	9600	2100	0.45	0.55	70.0	-	15.5	-	B

Segment 3: Basic

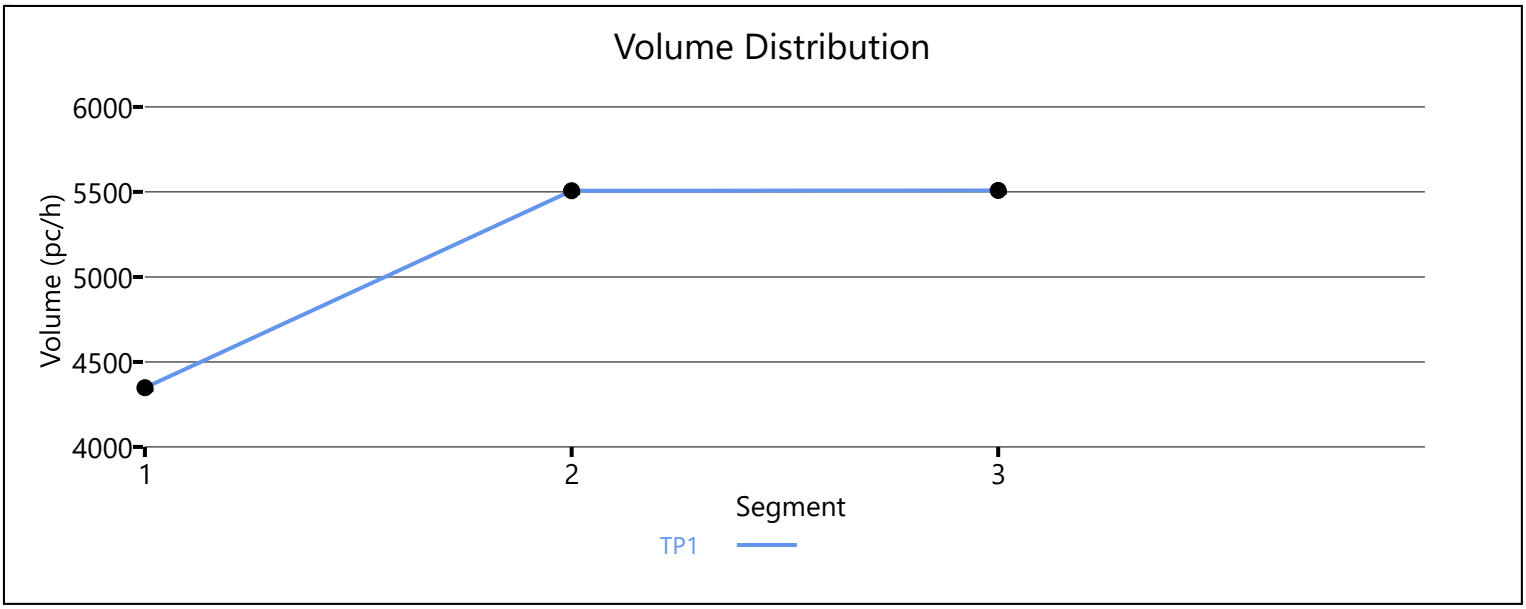
Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.909	5509	9572	0.58	69.0	20.0	C

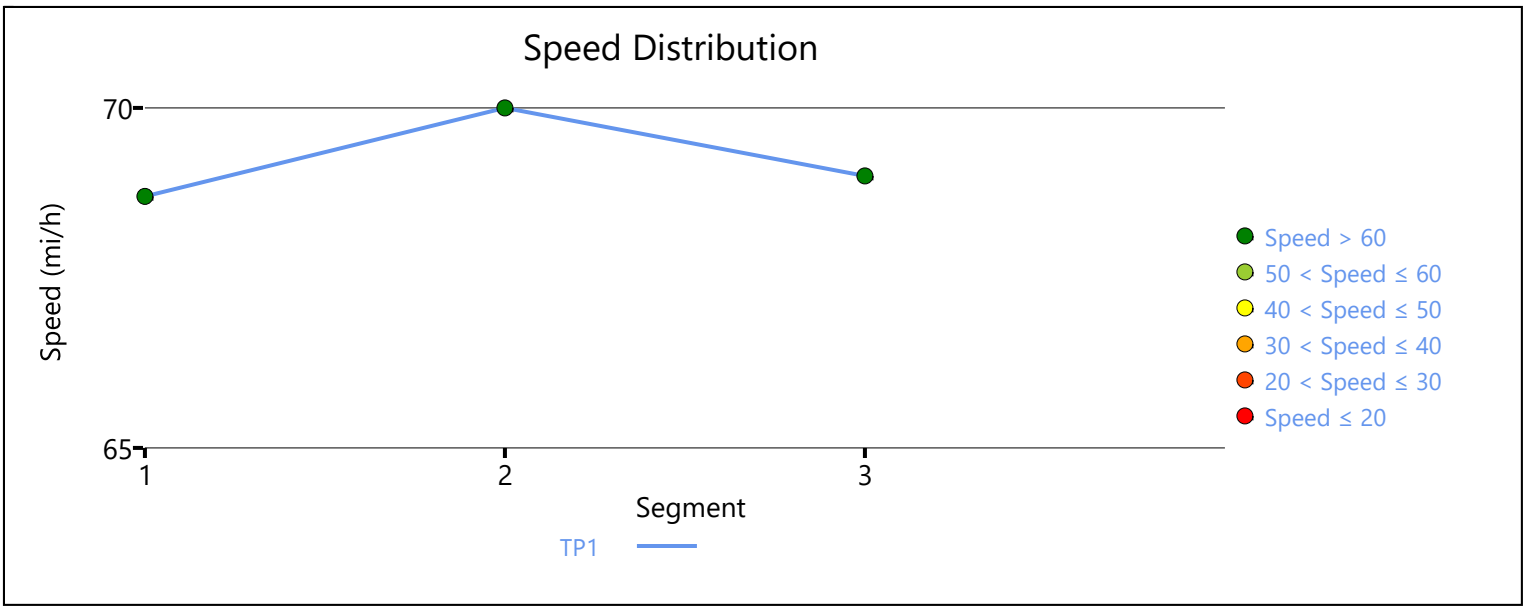
Facility Time Period Results

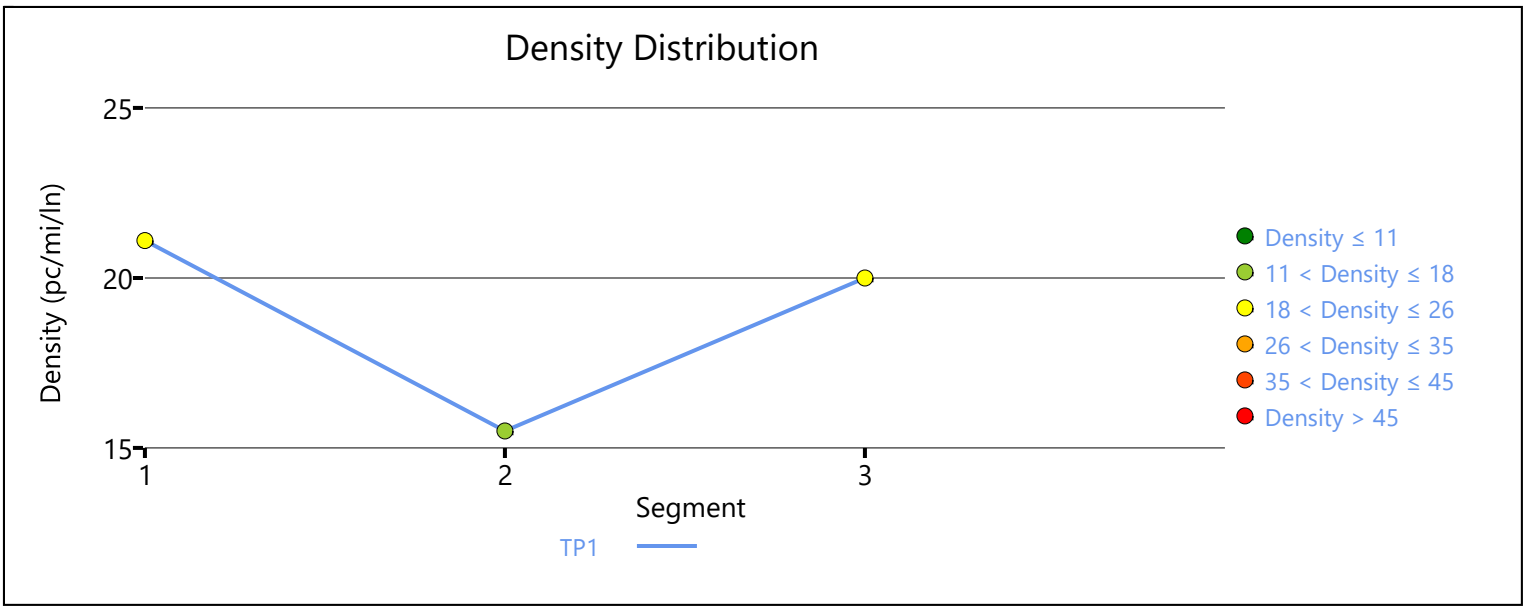
T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	69.1	19.6	18.0	1.6	C

Facility Overall Results

Space Mean Speed, mi/h	69.1	Density, veh/mi/ln	18.0
Average Travel Time, min	1.6	Density, pc/mi/ln	19.6







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HCS7 Freeway Facilities Report

Project Information

Analyst	JB	Date	6/30/2020
Agency	Urban Crossroads, Inc.	Analysis Year	Opening Year (2021) With Project
Jurisdiction	Caltrans	Time Period Analyzed	PM Peak Hour
Project Description	Hesperia Commerce Center II (JN 12778) - I-15 NB at Main		

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	7
Total Time Periods	1	Time Period Duration, min	15

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	I-15 NB, South of Main St.	6140	3
2	Diverge	Diverge	I-15 NB, Off-Ramp at Main St.	1500	3
3	Basic	Basic	I-15 NB, Between Off-Ramp and Loop On-Ramp	1125	3
4	Merge	Merge	I-15 NB, Loop On-Ramp at Main St.	1500	3
5	Basic	Basic	I-15 NB, Between Loop On-Ramp and On-Ramp	1215	3
6	Merge	Merge	I-15 NB, On-Ramp at Main St.	1500	3
7	Basic	Basic	I-15 NB, North of Main St.	16370	3

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.971	6928	7146	0.97	54.9	42.1	E

Segment 2: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.971	0.917	6928	1271	7200	2100	0.96	0.61	62.5	58.5	36.9	39.6	E

Segment 3: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.980	5675	7146	0.79	63.4	29.8	D

Segment 4: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.980	0.833	6382	707	7200	1900	0.89	0.37	58.0	55.3	36.7	33.8	D

Segment 5: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.962	6394	7146	0.89	59.1	36.1	E

Segment 6: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.962	0.962	6886	492	7200	2100	0.96	0.23	56.8	54.3	40.4	36.0	E

Segment 7: Basic

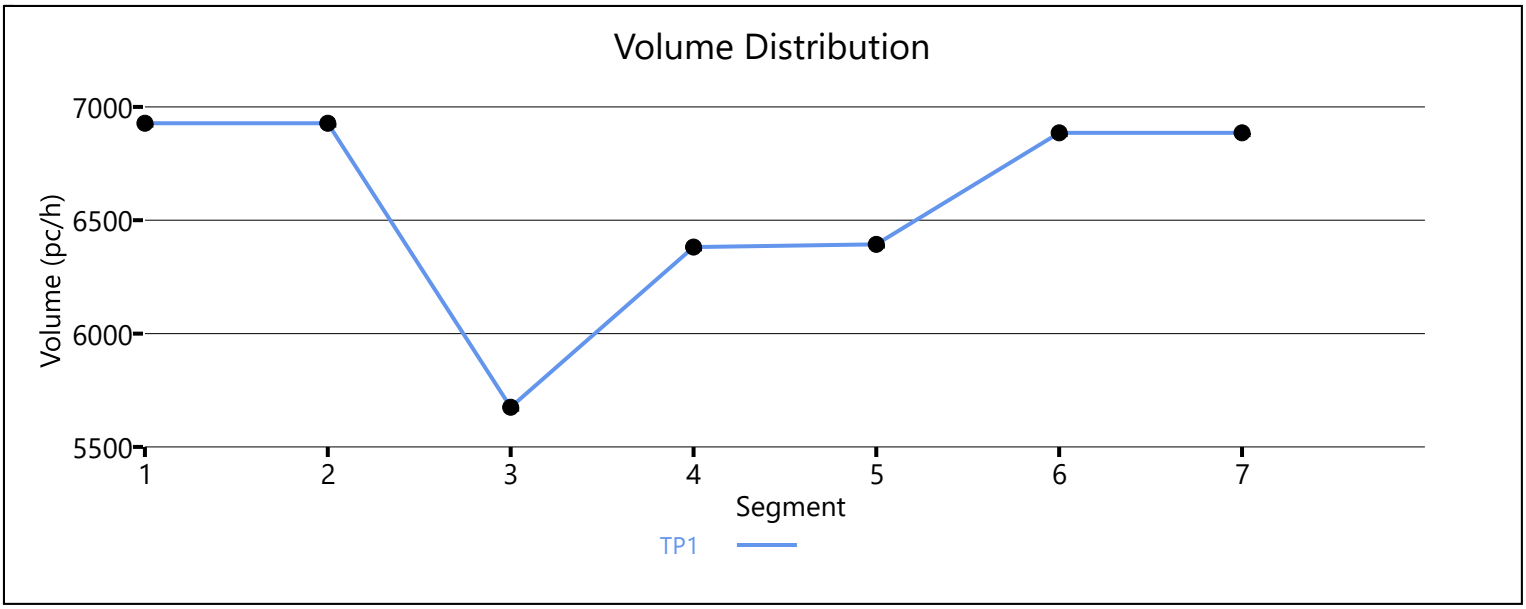
Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.962	6886	7146	0.96	55.2	41.6	E

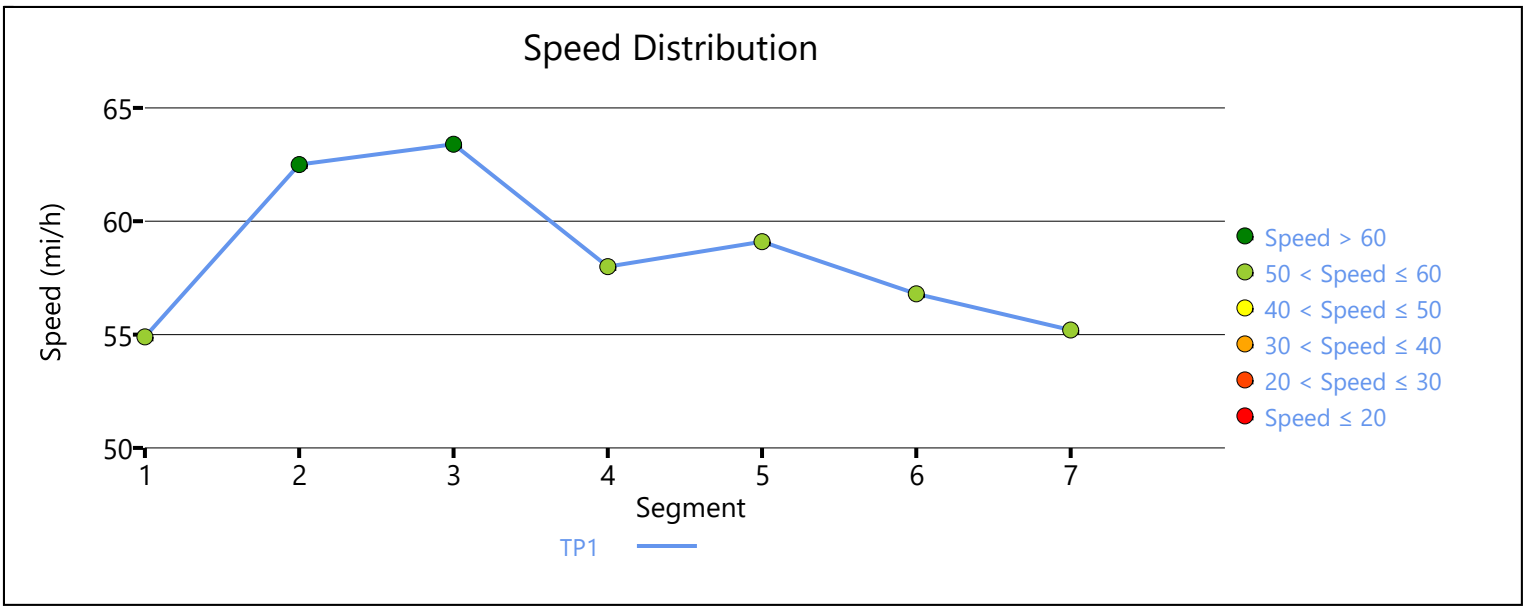
Facility Time Period Results

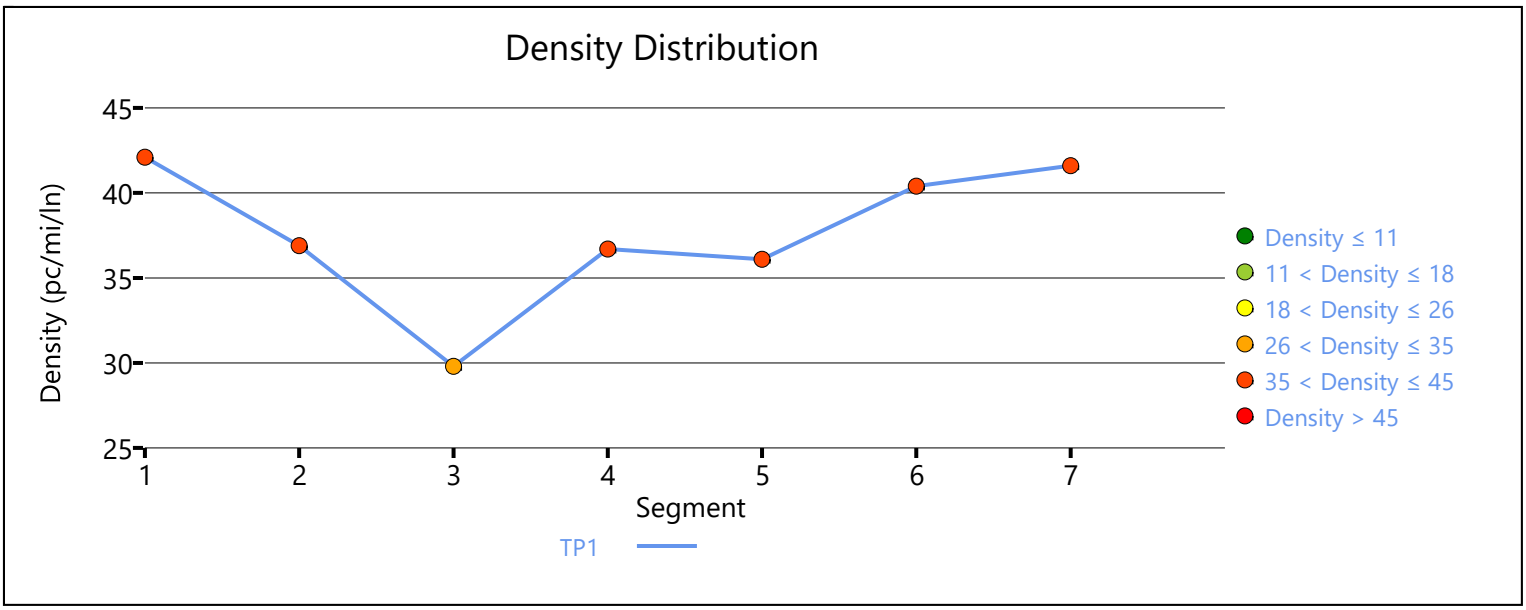
T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	56.1	40.5	39.1	5.9	E

Facility Overall Results

Space Mean Speed, mi/h	56.1	Density, veh/mi/ln	39.1
Average Travel Time, min	5.9	Density, pc/mi/ln	40.5







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HCS7 Freeway Facilities Report

Project Information

Analyst	JB	Date	6/30/2020
Agency	Urban Crossroads, Inc.	Analysis Year	Opening Year (2021) With Project
Jurisdiction	Caltrans	Time Period Analyzed	PM Peak Hour
Project Description	Hesperia Commerce Center II (JN:12778) - I-15 NB at US 395		

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	3
Total Time Periods	1	Time Period Duration, min	15

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	South of US 395	2000	4
2	Diverge	Diverge	Off-Ramp at US 395	1500	4
3	Basic	Basic	North of US 395	6350	4

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.943	6824	9572	0.71	66.6	25.6	C

Segment 2: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.943	0.885	6824	1502	9600	2100	0.71	0.72	64.3	57.9	26.5	31.9	D

Segment 3: Basic

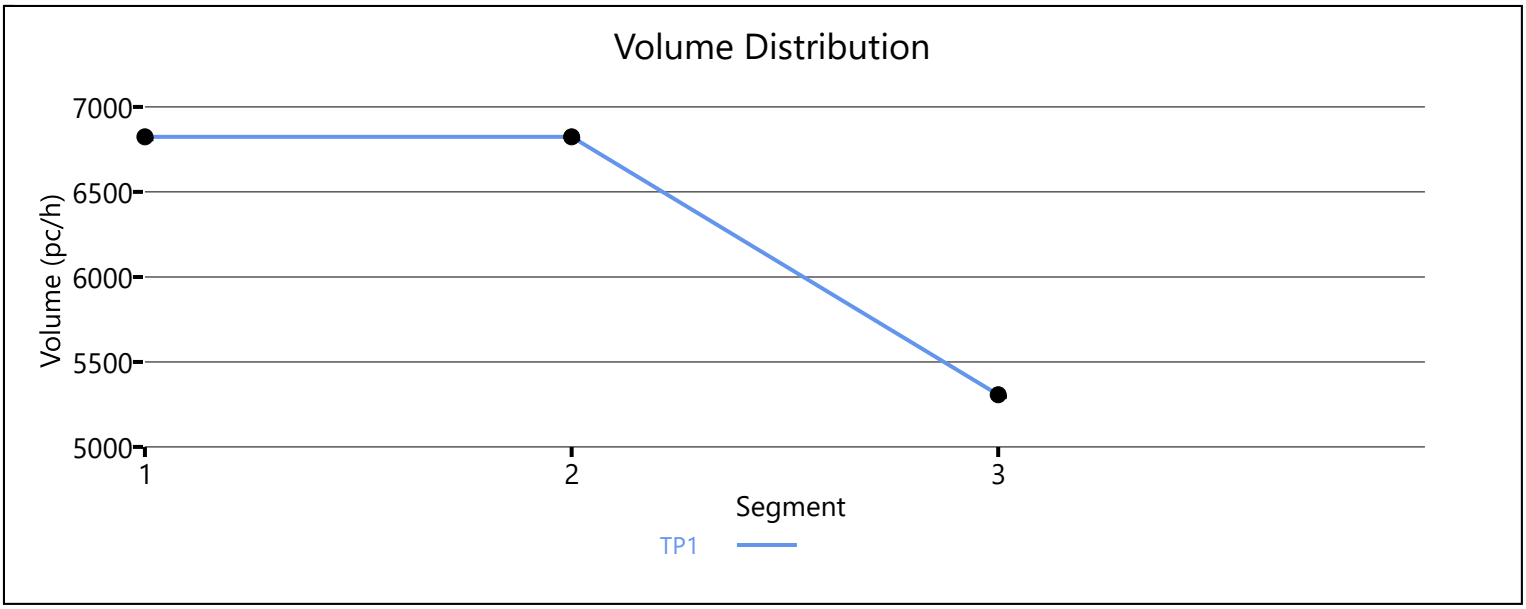
Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.962	5307	9572	0.55	69.2	19.2	C

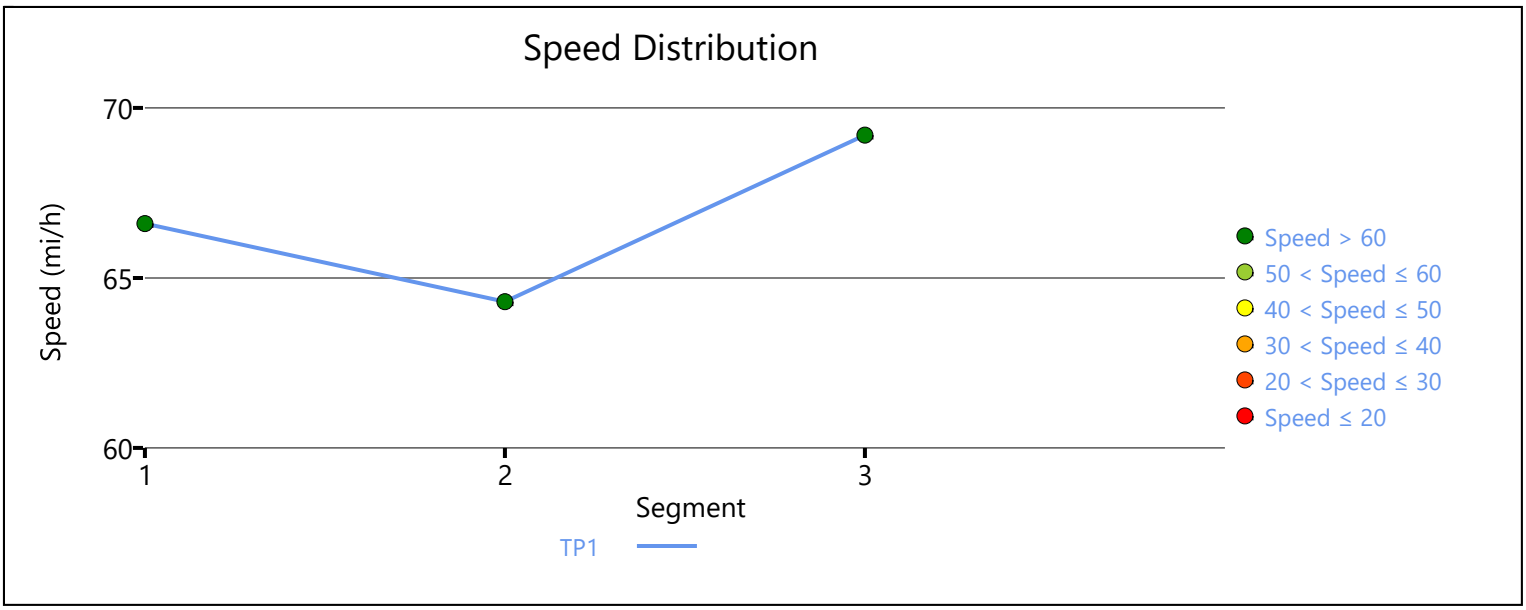
Facility Time Period Results

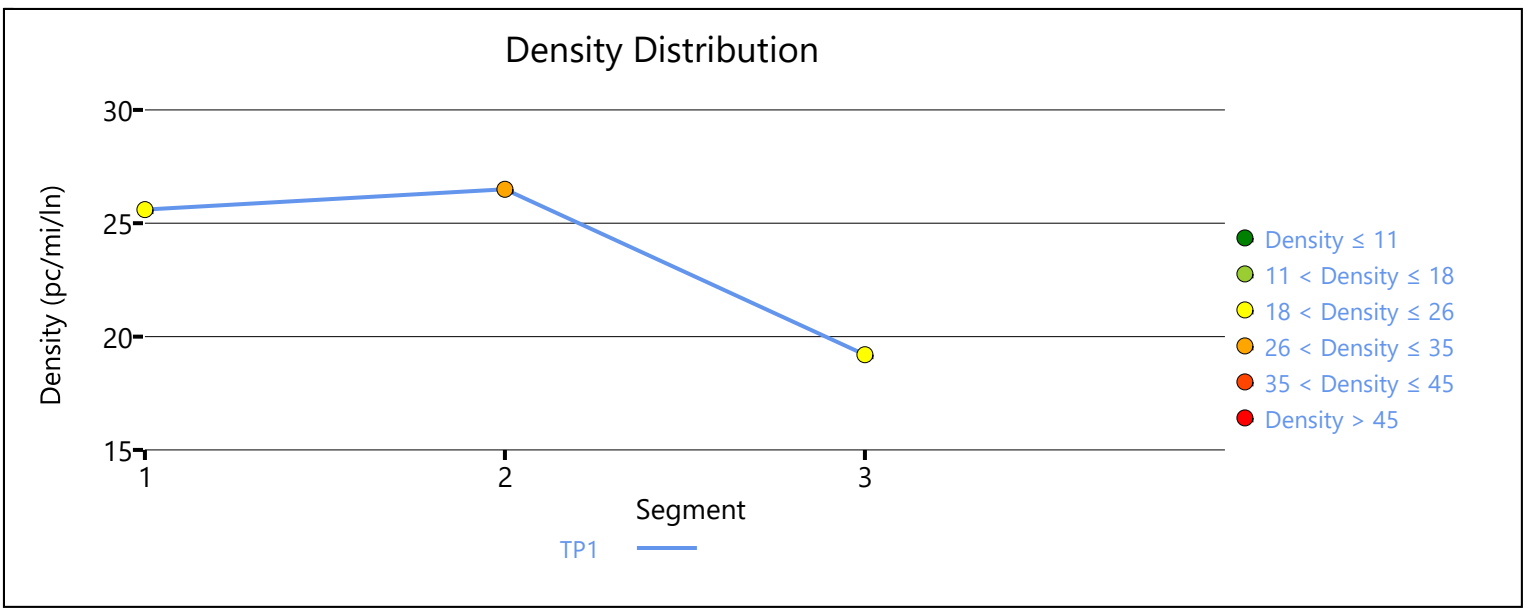
T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	67.7	21.6	20.6	1.7	C

Facility Overall Results

Space Mean Speed, mi/h	67.7	Density, veh/mi/ln	20.6
Average Travel Time, min	1.7	Density, pc/mi/ln	21.6







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APPENDIX 6.9:

OPENING YEAR CUMULATIVE (2021) WITHOUT PROJECT INTERSECTION OPERATIONS ANALYSIS WORKSHEETS WITH IMPROVEMENTS

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Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	1	3	1161	1399	0
Future Vol, veh/h	0	1	3	1161	1399	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	-
Veh in Median Storage, #	2	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	1	3	1290	1554	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	2205	777	1554	0	-	0
Stage 1	1554	-	-	-	-	-
Stage 2	651	-	-	-	-	-
Critical Hdwy	6.8	6.9	4.1	-	-	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	39	344	432	-	-	-
Stage 1	163	-	-	-	-	-
Stage 2	486	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	38	344	432	-	-	-
Mov Cap-2 Maneuver	145	-	-	-	-	-
Stage 1	159	-	-	-	-	-
Stage 2	486	-	-	-	-	-

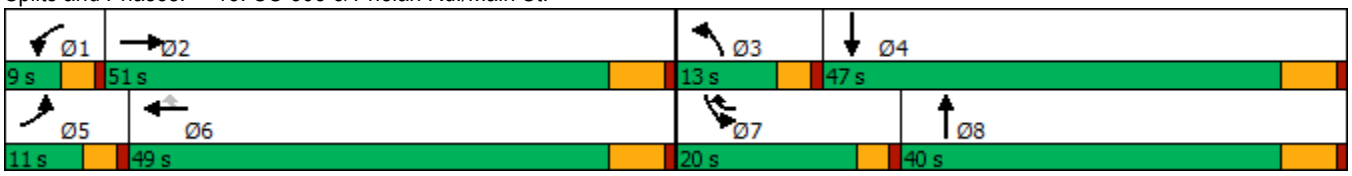
Approach	EB	NB	SB
HCM Control Delay, s	15.5	0.2	0
HCM LOS	C		

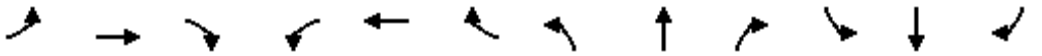
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	432	-	344	-	-
HCM Lane V/C Ratio	0.008	-	0.003	-	-
HCM Control Delay (s)	13.4	0.2	15.5	-	-
HCM Lane LOS	B	A	C	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	94	739	21	380	356	137	795	288	1047
Future Volume (vph)	94	739	21	380	356	137	795	288	1047
Turn Type	Prot	NA	Prot	NA	pm+ov	Prot	NA	Prot	NA
Protected Phases	5	2	1	6	7	3	8	7	4
Permitted Phases					6				
Detector Phase	5	2	1	6	7	3	8	7	4
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.0	16.0	9.0	16.0	9.0	9.0	16.0	9.0	16.0
Total Split (s)	11.0	51.0	9.0	49.0	20.0	13.0	40.0	20.0	47.0
Total Split (%)	9.2%	42.5%	7.5%	40.8%	16.7%	10.8%	33.3%	16.7%	39.2%
Yellow Time (s)	3.0	5.0	3.0	5.0	3.0	3.0	5.0	3.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	6.0	4.0	6.0	4.0	4.0	6.0	4.0	6.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	7.1	24.9	5.1	16.8	35.6	8.2	32.9	12.7	37.4
Actuated g/C Ratio	0.08	0.28	0.06	0.19	0.40	0.09	0.37	0.14	0.42
v/c Ratio	0.69	0.65	0.22	0.41	0.55	0.45	0.65	0.61	0.78
Control Delay	69.7	30.7	51.2	33.3	20.1	46.4	27.8	43.6	28.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	69.7	30.7	51.2	33.3	20.1	46.4	27.8	43.6	28.2
LOS	E	C	D	C	C	D	C	D	C
Approach Delay		34.4		27.6			30.5		31.4
Approach LOS		C		C			C		C

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 90	
Natural Cycle: 65	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.78	
Intersection Signal Delay: 31.2	Intersection LOS: C
Intersection Capacity Utilization 74.0%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 13: US-395 & Phelan Rd./Main St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	94	739	155	21	380	356	137	795	23	288	1047	74
Future Volume (veh/h)	94	739	155	21	380	356	137	795	23	288	1047	74
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	98	770	116	22	396	291	143	828	24	300	1091	73
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	126	1188	178	44	1118	530	223	1248	36	399	1369	92
Arrive On Green	0.07	0.26	0.26	0.02	0.22	0.22	0.06	0.35	0.35	0.11	0.40	0.40
Sat Flow, veh/h	1810	4554	681	1810	5187	1610	3510	3582	104	3510	3434	230
Grp Volume(v), veh/h	98	583	303	22	396	291	143	417	435	300	573	591
Grp Sat Flow(s),veh/h/ln	1810	1729	1777	1810	1729	1610	1755	1805	1881	1755	1805	1859
Q Serve(g_s), s	4.2	11.9	12.0	1.0	5.1	11.7	3.1	15.5	15.5	6.6	22.1	22.2
Cycle Q Clear(g_c), s	4.2	11.9	12.0	1.0	5.1	11.7	3.1	15.5	15.5	6.6	22.1	22.2
Prop In Lane	1.00		0.38	1.00		1.00	1.00		0.06	1.00		0.12
Lane Grp Cap(c), veh/h	126	902	464	44	1118	530	223	629	656	399	720	741
V/C Ratio(X)	0.78	0.65	0.65	0.50	0.35	0.55	0.64	0.66	0.66	0.75	0.80	0.80
Avail Cap(c_a), veh/h	160	1967	1011	114	2819	1058	399	776	809	710	935	963
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.2	26.0	26.0	38.1	26.3	21.7	36.2	21.8	21.8	34.0	21.0	21.0
Incr Delay (d2), s/veh	15.2	0.8	1.6	6.4	0.2	0.9	2.3	1.8	1.7	2.2	4.0	3.9
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	2.2	4.4	4.7	0.5	1.9	3.9	1.3	5.9	6.1	2.7	8.5	8.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	51.4	26.8	27.6	44.6	26.5	22.6	38.5	23.6	23.5	36.1	25.0	24.9
LnGrp LOS	D	C	C	D	C	C	D	C	C	D	C	C
Approach Vol, veh/h		984			709			995			1464	
Approach Delay, s/veh		29.5			25.5			25.7			27.2	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.9	26.6	9.0	37.5	9.5	23.1	13.0	33.6
Change Period (Y+Rc), s	4.0	6.0	4.0	6.0	4.0	6.0	4.0	6.0
Max Green Setting (Gmax), s	5.0	45.0	9.0	41.0	7.0	43.0	16.0	34.0
Max Q Clear Time (g_c+I1), s	3.0	14.0	5.1	24.2	6.2	13.7	8.6	17.5
Green Ext Time (p_c), s	0.0	5.5	0.1	7.4	0.0	3.4	0.4	5.0

Intersection Summary	
HCM 6th Ctrl Delay	27.1
HCM 6th LOS	C

Intersection	
Int Delay, s/veh	0.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	10	9	947	17	25	1199
Future Vol, veh/h	10	9	947	17	25	1199
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	375	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	11	10	1018	18	27	1289

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1726	518	0	0	1036	0
Stage 1	1027	-	-	-	-	-
Stage 2	699	-	-	-	-	-
Critical Hdwy	6.8	6.9	-	-	4.1	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	81	508	-	-	679	-
Stage 1	311	-	-	-	-	-
Stage 2	460	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	78	508	-	-	679	-
Mov Cap-2 Maneuver	201	-	-	-	-	-
Stage 1	311	-	-	-	-	-
Stage 2	442	-	-	-	-	-

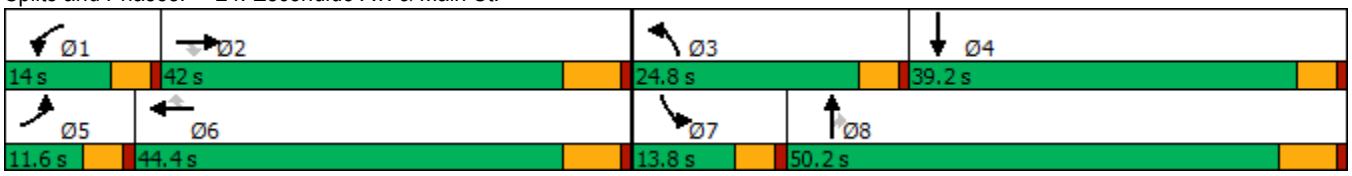
Approach	WB	NB	SB
HCM Control Delay, s	18.4	0	0.2
HCM LOS	C		

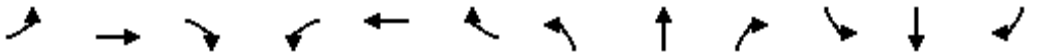
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	201	508	679	-
HCM Lane V/C Ratio	-	-	0.053	0.019	0.04	-
HCM Control Delay (s)	-	-	23.9	12.2	10.5	-
HCM Lane LOS	-	-	C	B	B	-
HCM 95th %tile Q(veh)	-	-	0.2	0.1	0.1	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations											
Traffic Volume (vph)	4	906	439	327	1104	3	740	22	345	1	3
Future Volume (vph)	4	906	439	327	1104	3	740	22	345	1	3
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA
Protected Phases	5	2		1	6		3	8		7	4
Permitted Phases			2			6			8		
Detector Phase	5	2	2	1	6	6	3	8	8	7	4
Switch Phase											
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.6	41.2	41.2	9.6	31.2	31.2	9.6	49.2	49.2	9.6	37.6
Total Split (s)	11.6	42.0	42.0	14.0	44.4	44.4	24.8	50.2	50.2	13.8	39.2
Total Split (%)	9.7%	35.0%	35.0%	11.7%	37.0%	37.0%	20.7%	41.8%	41.8%	11.5%	32.7%
Yellow Time (s)	3.6	5.2	5.2	3.6	5.2	5.2	3.6	5.2	5.2	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	6.2	4.6	6.2	6.2	4.6	6.2	6.2	4.6	4.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	5.4	25.0	25.0	10.0	38.4	38.4	21.5	26.2	26.2	5.3	13.7
Actuated g/C Ratio	0.07	0.31	0.31	0.12	0.48	0.48	0.27	0.33	0.33	0.07	0.17
v/c Ratio	0.04	0.61	0.58	0.92	0.49	0.00	0.97	0.04	0.49	0.01	0.05
Control Delay	47.0	26.7	6.0	70.6	18.1	0.0	59.3	20.2	5.2	48.0	19.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	47.0	26.7	6.0	70.6	18.1	0.0	59.3	20.2	5.2	48.0	19.0
LOS	D	C	A	E	B	A	E	C	A	D	B
Approach Delay		20.0			30.1			41.6			20.8
Approach LOS		C			C			D			C

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 80.5	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.97	
Intersection Signal Delay: 29.8	Intersection LOS: C
Intersection Capacity Utilization 75.5%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 24: Escondido Av. & Main St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	4	906	439	327	1104	3	740	22	345	1	3	12
Future Volume (veh/h)	4	906	439	327	1104	3	740	22	345	1	3	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1700	1800	1800	1600	1800	1800	1600	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	4	934	339	337	1138	3	763	23	194	1	3	11
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	9	1462	454	319	1967	611	686	621	526	2	39	142
Arrive On Green	0.01	0.30	0.30	0.11	0.40	0.40	0.23	0.35	0.35	0.00	0.11	0.11
Sat Flow, veh/h	1619	4914	1525	2956	4914	1525	2956	1800	1525	1619	338	1239
Grp Volume(v), veh/h	4	934	339	337	1138	3	763	23	194	1	0	14
Grp Sat Flow(s),veh/h/ln	1619	1638	1525	1478	1638	1525	1478	1800	1525	1619	0	1577
Q Serve(g_s), s	0.2	14.4	17.5	9.4	15.7	0.1	20.2	0.7	8.3	0.1	0.0	0.7
Cycle Q Clear(g_c), s	0.2	14.4	17.5	9.4	15.7	0.1	20.2	0.7	8.3	0.1	0.0	0.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.79
Lane Grp Cap(c), veh/h	9	1462	454	319	1967	611	686	621	526	2	0	180
V/C Ratio(X)	0.47	0.64	0.75	1.06	0.58	0.00	1.11	0.04	0.37	0.45	0.00	0.08
Avail Cap(c_a), veh/h	130	2020	627	319	2156	669	686	910	771	171	0	627
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	43.2	26.5	27.6	38.8	20.4	15.7	33.4	18.9	21.4	43.4	0.0	34.4
Incr Delay (d2), s/veh	13.9	0.5	3.2	65.9	0.3	0.0	69.6	0.0	0.4	45.0	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	5.1	6.6	6.1	5.3	0.0	13.7	0.3	3.0	0.0	0.0	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	57.1	27.0	30.8	104.7	20.7	15.7	103.0	18.9	21.8	88.5	0.0	34.6
LnGrp LOS	E	C	C	F	C	B	F	B	C	F	A	C
Approach Vol, veh/h		1277			1478			980			15	
Approach Delay, s/veh		28.1			39.9			85.0			38.2	
Approach LOS		C			D			F			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.0	32.1	24.8	16.2	5.1	41.0	4.7	36.2
Change Period (Y+Rc), s	4.6	6.2	4.6	* 6.2	4.6	6.2	4.6	6.2
Max Green Setting (Gmax), s	9.4	35.8	20.2	* 35	7.0	38.2	9.2	44.0
Max Q Clear Time (g_c+I1), s	11.4	19.5	22.2	2.7	2.2	17.7	2.1	10.3
Green Ext Time (p_c), s	0.0	6.4	0.0	0.0	0.0	7.3	0.0	0.8

Intersection Summary	
HCM 6th Ctrl Delay	47.6
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	3	4	8	1598	1281	4
Future Vol, veh/h	3	4	8	1598	1281	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	-
Veh in Median Storage, #	2	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	3	4	8	1665	1334	4

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	2185	669	1338	0	-	0
Stage 1	1336	-	-	-	-	-
Stage 2	849	-	-	-	-	-
Critical Hdwy	6.8	6.9	4.1	-	-	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	40	405	522	-	-	-
Stage 1	213	-	-	-	-	-
Stage 2	385	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	32	405	522	-	-	-
Mov Cap-2 Maneuver	148	-	-	-	-	-
Stage 1	170	-	-	-	-	-
Stage 2	385	-	-	-	-	-

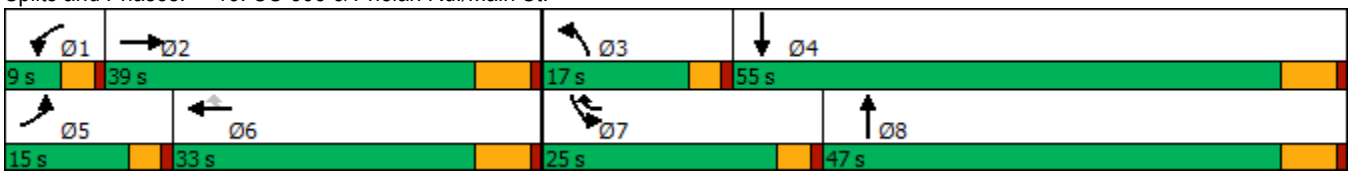
Approach	EB	NB	SB
HCM Control Delay, s	21	1.3	0
HCM LOS	C		

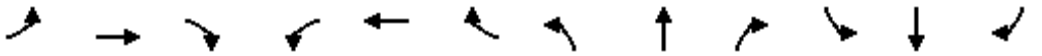
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	522	-	232	-	-
HCM Lane V/C Ratio	0.016	-	0.031	-	-
HCM Control Delay (s)	12	1.2	21	-	-
HCM Lane LOS	B	A	C	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	90	632	24	743	335	220	1210	321	895
Future Volume (vph)	90	632	24	743	335	220	1210	321	895
Turn Type	Prot	NA	Prot	NA	pm+ov	Prot	NA	Prot	NA
Protected Phases	5	2	1	6	7	3	8	7	4
Permitted Phases					6				
Detector Phase	5	2	1	6	7	3	8	7	4
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.0	16.0	9.0	16.0	9.0	9.0	16.0	9.0	16.0
Total Split (s)	15.0	39.0	9.0	33.0	25.0	17.0	47.0	25.0	55.0
Total Split (%)	12.5%	32.5%	7.5%	27.5%	20.8%	14.2%	39.2%	20.8%	45.8%
Yellow Time (s)	3.0	5.0	3.0	5.0	3.0	3.0	5.0	3.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	6.0	4.0	6.0	4.0	4.0	6.0	4.0	6.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	9.4	26.7	5.1	20.8	42.2	11.3	41.7	15.2	45.7
Actuated g/C Ratio	0.09	0.25	0.05	0.20	0.40	0.11	0.40	0.14	0.44
v/c Ratio	0.59	0.55	0.29	0.69	0.50	0.62	0.88	0.67	0.64
Control Delay	64.1	34.1	61.8	43.2	19.2	54.4	39.6	50.4	26.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	64.1	34.1	61.8	43.2	19.2	54.4	39.6	50.4	26.8
LOS	E	C	E	D	B	D	D	D	C
Approach Delay		37.3		36.3			41.8		32.6
Approach LOS		D		D			D		C

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 104.9	
Natural Cycle: 75	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.88	
Intersection Signal Delay: 37.2	Intersection LOS: D
Intersection Capacity Utilization 80.1%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 13: US-395 & Phelan Rd./Main St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	90	632	114	24	743	335	220	1210	47	321	895	99
Future Volume (veh/h)	90	632	114	24	743	335	220	1210	47	321	895	99
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	95	665	63	25	782	269	232	1274	33	338	942	82
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	122	1257	118	46	1160	523	309	1464	38	425	1482	129
Arrive On Green	0.07	0.25	0.25	0.03	0.20	0.20	0.09	0.40	0.40	0.12	0.43	0.43
Sat Flow, veh/h	1810	5125	481	1810	5700	1610	3510	3687	95	3510	3446	300
Grp Volume(v), veh/h	95	491	237	25	782	269	232	656	651	338	519	505
Grp Sat Flow(s),veh/h/ln	1810	1900	1806	1810	1900	1610	1755	1900	1883	1755	1900	1846
Q Serve(g_s), s	4.9	10.6	10.8	1.3	12.0	12.8	6.1	30.1	30.2	8.9	20.3	20.3
Cycle Q Clear(g_c), s	4.9	10.6	10.8	1.3	12.0	12.8	6.1	30.1	30.2	8.9	20.3	20.3
Prop In Lane	1.00		0.27	1.00		1.00	1.00		0.05	1.00		0.16
Lane Grp Cap(c), veh/h	122	932	443	46	1160	523	309	754	747	425	817	794
V/C Ratio(X)	0.78	0.53	0.53	0.54	0.67	0.51	0.75	0.87	0.87	0.79	0.64	0.64
Avail Cap(c_a), veh/h	210	1324	629	96	1625	654	482	823	815	778	983	955
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	43.5	31.0	31.0	45.6	34.8	25.9	42.2	26.3	26.3	40.5	21.2	21.2
Incr Delay (d2), s/veh	7.8	0.5	1.0	7.2	0.7	0.8	2.8	9.6	9.8	2.6	1.2	1.2
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	2.3	4.5	4.4	0.6	5.2	4.6	2.6	13.9	13.8	3.7	8.1	7.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	51.3	31.4	32.0	52.8	35.5	26.7	44.9	35.9	36.1	43.0	22.3	22.3
LnGrp LOS	D	C	C	D	D	C	D	D	D	D	C	C
Approach Vol, veh/h		823			1076			1539			1362	
Approach Delay, s/veh		33.9			33.7			37.3			27.5	
Approach LOS		C			C			D			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.4	29.2	12.3	46.7	10.4	25.3	15.5	43.6
Change Period (Y+Rc), s	4.0	6.0	4.0	6.0	4.0	6.0	4.0	6.0
Max Green Setting (Gmax), s	5.0	33.0	13.0	49.0	11.0	27.0	21.0	41.0
Max Q Clear Time (g_c+I1), s	3.3	12.8	8.1	22.3	6.9	14.8	10.9	32.2
Green Ext Time (p_c), s	0.0	3.9	0.2	7.6	0.0	4.4	0.6	5.4

Intersection Summary	
HCM 6th Ctrl Delay	33.1
HCM 6th LOS	C

Intersection	
Int Delay, s/veh	0.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	14	24	1452	33	11	1026
Future Vol, veh/h	14	24	1452	33	11	1026
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	375	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	98	98	98	98	98	98
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	14	24	1482	34	11	1047

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	2045	758	0	0	1516	0
Stage 1	1499	-	-	-	-	-
Stage 2	546	-	-	-	-	-
Critical Hdwy	6.8	6.9	-	-	4.1	-
Critical Hdwy Stg 1	5.6	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	50	354	-	-	446	-
Stage 1	190	-	-	-	-	-
Stage 2	550	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	49	354	-	-	446	-
Mov Cap-2 Maneuver	145	-	-	-	-	-
Stage 1	190	-	-	-	-	-
Stage 2	536	-	-	-	-	-

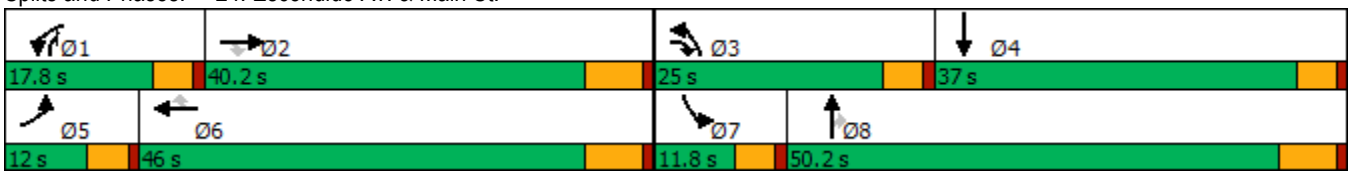
Approach	WB	NB	SB
HCM Control Delay, s	22	0	0.1
HCM LOS	C		

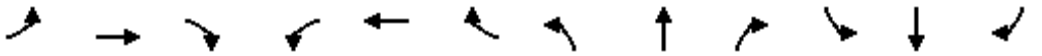
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	145	354	446	-
HCM Lane V/C Ratio	-	-	0.099	0.069	0.025	-
HCM Control Delay (s)	-	-	32.5	15.9	13.3	-
HCM Lane LOS	-	-	D	C	B	-
HCM 95th %tile Q(veh)	-	-	0.3	0.2	0.1	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations											
Traffic Volume (vph)	55	1557	724	458	1198	10	713	52	240	57	38
Future Volume (vph)	55	1557	724	458	1198	10	713	52	240	57	38
Turn Type	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA
Protected Phases	5	2	3	1	6		3	8	1	7	4
Permitted Phases			2			6			8		
Detector Phase	5	2	3	1	6	6	3	8	1	7	4
Switch Phase											
Minimum Initial (s)	5.0	10.0	5.0	5.0	10.0	10.0	5.0	10.0	5.0	5.0	10.0
Minimum Split (s)	9.6	40.2	9.6	9.6	31.2	31.2	9.6	49.2	9.6	9.6	36.6
Total Split (s)	12.0	40.2	25.0	17.8	46.0	46.0	25.0	50.2	17.8	11.8	37.0
Total Split (%)	10.0%	33.5%	20.8%	14.8%	38.3%	38.3%	20.8%	41.8%	14.8%	9.8%	30.8%
Yellow Time (s)	3.6	5.2	3.6	3.6	5.2	5.2	3.6	5.2	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	4.6	4.6	6.2	6.2	4.6	6.2	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	6.8	34.5	56.8	13.4	43.4	43.4	20.7	24.9	44.6	6.7	13.8
Actuated g/C Ratio	0.07	0.35	0.57	0.14	0.44	0.44	0.21	0.25	0.45	0.07	0.14
v/c Ratio	0.52	0.86	0.64	1.16	0.53	0.01	1.17	0.12	0.34	0.54	0.35
Control Delay	64.9	37.4	4.5	136.8	24.2	0.0	130.1	29.2	13.9	66.5	22.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	64.9	37.4	4.5	136.8	24.2	0.0	130.1	29.2	13.9	66.5	22.0
LOS	E	D	A	F	C	A	F	C	B	E	C
Approach Delay		27.9			55.0			97.2			38.9
Approach LOS		C			E			F			D

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 99.1	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.17	
Intersection Signal Delay: 50.5	Intersection LOS: D
Intersection Capacity Utilization 92.3%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 24: Escondido Av. & Main St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	55	1557	724	458	1198	10	713	52	240	57	38	54
Future Volume (veh/h)	55	1557	724	458	1198	10	713	52	240	57	38	54
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	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	1700	1800	1800	1600	1800	1800	1600	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	57	1622	567	477	1248	8	743	54	193	59	40	28
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	71	1855	844	415	2355	651	642	454	592	73	85	60
Arrive On Green	0.04	0.34	0.34	0.14	0.44	0.44	0.21	0.25	0.25	0.05	0.09	0.09
Sat Flow, veh/h	1619	5400	1523	3048	5400	1494	3048	1800	1525	1619	986	690
Grp Volume(v), veh/h	57	1622	567	477	1248	8	743	54	193	59	0	68
Grp Sat Flow(s),veh/h/ln	1619	1800	1523	1524	1800	1494	1524	1800	1525	1619	0	1676
Q Serve(g_s), s	3.4	27.3	25.6	13.2	16.4	0.3	20.4	2.2	8.6	3.5	0.0	3.7
Cycle Q Clear(g_c), s	3.4	27.3	25.6	13.2	16.4	0.3	20.4	2.2	8.6	3.5	0.0	3.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.41
Lane Grp Cap(c), veh/h	71	1855	844	415	2355	651	642	454	592	73	0	145
V/C Ratio(X)	0.81	0.87	0.67	1.15	0.53	0.01	1.16	0.12	0.33	0.81	0.00	0.47
Avail Cap(c_a), veh/h	124	1895	856	415	2355	651	642	818	901	120	0	561
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	45.9	29.8	15.3	41.8	20.0	15.5	38.2	27.9	20.7	45.8	0.0	42.1
Incr Delay (d2), s/veh	7.8	4.8	2.0	91.4	0.2	0.0	87.6	0.1	0.3	7.5	0.0	2.3
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	1.4	11.5	8.9	9.9	6.2	0.1	15.4	1.0	3.1	1.6	0.0	1.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	53.8	34.7	17.4	133.2	20.3	15.5	125.8	28.0	21.1	53.4	0.0	44.4
LnGrp LOS	D	C	B	F	C	B	F	C	C	D	A	D
Approach Vol, veh/h		2246			1733			990			127	
Approach Delay, s/veh		30.8			51.3			100.1			48.6	
Approach LOS		C			D			F			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.8	39.5	25.0	14.6	8.8	48.4	9.0	30.6
Change Period (Y+Rc), s	4.6	6.2	4.6	* 6.2	4.6	6.2	4.6	6.2
Max Green Setting (Gmax), s	13.2	34.0	20.4	* 32	7.4	39.8	7.2	44.0
Max Q Clear Time (g_c+I1), s	15.2	29.3	22.4	5.7	5.4	18.4	5.5	10.6
Green Ext Time (p_c), s	0.0	3.9	0.0	0.3	0.0	8.3	0.0	1.0

Intersection Summary	
HCM 6th Ctrl Delay	51.7
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

APPENDIX 6.10:

OPENING YEAR CUMULATIVE (2021) WITH PROJECT INTERSECTION OPERATIONS ANALYSIS WORKSHEETS WITH IMPROVEMENTS

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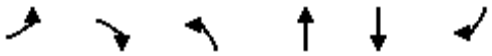
Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Configurations					
Traffic Volume (vph)	19	74	324	1161	1399
Future Volume (vph)	19	74	324	1161	1399
Turn Type	Prot	Perm	Prot	NA	NA
Protected Phases	4		5	2	6
Permitted Phases		4			
Detector Phase	4	4	5	2	6
Switch Phase					
Minimum Initial (s)	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	26.6	26.6	9.6	16.5	23.5
Total Split (s)	26.6	26.6	35.0	93.4	58.4
Total Split (%)	22.2%	22.2%	29.2%	77.8%	48.7%
Yellow Time (s)	3.6	3.6	3.6	5.5	5.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	6.5	6.5
Lead/Lag			Lead		Lag
Lead-Lag Optimize?			Yes		Yes
Recall Mode	None	None	None	Max	Max
Act Effct Green (s)	12.2	12.2	24.6	89.0	58.2
Actuated g/C Ratio	0.11	0.11	0.23	0.83	0.54
v/c Ratio	0.10	0.32	0.87	0.43	0.87
Control Delay	44.3	13.0	61.8	4.3	30.0
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	44.3	13.0	61.8	4.3	30.0
LOS	D	B	E	A	C
Approach Delay	19.4			16.9	30.0
Approach LOS	B			B	C

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 107.5	
Natural Cycle: 110	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.87	
Intersection Signal Delay: 23.4	Intersection LOS: C
Intersection Capacity Utilization 81.6%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 11: US-395 & Yucca Terrace Dr.





Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	19	74	324	1161	1399	111
Future Volume (veh/h)	19	74	324	1161	1399	111
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	21	60	360	1290	1554	123
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	154	137	391	2929	1872	147
Arrive On Green	0.08	0.08	0.22	0.81	0.55	0.55
Sat Flow, veh/h	1810	1610	1810	3705	3486	266
Grp Volume(v), veh/h	21	60	360	1290	822	855
Grp Sat Flow(s),veh/h/ln	1810	1610	1810	1805	1805	1852
Q Serve(g_s), s	1.2	3.8	20.8	11.2	40.1	41.1
Cycle Q Clear(g_c), s	1.2	3.8	20.8	11.2	40.1	41.1
Prop In Lane	1.00	1.00	1.00			0.14
Lane Grp Cap(c), veh/h	154	137	391	2929	997	1023
V/C Ratio(X)	0.14	0.44	0.92	0.44	0.82	0.84
Avail Cap(c_a), veh/h	372	331	514	2929	997	1023
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	45.4	46.6	41.1	3.0	19.7	20.0
Incr Delay (d2), s/veh	0.4	2.2	16.3	0.5	7.8	8.1
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	0.1	10.4	1.8	16.2	17.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	45.8	48.8	57.4	3.4	27.5	28.0
LnGrp LOS	D	D	E	A	C	C
Approach Vol, veh/h	81			1650	1677	
Approach Delay, s/veh	48.0			15.2	27.8	
Approach LOS	D			B	C	

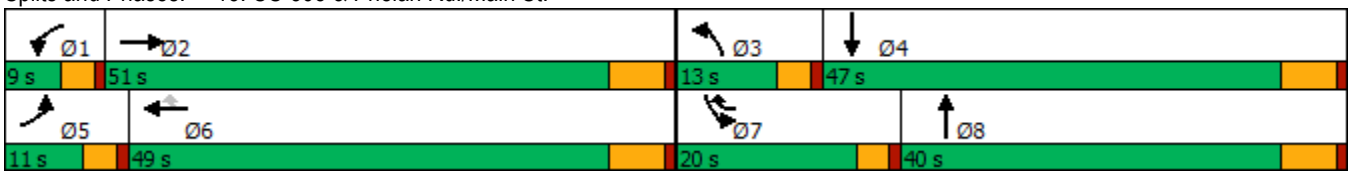
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		93.4		13.7	27.8	65.6
Change Period (Y+Rc), s		6.5		4.6	4.6	6.5
Max Green Setting (Gmax), s		86.9		22.0	30.4	51.9
Max Q Clear Time (g_c+I1), s		13.2		5.8	22.8	43.1
Green Ext Time (p_c), s		11.3		0.2	0.3	6.1

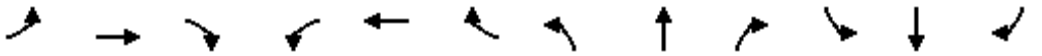
Intersection Summary		
HCM 6th Ctrl Delay		22.2
HCM 6th LOS		C

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	94	848	21	1134	591	223	881	346	1062
Future Volume (vph)	94	848	21	1134	591	223	881	346	1062
Turn Type	Prot	NA	Prot	NA	pm+ov	Prot	NA	Prot	NA
Protected Phases	5	2	1	6	7	3	8	7	4
Permitted Phases					6				
Detector Phase	5	2	1	6	7	3	8	7	4
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.0	16.0	9.0	16.0	9.0	9.0	16.0	9.0	16.0
Total Split (s)	11.0	51.0	9.0	49.0	20.0	13.0	40.0	20.0	47.0
Total Split (%)	9.2%	42.5%	7.5%	40.8%	16.7%	10.8%	33.3%	16.7%	39.2%
Yellow Time (s)	3.0	5.0	3.0	5.0	3.0	3.0	5.0	3.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	6.0	4.0	6.0	4.0	4.0	6.0	4.0	6.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	7.0	40.3	5.0	32.6	53.3	9.0	34.5	14.7	40.1
Actuated g/C Ratio	0.06	0.37	0.05	0.30	0.49	0.08	0.32	0.13	0.37
v/c Ratio	0.84	0.56	0.27	0.76	0.75	0.80	0.83	0.76	0.90
Control Delay	102.9	28.0	61.1	38.1	26.1	71.0	42.8	57.6	43.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	102.9	28.0	61.1	38.1	26.1	71.0	42.8	57.6	43.0
LOS	F	C	E	D	C	E	D	E	D
Approach Delay		34.3		34.3			48.3		46.4
Approach LOS		C		C			D		D

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 108.9	
Natural Cycle: 80	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.90	
Intersection Signal Delay: 40.5	Intersection LOS: D
Intersection Capacity Utilization 81.9%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 13: US-395 & Phelan Rd./Main St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	94	848	170	21	1134	591	223	881	23	346	1062	74
Future Volume (veh/h)	94	848	170	21	1134	591	223	881	23	346	1062	74
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	98	883	132	22	1181	536	232	918	24	360	1106	73
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	110	1729	257	40	1766	742	275	1095	29	422	1192	79
Arrive On Green	0.06	0.38	0.38	0.02	0.34	0.34	0.08	0.30	0.30	0.12	0.35	0.35
Sat Flow, veh/h	1810	4558	678	1810	5187	1610	3510	3594	94	3510	3437	227
Grp Volume(v), veh/h	98	669	346	22	1181	536	232	461	481	360	580	599
Grp Sat Flow(s),veh/h/ln	1810	1729	1778	1810	1729	1610	1755	1805	1883	1755	1805	1859
Q Serve(g_s), s	6.2	17.1	17.3	1.4	22.4	31.0	7.5	27.4	27.4	11.6	35.6	35.7
Cycle Q Clear(g_c), s	6.2	17.1	17.3	1.4	22.4	31.0	7.5	27.4	27.4	11.6	35.6	35.7
Prop In Lane	1.00		0.38	1.00		1.00	1.00		0.05	1.00		0.12
Lane Grp Cap(c), veh/h	110	1312	674	40	1766	742	275	550	574	422	626	644
V/C Ratio(X)	0.89	0.51	0.51	0.55	0.67	0.72	0.84	0.84	0.84	0.85	0.93	0.93
Avail Cap(c_a), veh/h	110	1353	695	79	1939	795	275	550	574	488	643	663
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.6	27.5	27.5	55.7	32.4	25.1	52.3	37.3	37.3	49.6	36.2	36.2
Incr Delay (d2), s/veh	52.4	0.3	0.6	8.7	0.8	3.0	20.4	11.2	10.8	11.8	19.7	19.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.3	6.6	6.9	0.7	8.8	11.2	3.9	13.0	13.5	5.5	17.9	18.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	106.0	27.8	28.1	64.4	33.2	28.1	72.7	48.5	48.1	61.4	55.9	55.6
LnGrp LOS	F	C	C	E	C	C	E	D	D	E	E	E
Approach Vol, veh/h		1113			1739			1174			1539	
Approach Delay, s/veh		34.8			32.0			53.1			57.1	
Approach LOS		C			C			D			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.5	49.6	13.0	45.9	11.0	45.2	17.8	41.1
Change Period (Y+Rc), s	4.0	6.0	4.0	6.0	4.0	6.0	4.0	6.0
Max Green Setting (Gmax), s	5.0	45.0	9.0	41.0	7.0	43.0	16.0	34.0
Max Q Clear Time (g_c+I1), s	3.4	19.3	9.5	37.7	8.2	33.0	13.6	29.4
Green Ext Time (p_c), s	0.0	6.2	0.0	2.2	0.0	6.2	0.2	2.4

Intersection Summary	
HCM 6th Ctrl Delay	44.0
HCM 6th LOS	D

Intersection	
Int Delay, s/veh	0.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	10	9	1118	17	25	1228
Future Vol, veh/h	10	9	1118	17	25	1228
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	375	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	11	10	1202	18	27	1320

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1925	610	0	0	1220	0
Stage 1	1211	-	-	-	-	-
Stage 2	714	-	-	-	-	-
Critical Hdwy	6.8	6.9	-	-	4.1	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	60	442	-	-	579	-
Stage 1	249	-	-	-	-	-
Stage 2	452	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	57	442	-	-	579	-
Mov Cap-2 Maneuver	168	-	-	-	-	-
Stage 1	249	-	-	-	-	-
Stage 2	431	-	-	-	-	-

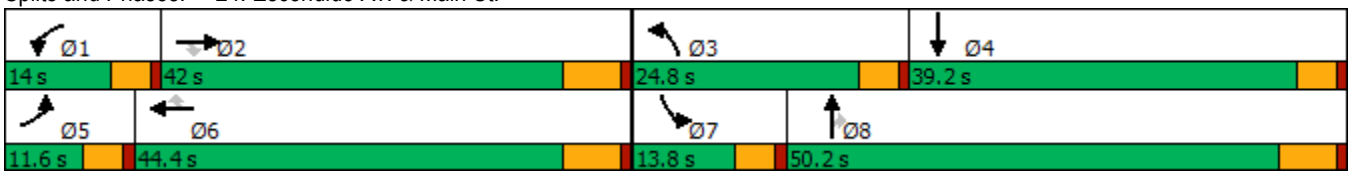
Approach	WB	NB	SB
HCM Control Delay, s	21	0	0.2
HCM LOS	C		

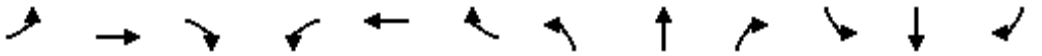
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	168	442	579	-
HCM Lane V/C Ratio	-	-	0.064	0.022	0.046	-
HCM Control Delay (s)	-	-	27.9	13.3	11.5	-
HCM Lane LOS	-	-	D	B	B	-
HCM 95th %tile Q(veh)	-	-	0.2	0.1	0.1	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations											
Traffic Volume (vph)	4	915	445	327	1155	3	774	22	345	1	3
Future Volume (vph)	4	915	445	327	1155	3	774	22	345	1	3
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA
Protected Phases	5	2		1	6		3	8		7	4
Permitted Phases			2			6			8		
Detector Phase	5	2	2	1	6	6	3	8	8	7	4
Switch Phase											
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.6	41.2	41.2	9.6	31.2	31.2	9.6	49.2	49.2	9.6	37.6
Total Split (s)	11.6	42.0	42.0	14.0	44.4	44.4	24.8	50.2	50.2	13.8	39.2
Total Split (%)	9.7%	35.0%	35.0%	11.7%	37.0%	37.0%	20.7%	41.8%	41.8%	11.5%	32.7%
Yellow Time (s)	3.6	5.2	5.2	3.6	5.2	5.2	3.6	5.2	5.2	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	6.2	4.6	6.2	6.2	4.6	6.2	6.2	4.6	4.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	5.4	25.1	25.1	10.0	38.5	38.5	21.4	26.2	26.2	5.3	13.7
Actuated g/C Ratio	0.07	0.31	0.31	0.12	0.48	0.48	0.27	0.33	0.33	0.07	0.17
v/c Ratio	0.04	0.62	0.58	0.92	0.51	0.00	1.02	0.04	0.49	0.01	0.05
Control Delay	47.0	26.8	6.0	71.1	18.4	0.0	69.9	20.2	5.2	48.0	19.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	47.0	26.8	6.0	71.1	18.4	0.0	69.9	20.2	5.2	48.0	19.0
LOS	D	C	A	E	B	A	E	C	A	D	B
Approach Delay		20.1			30.0			49.4			20.8
Approach LOS		C			C			D			C

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 80.6	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.02	
Intersection Signal Delay: 32.1	Intersection LOS: C
Intersection Capacity Utilization 76.8%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 24: Escondido Av. & Main St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	4	915	445	327	1155	3	774	22	345	1	3	12
Future Volume (veh/h)	4	915	445	327	1155	3	774	22	345	1	3	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1700	1800	1800	1600	1800	1800	1600	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	4	943	345	337	1191	3	798	23	194	1	3	11
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	9	1478	459	318	1980	615	683	618	524	2	38	141
Arrive On Green	0.01	0.30	0.30	0.11	0.40	0.40	0.23	0.34	0.34	0.00	0.11	0.11
Sat Flow, veh/h	1619	4914	1525	2956	4914	1525	2956	1800	1525	1619	338	1239
Grp Volume(v), veh/h	4	943	345	337	1191	3	798	23	194	1	0	14
Grp Sat Flow(s),veh/h/ln	1619	1638	1525	1478	1638	1525	1478	1800	1525	1619	0	1577
Q Serve(g_s), s	0.2	14.5	17.9	9.4	16.7	0.1	20.2	0.7	8.4	0.1	0.0	0.7
Cycle Q Clear(g_c), s	0.2	14.5	17.9	9.4	16.7	0.1	20.2	0.7	8.4	0.1	0.0	0.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.79
Lane Grp Cap(c), veh/h	9	1478	459	318	1980	615	683	618	524	2	0	180
V/C Ratio(X)	0.47	0.64	0.75	1.06	0.60	0.00	1.17	0.04	0.37	0.45	0.00	0.08
Avail Cap(c_a), veh/h	130	2011	624	318	2146	666	683	905	767	170	0	624
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	43.4	26.5	27.6	39.0	20.6	15.6	33.6	19.1	21.6	43.6	0.0	34.6
Incr Delay (d2), s/veh	13.9	0.5	3.4	67.5	0.4	0.0	91.2	0.0	0.4	45.0	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	5.2	6.8	6.2	5.7	0.0	15.8	0.3	3.0	0.0	0.0	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	57.3	26.9	31.1	106.5	21.0	15.6	124.9	19.1	22.0	88.7	0.0	34.8
LnGrp LOS	E	C	C	F	C	B	F	B	C	F	A	C
Approach Vol, veh/h		1292			1531			1015			15	
Approach Delay, s/veh		28.1			39.8			102.8			38.4	
Approach LOS		C			D			F			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.0	32.5	24.8	16.2	5.1	41.4	4.7	36.2
Change Period (Y+Rc), s	4.6	6.2	4.6	* 6.2	4.6	6.2	4.6	6.2
Max Green Setting (Gmax), s	9.4	35.8	20.2	* 35	7.0	38.2	9.2	44.0
Max Q Clear Time (g_c+I1), s	11.4	19.9	22.2	2.7	2.2	18.7	2.1	10.4
Green Ext Time (p_c), s	0.0	6.4	0.0	0.0	0.0	7.5	0.0	0.8

Intersection Summary	
HCM 6th Ctrl Delay	52.5
HCM 6th LOS	D

Notes

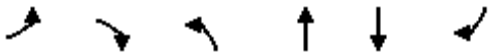
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Configurations					
Traffic Volume (vph)	110	413	71	1598	1281
Future Volume (vph)	110	413	71	1598	1281
Turn Type	Prot	Perm	Prot	NA	NA
Protected Phases	4		5	2	6
Permitted Phases		4			
Detector Phase	4	4	5	2	6
Switch Phase					
Minimum Initial (s)	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	26.6	26.6	9.6	16.5	23.5
Total Split (s)	29.0	29.0	15.0	91.0	76.0
Total Split (%)	24.2%	24.2%	12.5%	75.8%	63.3%
Yellow Time (s)	3.6	3.6	3.6	5.5	5.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	6.5	6.5
Lead/Lag			Lead		Lag
Lead-Lag Optimize?			Yes		Yes
Recall Mode	None	None	None	Max	Max
Act Effct Green (s)	22.6	22.6	8.6	84.5	73.5
Actuated g/C Ratio	0.19	0.19	0.07	0.71	0.62
v/c Ratio	0.33	0.94	0.57	0.64	0.61
Control Delay	44.1	56.6	70.3	10.6	16.4
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	44.1	56.6	70.3	10.6	16.4
LOS	D	E	E	B	B
Approach Delay	54.0			13.2	16.4
Approach LOS	D			B	B

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 118.2	
Natural Cycle: 75	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.94	
Intersection Signal Delay: 20.5	Intersection LOS: C
Intersection Capacity Utilization 71.1%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 11: US-395 & Yucca Terrace Dr.





Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	110	413	71	1598	1281	27
Future Volume (veh/h)	110	413	71	1598	1281	27
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	115	356	74	1665	1334	28
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	368	327	95	2542	2218	47
Arrive On Green	0.20	0.20	0.05	0.70	0.61	0.61
Sat Flow, veh/h	1810	1610	1810	3705	3711	76
Grp Volume(v), veh/h	115	356	74	1665	666	696
Grp Sat Flow(s),veh/h/ln	1810	1610	1810	1805	1805	1886
Q Serve(g_s), s	6.5	24.4	4.8	30.4	27.1	27.1
Cycle Q Clear(g_c), s	6.5	24.4	4.8	30.4	27.1	27.1
Prop In Lane	1.00	1.00	1.00			0.04
Lane Grp Cap(c), veh/h	368	327	95	2542	1107	1157
V/C Ratio(X)	0.31	1.09	0.78	0.65	0.60	0.60
Avail Cap(c_a), veh/h	368	327	157	2542	1107	1157
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	40.7	47.8	56.2	9.7	14.2	14.2
Incr Delay (d2), s/veh	0.5	75.1	5.2	1.3	2.4	2.3
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	26.4	2.3	9.5	10.1	10.5
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	41.1	122.9	61.3	11.1	16.6	16.5
LnGrp LOS	D	F	E	B	B	B
Approach Vol, veh/h	471			1739	1362	
Approach Delay, s/veh	103.0			13.2	16.6	
Approach LOS	F			B	B	

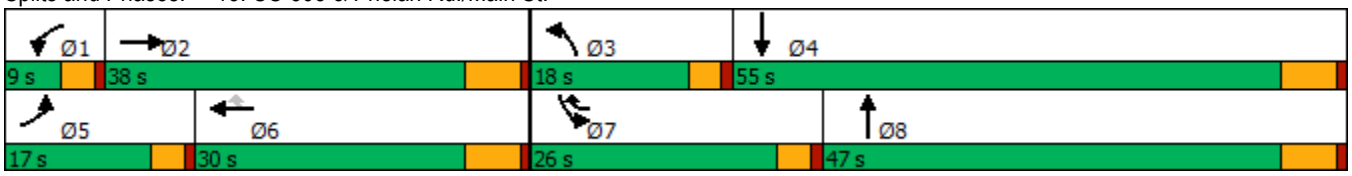
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		91.0		29.0	10.9	80.1
Change Period (Y+Rc), s		6.5		4.6	4.6	6.5
Max Green Setting (Gmax), s		84.5		24.4	10.4	69.5
Max Q Clear Time (g_c+I1), s		32.4		26.4	6.8	29.1
Green Ext Time (p_c), s		17.4		0.0	0.0	10.2

Intersection Summary		
HCM 6th Ctrl Delay		26.3
HCM 6th LOS		C

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	90	1244	24	895	379	238	1228	646	979
Future Volume (vph)	90	1244	24	895	379	238	1228	646	979
Turn Type	Prot	NA	Prot	NA	pm+ov	Prot	NA	Prot	NA
Protected Phases	5	2	1	6	7	3	8	7	4
Permitted Phases					6				
Detector Phase	5	2	1	6	7	3	8	7	4
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.0	16.0	9.0	16.0	9.0	9.0	16.0	9.0	16.0
Total Split (s)	17.0	38.0	9.0	30.0	26.0	18.0	47.0	26.0	55.0
Total Split (%)	14.2%	31.7%	7.5%	25.0%	21.7%	15.0%	39.2%	21.7%	45.8%
Yellow Time (s)	3.0	5.0	3.0	5.0	3.0	3.0	5.0	3.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	6.0	4.0	6.0	4.0	4.0	6.0	4.0	6.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	10.5	33.1	5.0	23.8	51.9	12.3	41.0	22.0	50.7
Actuated g/C Ratio	0.09	0.28	0.04	0.20	0.44	0.10	0.35	0.19	0.43
v/c Ratio	0.59	0.95	0.32	0.81	0.52	0.66	1.01	1.01	0.70
Control Delay	66.6	55.3	67.3	51.4	20.4	59.8	66.6	84.0	30.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	66.6	55.3	67.3	51.4	20.4	59.8	66.6	84.0	30.4
LOS	E	E	E	D	C	E	E	F	C
Approach Delay		56.0		42.7			65.6		50.5
Approach LOS		E		D			E		D

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 117.4	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.01	
Intersection Signal Delay: 54.0	Intersection LOS: D
Intersection Capacity Utilization 103.2%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 13: US-395 & Phelan Rd./Main St.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	90	1244	198	24	895	379	238	1228	47	646	979	99
Future Volume (veh/h)	90	1244	198	24	895	379	238	1228	47	646	979	99
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	95	1309	82	25	942	273	251	1293	23	680	1031	67
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	120	1423	89	43	1288	666	315	1301	23	679	1589	103
Arrive On Green	0.07	0.27	0.27	0.02	0.23	0.23	0.09	0.35	0.35	0.19	0.45	0.45
Sat Flow, veh/h	1810	5303	332	1810	5700	1610	3619	3722	66	3619	3529	229
Grp Volume(v), veh/h	95	938	453	25	942	273	251	660	656	680	555	543
Grp Sat Flow(s),veh/h/ln	1810	1900	1835	1810	1900	1610	1810	1900	1888	1810	1900	1859
Q Serve(g_s), s	6.1	28.1	28.1	1.6	18.0	14.0	8.0	40.6	40.6	22.0	26.6	26.6
Cycle Q Clear(g_c), s	6.1	28.1	28.1	1.6	18.0	14.0	8.0	40.6	40.6	22.0	26.6	26.6
Prop In Lane	1.00		0.18	1.00		1.00	1.00		0.04	1.00		0.12
Lane Grp Cap(c), veh/h	120	1020	493	43	1288	666	315	664	660	679	856	837
V/C Ratio(X)	0.79	0.92	0.92	0.58	0.73	0.41	0.80	0.99	0.99	1.00	0.65	0.65
Avail Cap(c_a), veh/h	201	1037	501	77	1288	666	432	664	660	679	856	837
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	54.0	41.7	41.7	56.7	42.1	24.3	52.5	38.0	38.0	47.6	25.0	25.0
Incr Delay (d2), s/veh	8.5	12.7	22.1	8.9	2.2	0.4	6.2	33.1	33.4	34.9	1.8	1.9
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	2.9	14.1	14.9	0.8	8.2	5.0	3.7	23.5	23.4	12.7	11.3	11.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	62.5	54.4	63.8	65.6	44.2	24.7	58.7	71.1	71.4	82.5	26.9	26.9
LnGrp LOS	E	D	E	E	D	C	E	E	E	F	C	C
Approach Vol, veh/h		1486			1240			1567			1778	
Approach Delay, s/veh		57.8			40.4			69.3			48.2	
Approach LOS		E			D			E			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.8	37.5	14.2	58.8	11.8	32.5	26.0	47.0
Change Period (Y+Rc), s	4.0	6.0	4.0	6.0	4.0	6.0	4.0	6.0
Max Green Setting (Gmax), s	5.0	32.0	14.0	49.0	13.0	24.0	22.0	41.0
Max Q Clear Time (g_c+I1), s	3.6	30.1	10.0	28.6	8.1	20.0	24.0	42.6
Green Ext Time (p_c), s	0.0	1.4	0.2	7.5	0.1	2.3	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	54.4
HCM 6th LOS	D

Intersection	
Int Delay, s/veh	0.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	14	24	1489	33	11	1194
Future Vol, veh/h	14	24	1489	33	11	1194
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	375	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	98	98	98	98	98	98
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	14	24	1519	34	11	1218

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	2167	777	0	0	1553	0
Stage 1	1536	-	-	-	-	-
Stage 2	631	-	-	-	-	-
Critical Hdwy	6.8	6.9	-	-	4.1	-
Critical Hdwy Stg 1	5.6	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	41	344	-	-	432	-
Stage 1	182	-	-	-	-	-
Stage 2	498	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	40	344	-	-	432	-
Mov Cap-2 Maneuver	135	-	-	-	-	-
Stage 1	182	-	-	-	-	-
Stage 2	486	-	-	-	-	-

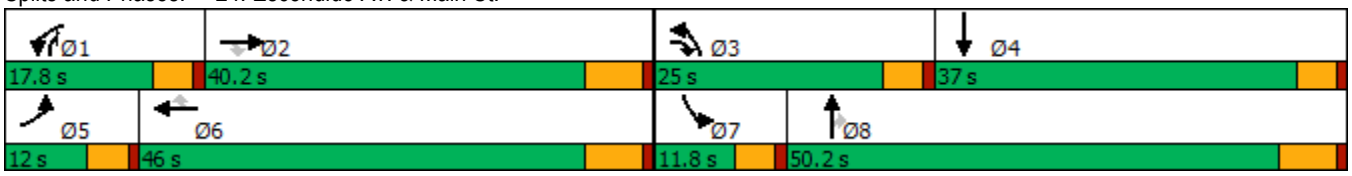
Approach	WB	NB	SB
HCM Control Delay, s	23.1	0	0.1
HCM LOS	C		

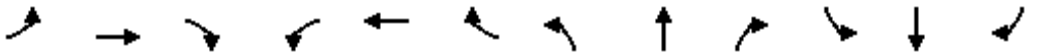
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	135	344	432	-
HCM Lane V/C Ratio	-	-	0.106	0.071	0.026	-
HCM Control Delay (s)	-	-	34.8	16.3	13.6	-
HCM Lane LOS	-	-	D	C	B	-
HCM 95th %tile Q(veh)	-	-	0.3	0.2	0.1	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations											
Traffic Volume (vph)	55	1607	758	458	1209	10	720	52	240	57	38
Future Volume (vph)	55	1607	758	458	1209	10	720	52	240	57	38
Turn Type	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA
Protected Phases	5	2	3	1	6		3	8	1	7	4
Permitted Phases			2			6			8		
Detector Phase	5	2	3	1	6	6	3	8	1	7	4
Switch Phase											
Minimum Initial (s)	5.0	10.0	5.0	5.0	10.0	10.0	5.0	10.0	5.0	5.0	10.0
Minimum Split (s)	9.6	40.2	9.6	9.6	31.2	31.2	9.6	49.2	9.6	9.6	36.6
Total Split (s)	12.0	40.2	25.0	17.8	46.0	46.0	25.0	50.2	17.8	11.8	37.0
Total Split (%)	10.0%	33.5%	20.8%	14.8%	38.3%	38.3%	20.8%	41.8%	14.8%	9.8%	30.8%
Yellow Time (s)	3.6	5.2	3.6	3.6	5.2	5.2	3.6	5.2	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	4.6	4.6	6.2	6.2	4.6	6.2	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	6.8	34.5	56.8	13.4	43.4	43.4	20.7	24.9	44.6	6.7	13.8
Actuated g/C Ratio	0.07	0.35	0.57	0.14	0.44	0.44	0.21	0.25	0.45	0.07	0.14
v/c Ratio	0.52	0.89	0.68	1.16	0.53	0.01	1.18	0.12	0.34	0.54	0.35
Control Delay	64.9	39.1	5.3	136.8	24.3	0.0	134.2	29.2	13.9	66.5	22.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	64.9	39.1	5.3	136.8	24.3	0.0	134.2	29.2	13.9	66.5	22.0
LOS	E	D	A	F	C	A	F	C	B	E	C
Approach Delay		29.1			54.9			100.3			38.9
Approach LOS		C			D			F			D

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 99.1	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.18	
Intersection Signal Delay: 51.3	Intersection LOS: D
Intersection Capacity Utilization 93.5%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 24: Escondido Av. & Main St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	55	1607	758	458	1209	10	720	52	240	57	38	54
Future Volume (veh/h)	55	1607	758	458	1209	10	720	52	240	57	38	54
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	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	1700	1800	1800	1600	1800	1800	1600	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	57	1674	603	477	1259	8	750	54	193	59	40	28
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	71	1866	846	414	2364	654	640	452	590	73	85	60
Arrive On Green	0.04	0.35	0.35	0.14	0.44	0.44	0.21	0.25	0.25	0.05	0.09	0.09
Sat Flow, veh/h	1619	5400	1523	3048	5400	1494	3048	1800	1525	1619	986	690
Grp Volume(v), veh/h	57	1674	603	477	1259	8	750	54	193	59	0	68
Grp Sat Flow(s),veh/h/ln	1619	1800	1523	1524	1800	1494	1524	1800	1525	1619	0	1676
Q Serve(g_s), s	3.4	28.6	28.3	13.2	16.6	0.3	20.4	2.3	8.6	3.5	0.0	3.8
Cycle Q Clear(g_c), s	3.4	28.6	28.3	13.2	16.6	0.3	20.4	2.3	8.6	3.5	0.0	3.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.41
Lane Grp Cap(c), veh/h	71	1866	846	414	2364	654	640	452	590	73	0	145
V/C Ratio(X)	0.81	0.90	0.71	1.15	0.53	0.01	1.17	0.12	0.33	0.81	0.00	0.47
Avail Cap(c_a), veh/h	123	1889	853	414	2364	654	640	815	898	120	0	559
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	46.1	30.2	15.9	42.0	20.0	15.4	38.4	28.1	20.9	46.0	0.0	42.3
Incr Delay (d2), s/veh	7.8	6.1	2.8	92.8	0.2	0.0	93.4	0.1	0.3	7.5	0.0	2.3
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	1.5	12.3	10.0	10.0	6.3	0.1	15.9	1.0	3.1	1.6	0.0	1.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	53.9	36.3	18.7	134.8	20.3	15.5	131.8	28.2	21.2	53.5	0.0	44.6
LnGrp LOS	D	D	B	F	C	B	F	C	C	D	A	D
Approach Vol, veh/h		2334			1744			997			127	
Approach Delay, s/veh		32.2			51.6			104.8			48.7	
Approach LOS		C			D			F			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.8	39.8	25.0	14.6	8.8	48.7	9.0	30.6
Change Period (Y+Rc), s	4.6	6.2	4.6	* 6.2	4.6	6.2	4.6	6.2
Max Green Setting (Gmax), s	13.2	34.0	20.4	* 32	7.4	39.8	7.2	44.0
Max Q Clear Time (g_c+I1), s	15.2	30.6	22.4	5.8	5.4	18.6	5.5	10.6
Green Ext Time (p_c), s	0.0	3.0	0.0	0.3	0.0	8.3	0.0	1.0

Intersection Summary	
HCM 6th Ctrl Delay	53.0
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

APPENDIX 6.11:

OPENING YEAR CUMULATIVE (2021) WITHOUT PROJECT CONDITIONS QUEUING ANALYSIS WORKSHEETS WITH IMPROVEMENTS

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Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	98	931	22	396	371	143	852	300	1168
v/c Ratio	0.69	0.65	0.22	0.41	0.55	0.45	0.65	0.61	0.78
Control Delay	69.7	30.7	51.2	33.3	20.1	46.4	27.8	43.6	28.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	69.7	30.7	51.2	33.3	20.1	46.4	27.8	43.6	28.2
Queue Length 50th (ft)	55	165	12	77	140	40	192	83	271
Queue Length 95th (ft)	#160	236	41	106	211	80	339	142	457
Internal Link Dist (ft)		1117		1265			3985		1763
Turn Bay Length (ft)	340		250		200	280		250	
Base Capacity (vph)	143	2597	102	2527	740	357	1417	635	1664
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.69	0.36	0.22	0.16	0.50	0.40	0.60	0.47	0.70

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	70	271	186	2	47	245	933	114	23	1160	132
v/c Ratio	0.19	0.45	0.97	0.00	0.10	0.79	0.44	0.12	0.27	0.77	0.18
Control Delay	33.5	6.4	100.3	30.5	0.4	62.1	15.3	2.9	63.3	33.9	6.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	33.5	6.4	100.3	30.5	0.4	62.1	15.3	2.9	63.3	33.9	6.7
Queue Length 50th (ft)	40	1	135	1	0	178	217	0	17	390	6
Queue Length 95th (ft)	79	63	#269	8	0	263	290	28	46	#583	50
Internal Link Dist (ft)		773		663			859			1974	
Turn Bay Length (ft)	50		400		400	190			225		225
Base Capacity (vph)	468	708	248	619	598	437	2117	974	84	1508	743
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.15	0.38	0.75	0.00	0.08	0.56	0.44	0.12	0.27	0.77	0.18

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	95	785	25	782	353	232	1323	338	1046
v/c Ratio	0.59	0.55	0.29	0.69	0.50	0.62	0.88	0.67	0.64
Control Delay	64.1	34.1	61.8	43.2	19.2	54.4	39.6	50.4	26.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	64.1	34.1	61.8	43.2	19.2	54.4	39.6	50.4	26.8
Queue Length 50th (ft)	63	151	17	169	129	79	427	115	285
Queue Length 95th (ft)	130	201	49	224	212	132	#678	173	395
Internal Link Dist (ft)		1117		1265			3985		1763
Turn Bay Length (ft)	340		250		200	280		250	
Base Capacity (vph)	192	1801	87	1492	797	441	1503	712	1784
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.49	0.44	0.29	0.52	0.44	0.53	0.88	0.47	0.59

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	82	264	135	4	34	214	1402	156	35	923	103
v/c Ratio	0.29	0.49	1.02	0.01	0.08	0.78	0.62	0.15	0.39	0.53	0.12
Control Delay	37.1	7.5	123.6	31.8	0.4	62.5	15.7	2.9	65.3	22.4	3.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	37.1	7.5	123.6	31.8	0.4	62.5	15.7	2.9	65.3	22.4	3.4
Queue Length 50th (ft)	48	1	~98	2	0	141	309	2	24	220	0
Queue Length 95th (ft)	91	63	#193	11	0	241	507	35	#66	372	28
Internal Link Dist (ft)		773		663			859			1974	
Turn Bay Length (ft)	50		400		400	190			225		225
Base Capacity (vph)	495	731	230	657	635	374	2264	1046	89	1727	834
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.17	0.36	0.59	0.01	0.05	0.57	0.62	0.15	0.39	0.53	0.12

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

APPENDIX 6.12:

OPENING YEAR CUMULATIVE (2021) WITH PROJECT CONDITIONS QUEUING ANALYSIS WORKSHEETS WITH IMPROVEMENTS

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Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	98	1060	22	1181	616	232	942	360	1183
v/c Ratio	0.84	0.56	0.27	0.76	0.75	0.80	0.83	0.76	0.90
Control Delay	102.9	28.0	61.1	38.1	26.1	71.0	42.8	57.6	43.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	102.9	28.0	61.1	38.1	26.1	71.0	42.8	57.6	43.0
Queue Length 50th (ft)	70	196	15	276	300	84	325	126	404
Queue Length 95th (ft)	#184	272	46	327	439	#163	#487	#194	#607
Internal Link Dist (ft)		1117		1265			3985		1763
Turn Bay Length (ft)	340		250		200	280		250	
Base Capacity (vph)	116	2121	83	2056	843	290	1141	516	1354
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.84	0.50	0.27	0.57	0.73	0.80	0.83	0.70	0.87

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	70	271	186	2	47	245	1118	114	23	1191	132
v/c Ratio	0.19	0.45	0.97	0.00	0.10	0.79	0.53	0.12	0.27	0.79	0.18
Control Delay	33.5	6.4	100.3	30.5	0.4	62.1	16.7	2.9	63.3	34.7	6.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	33.5	6.4	100.3	30.5	0.4	62.1	16.7	2.9	63.3	34.7	6.7
Queue Length 50th (ft)	40	1	135	1	0	178	280	0	17	405	6
Queue Length 95th (ft)	79	63	#269	8	0	263	367	28	46	#611	50
Internal Link Dist (ft)		773		663			859			1974	
Turn Bay Length (ft)	50		400		400	190			225		225
Base Capacity (vph)	468	708	248	619	598	437	2117	974	84	1508	743
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.15	0.38	0.75	0.00	0.08	0.56	0.53	0.12	0.27	0.79	0.18

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	95	1517	25	942	399	251	1342	680	1135
v/c Ratio	0.64	0.93	0.32	0.76	0.51	0.71	1.01	1.08	0.71
Control Delay	72.0	51.4	67.2	47.8	19.7	62.5	66.0	106.4	30.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	72.0	51.4	67.2	47.8	19.7	62.5	66.0	106.4	30.9
Queue Length 50th (ft)	72	383	19	227	160	97	~559	~310	363
Queue Length 95th (ft)	130	#481	49	273	253	142	#693	#429	442
Internal Link Dist (ft)		1117		1265			3985		1763
Turn Bay Length (ft)	340		250		200	280		250	
Base Capacity (vph)	169	1630	77	1314	778	388	1326	627	1608
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.56	0.93	0.32	0.72	0.51	0.65	1.01	1.08	0.71

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	82	264	135	4	34	214	1440	156	35	1095	103
v/c Ratio	0.29	0.49	1.02	0.01	0.08	0.78	0.64	0.15	0.39	0.63	0.12
Control Delay	37.1	7.5	123.6	31.8	0.4	62.5	16.1	3.0	65.3	24.5	3.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	37.1	7.5	123.6	31.8	0.4	62.5	16.1	3.0	65.3	24.5	3.4
Queue Length 50th (ft)	48	1	~98	2	0	141	323	3	24	278	0
Queue Length 95th (ft)	91	63	#193	11	0	241	530	37	#66	465	28
Internal Link Dist (ft)		773		663			859			1974	
Turn Bay Length (ft)	50		400		400	190			225		225
Base Capacity (vph)	495	731	230	657	635	374	2264	1045	89	1727	834
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.17	0.36	0.59	0.01	0.05	0.57	0.64	0.15	0.39	0.63	0.12

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

APPENDIX 7.1:

HORIZON YEAR (2040) WITHOUT PROJECT CONDITIONS INTERSECTION OPERATIONS ANALYSIS WORKSHEETS

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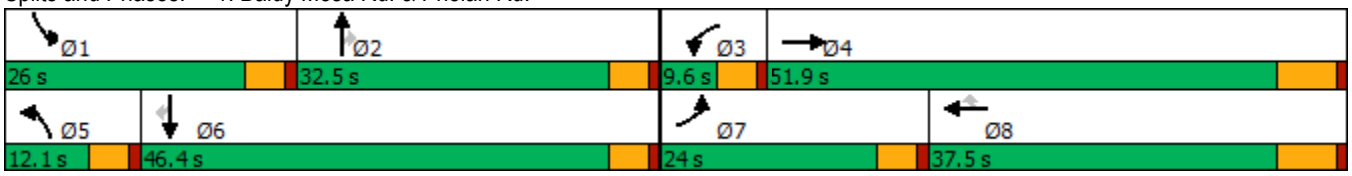
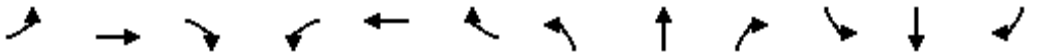
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	218	812	16	517	200	51	102	73	257	69	261
Future Volume (vph)	218	812	16	517	200	51	102	73	257	69	261
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4	3	8		5	2		1	6	
Permitted Phases					8			2			6
Detector Phase	7	4	3	8	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	30.5	9.6	37.5	37.5	9.6	31.6	31.6	9.6	40.6	40.6
Total Split (s)	24.0	51.9	9.6	37.5	37.5	12.1	32.5	32.5	26.0	46.4	46.4
Total Split (%)	20.0%	43.3%	8.0%	31.3%	31.3%	10.1%	27.1%	27.1%	21.7%	38.7%	38.7%
Yellow Time (s)	3.6	5.5	3.6	5.5	5.5	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.5	4.6	6.5	6.5	4.6	4.6	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Max	None	Max	Max	None	None	None	None	None	None
Act Effct Green (s)	17.6	49.9	5.0	31.2	31.2	6.8	13.9	13.9	20.3	29.6	29.6
Actuated g/C Ratio	0.17	0.48	0.05	0.30	0.30	0.07	0.13	0.13	0.20	0.29	0.29
v/c Ratio	0.81	0.53	0.20	0.52	0.35	0.49	0.44	0.20	0.83	0.14	0.43
Control Delay	64.9	22.0	57.3	33.4	7.4	64.8	47.0	1.2	62.8	29.7	5.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	64.9	22.0	57.3	33.4	7.4	64.8	47.0	1.2	62.8	29.7	5.5
LOS	E	C	E	C	A	E	D	A	E	C	A
Approach Delay		30.8		26.8			36.2			33.4	
Approach LOS		C		C			D			C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 103.5	
Natural Cycle: 110	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.83	
Intersection Signal Delay: 30.7	Intersection LOS: C
Intersection Capacity Utilization 62.4%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 1: Baldy Mesa Rd. & Phelan Rd.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	218	812	33	16	517	200	51	102	73	257	69	261
Future Volume (veh/h)	218	812	33	16	517	200	51	102	73	257	69	261
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	1800	1900	1900	1800	1900	1900	1800	1900	1900	1800	1900	1900
Adj Flow Rate, veh/h	237	883	26	17	562	165	55	111	53	279	75	184
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	268	1650	49	87	1281	571	70	193	163	310	460	390
Arrive On Green	0.16	0.46	0.46	0.05	0.35	0.35	0.04	0.10	0.10	0.18	0.24	0.24
Sat Flow, veh/h	1714	3581	105	1714	3610	1610	1714	1900	1610	1714	1900	1610
Grp Volume(v), veh/h	237	445	464	17	562	165	55	111	53	279	75	184
Grp Sat Flow(s),veh/h/ln	1714	1805	1881	1714	1805	1610	1714	1900	1610	1714	1900	1610
Q Serve(g_s), s	13.3	17.4	17.4	0.9	11.7	7.3	3.1	5.5	3.0	15.7	3.1	9.6
Cycle Q Clear(g_c), s	13.3	17.4	17.4	0.9	11.7	7.3	3.1	5.5	3.0	15.7	3.1	9.6
Prop In Lane	1.00		0.06	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	268	832	867	87	1281	571	70	193	163	310	460	390
V/C Ratio(X)	0.88	0.54	0.54	0.20	0.44	0.29	0.79	0.58	0.32	0.90	0.16	0.47
Avail Cap(c_a), veh/h	337	832	867	87	1281	571	130	538	456	372	806	683
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.7	19.0	19.0	44.8	24.3	22.9	46.9	42.2	41.1	39.5	29.5	32.0
Incr Delay (d2), s/veh	17.2	2.5	2.4	0.4	1.1	1.3	7.3	2.7	1.1	19.4	0.2	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.5	6.9	7.2	0.4	4.7	2.7	1.5	2.7	1.2	8.3	1.4	3.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	57.9	21.5	21.4	45.2	25.4	24.1	54.1	44.9	42.3	58.9	29.6	32.9
LnGrp LOS	E	C	C	D	C	C	D	D	D	E	C	C
Approach Vol, veh/h		1146			744			219			538	
Approach Delay, s/veh		29.0			25.6			46.6			45.9	
Approach LOS		C			C			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	22.4	14.6	9.6	51.9	8.6	28.4	20.0	41.5
Change Period (Y+Rc), s	4.6	4.6	4.6	6.5	4.6	4.6	4.6	6.5
Max Green Setting (Gmax), s	21.4	27.9	5.0	45.4	7.5	41.8	19.4	31.0
Max Q Clear Time (g_c+I1), s	17.7	7.5	2.9	19.4	5.1	11.6	15.3	13.7
Green Ext Time (p_c), s	0.2	0.7	0.0	5.2	0.0	1.1	0.1	3.5

Intersection Summary	
HCM 6th Ctrl Delay	32.9
HCM 6th LOS	C

Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	4	1150	8	6	628	0	23	0	26	8	0	13
Future Vol, veh/h	4	1150	8	6	628	0	23	0	26	8	0	13
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	105	-	105	110	-	110	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
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	0	0	0	0	0
Mvmt Flow	4	1250	9	7	683	0	25	0	28	9	0	14

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	683	0	0	1259	0	0	1962	1955	1250	1974	1964	683
Stage 1	-	-	-	-	-	-	1258	1258	-	697	697	-
Stage 2	-	-	-	-	-	-	704	697	-	1277	1267	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
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	2.2	-	-	2.2	-	-	3.8	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	919	-	-	559	-	-	47	65	213	47	64	453
Stage 1	-	-	-	-	-	-	203	245	-	435	446	-
Stage 2	-	-	-	-	-	-	407	446	-	206	242	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	919	-	-	559	-	-	45	64	213	40	63	453
Mov Cap-2 Maneuver	-	-	-	-	-	-	139	169	-	126	165	-
Stage 1	-	-	-	-	-	-	202	244	-	433	440	-
Stage 2	-	-	-	-	-	-	389	440	-	178	241	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0.1	35.6	22.5
HCM LOS			E	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	170	919	-	-	559	-	-	228
HCM Lane V/C Ratio	0.313	0.005	-	-	0.012	-	-	0.1
HCM Control Delay (s)	35.6	8.9	-	-	11.5	-	-	22.5
HCM Lane LOS	E	A	-	-	B	-	-	C
HCM 95th %tile Q(veh)	1.3	0	-	-	0	-	-	0.3

Intersection	
Int Delay, s/veh	0.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1219	14	4	654	20	8
Future Vol, veh/h	1219	14	4	654	20	8
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	110	-	0	-
Veh in Median Storage, #	0	-	-	0	1	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	1325	15	4	711	22	9

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1340	0	2052	1333
Stage 1	-	-	-	-	1333	-
Stage 2	-	-	-	-	719	-
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	-	-	521	-	62	190
Stage 1	-	-	-	-	248	-
Stage 2	-	-	-	-	486	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	521	-	62	190
Mov Cap-2 Maneuver	-	-	-	-	174	-
Stage 1	-	-	-	-	248	-
Stage 2	-	-	-	-	482	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	29.4
HCM LOS			D

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	178	-	-	521	-
HCM Lane V/C Ratio	0.171	-	-	0.008	-
HCM Control Delay (s)	29.4	-	-	12	-
HCM Lane LOS	D	-	-	B	-
HCM 95th %tile Q(veh)	0.6	-	-	0	-

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	11	1205	658	23	22	11
Future Vol, veh/h	11	1205	658	23	22	11
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	1	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	12	1310	715	25	24	12

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	740	0	-	0	1407	370
Stage 1	-	-	-	-	728	-
Stage 2	-	-	-	-	679	-
Critical Hdwy	4.1	-	-	-	6.8	6.9
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	876	-	-	-	132	633
Stage 1	-	-	-	-	444	-
Stage 2	-	-	-	-	471	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	876	-	-	-	130	633
Mov Cap-2 Maneuver	-	-	-	-	266	-
Stage 1	-	-	-	-	438	-
Stage 2	-	-	-	-	471	-

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	17.2
HCM LOS			C

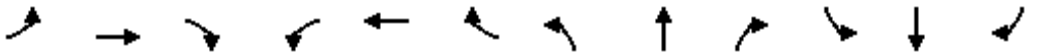
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	876	-	-	-	330
HCM Lane V/C Ratio	0.014	-	-	-	0.109
HCM Control Delay (s)	9.2	-	-	-	17.2
HCM Lane LOS	A	-	-	-	C
HCM 95th %tile Q(veh)	0	-	-	-	0.4

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	69	172	127	98	129	63	1126	61	297	1755	118
Future Volume (vph)	69	172	127	98	129	63	1126	61	297	1755	118
Turn Type	Perm	NA	Perm	Perm	NA	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		4			8	5	2		1	6	
Permitted Phases	4		4	8				2			6
Detector Phase	4	4	4	8	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	15.0	15.0	15.0	42.0	42.0	9.0	28.0	28.0	9.0	37.0	37.0
Total Split (s)	44.0	44.0	44.0	44.0	44.0	10.0	45.0	45.0	31.0	66.0	66.0
Total Split (%)	36.7%	36.7%	36.7%	36.7%	36.7%	8.3%	37.5%	37.5%	25.8%	55.0%	55.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	3.0	5.0	5.0	3.0	5.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	4.0	6.0	6.0	4.0	6.0	6.0
Lead/Lag						Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?						Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Max	Max	None	Max	Max
Act Effct Green (s)	39.0	39.0	39.0	39.0	39.0	6.0	41.5	41.5	24.5	60.0	60.0
Actuated g/C Ratio	0.32	0.32	0.32	0.32	0.32	0.05	0.35	0.35	0.20	0.50	0.50
v/c Ratio	1.15	0.30	0.23	0.31	0.86	0.76	0.98	0.11	0.88	1.06	0.15
Control Delay	198.9	32.0	9.2	33.4	44.3	101.0	61.0	3.1	70.3	68.2	3.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	198.9	32.0	9.2	33.4	44.3	101.0	61.0	3.1	70.3	68.2	3.1
LOS	F	C	A	C	D	F	E	A	E	E	A
Approach Delay		55.4			42.5		60.2			64.9	
Approach LOS		E			D		E			E	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Natural Cycle: 110	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.15	
Intersection Signal Delay: 59.7	Intersection LOS: E
Intersection Capacity Utilization 107.6%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 8: US-395 & Luna Rd.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	69	172	127	98	129	372	63	1126	61	297	1755	118
Future Volume (veh/h)	69	172	127	98	129	372	63	1126	61	297	1755	118
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	75	187	105	107	140	338	68	1224	50	323	1908	110
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	117	619	524	354	161	388	87	1282	569	351	1808	807
Arrive On Green	0.33	0.33	0.33	0.33	0.33	0.33	0.05	0.36	0.36	0.19	0.50	0.50
Sat Flow, veh/h	982	1900	1610	1166	493	1190	1810	3610	1603	1810	3610	1610
Grp Volume(v), veh/h	75	187	105	107	0	478	68	1224	50	323	1908	110
Grp Sat Flow(s),veh/h/ln	982	1900	1610	1166	0	1683	1810	1805	1603	1810	1805	1610
Q Serve(g_s), s	7.0	8.8	5.6	9.1	0.0	32.0	4.5	39.6	2.5	21.0	60.0	4.4
Cycle Q Clear(g_c), s	39.0	8.8	5.6	17.9	0.0	32.0	4.5	39.6	2.5	21.0	60.0	4.4
Prop In Lane	1.00		1.00	1.00		0.71	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	117	619	524	354	0	548	87	1282	569	351	1808	807
V/C Ratio(X)	0.64	0.30	0.20	0.30	0.00	0.87	0.78	0.95	0.09	0.92	1.06	0.14
Avail Cap(c_a), veh/h	117	619	524	354	0	548	91	1282	569	408	1808	807
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	57.2	30.2	29.1	36.9	0.0	38.0	56.4	37.7	25.7	47.4	29.9	16.0
Incr Delay (d2), s/veh	8.7	0.1	0.1	0.2	0.0	13.8	31.9	16.4	0.3	23.2	37.4	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	4.0	2.2	2.6	0.0	14.8	2.7	19.1	0.9	11.2	32.2	1.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	66.0	30.3	29.2	37.1	0.0	51.9	88.3	54.1	26.0	70.6	67.3	16.4
LnGrp LOS	E	C	C	D	A	D	F	D	C	E	F	B
Approach Vol, veh/h		367			585			1342			2341	
Approach Delay, s/veh		37.3			49.2			54.8			65.4	
Approach LOS		D			D			D			E	

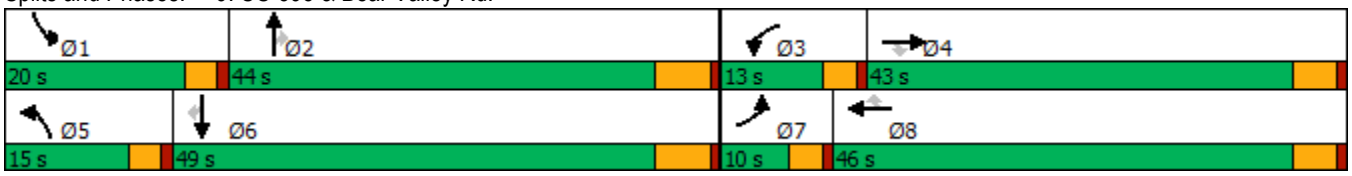
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	27.2	48.5		44.0	9.8	66.0		44.0				
Change Period (Y+Rc), s	4.0	6.0		5.0	4.0	6.0		5.0				
Max Green Setting (Gmax), s	27.0	39.0		39.0	6.0	60.0		39.0				
Max Q Clear Time (g_c+I1), s	23.0	41.6		41.0	6.5	62.0		34.0				
Green Ext Time (p_c), s	0.3	0.0		0.0	0.0	0.0		1.1				

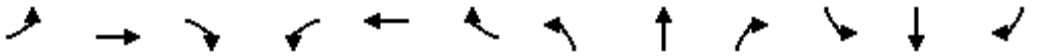
Intersection Summary			
HCM 6th Ctrl Delay		58.0	
HCM 6th LOS		E	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	80	464	317	217	347	138	148	1043	134	310	1726	47
Future Volume (vph)	80	464	317	217	347	138	148	1043	134	310	1726	47
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.0	43.0	43.0	9.0	43.0	43.0	9.0	44.0	44.0	9.0	44.0	44.0
Total Split (s)	10.0	43.0	43.0	13.0	46.0	46.0	15.0	44.0	44.0	20.0	49.0	49.0
Total Split (%)	8.3%	35.8%	35.8%	10.8%	38.3%	38.3%	12.5%	36.7%	36.7%	16.7%	40.8%	40.8%
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0	4.0	3.0	5.0	5.0	3.0	5.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	5.0	5.0	4.0	5.0	5.0	4.0	6.0	6.0	4.0	6.0	6.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Max	Max	None	Max	Max
Act Effct Green (s)	6.0	20.4	20.4	9.1	23.4	23.4	11.1	38.3	38.3	16.1	43.3	43.3
Actuated g/C Ratio	0.06	0.20	0.20	0.09	0.23	0.23	0.11	0.37	0.37	0.16	0.42	0.42
v/c Ratio	0.78	0.67	0.66	1.42	0.44	0.30	0.79	0.80	0.20	1.13	1.17	0.07
Control Delay	93.0	42.4	19.2	256.3	35.1	6.6	74.5	35.7	6.1	136.2	114.2	0.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	93.0	42.4	19.2	256.3	35.1	6.6	74.5	35.7	6.1	136.2	114.2	0.8
LOS	F	D	B	F	D	A	E	D	A	F	F	A
Approach Delay		38.5			97.9			37.1			115.0	
Approach LOS		D			F			D			F	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 103	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.42	
Intersection Signal Delay: 78.6	Intersection LOS: E
Intersection Capacity Utilization 96.6%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 9: US-395 & Bear Valley Rd.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	80	464	317	217	347	138	148	1043	134	310	1726	47
Future Volume (veh/h)	80	464	317	217	347	138	148	1043	134	310	1726	47
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	82	478	246	224	358	108	153	1075	111	320	1779	42
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	105	673	300	162	786	351	184	1361	607	287	1567	699
Arrive On Green	0.06	0.19	0.19	0.09	0.22	0.22	0.10	0.38	0.38	0.16	0.43	0.43
Sat Flow, veh/h	1810	3610	1610	1810	3610	1610	1810	3610	1610	1810	3610	1610
Grp Volume(v), veh/h	82	478	246	224	358	108	153	1075	111	320	1779	42
Grp Sat Flow(s),veh/h/ln	1810	1805	1610	1810	1805	1610	1810	1805	1610	1810	1805	1610
Q Serve(g_s), s	4.5	12.5	14.8	9.0	8.7	5.7	8.4	26.6	4.6	16.0	43.8	1.5
Cycle Q Clear(g_c), s	4.5	12.5	14.8	9.0	8.7	5.7	8.4	26.6	4.6	16.0	43.8	1.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	105	673	300	162	786	351	184	1361	607	287	1567	699
V/C Ratio(X)	0.78	0.71	0.82	1.39	0.46	0.31	0.83	0.79	0.18	1.11	1.14	0.06
Avail Cap(c_a), veh/h	108	1361	607	162	1468	655	197	1361	607	287	1567	699
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.8	38.4	39.4	45.9	34.2	33.1	44.4	27.9	21.0	42.4	28.5	16.6
Incr Delay (d2), s/veh	28.4	0.5	2.1	207.4	0.2	0.2	23.1	4.7	0.7	87.3	69.3	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.8	5.2	5.6	13.1	3.6	2.1	4.7	11.2	1.7	13.6	31.5	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	75.2	39.0	41.5	253.3	34.4	33.2	67.6	32.6	21.7	129.7	97.8	16.7
LnGrp LOS	E	D	D	F	C	C	E	C	C	F	F	B
Approach Vol, veh/h		806			690			1339			2141	
Approach Delay, s/veh		43.4			105.3			35.7			101.0	
Approach LOS		D			F			D			F	

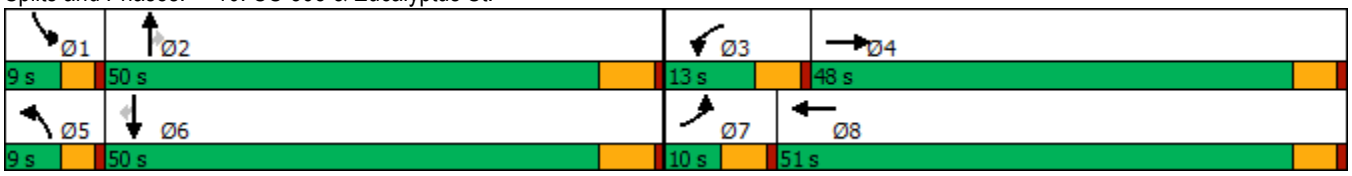
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	20.0	44.0	13.0	23.8	14.2	49.8	9.9	26.9
Change Period (Y+Rc), s	4.0	6.0	4.0	5.0	4.0	6.0	4.0	5.0
Max Green Setting (Gmax), s	16.0	38.0	9.0	38.0	11.0	43.0	6.0	41.0
Max Q Clear Time (g_c+I1), s	18.0	28.6	11.0	16.8	10.4	45.8	6.5	10.7
Green Ext Time (p_c), s	0.0	3.3	0.0	2.0	0.0	0.0	0.0	1.4

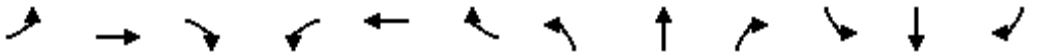
Intersection Summary	
HCM 6th Ctrl Delay	74.7
HCM 6th LOS	E

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	13	7	105	8	9	1186	81	9	2254	11
Future Volume (vph)	13	7	105	8	9	1186	81	9	2254	11
Turn Type	Prot	NA	Prot	NA	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4	3	8	5	2		1	6	
Permitted Phases							2			6
Detector Phase	7	4	3	8	5	2	2	1	6	6
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	10.0	48.0	10.0	48.0	9.0	41.0	41.0	9.0	41.0	41.0
Total Split (s)	10.0	48.0	13.0	51.0	9.0	50.0	50.0	9.0	50.0	50.0
Total Split (%)	8.3%	40.0%	10.8%	42.5%	7.5%	41.7%	41.7%	7.5%	41.7%	41.7%
Yellow Time (s)	4.0	4.0	4.0	4.0	3.0	5.0	5.0	3.0	5.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	4.0	6.0	6.0	4.0	6.0	6.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	Max	Max	None	Max	Max
Act Effct Green (s)	5.2	15.0	9.7	18.2	5.2	50.9	50.9	5.2	50.9	50.9
Actuated g/C Ratio	0.06	0.18	0.12	0.22	0.06	0.61	0.61	0.06	0.61	0.61
v/c Ratio	0.12	0.08	0.54	0.11	0.09	0.58	0.08	0.09	1.10	0.01
Control Delay	46.5	15.5	48.7	10.7	46.0	16.1	3.6	46.0	71.8	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	46.5	15.5	48.7	10.7	46.0	16.1	3.6	46.0	71.8	0.0
LOS	D	B	D	B	D	B	A	D	E	A
Approach Delay		26.3		38.6		15.5			71.3	
Approach LOS		C		D		B			E	

Intersection Summary		
Cycle Length: 120		
Actuated Cycle Length: 83.2		
Natural Cycle: 120		
Control Type: Actuated-Uncoordinated		
Maximum v/c Ratio: 1.10		
Intersection Signal Delay: 50.5	Intersection LOS: D	
Intersection Capacity Utilization 84.7%	ICU Level of Service E	
Analysis Period (min) 15		

Splits and Phases: 10: US-395 & Eucalyptus St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	13	7	17	105	8	30	9	1186	81	9	2254	11
Future Volume (veh/h)	13	7	17	105	8	30	9	1186	81	9	2254	11
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	14	8	10	113	9	21	10	1275	83	10	2424	11
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	30	76	95	144	82	191	23	2008	896	23	2008	896
Arrive On Green	0.02	0.10	0.10	0.08	0.16	0.16	0.01	0.56	0.56	0.01	0.56	0.56
Sat Flow, veh/h	1810	768	960	1810	506	1180	1810	3610	1610	1810	3610	1610
Grp Volume(v), veh/h	14	0	18	113	0	30	10	1275	83	10	2424	11
Grp Sat Flow(s),veh/h/ln	1810	0	1727	1810	0	1685	1810	1805	1610	1810	1805	1610
Q Serve(g_s), s	0.6	0.0	0.8	4.9	0.0	1.2	0.4	19.2	1.9	0.4	44.0	0.2
Cycle Q Clear(g_c), s	0.6	0.0	0.8	4.9	0.0	1.2	0.4	19.2	1.9	0.4	44.0	0.2
Prop In Lane	1.00		0.56	1.00		0.70	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	30	0	171	144	0	273	23	2008	896	23	2008	896
V/C Ratio(X)	0.46	0.00	0.11	0.79	0.00	0.11	0.44	0.64	0.09	0.44	1.21	0.01
Avail Cap(c_a), veh/h	114	0	939	183	0	980	114	2008	896	114	2008	896
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.5	0.0	32.4	35.7	0.0	28.3	38.8	12.0	8.2	38.8	17.6	7.8
Incr Delay (d2), s/veh	4.0	0.0	0.3	12.1	0.0	0.2	5.0	1.5	0.2	5.0	98.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	0.3	2.5	0.0	0.5	0.2	6.1	0.6	0.2	43.5	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	42.6	0.0	32.7	47.8	0.0	28.5	43.8	13.6	8.4	43.8	115.8	7.9
LnGrp LOS	D	A	C	D	A	C	D	B	A	D	F	A
Approach Vol, veh/h		32			143			1368			2445	
Approach Delay, s/veh		37.0			43.8			13.5			115.0	
Approach LOS		D			D			B			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.0	50.0	11.3	12.8	5.0	50.0	6.3	17.8
Change Period (Y+Rc), s	4.0	6.0	5.0	5.0	4.0	6.0	5.0	5.0
Max Green Setting (Gmax), s	5.0	44.0	8.0	43.0	5.0	44.0	5.0	46.0
Max Q Clear Time (g_c+I1), s	2.4	21.2	6.9	2.8	2.4	46.0	2.6	3.2
Green Ext Time (p_c), s	0.0	9.1	0.0	0.1	0.0	0.0	0.0	0.1

Intersection Summary	
HCM 6th Ctrl Delay	77.0
HCM 6th LOS	E

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	0	0	1	9	0	1	4	1920	81	6	2656	0
Future Vol, veh/h	0	0	1	9	0	1	4	1920	81	6	2656	0
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	-	-	-	-	-	-	-	-	-	-	-	-
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	0	0	0	0	0
Mvmt Flow	0	0	1	10	0	1	4	2087	88	7	2887	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	5041	5084	2887	5041	5040	2131	2887	0	0	2175	0	0
Stage 1	2901	2901	-	2139	2139	-	-	-	-	-	-	-
Stage 2	2140	2183	-	2902	2901	-	-	-	-	-	-	-
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	0	1	22	0	1	63	130	-	-	248	-	-
Stage 1	23	36	-	65	90	-	-	-	-	-	-	-
Stage 2	65	85	-	23	36	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	0	1	22	0	1	63	130	-	-	248	-	-
Mov Cap-2 Maneuver	0	1	-	0	1	-	-	-	-	-	-	-
Stage 1	23	36	-	65	90	-	-	-	-	-	-	-
Stage 2	64	85	-	22	36	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	177	73.7	0.1	0
HCM LOS	F	F		

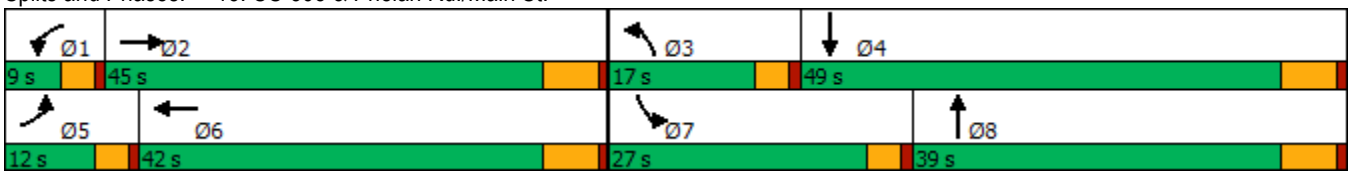
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	130	-	-	22	63	248	-	-
HCM Lane V/C Ratio	0.033	-	-	0.049	0.173	0.026	-	-
HCM Control Delay (s)	33.6	0	-	177	73.7	19.9	0	-
HCM Lane LOS	D	A	-	F	F	C	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0.1	0.6	0.1	-	-

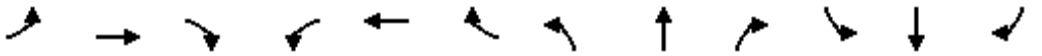
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	103	921	23	449	151	1485	317	2268
Future Volume (vph)	103	921	23	449	151	1485	317	2268
Turn Type	Prot	NA	Prot	NA	Prot	NA	Prot	NA
Protected Phases	5	2	1	6	3	8	7	4
Permitted Phases								
Detector Phase	5	2	1	6	3	8	7	4
Switch Phase								
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.0	16.0	9.0	16.0	9.0	16.0	9.0	16.0
Total Split (s)	12.0	45.0	9.0	42.0	17.0	39.0	27.0	49.0
Total Split (%)	10.0%	37.5%	7.5%	35.0%	14.2%	32.5%	22.5%	40.8%
Yellow Time (s)	3.0	5.0	3.0	5.0	3.0	5.0	3.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	6.0	4.0	6.0	4.0	6.0	4.0	6.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None
Act Effct Green (s)	8.0	39.4	5.0	32.6	12.4	33.1	22.7	43.4
Actuated g/C Ratio	0.07	0.34	0.04	0.28	0.11	0.28	0.20	0.37
v/c Ratio	0.86	0.97	0.31	0.83	0.82	1.54	0.94	1.83
Control Delay	105.8	58.2	66.3	37.9	82.8	278.7	82.1	400.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	105.8	58.2	66.3	37.9	82.8	278.7	82.1	400.9
LOS	F	E	E	D	F	F	F	F
Approach Delay		62.2		38.7		261.0		363.0
Approach LOS		E		D		F		F

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 116.4
Natural Cycle: 120
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.83
Intersection Signal Delay: 234.7 — Intersection LOS: F
Intersection Capacity Utilization 126.4% — ICU Level of Service H
Analysis Period (min) 15

Splits and Phases: 13: US-395 & Phelan Rd./Main St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	103	921	203	23	449	416	151	1485	26	317	2268	82
Future Volume (veh/h)	103	921	203	23	449	416	151	1485	26	317	2268	82
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	107	959	166	24	468	353	157	1547	27	330	2362	81
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	123	1011	175	42	556	418	185	1022	18	355	1338	46
Arrive On Green	0.07	0.33	0.33	0.02	0.28	0.28	0.10	0.28	0.28	0.20	0.38	0.38
Sat Flow, veh/h	1810	3077	532	1810	1963	1476	1810	3630	63	1810	3562	121
Grp Volume(v), veh/h	107	562	563	24	430	391	157	768	806	330	1190	1253
Grp Sat Flow(s),veh/h/ln	1810	1805	1804	1810	1805	1634	1810	1805	1889	1810	1805	1878
Q Serve(g_s), s	6.9	35.6	35.7	1.5	26.3	26.4	10.0	33.0	33.0	21.0	44.0	44.0
Cycle Q Clear(g_c), s	6.9	35.6	35.7	1.5	26.3	26.4	10.0	33.0	33.0	21.0	44.0	44.0
Prop In Lane	1.00		0.29	1.00		0.90	1.00		0.03	1.00		0.06
Lane Grp Cap(c), veh/h	123	593	593	42	512	463	185	508	532	355	678	706
V/C Ratio(X)	0.87	0.95	0.95	0.57	0.84	0.84	0.85	1.51	1.52	0.93	1.75	1.78
Avail Cap(c_a), veh/h	123	601	600	77	554	502	201	508	532	355	678	706
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	54.1	38.4	38.4	56.7	39.5	39.6	51.8	42.1	42.1	46.3	36.6	36.6
Incr Delay (d2), s/veh	42.8	24.4	24.7	8.9	10.5	11.7	25.5	240.4	241.5	30.2	345.8	354.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.5	18.6	18.7	0.8	12.4	11.4	5.6	47.6	50.0	11.9	82.8	87.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	96.9	62.8	63.1	65.5	50.0	51.3	77.3	282.5	283.6	76.5	382.4	391.2
LnGrp LOS	F	E	E	E	D	D	E	F	F	E	F	F
Approach Vol, veh/h		1232			845			1731			2773	
Approach Delay, s/veh		65.9			51.1			264.4			350.0	
Approach LOS		E			D			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.7	44.5	16.0	50.0	12.0	39.2	27.0	39.0
Change Period (Y+Rc), s	4.0	6.0	4.0	6.0	4.0	6.0	4.0	6.0
Max Green Setting (Gmax), s	5.0	39.0	13.0	43.0	8.0	36.0	23.0	33.0
Max Q Clear Time (g_c+I1), s	3.5	37.7	12.0	46.0	8.9	28.4	23.0	35.0
Green Ext Time (p_c), s	0.0	0.8	0.0	0.0	0.0	2.8	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	235.9
HCM 6th LOS	F

Intersection	
Int Delay, s/veh	18.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	122	432	1230	68	565	1929
Future Vol, veh/h	122	432	1230	68	565	1929
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	375	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	131	465	1323	73	608	2074

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	4650	698	0	0	1396	0
Stage 1	1360	-	-	-	-	-
Stage 2	3290	-	-	-	-	-
Critical Hdwy	6.6	6.9	-	-	4.1	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	~ 1	~ 388	-	-	~ 496	-
Stage 1	207	-	-	-	-	-
Stage 2	~ 25	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	0	~ 388	-	-	~ 496	-
Mov Cap-2 Maneuver	0	-	-	-	-	-
Stage 1	207	-	-	-	-	-
Stage 2	0	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s		0	32.6
HCM LOS	-		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	-	388	~ 496	-
HCM Lane V/C Ratio	-	-	-	1.197	1.225	-
HCM Control Delay (s)	-	-	-	142.1	143.8	-
HCM Lane LOS	-	-	-	F	F	-
HCM 95th %tile Q(veh)	-	-	-	18.8	23.6	-

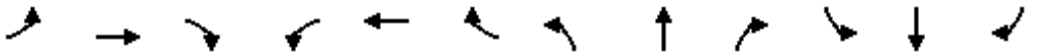
Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	70	1	232	2	58	247	1170	142	44	1874	133
Future Volume (vph)	70	1	232	2	58	247	1170	142	44	1874	133
Turn Type	Perm	NA	Perm	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		4		8		5	2		1	6	
Permitted Phases	4		8		8			2			6
Detector Phase	4	4	8	8	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	16.0	16.0	16.0	16.0	16.0	10.0	16.0	16.0	10.0	16.0	16.0
Total Split (s)	39.0	39.0	39.0	39.0	39.0	15.0	69.0	69.0	12.0	66.0	66.0
Total Split (%)	32.5%	32.5%	32.5%	32.5%	32.5%	12.5%	57.5%	57.5%	10.0%	55.0%	55.0%
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	5.0	6.0	6.0	5.0	6.0	6.0
Lead/Lag						Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?						Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Max	Max	None	Max	Max
Act Effct Green (s)	33.0	33.0	33.0	33.0	33.0	10.0	65.5	65.5	6.5	60.0	60.0
Actuated g/C Ratio	0.28	0.28	0.28	0.28	0.28	0.08	0.55	0.55	0.05	0.50	0.50
v/c Ratio	0.19	0.56	1.29	0.00	0.13	1.79	0.65	0.17	0.49	1.13	0.17
Control Delay	34.9	26.8	198.3	31.5	6.6	411.4	21.6	2.7	72.5	95.2	8.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	34.9	26.8	198.3	31.5	6.6	411.4	21.6	2.7	72.5	95.2	8.0
LOS	C	C	F	C	A	F	C	A	E	F	A
Approach Delay		28.4		159.2			81.6			89.0	
Approach LOS		C		F			F			F	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.79	
Intersection Signal Delay: 86.2	Intersection LOS: F
Intersection Capacity Utilization 114.5%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 15: US-395 & Three Flags Rd.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	70	1	273	232	2	58	247	1170	142	44	1874	133
Future Volume (veh/h)	70	1	273	232	2	58	247	1170	142	44	1874	133
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	76	1	260	252	2	54	268	1272	142	48	2037	124
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	455	2	441	222	522	442	151	1982	883	62	1805	805
Arrive On Green	0.28	0.28	0.28	0.28	0.28	0.28	0.08	0.55	0.55	0.03	0.50	0.50
Sat Flow, veh/h	1442	6	1605	1199	1900	1607	1810	3610	1609	1810	3610	1610
Grp Volume(v), veh/h	76	0	261	252	2	54	268	1272	142	48	2037	124
Grp Sat Flow(s),veh/h/ln	1442	0	1611	1199	1900	1607	1810	1805	1609	1810	1805	1610
Q Serve(g_s), s	4.8	0.0	16.8	16.2	0.1	3.0	10.0	29.4	5.2	3.2	60.0	5.0
Cycle Q Clear(g_c), s	4.9	0.0	16.8	33.0	0.1	3.0	10.0	29.4	5.2	3.2	60.0	5.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	455	0	443	222	523	442	151	1982	883	62	1805	805
V/C Ratio(X)	0.17	0.00	0.59	1.14	0.00	0.12	1.78	0.64	0.16	0.77	1.13	0.15
Avail Cap(c_a), veh/h	455	0	443	222	523	442	151	1982	883	106	1805	805
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	33.4	0.0	37.6	54.1	31.6	32.6	55.0	18.8	13.4	57.5	30.0	16.3
Incr Delay (d2), s/veh	0.1	0.0	1.4	102.1	0.0	0.0	375.2	1.6	0.4	7.4	65.6	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	0.0	6.8	13.0	0.0	1.2	20.1	11.3	1.8	1.5	39.3	1.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	33.4	0.0	39.0	156.2	31.6	32.7	430.2	20.5	13.8	64.8	95.6	16.7
LnGrp LOS	C	A	D	F	C	C	F	C	B	E	F	B
Approach Vol, veh/h		337			308			1682			2209	
Approach Delay, s/veh		37.8			133.8			85.2			90.5	
Approach LOS		D			F			F			F	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.1	71.9		39.0	15.0	66.0		39.0				
Change Period (Y+Rc), s	5.0	6.0		6.0	5.0	6.0		6.0				
Max Green Setting (Gmax), s	7.0	63.0		33.0	10.0	60.0		33.0				
Max Q Clear Time (g_c+I1), s	5.2	31.4		18.8	12.0	62.0		35.0				
Green Ext Time (p_c), s	0.0	10.4		1.0	0.0	0.0		0.0				

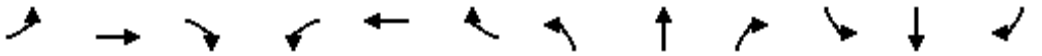
Intersection Summary			
HCM 6th Ctrl Delay		87.5	
HCM 6th LOS		F	

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	62	74	129	89	238	13	1260	83	272	1870	237
Future Volume (vph)	62	74	129	89	238	13	1260	83	272	1870	237
Turn Type	Perm	NA	Perm	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		4		8		5	2		1	6	
Permitted Phases	4		8		8			2			6
Detector Phase	4	4	8	8	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	15.0	15.0	46.0	46.0	46.0	9.0	34.0	34.0	9.0	34.0	34.0
Total Split (s)	47.0	47.0	47.0	47.0	47.0	9.0	42.0	42.0	31.0	64.0	64.0
Total Split (%)	39.2%	39.2%	39.2%	39.2%	39.2%	7.5%	35.0%	35.0%	25.8%	53.3%	53.3%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	3.0	5.0	5.0	3.0	5.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	0.0	-2.0	-2.0	0.0	-2.0	-2.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag						Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?						Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Max	Max	None	Max	Max
Act Effct Green (s)	18.4	18.4	18.4	18.4	18.4	5.1	40.8	40.8	18.8	62.3	62.3
Actuated g/C Ratio	0.20	0.20	0.20	0.20	0.20	0.06	0.45	0.45	0.21	0.69	0.69
v/c Ratio	0.25	0.22	0.52	0.25	0.49	0.14	0.84	0.12	0.79	0.82	0.22
Control Delay	31.5	29.4	38.1	30.7	6.9	50.3	30.6	5.8	50.7	16.7	4.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	31.5	29.4	38.1	30.7	6.9	50.3	30.6	5.8	50.7	16.7	4.5
LOS	C	C	D	C	A	D	C	A	D	B	A
Approach Delay		30.4		20.3			29.2			19.4	
Approach LOS		C		C			C			B	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 90.2	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.84	
Intersection Signal Delay: 22.9	Intersection LOS: C
Intersection Capacity Utilization 80.3%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 16: US-395 & Joshua St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	62	74	4	129	89	238	13	1260	83	272	1870	237
Future Volume (veh/h)	62	74	4	129	89	238	13	1260	83	272	1870	237
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	67	80	1	140	97	205	14	1370	76	296	2033	253
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	235	334	4	280	339	286	30	1810	807	337	2423	1081
Arrive On Green	0.18	0.18	0.17	0.18	0.18	0.18	0.02	0.50	0.50	0.19	0.67	0.67
Sat Flow, veh/h	1154	1872	23	1413	1900	1607	1810	3610	1610	1810	3610	1610
Grp Volume(v), veh/h	67	0	81	140	97	205	14	1370	76	296	2033	253
Grp Sat Flow(s),veh/h/ln	1154	0	1896	1413	1900	1607	1810	1805	1610	1810	1805	1610
Q Serve(g_s), s	4.8	0.0	3.3	8.4	4.0	10.7	0.7	27.3	2.2	14.2	37.9	5.5
Cycle Q Clear(g_c), s	8.7	0.0	3.3	11.7	4.0	10.7	0.7	27.3	2.2	14.2	37.9	5.5
Prop In Lane	1.00		0.01	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	235	0	338	280	339	286	30	1810	807	337	2423	1081
V/C Ratio(X)	0.28	0.00	0.24	0.50	0.29	0.72	0.47	0.76	0.09	0.88	0.84	0.23
Avail Cap(c_a), veh/h	585	0	912	708	914	773	101	1810	807	547	2423	1081
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	31.5	36.6	31.8	34.6	43.6	17.9	11.7	35.4	11.1	5.7
Incr Delay (d2), s/veh	0.2	0.0	0.1	0.5	0.2	1.3	8.4	3.0	0.2	7.7	3.7	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	0.0	1.5	2.9	1.8	4.2	0.4	10.0	0.7	6.5	10.9	1.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	35.8	0.0	31.7	37.1	32.0	35.9	51.9	20.9	11.9	43.1	14.8	6.2
LnGrp LOS	D	A	C	D	C	D	D	C	B	D	B	A
Approach Vol, veh/h		148			442			1460			2582	
Approach Delay, s/veh		33.6			35.4			20.8			17.2	
Approach LOS		C			D			C			B	

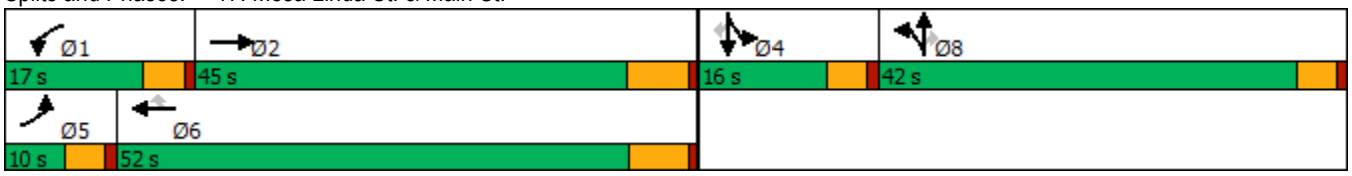
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	20.7	48.8		19.9	5.5	64.0		19.9				
Change Period (Y+Rc), s	4.0	6.0		5.0	4.0	6.0		5.0				
Max Green Setting (Gmax), s	27.0	36.0		42.0	5.0	58.0		42.0				
Max Q Clear Time (g_c+I1), s	16.2	29.3		10.7	2.7	39.9		13.7				
Green Ext Time (p_c), s	0.4	5.7		0.4	0.0	17.0		0.9				

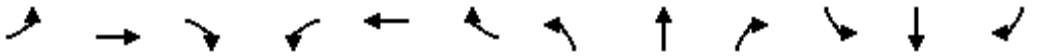
Intersection Summary			
HCM 6th Ctrl Delay		20.6	
HCM 6th LOS		C	

Lane Group	EBL	EBT	WBL	WBT	WBR	NBT	NBR	SBT	SBR
Lane Configurations									
Traffic Volume (vph)	7	1210	121	803	24	3	177	3	20
Future Volume (vph)	7	1210	121	803	24	3	177	3	20
Turn Type	Prot	NA	Prot	NA	Perm	NA	Perm	NA	Perm
Protected Phases	5	2	1	6		8		4	
Permitted Phases					6		8		4
Detector Phase	5	2	1	6	6	8	8	4	4
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	16.5	9.6	23.2	23.2	40.6	40.6	14.6	14.6
Total Split (s)	10.0	45.0	17.0	52.0	52.0	42.0	42.0	16.0	16.0
Total Split (%)	8.3%	37.5%	14.2%	43.3%	43.3%	35.0%	35.0%	13.3%	13.3%
Yellow Time (s)	3.6	5.5	3.6	5.2	5.2	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.5	4.6	6.2	6.2	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lead	Lag	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes				
Recall Mode	None	Max	None	Max	Max	None	None	None	None
Act Effct Green (s)	5.3	39.5	10.8	53.8	53.8	14.3	14.3	10.5	10.5
Actuated g/C Ratio	0.06	0.43	0.12	0.58	0.58	0.16	0.16	0.11	0.11
v/c Ratio	0.08	0.59	0.66	0.29	0.03	0.01	0.47	0.36	0.07
Control Delay	50.0	24.2	58.5	12.9	0.0	32.3	8.8	48.0	0.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	50.0	24.2	58.5	12.9	0.0	32.3	8.8	48.0	0.4
LOS	D	C	E	B	A	C	A	D	A
Approach Delay		24.3		18.4		9.2		37.2	
Approach LOS		C		B		A		D	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 92.2	
Natural Cycle: 100	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.66	
Intersection Signal Delay: 21.4	Intersection LOS: C
Intersection Capacity Utilization 55.8%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 17: Mesa Linda St. & Main St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	7	1210	4	121	803	24	0	3	177	66	3	20
Future Volume (veh/h)	7	1210	4	121	803	24	0	3	177	66	3	20
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	1800	1900	1900	1800	1900	1900	1800	1900	1900	1800	1900	1900
Adj Flow Rate, veh/h	8	1315	4	132	873	18	0	3	172	72	3	9
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	17	2356	7	163	2729	847	0	250	212	173	7	160
Arrive On Green	0.01	0.44	0.44	0.09	0.53	0.53	0.00	0.13	0.13	0.10	0.10	0.10
Sat Flow, veh/h	1714	5339	16	1714	5187	1610	0	1900	1610	1740	73	1610
Grp Volume(v), veh/h	8	852	467	132	873	18	0	3	172	75	0	9
Grp Sat Flow(s),veh/h/ln	1714	1729	1897	1714	1729	1610	0	1900	1610	1813	0	1610
Q Serve(g_s), s	0.4	15.9	15.9	6.6	8.4	0.5	0.0	0.1	9.1	3.4	0.0	0.4
Cycle Q Clear(g_c), s	0.4	15.9	15.9	6.6	8.4	0.5	0.0	0.1	9.1	3.4	0.0	0.4
Prop In Lane	1.00		0.01	1.00		1.00	0.00		1.00	0.96		1.00
Lane Grp Cap(c), veh/h	17	1526	837	163	2729	847	0	250	212	181	0	160
V/C Ratio(X)	0.46	0.56	0.56	0.81	0.32	0.02	0.00	0.01	0.81	0.42	0.00	0.06
Avail Cap(c_a), veh/h	106	1526	837	244	2729	847	0	814	690	237	0	210
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	42.9	18.1	18.1	38.7	11.8	9.9	0.0	33.0	36.8	36.9	0.0	35.6
Incr Delay (d2), s/veh	7.0	1.5	2.7	6.9	0.3	0.0	0.0	0.0	7.3	1.5	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	5.7	6.5	2.9	2.8	0.2	0.0	0.1	4.0	1.6	0.0	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	49.9	19.5	20.8	45.6	12.1	10.0	0.0	33.0	44.2	38.4	0.0	35.7
LnGrp LOS	D	B	C	D	B	A	A	C	D	D	A	D
Approach Vol, veh/h		1327			1023			175			84	
Approach Delay, s/veh		20.2			16.4			44.0			38.1	
Approach LOS		C			B			D			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	12.9	45.0		13.3	5.5	52.4		16.1				
Change Period (Y+Rc), s	4.6	6.5		4.6	4.6	* 6.5		4.6				
Max Green Setting (Gmax), s	12.4	38.5		11.4	5.4	* 46		37.4				
Max Q Clear Time (g_c+I1), s	8.6	17.9		5.4	2.4	10.4		11.1				
Green Ext Time (p_c), s	0.0	7.8		0.1	0.0	6.2		0.6				

Intersection Summary		
HCM 6th Ctrl Delay		20.8
HCM 6th LOS		C

Notes

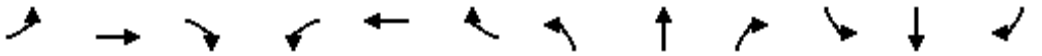
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	78	1152	310	284	890	24	179	15	154	47	15	36
Future Volume (vph)	78	1152	310	284	890	24	179	15	154	47	15	36
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Split	NA	Perm	Split	NA	Perm
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases			2			6			8			4
Detector Phase	5	2	2	1	6	6	8	8	8	4	4	4
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	32.2	32.2	9.6	32.2	32.2	43.6	43.6	43.6	41.6	41.6	41.6
Total Split (s)	11.0	34.8	34.8	10.0	33.8	33.8	43.6	43.6	43.6	41.6	41.6	41.6
Total Split (%)	8.5%	26.8%	26.8%	7.7%	26.0%	26.0%	33.5%	33.5%	33.5%	32.0%	32.0%	32.0%
Yellow Time (s)	3.6	5.2	5.2	3.6	5.2	5.2	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	6.2	4.6	6.2	6.2	4.6	4.6	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes						
Recall Mode	None	Max	Max	None	Max	Max	None	None	None	None	None	None
Act Effct Green (s)	6.9	30.6	30.6	5.8	29.5	29.5	14.9	14.9	14.9	14.1	14.1	14.1
Actuated g/C Ratio	0.08	0.37	0.37	0.07	0.36	0.36	0.18	0.18	0.18	0.17	0.17	0.17
v/c Ratio	0.60	0.65	0.43	1.42	0.52	0.04	0.36	0.34	0.39	0.17	0.05	0.11
Control Delay	61.1	27.5	7.2	244.2	26.5	0.1	34.9	34.3	8.1	33.0	31.6	0.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	61.1	27.5	7.2	244.2	26.5	0.1	34.9	34.3	8.1	33.0	31.6	0.6
LOS	E	C	A	F	C	A	C	C	A	C	C	A
Approach Delay		25.1			77.7			22.9			20.9	
Approach LOS		C			E			C			C	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 82.8	
Natural Cycle: 130	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.42	
Intersection Signal Delay: 44.5	Intersection LOS: D
Intersection Capacity Utilization 56.8%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 18: Cataba Av. & Main St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	78	1152	310	284	890	24	179	15	154	47	15	36
Future Volume (veh/h)	78	1152	310	284	890	24	179	15	154	47	15	36
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1800	1900	1900	1700	1900	1900	1800	1900	1900	1800	1900	1900
Adj Flow Rate, veh/h	85	1252	330	309	967	19	206	0	147	51	16	11
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	108	2055	637	235	2117	657	489	0	229	188	208	176
Arrive On Green	0.06	0.40	0.40	0.07	0.41	0.41	0.14	0.00	0.14	0.11	0.11	0.11
Sat Flow, veh/h	1714	5187	1609	3141	5187	1609	3429	0	1607	1714	1900	1610
Grp Volume(v), veh/h	85	1252	330	309	967	19	206	0	147	51	16	11
Grp Sat Flow(s),veh/h/ln	1714	1729	1609	1570	1729	1609	1714	0	1607	1714	1900	1610
Q Serve(g_s), s	3.5	13.9	11.2	5.4	9.8	0.5	4.0	0.0	6.2	2.0	0.5	0.4
Cycle Q Clear(g_c), s	3.5	13.9	11.2	5.4	9.8	0.5	4.0	0.0	6.2	2.0	0.5	0.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	108	2055	637	235	2117	657	489	0	229	188	208	176
V/C Ratio(X)	0.79	0.61	0.52	1.32	0.46	0.03	0.42	0.00	0.64	0.27	0.08	0.06
Avail Cap(c_a), veh/h	152	2055	637	235	2117	657	1852	0	868	879	974	825
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.4	17.3	16.6	33.4	15.5	12.8	28.2	0.0	29.2	29.5	28.9	28.8
Incr Delay (d2), s/veh	10.7	1.4	3.0	168.7	0.7	0.1	0.6	0.0	3.0	0.8	0.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	4.7	3.9	7.4	3.3	0.2	1.6	0.0	2.5	0.8	0.3	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	44.1	18.7	19.5	202.1	16.3	12.9	28.8	0.0	32.2	30.3	29.0	29.0
LnGrp LOS	D	B	B	F	B	B	C	A	C	C	C	C
Approach Vol, veh/h		1667			1295			353			78	
Approach Delay, s/veh		20.2			60.6			30.2			29.8	
Approach LOS		C			E			C			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.0	34.8		12.5	9.1	35.7		14.9				
Change Period (Y+Rc), s	4.6	6.2		4.6	4.6	6.2		4.6				
Max Green Setting (Gmax), s	5.4	28.6		37.0	6.4	27.6		39.0				
Max Q Clear Time (g_c+I1), s	7.4	15.9		4.0	5.5	11.8		8.2				
Green Ext Time (p_c), s	0.0	7.0		0.2	0.0	5.5		1.3				

Intersection Summary			
HCM 6th Ctrl Delay		36.9	
HCM 6th LOS		D	

Notes

User approved pedestrian interval to be less than phase max green.

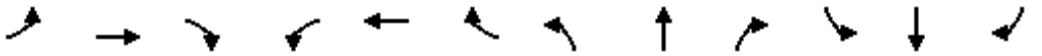
User approved volume balancing among the lanes for turning movement.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	42	1219	17	194	1039	15	16	110	522	37
Future Volume (vph)	42	1219	17	194	1039	15	16	110	522	37
Turn Type	Prot	NA	Perm	Prot	NA	Perm	NA	Perm	Perm	NA
Protected Phases	5	2		1	6		8			4
Permitted Phases			2			8		8	4	
Detector Phase	5	2	2	1	6	8	8	8	4	4
Switch Phase										
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	29.2	29.2	9.6	30.2	38.6	38.6	38.6	41.6	41.6
Total Split (s)	14.0	45.0	45.0	29.0	60.0	46.0	46.0	46.0	46.0	46.0
Total Split (%)	11.7%	37.5%	37.5%	24.2%	50.0%	38.3%	38.3%	38.3%	38.3%	38.3%
Yellow Time (s)	3.6	5.2	5.2	3.6	5.2	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	6.2	4.6	6.2	4.6	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes					
Recall Mode	None	Max	Max	None	Max	None	None	None	None	None
Act Effct Green (s)	7.3	41.5	41.5	17.6	53.9	41.5	41.5	41.5	41.5	41.5
Actuated g/C Ratio	0.06	0.36	0.36	0.15	0.46	0.36	0.36	0.36	0.36	0.36
v/c Ratio	0.40	0.67	0.03	0.76	0.58	0.03	0.02	0.17	1.11	0.10
Control Delay	64.4	34.3	0.1	66.1	23.0	26.2	25.9	5.6	110.7	17.4
Queue Delay	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0
Total Delay	64.4	34.3	0.1	66.1	23.3	26.2	25.9	5.6	110.7	17.4
LOS	E	C	A	E	C	C	C	A	F	B
Approach Delay		34.8			28.6		10.0			100.6
Approach LOS		C			C		B			F

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 116	
Natural Cycle: 85	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.11	
Intersection Signal Delay: 42.0	Intersection LOS: D
Intersection Capacity Utilization 84.9%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 19: Key Point Av. & Main St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	42	1219	17	194	1039	316	15	16	110	522	37	26
Future Volume (veh/h)	42	1219	17	194	1039	316	15	16	110	522	37	26
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	1800	1900	1900	1800	1900	1900	1800	1900	1900	1800	1900	1900
Adj Flow Rate, veh/h	43	1244	14	198	1060	288	15	16	52	533	38	22
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	56	1925	597	226	1910	519	527	688	583	546	409	237
Arrive On Green	0.03	0.37	0.37	0.13	0.47	0.47	0.36	0.36	0.36	0.36	0.36	0.36
Sat Flow, veh/h	1714	5187	1608	1714	4058	1102	1364	1900	1609	1353	1129	654
Grp Volume(v), veh/h	43	1244	14	198	903	445	15	16	52	533	0	60
Grp Sat Flow(s),veh/h/ln	1714	1729	1608	1714	1729	1702	1364	1900	1609	1353	0	1782
Q Serve(g_s), s	2.8	22.7	0.6	13.0	21.4	21.4	0.8	0.6	2.4	40.8	0.0	2.5
Cycle Q Clear(g_c), s	2.8	22.7	0.6	13.0	21.4	21.4	3.4	0.6	2.4	41.4	0.0	2.5
Prop In Lane	1.00		1.00	1.00		0.65	1.00		1.00	1.00		0.37
Lane Grp Cap(c), veh/h	56	1925	597	226	1627	801	527	688	583	546	0	645
V/C Ratio(X)	0.77	0.65	0.02	0.87	0.56	0.56	0.03	0.02	0.09	0.98	0.00	0.09
Avail Cap(c_a), veh/h	141	1925	597	366	1627	801	527	688	583	546	0	645
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	54.9	29.7	22.8	48.7	21.7	21.7	25.2	23.5	24.0	38.7	0.0	24.1
Incr Delay (d2), s/veh	8.0	1.7	0.1	7.6	1.4	2.8	0.0	0.0	0.1	32.5	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	9.1	0.2	5.8	8.3	8.5	0.3	0.3	1.0	20.4	0.0	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	62.9	31.4	22.9	56.3	23.1	24.5	25.2	23.5	24.1	71.2	0.0	24.1
LnGrp LOS	E	C	C	E	C	C	C	C	C	E	A	C
Approach Vol, veh/h		1301			1546			83			593	
Approach Delay, s/veh		32.4			27.7			24.2			66.5	
Approach LOS		C			C			C			E	

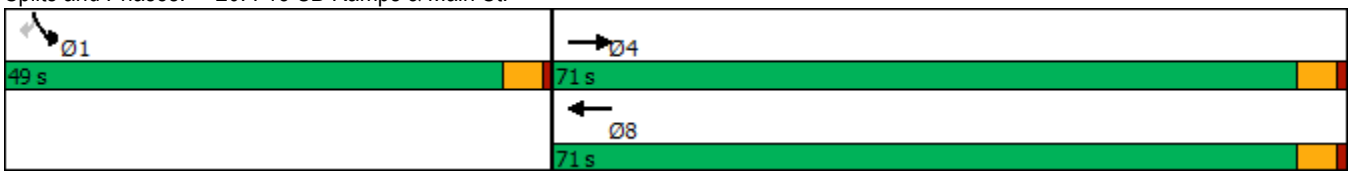
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	19.7	48.6		46.0	8.3	60.0		46.0				
Change Period (Y+Rc), s	4.6	6.2		4.6	4.6	6.2		4.6				
Max Green Setting (Gmax), s	24.4	38.8		41.4	9.4	53.8		41.4				
Max Q Clear Time (g_c+I1), s	15.0	24.7		43.4	4.8	23.4		5.4				
Green Ext Time (p_c), s	0.2	6.7		0.0	0.0	10.0		0.3				

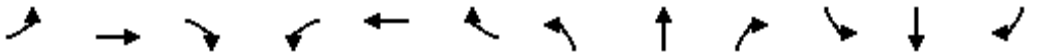
Intersection Summary												
HCM 6th Ctrl Delay			35.9									
HCM 6th LOS			D									

Lane Group	EBT	EBR	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	1388	35	1146	23	434	293
Future Volume (vph)	1388	35	1146	23	434	293
Turn Type	NA	Free	NA	Free	Prot	Perm
Protected Phases	4		8		1	
Permitted Phases		Free		Free		1
Detector Phase	4		8		1	1
Switch Phase						
Minimum Initial (s)	5.0		5.0		5.0	5.0
Minimum Split (s)	9.6		22.6		9.6	9.6
Total Split (s)	71.0		71.0		49.0	49.0
Total Split (%)	59.2%		59.2%		40.8%	40.8%
Yellow Time (s)	3.6		3.6		3.6	3.6
All-Red Time (s)	1.0		1.0		1.0	1.0
Lost Time Adjust (s)	0.0		0.0		0.0	0.0
Total Lost Time (s)	4.6		4.6		4.6	4.6
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None		None		None	None
Act Effct Green (s)	25.9	51.1	25.9	51.1	15.4	15.4
Actuated g/C Ratio	0.51	1.00	0.51	1.00	0.30	0.30
v/c Ratio	0.56	0.02	0.46	0.01	0.43	0.58
Control Delay	9.9	0.0	9.0	0.0	16.4	18.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	9.9	0.0	9.0	0.0	16.4	18.0
LOS	A	A	A	A	B	B
Approach Delay	9.7		8.9			
Approach LOS	A		A			

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 51.1	
Natural Cycle: 40	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.58	
Intersection Signal Delay: 11.0	Intersection LOS: B
Intersection Capacity Utilization 48.0%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 20: I-15 SB Ramps & Main St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↱		↑↑↑	↱				↰↰		↱
Traffic Volume (veh/h)	0	1388	35	0	1146	23	0	0	0	434	0	293
Future Volume (veh/h)	0	1388	35	0	1146	23	0	0	0	434	0	293
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	1900	1900	0	1900	1900				1900	0	1900
Adj Flow Rate, veh/h	0	1461	0	0	1206	0				457	0	227
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95				0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0				0	0	0
Cap, veh/h	0	2833		0	2833					828	0	380
Arrive On Green	0.00	0.55	0.00	0.00	0.55	0.00				0.24	0.00	0.24
Sat Flow, veh/h	0	5358	1610	0	5358	1610				3510	0	1610
Grp Volume(v), veh/h	0	1461	0	0	1206	0				457	0	227
Grp Sat Flow(s),veh/h/ln	0	1729	1610	0	1729	1610				1755	0	1610
Q Serve(g_s), s	0.0	7.5	0.0	0.0	5.8	0.0				4.8	0.0	5.3
Cycle Q Clear(g_c), s	0.0	7.5	0.0	0.0	5.8	0.0				4.8	0.0	5.3
Prop In Lane	0.00		1.00	0.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2833		0	2833					828	0	380
V/C Ratio(X)	0.00	0.52		0.00	0.43					0.55	0.00	0.60
Avail Cap(c_a), veh/h	0	8159		0	8159					3692	0	1694
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	6.1	0.0	0.0	5.7	0.0				14.2	0.0	14.3
Incr Delay (d2), s/veh	0.0	0.1	0.0	0.0	0.1	0.0				0.6	0.0	1.5
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	0.0	1.1	0.0	0.0	0.8	0.0				1.7	0.0	1.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	6.2	0.0	0.0	5.8	0.0				14.7	0.0	15.9
LnGrp LOS	A	A		A	A					B	A	B
Approach Vol, veh/h		1461	A		1206	A					684	
Approach Delay, s/veh		6.2			5.8						15.1	
Approach LOS		A			A						B	

Timer - Assigned Phs				4		6		8				
Phs Duration (G+Y+Rc), s				27.7		14.6		27.7				
Change Period (Y+Rc), s				4.6		4.6		4.6				
Max Green Setting (Gmax), s				66.4		44.4		66.4				
Max Q Clear Time (g_c+I1), s				9.5		7.3		7.8				
Green Ext Time (p_c), s				13.5		2.7		10.0				

Intersection Summary												
HCM 6th Ctrl Delay			7.9									
HCM 6th LOS			A									

Notes

Unsignalized Delay for [EBR, WBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBT	EBR	WBT	WBR	NBL	NBT	NBR
Lane Configurations							
Traffic Volume (vph)	1410	411	1741	670	161	8	547
Future Volume (vph)	1410	411	1741	670	161	8	547
Turn Type	NA	Perm	NA	Perm	Split	NA	Perm
Protected Phases	2		6		8	8	
Permitted Phases		2		6			8
Detector Phase	2	2	6	6	8	8	8
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.6	22.6	22.6	22.6	9.6	9.6	9.6
Total Split (s)	78.0	78.0	78.0	78.0	42.0	42.0	42.0
Total Split (%)	65.0%	65.0%	65.0%	65.0%	35.0%	35.0%	35.0%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Lead/Lag							
Lead-Lag Optimize?							
Recall Mode	None	None	None	None	Min	Min	Min
Act Effct Green (s)	52.8	52.8	52.8	52.8	22.1	22.1	22.1
Actuated g/C Ratio	0.62	0.62	0.62	0.62	0.26	0.26	0.26
v/c Ratio	0.45	0.36	0.55	0.54	0.35	0.65	0.66
Control Delay	9.5	1.8	10.6	2.5	30.2	32.6	33.1
Queue Delay	0.0	0.0	0.1	0.3	0.0	0.0	0.0
Total Delay	9.5	1.8	10.7	2.8	30.2	32.6	33.1
LOS	A	A	B	A	C	C	C
Approach Delay	7.8		8.5			32.3	
Approach LOS	A		A			C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 85	
Natural Cycle: 40	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.66	
Intersection Signal Delay: 11.7	Intersection LOS: B
Intersection Capacity Utilization 60.9%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 21: I-15 NB Ramps & Main St.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↱		↑↑↑	↱	↰	↑	↱			
Traffic Volume (veh/h)	0	1410	411	0	1741	670	161	8	547	0	0	0
Future Volume (veh/h)	0	1410	411	0	1741	670	161	8	547	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	0	1900	1900	0	1900	1900	1900	1900	1900			
Adj Flow Rate, veh/h	0	1439	0	0	1777	652	164	0	353			
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98			
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0			
Cap, veh/h	0	3541		0	3541	1099	304	0	540			
Arrive On Green	0.00	0.68	0.00	0.00	0.68	0.68	0.17	0.00	0.17			
Sat Flow, veh/h	0	5358	1610	0	5358	1610	1810	0	3220			
Grp Volume(v), veh/h	0	1439	0	0	1777	652	164	0	353			
Grp Sat Flow(s),veh/h/ln	0	1729	1610	0	1729	1610	1810	0	1610			
Q Serve(g_s), s	0.0	7.5	0.0	0.0	10.2	13.3	5.1	0.0	6.3			
Cycle Q Clear(g_c), s	0.0	7.5	0.0	0.0	10.2	13.3	5.1	0.0	6.3			
Prop In Lane	0.00		1.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	0	3541		0	3541	1099	304	0	540			
V/C Ratio(X)	0.00	0.41		0.00	0.50	0.59	0.54	0.00	0.65			
Avail Cap(c_a), veh/h	0	6187		0	6187	1921	1100	0	1957			
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	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	0.0	4.3	0.0	0.0	4.7	5.2	23.4	0.0	23.9			
Incr Delay (d2), s/veh	0.0	0.1	0.0	0.0	0.1	0.5	1.5	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	0.0	1.1	0.0	0.0	1.5	2.0	2.2	0.0	2.4			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	4.4	0.0	0.0	4.8	5.7	24.9	0.0	25.3			
LnGrp LOS	A	A		A	A	A	C	A	C			
Approach Vol, veh/h		1439	A		2429			517				
Approach Delay, s/veh		4.4			5.1			25.2				
Approach LOS		A			A			C				

Timer - Assigned Phs	2				6		8					
Phs Duration (G+Y+Rc), s	46.6				46.6		14.9					
Change Period (Y+Rc), s	4.6				4.6		4.6					
Max Green Setting (Gmax), s	73.4				73.4		37.4					
Max Q Clear Time (g_c+I1), s	9.5				15.3		8.3					
Green Ext Time (p_c), s	13.4				26.7		2.0					

Intersection Summary	
HCM 6th Ctrl Delay	7.2
HCM 6th LOS	A

Notes

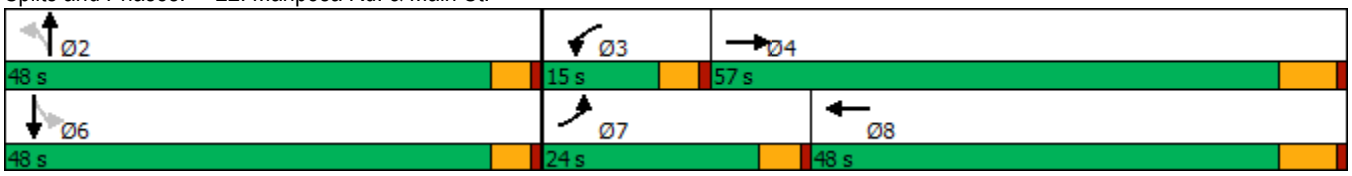
User approved volume balancing among the lanes for turning movement.

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	179	1638	61	2063	105	55	49	68
Future Volume (vph)	179	1638	61	2063	105	55	49	68
Turn Type	Prot	NA	Prot	NA	Perm	NA	Perm	NA
Protected Phases	7	4	3	8		2		6
Permitted Phases					2		6	
Detector Phase	7	4	3	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	24.2	9.6	24.2	44.6	44.6	44.6	44.6
Total Split (s)	24.0	57.0	15.0	48.0	48.0	48.0	48.0	48.0
Total Split (%)	20.0%	47.5%	12.5%	40.0%	40.0%	40.0%	40.0%	40.0%
Yellow Time (s)	3.6	5.2	3.6	5.2	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	4.6	6.2	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes				
Recall Mode	None	Max	Max	None	None	None	None	None
Act Effct Green (s)	14.7	51.3	10.5	47.1	21.6	21.6	21.6	21.6
Actuated g/C Ratio	0.15	0.52	0.11	0.48	0.22	0.22	0.22	0.22
v/c Ratio	0.76	0.57	0.36	0.73	1.28	0.27	0.20	0.67
Control Delay	60.8	18.3	51.0	25.0	225.0	20.8	31.6	23.3
Queue Delay	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	60.8	18.9	51.0	25.0	225.0	20.8	31.6	23.3
LOS	E	B	D	C	F	C	C	C
Approach Delay		22.8		25.8		123.3		24.4
Approach LOS		C		C		F		C

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 98.9	
Natural Cycle: 100	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.28	
Intersection Signal Delay: 28.8	Intersection LOS: C
Intersection Capacity Utilization 84.5%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 22: Mariposa Rd. & Main St.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	179	1638	140	61	2063	40	105	55	49	49	68	242
Future Volume (veh/h)	179	1638	140	61	2063	40	105	55	49	49	68	242
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	1800	1900	1900	1800	1900	1900	1800	1900	1900	1800	1900	1900
Adj Flow Rate, veh/h	192	1761	138	66	2218	42	113	59	31	53	73	177
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	223	3082	242	174	3104	59	212	297	156	354	125	302
Arrive On Green	0.13	0.50	0.50	0.10	0.47	0.47	0.25	0.25	0.25	0.25	0.25	0.25
Sat Flow, veh/h	1714	6226	488	1714	6653	126	1148	1173	616	1327	492	1193
Grp Volume(v), veh/h	192	1386	513	66	1634	626	113	0	90	53	0	250
Grp Sat Flow(s),veh/h/ln	1714	1634	1812	1714	1634	1877	1148	0	1789	1327	0	1685
Q Serve(g_s), s	11.3	20.4	20.4	3.7	27.4	27.4	9.8	0.0	4.1	3.4	0.0	13.3
Cycle Q Clear(g_c), s	11.3	20.4	20.4	3.7	27.4	27.4	23.2	0.0	4.1	7.4	0.0	13.3
Prop In Lane	1.00		0.27	1.00		0.07	1.00		0.34	1.00		0.71
Lane Grp Cap(c), veh/h	223	2427	897	174	2287	876	212	0	454	354	0	427
V/C Ratio(X)	0.86	0.57	0.57	0.38	0.71	0.71	0.53	0.00	0.20	0.15	0.00	0.59
Avail Cap(c_a), veh/h	324	2427	897	174	2287	876	406	0	757	579	0	713
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	43.7	18.2	18.2	43.1	21.9	21.9	43.7	0.0	30.1	33.0	0.0	33.6
Incr Delay (d2), s/veh	10.8	1.0	2.6	6.2	1.1	2.8	2.1	0.0	0.2	0.2	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.2	7.1	8.2	1.8	9.6	11.4	2.9	0.0	1.8	1.1	0.0	5.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	54.5	19.2	20.9	49.3	23.0	24.7	45.8	0.0	30.3	33.2	0.0	34.8
LnGrp LOS	D	B	C	D	C	C	D	A	C	C	A	C
Approach Vol, veh/h		2091			2326			203			303	
Approach Delay, s/veh		22.9			24.2			38.9			34.6	
Approach LOS		C			C			D			C	

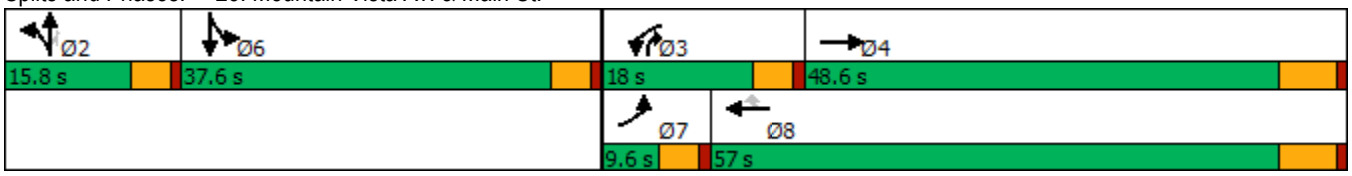
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		30.6	15.0	57.0		30.6	17.9	54.1				
Change Period (Y+Rc), s		4.6	4.6	6.2		4.6	4.6	6.2				
Max Green Setting (Gmax), s		43.4	10.4	50.8		43.4	19.4	41.8				
Max Q Clear Time (g_c+I1), s		25.2	5.7	22.4		15.3	13.3	29.4				
Green Ext Time (p_c), s		0.8	0.0	14.8		1.9	0.1	9.8				

Intersection Summary												
HCM 6th Ctrl Delay			24.9									
HCM 6th LOS			C									

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	22	1504	101	2018	81	22	1	41	69	3
Future Volume (vph)	22	1504	101	2018	81	22	1	41	69	3
Turn Type	Prot	NA	Prot	NA	Perm	Split	NA	pm+ov	Split	NA
Protected Phases	7	4	3	8		2	2	3	6	6
Permitted Phases					8			2		
Detector Phase	7	4	3	8	8	2	2	3	6	6
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	43.2	9.6	32.2	32.2	14.6	14.6	9.6	37.6	37.6
Total Split (s)	9.6	48.6	18.0	57.0	57.0	15.8	15.8	18.0	37.6	37.6
Total Split (%)	8.0%	40.5%	15.0%	47.5%	47.5%	13.2%	13.2%	15.0%	31.3%	31.3%
Yellow Time (s)	3.6	5.2	3.6	5.2	5.2	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	4.6	6.2	6.2	4.6	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lead	Lag	Lag			Lead		
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes			Yes		
Recall Mode	None	Max	None	Max	Max	None	None	None	None	None
Act Effct Green (s)	5.2	51.5	9.6	60.1	60.1	10.4	10.4	12.9	13.8	13.8
Actuated g/C Ratio	0.06	0.59	0.11	0.68	0.68	0.12	0.12	0.15	0.16	0.16
v/c Ratio	0.12	0.41	0.56	0.59	0.08	0.06	0.03	0.09	0.17	0.16
Control Delay	48.2	16.5	52.7	14.9	3.1	44.2	43.2	1.9	35.6	27.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	48.2	16.5	52.7	14.9	3.1	44.2	43.2	1.9	35.6	27.1
LOS	D	B	D	B	A	D	D	A	D	C
Approach Delay		16.9		16.2			17.1			31.4
Approach LOS		B		B			B			C

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 88	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.59	
Intersection Signal Delay: 16.8	Intersection LOS: B
Intersection Capacity Utilization 65.7%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 23: Mountain Vista Av. & Main St.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	22	1504	29	101	2018	81	22	1	41	69	3	13
Future Volume (veh/h)	22	1504	29	101	2018	81	22	1	41	69	3	13
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1700	1900	1900	1800	1900	1900	1800	1900	1900	1800	1900	1800
Adj Flow Rate, veh/h	23	1551	29	104	2080	81	23	1	22	80	0	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	77	3468	65	131	2972	922	262	145	492	345	191	0
Arrive On Green	0.02	0.52	0.52	0.08	0.57	0.57	0.08	0.08	0.08	0.10	0.00	0.00
Sat Flow, veh/h	3141	6655	124	1714	5187	1609	3429	1900	3220	3429	1900	0
Grp Volume(v), veh/h	23	1142	438	104	2080	81	23	1	22	80	0	0
Grp Sat Flow(s),veh/h/ln	1570	1634	1877	1714	1729	1609	1714	1900	1610	1714	1900	0
Q Serve(g_s), s	0.6	12.9	12.9	5.3	25.3	2.0	0.6	0.0	0.5	1.9	0.0	0.0
Cycle Q Clear(g_c), s	0.6	12.9	12.9	5.3	25.3	2.0	0.6	0.0	0.5	1.9	0.0	0.0
Prop In Lane	1.00		0.07	1.00		1.00	1.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	77	2554	978	131	2972	922	262	145	492	345	191	0
V/C Ratio(X)	0.30	0.45	0.45	0.79	0.70	0.09	0.09	0.01	0.04	0.23	0.00	0.00
Avail Cap(c_a), veh/h	177	2554	978	259	2972	922	433	240	653	1276	707	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	42.5	13.3	13.3	40.3	13.5	8.5	38.1	37.8	32.0	36.7	0.0	0.0
Incr Delay (d2), s/veh	0.8	0.6	1.5	4.1	1.4	0.2	0.1	0.0	0.0	0.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	4.1	5.0	2.2	8.2	0.6	0.2	0.0	0.2	0.8	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	43.3	13.8	14.7	44.3	14.9	8.7	38.2	37.8	32.1	37.1	0.0	0.0
LnGrp LOS	D	B	B	D	B	A	D	D	C	D	A	A
Approach Vol, veh/h		1603			2265			46			80	
Approach Delay, s/veh		14.5			16.0			35.3			37.1	
Approach LOS		B			B			D			D	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		11.4	11.4	52.4		13.5	6.8	57.0				
Change Period (Y+Rc), s		4.6	4.6	6.2		4.6	4.6	6.2				
Max Green Setting (Gmax), s		11.2	13.4	42.4		33.0	5.0	50.8				
Max Q Clear Time (g_c+I1), s		2.6	7.3	14.9		3.9	2.6	27.3				
Green Ext Time (p_c), s		0.1	0.0	11.5		0.2	0.0	16.0				

Intersection Summary												
HCM 6th Ctrl Delay			16.1									
HCM 6th LOS			B									

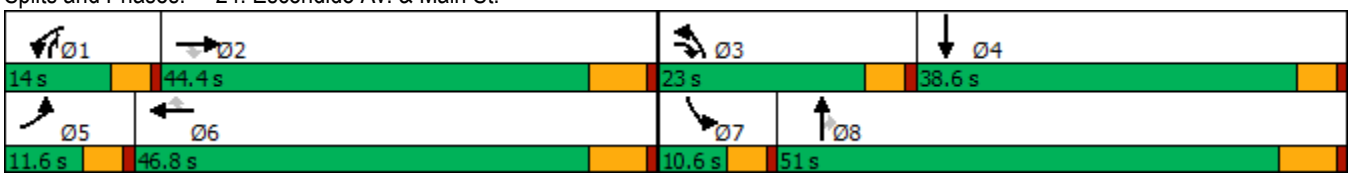
Notes

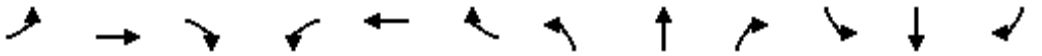
User approved volume balancing among the lanes for turning movement.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations											
Traffic Volume (vph)	6	1103	505	359	1369	4	814	30	379	1	4
Future Volume (vph)	6	1103	505	359	1369	4	814	30	379	1	4
Turn Type	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA
Protected Phases	5	2	3	1	6		3	8	1	7	4
Permitted Phases			2			6			8		
Detector Phase	5	2	3	1	6	6	3	8	1	7	4
Switch Phase											
Minimum Initial (s)	5.0	10.0	5.0	5.0	10.0	10.0	5.0	10.0	5.0	5.0	10.0
Minimum Split (s)	9.6	41.2	9.6	9.6	31.2	31.2	9.6	49.2	9.6	9.6	37.6
Total Split (s)	11.6	44.4	23.0	14.0	46.8	46.8	23.0	51.0	14.0	10.6	38.6
Total Split (%)	9.7%	37.0%	19.2%	11.7%	39.0%	39.0%	19.2%	42.5%	11.7%	8.8%	32.2%
Yellow Time (s)	3.6	5.2	3.6	3.6	5.2	5.2	3.6	5.2	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	4.6	4.6	6.2	6.2	4.6	6.2	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Min	None	None	Min
Act Effct Green (s)	5.3	29.5	54.5	9.6	42.1	42.1	18.7	34.1	50.0	5.1	13.7
Actuated g/C Ratio	0.06	0.32	0.59	0.10	0.46	0.46	0.20	0.37	0.54	0.06	0.15
v/c Ratio	0.06	0.68	0.45	1.13	0.85	0.00	1.31	0.04	0.41	0.01	0.08
Control Delay	48.2	30.2	2.4	130.9	30.1	0.0	183.9	20.5	9.4	49.0	17.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	48.2	30.2	2.4	130.9	30.1	0.0	183.9	20.5	9.4	49.0	17.1
LOS	D	C	A	F	C	A	F	C	A	D	B
Approach Delay		21.5			50.9			125.8			18.5
Approach LOS		C			D			F			B

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 91.9	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.31	
Intersection Signal Delay: 60.4	Intersection LOS: E
Intersection Capacity Utilization 88.8%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 24: Escondido Av. & Main St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	6	1103	505	359	1369	4	814	30	379	1	4	17
Future Volume (veh/h)	6	1103	505	359	1369	4	814	30	379	1	4	17
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1800	1900	1900	1700	1900	1900	1700	1900	1900	1800	1900	1900
Adj Flow Rate, veh/h	6	1137	407	370	1411	4	839	31	229	1	4	17
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	13	1739	871	330	1562	697	647	601	679	2	35	150
Arrive On Green	0.01	0.34	0.34	0.11	0.43	0.43	0.21	0.32	0.32	0.00	0.11	0.11
Sat Flow, veh/h	1714	5187	1610	3141	3610	1610	3141	1900	1610	1714	316	1342
Grp Volume(v), veh/h	6	1137	407	370	1411	4	839	31	229	1	0	21
Grp Sat Flow(s),veh/h/ln	1714	1729	1610	1570	1805	1610	1570	1900	1610	1714	0	1658
Q Serve(g_s), s	0.3	16.7	13.9	9.4	32.5	0.1	18.4	1.0	8.6	0.1	0.0	1.0
Cycle Q Clear(g_c), s	0.3	16.7	13.9	9.4	32.5	0.1	18.4	1.0	8.6	0.1	0.0	1.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.81
Lane Grp Cap(c), veh/h	13	1739	871	330	1562	697	647	601	679	2	0	186
V/C Ratio(X)	0.45	0.65	0.47	1.12	0.90	0.01	1.30	0.05	0.34	0.43	0.00	0.11
Avail Cap(c_a), veh/h	134	2218	1020	330	1640	732	647	953	977	115	0	631
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	44.1	25.3	12.6	40.0	23.6	14.4	35.5	21.2	17.4	44.6	0.0	35.7
Incr Delay (d2), s/veh	8.7	0.5	0.4	85.8	7.2	0.0	144.9	0.0	0.3	39.4	0.0	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	0.2	6.2	4.8	7.3	13.5	0.0	20.0	0.5	3.2	0.0	0.0	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	52.8	25.7	13.0	125.8	30.8	14.4	180.4	21.3	17.7	84.0	0.0	36.0
LnGrp LOS	D	C	B	F	C	B	F	C	B	F	A	D
Approach Vol, veh/h		1550			1785			1099			22	
Approach Delay, s/veh		22.5			50.5			142.0			38.1	
Approach LOS		C			D			F			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.0	36.1	23.0	16.2	5.3	44.9	4.7	34.5
Change Period (Y+Rc), s	4.6	6.2	4.6	* 6.2	4.6	6.2	4.6	6.2
Max Green Setting (Gmax), s	9.4	38.2	18.4	* 34	7.0	40.6	6.0	44.8
Max Q Clear Time (g_c+I1), s	11.4	18.7	20.4	3.0	2.3	34.5	2.1	10.6
Green Ext Time (p_c), s	0.0	8.7	0.0	0.1	0.0	4.1	0.0	1.0

Intersection Summary	
HCM 6th Ctrl Delay	63.3
HCM 6th LOS	E

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	5.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	33	293	1121	45	122	693
Future Vol, veh/h	33	293	1121	45	122	693
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	100	0	-	-	195	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	36	318	1218	49	133	753

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1886	634	0	0	1267	0
Stage 1	1243	-	-	-	-	-
Stage 2	643	-	-	-	-	-
Critical Hdwy	6.8	6.9	-	-	4.1	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	64	427	-	-	555	-
Stage 1	239	-	-	-	-	-
Stage 2	491	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	49	427	-	-	555	-
Mov Cap-2 Maneuver	154	-	-	-	-	-
Stage 1	239	-	-	-	-	-
Stage 2	373	-	-	-	-	-

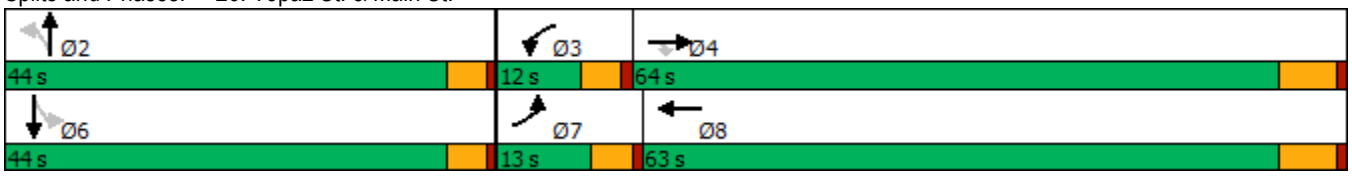
Approach	WB	NB	SB
HCM Control Delay, s	34.4	0	2
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	154	427	555	-
HCM Lane V/C Ratio	-	-	0.233	0.746	0.239	-
HCM Control Delay (s)	-	-	35.3	34.3	13.5	-
HCM Lane LOS	-	-	E	D	B	-
HCM 95th %tile Q(veh)	-	-	0.9	6.1	0.9	-

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	60	1357	114	45	1362	233	113	134	87
Future Volume (vph)	60	1357	114	45	1362	233	113	134	87
Turn Type	Prot	NA	Perm	Prot	NA	Perm	NA	Perm	NA
Protected Phases	7	4		3	8		2		6
Permitted Phases			4			2		6	
Detector Phase	7	4	4	3	8	2	2	6	6
Switch Phase									
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	25.2	25.2	9.6	23.2	32.6	32.6	38.6	38.6
Total Split (s)	13.0	64.0	64.0	12.0	63.0	44.0	44.0	44.0	44.0
Total Split (%)	10.8%	53.3%	53.3%	10.0%	52.5%	36.7%	36.7%	36.7%	36.7%
Yellow Time (s)	3.6	5.2	5.2	3.6	5.2	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	6.2	4.6	6.2	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes				
Recall Mode	None	None	None	Max	None	None	None	None	None
Act Effct Green (s)	7.4	52.5	52.5	7.6	55.5	32.8	32.8	32.8	32.8
Actuated g/C Ratio	0.07	0.48	0.48	0.07	0.51	0.30	0.30	0.30	0.30
v/c Ratio	0.56	0.85	0.15	0.41	0.89	0.89	0.38	0.52	0.37
Control Delay	72.1	30.8	5.4	64.5	33.9	70.4	28.0	40.0	24.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	72.1	30.8	5.4	64.5	33.9	70.4	28.0	40.0	24.5
LOS	E	C	A	E	C	E	C	D	C
Approach Delay		30.6			34.8		51.1		30.9
Approach LOS		C			C		D		C

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 108.9	
Natural Cycle: 100	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.89	
Intersection Signal Delay: 34.6	Intersection LOS: C
Intersection Capacity Utilization 87.2%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 26: Topaz St. & Main St.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	60	1357	114	45	1362	131	233	113	81	134	87	104
Future Volume (veh/h)	60	1357	114	45	1362	131	233	113	81	134	87	104
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	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	1800	1900	1900	1800	1900	1900	1800	1900	1900	1800	1900	1900
Adj Flow Rate, veh/h	65	1475	111	49	1480	139	253	123	70	146	95	66
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	83	1726	754	123	1674	156	357	341	194	330	314	218
Arrive On Green	0.05	0.48	0.48	0.07	0.50	0.50	0.30	0.30	0.30	0.30	0.30	0.30
Sat Flow, veh/h	1714	3610	1577	1714	3337	311	1245	1135	646	1207	1044	725
Grp Volume(v), veh/h	65	1475	111	49	796	823	253	0	193	146	0	161
Grp Sat Flow(s),veh/h/ln	1714	1805	1577	1714	1805	1844	1245	0	1781	1207	0	1769
Q Serve(g_s), s	3.9	37.2	4.1	2.8	40.5	41.4	20.2	0.0	8.8	11.1	0.0	7.2
Cycle Q Clear(g_c), s	3.9	37.2	4.1	2.8	40.5	41.4	27.4	0.0	8.8	19.9	0.0	7.2
Prop In Lane	1.00		1.00	1.00		0.17	1.00		0.36	1.00		0.41
Lane Grp Cap(c), veh/h	83	1726	754	123	906	925	357	0	536	330	0	532
V/C Ratio(X)	0.79	0.85	0.15	0.40	0.88	0.89	0.71	0.00	0.36	0.44	0.00	0.30
Avail Cap(c_a), veh/h	140	2025	885	123	995	1016	459	0	681	429	0	677
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	48.5	23.7	15.1	45.7	22.9	23.1	38.3	0.0	28.3	36.1	0.0	27.7
Incr Delay (d2), s/veh	6.1	3.4	0.1	9.3	8.5	9.3	3.5	0.0	0.4	0.9	0.0	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	1.7	14.7	1.3	1.5	17.0	18.0	6.5	0.0	3.8	3.4	0.0	3.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	54.6	27.1	15.2	55.0	31.4	32.4	41.8	0.0	28.7	37.0	0.0	28.0
LnGrp LOS	D	C	B	E	C	C	D	A	C	D	A	C
Approach Vol, veh/h		1651			1668			446			307	
Approach Delay, s/veh		27.4			32.6			36.1			32.3	
Approach LOS		C			C			D			C	

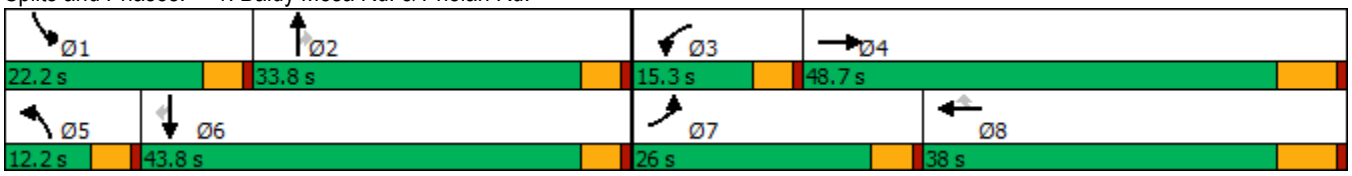
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		35.6	12.0	55.5		35.6	9.6	57.9				
Change Period (Y+Rc), s		4.6	4.6	6.2		4.6	4.6	6.2				
Max Green Setting (Gmax), s		39.4	7.4	57.8		39.4	8.4	56.8				
Max Q Clear Time (g_c+I1), s		29.4	4.8	39.2		21.9	5.9	43.4				
Green Ext Time (p_c), s		1.5	0.0	10.1		1.4	0.0	8.3				

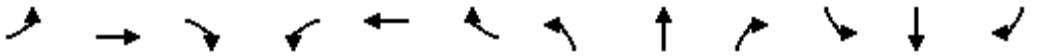
Intersection Summary	
HCM 6th Ctrl Delay	30.8
HCM 6th LOS	C

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	213	760	81	793	201	53	41	37	165	52	190
Future Volume (vph)	213	760	81	793	201	53	41	37	165	52	190
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4	3	8		5	2		1	6	
Permitted Phases					8			2			6
Detector Phase	7	4	3	8	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	30.5	9.6	37.5	37.5	9.6	31.6	31.6	9.6	40.6	40.6
Total Split (s)	26.0	48.7	15.3	38.0	38.0	12.2	33.8	33.8	22.2	43.8	43.8
Total Split (%)	21.7%	40.6%	12.8%	31.7%	31.7%	10.2%	28.2%	28.2%	18.5%	36.5%	36.5%
Yellow Time (s)	3.6	5.5	3.6	5.5	5.5	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.5	4.6	6.5	6.5	4.6	4.6	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Max	None	Max	Max	None	None	None	None	None	None
Act Effct Green (s)	16.6	44.7	8.7	33.9	33.9	6.9	13.1	13.1	14.3	19.1	19.1
Actuated g/C Ratio	0.18	0.47	0.09	0.36	0.36	0.07	0.14	0.14	0.15	0.20	0.20
v/c Ratio	0.77	0.52	0.56	0.66	0.32	0.46	0.17	0.10	0.69	0.15	0.42
Control Delay	56.9	22.8	59.8	32.0	8.4	59.9	40.3	0.5	55.7	32.7	7.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	56.9	22.8	59.8	32.0	8.4	59.9	40.3	0.5	55.7	32.7	7.2
LOS	E	C	E	C	A	E	D	A	E	C	A
Approach Delay		29.8		29.7			36.9			30.1	
Approach LOS		C		C			D			C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 94.8	
Natural Cycle: 100	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.77	
Intersection Signal Delay: 30.2	Intersection LOS: C
Intersection Capacity Utilization 67.7%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 1: Baldy Mesa Rd. & Phelan Rd.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	213	760	52	81	793	201	53	41	37	165	52	190
Future Volume (veh/h)	213	760	52	81	793	201	53	41	37	165	52	190
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		0.99	1.00		0.99	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	1800	1900	1900	1800	1900	1900	1800	1900	1900	1800	1900	1900
Adj Flow Rate, veh/h	229	817	47	87	853	176	57	44	29	177	56	142
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	264	1616	93	123	1386	614	72	219	184	211	373	316
Arrive On Green	0.15	0.47	0.47	0.07	0.38	0.38	0.04	0.12	0.12	0.12	0.20	0.20
Sat Flow, veh/h	1714	3470	200	1714	3610	1600	1714	1900	1596	1714	1900	1610
Grp Volume(v), veh/h	229	425	439	87	853	176	57	44	29	177	56	142
Grp Sat Flow(s),veh/h/ln	1714	1805	1864	1714	1805	1600	1714	1900	1596	1714	1900	1610
Q Serve(g_s), s	11.8	14.9	14.9	4.5	17.3	6.9	3.0	1.9	1.5	9.1	2.2	7.0
Cycle Q Clear(g_c), s	11.8	14.9	14.9	4.5	17.3	6.9	3.0	1.9	1.5	9.1	2.2	7.0
Prop In Lane	1.00		0.11	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	264	841	868	123	1386	614	72	219	184	211	373	316
V/C Ratio(X)	0.87	0.51	0.51	0.70	0.62	0.29	0.79	0.20	0.16	0.84	0.15	0.45
Avail Cap(c_a), veh/h	405	841	868	202	1386	614	144	612	514	333	822	697
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.4	16.9	16.9	41.1	22.5	19.3	43.0	36.3	36.1	38.8	30.2	32.1
Incr Delay (d2), s/veh	7.9	2.2	2.1	2.7	2.1	1.2	7.1	0.4	0.4	5.7	0.2	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.2	5.7	5.9	1.9	6.8	2.5	1.4	0.9	0.6	4.2	1.0	2.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	45.3	19.1	19.0	43.8	24.6	20.5	50.1	36.8	36.5	44.5	30.3	33.1
LnGrp LOS	D	B	B	D	C	C	D	D	D	D	C	C
Approach Vol, veh/h		1093			1116			130			375	
Approach Delay, s/veh		24.6			25.4			42.5			38.1	
Approach LOS		C			C			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.7	15.0	11.1	48.7	8.4	22.4	18.6	41.3
Change Period (Y+Rc), s	4.6	4.6	4.6	6.5	4.6	4.6	4.6	6.5
Max Green Setting (Gmax), s	17.6	29.2	10.7	42.2	7.6	39.2	21.4	31.5
Max Q Clear Time (g_c+I1), s	11.1	3.9	6.5	16.9	5.0	9.0	13.8	19.3
Green Ext Time (p_c), s	0.1	0.3	0.0	4.8	0.0	0.8	0.2	4.5

Intersection Summary	
HCM 6th Ctrl Delay	27.6
HCM 6th LOS	C

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	6	936	6	40	1092	7	4	0	20	8	0	4
Future Vol, veh/h	6	936	6	40	1092	7	4	0	20	8	0	4
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	105	-	105	110	-	110	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	6	985	6	42	1149	7	4	0	21	8	0	4

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1156	0	0	991	0	0	2236	2237	985	2244	2236	1149
Stage 1	-	-	-	-	-	-	997	997	-	1233	1233	-
Stage 2	-	-	-	-	-	-	1239	1240	-	1011	1003	-
Critical Hdwy	4.1	-	-	4.1	-	-	6.8	6.5	6.2	7.1	6.5	6.2
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	2.2	-	-	2.2	-	-	3.3	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	612	-	-	706	-	-	38	43	304	30	43	244
Stage 1	-	-	-	-	-	-	307	325	-	219	251	-
Stage 2	-	-	-	-	-	-	224	249	-	291	322	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	612	-	-	706	-	-	35	40	304	26	40	244
Mov Cap-2 Maneuver	-	-	-	-	-	-	126	139	-	113	134	-
Stage 1	-	-	-	-	-	-	304	322	-	217	236	-
Stage 2	-	-	-	-	-	-	207	234	-	268	319	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.4	21.3	33.7
HCM LOS			C	D

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	246	612	-	-	706	-	-	138
HCM Lane V/C Ratio	0.103	0.01	-	-	0.06	-	-	0.092
HCM Control Delay (s)	21.3	10.9	-	-	10.4	-	-	33.7
HCM Lane LOS	C	B	-	-	B	-	-	D
HCM 95th %tile Q(veh)	0.3	0	-	-	0.2	-	-	0.3

Intersection	
Int Delay, s/veh	0.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1006	3	6	1281	8	6
Future Vol, veh/h	1006	3	6	1281	8	6
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	110	-	0	-
Veh in Median Storage, #	0	-	-	0	1	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	1048	3	6	1334	8	6

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1051	0	2396	1050
Stage 1	-	-	-	-	1050	-
Stage 2	-	-	-	-	1346	-
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	-	-	670	-	38	278
Stage 1	-	-	-	-	340	-
Stage 2	-	-	-	-	245	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	670	-	38	278
Mov Cap-2 Maneuver	-	-	-	-	146	-
Stage 1	-	-	-	-	340	-
Stage 2	-	-	-	-	243	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	26.4
HCM LOS			D

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	183	-	-	670	-
HCM Lane V/C Ratio	0.08	-	-	0.009	-
HCM Control Delay (s)	26.4	-	-	10.4	-
HCM Lane LOS	D	-	-	B	-
HCM 95th %tile Q(veh)	0.3	-	-	0	-

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	13	990	1287	25	23	12
Future Vol, veh/h	13	990	1287	25	23	12
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	1	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	14	1076	1399	27	25	13

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1426	0	-	0	1979	713
Stage 1	-	-	-	-	1413	-
Stage 2	-	-	-	-	566	-
Critical Hdwy	4.1	-	-	-	6.8	6.9
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	483	-	-	-	55	379
Stage 1	-	-	-	-	194	-
Stage 2	-	-	-	-	537	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	483	-	-	-	53	379
Mov Cap-2 Maneuver	-	-	-	-	145	-
Stage 1	-	-	-	-	188	-
Stage 2	-	-	-	-	537	-

Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	29.6
HCM LOS			D

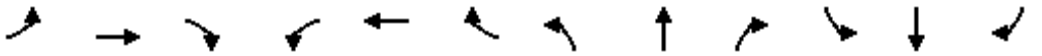
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	483	-	-	-	184
HCM Lane V/C Ratio	0.029	-	-	-	0.207
HCM Control Delay (s)	12.7	-	-	-	29.6
HCM Lane LOS	B	-	-	-	D
HCM 95th %tile Q(veh)	0.1	-	-	-	0.8

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	102	98	82	69	148	119	1867	123	302	1439	122
Future Volume (vph)	102	98	82	69	148	119	1867	123	302	1439	122
Turn Type	Perm	NA	Perm	Perm	NA	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		4			8	5	2		1	6	
Permitted Phases	4		4	8				2			6
Detector Phase	4	4	4	8	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	15.0	15.0	15.0	42.0	42.0	9.0	28.0	28.0	9.0	37.0	37.0
Total Split (s)	42.0	42.0	42.0	42.0	42.0	14.0	49.0	49.0	29.0	64.0	64.0
Total Split (%)	35.0%	35.0%	35.0%	35.0%	35.0%	11.7%	40.8%	40.8%	24.2%	53.3%	53.3%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	3.0	5.0	5.0	3.0	5.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	4.0	6.0	6.0	4.0	6.0	6.0
Lead/Lag						Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?						Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Max	Max	None	Max	Max
Act Effct Green (s)	37.0	37.0	37.0	37.0	37.0	9.8	44.5	44.5	23.4	58.0	58.0
Actuated g/C Ratio	0.31	0.31	0.31	0.31	0.31	0.08	0.37	0.37	0.20	0.48	0.48
v/c Ratio	1.14	0.17	0.15	0.18	0.82	0.84	1.45	0.19	0.89	0.86	0.15
Control Delay	175.7	31.4	4.9	31.9	43.5	95.4	238.7	7.0	74.8	33.5	3.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	175.7	31.4	4.9	31.9	43.5	95.4	238.7	7.0	74.8	33.5	3.3
LOS	F	C	A	C	D	F	F	A	E	C	A
Approach Delay		75.9			42.0		217.1			38.3	
Approach LOS		E			D		F			D	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 119.8	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.45	
Intersection Signal Delay: 119.8	Intersection LOS: F
Intersection Capacity Utilization 120.4%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 8: US-395 & Luna Rd.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	102	98	82	69	148	311	119	1867	123	302	1439	122
Future Volume (veh/h)	102	98	82	69	148	311	119	1867	123	302	1439	122
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	106	102	66	72	154	262	124	1945	103	315	1499	108
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	149	586	497	412	195	331	150	1362	608	342	1746	779
Arrive On Green	0.31	0.31	0.31	0.31	0.31	0.31	0.08	0.38	0.38	0.19	0.48	0.48
Sat Flow, veh/h	1040	1900	1610	1305	631	1074	1810	3610	1610	1810	3610	1610
Grp Volume(v), veh/h	106	102	66	72	0	416	124	1945	103	315	1499	108
Grp Sat Flow(s),veh/h/ln	1040	1900	1610	1305	0	1705	1810	1805	1610	1810	1805	1610
Q Serve(g_s), s	10.2	4.7	3.5	5.1	0.0	26.8	8.1	45.3	5.1	20.5	44.0	4.5
Cycle Q Clear(g_c), s	37.0	4.7	3.5	9.8	0.0	26.8	8.1	45.3	5.1	20.5	44.0	4.5
Prop In Lane	1.00		1.00	1.00		0.63	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	149	586	497	412	0	526	150	1362	608	342	1746	779
V/C Ratio(X)	0.71	0.17	0.13	0.17	0.00	0.79	0.83	1.43	0.17	0.92	0.86	0.14
Avail Cap(c_a), veh/h	149	586	497	412	0	526	151	1362	608	377	1746	779
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	55.7	30.3	29.9	33.9	0.0	37.9	54.2	37.3	24.8	47.7	27.3	17.1
Incr Delay (d2), s/veh	12.8	0.1	0.0	0.1	0.0	7.4	29.3	196.9	0.6	25.7	5.7	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.7	2.1	1.4	1.6	0.0	11.9	4.8	55.5	1.9	11.2	18.3	1.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	68.5	30.4	29.9	34.0	0.0	45.3	83.5	234.2	25.4	73.4	33.1	17.5
LnGrp LOS	E	C	C	C	A	D	F	F	C	E	C	B
Approach Vol, veh/h		274			488			2172			1922	
Approach Delay, s/veh		45.0			43.6			215.7			38.8	
Approach LOS		D			D			F			D	

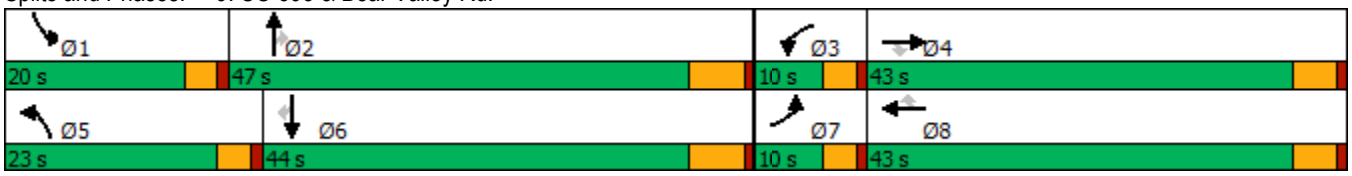
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	26.7	51.3		42.0	13.9	64.0		42.0				
Change Period (Y+Rc), s	4.0	6.0		5.0	4.0	6.0		5.0				
Max Green Setting (Gmax), s	25.0	43.0		37.0	10.0	58.0		37.0				
Max Q Clear Time (g_c+I1), s	22.5	47.3		39.0	10.1	46.0		28.8				
Green Ext Time (p_c), s	0.2	0.0		0.0	0.0	6.5		1.2				

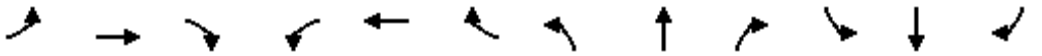
Intersection Summary												
HCM 6th Ctrl Delay			118.8									
HCM 6th LOS			F									

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	111	440	188	149	510	209	406	1751	285	229	1327	95
Future Volume (vph)	111	440	188	149	510	209	406	1751	285	229	1327	95
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.0	43.0	43.0	9.0	43.0	43.0	9.0	44.0	44.0	9.0	44.0	44.0
Total Split (s)	10.0	43.0	43.0	10.0	43.0	43.0	23.0	47.0	47.0	20.0	44.0	44.0
Total Split (%)	8.3%	35.8%	35.8%	8.3%	35.8%	35.8%	19.2%	39.2%	39.2%	16.7%	36.7%	36.7%
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0	4.0	3.0	5.0	5.0	3.0	5.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	5.0	5.0	4.0	5.0	5.0	4.0	6.0	6.0	4.0	6.0	6.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Max	Max	None	Max	Max
Act Effct Green (s)	6.0	21.7	21.7	6.0	21.7	21.7	19.1	41.3	41.3	16.1	38.2	38.2
Actuated g/C Ratio	0.06	0.21	0.21	0.06	0.21	0.21	0.18	0.40	0.40	0.15	0.37	0.37
v/c Ratio	1.12	0.62	0.40	1.51	0.72	0.44	1.29	1.29	0.40	0.87	1.06	0.16
Control Delay	171.6	40.6	6.9	306.6	43.5	7.0	188.2	165.1	12.2	73.5	73.9	7.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	171.6	40.6	6.9	306.6	43.5	7.0	188.2	165.1	12.2	73.5	73.9	7.4
LOS	F	D	A	F	D	A	F	F	B	E	E	A
Approach Delay		51.7			79.9			151.1			70.0	
Approach LOS		D			E			F			E	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 104.2	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.51	
Intersection Signal Delay: 103.9	Intersection LOS: F
Intersection Capacity Utilization 98.3%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 9: US-395 & Bear Valley Rd.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	111	440	188	149	510	209	406	1751	285	229	1327	95
Future Volume (veh/h)	111	440	188	149	510	209	406	1751	285	229	1327	95
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	117	463	116	157	537	151	427	1843	239	241	1397	87
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	108	678	303	108	678	302	340	1494	666	272	1359	605
Arrive On Green	0.06	0.19	0.19	0.06	0.19	0.19	0.19	0.41	0.41	0.15	0.38	0.38
Sat Flow, veh/h	1810	3610	1610	1810	3610	1605	1810	3610	1610	1810	3610	1609
Grp Volume(v), veh/h	117	463	116	157	537	151	427	1843	239	241	1397	87
Grp Sat Flow(s),veh/h/ln	1810	1805	1610	1810	1805	1605	1810	1805	1610	1810	1805	1609
Q Serve(g_s), s	6.0	12.1	6.4	6.0	14.3	8.5	19.0	41.8	10.3	13.2	38.0	3.6
Cycle Q Clear(g_c), s	6.0	12.1	6.4	6.0	14.3	8.5	19.0	41.8	10.3	13.2	38.0	3.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	108	678	303	108	678	302	340	1494	666	272	1359	605
V/C Ratio(X)	1.09	0.68	0.38	1.46	0.79	0.50	1.25	1.23	0.36	0.88	1.03	0.14
Avail Cap(c_a), veh/h	108	1359	606	108	1359	604	340	1494	666	287	1359	605
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.5	38.2	35.9	47.5	39.1	36.8	41.0	29.6	20.4	42.0	31.5	20.8
Incr Delay (d2), s/veh	112.5	0.5	0.3	250.9	0.8	0.5	136.2	111.1	1.5	25.0	31.9	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.9	5.0	2.4	10.0	6.0	3.2	20.7	38.9	3.8	7.4	20.7	1.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	160.0	38.6	36.2	298.4	39.9	37.2	177.2	140.7	21.9	67.0	63.4	21.3
LnGrp LOS	F	D	D	F	D	D	F	F	C	E	F	C
Approach Vol, veh/h		696			845			2509			1725	
Approach Delay, s/veh		58.6			87.5			135.6			61.8	
Approach LOS		E			F			F			E	

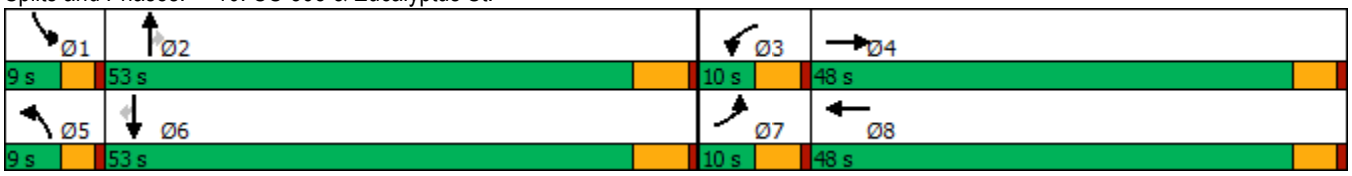
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	19.2	47.8	10.0	24.0	23.0	44.0	10.0	24.0
Change Period (Y+Rc), s	4.0	6.0	4.0	5.0	4.0	6.0	4.0	5.0
Max Green Setting (Gmax), s	16.0	41.0	6.0	38.0	19.0	38.0	6.0	38.0
Max Q Clear Time (g_c+I1), s	15.2	43.8	8.0	14.1	21.0	40.0	8.0	16.3
Green Ext Time (p_c), s	0.0	0.0	0.0	1.8	0.0	0.0	0.0	2.1

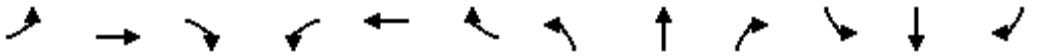
Intersection Summary	
HCM 6th Ctrl Delay	97.2
HCM 6th LOS	F

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	8	0	62	3	12	2451	120	16	1510	16
Future Volume (vph)	8	0	62	3	12	2451	120	16	1510	16
Turn Type	Prot	NA	Prot	NA	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4	3	8	5	2		1	6	
Permitted Phases							2			6
Detector Phase	7	4	3	8	5	2	2	1	6	6
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	10.0	48.0	10.0	48.0	9.0	41.0	41.0	9.0	41.0	41.0
Total Split (s)	10.0	48.0	10.0	48.0	9.0	53.0	53.0	9.0	53.0	53.0
Total Split (%)	8.3%	40.0%	8.3%	40.0%	7.5%	44.2%	44.2%	7.5%	44.2%	44.2%
Yellow Time (s)	4.0	4.0	4.0	4.0	3.0	5.0	5.0	3.0	5.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	4.0	6.0	6.0	4.0	6.0	6.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	Max	Max	None	Max	Max
Act Effct Green (s)	5.2	15.1	9.6	15.1	5.2	56.9	56.9	5.2	56.9	56.9
Actuated g/C Ratio	0.06	0.18	0.11	0.18	0.06	0.66	0.66	0.06	0.66	0.66
v/c Ratio	0.07	0.01	0.32	0.06	0.12	1.08	0.11	0.16	0.67	0.02
Control Delay	44.9	0.0	44.2	14.2	45.5	62.7	4.8	46.2	15.3	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	44.9	0.0	44.2	14.2	45.5	62.7	4.8	46.2	15.3	0.0
LOS	D	A	D	B	D	E	A	D	B	A
Approach Delay		29.9		38.0		60.0			15.5	
Approach LOS		C		D		E			B	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 86.1	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.08	
Intersection Signal Delay: 43.2	Intersection LOS: D
Intersection Capacity Utilization 87.0%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 10: US-395 & Eucalyptus St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	8	0	4	62	3	13	12	2451	120	16	1510	16
Future Volume (veh/h)	8	0	4	62	3	13	12	2451	120	16	1510	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	8	0	1	65	3	6	13	2580	123	17	1589	16
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	18	0	105	88	59	117	29	2194	979	36	2209	985
Arrive On Green	0.01	0.00	0.07	0.05	0.10	0.10	0.02	0.61	0.61	0.02	0.61	0.61
Sat Flow, veh/h	1810	0	1610	1810	565	1131	1810	3610	1610	1810	3610	1610
Grp Volume(v), veh/h	8	0	1	65	0	9	13	2580	123	17	1589	16
Grp Sat Flow(s),veh/h/ln	1810	0	1610	1810	0	1696	1810	1805	1610	1810	1805	1610
Q Serve(g_s), s	0.3	0.0	0.0	2.7	0.0	0.4	0.6	47.0	2.5	0.7	23.6	0.3
Cycle Q Clear(g_c), s	0.3	0.0	0.0	2.7	0.0	0.4	0.6	47.0	2.5	0.7	23.6	0.3
Prop In Lane	1.00		1.00	1.00		0.67	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	18	0	105	88	0	176	29	2194	979	36	2209	985
V/C Ratio(X)	0.43	0.00	0.01	0.74	0.00	0.05	0.46	1.18	0.13	0.47	0.72	0.02
Avail Cap(c_a), veh/h	117	0	895	117	0	943	117	2194	979	117	2209	985
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.0	0.0	33.8	36.3	0.0	31.2	37.7	15.2	6.4	37.5	10.4	5.9
Incr Delay (d2), s/veh	5.8	0.0	0.0	9.7	0.0	0.1	4.2	84.2	0.3	3.6	2.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	0.0	1.4	0.0	0.1	0.3	38.1	0.7	0.4	8.7	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	43.9	0.0	33.9	46.0	0.0	31.4	41.9	99.4	6.7	41.1	12.5	5.9
LnGrp LOS	D	A	C	D	A	C	D	F	A	D	B	A
Approach Vol, veh/h		9			74			2716			1622	
Approach Delay, s/veh		42.8			44.2			94.9			12.7	
Approach LOS		D			D			F			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.5	53.0	8.8	10.0	5.2	53.3	5.8	13.0
Change Period (Y+Rc), s	4.0	6.0	5.0	5.0	4.0	6.0	5.0	5.0
Max Green Setting (Gmax), s	5.0	47.0	5.0	43.0	5.0	47.0	5.0	43.0
Max Q Clear Time (g_c+I1), s	2.7	49.0	4.7	2.0	2.6	25.6	2.3	2.4
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	13.5	0.0	0.0

Intersection Summary		
HCM 6th Ctrl Delay		63.8
HCM 6th LOS		E

Intersection	
Int Delay, s/veh	5.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	4	0	6	31	0	3	11	2789	28	2	2005	6
Future Vol, veh/h	4	0	6	31	0	3	11	2789	28	2	2005	6
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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	4	0	6	32	0	3	11	2905	29	2	2089	6

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	5039	5052	2092	5041	5041	2920	2095	0	0	2934	0	0
Stage 1	2096	2096	-	2942	2942	-	-	-	-	-	-	-
Stage 2	2943	2956	-	2099	2099	-	-	-	-	-	-	-
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	0	1	67	0	1	21	267	-	-	125	-	-
Stage 1	69	94	-	~ 21	34	-	-	-	-	-	-	-
Stage 2	21	34	-	69	94	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	0	1	67	0	1	21	267	-	-	125	-	-
Mov Cap-2 Maneuver	0	1	-	0	1	-	-	-	-	-	-	-
Stage 1	69	94	-	~ 21	34	-	-	-	-	-	-	-
Stage 2	18	34	-	63	94	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	68.4	$ 723.3	0.1	0
HCM LOS	F	F		

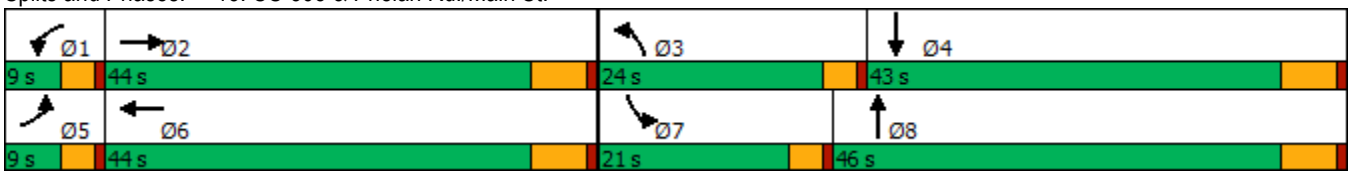
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	267	-	-	67	21	125	-	-
HCM Lane V/C Ratio	0.043	-	-	0.155	1.687	0.017	-	-
HCM Control Delay (s)	19.1	0	-	68.4	$ 723.3	34.3	0	-
HCM Lane LOS	C	A	-	F	F	D	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0.5	4.7	0.1	-	-

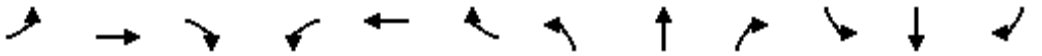
Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	99	787	27	925	278	2369	382	1551
Future Volume (vph)	99	787	27	925	278	2369	382	1551
Turn Type	Prot	NA	Prot	NA	Prot	NA	Prot	NA
Protected Phases	5	2	1	6	3	8	7	4
Permitted Phases								
Detector Phase	5	2	1	6	3	8	7	4
Switch Phase								
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.0	16.0	9.0	16.0	9.0	16.0	9.0	16.0
Total Split (s)	9.0	44.0	9.0	44.0	24.0	46.0	21.0	43.0
Total Split (%)	7.5%	36.7%	7.5%	36.7%	20.0%	38.3%	17.5%	35.8%
Yellow Time (s)	3.0	5.0	3.0	5.0	3.0	5.0	3.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	6.0	4.0	6.0	4.0	6.0	4.0	6.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None
Act Effct Green (s)	5.0	41.6	5.0	38.0	20.0	40.0	17.0	37.0
Actuated g/C Ratio	0.04	0.35	0.04	0.32	0.17	0.33	0.14	0.31
v/c Ratio	1.39	0.78	0.37	1.20	0.98	2.48	1.58	1.58
Control Delay	279.2	40.6	70.2	133.6	96.6	687.6	312.1	296.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	279.2	40.6	70.2	133.6	96.6	687.6	312.1	296.0
LOS	F	D	E	F	F	F	F	F
Approach Delay		63.9		132.3		634.0		299.0
Approach LOS		E		F		F		F

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 2.48	
Intersection Signal Delay: 375.9	Intersection LOS: F
Intersection Capacity Utilization 159.4%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 13: US-395 & Phelan Rd./Main St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	99	787	126	27	925	360	278	2369	423	382	1551	109
Future Volume (veh/h)	99	787	126	27	925	360	278	2369	423	382	1551	109
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	104	828	105	28	974	295	293	2494	438	402	1633	100
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	75	1070	136	46	865	261	302	1028	175	256	1066	65
Arrive On Green	0.04	0.33	0.33	0.03	0.32	0.32	0.17	0.33	0.33	0.14	0.31	0.31
Sat Flow, veh/h	1810	3214	408	1810	2733	824	1810	3084	526	1810	3457	210
Grp Volume(v), veh/h	104	465	468	28	642	627	293	1428	1504	402	848	885
Grp Sat Flow(s),veh/h/ln	1810	1805	1816	1810	1805	1752	1810	1805	1805	1810	1805	1862
Q Serve(g_s), s	5.0	27.8	27.8	1.8	38.0	38.0	19.3	40.0	40.0	17.0	37.0	37.0
Cycle Q Clear(g_c), s	5.0	27.8	27.8	1.8	38.0	38.0	19.3	40.0	40.0	17.0	37.0	37.0
Prop In Lane	1.00		0.22	1.00		0.47	1.00		0.29	1.00		0.11
Lane Grp Cap(c), veh/h	75	601	605	46	572	555	302	602	602	256	557	574
V/C Ratio(X)	1.38	0.77	0.77	0.61	1.12	1.13	0.97	2.37	2.50	1.57	1.52	1.54
Avail Cap(c_a), veh/h	75	601	605	75	572	555	302	602	602	256	557	574
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	57.5	36.0	36.0	57.9	41.0	41.0	49.7	40.0	40.0	51.5	41.5	41.5
Incr Delay (d2), s/veh	234.0	6.2	6.2	9.4	76.1	79.6	43.8	623.5	679.3	273.8	244.5	252.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.1	12.5	12.5	0.9	27.8	27.5	12.0	120.6	130.0	26.8	53.1	56.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	291.5	42.2	42.1	67.3	117.1	120.6	93.6	663.5	719.3	325.3	286.0	294.0
LnGrp LOS	F	D	D	E	F	F	F	F	F	F	F	F
Approach Vol, veh/h		1037			1297			3225			2135	
Approach Delay, s/veh		67.2			117.7			637.7			296.7	
Approach LOS		E			F			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.0	46.0	24.0	43.0	9.0	44.0	21.0	46.0
Change Period (Y+Rc), s	4.0	6.0	4.0	6.0	4.0	6.0	4.0	6.0
Max Green Setting (Gmax), s	5.0	38.0	20.0	37.0	5.0	38.0	17.0	40.0
Max Q Clear Time (g_c+I1), s	3.8	29.8	21.3	39.0	7.0	40.0	19.0	42.0
Green Ext Time (p_c), s	0.0	3.2	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	378.5
HCM 6th LOS	F

Intersection	
Int Delay, s/veh	94.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	91	762	2308	188	512	1191
Future Vol, veh/h	91	762	2308	188	512	1191
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	375	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	98	98	98	98	98	98
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	93	778	2355	192	522	1215

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	4710	1274	0	0	2547	0
Stage 1	2451	-	-	-	-	-
Stage 2	2259	-	-	-	-	-
Critical Hdwy	6.6	6.9	-	-	4.1	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	~ 1	~ 161	-	-	~ 177	-
Stage 1	~ 52	-	-	-	-	-
Stage 2	~ 86	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	0	~ 161	-	-	~ 177	-
Mov Cap-2 Maneuver	0	-	-	-	-	-
Stage 1	~ 52	-	-	-	-	-
Stage 2	0	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s		0	280.6
HCM LOS	-		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	-	161	~ 177	-
HCM Lane V/C Ratio	-	-	-	4.83	2.952	-
HCM Control Delay (s)	-	-	$ 1778.4	$ 933.4		-
HCM Lane LOS	-	-	-	F	F	-
HCM 95th %tile Q(veh)	-	-	-	80.7	47.3	-

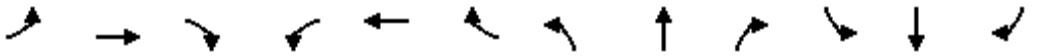
Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	88	1	229	8	175	231	2233	208	68	1103	111
Future Volume (vph)	88	1	229	8	175	231	2233	208	68	1103	111
Turn Type	Perm	NA	Perm	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		4		8		5	2		1	6	
Permitted Phases	4		8		8			2			6
Detector Phase	4	4	8	8	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	16.0	16.0	16.0	16.0	16.0	10.0	16.0	16.0	10.0	16.0	16.0
Total Split (s)	31.0	31.0	31.0	31.0	31.0	29.0	79.0	79.0	10.0	60.0	60.0
Total Split (%)	25.8%	25.8%	25.8%	25.8%	25.8%	24.2%	65.8%	65.8%	8.3%	50.0%	50.0%
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	5.0	6.0	6.0	5.0	6.0	6.0
Lead/Lag						Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?						Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Max	Max	None	Max	Max
Act Effct Green (s)	25.0	25.0	25.0	25.0	25.0	19.4	73.0	73.0	5.0	58.6	58.6
Actuated g/C Ratio	0.21	0.21	0.21	0.21	0.21	0.16	0.61	0.61	0.04	0.49	0.49
v/c Ratio	0.30	0.51	2.02	0.02	0.42	0.81	1.04	0.21	0.92	0.64	0.13
Control Delay	43.5	8.1	513.4	38.1	18.3	69.4	54.0	3.8	141.0	25.6	3.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	10.1	0.0	0.0	0.0	0.0
Total Delay	43.5	8.1	513.4	38.1	18.3	69.4	64.1	3.8	141.0	25.6	3.5
LOS	D	A	F	D	B	E	E	A	F	C	A
Approach Delay		16.5		293.9			59.8			29.8	
Approach LOS		B		F			E			C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 2.02	
Intersection Signal Delay: 68.7	Intersection LOS: E
Intersection Capacity Utilization 115.4%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 15: US-395 & Three Flags Rd.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	88	1	284	229	8	175	231	2233	208	68	1103	111
Future Volume (veh/h)	88	1	284	229	8	175	231	2233	208	68	1103	111
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	90	1	198	234	8	113	236	2279	161	69	1126	77
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	339	2	334	183	396	335	264	2196	979	75	1819	811
Arrive On Green	0.21	0.21	0.21	0.21	0.21	0.21	0.15	0.61	0.61	0.04	0.50	0.50
Sat Flow, veh/h	1362	8	1603	1269	1900	1610	1810	3610	1609	1810	3610	1610
Grp Volume(v), veh/h	90	0	199	234	8	113	236	2279	161	69	1126	77
Grp Sat Flow(s),veh/h/ln	1362	0	1611	1269	1900	1610	1810	1805	1609	1810	1805	1610
Q Serve(g_s), s	6.7	0.0	13.4	11.6	0.4	7.2	15.4	73.0	5.2	4.6	27.0	3.0
Cycle Q Clear(g_c), s	7.2	0.0	13.4	25.0	0.4	7.2	15.4	73.0	5.2	4.6	27.0	3.0
Prop In Lane	1.00		0.99	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	339	0	336	183	396	335	264	2196	979	75	1819	811
V/C Ratio(X)	0.27	0.00	0.59	1.28	0.02	0.34	0.89	1.04	0.16	0.92	0.62	0.09
Avail Cap(c_a), veh/h	339	0	336	183	396	335	362	2196	979	75	1819	811
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	40.6	0.0	42.9	56.1	37.8	40.4	50.3	23.5	10.2	57.3	21.5	15.5
Incr Delay (d2), s/veh	0.2	0.0	1.9	161.1	0.0	0.2	15.4	29.8	0.4	74.0	1.6	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	2.3	0.0	5.5	13.7	0.2	2.9	7.8	34.4	1.7	3.6	10.7	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	40.8	0.0	44.8	217.2	37.8	40.7	65.8	53.3	10.6	131.3	23.1	15.7
LnGrp LOS	D	A	D	F	D	D	E	F	B	F	C	B
Approach Vol, veh/h		289			355			2676			1272	
Approach Delay, s/veh		43.6			157.0			51.8			28.5	
Approach LOS		D			F			D			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.0	79.0		31.0	22.5	66.5		31.0				
Change Period (Y+Rc), s	5.0	6.0		6.0	5.0	6.0		6.0				
Max Green Setting (Gmax), s	5.0	73.0		25.0	24.0	54.0		25.0				
Max Q Clear Time (g_c+I1), s	6.6	75.0		15.4	17.4	29.0		27.0				
Green Ext Time (p_c), s	0.0	0.0		0.7	0.2	8.0		0.0				

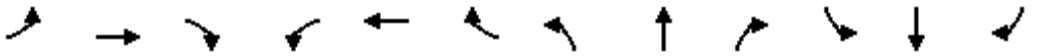
Intersection Summary			
HCM 6th Ctrl Delay		53.0	
HCM 6th LOS		D	

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	405	149	114	76	473	35	1794	122	200	1349	66
Future Volume (vph)	405	149	114	76	473	35	1794	122	200	1349	66
Turn Type	Perm	NA	Perm	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		4		8		5	2		1	6	
Permitted Phases	4		8		8			2			6
Detector Phase	4	4	8	8	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	15.0	15.0	46.0	46.0	46.0	9.0	34.0	34.0	9.0	34.0	34.0
Total Split (s)	47.0	47.0	47.0	47.0	47.0	9.0	41.0	41.0	32.0	64.0	64.0
Total Split (%)	39.2%	39.2%	39.2%	39.2%	39.2%	7.5%	34.2%	34.2%	26.7%	53.3%	53.3%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	3.0	5.0	5.0	3.0	5.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	0.0	-2.0	-2.0	0.0	-2.0	-2.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag						Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?						Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Max	Max	None	Max	Max
Act Effct Green (s)	37.8	37.8	37.8	37.8	37.8	5.0	43.9	43.9	17.6	60.6	60.6
Actuated g/C Ratio	0.34	0.34	0.34	0.34	0.34	0.04	0.39	0.39	0.16	0.54	0.54
v/c Ratio	0.92	0.27	0.32	0.12	0.59	0.44	1.30	0.18	0.72	0.71	0.08
Control Delay	62.7	27.2	30.3	26.2	7.1	72.5	170.9	10.0	60.1	23.3	5.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	62.7	27.2	30.3	26.2	7.1	72.5	170.9	10.0	60.1	23.3	5.5
LOS	E	C	C	C	A	E	F	A	E	C	A
Approach Delay		52.3		13.3			159.1			27.1	
Approach LOS		D		B			F			C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 111.5	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.30	
Intersection Signal Delay: 81.8	Intersection LOS: F
Intersection Capacity Utilization 111.6%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 16: US-395 & Joshua St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	405	149	18	114	76	473	35	1794	122	200	1349	66
Future Volume (veh/h)	405	149	18	114	76	473	35	1794	122	200	1349	66
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	418	154	16	118	78	430	36	1849	114	206	1391	61
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	382	614	64	451	690	584	53	1462	652	237	1828	815
Arrive On Green	0.36	0.36	0.35	0.36	0.36	0.36	0.03	0.40	0.40	0.13	0.51	0.51
Sat Flow, veh/h	956	1693	176	1303	1900	1609	1810	3610	1610	1810	3610	1610
Grp Volume(v), veh/h	418	0	170	118	78	430	36	1849	114	206	1391	61
Grp Sat Flow(s),veh/h/ln	956	0	1868	1303	1900	1609	1810	1805	1610	1810	1805	1610
Q Serve(g_s), s	39.8	0.0	7.6	8.3	3.2	27.5	2.3	48.0	5.4	13.2	36.7	2.3
Cycle Q Clear(g_c), s	43.0	0.0	7.6	15.8	3.2	27.5	2.3	48.0	5.4	13.2	36.7	2.3
Prop In Lane	1.00		0.09	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	382	0	678	451	690	584	53	1462	652	237	1828	815
V/C Ratio(X)	1.10	0.00	0.25	0.26	0.11	0.74	0.68	1.27	0.17	0.87	0.76	0.07
Avail Cap(c_a), veh/h	382	0	678	451	690	584	76	1462	652	428	1828	815
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	42.5	0.0	26.5	32.0	25.1	32.8	56.9	35.3	22.6	50.5	23.5	15.0
Incr Delay (d2), s/veh	74.3	0.0	0.1	0.1	0.0	4.3	10.7	124.9	0.6	7.2	3.0	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	19.3	0.0	3.4	2.6	1.5	11.3	1.2	44.5	2.0	6.2	14.6	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	116.8	0.0	26.6	32.1	25.1	37.1	67.7	160.2	23.2	57.7	26.5	15.2
LnGrp LOS	F	A	C	C	C	D	E	F	C	E	C	B
Approach Vol, veh/h		588			626			1999			1658	
Approach Delay, s/veh		90.7			34.7			150.7			30.0	
Approach LOS		F			C			F			C	

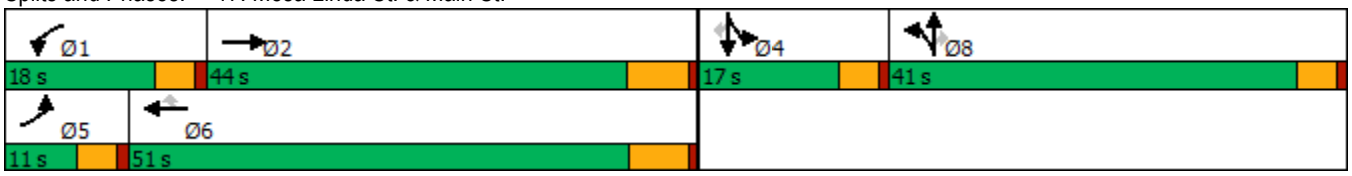
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	19.5	52.0		47.0	7.5	64.0		47.0				
Change Period (Y+Rc), s	4.0	6.0		5.0	4.0	6.0		5.0				
Max Green Setting (Gmax), s	28.0	35.0		42.0	5.0	58.0		42.0				
Max Q Clear Time (g_c+I1), s	15.2	50.0		45.0	4.3	38.7		29.5				
Green Ext Time (p_c), s	0.3	0.0		0.0	0.0	14.3		1.1				

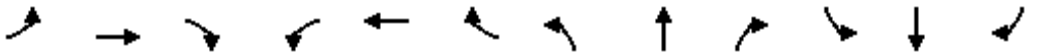
Intersection Summary			
HCM 6th Ctrl Delay		87.5	
HCM 6th LOS		F	

Lane Group	EBL	EBT	WBL	WBT	WBR	NBT	NBR	SBT	SBR
Lane Configurations									
Traffic Volume (vph)	7	1072	98	1280	76	10	114	0	4
Future Volume (vph)	7	1072	98	1280	76	10	114	0	4
Turn Type	Prot	NA	Prot	NA	Perm	NA	Perm	NA	Perm
Protected Phases	5	2	1	6		8		4	
Permitted Phases					6		8		4
Detector Phase	5	2	1	6	6	8	8	4	4
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	16.5	9.6	23.2	23.2	40.6	40.6	14.6	14.6
Total Split (s)	11.0	44.0	18.0	51.0	51.0	41.0	41.0	17.0	17.0
Total Split (%)	9.2%	36.7%	15.0%	42.5%	42.5%	34.2%	34.2%	14.2%	14.2%
Yellow Time (s)	3.6	5.5	3.6	5.2	5.2	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.5	4.6	6.2	6.2	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lead	Lag	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes				
Recall Mode	None	Max	None	Max	Max	None	None	None	None
Act Effct Green (s)	5.4	40.9	9.4	51.2	51.2	14.2	14.2	10.6	10.6
Actuated g/C Ratio	0.06	0.47	0.11	0.59	0.59	0.16	0.16	0.12	0.12
v/c Ratio	0.07	0.46	0.55	0.43	0.08	0.08	0.30	0.21	0.01
Control Delay	48.4	20.3	52.2	13.9	3.1	32.9	4.0	43.3	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	48.4	20.3	52.2	13.9	3.1	32.9	4.0	43.3	0.0
LOS	D	C	D	B	A	C	A	D	A
Approach Delay		20.5		15.9		8.8		39.9	
Approach LOS		C		B		A		D	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 86.3	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.55	
Intersection Signal Delay: 17.8	Intersection LOS: B
Intersection Capacity Utilization 54.2%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 17: Mesa Linda St. & Main St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	7	1072	8	98	1280	76	13	10	114	44	0	4
Future Volume (veh/h)	7	1072	8	98	1280	76	13	10	114	44	0	4
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1800	1900	1900	1800	1900	1900	1800	1900	1900	1800	1900	1900
Adj Flow Rate, veh/h	7	1117	7	102	1333	71	14	10	60	46	0	2
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	15	2592	16	129	2872	892	113	81	169	148	0	131
Arrive On Green	0.01	0.49	0.49	0.08	0.55	0.55	0.10	0.10	0.10	0.08	0.00	0.08
Sat Flow, veh/h	1714	5319	33	1714	5187	1610	1077	769	1610	1810	0	1610
Grp Volume(v), veh/h	7	726	398	102	1333	71	24	0	60	46	0	2
Grp Sat Flow(s),veh/h/ln	1714	1729	1894	1714	1729	1610	1846	0	1610	1810	0	1610
Q Serve(g_s), s	0.3	11.0	11.0	4.7	12.5	1.7	1.0	0.0	2.8	1.9	0.0	0.1
Cycle Q Clear(g_c), s	0.3	11.0	11.0	4.7	12.5	1.7	1.0	0.0	2.8	1.9	0.0	0.1
Prop In Lane	1.00		0.02	1.00		1.00	0.58		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	15	1685	923	129	2872	892	194	0	169	148	0	131
V/C Ratio(X)	0.45	0.43	0.43	0.79	0.46	0.08	0.12	0.00	0.36	0.31	0.00	0.02
Avail Cap(c_a), veh/h	136	1685	923	284	2872	892	831	0	724	277	0	247
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	39.9	13.5	13.5	36.8	10.8	8.4	32.8	0.0	33.7	35.0	0.0	34.2
Incr Delay (d2), s/veh	7.6	0.8	1.5	4.0	0.5	0.2	0.3	0.0	1.3	1.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	3.6	4.2	2.0	3.9	0.5	0.4	0.0	1.1	0.9	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	47.4	14.3	14.9	40.8	11.4	8.6	33.1	0.0	34.9	36.2	0.0	34.2
LnGrp LOS	D	B	B	D	B	A	C	A	C	D	A	C
Approach Vol, veh/h		1131			1506			84			48	
Approach Delay, s/veh		14.7			13.2			34.4			36.1	
Approach LOS		B			B			C			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.7	45.9		11.2	5.3	51.3		13.1				
Change Period (Y+Rc), s	4.6	6.5		4.6	4.6	* 6.5		4.6				
Max Green Setting (Gmax), s	13.4	37.5		12.4	6.4	* 45		36.4				
Max Q Clear Time (g_c+I1), s	6.7	13.0		3.9	2.3	14.5		4.8				
Green Ext Time (p_c), s	0.1	6.9		0.1	0.0	10.6		0.3				

Intersection Summary		
HCM 6th Ctrl Delay		14.9
HCM 6th LOS		B

Notes

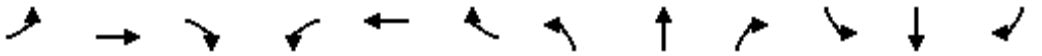
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	108	981	124	324	1078	61	218	71	193	98	41	156
Future Volume (vph)	108	981	124	324	1078	61	218	71	193	98	41	156
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Split	NA	Perm	Split	NA	Perm
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases			2			6			8			4
Detector Phase	5	2	2	1	6	6	8	8	8	4	4	4
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	32.2	32.2	9.6	32.2	32.2	43.6	43.6	43.6	41.6	41.6	41.6
Total Split (s)	11.0	34.8	34.8	10.0	33.8	33.8	43.6	43.6	43.6	41.6	41.6	41.6
Total Split (%)	8.5%	26.8%	26.8%	7.7%	26.0%	26.0%	33.5%	33.5%	33.5%	32.0%	32.0%	32.0%
Yellow Time (s)	3.6	5.2	5.2	3.6	5.2	5.2	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	6.2	4.6	6.2	6.2	4.6	4.6	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes						
Recall Mode	None	Max	Max	None	Max	Max	None	None	None	None	None	None
Act Effct Green (s)	6.7	29.9	29.9	5.7	28.9	28.9	16.4	16.4	16.4	14.4	14.4	14.4
Actuated g/C Ratio	0.08	0.34	0.34	0.07	0.33	0.33	0.19	0.19	0.19	0.16	0.16	0.16
v/c Ratio	0.84	0.56	0.20	1.64	0.64	0.11	0.47	0.45	0.43	0.35	0.13	0.40
Control Delay	89.6	28.1	7.1	337.1	29.8	3.7	37.0	36.1	7.8	36.6	33.0	8.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	89.6	28.1	7.1	337.1	29.8	3.7	37.0	36.1	7.8	36.6	33.0	8.7
LOS	F	C	A	F	C	A	D	D	A	D	C	A
Approach Delay		31.4			96.9			25.0			21.3	
Approach LOS		C			F			C			C	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 87.4	
Natural Cycle: 130	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.64	
Intersection Signal Delay: 57.4	Intersection LOS: E
Intersection Capacity Utilization 62.2%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 18: Cataba Av. & Main St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	108	981	124	324	1078	61	218	71	193	98	41	156
Future Volume (veh/h)	108	981	124	324	1078	61	218	71	193	98	41	156
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	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	1800	1900	1900	1700	1900	1900	1800	1900	1900	1800	1900	1900
Adj Flow Rate, veh/h	110	1001	88	331	1100	50	147	177	94	100	42	69
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	138	1957	607	224	1908	591	270	299	251	223	248	210
Arrive On Green	0.08	0.38	0.38	0.07	0.37	0.37	0.16	0.16	0.16	0.13	0.13	0.13
Sat Flow, veh/h	1714	5187	1609	3141	5187	1608	1714	1900	1595	1714	1900	1610
Grp Volume(v), veh/h	110	1001	88	331	1100	50	147	177	94	100	42	69
Grp Sat Flow(s),veh/h/ln	1714	1729	1609	1570	1729	1608	1714	1900	1595	1714	1900	1610
Q Serve(g_s), s	4.8	11.3	2.7	5.4	12.9	1.5	6.0	6.6	4.0	4.1	1.5	3.0
Cycle Q Clear(g_c), s	4.8	11.3	2.7	5.4	12.9	1.5	6.0	6.6	4.0	4.1	1.5	3.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	138	1957	607	224	1908	591	270	299	251	223	248	210
V/C Ratio(X)	0.80	0.51	0.14	1.48	0.58	0.08	0.54	0.59	0.37	0.45	0.17	0.33
Avail Cap(c_a), veh/h	145	1957	607	224	1908	591	882	977	820	837	927	786
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.2	18.2	15.6	35.2	19.2	15.6	29.4	29.7	28.6	30.4	29.3	30.0
Incr Delay (d2), s/veh	22.8	1.0	0.5	238.2	1.3	0.3	1.7	1.9	0.9	1.4	0.3	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	2.7	3.9	0.9	9.3	4.7	0.5	2.5	3.1	1.6	1.7	0.7	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	57.0	19.2	16.1	273.5	20.5	15.9	31.2	31.5	29.5	31.8	29.6	30.9
LnGrp LOS	E	B	B	F	C	B	C	C	C	C	C	C
Approach Vol, veh/h		1199			1481			418			211	
Approach Delay, s/veh		22.4			76.9			31.0			31.1	
Approach LOS		C			E			C			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.0	34.8		14.5	10.7	34.1		16.5				
Change Period (Y+Rc), s	4.6	6.2		4.6	4.6	6.2		4.6				
Max Green Setting (Gmax), s	5.4	28.6		37.0	6.4	27.6		39.0				
Max Q Clear Time (g_c+I1), s	7.4	13.3		6.1	6.8	14.9		8.6				
Green Ext Time (p_c), s	0.0	5.6		0.8	0.0	5.6		1.9				

Intersection Summary		
HCM 6th Ctrl Delay	48.4	
HCM 6th LOS	D	

Notes

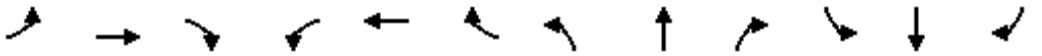
User approved pedestrian interval to be less than phase max green.
User approved volume balancing among the lanes for turning movement.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	85	1275	34	303	1543	41	100	325	254	119
Future Volume (vph)	85	1275	34	303	1543	41	100	325	254	119
Turn Type	Prot	NA	Perm	Prot	NA	Perm	NA	Perm	Perm	NA
Protected Phases	5	2		1	6		8			4
Permitted Phases			2			8		8	4	
Detector Phase	5	2	2	1	6	8	8	8	4	4
Switch Phase										
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	29.2	29.2	9.6	30.2	38.6	38.6	38.6	41.6	41.6
Total Split (s)	16.0	37.0	37.0	39.0	60.0	44.0	44.0	44.0	44.0	44.0
Total Split (%)	13.3%	30.8%	30.8%	32.5%	50.0%	36.7%	36.7%	36.7%	36.7%	36.7%
Yellow Time (s)	3.6	5.2	5.2	3.6	5.2	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	6.2	4.6	6.2	4.6	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes					
Recall Mode	None	Max	Max	None	Max	None	None	None	None	None
Act Effct Green (s)	9.1	38.4	38.4	23.0	54.9	26.6	26.6	26.6	26.6	26.6
Actuated g/C Ratio	0.09	0.37	0.37	0.22	0.53	0.26	0.26	0.26	0.26	0.26
v/c Ratio	0.58	0.68	0.05	0.82	0.82	0.16	0.21	0.51	0.81	0.35
Control Delay	65.1	32.6	0.1	56.6	25.4	31.4	31.3	6.2	56.8	30.2
Queue Delay	0.0	0.0	0.0	0.0	1.6	0.0	0.0	0.0	0.0	0.0
Total Delay	65.1	32.6	0.1	56.6	27.0	31.4	31.3	6.2	56.8	30.2
LOS	E	C	A	E	C	C	C	A	E	C
Approach Delay		33.8			30.6		13.8			46.5
Approach LOS		C			C		B			D

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 103.7	
Natural Cycle: 95	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.82	
Intersection Signal Delay: 31.3	Intersection LOS: C
Intersection Capacity Utilization 89.6%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 19: Key Point Av. & Main St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	85	1275	34	303	1543	607	41	100	325	254	119	43
Future Volume (veh/h)	85	1275	34	303	1543	607	41	100	325	254	119	43
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		0.98	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	1800	1900	1900	1800	1900	1900	1800	1900	1900	1800	1900	1900
Adj Flow Rate, veh/h	87	1301	31	309	1574	543	42	102	191	259	121	23
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	109	1867	580	339	1893	638	370	571	477	354	466	89
Arrive On Green	0.06	0.36	0.36	0.20	0.49	0.49	0.30	0.30	0.30	0.30	0.30	0.30
Sat Flow, veh/h	1714	5187	1610	1714	3832	1292	1260	1900	1585	1102	1551	295
Grp Volume(v), veh/h	87	1301	31	309	1417	700	42	102	191	259	0	144
Grp Sat Flow(s),veh/h/ln	1714	1729	1610	1714	1729	1666	1260	1900	1585	1102	0	1846
Q Serve(g_s), s	5.4	23.3	1.4	19.2	38.2	39.9	2.8	4.3	10.4	24.7	0.0	6.4
Cycle Q Clear(g_c), s	5.4	23.3	1.4	19.2	38.2	39.9	9.3	4.3	10.4	29.0	0.0	6.4
Prop In Lane	1.00		1.00	1.00		0.78	1.00		1.00	1.00		0.16
Lane Grp Cap(c), veh/h	109	1867	580	339	1709	823	370	571	477	354	0	555
V/C Ratio(X)	0.80	0.70	0.05	0.91	0.83	0.85	0.11	0.18	0.40	0.73	0.00	0.26
Avail Cap(c_a), veh/h	179	1867	580	542	1709	823	448	688	574	421	0	668
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	50.3	29.8	22.7	42.7	23.6	24.0	32.4	28.1	30.3	38.9	0.0	28.9
Incr Delay (d2), s/veh	4.9	2.2	0.2	9.3	4.8	10.7	0.1	0.1	0.5	5.3	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	9.4	0.5	8.6	15.0	16.3	0.9	2.0	4.1	7.2	0.0	2.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	55.2	31.9	22.9	52.0	28.4	34.8	32.5	28.3	30.8	44.1	0.0	29.1
LnGrp LOS	E	C	C	D	C	C	C	C	C	D	A	C
Approach Vol, veh/h		1419			2426			335			403	
Approach Delay, s/veh		33.2			33.2			30.3			38.8	
Approach LOS		C			C			C			D	

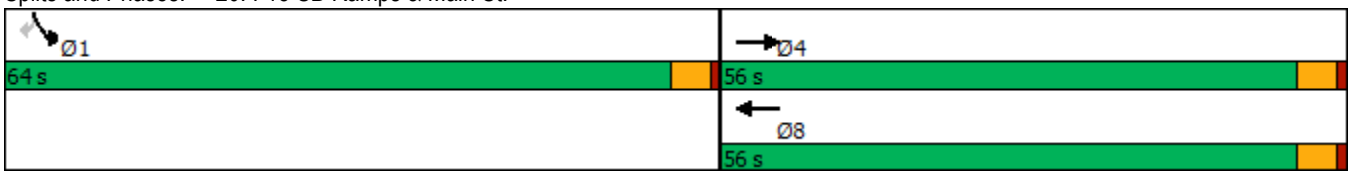
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	26.1	45.4		37.3	11.5	60.0		37.3				
Change Period (Y+Rc), s	4.6	6.2		4.6	4.6	6.2		4.6				
Max Green Setting (Gmax), s	34.4	30.8		39.4	11.4	53.8		39.4				
Max Q Clear Time (g_c+I1), s	21.2	25.3		31.0	7.4	41.9		12.4				
Green Ext Time (p_c), s	0.3	3.5		1.3	0.0	9.3		1.4				

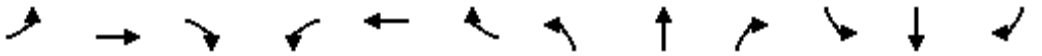
Intersection Summary			
HCM 6th Ctrl Delay		33.5	
HCM 6th LOS		C	

Lane Group	EBT	WBT	SBL	SBR
Lane Configurations				
Traffic Volume (vph)	1753	1844	763	555
Future Volume (vph)	1753	1844	763	555
Turn Type	NA	NA	Prot	Perm
Protected Phases	4	8	1	
Permitted Phases				1
Detector Phase	4	8	1	1
Switch Phase				
Minimum Initial (s)	5.0	5.0	5.0	5.0
Minimum Split (s)	9.6	22.6	9.6	9.6
Total Split (s)	56.0	56.0	64.0	64.0
Total Split (%)	46.7%	46.7%	53.3%	53.3%
Yellow Time (s)	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	4.6
Lead/Lag				
Lead-Lag Optimize?				
Recall Mode	None	None	None	None
Act Effct Green (s)	45.0	45.0	41.8	41.8
Actuated g/C Ratio	0.47	0.47	0.43	0.43
v/c Ratio	0.75	0.79	0.52	0.81
Control Delay	24.6	25.8	21.4	33.7
Queue Delay	0.2	0.0	0.0	0.0
Total Delay	24.8	25.8	21.4	33.7
LOS	C	C	C	C
Approach Delay	24.8	25.8		
Approach LOS	C	C		

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 96.5	
Natural Cycle: 45	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.81	
Intersection Signal Delay: 25.7	Intersection LOS: C
Intersection Capacity Utilization 77.7%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 20: I-15 SB Ramps & Main St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↱		↑↑↑	↱				↰↰		↱
Traffic Volume (veh/h)	0	1753	0	0	1844	0	0	0	0	763	0	555
Future Volume (veh/h)	0	1753	0	0	1844	0	0	0	0	763	0	555
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	1900	1900	0	1900	1900				1900	0	1900
Adj Flow Rate, veh/h	0	1807	0	0	1901	0				787	0	459
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	0	0	0	0	0				0	0	0
Cap, veh/h	0	2692		0	2692					1258	0	577
Arrive On Green	0.00	0.52	0.00	0.00	0.52	0.00				0.36	0.00	0.36
Sat Flow, veh/h	0	5358	1610	0	5358	1610				3510	0	1610
Grp Volume(v), veh/h	0	1807	0	0	1901	0				787	0	459
Grp Sat Flow(s),veh/h/ln	0	1729	1610	0	1729	1610				1755	0	1610
Q Serve(g_s), s	0.0	19.3	0.0	0.0	20.8	0.0				13.9	0.0	19.2
Cycle Q Clear(g_c), s	0.0	19.3	0.0	0.0	20.8	0.0				13.9	0.0	19.2
Prop In Lane	0.00		1.00	0.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2692		0	2692					1258	0	577
V/C Ratio(X)	0.00	0.67		0.00	0.71					0.63	0.00	0.80
Avail Cap(c_a), veh/h	0	3558		0	3558					2783	0	1277
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	13.3	0.0	0.0	13.7	0.0				19.9	0.0	21.6
Incr Delay (d2), s/veh	0.0	0.3	0.0	0.0	0.4	0.0				0.5	0.0	2.6
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	0.0	5.8	0.0	0.0	6.3	0.0				5.5	0.0	7.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	13.6	0.0	0.0	14.1	0.0				20.4	0.0	24.1
LnGrp LOS	A	B		A	B					C	A	C
Approach Vol, veh/h		1807	A		1901	A					1246	
Approach Delay, s/veh		13.6			14.1						21.8	
Approach LOS		B			B						C	

Timer - Assigned Phs			4		6		8					
Phs Duration (G+Y+Rc), s			43.5		31.4		43.5					
Change Period (Y+Rc), s			4.6		4.6		4.6					
Max Green Setting (Gmax), s			51.4		59.4		51.4					
Max Q Clear Time (g_c+I1), s			21.3		21.2		22.8					
Green Ext Time (p_c), s			15.5		5.7		16.0					

Intersection Summary												
HCM 6th Ctrl Delay			15.9									
HCM 6th LOS			B									

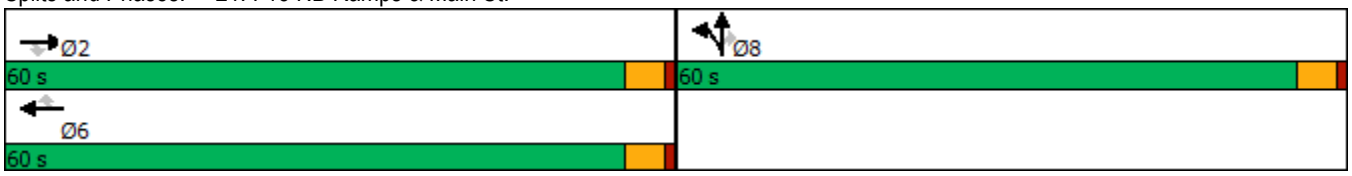
Notes

Unsignalized Delay for [EBR, WBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBT	EBR	WBT	WBR	NBL	NBT	NBR
Lane Configurations							
Traffic Volume (vph)	2204	312	1847	560	253	0	1174
Future Volume (vph)	2204	312	1847	560	253	0	1174
Turn Type	NA	Perm	NA	Perm	Split	NA	Perm
Protected Phases	2		6		8	8	
Permitted Phases		2		6			8
Detector Phase	2	2	6	6	8	8	8
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.6	22.6	22.6	22.6	9.6	9.6	9.6
Total Split (s)	60.0	60.0	60.0	60.0	60.0	60.0	60.0
Total Split (%)	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Lead/Lag							
Lead-Lag Optimize?							
Recall Mode	None	None	None	None	Min	Min	Min
Act Effct Green (s)	55.6	55.6	55.6	55.6	51.2	51.2	51.2
Actuated g/C Ratio	0.48	0.48	0.48	0.48	0.44	0.44	0.44
v/c Ratio	0.91	0.36	0.77	0.56	0.33	0.88	0.88
Control Delay	35.7	6.8	28.2	5.4	22.2	44.9	44.9
Queue Delay	0.0	0.0	46.1	0.9	0.0	0.0	0.0
Total Delay	35.7	6.8	74.3	6.3	22.2	44.9	44.9
LOS	D	A	E	A	C	D	D
Approach Delay	32.1		58.5			40.8	
Approach LOS	C		E			D	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 116	
Natural Cycle: 70	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.91	
Intersection Signal Delay: 44.1	Intersection LOS: D
Intersection Capacity Utilization 98.7%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 21: I-15 NB Ramps & Main St.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↱		↑↑↑	↱	↰	↑	↱			
Traffic Volume (veh/h)	0	2204	312	0	1847	560	253	0	1174	0	0	0
Future Volume (veh/h)	0	2204	312	0	1847	560	253	0	1174	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	0	1900	1900	0	1900	1900	1900	1900	1900			
Adj Flow Rate, veh/h	0	2272	0	0	1904	430	261	0	1063			
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	0	0	0	0	0	0	0	0			
Cap, veh/h	0	2706		0	2706	840	699	0	1243			
Arrive On Green	0.00	0.52	0.00	0.00	0.52	0.52	0.39	0.00	0.39			
Sat Flow, veh/h	0	5358	1610	0	5358	1610	1810	0	3220			
Grp Volume(v), veh/h	0	2272	0	0	1904	430	261	0	1063			
Grp Sat Flow(s),veh/h/ln	0	1729	1610	0	1729	1610	1810	0	1610			
Q Serve(g_s), s	0.0	37.2	0.0	0.0	27.7	17.4	10.3	0.0	30.2			
Cycle Q Clear(g_c), s	0.0	37.2	0.0	0.0	27.7	17.4	10.3	0.0	30.2			
Prop In Lane	0.00		1.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	0	2706		0	2706	840	699	0	1243			
V/C Ratio(X)	0.00	0.84		0.00	0.70	0.51	0.37	0.00	0.85			
Avail Cap(c_a), veh/h	0	2882		0	2882	895	1005	0	1789			
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	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	0.0	20.3	0.0	0.0	18.0	15.6	22.0	0.0	28.0			
Incr Delay (d2), s/veh	0.0	2.3	0.0	0.0	0.7	0.5	0.3	0.0	3.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.0	13.3	0.0	0.0	9.7	5.7	4.4	0.0	11.9			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	22.6	0.0	0.0	18.8	16.1	22.3	0.0	31.0			
LnGrp LOS	A	C		A	B	B	C	A	C			
Approach Vol, veh/h		2272	A		2334			1324				
Approach Delay, s/veh		22.6			18.3			29.3				
Approach LOS		C			B			C				

Timer - Assigned Phs	2				6		8					
Phs Duration (G+Y+Rc), s	56.6				56.6		43.1					
Change Period (Y+Rc), s	4.6				4.6		4.6					
Max Green Setting (Gmax), s	55.4				55.4		55.4					
Max Q Clear Time (g_c+I1), s	39.2				29.7		32.2					
Green Ext Time (p_c), s	12.8				17.0		6.3					

Intersection Summary		
HCM 6th Ctrl Delay	22.4	
HCM 6th LOS	C	

Notes

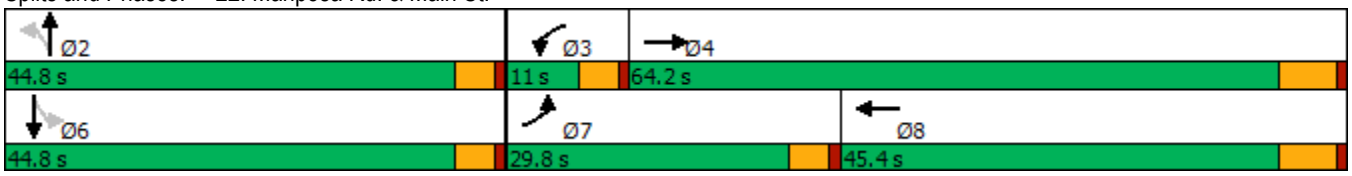
User approved volume balancing among the lanes for turning movement.

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	326	2827	119	1930	210	114	186	78
Future Volume (vph)	326	2827	119	1930	210	114	186	78
Turn Type	Prot	NA	Prot	NA	Perm	NA	Perm	NA
Protected Phases	7	4	3	8		2		6
Permitted Phases					2		6	
Detector Phase	7	4	3	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	24.2	9.6	24.2	44.6	44.6	44.6	44.6
Total Split (s)	29.8	64.2	11.0	45.4	44.8	44.8	44.8	44.8
Total Split (%)	24.8%	53.5%	9.2%	37.8%	37.3%	37.3%	37.3%	37.3%
Yellow Time (s)	3.6	5.2	3.6	5.2	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	4.6	6.2	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes				
Recall Mode	None	Max	Max	None	None	None	None	None
Act Effct Green (s)	24.6	58.0	6.4	39.8	40.2	40.2	40.2	40.2
Actuated g/C Ratio	0.20	0.48	0.05	0.33	0.34	0.34	0.34	0.34
v/c Ratio	0.95	0.99	1.33	0.98	1.02	0.35	0.60	0.53
Control Delay	84.5	45.6	249.2	55.3	107.8	26.2	42.6	20.8
Queue Delay	0.0	39.8	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	84.5	85.4	249.2	55.3	107.8	26.2	42.6	20.8
LOS	F	F	F	E	F	C	D	C
Approach Delay		85.3		65.8		66.9		28.4
Approach LOS		F		E		E		C

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.33	
Intersection Signal Delay: 72.9	Intersection LOS: E
Intersection Capacity Utilization 101.1%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 22: Mariposa Rd. & Main St.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	326	2827	226	119	1930	144	210	114	97	186	78	266
Future Volume (veh/h)	326	2827	226	119	1930	144	210	114	97	186	78	266
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		0.99	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	1800	1900	1900	1800	1900	1900	1800	1900	1900	1800	1900	1900
Adj Flow Rate, veh/h	333	2885	215	121	1969	131	214	116	72	190	80	200
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	356	3025	223	91	2074	138	286	365	227	371	161	403
Arrive On Green	0.21	0.48	0.48	0.05	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33
Sat Flow, veh/h	1714	6258	461	1714	6307	420	1117	1091	677	1214	481	1203
Grp Volume(v), veh/h	333	2252	848	121	1530	570	214	0	188	190	0	280
Grp Sat Flow(s),veh/h/ln	1714	1634	1817	1714	1634	1824	1117	0	1768	1214	0	1684
Q Serve(g_s), s	22.9	52.7	54.2	6.4	36.6	36.6	22.7	0.0	9.5	16.6	0.0	15.9
Cycle Q Clear(g_c), s	22.9	52.7	54.2	6.4	36.6	36.6	38.6	0.0	9.5	26.1	0.0	15.9
Prop In Lane	1.00		0.25	1.00		0.23	1.00		0.38	1.00		0.71
Lane Grp Cap(c), veh/h	356	2369	878	91	1612	600	286	0	592	371	0	564
V/C Ratio(X)	0.93	0.95	0.97	1.32	0.95	0.95	0.75	0.00	0.32	0.51	0.00	0.50
Avail Cap(c_a), veh/h	360	2369	878	91	1612	600	286	0	592	371	0	564
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	46.7	29.6	30.0	56.8	39.3	39.3	47.2	0.0	29.7	39.4	0.0	31.8
Incr Delay (d2), s/veh	30.6	10.1	23.0	203.2	12.4	24.8	10.4	0.0	0.3	1.2	0.0	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.4	20.8	27.0	7.8	15.7	19.6	7.2	0.0	4.1	5.1	0.0	6.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	77.3	39.7	53.1	260.0	51.7	64.1	57.6	0.0	30.0	40.6	0.0	32.5
LnGrp LOS	E	D	D	F	D	E	E	A	C	D	A	C
Approach Vol, veh/h		3433			2221			402			470	
Approach Delay, s/veh		46.6			66.3			44.7			35.8	
Approach LOS		D			E			D			D	

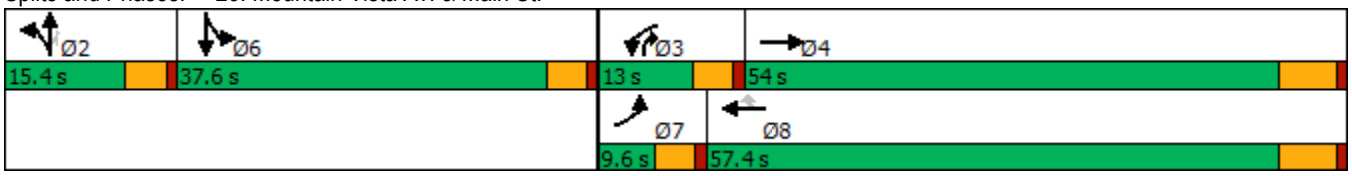
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		44.8	11.0	64.2		44.8	29.5	45.7				
Change Period (Y+Rc), s		4.6	4.6	6.2		4.6	4.6	6.2				
Max Green Setting (Gmax), s		40.2	6.4	58.0		40.2	25.2	39.2				
Max Q Clear Time (g_c+I1), s		40.6	8.4	56.2		28.1	24.9	38.6				
Green Ext Time (p_c), s		0.0	0.0	1.7		2.1	0.0	0.6				

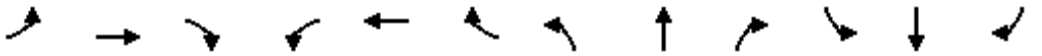
Intersection Summary	
HCM 6th Ctrl Delay	52.4
HCM 6th LOS	D

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	67	2437	86	1994	96	45	7	37	108	10
Future Volume (vph)	67	2437	86	1994	96	45	7	37	108	10
Turn Type	Prot	NA	Prot	NA	Perm	Split	NA	pm+ov	Split	NA
Protected Phases	7	4	3	8		2	2	3	6	6
Permitted Phases					8			2		
Detector Phase	7	4	3	8	8	2	2	3	6	6
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	43.2	9.6	32.2	32.2	14.6	14.6	9.6	37.6	37.6
Total Split (s)	9.6	54.0	13.0	57.4	57.4	15.4	15.4	13.0	37.6	37.6
Total Split (%)	8.0%	45.0%	10.8%	47.8%	47.8%	12.8%	12.8%	10.8%	31.3%	31.3%
Yellow Time (s)	3.6	5.2	3.6	5.2	5.2	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	4.6	6.2	6.2	4.6	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lead	Lag	Lag			Lead		
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes			Yes		
Recall Mode	None	Max	None	Max	Max	None	None	None	None	None
Act Effct Green (s)	5.1	52.4	8.1	59.1	59.1	10.2	10.2	13.6	14.0	14.0
Actuated g/C Ratio	0.05	0.55	0.09	0.62	0.62	0.11	0.11	0.14	0.15	0.15
v/c Ratio	0.42	0.72	0.62	0.65	0.10	0.14	0.09	0.08	0.28	0.26
Control Delay	56.0	21.3	64.9	18.8	4.1	46.6	44.3	1.7	39.8	36.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	56.0	21.3	64.9	18.8	4.1	46.6	44.3	1.7	39.8	36.3
LOS	E	C	E	B	A	D	D	A	D	D
Approach Delay		22.2		19.9			27.0			38.0
Approach LOS		C		B			C			D

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 94.8	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.72	
Intersection Signal Delay: 21.7	Intersection LOS: C
Intersection Capacity Utilization 65.7%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 23: Mountain Vista Av. & Main St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	67	2437	25	86	1994	96	45	7	37	108	10	8
Future Volume (veh/h)	67	2437	25	86	1994	96	45	7	37	108	10	8
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	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	1700	1900	1900	1800	1900	1900	1800	1900	1900	1800	1900	1900
Adj Flow Rate, veh/h	71	2565	24	91	2099	86	47	7	24	128	0	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	141	3526	33	115	2833	879	318	176	514	353	195	0
Arrive On Green	0.04	0.52	0.52	0.07	0.55	0.55	0.09	0.09	0.09	0.10	0.00	0.00
Sat Flow, veh/h	3141	6726	63	1714	5187	1610	3429	1900	3220	3429	1900	0
Grp Volume(v), veh/h	71	1869	720	91	2099	86	47	7	24	128	0	0
Grp Sat Flow(s),veh/h/ln	1570	1634	1887	1714	1729	1610	1714	1900	1610	1714	1900	0
Q Serve(g_s), s	2.1	27.5	27.5	4.9	28.9	2.4	1.2	0.3	0.6	3.3	0.0	0.0
Cycle Q Clear(g_c), s	2.1	27.5	27.5	4.9	28.9	2.4	1.2	0.3	0.6	3.3	0.0	0.0
Prop In Lane	1.00		0.03	1.00		1.00	1.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	141	2570	989	115	2833	879	318	176	514	353	195	0
V/C Ratio(X)	0.50	0.73	0.73	0.79	0.74	0.10	0.15	0.04	0.05	0.36	0.00	0.00
Avail Cap(c_a), veh/h	168	2570	989	154	2833	879	395	219	586	1207	669	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	43.7	17.1	17.2	43.1	16.2	10.2	39.1	38.7	33.4	39.2	0.0	0.0
Incr Delay (d2), s/veh	1.0	1.8	4.7	13.2	1.8	0.2	0.2	0.1	0.0	0.6	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	9.1	11.3	2.4	9.9	0.8	0.5	0.2	0.2	1.4	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	44.8	19.0	21.8	56.3	18.0	10.4	39.3	38.8	33.4	39.8	0.0	0.0
LnGrp LOS	D	B	C	E	B	B	D	D	C	D	A	A
Approach Vol, veh/h		2660			2276			78			128	
Approach Delay, s/veh		20.4			19.3			37.5			39.8	
Approach LOS		C			B			D			D	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		13.3	10.9	55.3		14.2	8.8	57.4				
Change Period (Y+Rc), s		4.6	4.6	6.2		4.6	4.6	6.2				
Max Green Setting (Gmax), s		10.8	8.4	47.8		33.0	5.0	51.2				
Max Q Clear Time (g_c+I1), s		3.2	6.9	29.5		5.3	4.1	30.9				
Green Ext Time (p_c), s		0.1	0.0	14.8		0.4	0.0	14.5				

Intersection Summary		
HCM 6th Ctrl Delay		20.7
HCM 6th LOS		C

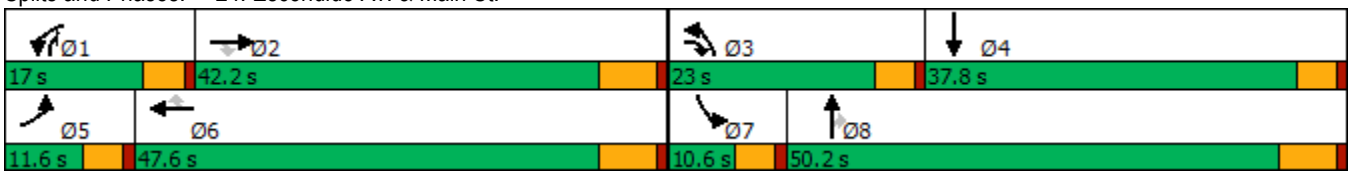
Notes

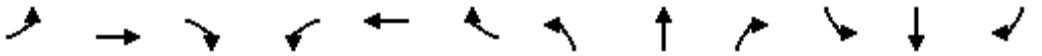
User approved volume balancing among the lanes for turning movement.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations											
Traffic Volume (vph)	74	1712	796	504	1318	14	784	71	276	77	52
Future Volume (vph)	74	1712	796	504	1318	14	784	71	276	77	52
Turn Type	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA
Protected Phases	5	2	3	1	6		3	8	1	7	4
Permitted Phases			2			6			8		
Detector Phase	5	2	3	1	6	6	3	8	1	7	4
Switch Phase											
Minimum Initial (s)	5.0	10.0	5.0	5.0	10.0	10.0	5.0	10.0	5.0	5.0	10.0
Minimum Split (s)	9.6	41.2	9.6	9.6	31.2	31.2	9.6	49.2	9.6	9.6	37.6
Total Split (s)	11.6	42.2	23.0	17.0	47.6	47.6	23.0	50.2	17.0	10.6	37.8
Total Split (%)	9.7%	35.2%	19.2%	14.2%	39.7%	39.7%	19.2%	41.8%	14.2%	8.8%	31.5%
Yellow Time (s)	3.6	5.2	3.6	3.6	5.2	5.2	3.6	5.2	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	4.6	4.6	6.2	6.2	4.6	6.2	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Max	None	None	Max	Max	None	None	None	None	None
Act Effct Green (s)	6.9	36.3	56.4	12.5	41.8	41.8	18.5	22.9	38.2	11.7	14.3
Actuated g/C Ratio	0.07	0.36	0.55	0.12	0.41	0.41	0.18	0.23	0.38	0.12	0.14
v/c Ratio	0.67	0.96	0.70	1.37	0.92	0.02	1.43	0.17	0.44	0.41	0.44
Control Delay	75.5	47.0	6.3	216.2	40.9	0.1	237.0	30.1	17.7	55.6	26.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	75.5	47.0	6.3	216.2	40.9	0.1	237.0	30.1	17.7	55.6	26.7
LOS	E	D	A	F	D	A	F	C	B	E	C
Approach Delay		35.3			88.7			170.4			37.7
Approach LOS		D			F			F			D

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 101.7	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.43	
Intersection Signal Delay: 79.0	Intersection LOS: E
Intersection Capacity Utilization 99.1%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 24: Escondido Av. & Main St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	74	1712	796	504	1318	14	784	71	276	77	52	73
Future Volume (veh/h)	74	1712	796	504	1318	14	784	71	276	77	52	73
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	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	1800	1900	1900	1700	1900	1900	1700	1900	1900	1800	1900	1900
Adj Flow Rate, veh/h	77	1783	639	525	1373	13	817	74	207	80	54	73
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	97	1904	892	397	1576	688	589	432	570	101	72	98
Arrive On Green	0.06	0.37	0.37	0.13	0.44	0.44	0.19	0.23	0.23	0.06	0.10	0.10
Sat Flow, veh/h	1714	5187	1608	3141	3610	1577	3141	1900	1610	1714	732	990
Grp Volume(v), veh/h	77	1783	639	525	1373	13	817	74	207	80	0	127
Grp Sat Flow(s),veh/h/ln	1714	1729	1608	1570	1805	1577	1570	1900	1610	1714	0	1722
Q Serve(g_s), s	4.4	32.5	28.8	12.4	33.9	0.5	18.4	3.1	9.4	4.5	0.0	7.0
Cycle Q Clear(g_c), s	4.4	32.5	28.8	12.4	33.9	0.5	18.4	3.1	9.4	4.5	0.0	7.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.57
Lane Grp Cap(c), veh/h	97	1904	892	397	1576	688	589	432	570	101	0	170
V/C Ratio(X)	0.79	0.94	0.72	1.32	0.87	0.02	1.39	0.17	0.36	0.79	0.00	0.75
Avail Cap(c_a), veh/h	122	1904	892	397	1576	688	589	852	926	105	0	583
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	45.7	29.9	16.1	42.8	25.1	15.7	39.8	30.5	23.5	45.6	0.0	43.0
Incr Delay (d2), s/veh	18.5	10.3	4.9	161.7	6.9	0.1	184.3	0.2	0.4	29.1	0.0	6.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.3	14.0	11.2	13.5	14.3	0.2	22.1	1.4	3.6	2.7	0.0	3.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	64.2	40.2	21.1	204.5	32.0	15.7	224.2	30.6	23.9	74.7	0.0	49.4
LnGrp LOS	E	D	C	F	C	B	F	C	C	E	A	D
Approach Vol, veh/h		2499			1911			1098			207	
Approach Delay, s/veh		36.0			79.3			173.4			59.2	
Approach LOS		D			E			F			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.0	42.2	23.0	15.9	10.2	49.0	10.4	28.5
Change Period (Y+Rc), s	4.6	6.2	4.6	* 6.2	4.6	6.2	4.6	6.2
Max Green Setting (Gmax), s	12.4	36.0	18.4	* 33	7.0	41.4	6.0	44.0
Max Q Clear Time (g_c+I1), s	14.4	34.5	20.4	9.0	6.4	35.9	6.5	11.4
Green Ext Time (p_c), s	0.0	1.4	0.0	0.7	0.0	3.7	0.0	1.2

Intersection Summary	
HCM 6th Ctrl Delay	77.7
HCM 6th LOS	E

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	3.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	23	179	772	23	335	1056
Future Vol, veh/h	23	179	772	23	335	1056
Conflicting Peds, #/hr	0	0	0	4	1	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	100	0	-	-	195	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	24	186	804	24	349	1100

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	2068	418	0	0	832	0
Stage 1	820	-	-	-	-	-
Stage 2	1248	-	-	-	-	-
Critical Hdwy	6.8	6.9	-	-	4.1	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	48	589	-	-	809	-
Stage 1	398	-	-	-	-	-
Stage 2	238	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	27	587	-	-	806	-
Mov Cap-2 Maneuver	101	-	-	-	-	-
Stage 1	396	-	-	-	-	-
Stage 2	135	-	-	-	-	-

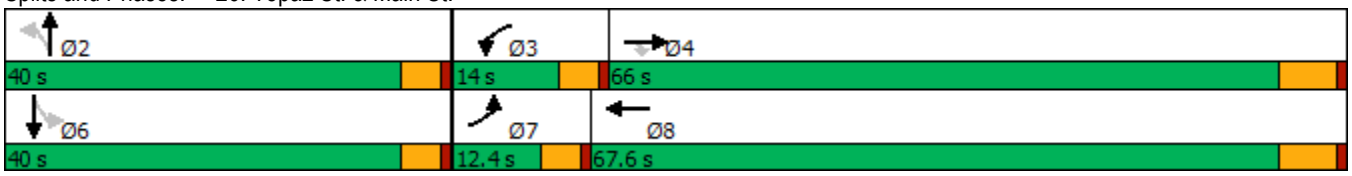
Approach	WB	NB	SB
HCM Control Delay, s	18.3	0	3.1
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	101	587	806	-
HCM Lane V/C Ratio	-	-	0.237	0.318	0.433	-
HCM Control Delay (s)	-	-	51.4	14	12.8	-
HCM Lane LOS	-	-	F	B	B	-
HCM 95th %tile Q(veh)	-	-	0.9	1.4	2.2	-

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	88	1958	305	144	1623	294	45	86	49
Future Volume (vph)	88	1958	305	144	1623	294	45	86	49
Turn Type	Prot	NA	Perm	Prot	NA	Perm	NA	Perm	NA
Protected Phases	7	4		3	8		2		6
Permitted Phases			4			2		6	
Detector Phase	7	4	4	3	8	2	2	6	6
Switch Phase									
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	25.2	25.2	9.6	23.2	32.6	32.6	38.6	38.6
Total Split (s)	12.4	66.0	66.0	14.0	67.6	40.0	40.0	40.0	40.0
Total Split (%)	10.3%	55.0%	55.0%	11.7%	56.3%	33.3%	33.3%	33.3%	33.3%
Yellow Time (s)	3.6	5.2	5.2	3.6	5.2	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	6.2	4.6	6.2	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes				
Recall Mode	None	None	None	Max	None	None	None	None	None
Act Effct Green (s)	7.7	59.9	59.9	9.4	61.6	32.4	32.4	32.4	32.4
Actuated g/C Ratio	0.07	0.51	0.51	0.08	0.53	0.28	0.28	0.28	0.28
v/c Ratio	0.81	1.09	0.34	1.08	0.94	0.92	0.33	0.33	0.22
Control Delay	100.9	80.5	7.6	152.1	37.5	75.3	12.9	37.2	18.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	100.9	80.5	7.6	152.1	37.5	75.3	12.9	37.2	18.9
LOS	F	F	A	F	D	E	B	D	B
Approach Delay		71.8			46.4		51.9		26.9
Approach LOS		E			D		D		C

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 117.1	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.09	
Intersection Signal Delay: 58.4	Intersection LOS: E
Intersection Capacity Utilization 109.9%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 26: Topaz St. & Main St.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	88	1958	305	144	1623	95	294	45	132	86	49	61
Future Volume (veh/h)	88	1958	305	144	1623	95	294	45	132	86	49	61
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	0.99		1.00	1.00		0.99
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	1800	1900	1900	1800	1900	1900	1800	1900	1900	1800	1900	1900
Adj Flow Rate, veh/h	91	2019	242	148	1673	91	303	46	105	89	51	32
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	113	1834	818	137	1819	98	387	145	330	326	306	192
Arrive On Green	0.07	0.51	0.51	0.08	0.52	0.52	0.28	0.28	0.28	0.28	0.28	0.28
Sat Flow, veh/h	1714	3610	1610	1714	3483	188	1325	514	1174	1256	1087	682
Grp Volume(v), veh/h	91	2019	242	148	862	902	303	0	151	89	0	83
Grp Sat Flow(s),veh/h/ln	1714	1805	1610	1714	1805	1866	1325	0	1689	1256	0	1769
Q Serve(g_s), s	6.2	59.8	10.2	9.4	51.4	52.6	26.3	0.0	8.3	7.1	0.0	4.2
Cycle Q Clear(g_c), s	6.2	59.8	10.2	9.4	51.4	52.6	30.5	0.0	8.3	15.4	0.0	4.2
Prop In Lane	1.00		1.00	1.00		0.10	1.00		0.70	1.00		0.39
Lane Grp Cap(c), veh/h	113	1834	818	137	943	974	387	0	475	326	0	497
V/C Ratio(X)	0.81	1.10	0.30	1.08	0.91	0.93	0.78	0.00	0.32	0.27	0.00	0.17
Avail Cap(c_a), veh/h	114	1834	818	137	943	974	413	0	508	350	0	532
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	54.2	28.9	16.8	54.1	25.7	26.0	43.4	0.0	33.4	39.5	0.0	31.9
Incr Delay (d2), s/veh	31.1	54.2	0.2	100.2	13.2	14.2	9.0	0.0	0.4	0.4	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.5	36.7	3.5	7.7	23.0	24.5	9.6	0.0	3.5	2.3	0.0	1.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	85.3	83.2	17.0	154.3	38.9	40.2	52.4	0.0	33.8	39.9	0.0	32.1
LnGrp LOS	F	F	B	F	D	D	D	A	C	D	A	C
Approach Vol, veh/h		2352			1912			454			172	
Approach Delay, s/veh		76.5			48.5			46.2			36.1	
Approach LOS		E			D			D			D	

Timer - Assigned Phs	2	3	4	6	7	8
Phs Duration (G+Y+Rc), s	37.7	14.0	66.0	37.7	12.3	67.7
Change Period (Y+Rc), s	4.6	4.6	6.2	4.6	4.6	6.2
Max Green Setting (Gmax), s	35.4	9.4	59.8	35.4	7.8	61.4
Max Q Clear Time (g_c+I1), s	32.5	11.4	61.8	17.4	8.2	54.6
Green Ext Time (p_c), s	0.6	0.0	0.0	0.7	0.0	5.2

Intersection Summary	
HCM 6th Ctrl Delay	61.3
HCM 6th LOS	E

APPENDIX 7.2:

HORIZON YEAR (2040) WITH PROJECT CONDITIONS INTERSECTION OPERATIONS ANALYSIS WORKSHEETS

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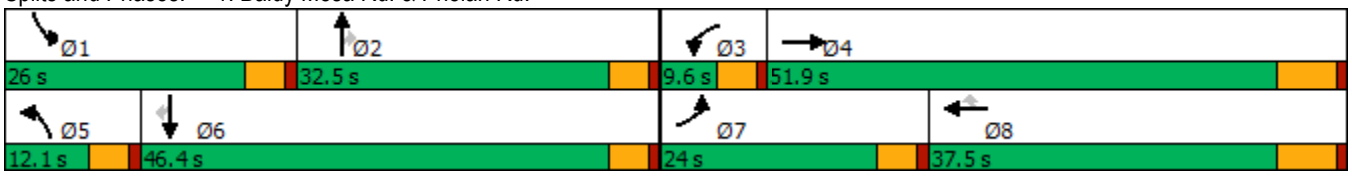
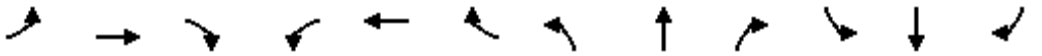
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	218	846	19	523	204	51	102	90	283	69	261
Future Volume (vph)	218	846	19	523	204	51	102	90	283	69	261
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4	3	8		5	2		1	6	
Permitted Phases					8			2			6
Detector Phase	7	4	3	8	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	30.5	9.6	37.5	37.5	9.6	31.6	31.6	9.6	40.6	40.6
Total Split (s)	24.0	51.9	9.6	37.5	37.5	12.1	32.5	32.5	26.0	46.4	46.4
Total Split (%)	20.0%	43.3%	8.0%	31.3%	31.3%	10.1%	27.1%	27.1%	21.7%	38.7%	38.7%
Yellow Time (s)	3.6	5.5	3.6	5.5	5.5	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.5	4.6	6.5	6.5	4.6	4.6	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Max	None	Max	Max	None	None	None	None	None	None
Act Effct Green (s)	17.7	49.9	5.0	31.2	31.2	6.8	13.9	13.9	21.5	30.7	30.7
Actuated g/C Ratio	0.17	0.48	0.05	0.30	0.30	0.06	0.13	0.13	0.21	0.29	0.29
v/c Ratio	0.82	0.56	0.26	0.53	0.36	0.50	0.44	0.25	0.88	0.13	0.42
Control Delay	65.8	22.8	59.2	33.9	7.6	65.2	47.3	1.6	67.6	29.6	5.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	65.8	22.8	59.2	33.9	7.6	65.2	47.3	1.6	67.6	29.6	5.4
LOS	E	C	E	C	A	E	D	A	E	C	A
Approach Delay		31.3		27.4			34.0			36.9	
Approach LOS		C		C			C			D	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 104.7	
Natural Cycle: 110	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.88	
Intersection Signal Delay: 31.7	Intersection LOS: C
Intersection Capacity Utilization 64.9%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 1: Baldy Mesa Rd. & Phelan Rd.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	218	846	33	19	523	204	51	102	90	283	69	261
Future Volume (veh/h)	218	846	33	19	523	204	51	102	90	283	69	261
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	1800	1900	1900	1800	1900	1900	1800	1900	1900	1800	1900	1900
Adj Flow Rate, veh/h	237	920	26	21	568	170	55	111	72	308	75	184
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	268	1620	46	85	1247	556	70	189	160	337	486	412
Arrive On Green	0.16	0.45	0.45	0.05	0.35	0.35	0.04	0.10	0.10	0.20	0.26	0.26
Sat Flow, veh/h	1714	3585	101	1714	3610	1610	1714	1900	1610	1714	1900	1610
Grp Volume(v), veh/h	237	463	483	21	568	170	55	111	72	308	75	184
Grp Sat Flow(s),veh/h/ln	1714	1805	1882	1714	1805	1610	1714	1900	1610	1714	1900	1610
Q Serve(g_s), s	13.6	19.0	19.0	1.2	12.3	7.8	3.2	5.6	4.2	17.7	3.1	9.6
Cycle Q Clear(g_c), s	13.6	19.0	19.0	1.2	12.3	7.8	3.2	5.6	4.2	17.7	3.1	9.6
Prop In Lane	1.00		0.05	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	268	816	850	85	1247	556	70	189	160	337	486	412
V/C Ratio(X)	0.88	0.57	0.57	0.25	0.46	0.31	0.79	0.59	0.45	0.91	0.15	0.45
Avail Cap(c_a), veh/h	331	816	850	85	1247	556	128	528	447	365	790	670
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.5	20.3	20.3	45.9	25.5	24.1	47.8	43.3	42.6	39.5	29.0	31.4
Incr Delay (d2), s/veh	18.3	2.9	2.7	0.6	1.2	1.4	7.2	2.9	2.0	24.5	0.1	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.7	7.7	8.0	0.5	5.0	2.9	1.5	2.8	1.7	9.7	1.4	3.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	59.8	23.2	23.0	46.5	26.7	25.5	55.0	46.1	44.6	64.0	29.1	32.2
LnGrp LOS	E	C	C	D	C	C	D	D	D	E	C	C
Approach Vol, veh/h		1183			759			238			567	
Approach Delay, s/veh		30.4			27.0			47.7			49.1	
Approach LOS		C			C			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	24.4	14.6	9.6	51.9	8.7	30.3	20.3	41.2
Change Period (Y+Rc), s	4.6	4.6	4.6	6.5	4.6	4.6	4.6	6.5
Max Green Setting (Gmax), s	21.4	27.9	5.0	45.4	7.5	41.8	19.4	31.0
Max Q Clear Time (g_c+I1), s	19.7	7.6	3.2	21.0	5.2	11.6	15.6	14.3
Green Ext Time (p_c), s	0.1	0.8	0.0	5.3	0.0	1.1	0.1	3.5

Intersection Summary	
HCM 6th Ctrl Delay	34.8
HCM 6th LOS	C

Intersection	
Int Delay, s/veh	1.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	4	1227	8	6	641	1	23	0	26	17	0	13
Future Vol, veh/h	4	1227	8	6	641	1	23	0	26	17	0	13
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	105	-	105	110	-	110	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
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	0	0	0	0	0
Mvmt Flow	4	1334	9	7	697	1	25	0	28	18	0	14

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	698	0	0	1343	0	0	2061	2054	1334	2072	2062	697
Stage 1	-	-	-	-	-	-	1342	1342	-	711	711	-
Stage 2	-	-	-	-	-	-	719	712	-	1361	1351	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
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	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	908	-	-	520	-	-	41	56	190	40	55	444
Stage 1	-	-	-	-	-	-	190	223	-	427	439	-
Stage 2	-	-	-	-	-	-	423	439	-	185	221	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	908	-	-	520	-	-	39	55	190	34	54	444
Mov Cap-2 Maneuver	-	-	-	-	-	-	132	156	-	113	152	-
Stage 1	-	-	-	-	-	-	189	222	-	425	433	-
Stage 2	-	-	-	-	-	-	404	433	-	157	220	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0.1	39	31.7
HCM LOS			E	D

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	158	908	-	-	520	-	-	167
HCM Lane V/C Ratio	0.337	0.005	-	-	0.013	-	-	0.195
HCM Control Delay (s)	39	9	-	-	12	-	-	31.7
HCM Lane LOS	E	A	-	-	B	-	-	D
HCM 95th %tile Q(veh)	1.4	0	-	-	0	-	-	0.7

Intersection	
Int Delay, s/veh	0.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1305	14	4	669	20	8
Future Vol, veh/h	1305	14	4	669	20	8
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	110	-	0	-
Veh in Median Storage, #	0	-	-	0	1	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	1418	15	4	727	22	9

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1433	0	2161	1426
Stage 1	-	-	-	-	1426	-
Stage 2	-	-	-	-	735	-
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	-	-	480	-	53	168
Stage 1	-	-	-	-	224	-
Stage 2	-	-	-	-	478	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	480	-	53	168
Mov Cap-2 Maneuver	-	-	-	-	159	-
Stage 1	-	-	-	-	224	-
Stage 2	-	-	-	-	474	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	32.5
HCM LOS			D

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	161	-	-	480	-
HCM Lane V/C Ratio	0.189	-	-	0.009	-
HCM Control Delay (s)	32.5	-	-	12.6	-
HCM Lane LOS	D	-	-	B	-
HCM 95th %tile Q(veh)	0.7	-	-	0	-

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑↑	↱	↰	
Traffic Vol, veh/h	0	1313	665	400	12	7
Future Vol, veh/h	0	1313	665	400	12	7
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	0	-
Veh in Median Storage, #	-	0	0	-	2	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	1427	723	435	13	8

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	2150	362
Stage 1	-	-	-	-	723	-
Stage 2	-	-	-	-	1427	-
Critical Hdwy	-	-	-	-	6.6	6.9
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	0	-	-	-	48	641
Stage 1	0	-	-	-	447	-
Stage 2	0	-	-	-	224	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	48	641
Mov Cap-2 Maneuver	-	-	-	-	193	-
Stage 1	-	-	-	-	447	-
Stage 2	-	-	-	-	224	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	20
HCM LOS			C

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	260
HCM Lane V/C Ratio	-	-	-	0.079
HCM Control Delay (s)	-	-	-	20
HCM Lane LOS	-	-	-	C
HCM 95th %tile Q(veh)	-	-	-	0.3

Intersection	
Int Delay, s/veh	7.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1	0	161	4	0	42
Future Vol, veh/h	1	0	161	4	0	42
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	100	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	1	0	175	4	0	46

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1	0	355	1
Stage 1	-	-	-	-	1	-
Stage 2	-	-	-	-	354	-
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	-	-	1635	-	647	1090
Stage 1	-	-	-	-	1028	-
Stage 2	-	-	-	-	715	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1635	-	578	1090
Mov Cap-2 Maneuver	-	-	-	-	578	-
Stage 1	-	-	-	-	1028	-
Stage 2	-	-	-	-	638	-

Approach	EB	WB	NB
HCM Control Delay, s	0	7.3	8.4
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1090	-	-	1635	-
HCM Lane V/C Ratio	0.042	-	-	0.107	-
HCM Control Delay (s)	8.4	-	-	7.5	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0.4	-

Intersection	
Int Delay, s/veh	4.9

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	43	0	271	165	0	50
Future Vol, veh/h	43	0	271	165	0	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	-	-	100	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	47	0	295	179	0	54

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	47	0	816	47
Stage 1	-	-	-	-	47	-
Stage 2	-	-	-	-	769	-
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	-	-	1573	-	349	1028
Stage 1	-	-	-	-	981	-
Stage 2	-	-	-	-	461	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1573	-	283	1028
Mov Cap-2 Maneuver	-	-	-	-	332	-
Stage 1	-	-	-	-	981	-
Stage 2	-	-	-	-	374	-

Approach	EB	WB	NB
HCM Control Delay, s	0	4.9	8.7
HCM LOS			A

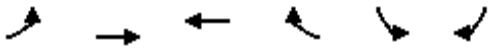
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1028	-	-	1573	-
HCM Lane V/C Ratio	0.053	-	-	0.187	-
HCM Control Delay (s)	8.7	-	-	7.8	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0.2	-	-	0.7	-

Lane Group	EBL	EBT	WBT	SBL
Lane Configurations				
Traffic Volume (vph)	97	1217	1058	134
Future Volume (vph)	97	1217	1058	134
Turn Type	Prot	NA	NA	Prot
Protected Phases	7	4	8	6
Permitted Phases				
Detector Phase	7	4	8	6
Switch Phase				
Minimum Initial (s)	5.0	10.0	10.0	10.0
Minimum Split (s)	9.6	16.5	23.5	26.6
Total Split (s)	13.0	90.0	77.0	30.0
Total Split (%)	10.8%	75.0%	64.2%	25.0%
Yellow Time (s)	3.6	5.5	5.5	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.5	6.5	4.6
Lead/Lag	Lead		Lag	
Lead-Lag Optimize?	Yes		Yes	
Recall Mode	None	Max	Max	None
Act Effct Green (s)	8.4	83.6	70.6	15.4
Actuated g/C Ratio	0.08	0.76	0.64	0.14
v/c Ratio	0.81	0.48	0.51	0.66
Control Delay	91.6	6.1	10.4	55.9
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	91.6	6.1	10.4	55.9
LOS	F	A	B	E
Approach Delay		12.4	10.4	55.9
Approach LOS		B	B	E

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 110.1	
Natural Cycle: 70	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.81	
Intersection Signal Delay: 13.6	Intersection LOS: B
Intersection Capacity Utilization 58.1%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 7: Phelan Rd. & Driveway 4





Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	97	1217	1058	463	134	18
Future Volume (veh/h)	97	1217	1058	463	134	18
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	1800	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	105	1323	1150	503	146	20
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	130	2826	2349	1025	176	24
Arrive On Green	0.08	0.78	0.66	0.66	0.11	0.11
Sat Flow, veh/h	1714	3705	3708	1543	1559	214
Grp Volume(v), veh/h	105	1323	1124	529	167	0
Grp Sat Flow(s),veh/h/ln	1714	1805	1729	1622	1784	0
Q Serve(g_s), s	6.4	13.4	17.3	17.3	9.8	0.0
Cycle Q Clear(g_c), s	6.4	13.4	17.3	17.3	9.8	0.0
Prop In Lane	1.00			0.95	0.87	0.12
Lane Grp Cap(c), veh/h	130	2826	2297	1078	202	0
V/C Ratio(X)	0.81	0.47	0.49	0.49	0.83	0.00
Avail Cap(c_a), veh/h	135	2826	2297	1078	425	0
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	0.00
Uniform Delay (d), s/veh	48.5	4.0	8.9	8.9	46.3	0.0
Incr Delay (d2), s/veh	26.8	0.6	0.7	1.6	8.4	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	3.6	2.7	5.2	5.1	4.8	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	75.3	4.5	9.7	10.5	54.7	0.0
LnGrp LOS	E	A	A	B	D	A
Approach Vol, veh/h		1428	1653		167	
Approach Delay, s/veh		9.7	9.9		54.7	
Approach LOS		A	A		D	

Timer - Assigned Phs			4		6	7	8
Phs Duration (G+Y+Rc), s			90.0		16.7	12.7	77.3
Change Period (Y+Rc), s			6.5		4.6	4.6	6.5
Max Green Setting (Gmax), s			83.5		25.4	8.4	70.5
Max Q Clear Time (g_c+I1), s			15.4		11.8	8.4	19.3
Green Ext Time (p_c), s			11.7		0.4	0.0	15.2

Intersection Summary	
HCM 6th Ctrl Delay	12.1
HCM 6th LOS	B

Notes

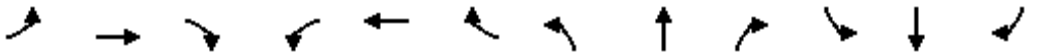
User approved volume balancing among the lanes for turning movement.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	69	172	127	107	129	63	1133	62	297	1797	118
Future Volume (vph)	69	172	127	107	129	63	1133	62	297	1797	118
Turn Type	Perm	NA	Perm	Perm	NA	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		4			8	5	2		1	6	
Permitted Phases	4		4	8				2			6
Detector Phase	4	4	4	8	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	15.0	15.0	15.0	42.0	42.0	9.0	28.0	28.0	9.0	37.0	37.0
Total Split (s)	44.0	44.0	44.0	44.0	44.0	10.0	45.0	45.0	31.0	66.0	66.0
Total Split (%)	36.7%	36.7%	36.7%	36.7%	36.7%	8.3%	37.5%	37.5%	25.8%	55.0%	55.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	3.0	5.0	5.0	3.0	5.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	4.0	6.0	6.0	4.0	6.0	6.0
Lead/Lag						Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?						Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Max	Max	None	Max	Max
Act Effct Green (s)	39.0	39.0	39.0	39.0	39.0	6.0	41.5	41.5	24.5	60.0	60.0
Actuated g/C Ratio	0.32	0.32	0.32	0.32	0.32	0.05	0.35	0.35	0.20	0.50	0.50
v/c Ratio	1.15	0.30	0.23	0.33	0.86	0.76	0.99	0.11	0.88	1.08	0.15
Control Delay	198.9	32.0	9.3	34.0	44.3	101.0	62.5	3.1	70.3	77.1	3.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	198.9	32.0	9.3	34.0	44.3	101.0	62.5	3.1	70.3	77.1	3.2
LOS	F	C	A	C	D	F	E	A	E	E	A
Approach Delay		55.5			42.5		61.5			72.2	
Approach LOS		E			D		E			E	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.15	
Intersection Signal Delay: 63.7	Intersection LOS: E
Intersection Capacity Utilization 108.7%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 8: US-395 & Luna Rd.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	69	172	127	107	129	372	63	1133	62	297	1797	118
Future Volume (veh/h)	69	172	127	107	129	372	63	1133	62	297	1797	118
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	75	187	105	116	140	338	68	1232	51	323	1953	110
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	117	619	524	354	161	388	87	1282	569	351	1808	807
Arrive On Green	0.33	0.33	0.33	0.33	0.33	0.33	0.05	0.36	0.36	0.19	0.50	0.50
Sat Flow, veh/h	982	1900	1610	1166	493	1190	1810	3610	1603	1810	3610	1610
Grp Volume(v), veh/h	75	187	105	116	0	478	68	1232	51	323	1953	110
Grp Sat Flow(s),veh/h/ln	982	1900	1610	1166	0	1683	1810	1805	1603	1810	1805	1610
Q Serve(g_s), s	7.0	8.8	5.6	9.9	0.0	32.0	4.5	40.0	2.5	21.0	60.0	4.4
Cycle Q Clear(g_c), s	39.0	8.8	5.6	18.7	0.0	32.0	4.5	40.0	2.5	21.0	60.0	4.4
Prop In Lane	1.00		1.00	1.00		0.71	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	117	619	524	354	0	548	87	1282	569	351	1808	807
V/C Ratio(X)	0.64	0.30	0.20	0.33	0.00	0.87	0.78	0.96	0.09	0.92	1.08	0.14
Avail Cap(c_a), veh/h	117	619	524	354	0	548	91	1282	569	408	1808	807
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	57.2	30.2	29.1	37.2	0.0	38.0	56.4	37.8	25.7	47.4	29.9	16.0
Incr Delay (d2), s/veh	8.7	0.1	0.1	0.2	0.0	13.8	31.9	17.4	0.3	23.2	46.4	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	4.0	2.2	2.8	0.0	14.8	2.7	19.4	1.0	11.2	34.5	1.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	66.0	30.3	29.2	37.4	0.0	51.9	88.3	55.2	26.0	70.6	76.3	16.4
LnGrp LOS	E	C	C	D	A	D	F	E	C	E	F	B
Approach Vol, veh/h		367			594			1351			2386	
Approach Delay, s/veh		37.3			49.0			55.8			72.8	
Approach LOS		D			D			E			E	

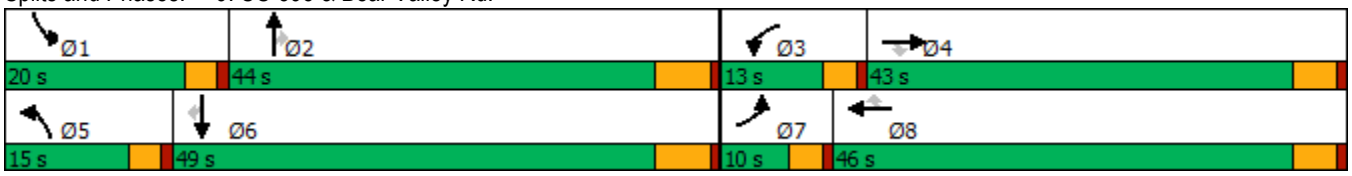
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	27.2	48.5		44.0	9.8	66.0		44.0				
Change Period (Y+Rc), s	4.0	6.0		5.0	4.0	6.0		5.0				
Max Green Setting (Gmax), s	27.0	39.0		39.0	6.0	60.0		39.0				
Max Q Clear Time (g_c+I1), s	23.0	42.0		41.0	6.5	62.0		34.0				
Green Ext Time (p_c), s	0.3	0.0		0.0	0.0	0.0		1.1				

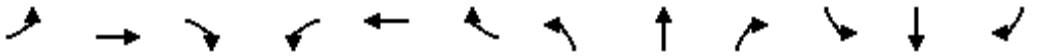
Intersection Summary	
HCM 6th Ctrl Delay	62.1
HCM 6th LOS	E

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	80	464	317	251	347	138	148	1052	140	310	1777	47
Future Volume (vph)	80	464	317	251	347	138	148	1052	140	310	1777	47
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.0	43.0	43.0	9.0	43.0	43.0	9.0	44.0	44.0	9.0	44.0	44.0
Total Split (s)	10.0	43.0	43.0	13.0	46.0	46.0	15.0	44.0	44.0	20.0	49.0	49.0
Total Split (%)	8.3%	35.8%	35.8%	10.8%	38.3%	38.3%	12.5%	36.7%	36.7%	16.7%	40.8%	40.8%
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0	4.0	3.0	5.0	5.0	3.0	5.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	5.0	5.0	4.0	5.0	5.0	4.0	6.0	6.0	4.0	6.0	6.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Max	Max	None	Max	Max
Act Effct Green (s)	6.0	20.4	20.4	9.1	23.4	23.4	11.1	38.3	38.3	16.1	43.3	43.3
Actuated g/C Ratio	0.06	0.20	0.20	0.09	0.23	0.23	0.11	0.37	0.37	0.16	0.42	0.42
v/c Ratio	0.78	0.67	0.66	1.64	0.44	0.30	0.79	0.81	0.21	1.13	1.21	0.07
Control Delay	93.0	42.4	19.4	345.3	35.1	6.6	74.5	36.0	6.2	136.2	128.7	0.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	93.0	42.4	19.4	345.3	35.1	6.6	74.5	36.0	6.2	136.2	128.7	0.8
LOS	F	D	B	F	D	A	E	D	A	F	F	A
Approach Delay		38.6			135.6			37.2			127.0	
Approach LOS		D			F			D			F	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 103	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.64	
Intersection Signal Delay: 89.5	Intersection LOS: F
Intersection Capacity Utilization 99.9%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 9: US-395 & Bear Valley Rd.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	80	464	317	251	347	138	148	1052	140	310	1777	47
Future Volume (veh/h)	80	464	317	251	347	138	148	1052	140	310	1777	47
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	82	478	246	259	358	108	153	1085	117	320	1832	42
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	105	673	300	162	786	351	184	1361	607	287	1567	699
Arrive On Green	0.06	0.19	0.19	0.09	0.22	0.22	0.10	0.38	0.38	0.16	0.43	0.43
Sat Flow, veh/h	1810	3610	1610	1810	3610	1610	1810	3610	1610	1810	3610	1610
Grp Volume(v), veh/h	82	478	246	259	358	108	153	1085	117	320	1832	42
Grp Sat Flow(s),veh/h/ln	1810	1805	1610	1810	1805	1610	1810	1805	1610	1810	1805	1610
Q Serve(g_s), s	4.5	12.5	14.8	9.0	8.7	5.7	8.4	27.0	4.9	16.0	43.8	1.5
Cycle Q Clear(g_c), s	4.5	12.5	14.8	9.0	8.7	5.7	8.4	27.0	4.9	16.0	43.8	1.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	105	673	300	162	786	351	184	1361	607	287	1567	699
V/C Ratio(X)	0.78	0.71	0.82	1.60	0.46	0.31	0.83	0.80	0.19	1.11	1.17	0.06
Avail Cap(c_a), veh/h	108	1361	607	162	1468	655	197	1361	607	287	1567	699
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.8	38.4	39.4	45.9	34.2	33.1	44.4	28.0	21.1	42.4	28.5	16.6
Incr Delay (d2), s/veh	28.4	0.5	2.1	298.3	0.2	0.2	23.1	4.9	0.7	87.3	83.3	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.8	5.2	5.6	17.2	3.6	2.1	4.7	11.3	1.8	13.6	34.5	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	75.2	39.0	41.5	344.2	34.4	33.2	67.6	32.9	21.8	129.7	111.8	16.7
LnGrp LOS	E	D	D	F	C	C	E	C	C	F	F	B
Approach Vol, veh/h		806			725			1355			2194	
Approach Delay, s/veh		43.4			144.9			35.9			112.6	
Approach LOS		D			F			D			F	

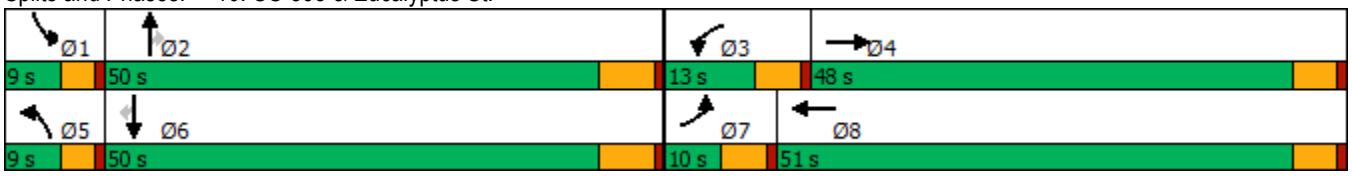
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	20.0	44.0	13.0	23.8	14.2	49.8	9.9	26.9
Change Period (Y+Rc), s	4.0	6.0	4.0	5.0	4.0	6.0	4.0	5.0
Max Green Setting (Gmax), s	16.0	38.0	9.0	38.0	11.0	43.0	6.0	41.0
Max Q Clear Time (g_c+I1), s	18.0	29.0	11.0	16.8	10.4	45.8	6.5	10.7
Green Ext Time (p_c), s	0.0	3.2	0.0	2.0	0.0	0.0	0.0	1.4

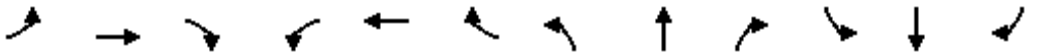
Intersection Summary	
HCM 6th Ctrl Delay	85.8
HCM 6th LOS	F

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	13	7	122	8	10	1200	84	9	2339	11
Future Volume (vph)	13	7	122	8	10	1200	84	9	2339	11
Turn Type	Prot	NA	Prot	NA	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4	3	8	5	2		1	6	
Permitted Phases							2			6
Detector Phase	7	4	3	8	5	2	2	1	6	6
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	10.0	48.0	10.0	48.0	9.0	41.0	41.0	9.0	41.0	41.0
Total Split (s)	10.0	48.0	13.0	51.0	9.0	50.0	50.0	9.0	50.0	50.0
Total Split (%)	8.3%	40.0%	10.8%	42.5%	7.5%	41.7%	41.7%	7.5%	41.7%	41.7%
Yellow Time (s)	4.0	4.0	4.0	4.0	3.0	5.0	5.0	3.0	5.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	4.0	6.0	6.0	4.0	6.0	6.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	Max	Max	None	Max	Max
Act Effct Green (s)	5.2	15.0	9.2	21.1	5.2	49.9	49.9	5.2	49.9	49.9
Actuated g/C Ratio	0.06	0.18	0.11	0.25	0.06	0.59	0.59	0.06	0.59	0.59
v/c Ratio	0.13	0.11	0.67	0.09	0.10	0.61	0.09	0.09	1.19	0.01
Control Delay	47.8	13.7	57.9	10.4	47.2	17.7	3.9	47.1	111.2	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	47.8	13.7	57.9	10.4	47.2	17.7	3.9	47.1	111.2	0.0
LOS	D	B	E	B	D	B	A	D	F	A
Approach Delay		23.2		46.6		17.0			110.5	
Approach LOS		C		D		B			F	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 85.1	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.19	
Intersection Signal Delay: 75.5	Intersection LOS: E
Intersection Capacity Utilization 88.0%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 10: US-395 & Eucalyptus St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	13	7	26	122	8	30	10	1200	84	9	2339	11
Future Volume (veh/h)	13	7	26	122	8	30	10	1200	84	9	2339	11
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	14	8	20	131	9	21	11	1290	86	10	2515	11
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	30	50	125	164	90	210	24	1969	878	23	1965	876
Arrive On Green	0.02	0.10	0.10	0.09	0.18	0.18	0.01	0.55	0.55	0.01	0.54	0.54
Sat Flow, veh/h	1810	481	1203	1810	506	1180	1810	3610	1610	1810	3610	1610
Grp Volume(v), veh/h	14	0	28	131	0	30	11	1290	86	10	2515	11
Grp Sat Flow(s),veh/h/ln	1810	0	1684	1810	0	1685	1810	1805	1610	1810	1805	1610
Q Serve(g_s), s	0.6	0.0	1.2	5.7	0.0	1.2	0.5	20.4	2.1	0.4	44.0	0.3
Cycle Q Clear(g_c), s	0.6	0.0	1.2	5.7	0.0	1.2	0.5	20.4	2.1	0.4	44.0	0.3
Prop In Lane	1.00		0.71	1.00		0.70	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	30	0	175	164	0	300	24	1969	878	23	1965	876
V/C Ratio(X)	0.46	0.00	0.16	0.80	0.00	0.10	0.45	0.66	0.10	0.44	1.28	0.01
Avail Cap(c_a), veh/h	112	0	896	179	0	959	112	1969	878	112	1965	876
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.4	0.0	33.0	36.0	0.0	27.8	39.6	13.0	8.8	39.6	18.4	8.5
Incr Delay (d2), s/veh	4.1	0.0	0.4	18.3	0.0	0.1	4.7	1.7	0.2	5.0	130.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	0.5	3.2	0.0	0.5	0.2	6.7	0.7	0.2	51.8	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	43.5	0.0	33.4	54.3	0.0	27.9	44.3	14.7	9.0	44.7	148.5	8.5
LnGrp LOS	D	A	C	D	A	C	D	B	A	D	F	A
Approach Vol, veh/h		42			161			1387			2536	
Approach Delay, s/veh		36.8			49.4			14.6			147.5	
Approach LOS		D			D			B			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.0	50.1	12.3	13.4	5.1	50.0	6.3	19.4
Change Period (Y+Rc), s	4.0	6.0	5.0	5.0	4.0	6.0	5.0	5.0
Max Green Setting (Gmax), s	5.0	44.0	8.0	43.0	5.0	44.0	5.0	46.0
Max Q Clear Time (g_c+I1), s	2.4	22.4	7.7	3.2	2.5	46.0	2.6	3.2
Green Ext Time (p_c), s	0.0	9.0	0.0	0.1	0.0	0.0	0.0	0.1

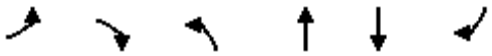
Intersection Summary	
HCM 6th Ctrl Delay	97.8
HCM 6th LOS	F

Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Configurations					
Traffic Volume (vph)	19	74	325	1920	2656
Future Volume (vph)	19	74	325	1920	2656
Turn Type	Prot	Perm	Prot	NA	NA
Protected Phases	4		5	2	6
Permitted Phases		4			
Detector Phase	4	4	5	2	6
Switch Phase					
Minimum Initial (s)	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	26.6	26.6	9.6	16.5	23.5
Total Split (s)	26.6	26.6	9.6	93.4	83.8
Total Split (%)	22.2%	22.2%	8.0%	77.8%	69.8%
Yellow Time (s)	3.6	3.6	3.6	5.5	5.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	6.5	6.5
Lead/Lag			Lead		Lag
Lead-Lag Optimize?			Yes		Yes
Recall Mode	None	None	None	Max	Max
Act Effct Green (s)	12.2	12.2	5.0	89.0	77.8
Actuated g/C Ratio	0.11	0.11	0.05	0.83	0.72
v/c Ratio	0.10	0.33	4.20	1.33	2.20
Control Delay	44.3	17.5	1482.4	168.9	559.6
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	44.3	17.5	1482.4	168.9	559.6
LOS	D	B	F	F	F
Approach Delay	23.1			359.0	559.6
Approach LOS	C			F	F

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 107.5	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 4.20	
Intersection Signal Delay: 461.6	Intersection LOS: F
Intersection Capacity Utilization 185.9%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 11: US-395 & Yucca Terrace Dr.





Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	19	74	325	1920	2656	111
Future Volume (veh/h)	19	74	325	1920	2656	111
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	21	80	353	2087	2887	121
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	160	142	84	1536	1302	55
Arrive On Green	0.09	0.09	0.05	0.81	0.72	0.72
Sat Flow, veh/h	1810	1610	1810	1900	1810	76
Grp Volume(v), veh/h	21	80	353	2087	0	3008
Grp Sat Flow(s),veh/h/ln	1810	1610	1810	1900	0	1886
Q Serve(g_s), s	1.2	5.1	5.0	86.9	0.0	77.3
Cycle Q Clear(g_c), s	1.2	5.1	5.0	86.9	0.0	77.3
Prop In Lane	1.00	1.00	1.00			0.04
Lane Grp Cap(c), veh/h	160	142	84	1536	0	1356
V/C Ratio(X)	0.13	0.56	4.19	1.36	0.00	2.22
Avail Cap(c_a), veh/h	370	329	84	1536	0	1356
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	0.00	1.00
Uniform Delay (d), s/veh	45.2	47.0	51.3	10.3	0.0	15.1
Incr Delay (d2), s/veh	0.4	3.4	1465.1	165.8	0.0	550.4
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	0.1	36.4	84.7	0.0	228.6
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	45.6	50.4	1516.4	176.1	0.0	565.5
LnGrp LOS	D	D	F	F	A	F
Approach Vol, veh/h	101			2440	3008	
Approach Delay, s/veh	49.4			370.0	565.5	
Approach LOS	D			F	F	

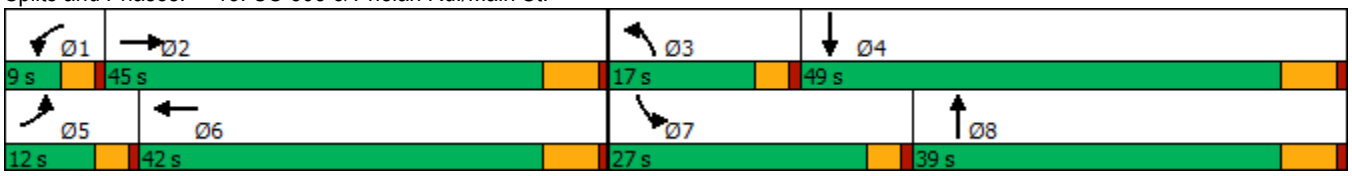
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		93.4		14.1	9.6	83.8
Change Period (Y+Rc), s		6.5		4.6	4.6	6.5
Max Green Setting (Gmax), s		86.9		22.0	5.0	77.3
Max Q Clear Time (g_c+I1), s		88.9		7.1	7.0	79.3
Green Ext Time (p_c), s		0.0		0.2	0.0	0.0

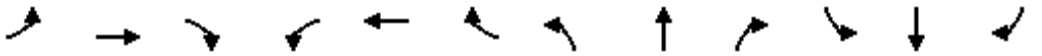
Intersection Summary		
HCM 6th Ctrl Delay	470.2	
HCM 6th LOS	F	

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	103	1030	23	1203	237	1571	375	2283
Future Volume (vph)	103	1030	23	1203	237	1571	375	2283
Turn Type	Prot	NA	Prot	NA	Prot	NA	Prot	NA
Protected Phases	5	2	1	6	3	8	7	4
Permitted Phases								
Detector Phase	5	2	1	6	3	8	7	4
Switch Phase								
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.0	16.0	9.0	16.0	9.0	16.0	9.0	16.0
Total Split (s)	12.0	45.0	9.0	42.0	17.0	39.0	27.0	49.0
Total Split (%)	10.0%	37.5%	7.5%	35.0%	14.2%	32.5%	22.5%	40.8%
Yellow Time (s)	3.0	5.0	3.0	5.0	3.0	5.0	3.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	6.0	4.0	6.0	4.0	6.0	4.0	6.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None
Act Effct Green (s)	8.0	42.6	5.0	36.0	13.0	33.0	23.0	43.0
Actuated g/C Ratio	0.07	0.36	0.04	0.30	0.11	0.28	0.19	0.36
v/c Ratio	0.89	1.03	0.32	1.78	1.27	1.68	1.13	1.91
Control Delay	113.0	71.4	67.3	381.6	197.5	339.4	133.8	438.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	113.0	71.4	67.3	381.6	197.5	339.4	133.8	438.2
LOS	F	E	E	F	F	F	F	F
Approach Delay		74.6		377.7		321.1		396.5
Approach LOS		E		F		F		F

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.91	
Intersection Signal Delay: 318.5	Intersection LOS: F
Intersection Capacity Utilization 155.3%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 13: US-395 & Phelan Rd./Main St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	103	1030	218	23	1203	651	237	1571	26	375	2283	82
Future Volume (veh/h)	103	1030	218	23	1203	651	237	1571	26	375	2283	82
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	107	1073	182	24	1253	598	247	1636	27	391	2378	81
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	121	1062	180	42	727	326	196	999	16	347	1277	43
Arrive On Green	0.07	0.34	0.34	0.02	0.30	0.30	0.11	0.28	0.28	0.19	0.36	0.36
Sat Flow, veh/h	1810	3088	523	1810	2425	1085	1810	3634	60	1810	3563	121
Grp Volume(v), veh/h	107	626	629	24	912	939	247	811	852	391	1198	1261
Grp Sat Flow(s),veh/h/ln	1810	1805	1806	1810	1805	1705	1810	1805	1889	1810	1805	1878
Q Serve(g_s), s	7.0	41.2	41.2	1.6	36.0	36.0	13.0	33.0	33.0	23.0	43.0	43.0
Cycle Q Clear(g_c), s	7.0	41.2	41.2	1.6	36.0	36.0	13.0	33.0	33.0	23.0	43.0	43.0
Prop In Lane	1.00		0.29	1.00		0.64	1.00		0.03	1.00		0.06
Lane Grp Cap(c), veh/h	121	620	621	42	542	511	196	496	520	347	647	673
V/C Ratio(X)	0.89	1.01	1.01	0.58	1.68	1.84	1.26	1.63	1.64	1.13	1.85	1.87
Avail Cap(c_a), veh/h	121	620	621	75	542	511	196	496	520	347	647	673
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	55.6	39.4	39.4	58.0	42.0	42.0	53.5	43.5	43.5	48.5	38.5	38.5
Incr Delay (d2), s/veh	48.5	38.4	39.5	9.1	315.5	384.3	151.4	294.6	296.3	87.4	389.4	398.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.7	23.5	23.7	0.8	62.4	68.7	13.9	54.4	57.2	18.2	87.5	92.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	104.1	77.8	78.8	67.1	357.5	426.3	204.9	338.1	339.8	135.9	427.9	437.3
LnGrp LOS	F	F	F	E	F	F	F	F	F	F	F	F
Approach Vol, veh/h		1362			1875			1910			2850	
Approach Delay, s/veh		80.3			388.2			321.6			392.0	
Approach LOS		F			F			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.8	47.2	17.0	49.0	12.0	42.0	27.0	39.0
Change Period (Y+Rc), s	4.0	6.0	4.0	6.0	4.0	6.0	4.0	6.0
Max Green Setting (Gmax), s	5.0	39.0	13.0	43.0	8.0	36.0	23.0	33.0
Max Q Clear Time (g_c+I1), s	3.6	43.2	15.0	45.0	9.0	38.0	25.0	35.0
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	321.2
HCM 6th LOS	F

Intersection	
Int Delay, s/veh	29.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	122	432	1401	68	565	1958
Future Vol, veh/h	122	432	1401	68	565	1958
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	375	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	131	465	1506	73	608	2105

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	4864	790	0	0	1579	0
Stage 1	1543	-	-	-	-	-
Stage 2	3321	-	-	-	-	-
Critical Hdwy	6.6	6.9	-	-	4.1	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	~ 1	~ 337	-	-	~ 422	-
Stage 1	165	-	-	-	-	-
Stage 2	~ 24	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	0	~ 337	-	-	~ 422	-
Mov Cap-2 Maneuver	0	-	-	-	-	-
Stage 1	165	-	-	-	-	-
Stage 2	0	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s		0	52.9
HCM LOS	-		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	-	337	~ 422	-
HCM Lane V/C Ratio	-	-	-	1.378	1.44	-
HCM Control Delay (s)	-	-	-	218.6	236.2	-
HCM Lane LOS	-	-	-	F	F	-
HCM 95th %tile Q(veh)	-	-	-	23.4	30.6	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	70	1	232	2	58	247	1341	142	44	1903	133
Future Volume (vph)	70	1	232	2	58	247	1341	142	44	1903	133
Turn Type	Perm	NA	Perm	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		4		8		5	2		1	6	
Permitted Phases	4		8		8			2			6
Detector Phase	4	4	8	8	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	16.0	16.0	16.0	16.0	16.0	10.0	16.0	16.0	10.0	16.0	16.0
Total Split (s)	39.0	39.0	39.0	39.0	39.0	15.0	69.0	69.0	12.0	66.0	66.0
Total Split (%)	32.5%	32.5%	32.5%	32.5%	32.5%	12.5%	57.5%	57.5%	10.0%	55.0%	55.0%
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	5.0	6.0	6.0	5.0	6.0	6.0
Lead/Lag						Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?						Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Max	Max	None	Max	Max
Act Effct Green (s)	33.0	33.0	33.0	33.0	33.0	10.0	65.5	65.5	6.5	60.0	60.0
Actuated g/C Ratio	0.28	0.28	0.28	0.28	0.28	0.08	0.55	0.55	0.05	0.50	0.50
v/c Ratio	0.19	0.56	1.29	0.00	0.13	1.79	0.74	0.17	0.49	1.15	0.17
Control Delay	34.9	26.8	198.3	31.5	6.6	411.4	24.3	3.5	72.5	102.2	8.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	34.9	26.8	198.3	31.5	6.6	411.4	24.3	3.5	72.5	102.2	8.1
LOS	C	C	F	C	A	F	C	A	E	F	A
Approach Delay		28.4		159.2			77.8			95.5	
Approach LOS		C		F			E			F	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.79	
Intersection Signal Delay: 87.6	Intersection LOS: F
Intersection Capacity Utilization 115.3%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 15: US-395 & Three Flags Rd.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	70	1	273	232	2	58	247	1341	142	44	1903	133
Future Volume (veh/h)	70	1	273	232	2	58	247	1341	142	44	1903	133
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	76	1	260	252	2	54	268	1458	142	48	2068	124
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	455	2	441	222	522	442	151	1982	883	62	1805	805
Arrive On Green	0.28	0.28	0.28	0.28	0.28	0.28	0.08	0.55	0.55	0.03	0.50	0.50
Sat Flow, veh/h	1442	6	1605	1199	1900	1607	1810	3610	1609	1810	3610	1610
Grp Volume(v), veh/h	76	0	261	252	2	54	268	1458	142	48	2068	124
Grp Sat Flow(s),veh/h/ln	1442	0	1611	1199	1900	1607	1810	1805	1609	1810	1805	1610
Q Serve(g_s), s	4.8	0.0	16.8	16.2	0.1	3.0	10.0	36.7	5.2	3.2	60.0	5.0
Cycle Q Clear(g_c), s	4.9	0.0	16.8	33.0	0.1	3.0	10.0	36.7	5.2	3.2	60.0	5.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	455	0	443	222	523	442	151	1982	883	62	1805	805
V/C Ratio(X)	0.17	0.00	0.59	1.14	0.00	0.12	1.78	0.74	0.16	0.77	1.15	0.15
Avail Cap(c_a), veh/h	455	0	443	222	523	442	151	1982	883	106	1805	805
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	33.4	0.0	37.6	54.1	31.6	32.6	55.0	20.5	13.4	57.5	30.0	16.3
Incr Delay (d2), s/veh	0.1	0.0	1.4	102.1	0.0	0.0	375.2	2.5	0.4	7.4	72.6	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	0.0	6.8	13.0	0.0	1.2	20.1	14.2	1.8	1.5	41.1	1.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	33.4	0.0	39.0	156.2	31.6	32.7	430.2	22.9	13.8	64.8	102.6	16.7
LnGrp LOS	C	A	D	F	C	C	F	C	B	E	F	B
Approach Vol, veh/h		337			308			1868			2240	
Approach Delay, s/veh		37.8			133.8			80.7			97.1	
Approach LOS		D			F			F			F	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.1	71.9		39.0	15.0	66.0		39.0				
Change Period (Y+Rc), s	5.0	6.0		6.0	5.0	6.0		6.0				
Max Green Setting (Gmax), s	7.0	63.0		33.0	10.0	60.0		33.0				
Max Q Clear Time (g_c+I1), s	5.2	38.7		18.8	12.0	62.0		35.0				
Green Ext Time (p_c), s	0.0	11.3		1.0	0.0	0.0		0.0				

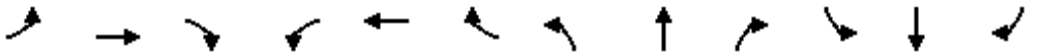
Intersection Summary			
HCM 6th Ctrl Delay		88.8	
HCM 6th LOS		F	

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	62	74	129	89	272	13	1397	83	278	1894	237
Future Volume (vph)	62	74	129	89	272	13	1397	83	278	1894	237
Turn Type	Perm	NA	Perm	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		4		8		5	2		1	6	
Permitted Phases	4		8		8			2			6
Detector Phase	4	4	8	8	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	15.0	15.0	46.0	46.0	46.0	9.0	34.0	34.0	9.0	34.0	34.0
Total Split (s)	47.0	47.0	47.0	47.0	47.0	9.0	42.0	42.0	31.0	64.0	64.0
Total Split (%)	39.2%	39.2%	39.2%	39.2%	39.2%	7.5%	35.0%	35.0%	25.8%	53.3%	53.3%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	3.0	5.0	5.0	3.0	5.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	0.0	-2.0	-2.0	0.0	-2.0	-2.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag						Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?						Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Max	Max	None	Max	Max
Act Effct Green (s)	18.4	18.4	18.4	18.4	18.4	5.1	40.6	40.6	19.1	62.5	62.5
Actuated g/C Ratio	0.20	0.20	0.20	0.20	0.20	0.06	0.45	0.45	0.21	0.69	0.69
v/c Ratio	0.25	0.22	0.52	0.25	0.53	0.14	0.94	0.12	0.79	0.83	0.22
Control Delay	31.6	29.5	38.2	30.8	7.0	50.5	38.5	5.8	50.8	17.1	4.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	31.6	29.5	38.2	30.8	7.0	50.5	38.5	5.8	50.8	17.1	4.5
LOS	C	C	D	C	A	D	D	A	D	B	A
Approach Delay		30.5		19.6			36.8			19.7	
Approach LOS		C		B			D			B	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 90.5	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.94	
Intersection Signal Delay: 25.7	Intersection LOS: C
Intersection Capacity Utilization 81.0%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 16: US-395 & Joshua St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	62	74	4	129	89	272	13	1397	83	278	1894	237
Future Volume (veh/h)	62	74	4	129	89	272	13	1397	83	278	1894	237
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	67	80	1	140	97	242	14	1518	76	302	2059	253
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	243	357	4	297	362	306	30	1762	786	342	2386	1064
Arrive On Green	0.19	0.19	0.18	0.19	0.19	0.19	0.02	0.49	0.49	0.19	0.66	0.66
Sat Flow, veh/h	1116	1872	23	1413	1900	1608	1810	3610	1610	1810	3610	1610
Grp Volume(v), veh/h	67	0	81	140	97	242	14	1518	76	302	2059	253
Grp Sat Flow(s),veh/h/ln	1116	0	1896	1413	1900	1608	1810	1805	1610	1810	1805	1610
Q Serve(g_s), s	4.9	0.0	3.3	8.4	4.0	13.0	0.7	33.7	2.3	14.7	40.9	5.7
Cycle Q Clear(g_c), s	8.9	0.0	3.3	11.7	4.0	13.0	0.7	33.7	2.3	14.7	40.9	5.7
Prop In Lane	1.00		0.01	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	243	0	361	297	362	306	30	1762	786	342	2386	1064
V/C Ratio(X)	0.28	0.00	0.22	0.47	0.27	0.79	0.47	0.86	0.10	0.88	0.86	0.24
Avail Cap(c_a), veh/h	559	0	898	697	900	762	100	1762	786	538	2386	1064
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	35.1	0.0	31.1	36.0	31.3	35.0	44.3	20.5	12.5	35.8	12.1	6.2
Incr Delay (d2), s/veh	0.2	0.0	0.1	0.4	0.1	1.7	8.4	5.8	0.2	8.9	4.4	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	0.0	1.5	2.9	1.8	5.1	0.4	13.1	0.8	6.8	12.3	1.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	35.4	0.0	31.2	36.5	31.5	36.8	52.7	26.3	12.7	44.7	16.6	6.7
LnGrp LOS	D	A	C	D	C	D	D	C	B	D	B	A
Approach Vol, veh/h		148			479			1608			2614	
Approach Delay, s/veh		33.1			35.6			25.9			18.9	
Approach LOS		C			D			C			B	

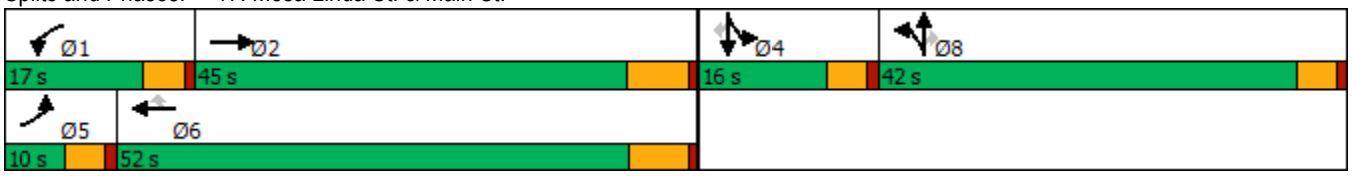
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	21.2	48.3		21.3	5.5	64.0		21.3				
Change Period (Y+Rc), s	4.0	6.0		5.0	4.0	6.0		5.0				
Max Green Setting (Gmax), s	27.0	36.0		42.0	5.0	58.0		42.0				
Max Q Clear Time (g_c+I1), s	16.7	35.7		10.9	2.7	42.9		15.0				
Green Ext Time (p_c), s	0.4	0.3		0.4	0.0	14.4		0.9				

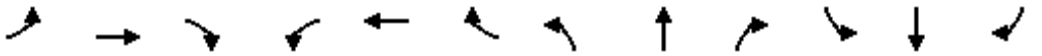
Intersection Summary			
HCM 6th Ctrl Delay		23.3	
HCM 6th LOS		C	

Lane Group	EBL	EBT	WBL	WBT	WBR	NBT	NBR	SBT	SBR
Lane Configurations									
Traffic Volume (vph)	7	1377	121	1792	24	3	177	3	20
Future Volume (vph)	7	1377	121	1792	24	3	177	3	20
Turn Type	Prot	NA	Prot	NA	Perm	NA	Perm	NA	Perm
Protected Phases	5	2	1	6		8		4	
Permitted Phases					6		8		4
Detector Phase	5	2	1	6	6	8	8	4	4
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	16.5	9.6	23.2	23.2	40.6	40.6	14.6	14.6
Total Split (s)	10.0	45.0	17.0	52.0	52.0	42.0	42.0	16.0	16.0
Total Split (%)	8.3%	37.5%	14.2%	43.3%	43.3%	35.0%	35.0%	13.3%	13.3%
Yellow Time (s)	3.6	5.5	3.6	5.2	5.2	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.5	4.6	6.2	6.2	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lead	Lag	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes				
Recall Mode	None	Max	None	Max	Max	None	None	None	None
Act Effct Green (s)	5.3	39.5	10.8	53.8	53.8	14.3	14.3	10.5	10.5
Actuated g/C Ratio	0.06	0.43	0.12	0.58	0.58	0.16	0.16	0.11	0.11
v/c Ratio	0.08	0.68	0.66	0.64	0.03	0.01	0.47	0.36	0.07
Control Delay	50.0	25.8	58.5	17.7	0.0	32.3	8.8	48.0	0.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	50.0	25.8	58.5	17.7	0.0	32.3	8.8	48.0	0.4
LOS	D	C	E	B	A	C	A	D	A
Approach Delay		25.9		20.0		9.2		37.2	
Approach LOS		C		C		A		D	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 92.2	
Natural Cycle: 110	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.68	
Intersection Signal Delay: 22.2	Intersection LOS: C
Intersection Capacity Utilization 64.1%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 17: Mesa Linda St. & Main St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	7	1377	4	121	1792	24	0	3	177	66	3	20
Future Volume (veh/h)	7	1377	4	121	1792	24	0	3	177	66	3	20
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	1800	1900	1900	1800	1900	1900	1800	1900	1900	1800	1900	1900
Adj Flow Rate, veh/h	8	1497	4	132	1948	18	0	3	172	72	3	9
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	17	2357	6	163	2729	847	0	250	212	173	7	160
Arrive On Green	0.01	0.44	0.44	0.09	0.53	0.53	0.00	0.13	0.13	0.10	0.10	0.10
Sat Flow, veh/h	1714	5341	14	1714	5187	1610	0	1900	1610	1740	73	1610
Grp Volume(v), veh/h	8	969	532	132	1948	18	0	3	172	75	0	9
Grp Sat Flow(s),veh/h/ln	1714	1729	1897	1714	1729	1610	0	1900	1610	1813	0	1610
Q Serve(g_s), s	0.4	19.0	19.0	6.6	24.9	0.5	0.0	0.1	9.1	3.4	0.0	0.4
Cycle Q Clear(g_c), s	0.4	19.0	19.0	6.6	24.9	0.5	0.0	0.1	9.1	3.4	0.0	0.4
Prop In Lane	1.00		0.01	1.00		1.00	0.00		1.00	0.96		1.00
Lane Grp Cap(c), veh/h	17	1526	837	163	2729	847	0	250	212	181	0	160
V/C Ratio(X)	0.46	0.64	0.64	0.81	0.71	0.02	0.00	0.01	0.81	0.42	0.00	0.06
Avail Cap(c_a), veh/h	106	1526	837	244	2729	847	0	814	690	237	0	210
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	42.9	18.9	18.9	38.7	15.7	9.9	0.0	33.0	36.8	36.9	0.0	35.6
Incr Delay (d2), s/veh	7.0	2.0	3.7	6.9	1.6	0.0	0.0	0.0	7.3	1.5	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	6.8	7.9	2.9	8.4	0.2	0.0	0.1	4.0	1.6	0.0	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	49.9	21.0	22.6	45.6	17.3	10.0	0.0	33.0	44.2	38.4	0.0	35.7
LnGrp LOS	D	C	C	D	B	A	A	C	D	D	A	D
Approach Vol, veh/h		1509			2098			175			84	
Approach Delay, s/veh		21.7			19.0			44.0			38.1	
Approach LOS		C			B			D			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	12.9	45.0		13.3	5.5	52.4		16.1				
Change Period (Y+Rc), s	4.6	6.5		4.6	4.6	* 6.5		4.6				
Max Green Setting (Gmax), s	12.4	38.5		11.4	5.4	* 46		37.4				
Max Q Clear Time (g_c+I1), s	8.6	21.0		5.4	2.4	26.9		11.1				
Green Ext Time (p_c), s	0.0	8.4		0.1	0.0	12.7		0.6				

Intersection Summary		
HCM 6th Ctrl Delay		21.6
HCM 6th LOS		C

Notes

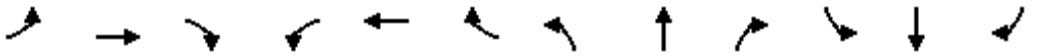
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	78	1319	310	284	1879	24	179	15	154	47	15	36
Future Volume (vph)	78	1319	310	284	1879	24	179	15	154	47	15	36
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Split	NA	Perm	Split	NA	Perm
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases			2			6			8			4
Detector Phase	5	2	2	1	6	6	8	8	8	4	4	4
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	32.2	32.2	9.6	32.2	32.2	43.6	43.6	43.6	41.6	41.6	41.6
Total Split (s)	11.0	34.8	34.8	10.0	33.8	33.8	43.6	43.6	43.6	41.6	41.6	41.6
Total Split (%)	8.5%	26.8%	26.8%	7.7%	26.0%	26.0%	33.5%	33.5%	33.5%	32.0%	32.0%	32.0%
Yellow Time (s)	3.6	5.2	5.2	3.6	5.2	5.2	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	6.2	4.6	6.2	6.2	4.6	4.6	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes						
Recall Mode	None	Max	Max	None	Max	Max	None	None	None	None	None	None
Act Effct Green (s)	6.9	30.6	30.6	5.8	29.5	29.5	14.9	14.9	14.9	14.1	14.1	14.1
Actuated g/C Ratio	0.08	0.37	0.37	0.07	0.36	0.36	0.18	0.18	0.18	0.17	0.17	0.17
v/c Ratio	0.60	0.75	0.44	1.42	1.10	0.04	0.36	0.34	0.39	0.17	0.05	0.11
Control Delay	61.1	29.2	9.3	244.2	83.3	0.1	34.9	34.3	8.1	33.0	31.6	0.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	61.1	29.2	9.3	244.2	83.3	0.1	34.9	34.3	8.1	33.0	31.6	0.6
LOS	E	C	A	F	F	A	C	C	A	C	C	A
Approach Delay		27.1			103.3			22.9			20.9	
Approach LOS		C			F			C			C	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 82.8	
Natural Cycle: 130	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.42	
Intersection Signal Delay: 65.0	Intersection LOS: E
Intersection Capacity Utilization 66.6%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 18: Cataba Av. & Main St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	78	1319	310	284	1879	24	179	15	154	47	15	36
Future Volume (veh/h)	78	1319	310	284	1879	24	179	15	154	47	15	36
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1800	1900	1900	1700	1900	1900	1800	1900	1900	1800	1900	1900
Adj Flow Rate, veh/h	85	1434	330	309	2042	19	206	0	147	51	16	11
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	108	2055	637	235	2117	657	489	0	229	188	208	176
Arrive On Green	0.06	0.40	0.40	0.07	0.41	0.41	0.14	0.00	0.14	0.11	0.11	0.11
Sat Flow, veh/h	1714	5187	1609	3141	5187	1609	3429	0	1607	1714	1900	1610
Grp Volume(v), veh/h	85	1434	330	309	2042	19	206	0	147	51	16	11
Grp Sat Flow(s),veh/h/ln	1714	1729	1609	1570	1729	1609	1714	0	1607	1714	1900	1610
Q Serve(g_s), s	3.5	16.7	11.2	5.4	27.7	0.5	4.0	0.0	6.2	2.0	0.5	0.4
Cycle Q Clear(g_c), s	3.5	16.7	11.2	5.4	27.7	0.5	4.0	0.0	6.2	2.0	0.5	0.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	108	2055	637	235	2117	657	489	0	229	188	208	176
V/C Ratio(X)	0.79	0.70	0.52	1.32	0.96	0.03	0.42	0.00	0.64	0.27	0.08	0.06
Avail Cap(c_a), veh/h	152	2055	637	235	2117	657	1852	0	868	879	974	825
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.4	18.2	16.6	33.4	20.8	12.8	28.2	0.0	29.2	29.5	28.9	28.8
Incr Delay (d2), s/veh	10.7	2.0	3.0	168.7	12.8	0.1	0.6	0.0	3.0	0.8	0.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	5.7	3.9	7.4	11.6	0.2	1.6	0.0	2.5	0.8	0.3	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	44.1	20.2	19.5	202.1	33.6	12.9	28.8	0.0	32.2	30.3	29.0	29.0
LnGrp LOS	D	C	B	F	C	B	C	A	C	C	C	C
Approach Vol, veh/h		1849			2370			353			78	
Approach Delay, s/veh		21.2			55.4			30.2			29.8	
Approach LOS		C			E			C			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.0	34.8		12.5	9.1	35.7		14.9				
Change Period (Y+Rc), s	4.6	6.2		4.6	4.6	6.2		4.6				
Max Green Setting (Gmax), s	5.4	28.6		37.0	6.4	27.6		39.0				
Max Q Clear Time (g_c+I1), s	7.4	18.7		4.0	5.5	29.7		8.2				
Green Ext Time (p_c), s	0.0	6.5		0.2	0.0	0.0		1.3				

Intersection Summary		
HCM 6th Ctrl Delay		39.5
HCM 6th LOS		D

Notes

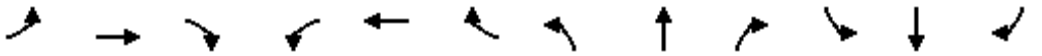
User approved pedestrian interval to be less than phase max green.
User approved volume balancing among the lanes for turning movement.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	42	1386	17	194	2028	15	16	110	522	37
Future Volume (vph)	42	1386	17	194	2028	15	16	110	522	37
Turn Type	Prot	NA	Perm	Prot	NA	Perm	NA	Perm	Perm	NA
Protected Phases	5	2		1	6		8			4
Permitted Phases			2			8		8	4	
Detector Phase	5	2	2	1	6	8	8	8	4	4
Switch Phase										
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	29.2	29.2	9.6	30.2	38.6	38.6	38.6	41.6	41.6
Total Split (s)	14.0	45.0	45.0	29.0	60.0	46.0	46.0	46.0	46.0	46.0
Total Split (%)	11.7%	37.5%	37.5%	24.2%	50.0%	38.3%	38.3%	38.3%	38.3%	38.3%
Yellow Time (s)	3.6	5.2	5.2	3.6	5.2	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	6.2	4.6	6.2	4.6	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes					
Recall Mode	None	Max	Max	None	Max	None	None	None	None	None
Act Effct Green (s)	7.3	41.5	41.5	17.6	53.9	41.5	41.5	41.5	41.5	41.5
Actuated g/C Ratio	0.06	0.36	0.36	0.15	0.46	0.36	0.36	0.36	0.36	0.36
v/c Ratio	0.40	0.76	0.03	0.76	1.01	0.03	0.02	0.17	1.11	0.10
Control Delay	64.4	36.8	0.1	66.1	51.0	26.2	25.9	5.6	110.7	17.4
Queue Delay	0.0	0.0	0.0	0.0	36.4	0.0	0.0	0.0	0.0	0.0
Total Delay	64.4	36.8	0.1	66.1	87.3	26.2	25.9	5.6	110.7	17.4
LOS	E	D	A	E	F	C	C	A	F	B
Approach Delay		37.2			85.7		10.0			100.6
Approach LOS		D			F		B			F

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 116	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.11	
Intersection Signal Delay: 70.4	Intersection LOS: E
Intersection Capacity Utilization 100.4%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 19: Key Point Av. & Main St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	42	1386	17	194	2028	316	15	16	110	522	37	26
Future Volume (veh/h)	42	1386	17	194	2028	316	15	16	110	522	37	26
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	1800	1900	1900	1800	1900	1900	1800	1900	1900	1800	1900	1900
Adj Flow Rate, veh/h	43	1414	14	198	2069	288	15	16	52	533	38	22
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	56	1925	597	226	2171	297	527	688	583	546	409	237
Arrive On Green	0.03	0.37	0.37	0.13	0.47	0.47	0.36	0.36	0.36	0.36	0.36	0.36
Sat Flow, veh/h	1714	5187	1608	1714	4613	631	1364	1900	1609	1353	1129	654
Grp Volume(v), veh/h	43	1414	14	198	1542	815	15	16	52	533	0	60
Grp Sat Flow(s),veh/h/ln	1714	1729	1608	1714	1729	1786	1364	1900	1609	1353	0	1782
Q Serve(g_s), s	2.8	26.9	0.6	13.0	48.7	50.8	0.8	0.6	2.4	40.8	0.0	2.5
Cycle Q Clear(g_c), s	2.8	26.9	0.6	13.0	48.7	50.8	3.4	0.6	2.4	41.4	0.0	2.5
Prop In Lane	1.00		1.00	1.00		0.35	1.00		1.00	1.00		0.37
Lane Grp Cap(c), veh/h	56	1925	597	226	1627	841	527	688	583	546	0	645
V/C Ratio(X)	0.77	0.73	0.02	0.87	0.95	0.97	0.03	0.02	0.09	0.98	0.00	0.09
Avail Cap(c_a), veh/h	141	1925	597	366	1627	841	527	688	583	546	0	645
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	54.9	31.1	22.8	48.7	28.9	29.5	25.2	23.5	24.0	38.7	0.0	24.1
Incr Delay (d2), s/veh	8.0	2.5	0.1	7.6	12.9	24.5	0.0	0.0	0.1	32.5	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	10.9	0.2	5.8	21.1	25.2	0.3	0.3	1.0	20.4	0.0	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	62.9	33.6	22.9	56.3	41.8	53.9	25.2	23.5	24.1	71.2	0.0	24.1
LnGrp LOS	E	C	C	E	D	D	C	C	C	E	A	C
Approach Vol, veh/h		1471			2555			83			593	
Approach Delay, s/veh		34.4			46.8			24.2			66.5	
Approach LOS		C			D			C			E	

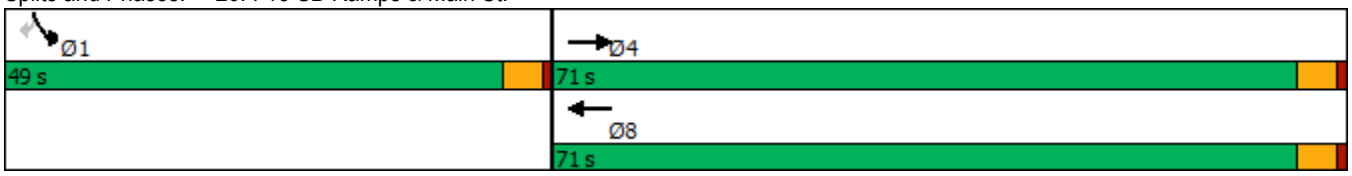
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	19.7	48.6		46.0	8.3	60.0		46.0				
Change Period (Y+Rc), s	4.6	6.2		4.6	4.6	6.2		4.6				
Max Green Setting (Gmax), s	24.4	38.8		41.4	9.4	53.8		41.4				
Max Q Clear Time (g_c+I1), s	15.0	28.9		43.4	4.8	52.8		5.4				
Green Ext Time (p_c), s	0.2	5.9		0.0	0.0	1.0		0.3				

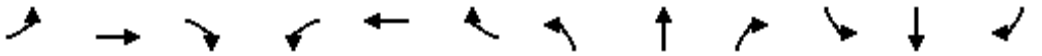
Intersection Summary												
HCM 6th Ctrl Delay			45.0									
HCM 6th LOS			D									

Lane Group	EBT	EBR	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	1477	113	1696	23	434	732
Future Volume (vph)	1477	113	1696	23	434	732
Turn Type	NA	Free	NA	Free	Prot	Perm
Protected Phases	4		8		1	
Permitted Phases		Free		Free		1
Detector Phase	4		8		1	1
Switch Phase						
Minimum Initial (s)	5.0		5.0		5.0	5.0
Minimum Split (s)	9.6		22.6		9.6	9.6
Total Split (s)	71.0		71.0		49.0	49.0
Total Split (%)	59.2%		59.2%		40.8%	40.8%
Yellow Time (s)	3.6		3.6		3.6	3.6
All-Red Time (s)	1.0		1.0		1.0	1.0
Lost Time Adjust (s)	0.0		0.0		0.0	0.0
Total Lost Time (s)	4.6		4.6		4.6	4.6
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None		None		None	None
Act Effct Green (s)	46.2	100.2	46.2	100.2	44.7	44.7
Actuated g/C Ratio	0.46	1.00	0.46	1.00	0.45	0.45
v/c Ratio	0.65	0.07	0.75	0.01	0.29	1.06
Control Delay	21.8	0.1	24.0	0.0	19.7	78.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	21.9	0.1	24.0	0.0	19.7	78.9
LOS	C	A	C	A	B	E
Approach Delay	20.3		23.7			
Approach LOS	C		C			

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 100.2	
Natural Cycle: 60	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.06	
Intersection Signal Delay: 31.2	Intersection LOS: C
Intersection Capacity Utilization 85.8%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 20: I-15 SB Ramps & Main St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↱		↑↑↑	↱				↰↰		↱
Traffic Volume (veh/h)	0	1477	113	0	1696	23	0	0	0	434	0	732
Future Volume (veh/h)	0	1477	113	0	1696	23	0	0	0	434	0	732
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	1900	1900	0	1900	1900				1900	0	1900
Adj Flow Rate, veh/h	0	1555	0	0	1785	0				457	0	690
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95				0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0				0	0	0
Cap, veh/h	0	2418		0	2418					1551	0	711
Arrive On Green	0.00	0.47	0.00	0.00	0.47	0.00				0.44	0.00	0.44
Sat Flow, veh/h	0	5358	1610	0	5358	1610				3510	0	1610
Grp Volume(v), veh/h	0	1555	0	0	1785	0				457	0	690
Grp Sat Flow(s),veh/h/ln	0	1729	1610	0	1729	1610				1755	0	1610
Q Serve(g_s), s	0.0	22.8	0.0	0.0	28.0	0.0				8.4	0.0	41.8
Cycle Q Clear(g_c), s	0.0	22.8	0.0	0.0	28.0	0.0				8.4	0.0	41.8
Prop In Lane	0.00		1.00	0.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2418		0	2418					1551	0	711
V/C Ratio(X)	0.00	0.64		0.00	0.74					0.29	0.00	0.97
Avail Cap(c_a), veh/h	0	3445		0	3445					1559	0	715
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	20.3	0.0	0.0	21.7	0.0				17.9	0.0	27.3
Incr Delay (d2), s/veh	0.0	0.3	0.0	0.0	0.5	0.0				0.1	0.0	26.2
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	8.2	0.0	0.0	10.1	0.0				3.4	0.0	20.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	20.6	0.0	0.0	22.2	0.0				18.0	0.0	53.5
LnGrp LOS	A	C		A	C					B	A	D
Approach Vol, veh/h		1555	A		1785	A					1147	
Approach Delay, s/veh		20.6			22.2						39.4	
Approach LOS		C			C						D	

Timer - Assigned Phs				4		6		8				
Phs Duration (G+Y+Rc), s				51.2		48.8		51.2				
Change Period (Y+Rc), s				4.6		4.6		4.6				
Max Green Setting (Gmax), s				66.4		44.4		66.4				
Max Q Clear Time (g_c+I1), s				24.8		43.8		30.0				
Green Ext Time (p_c), s				14.1		0.3		16.6				

Intersection Summary												
HCM 6th Ctrl Delay			26.1									
HCM 6th LOS			C									

Notes

Unsignalized Delay for [EBR, WBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBT	EBR	WBT	WBR	NBL	NBT	NBR
Lane Configurations							
Traffic Volume (vph)	1425	485	1827	670	625	8	547
Future Volume (vph)	1425	485	1827	670	625	8	547
Turn Type	NA	Perm	NA	Perm	Split	NA	Perm
Protected Phases	2		6		8	8	
Permitted Phases		2		6			8
Detector Phase	2	2	6	6	8	8	8
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.6	22.6	22.6	22.6	9.6	9.6	9.6
Total Split (s)	78.0	78.0	78.0	78.0	42.0	42.0	42.0
Total Split (%)	65.0%	65.0%	65.0%	65.0%	35.0%	35.0%	35.0%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Lead/Lag							
Lead-Lag Optimize?							
Recall Mode	None	None	None	None	Min	Min	Min
Act Effct Green (s)	61.6	61.6	61.6	61.6	37.8	37.8	37.8
Actuated g/C Ratio	0.57	0.57	0.57	0.57	0.35	0.35	0.35
v/c Ratio	0.50	0.44	0.63	0.56	1.02	0.50	0.51
Control Delay	14.5	2.2	16.7	2.7	77.5	29.1	29.4
Queue Delay	0.0	0.0	0.6	0.6	0.0	0.0	0.0
Total Delay	14.5	2.2	17.3	3.3	77.5	29.1	29.4
LOS	B	A	B	A	E	C	C
Approach Delay	11.3		13.5			54.8	
Approach LOS	B		B			D	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 108.7	
Natural Cycle: 55	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.02	
Intersection Signal Delay: 21.5	Intersection LOS: C
Intersection Capacity Utilization 77.6%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 21: I-15 NB Ramps & Main St.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↱		↑↑↑	↱	↰	↑	↱			
Traffic Volume (veh/h)	0	1425	485	0	1827	670	625	8	547	0	0	0
Future Volume (veh/h)	0	1425	485	0	1827	670	625	8	547	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	0	1900	1900	0	1900	1900	1900	1900	1900			
Adj Flow Rate, veh/h	0	1454	0	0	1864	652	638	0	353			
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98			
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0			
Cap, veh/h	0	2861		0	2861	888	651	0	1159			
Arrive On Green	0.00	0.55	0.00	0.00	0.55	0.55	0.36	0.00	0.36			
Sat Flow, veh/h	0	5358	1610	0	5358	1610	1810	0	3220			
Grp Volume(v), veh/h	0	1454	0	0	1864	652	638	0	353			
Grp Sat Flow(s),veh/h/ln	0	1729	1610	0	1729	1610	1810	0	1610			
Q Serve(g_s), s	0.0	18.2	0.0	0.0	26.1	31.7	36.2	0.0	8.2			
Cycle Q Clear(g_c), s	0.0	18.2	0.0	0.0	26.1	31.7	36.2	0.0	8.2			
Prop In Lane	0.00		1.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	0	2861		0	2861	888	651	0	1159			
V/C Ratio(X)	0.00	0.51		0.00	0.65	0.73	0.98	0.00	0.30			
Avail Cap(c_a), veh/h	0	3663		0	3663	1137	651	0	1159			
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	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	0.0	14.5	0.0	0.0	16.3	17.6	32.9	0.0	23.9			
Incr Delay (d2), s/veh	0.0	0.1	0.0	0.0	0.3	1.8	30.1	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	6.2	0.0	0.0	8.9	10.5	21.0	0.0	3.2			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	14.7	0.0	0.0	16.6	19.4	63.0	0.0	24.1			
LnGrp LOS	A	B		A	B	B	E	A	C			
Approach Vol, veh/h		1454	A		2516			991				
Approach Delay, s/veh		14.7			17.3			49.1				
Approach LOS		B			B			D				

Timer - Assigned Phs	2				6		8					
Phs Duration (G+Y+Rc), s	61.9				61.9		42.0					
Change Period (Y+Rc), s	4.6				4.6		4.6					
Max Green Setting (Gmax), s	73.4				73.4		37.4					
Max Q Clear Time (g_c+I1), s	20.2				33.7		38.2					
Green Ext Time (p_c), s	13.3				23.6		0.0					

Intersection Summary												
HCM 6th Ctrl Delay			22.9									
HCM 6th LOS			C									

Notes

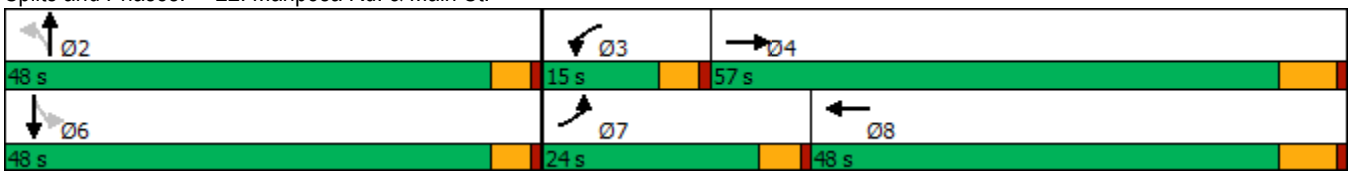
User approved volume balancing among the lanes for turning movement.

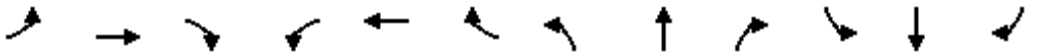
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	179	1653	61	2149	105	55	49	68
Future Volume (vph)	179	1653	61	2149	105	55	49	68
Turn Type	Prot	NA	Prot	NA	Perm	NA	Perm	NA
Protected Phases	7	4	3	8		2		6
Permitted Phases					2		6	
Detector Phase	7	4	3	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	24.2	9.6	24.2	44.6	44.6	44.6	44.6
Total Split (s)	24.0	57.0	15.0	48.0	48.0	48.0	48.0	48.0
Total Split (%)	20.0%	47.5%	12.5%	40.0%	40.0%	40.0%	40.0%	40.0%
Yellow Time (s)	3.6	5.2	3.6	5.2	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	4.6	6.2	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes				
Recall Mode	None	Max	Max	None	None	None	None	None
Act Effct Green (s)	14.7	51.3	10.5	47.1	21.6	21.6	21.6	21.6
Actuated g/C Ratio	0.15	0.52	0.11	0.48	0.22	0.22	0.22	0.22
v/c Ratio	0.76	0.57	0.36	0.76	1.28	0.27	0.20	0.67
Control Delay	60.8	18.4	51.0	25.8	225.0	20.8	31.6	23.3
Queue Delay	0.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	60.8	19.0	51.0	25.8	225.0	20.8	31.6	23.3
LOS	E	B	D	C	F	C	C	C
Approach Delay		22.8		26.5		123.3		24.4
Approach LOS		C		C		F		C

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 98.9	
Natural Cycle: 100	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.28	
Intersection Signal Delay: 29.0	Intersection LOS: C
Intersection Capacity Utilization 85.8%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 22: Mariposa Rd. & Main St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	179	1653	140	61	2149	40	105	55	49	49	68	242
Future Volume (veh/h)	179	1653	140	61	2149	40	105	55	49	49	68	242
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	1800	1900	1900	1800	1900	1900	1800	1900	1900	1800	1900	1900
Adj Flow Rate, veh/h	192	1777	138	66	2311	42	113	59	31	53	73	177
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	223	3085	240	174	3107	56	212	297	156	354	125	302
Arrive On Green	0.13	0.50	0.50	0.10	0.47	0.47	0.25	0.25	0.25	0.25	0.25	0.25
Sat Flow, veh/h	1714	6231	484	1714	6659	121	1148	1173	616	1327	492	1193
Grp Volume(v), veh/h	192	1398	517	66	1701	652	113	0	90	53	0	250
Grp Sat Flow(s),veh/h/ln	1714	1634	1813	1714	1634	1878	1148	0	1789	1327	0	1685
Q Serve(g_s), s	11.3	20.7	20.7	3.7	29.1	29.1	9.8	0.0	4.1	3.4	0.0	13.3
Cycle Q Clear(g_c), s	11.3	20.7	20.7	3.7	29.1	29.1	23.2	0.0	4.1	7.4	0.0	13.3
Prop In Lane	1.00		0.27	1.00		0.06	1.00		0.34	1.00		0.71
Lane Grp Cap(c), veh/h	223	2427	898	174	2287	876	212	0	454	354	0	427
V/C Ratio(X)	0.86	0.58	0.58	0.38	0.74	0.74	0.53	0.00	0.20	0.15	0.00	0.59
Avail Cap(c_a), veh/h	324	2427	898	174	2287	876	406	0	757	579	0	713
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	43.7	18.3	18.3	43.1	22.4	22.4	43.7	0.0	30.1	33.0	0.0	33.6
Incr Delay (d2), s/veh	10.8	1.0	2.7	6.2	1.4	3.5	2.1	0.0	0.2	0.2	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.2	7.1	8.3	1.8	10.2	12.3	2.9	0.0	1.8	1.1	0.0	5.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	54.5	19.3	21.0	49.3	23.7	25.8	45.8	0.0	30.3	33.2	0.0	34.8
LnGrp LOS	D	B	C	D	C	C	D	A	C	C	A	C
Approach Vol, veh/h		2107			2419			203			303	
Approach Delay, s/veh		22.9			25.0			38.9			34.6	
Approach LOS		C			C			D			C	

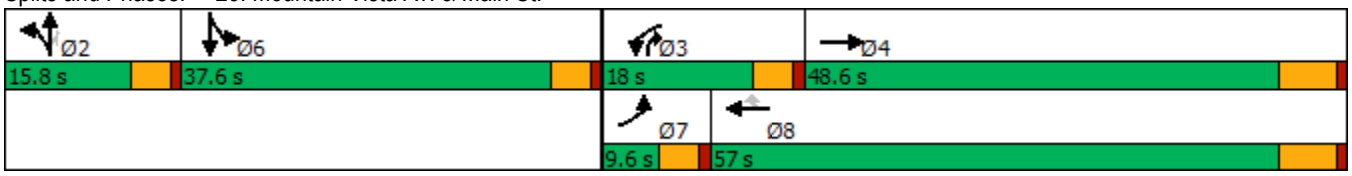
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		30.6	15.0	57.0		30.6	17.9	54.1				
Change Period (Y+Rc), s		4.6	4.6	6.2		4.6	4.6	6.2				
Max Green Setting (Gmax), s		43.4	10.4	50.8		43.4	19.4	41.8				
Max Q Clear Time (g_c+I1), s		25.2	5.7	22.7		15.3	13.3	31.1				
Green Ext Time (p_c), s		0.8	0.0	14.9		1.9	0.1	8.8				

Intersection Summary	
HCM 6th Ctrl Delay	25.3
HCM 6th LOS	C

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	22	1519	101	2104	81	22	1	41	69	3
Future Volume (vph)	22	1519	101	2104	81	22	1	41	69	3
Turn Type	Prot	NA	Prot	NA	Perm	Split	NA	pm+ov	Split	NA
Protected Phases	7	4	3	8		2	2	3	6	6
Permitted Phases					8			2		
Detector Phase	7	4	3	8	8	2	2	3	6	6
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	43.2	9.6	32.2	32.2	14.6	14.6	9.6	37.6	37.6
Total Split (s)	9.6	48.6	18.0	57.0	57.0	15.8	15.8	18.0	37.6	37.6
Total Split (%)	8.0%	40.5%	15.0%	47.5%	47.5%	13.2%	13.2%	15.0%	31.3%	31.3%
Yellow Time (s)	3.6	5.2	3.6	5.2	5.2	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	4.6	6.2	6.2	4.6	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lead	Lag	Lag			Lead		
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes			Yes		
Recall Mode	None	Max	None	Max	Max	None	None	None	None	None
Act Effct Green (s)	5.2	51.5	9.6	60.1	60.1	10.4	10.4	12.9	13.8	13.8
Actuated g/C Ratio	0.06	0.59	0.11	0.68	0.68	0.12	0.12	0.15	0.16	0.16
v/c Ratio	0.12	0.42	0.56	0.61	0.08	0.06	0.03	0.09	0.17	0.16
Control Delay	48.2	16.5	52.7	15.3	3.1	44.2	43.2	1.9	35.6	27.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	48.2	16.5	52.7	15.3	3.1	44.2	43.2	1.9	35.6	27.1
LOS	D	B	D	B	A	D	D	A	D	C
Approach Delay		17.0		16.6			17.1			31.4
Approach LOS		B		B			B			C

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 88	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.61	
Intersection Signal Delay: 17.0	Intersection LOS: B
Intersection Capacity Utilization 67.3%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 23: Mountain Vista Av. & Main St.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	22	1519	29	101	2104	81	22	1	41	69	3	13
Future Volume (veh/h)	22	1519	29	101	2104	81	22	1	41	69	3	13
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1700	1900	1900	1800	1900	1900	1800	1900	1900	1800	1900	1800
Adj Flow Rate, veh/h	23	1566	29	104	2169	81	23	1	22	80	0	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	77	3468	64	131	2972	922	262	145	492	345	191	0
Arrive On Green	0.02	0.52	0.52	0.08	0.57	0.57	0.08	0.08	0.08	0.10	0.00	0.00
Sat Flow, veh/h	3141	6656	123	1714	5187	1609	3429	1900	3220	3429	1900	0
Grp Volume(v), veh/h	23	1153	442	104	2169	81	23	1	22	80	0	0
Grp Sat Flow(s),veh/h/ln	1570	1634	1878	1714	1729	1609	1714	1900	1610	1714	1900	0
Q Serve(g_s), s	0.6	13.1	13.1	5.3	27.2	2.0	0.6	0.0	0.5	1.9	0.0	0.0
Cycle Q Clear(g_c), s	0.6	13.1	13.1	5.3	27.2	2.0	0.6	0.0	0.5	1.9	0.0	0.0
Prop In Lane	1.00		0.07	1.00		1.00	1.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	77	2554	978	131	2972	922	262	145	492	345	191	0
V/C Ratio(X)	0.30	0.45	0.45	0.79	0.73	0.09	0.09	0.01	0.04	0.23	0.00	0.00
Avail Cap(c_a), veh/h	177	2554	978	259	2972	922	433	240	653	1276	707	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	42.5	13.3	13.3	40.3	13.9	8.5	38.1	37.8	32.0	36.7	0.0	0.0
Incr Delay (d2), s/veh	0.8	0.6	1.5	4.1	1.6	0.2	0.1	0.0	0.0	0.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	4.2	5.0	2.2	8.8	0.6	0.2	0.0	0.2	0.8	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	43.3	13.9	14.8	44.3	15.5	8.7	38.2	37.8	32.1	37.1	0.0	0.0
LnGrp LOS	D	B	B	D	B	A	D	D	C	D	A	A
Approach Vol, veh/h		1618			2354			46			80	
Approach Delay, s/veh		14.5			16.5			35.3			37.1	
Approach LOS		B			B			D			D	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		11.4	11.4	52.4		13.5	6.8	57.0				
Change Period (Y+Rc), s		4.6	4.6	6.2		4.6	4.6	6.2				
Max Green Setting (Gmax), s		11.2	13.4	42.4		33.0	5.0	50.8				
Max Q Clear Time (g_c+I1), s		2.6	7.3	15.1		3.9	2.6	29.2				
Green Ext Time (p_c), s		0.1	0.0	11.6		0.2	0.0	15.7				

Intersection Summary												
HCM 6th Ctrl Delay			16.4									
HCM 6th LOS			B									

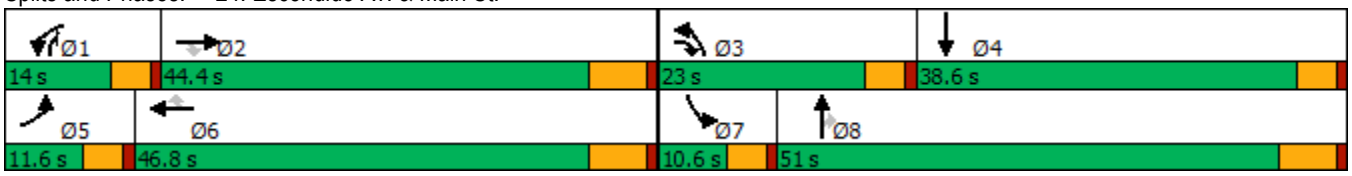
Notes

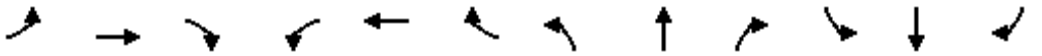
User approved volume balancing among the lanes for turning movement.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations											
Traffic Volume (vph)	6	1112	511	359	1420	4	848	30	379	1	4
Future Volume (vph)	6	1112	511	359	1420	4	848	30	379	1	4
Turn Type	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA
Protected Phases	5	2	3	1	6		3	8	1	7	4
Permitted Phases			2			6			8		
Detector Phase	5	2	3	1	6	6	3	8	1	7	4
Switch Phase											
Minimum Initial (s)	5.0	10.0	5.0	5.0	10.0	10.0	5.0	10.0	5.0	5.0	10.0
Minimum Split (s)	9.6	41.2	9.6	9.6	31.2	31.2	9.6	49.2	9.6	9.6	37.6
Total Split (s)	11.6	44.4	23.0	14.0	46.8	46.8	23.0	51.0	14.0	10.6	38.6
Total Split (%)	9.7%	37.0%	19.2%	11.7%	39.0%	39.0%	19.2%	42.5%	11.7%	8.8%	32.2%
Yellow Time (s)	3.6	5.2	3.6	3.6	5.2	5.2	3.6	5.2	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	4.6	4.6	6.2	6.2	4.6	6.2	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Min	None	None	Min
Act Effct Green (s)	5.3	29.5	54.5	9.6	42.1	42.1	18.7	34.0	49.9	5.1	13.7
Actuated g/C Ratio	0.06	0.32	0.59	0.10	0.46	0.46	0.20	0.37	0.54	0.06	0.15
v/c Ratio	0.06	0.69	0.45	1.13	0.89	0.00	1.37	0.04	0.41	0.01	0.08
Control Delay	48.2	30.3	2.4	131.2	32.0	0.0	206.8	20.5	9.4	49.0	17.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	48.2	30.3	2.4	131.2	32.0	0.0	206.8	20.5	9.4	49.0	17.1
LOS	D	C	A	F	C	A	F	C	A	D	B
Approach Delay		21.6			51.9			142.8			18.5
Approach LOS		C			D			F			B

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 91.9	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.37	
Intersection Signal Delay: 65.6	Intersection LOS: E
Intersection Capacity Utilization 91.3%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 24: Escondido Av. & Main St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	6	1112	511	359	1420	4	848	30	379	1	4	17
Future Volume (veh/h)	6	1112	511	359	1420	4	848	30	379	1	4	17
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1800	1900	1900	1700	1900	1900	1700	1900	1900	1800	1900	1900
Adj Flow Rate, veh/h	6	1146	413	370	1464	4	874	31	229	1	4	17
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	13	1773	879	327	1582	706	640	595	672	2	35	149
Arrive On Green	0.01	0.34	0.34	0.10	0.44	0.44	0.20	0.31	0.31	0.00	0.11	0.11
Sat Flow, veh/h	1714	5187	1610	3141	3610	1610	3141	1900	1610	1714	316	1342
Grp Volume(v), veh/h	6	1146	413	370	1464	4	874	31	229	1	0	21
Grp Sat Flow(s),veh/h/ln	1714	1729	1610	1570	1805	1610	1570	1900	1610	1714	0	1658
Q Serve(g_s), s	0.3	16.8	14.1	9.4	34.6	0.1	18.4	1.0	8.7	0.1	0.0	1.0
Cycle Q Clear(g_c), s	0.3	16.8	14.1	9.4	34.6	0.1	18.4	1.0	8.7	0.1	0.0	1.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.81
Lane Grp Cap(c), veh/h	13	1773	879	327	1582	706	640	595	672	2	0	184
V/C Ratio(X)	0.45	0.65	0.47	1.13	0.93	0.01	1.36	0.05	0.34	0.43	0.00	0.11
Avail Cap(c_a), veh/h	133	2196	1010	327	1624	724	640	943	967	114	0	625
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	44.6	25.1	12.5	40.4	24.0	14.3	35.9	21.6	17.8	45.0	0.0	36.1
Incr Delay (d2), s/veh	8.7	0.5	0.4	90.0	9.3	0.0	174.1	0.0	0.3	39.4	0.0	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	0.2	6.3	4.9	7.5	14.7	0.0	22.4	0.5	3.2	0.0	0.0	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	53.3	25.6	12.9	130.4	33.3	14.3	210.0	21.7	18.1	84.5	0.0	36.4
LnGrp LOS	D	C	B	F	C	B	F	C	B	F	A	D
Approach Vol, veh/h		1565			1838			1134			22	
Approach Delay, s/veh		22.3			52.8			166.1			38.6	
Approach LOS		C			D			F			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.0	37.0	23.0	16.2	5.3	45.7	4.7	34.5
Change Period (Y+Rc), s	4.6	6.2	4.6	* 6.2	4.6	6.2	4.6	6.2
Max Green Setting (Gmax), s	9.4	38.2	18.4	* 34	7.0	40.6	6.0	44.8
Max Q Clear Time (g_c+I1), s	11.4	18.8	20.4	3.0	2.3	36.6	2.1	10.7
Green Ext Time (p_c), s	0.0	8.8	0.0	0.1	0.0	3.0	0.0	1.0

Intersection Summary	
HCM 6th Ctrl Delay	70.5
HCM 6th LOS	E

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	6.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	33	310	1138	45	125	696
Future Vol, veh/h	33	310	1138	45	125	696
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	100	0	-	-	195	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	36	337	1237	49	136	757

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1913	643	0	0	1286	0
Stage 1	1262	-	-	-	-	-
Stage 2	651	-	-	-	-	-
Critical Hdwy	6.8	6.9	-	-	4.1	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	61	421	-	-	546	-
Stage 1	234	-	-	-	-	-
Stage 2	486	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	46	421	-	-	546	-
Mov Cap-2 Maneuver	150	-	-	-	-	-
Stage 1	234	-	-	-	-	-
Stage 2	365	-	-	-	-	-

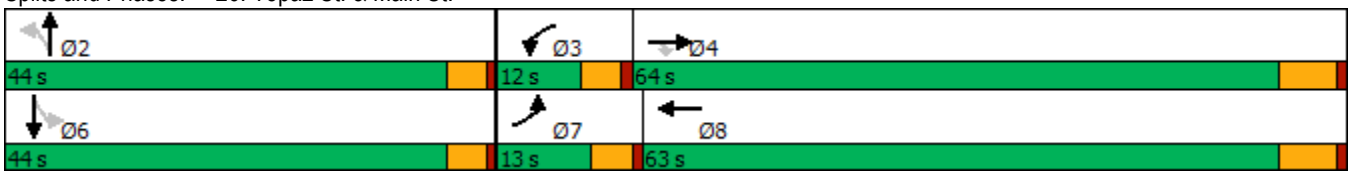
Approach	WB	NB	SB
HCM Control Delay, s	39.7	0	2.1
HCM LOS	E		

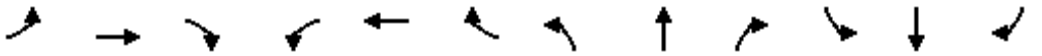
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	150	421	546	-
HCM Lane V/C Ratio	-	-	0.239	0.8	0.249	-
HCM Control Delay (s)	-	-	36.4	40	13.8	-
HCM Lane LOS	-	-	E	E	B	-
HCM 95th %tile Q(veh)	-	-	0.9	7.2	1	-

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	61	1361	117	45	1388	250	113	134	87
Future Volume (vph)	61	1361	117	45	1388	250	113	134	87
Turn Type	Prot	NA	Perm	Prot	NA	Perm	NA	Perm	NA
Protected Phases	7	4		3	8		2		6
Permitted Phases			4			2		6	
Detector Phase	7	4	4	3	8	2	2	6	6
Switch Phase									
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	25.2	25.2	9.6	23.2	32.6	32.6	38.6	38.6
Total Split (s)	13.0	64.0	64.0	12.0	63.0	44.0	44.0	44.0	44.0
Total Split (%)	10.8%	53.3%	53.3%	10.0%	52.5%	36.7%	36.7%	36.7%	36.7%
Yellow Time (s)	3.6	5.2	5.2	3.6	5.2	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	6.2	4.6	6.2	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes				
Recall Mode	None	None	None	Max	None	None	None	None	None
Act Effct Green (s)	7.5	53.2	53.2	7.5	55.8	35.7	35.7	35.7	35.7
Actuated g/C Ratio	0.07	0.47	0.47	0.07	0.50	0.32	0.32	0.32	0.32
v/c Ratio	0.58	0.86	0.16	0.43	0.93	0.92	0.36	0.48	0.37
Control Delay	74.8	32.9	5.4	66.2	38.5	74.4	27.4	38.2	23.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	74.8	32.9	5.4	66.2	38.5	74.4	27.4	38.2	23.9
LOS	E	C	A	E	D	E	C	D	C
Approach Delay		32.5			39.3		53.9		29.7
Approach LOS		C			D		D		C

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 112.1	
Natural Cycle: 100	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.93	
Intersection Signal Delay: 37.4	Intersection LOS: D
Intersection Capacity Utilization 89.5%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 26: Topaz St. & Main St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	61	1361	117	45	1388	131	250	113	81	134	87	113
Future Volume (veh/h)	61	1361	117	45	1388	131	250	113	81	134	87	113
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	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	1800	1900	1900	1800	1900	1900	1800	1900	1900	1800	1900	1900
Adj Flow Rate, veh/h	66	1479	114	49	1509	139	272	123	70	146	95	76
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	84	1717	750	116	1653	151	365	359	205	347	309	247
Arrive On Green	0.05	0.48	0.48	0.07	0.49	0.49	0.32	0.32	0.32	0.32	0.32	0.32
Sat Flow, veh/h	1714	3610	1577	1714	3344	306	1233	1135	646	1207	977	782
Grp Volume(v), veh/h	66	1479	114	49	809	839	272	0	193	146	0	171
Grp Sat Flow(s),veh/h/ln	1714	1805	1577	1714	1805	1845	1233	0	1782	1207	0	1759
Q Serve(g_s), s	4.2	39.9	4.5	3.0	45.1	46.3	23.5	0.0	9.1	11.6	0.0	8.1
Cycle Q Clear(g_c), s	4.2	39.9	4.5	3.0	45.1	46.3	31.6	0.0	9.1	20.7	0.0	8.1
Prop In Lane	1.00		1.00	1.00		0.17	1.00		0.36	1.00		0.44
Lane Grp Cap(c), veh/h	84	1717	750	116	892	912	365	0	564	347	0	557
V/C Ratio(X)	0.79	0.86	0.15	0.42	0.91	0.92	0.74	0.00	0.34	0.42	0.00	0.31
Avail Cap(c_a), veh/h	131	1901	830	116	934	955	418	0	640	399	0	632
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	51.6	25.5	16.3	49.1	25.4	25.7	40.4	0.0	28.7	36.7	0.0	28.4
Incr Delay (d2), s/veh	6.4	4.0	0.1	11.0	12.1	13.4	6.2	0.0	0.4	0.8	0.0	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	1.9	16.2	1.5	1.6	20.0	21.3	7.7	0.0	4.0	3.5	0.0	3.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	58.0	29.5	16.3	60.1	37.5	39.1	46.5	0.0	29.1	37.5	0.0	28.7
LnGrp LOS	E	C	B	E	D	D	D	A	C	D	A	C
Approach Vol, veh/h		1659			1697			465			317	
Approach Delay, s/veh		29.8			38.9			39.3			32.7	
Approach LOS		C			D			D			C	

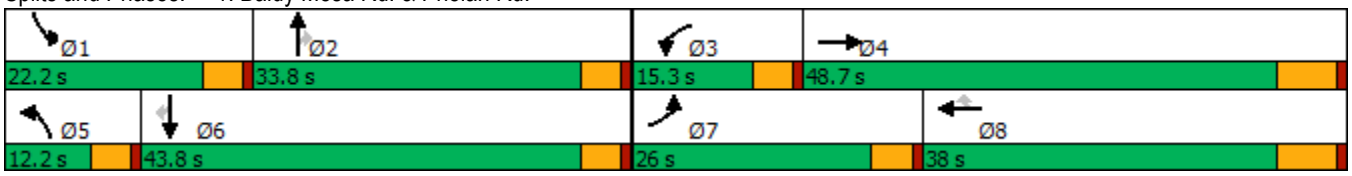
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		39.3	12.0	58.4		39.3	10.0	60.4				
Change Period (Y+Rc), s		4.6	4.6	6.2		4.6	4.6	6.2				
Max Green Setting (Gmax), s		39.4	7.4	57.8		39.4	8.4	56.8				
Max Q Clear Time (g_c+I1), s		33.6	5.0	41.9		22.7	6.2	48.3				
Green Ext Time (p_c), s		1.1	0.0	9.2		1.4	0.0	6.0				

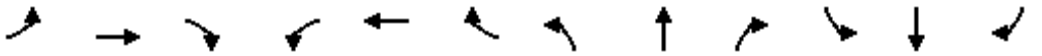
Intersection Summary	
HCM 6th Ctrl Delay	34.8
HCM 6th LOS	C

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	213	767	98	827	226	53	41	41	171	52	190
Future Volume (vph)	213	767	98	827	226	53	41	41	171	52	190
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4	3	8		5	2		1	6	
Permitted Phases					8			2			6
Detector Phase	7	4	3	8	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	30.5	9.6	37.5	37.5	9.6	31.6	31.6	9.6	40.6	40.6
Total Split (s)	26.0	48.7	15.3	38.0	38.0	12.2	33.8	33.8	22.2	43.8	43.8
Total Split (%)	21.7%	40.6%	12.8%	31.7%	31.7%	10.2%	28.2%	28.2%	18.5%	36.5%	36.5%
Yellow Time (s)	3.6	5.5	3.6	5.5	5.5	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.5	4.6	6.5	6.5	4.6	4.6	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Max	None	Max	Max	None	None	None	None	None	None
Act Effct Green (s)	16.8	43.2	9.5	35.8	35.8	6.8	13.0	13.0	14.6	19.5	19.5
Actuated g/C Ratio	0.17	0.44	0.10	0.37	0.37	0.07	0.13	0.13	0.15	0.20	0.20
v/c Ratio	0.78	0.55	0.63	0.67	0.35	0.47	0.17	0.11	0.72	0.15	0.42
Control Delay	58.4	24.1	63.2	32.3	10.2	61.3	40.8	0.6	57.9	32.8	7.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	58.4	24.1	63.2	32.3	10.2	61.3	40.8	0.6	57.9	32.8	7.2
LOS	E	C	E	C	B	E	D	A	E	C	A
Approach Delay		31.2		30.6			36.7			31.5	
Approach LOS		C		C			D			C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 97.2	
Natural Cycle: 100	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.78	
Intersection Signal Delay: 31.2	Intersection LOS: C
Intersection Capacity Utilization 68.0%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 1: Baldy Mesa Rd. & Phelan Rd.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	213	767	52	98	827	226	53	41	41	171	52	190
Future Volume (veh/h)	213	767	52	98	827	226	53	41	41	171	52	190
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		0.99	1.00		0.99	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	1800	1900	1900	1800	1900	1900	1800	1900	1900	1800	1900	1900
Adj Flow Rate, veh/h	229	825	47	105	889	203	57	44	33	184	56	142
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	263	1589	91	140	1394	618	72	215	181	218	376	319
Arrive On Green	0.15	0.46	0.46	0.08	0.39	0.39	0.04	0.11	0.11	0.13	0.20	0.20
Sat Flow, veh/h	1714	3472	198	1714	3610	1600	1714	1900	1596	1714	1900	1610
Grp Volume(v), veh/h	229	429	443	105	889	203	57	44	33	184	56	142
Grp Sat Flow(s),veh/h/ln	1714	1805	1864	1714	1805	1600	1714	1900	1596	1714	1900	1610
Q Serve(g_s), s	12.0	15.6	15.6	5.5	18.5	8.2	3.0	1.9	1.7	9.7	2.2	7.2
Cycle Q Clear(g_c), s	12.0	15.6	15.6	5.5	18.5	8.2	3.0	1.9	1.7	9.7	2.2	7.2
Prop In Lane	1.00		0.11	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	263	826	853	140	1394	618	72	215	181	218	376	319
V/C Ratio(X)	0.87	0.52	0.52	0.75	0.64	0.33	0.79	0.20	0.18	0.85	0.15	0.45
Avail Cap(c_a), veh/h	398	826	853	199	1394	618	141	602	505	327	808	685
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.1	17.8	17.8	41.4	23.1	19.9	43.8	37.1	37.0	39.4	30.5	32.5
Incr Delay (d2), s/veh	8.7	2.3	2.3	4.8	2.2	1.4	7.1	0.5	0.5	7.9	0.2	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.3	6.1	6.3	2.4	7.4	3.0	1.4	0.9	0.7	4.5	1.1	2.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	46.8	20.1	20.0	46.2	25.3	21.3	50.8	37.6	37.5	47.3	30.7	33.5
LnGrp LOS	D	C	C	D	C	C	D	D	D	D	C	C
Approach Vol, veh/h		1101			1197			134			382	
Approach Delay, s/veh		25.6			26.5			43.2			39.7	
Approach LOS		C			C			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.3	15.0	12.2	48.7	8.5	22.9	18.8	42.1
Change Period (Y+Rc), s	4.6	4.6	4.6	6.5	4.6	4.6	4.6	6.5
Max Green Setting (Gmax), s	17.6	29.2	10.7	42.2	7.6	39.2	21.4	31.5
Max Q Clear Time (g_c+I1), s	11.7	3.9	7.5	17.6	5.0	9.2	14.0	20.5
Green Ext Time (p_c), s	0.1	0.3	0.0	4.8	0.0	0.8	0.2	4.5

Intersection Summary	
HCM 6th Ctrl Delay	28.7
HCM 6th LOS	C

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	6	953	6	40	1168	15	4	0	20	10	0	4
Future Vol, veh/h	6	953	6	40	1168	15	4	0	20	10	0	4
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	105	-	105	110	-	110	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	6	1003	6	42	1229	16	4	0	21	11	0	4

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1245	0	0	1009	0	0	2338	2344	1003	2342	2334	1229
Stage 1	-	-	-	-	-	-	1015	1015	-	1313	1313	-
Stage 2	-	-	-	-	-	-	1323	1329	-	1029	1021	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
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	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	566	-	-	695	-	-	26	37	297	26	37	219
Stage 1	-	-	-	-	-	-	290	318	-	197	230	-
Stage 2	-	-	-	-	-	-	194	226	-	285	316	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	566	-	-	695	-	-	24	34	297	23	34	219
Mov Cap-2 Maneuver	-	-	-	-	-	-	109	128	-	105	125	-
Stage 1	-	-	-	-	-	-	287	315	-	195	216	-
Stage 2	-	-	-	-	-	-	179	212	-	262	313	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.3	22.5	38.2
HCM LOS			C	E

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	231	566	-	-	695	-	-	123
HCM Lane V/C Ratio	0.109	0.011	-	-	0.061	-	-	0.12
HCM Control Delay (s)	22.5	11.4	-	-	10.5	-	-	38.2
HCM Lane LOS	C	B	-	-	B	-	-	E
HCM 95th %tile Q(veh)	0.4	0	-	-	0.2	-	-	0.4

Intersection	
Int Delay, s/veh	0.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1024	3	6	1365	8	6
Future Vol, veh/h	1024	3	6	1365	8	6
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	110	-	0	-
Veh in Median Storage, #	0	-	-	0	1	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	1067	3	6	1422	8	6

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1070	0	2503	1069
Stage 1	-	-	-	-	1069	-
Stage 2	-	-	-	-	1434	-
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	-	-	659	-	32	272
Stage 1	-	-	-	-	333	-
Stage 2	-	-	-	-	222	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	659	-	32	272
Mov Cap-2 Maneuver	-	-	-	-	135	-
Stage 1	-	-	-	-	333	-
Stage 2	-	-	-	-	220	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	27.9
HCM LOS			D

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	172	-	-	659	-
HCM Lane V/C Ratio	0.085	-	-	0.009	-
HCM Control Delay (s)	27.9	-	-	10.5	-
HCM Lane LOS	D	-	-	B	-
HCM 95th %tile Q(veh)	0.3	-	-	0	-

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑↑	↱	⅄	
Traffic Vol, veh/h	0	1031	1329	82	65	42
Future Vol, veh/h	0	1031	1329	82	65	42
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	0	-
Veh in Median Storage, #	-	0	0	-	2	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	1121	1445	89	71	46

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	2566	723
Stage 1	-	-	-	-	1445	-
Stage 2	-	-	-	-	1121	-
Critical Hdwy	-	-	-	-	5.5	6
Critical Hdwy Stg 1	-	-	-	-	5.5	-
Critical Hdwy Stg 2	-	-	-	-	5.5	-
Follow-up Hdwy	-	-	-	-	3	3
Pot Cap-1 Maneuver	0	-	-	-	~ 58	479
Stage 1	0	-	-	-	227	-
Stage 2	0	-	-	-	333	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	~ 58	479
Mov Cap-2 Maneuver	-	-	-	-	185	-
Stage 1	-	-	-	-	227	-
Stage 2	-	-	-	-	333	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	32.5
HCM LOS			D

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	244
HCM Lane V/C Ratio	-	-	-	0.477
HCM Control Delay (s)	-	-	-	32.5
HCM Lane LOS	-	-	-	D
HCM 95th %tile Q(veh)	-	-	-	2.4

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	8.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	10	0	32	17	0	236
Future Vol, veh/h	10	0	32	17	0	236
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	100	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	11	0	35	18	0	257

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	11	0	99	11
Stage 1	-	-	-	-	11	-
Stage 2	-	-	-	-	88	-
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	-	-	1621	-	905	1076
Stage 1	-	-	-	-	1017	-
Stage 2	-	-	-	-	940	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1621	-	885	1076
Mov Cap-2 Maneuver	-	-	-	-	885	-
Stage 1	-	-	-	-	1017	-
Stage 2	-	-	-	-	919	-

Approach	EB	WB	NB
HCM Control Delay, s	0	4.7	9.4
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1076	-	-	1621	-
HCM Lane V/C Ratio	0.238	-	-	0.021	-
HCM Control Delay (s)	9.4	-	-	7.3	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0.9	-	-	0.1	-

Intersection	
Int Delay, s/veh	6.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	246	0	54	49	0	280
Future Vol, veh/h	246	0	54	49	0	280
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	100	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	267	0	59	53	0	304

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	267	0	438	267
Stage 1	-	-	-	-	267	-
Stage 2	-	-	-	-	171	-
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	-	-	1308	-	580	777
Stage 1	-	-	-	-	782	-
Stage 2	-	-	-	-	864	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1308	-	554	777
Mov Cap-2 Maneuver	-	-	-	-	619	-
Stage 1	-	-	-	-	782	-
Stage 2	-	-	-	-	825	-

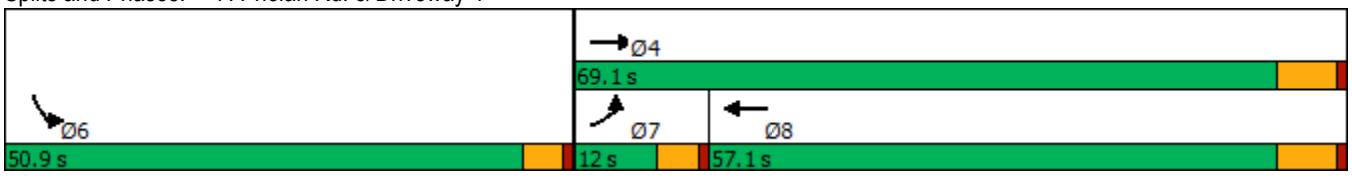
Approach	EB	WB	NB
HCM Control Delay, s	0	4.1	12.6
HCM LOS			B

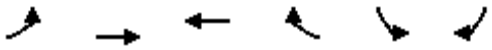
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	777	-	-	1308	-
HCM Lane V/C Ratio	0.392	-	-	0.045	-
HCM Control Delay (s)	12.6	-	-	7.9	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	1.9	-	-	0.1	-

Lane Group	EBL	EBT	WBT	SBL
Lane Configurations				
Traffic Volume (vph)	31	1055	1369	654
Future Volume (vph)	31	1055	1369	654
Turn Type	Prot	NA	NA	Prot
Protected Phases	7	4	8	6
Permitted Phases				
Detector Phase	7	4	8	6
Switch Phase				
Minimum Initial (s)	5.0	10.0	10.0	10.0
Minimum Split (s)	9.6	16.5	23.5	26.6
Total Split (s)	12.0	69.1	57.1	50.9
Total Split (%)	10.0%	57.6%	47.6%	42.4%
Yellow Time (s)	3.6	5.5	5.5	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.5	6.5	4.6
Lead/Lag	Lead		Lag	
Lead-Lag Optimize?	Yes		Yes	
Recall Mode	None	Max	Max	None
Act Effct Green (s)	6.4	62.6	55.5	46.3
Actuated g/C Ratio	0.05	0.52	0.46	0.39
v/c Ratio	0.37	0.61	0.68	1.11
Control Delay	66.1	21.9	27.6	102.3
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	66.1	21.9	27.6	102.3
LOS	E	C	C	F
Approach Delay		23.1	27.6	102.3
Approach LOS		C	C	F

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.11	
Intersection Signal Delay: 42.3	Intersection LOS: D
Intersection Capacity Utilization 77.9%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 7: Phelan Rd. & Driveway 4





Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	31	1055	1369	113	654	54
Future Volume (veh/h)	31	1055	1369	113	654	54
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	1800	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	34	1147	1488	123	711	37
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	48	1883	2222	184	659	34
Arrive On Green	0.03	0.52	0.46	0.46	0.39	0.39
Sat Flow, veh/h	1714	3705	5053	403	1707	89
Grp Volume(v), veh/h	34	1147	1054	557	749	0
Grp Sat Flow(s),veh/h/ln	1714	1805	1729	1827	1799	0
Q Serve(g_s), s	2.4	26.7	28.7	28.7	46.3	0.0
Cycle Q Clear(g_c), s	2.4	26.7	28.7	28.7	46.3	0.0
Prop In Lane	1.00			0.22	0.95	0.05
Lane Grp Cap(c), veh/h	48	1883	1574	832	694	0
V/C Ratio(X)	0.70	0.61	0.67	0.67	1.08	0.00
Avail Cap(c_a), veh/h	106	1883	1574	832	694	0
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	0.00
Uniform Delay (d), s/veh	57.8	20.1	25.6	25.6	36.9	0.0
Incr Delay (d2), s/veh	6.7	1.5	2.3	4.3	57.6	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	1.1	10.4	11.2	12.3	31.2	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	64.5	21.6	27.9	29.9	94.4	0.0
LnGrp LOS	E	C	C	C	F	A
Approach Vol, veh/h		1181	1611		749	
Approach Delay, s/veh		22.8	28.6		94.4	
Approach LOS		C	C		F	

Timer - Assigned Phs	4	6	7	8
Phs Duration (G+Y+Rc), s	69.1	50.9	8.0	61.1
Change Period (Y+Rc), s	6.5	4.6	4.6	6.5
Max Green Setting (Gmax), s	62.6	46.3	7.4	50.6
Max Q Clear Time (g_c+I1), s	28.7	48.3	4.4	30.7
Green Ext Time (p_c), s	8.6	0.0	0.0	9.9

Intersection Summary	
HCM 6th Ctrl Delay	40.6
HCM 6th LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	102	98	82	71	148	119	1907	131	302	1447	122
Future Volume (vph)	102	98	82	71	148	119	1907	131	302	1447	122
Turn Type	Perm	NA	Perm	Perm	NA	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		4			8	5	2		1	6	
Permitted Phases	4		4	8				2			6
Detector Phase	4	4	4	8	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	15.0	15.0	15.0	42.0	42.0	9.0	28.0	28.0	9.0	37.0	37.0
Total Split (s)	42.0	42.0	42.0	42.0	42.0	14.0	49.0	49.0	29.0	64.0	64.0
Total Split (%)	35.0%	35.0%	35.0%	35.0%	35.0%	11.7%	40.8%	40.8%	24.2%	53.3%	53.3%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	3.0	5.0	5.0	3.0	5.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	4.0	6.0	6.0	4.0	6.0	6.0
Lead/Lag						Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?						Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Max	Max	None	Max	Max
Act Effct Green (s)	37.0	37.0	37.0	37.0	37.0	9.8	44.5	44.5	23.4	58.0	58.0
Actuated g/C Ratio	0.31	0.31	0.31	0.31	0.31	0.08	0.37	0.37	0.20	0.48	0.48
v/c Ratio	1.14	0.17	0.15	0.18	0.82	0.84	1.48	0.20	0.89	0.86	0.15
Control Delay	175.7	31.4	4.9	32.0	43.5	95.4	251.9	7.2	74.8	33.8	3.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	175.7	31.4	4.9	32.0	43.5	95.4	251.9	7.2	74.8	33.8	3.3
LOS	F	C	A	C	D	F	F	A	E	C	A
Approach Delay		75.9			42.0		228.4			38.5	
Approach LOS		E			D		F			D	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 119.8	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.48	
Intersection Signal Delay: 125.7	Intersection LOS: F
Intersection Capacity Utilization 121.5%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 8: US-395 & Luna Rd.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	102	98	82	71	148	311	119	1907	131	302	1447	122
Future Volume (veh/h)	102	98	82	71	148	311	119	1907	131	302	1447	122
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	106	102	66	74	154	262	124	1986	111	315	1507	108
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	149	586	497	412	195	331	150	1362	608	342	1746	779
Arrive On Green	0.31	0.31	0.31	0.31	0.31	0.31	0.08	0.38	0.38	0.19	0.48	0.48
Sat Flow, veh/h	1040	1900	1610	1305	631	1074	1810	3610	1610	1810	3610	1610
Grp Volume(v), veh/h	106	102	66	74	0	416	124	1986	111	315	1507	108
Grp Sat Flow(s),veh/h/ln	1040	1900	1610	1305	0	1705	1810	1805	1610	1810	1805	1610
Q Serve(g_s), s	10.2	4.7	3.5	5.3	0.0	26.8	8.1	45.3	5.5	20.5	44.4	4.5
Cycle Q Clear(g_c), s	37.0	4.7	3.5	10.0	0.0	26.8	8.1	45.3	5.5	20.5	44.4	4.5
Prop In Lane	1.00		1.00	1.00		0.63	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	149	586	497	412	0	526	150	1362	608	342	1746	779
V/C Ratio(X)	0.71	0.17	0.13	0.18	0.00	0.79	0.83	1.46	0.18	0.92	0.86	0.14
Avail Cap(c_a), veh/h	149	586	497	412	0	526	151	1362	608	377	1746	779
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	55.7	30.3	29.9	33.9	0.0	37.9	54.2	37.3	25.0	47.7	27.4	17.1
Incr Delay (d2), s/veh	12.8	0.1	0.0	0.1	0.0	7.4	29.3	210.2	0.7	25.7	5.9	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.7	2.1	1.4	1.7	0.0	11.9	4.8	58.1	2.1	11.2	18.5	1.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	68.5	30.4	29.9	34.0	0.0	45.3	83.5	247.6	25.6	73.4	33.4	17.5
LnGrp LOS	E	C	C	C	A	D	F	F	C	E	C	B
Approach Vol, veh/h		274			490			2221			1930	
Approach Delay, s/veh		45.0			43.6			227.3			39.0	
Approach LOS		D			D			F			D	

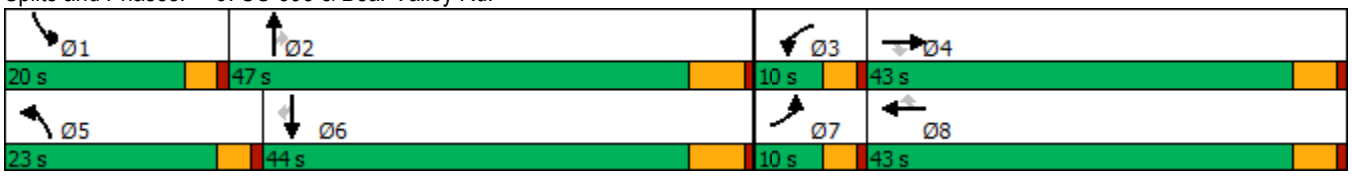
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	26.7	51.3		42.0	13.9	64.0		42.0				
Change Period (Y+Rc), s	4.0	6.0		5.0	4.0	6.0		5.0				
Max Green Setting (Gmax), s	25.0	43.0		37.0	10.0	58.0		37.0				
Max Q Clear Time (g_c+I1), s	22.5	47.3		39.0	10.1	46.4		28.8				
Green Ext Time (p_c), s	0.2	0.0		0.0	0.0	6.4		1.2				

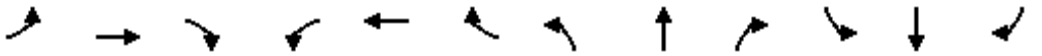
Intersection Summary			
HCM 6th Ctrl Delay		124.9	
HCM 6th LOS		F	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	111	440	188	156	510	209	406	1799	319	229	1337	95
Future Volume (vph)	111	440	188	156	510	209	406	1799	319	229	1337	95
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.0	43.0	43.0	9.0	43.0	43.0	9.0	44.0	44.0	9.0	44.0	44.0
Total Split (s)	10.0	43.0	43.0	10.0	43.0	43.0	23.0	47.0	47.0	20.0	44.0	44.0
Total Split (%)	8.3%	35.8%	35.8%	8.3%	35.8%	35.8%	19.2%	39.2%	39.2%	16.7%	36.7%	36.7%
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0	4.0	3.0	5.0	5.0	3.0	5.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	5.0	5.0	4.0	5.0	5.0	4.0	6.0	6.0	4.0	6.0	6.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Max	Max	None	Max	Max
Act Effct Green (s)	6.0	21.7	21.7	6.0	21.7	21.7	19.1	41.3	41.3	16.1	38.2	38.2
Actuated g/C Ratio	0.06	0.21	0.21	0.06	0.21	0.21	0.18	0.40	0.40	0.15	0.37	0.37
v/c Ratio	1.12	0.62	0.40	1.58	0.72	0.44	1.29	1.33	0.45	0.87	1.06	0.16
Control Delay	171.6	40.6	6.9	333.2	43.5	7.0	188.2	180.4	12.9	73.5	76.4	7.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	171.6	40.6	6.9	333.2	43.5	7.0	188.2	180.4	12.9	73.5	76.4	7.4
LOS	F	D	A	F	D	A	F	F	B	E	E	A
Approach Delay		51.7			86.4			160.5			72.0	
Approach LOS		D			F			F			E	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 104.2	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.58	
Intersection Signal Delay: 110.1	Intersection LOS: F
Intersection Capacity Utilization 99.6%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 9: US-395 & Bear Valley Rd.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	111	440	188	156	510	209	406	1799	319	229	1337	95
Future Volume (veh/h)	111	440	188	156	510	209	406	1799	319	229	1337	95
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	117	463	116	164	537	151	427	1894	275	241	1407	87
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	108	678	303	108	678	302	340	1494	666	272	1359	605
Arrive On Green	0.06	0.19	0.19	0.06	0.19	0.19	0.19	0.41	0.41	0.15	0.38	0.38
Sat Flow, veh/h	1810	3610	1610	1810	3610	1605	1810	3610	1610	1810	3610	1609
Grp Volume(v), veh/h	117	463	116	164	537	151	427	1894	275	241	1407	87
Grp Sat Flow(s),veh/h/ln	1810	1805	1610	1810	1805	1605	1810	1805	1610	1810	1805	1609
Q Serve(g_s), s	6.0	12.1	6.4	6.0	14.3	8.5	19.0	41.8	12.2	13.2	38.0	3.6
Cycle Q Clear(g_c), s	6.0	12.1	6.4	6.0	14.3	8.5	19.0	41.8	12.2	13.2	38.0	3.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	108	678	303	108	678	302	340	1494	666	272	1359	605
V/C Ratio(X)	1.09	0.68	0.38	1.53	0.79	0.50	1.25	1.27	0.41	0.88	1.04	0.14
Avail Cap(c_a), veh/h	108	1359	606	108	1359	604	340	1494	666	287	1359	605
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.5	38.2	35.9	47.5	39.1	36.8	41.0	29.6	20.9	42.0	31.5	20.8
Incr Delay (d2), s/veh	112.5	0.5	0.3	277.7	0.8	0.5	136.2	125.9	1.9	25.0	34.1	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.9	5.0	2.4	10.8	6.0	3.2	20.7	42.0	4.5	7.4	21.1	1.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	160.0	38.6	36.2	325.2	39.9	37.2	177.2	155.5	22.8	67.0	65.6	21.3
LnGrp LOS	F	D	D	F	D	D	F	F	C	E	F	C
Approach Vol, veh/h		696			852			2596			1735	
Approach Delay, s/veh		58.6			94.4			145.0			63.6	
Approach LOS		E			F			F			E	

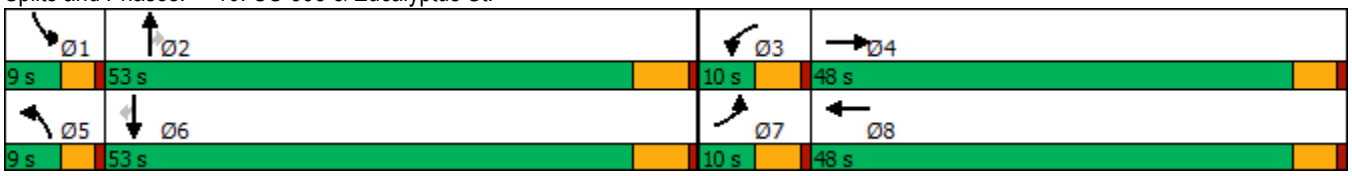
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	19.2	47.8	10.0	24.0	23.0	44.0	10.0	24.0
Change Period (Y+Rc), s	4.0	6.0	4.0	5.0	4.0	6.0	4.0	5.0
Max Green Setting (Gmax), s	16.0	41.0	6.0	38.0	19.0	38.0	6.0	38.0
Max Q Clear Time (g_c+I1), s	15.2	43.8	8.0	14.1	21.0	40.0	8.0	16.3
Green Ext Time (p_c), s	0.0	0.0	0.0	1.8	0.0	0.0	0.0	2.1

Intersection Summary	
HCM 6th Ctrl Delay	103.4
HCM 6th LOS	F

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	8	0	66	3	20	2533	137	16	1527	16
Future Volume (vph)	8	0	66	3	20	2533	137	16	1527	16
Turn Type	Prot	NA	Prot	NA	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4	3	8	5	2		1	6	
Permitted Phases							2			6
Detector Phase	7	4	3	8	5	2	2	1	6	6
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	10.0	48.0	10.0	48.0	9.0	41.0	41.0	9.0	41.0	41.0
Total Split (s)	10.0	48.0	10.0	48.0	9.0	53.0	53.0	9.0	53.0	53.0
Total Split (%)	8.3%	40.0%	8.3%	40.0%	7.5%	44.2%	44.2%	7.5%	44.2%	44.2%
Yellow Time (s)	4.0	4.0	4.0	4.0	3.0	5.0	5.0	3.0	5.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	4.0	6.0	6.0	4.0	6.0	6.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	Max	Max	None	Max	Max
Act Effct Green (s)	5.2	15.1	9.7	15.1	5.2	56.4	56.4	5.2	56.4	56.4
Actuated g/C Ratio	0.06	0.18	0.11	0.18	0.06	0.66	0.66	0.06	0.66	0.66
v/c Ratio	0.07	0.02	0.34	0.06	0.19	1.12	0.13	0.16	0.68	0.02
Control Delay	44.8	0.0	44.2	14.1	46.6	78.7	5.3	45.9	15.5	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	44.8	0.0	44.2	14.1	46.6	78.7	5.3	45.9	15.5	0.0
LOS	D	A	D	B	D	E	A	D	B	A
Approach Delay		25.6		38.2		74.7			15.7	
Approach LOS		C		D		E			B	

Intersection Summary		
Cycle Length: 120		
Actuated Cycle Length: 85.6		
Natural Cycle: 120		
Control Type: Actuated-Uncoordinated		
Maximum v/c Ratio: 1.12		
Intersection Signal Delay: 52.7	Intersection LOS: D	
Intersection Capacity Utilization 89.5%	ICU Level of Service E	
Analysis Period (min) 15		

Splits and Phases: 10: US-395 & Eucalyptus St.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	8	0	6	66	3	13	20	2533	137	16	1527	16
Future Volume (veh/h)	8	0	6	66	3	13	20	2533	137	16	1527	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	8	0	3	69	3	6	21	2666	141	17	1607	16
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	18	0	107	90	60	120	42	2192	978	36	2178	972
Arrive On Green	0.01	0.00	0.07	0.05	0.11	0.11	0.02	0.61	0.61	0.02	0.60	0.60
Sat Flow, veh/h	1810	0	1610	1810	565	1131	1810	3610	1610	1810	3610	1610
Grp Volume(v), veh/h	8	0	3	69	0	9	21	2666	141	17	1607	16
Grp Sat Flow(s),veh/h/ln	1810	0	1610	1810	0	1696	1810	1805	1610	1810	1805	1610
Q Serve(g_s), s	0.3	0.0	0.1	2.9	0.0	0.4	0.9	47.3	2.9	0.7	24.8	0.3
Cycle Q Clear(g_c), s	0.3	0.0	0.1	2.9	0.0	0.4	0.9	47.3	2.9	0.7	24.8	0.3
Prop In Lane	1.00		1.00	1.00		0.67	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	18	0	107	90	0	180	42	2192	978	36	2178	972
V/C Ratio(X)	0.43	0.00	0.03	0.77	0.00	0.05	0.50	1.22	0.14	0.48	0.74	0.02
Avail Cap(c_a), veh/h	116	0	889	116	0	937	116	2192	978	116	2178	972
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.3	0.0	34.0	36.6	0.0	31.3	37.6	15.3	6.6	37.8	11.0	6.2
Incr Delay (d2), s/veh	5.8	0.0	0.1	14.6	0.0	0.1	3.3	101.8	0.3	3.6	2.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	0.1	1.6	0.0	0.2	0.4	43.5	0.9	0.4	9.2	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	44.2	0.0	34.1	51.1	0.0	31.4	40.9	117.1	6.9	41.4	13.3	6.2
LnGrp LOS	D	A	C	D	A	C	D	F	A	D	B	A
Approach Vol, veh/h		11			78			2828			1640	
Approach Delay, s/veh		41.4			48.8			111.0			13.5	
Approach LOS		D			D			F			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.5	53.3	8.9	10.2	5.8	53.0	5.8	13.3
Change Period (Y+Rc), s	4.0	6.0	5.0	5.0	4.0	6.0	5.0	5.0
Max Green Setting (Gmax), s	5.0	47.0	5.0	43.0	5.0	47.0	5.0	43.0
Max Q Clear Time (g_c+I1), s	2.7	49.3	4.9	2.1	2.9	26.8	2.3	2.4
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	13.1	0.0	0.0

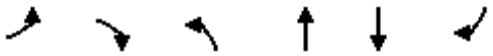
Intersection Summary	
HCM 6th Ctrl Delay	74.7
HCM 6th LOS	E

Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Configurations					
Traffic Volume (vph)	111	415	74	2789	2005
Future Volume (vph)	111	415	74	2789	2005
Turn Type	Prot	Perm	Prot	NA	NA
Protected Phases	4		5	2	6
Permitted Phases		4			
Detector Phase	4	4	5	2	6
Switch Phase					
Minimum Initial (s)	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	26.6	26.6	11.5	14.6	23.5
Total Split (s)	26.6	26.6	11.5	93.4	81.9
Total Split (%)	22.2%	22.2%	9.6%	77.8%	68.3%
Yellow Time (s)	3.6	3.6	5.5	3.6	5.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	6.5	4.6	6.5
Lead/Lag			Lead		Lag
Lead-Lag Optimize?			Yes		Yes
Recall Mode	None	None	None	Max	Max
Act Effct Green (s)	22.0	22.0	5.0	88.8	75.4
Actuated g/C Ratio	0.18	0.18	0.04	0.74	0.63
v/c Ratio	0.35	1.20	1.03	2.07	1.78
Control Delay	46.3	150.1	167.9	500.9	375.8
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	46.3	150.1	167.9	500.9	375.8
LOS	D	F	F	F	F
Approach Delay	128.1			492.3	375.8
Approach LOS	F			F	F

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 2.07	
Intersection Signal Delay: 413.3	Intersection LOS: F
Intersection Capacity Utilization 162.8%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 11: US-395 & Yucca Terrace Dr.





Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	111	415	74	2789	2005	29
Future Volume (veh/h)	111	415	74	2789	2005	29
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	116	432	77	2905	2089	30
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	327	291	74	1384	1185	17
Arrive On Green	0.18	0.18	0.04	0.73	0.63	0.63
Sat Flow, veh/h	1810	1610	1810	1900	1868	27
Grp Volume(v), veh/h	116	432	77	2905	0	2119
Grp Sat Flow(s),veh/h/ln	1810	1610	1810	1900	0	1895
Q Serve(g_s), s	6.8	22.0	5.0	88.8	0.0	77.3
Cycle Q Clear(g_c), s	6.8	22.0	5.0	88.8	0.0	77.3
Prop In Lane	1.00	1.00	1.00			0.01
Lane Grp Cap(c), veh/h	327	291	74	1384	0	1202
V/C Ratio(X)	0.36	1.49	1.04	2.10	0.00	1.76
Avail Cap(c_a), veh/h	327	291	74	1384	0	1202
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	0.00	1.00
Uniform Delay (d), s/veh	43.7	50.0	58.5	16.5	0.0	22.3
Incr Delay (d2), s/veh	0.7	236.5	115.2	497.0	0.0	346.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.2	37.0	4.6	217.5	0.0	143.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	44.4	286.4	173.6	513.5	0.0	369.2
LnGrp LOS	D	F	F	F	A	F
Approach Vol, veh/h	548			2982	2119	
Approach Delay, s/veh	235.2			504.7	369.2	
Approach LOS	F			F	F	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		95.3		26.6	11.5	83.8
Change Period (Y+Rc), s		* 6.5		4.6	6.5	6.5
Max Green Setting (Gmax), s		* 89		22.0	5.0	75.4
Max Q Clear Time (g_c+I1), s		90.8		24.0	7.0	79.3
Green Ext Time (p_c), s		0.0		0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	427.7
HCM 6th LOS	F

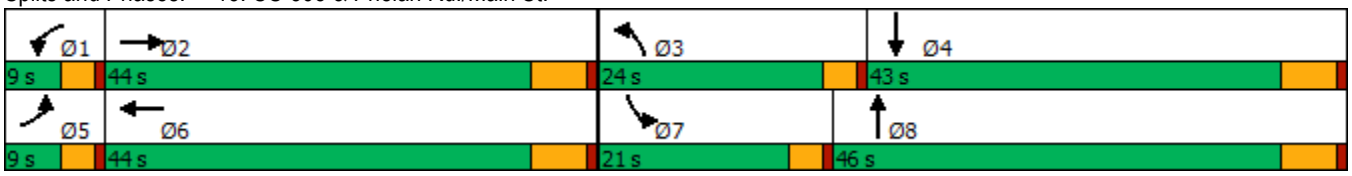
Notes

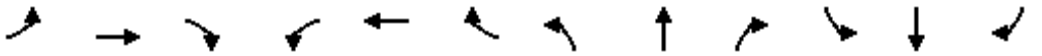
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	99	1399	27	1077	296	2387	707	1635
Future Volume (vph)	99	1399	27	1077	296	2387	707	1635
Turn Type	Prot	NA	Prot	NA	Prot	NA	Prot	NA
Protected Phases	5	2	1	6	3	8	7	4
Permitted Phases								
Detector Phase	5	2	1	6	3	8	7	4
Switch Phase								
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.0	16.0	9.0	16.0	9.0	16.0	9.0	16.0
Total Split (s)	9.0	44.0	9.0	44.0	24.0	46.0	21.0	43.0
Total Split (%)	7.5%	36.7%	7.5%	36.7%	20.0%	38.3%	17.5%	35.8%
Yellow Time (s)	3.0	5.0	3.0	5.0	3.0	5.0	3.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	6.0	4.0	6.0	4.0	6.0	4.0	6.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None
Act Effct Green (s)	5.0	41.6	5.0	38.0	20.0	40.0	17.0	37.0
Actuated g/C Ratio	0.04	0.35	0.04	0.32	0.17	0.33	0.14	0.31
v/c Ratio	1.39	1.38	0.37	1.38	1.04	2.49	2.92	1.66
Control Delay	279.2	206.4	70.2	210.1	111.5	694.7	893.1	329.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	279.2	206.4	70.2	210.1	111.5	694.7	893.1	329.7
LOS	F	F	E	F	F	F	F	F
Approach Delay		210.6		207.6		639.0		492.2
Approach LOS		F		F		F		F

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 2.92	
Intersection Signal Delay: 440.5	Intersection LOS: F
Intersection Capacity Utilization 184.8%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 13: US-395 & Phelan Rd./Main St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	99	1399	210	27	1077	404	296	2387	423	707	1635	109
Future Volume (veh/h)	99	1399	210	27	1077	404	296	2387	423	707	1635	109
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	104	1473	193	28	1134	341	312	2513	438	744	1721	100
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	75	1068	138	46	869	258	302	1029	174	256	1070	62
Arrive On Green	0.04	0.33	0.33	0.03	0.32	0.32	0.17	0.33	0.33	0.14	0.31	0.31
Sat Flow, veh/h	1810	3205	415	1810	2744	814	1810	3088	523	1810	3469	200
Grp Volume(v), veh/h	104	821	845	28	741	734	312	1438	1513	744	889	932
Grp Sat Flow(s),veh/h/ln	1810	1805	1815	1810	1805	1753	1810	1805	1806	1810	1805	1864
Q Serve(g_s), s	5.0	40.0	40.0	1.8	38.0	38.0	20.0	40.0	40.0	17.0	37.0	37.0
Cycle Q Clear(g_c), s	5.0	40.0	40.0	1.8	38.0	38.0	20.0	40.0	40.0	17.0	37.0	37.0
Prop In Lane	1.00		0.23	1.00		0.46	1.00		0.29	1.00		0.11
Lane Grp Cap(c), veh/h	75	601	604	46	572	555	302	602	602	256	557	575
V/C Ratio(X)	1.38	1.37	1.40	0.61	1.30	1.32	1.03	2.39	2.51	2.90	1.60	1.62
Avail Cap(c_a), veh/h	75	601	604	75	572	555	302	602	602	256	557	575
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	57.5	40.0	40.0	57.9	41.0	41.0	50.0	40.0	40.0	51.5	41.5	41.5
Incr Delay (d2), s/veh	234.0	175.2	188.9	9.4	145.6	157.5	61.0	630.4	686.2	866.6	277.4	287.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.1	45.7	48.3	0.9	38.8	39.5	13.7	121.8	131.2	69.1	58.2	61.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	291.5	215.2	228.9	67.3	186.6	198.5	111.0	670.4	726.2	918.1	318.9	329.0
LnGrp LOS	F	F	F	E	F	F	F	F	F	F	F	F
Approach Vol, veh/h		1770			1503			3263			2565	
Approach Delay, s/veh		226.2			190.2			642.8			496.4	
Approach LOS		F			F			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.0	46.0	24.0	43.0	9.0	44.0	21.0	46.0
Change Period (Y+Rc), s	4.0	6.0	4.0	6.0	4.0	6.0	4.0	6.0
Max Green Setting (Gmax), s	5.0	38.0	20.0	37.0	5.0	38.0	17.0	40.0
Max Q Clear Time (g_c+I1), s	3.8	42.0	22.0	39.0	7.0	40.0	19.0	42.0
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	445.8
HCM 6th LOS	F

Intersection	
Int Delay, s/veh	95.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	91	762	2345	188	512	1359
Future Vol, veh/h	91	762	2345	188	512	1359
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	375	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	98	98	98	98	98	98
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	93	778	2393	192	522	1387

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	4920	1293	0	0	2585	0
Stage 1	2489	-	-	-	-	-
Stage 2	2431	-	-	-	-	-
Critical Hdwy	6.6	6.9	-	-	4.1	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	~ 1	~ 156	-	-	~ 171	-
Stage 1	~ 50	-	-	-	-	-
Stage 2	~ 70	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	0	~ 156	-	-	~ 171	-
Mov Cap-2 Maneuver	0	-	-	-	-	-
Stage 1	~ 50	-	-	-	-	-
Stage 2	0	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s		0	268.5
HCM LOS	-		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	-	156	~ 171	-
HCM Lane V/C Ratio	-	-	-	4.984	3.055	-
HCM Control Delay (s)	-	-	$ 1849.4	$ 981.2		-
HCM Lane LOS	-	-	-	F	F	-
HCM 95th %tile Q(veh)	-	-	-	81.3	48	-

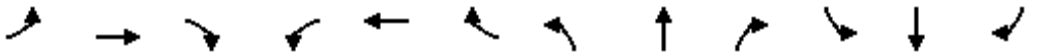
Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	88	1	229	8	175	231	2270	208	68	1271	111
Future Volume (vph)	88	1	229	8	175	231	2270	208	68	1271	111
Turn Type	Perm	NA	Perm	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		4		8		5	2		1	6	
Permitted Phases	4		8		8			2			6
Detector Phase	4	4	8	8	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	16.0	16.0	16.0	16.0	16.0	10.0	16.0	16.0	10.0	16.0	16.0
Total Split (s)	31.0	31.0	31.0	31.0	31.0	29.0	79.0	79.0	10.0	60.0	60.0
Total Split (%)	25.8%	25.8%	25.8%	25.8%	25.8%	24.2%	65.8%	65.8%	8.3%	50.0%	50.0%
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	5.0	6.0	6.0	5.0	6.0	6.0
Lead/Lag						Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?						Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Max	Max	None	Max	Max
Act Effct Green (s)	25.0	25.0	25.0	25.0	25.0	19.4	73.0	73.0	5.0	58.6	58.6
Actuated g/C Ratio	0.21	0.21	0.21	0.21	0.21	0.16	0.61	0.61	0.04	0.49	0.49
v/c Ratio	0.30	0.51	2.02	0.02	0.42	0.81	1.05	0.21	0.92	0.74	0.13
Control Delay	43.5	8.1	513.4	38.1	18.3	69.4	59.7	3.9	141.0	28.4	3.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	10.3	0.0	0.0	0.0	0.0
Total Delay	43.5	8.1	513.4	38.1	18.3	69.4	70.1	3.9	141.0	28.4	3.5
LOS	D	A	F	D	B	E	E	A	F	C	A
Approach Delay		16.5		293.9			65.0			31.7	
Approach LOS		B		F			E			C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 2.02	
Intersection Signal Delay: 70.7	Intersection LOS: E
Intersection Capacity Utilization 116.4%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 15: US-395 & Three Flags Rd.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	88	1	284	229	8	175	231	2270	208	68	1271	111
Future Volume (veh/h)	88	1	284	229	8	175	231	2270	208	68	1271	111
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	90	1	198	234	8	113	236	2316	161	69	1297	77
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	339	2	334	183	396	335	264	2196	979	75	1819	811
Arrive On Green	0.21	0.21	0.21	0.21	0.21	0.21	0.15	0.61	0.61	0.04	0.50	0.50
Sat Flow, veh/h	1362	8	1603	1269	1900	1610	1810	3610	1609	1810	3610	1610
Grp Volume(v), veh/h	90	0	199	234	8	113	236	2316	161	69	1297	77
Grp Sat Flow(s),veh/h/ln	1362	0	1611	1269	1900	1610	1810	1805	1609	1810	1805	1610
Q Serve(g_s), s	6.7	0.0	13.4	11.6	0.4	7.2	15.4	73.0	5.2	4.6	33.4	3.0
Cycle Q Clear(g_c), s	7.2	0.0	13.4	25.0	0.4	7.2	15.4	73.0	5.2	4.6	33.4	3.0
Prop In Lane	1.00		0.99	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	339	0	336	183	396	335	264	2196	979	75	1819	811
V/C Ratio(X)	0.27	0.00	0.59	1.28	0.02	0.34	0.89	1.05	0.16	0.92	0.71	0.09
Avail Cap(c_a), veh/h	339	0	336	183	396	335	362	2196	979	75	1819	811
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	40.6	0.0	42.9	56.1	37.8	40.4	50.3	23.5	10.2	57.3	23.0	15.5
Incr Delay (d2), s/veh	0.2	0.0	1.9	161.1	0.0	0.2	15.4	35.5	0.4	74.0	2.4	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.3	0.0	5.5	13.7	0.2	2.9	7.8	36.2	1.7	3.6	13.3	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	40.8	0.0	44.8	217.2	37.8	40.7	65.8	59.0	10.6	131.3	25.5	15.7
LnGrp LOS	D	A	D	F	D	D	E	F	B	F	C	B
Approach Vol, veh/h		289			355			2713			1443	
Approach Delay, s/veh		43.6			157.0			56.7			30.0	
Approach LOS		D			F			E			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.0	79.0		31.0	22.5	66.5		31.0				
Change Period (Y+Rc), s	5.0	6.0		6.0	5.0	6.0		6.0				
Max Green Setting (Gmax), s	5.0	73.0		25.0	24.0	54.0		25.0				
Max Q Clear Time (g_c+I1), s	6.6	75.0		15.4	17.4	35.4		27.0				
Green Ext Time (p_c), s	0.0	0.0		0.7	0.2	8.4		0.0				

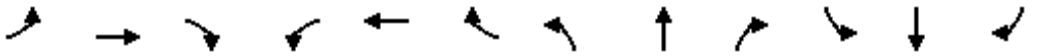
Intersection Summary			
HCM 6th Ctrl Delay		55.3	
HCM 6th LOS		E	

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	405	149	114	76	480	35	1823	122	234	1484	66
Future Volume (vph)	405	149	114	76	480	35	1823	122	234	1484	66
Turn Type	Perm	NA	Perm	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		4		8		5	2		1	6	
Permitted Phases	4		8		8			2			6
Detector Phase	4	4	8	8	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	15.0	15.0	46.0	46.0	46.0	9.0	34.0	34.0	9.0	34.0	34.0
Total Split (s)	47.0	47.0	47.0	47.0	47.0	9.0	41.0	41.0	32.0	64.0	64.0
Total Split (%)	39.2%	39.2%	39.2%	39.2%	39.2%	7.5%	34.2%	34.2%	26.7%	53.3%	53.3%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	3.0	5.0	5.0	3.0	5.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	0.0	-2.0	-2.0	0.0	-2.0	-2.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag						Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?						Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Max	Max	None	Max	Max
Act Effct Green (s)	37.8	37.8	37.8	37.8	37.8	5.0	41.8	41.8	19.7	60.6	60.6
Actuated g/C Ratio	0.34	0.34	0.34	0.34	0.34	0.04	0.37	0.37	0.18	0.54	0.54
v/c Ratio	0.92	0.27	0.32	0.12	0.59	0.44	1.39	0.19	0.76	0.78	0.08
Control Delay	62.7	27.2	30.3	26.2	7.5	72.5	209.1	10.7	59.4	25.7	5.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	62.7	27.2	30.3	26.2	7.5	72.5	209.1	10.7	59.4	25.7	5.8
LOS	E	C	C	C	A	E	F	B	E	C	A
Approach Delay		52.3		13.5			194.4			29.4	
Approach LOS		D		B			F			C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 111.5	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.39	
Intersection Signal Delay: 95.1	Intersection LOS: F
Intersection Capacity Utilization 112.8%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 16: US-395 & Joshua St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	405	149	18	114	76	480	35	1823	122	234	1484	66
Future Volume (veh/h)	405	149	18	114	76	480	35	1823	122	234	1484	66
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	418	154	16	118	78	437	36	1879	114	241	1530	61
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	379	614	64	451	690	584	53	1392	621	272	1828	815
Arrive On Green	0.36	0.36	0.35	0.36	0.36	0.36	0.03	0.39	0.39	0.15	0.51	0.51
Sat Flow, veh/h	949	1693	176	1303	1900	1609	1810	3610	1610	1810	3610	1610
Grp Volume(v), veh/h	418	0	170	118	78	437	36	1879	114	241	1530	61
Grp Sat Flow(s),veh/h/ln	949	0	1868	1303	1900	1609	1810	1805	1610	1810	1805	1610
Q Serve(g_s), s	39.8	0.0	7.6	8.3	3.2	28.1	2.3	45.7	5.5	15.5	43.0	2.3
Cycle Q Clear(g_c), s	43.0	0.0	7.6	15.8	3.2	28.1	2.3	45.7	5.5	15.5	43.0	2.3
Prop In Lane	1.00		0.09	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	379	0	678	451	690	584	53	1392	621	272	1828	815
V/C Ratio(X)	1.10	0.00	0.25	0.26	0.11	0.75	0.68	1.35	0.18	0.89	0.84	0.07
Avail Cap(c_a), veh/h	379	0	678	451	690	584	76	1392	621	428	1828	815
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	42.5	0.0	26.5	32.0	25.1	33.0	56.9	36.4	24.1	49.3	25.0	15.0
Incr Delay (d2), s/veh	76.4	0.0	0.1	0.1	0.0	4.7	10.7	162.4	0.7	11.3	4.7	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	19.4	0.0	3.4	2.6	1.5	11.6	1.2	49.7	2.1	7.5	17.4	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	119.0	0.0	26.6	32.1	25.1	37.7	67.7	198.8	24.7	60.7	29.8	15.2
LnGrp LOS	F	A	C	C	C	D	E	F	C	E	C	B
Approach Vol, veh/h		588			633			2029			1832	
Approach Delay, s/veh		92.3			35.1			186.7			33.4	
Approach LOS		F			D			F			C	

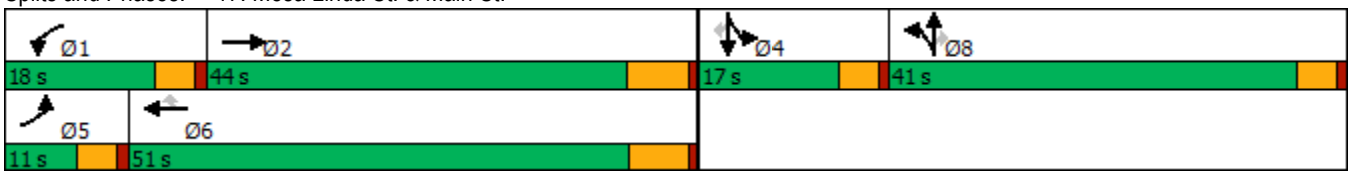
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	21.8	49.7		47.0	7.5	64.0		47.0				
Change Period (Y+Rc), s	4.0	6.0		5.0	4.0	6.0		5.0				
Max Green Setting (Gmax), s	28.0	35.0		42.0	5.0	58.0		42.0				
Max Q Clear Time (g_c+I1), s	17.5	47.7		45.0	4.3	45.0		30.1				
Green Ext Time (p_c), s	0.3	0.0		0.0	0.0	10.9		1.1				

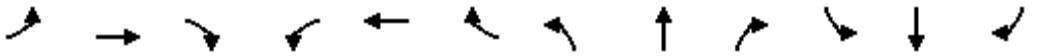
Intersection Summary			
HCM 6th Ctrl Delay		101.6	
HCM 6th LOS		F	

Lane Group	EBL	EBT	WBL	WBT	WBR	NBT	NBR	SBT	SBR
Lane Configurations									
Traffic Volume (vph)	7	2009	98	1476	76	10	114	0	4
Future Volume (vph)	7	2009	98	1476	76	10	114	0	4
Turn Type	Prot	NA	Prot	NA	Perm	NA	Perm	NA	Perm
Protected Phases	5	2	1	6		8		4	
Permitted Phases					6		8		4
Detector Phase	5	2	1	6	6	8	8	4	4
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	16.5	9.6	23.2	23.2	40.6	40.6	14.6	14.6
Total Split (s)	11.0	44.0	18.0	51.0	51.0	41.0	41.0	17.0	17.0
Total Split (%)	9.2%	36.7%	15.0%	42.5%	42.5%	34.2%	34.2%	14.2%	14.2%
Yellow Time (s)	3.6	5.5	3.6	5.2	5.2	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.5	4.6	6.2	6.2	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lead	Lag	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes				
Recall Mode	None	Max	None	Max	Max	None	None	None	None
Act Effct Green (s)	5.4	40.9	9.4	51.2	51.2	14.2	14.2	10.6	10.6
Actuated g/C Ratio	0.06	0.47	0.11	0.59	0.59	0.16	0.16	0.12	0.12
v/c Ratio	0.07	0.85	0.55	0.50	0.08	0.08	0.30	0.21	0.01
Control Delay	48.4	28.8	52.2	14.8	3.1	32.9	4.0	43.3	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	48.4	28.8	52.2	14.8	3.1	32.9	4.0	43.3	0.0
LOS	D	C	D	B	A	C	A	D	A
Approach Delay		28.9		16.5		8.8		39.9	
Approach LOS		C		B		A		D	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 86.3	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.85	
Intersection Signal Delay: 23.0	Intersection LOS: C
Intersection Capacity Utilization 68.7%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 17: Mesa Linda St. & Main St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	7	2009	8	98	1476	76	13	10	114	44	0	4
Future Volume (veh/h)	7	2009	8	98	1476	76	13	10	114	44	0	4
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1800	1900	1900	1800	1900	1900	1800	1900	1900	1800	1900	1900
Adj Flow Rate, veh/h	7	2093	7	102	1538	71	14	10	60	46	0	2
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	15	2601	9	129	2872	892	113	81	169	148	0	131
Arrive On Green	0.01	0.49	0.49	0.08	0.55	0.55	0.10	0.10	0.10	0.08	0.00	0.08
Sat Flow, veh/h	1714	5337	18	1714	5187	1610	1077	769	1610	1810	0	1610
Grp Volume(v), veh/h	7	1356	744	102	1538	71	24	0	60	46	0	2
Grp Sat Flow(s),veh/h/ln	1714	1729	1897	1714	1729	1610	1846	0	1610	1810	0	1610
Q Serve(g_s), s	0.3	26.8	26.8	4.7	15.2	1.7	1.0	0.0	2.8	1.9	0.0	0.1
Cycle Q Clear(g_c), s	0.3	26.8	26.8	4.7	15.2	1.7	1.0	0.0	2.8	1.9	0.0	0.1
Prop In Lane	1.00		0.01	1.00		1.00	0.58		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	15	1685	924	129	2872	892	194	0	169	148	0	131
V/C Ratio(X)	0.45	0.80	0.80	0.79	0.54	0.08	0.12	0.00	0.36	0.31	0.00	0.02
Avail Cap(c_a), veh/h	136	1685	924	284	2872	892	831	0	724	277	0	247
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	39.9	17.5	17.5	36.8	11.5	8.4	32.8	0.0	33.7	35.0	0.0	34.2
Incr Delay (d2), s/veh	7.6	4.2	7.4	4.0	0.7	0.2	0.3	0.0	1.3	1.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	9.3	11.1	2.0	4.7	0.5	0.4	0.0	1.1	0.9	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	47.4	21.7	24.9	40.8	12.2	8.6	33.1	0.0	34.9	36.2	0.0	34.2
LnGrp LOS	D	C	C	D	B	A	C	A	C	D	A	C
Approach Vol, veh/h		2107			1711			84			48	
Approach Delay, s/veh		22.9			13.7			34.4			36.1	
Approach LOS		C			B			C			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.7	45.9		11.2	5.3	51.3		13.1				
Change Period (Y+Rc), s	4.6	6.5		4.6	4.6	* 6.5		4.6				
Max Green Setting (Gmax), s	13.4	37.5		12.4	6.4	* 45		36.4				
Max Q Clear Time (g_c+I1), s	6.7	28.8		3.9	2.3	17.2		4.8				
Green Ext Time (p_c), s	0.1	6.9		0.1	0.0	12.3		0.3				

Intersection Summary		
HCM 6th Ctrl Delay		19.3
HCM 6th LOS		B

Notes

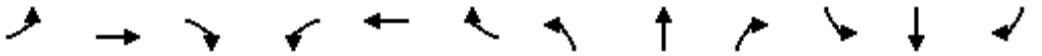
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	108	1918	124	324	1274	61	218	71	193	98	41	156
Future Volume (vph)	108	1918	124	324	1274	61	218	71	193	98	41	156
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Split	NA	Perm	Split	NA	Perm
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases			2			6			8			4
Detector Phase	5	2	2	1	6	6	8	8	8	4	4	4
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	32.2	32.2	9.6	32.2	32.2	43.6	43.6	43.6	41.6	41.6	41.6
Total Split (s)	11.0	34.8	34.8	10.0	33.8	33.8	43.6	43.6	43.6	41.6	41.6	41.6
Total Split (%)	8.5%	26.8%	26.8%	7.7%	26.0%	26.0%	33.5%	33.5%	33.5%	32.0%	32.0%	32.0%
Yellow Time (s)	3.6	5.2	5.2	3.6	5.2	5.2	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	6.2	4.6	6.2	6.2	4.6	4.6	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes						
Recall Mode	None	Max	Max	None	Max	Max	None	None	None	None	None	None
Act Effct Green (s)	6.7	29.9	29.9	5.7	28.9	28.9	16.4	16.4	16.4	14.4	14.4	14.4
Actuated g/C Ratio	0.08	0.34	0.34	0.07	0.33	0.33	0.19	0.19	0.19	0.16	0.16	0.16
v/c Ratio	0.84	1.10	0.21	1.64	0.76	0.11	0.47	0.45	0.43	0.35	0.13	0.40
Control Delay	89.6	83.8	11.8	337.1	32.1	3.7	37.0	36.1	7.8	36.6	33.0	8.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	89.6	83.8	11.8	337.1	32.1	3.7	37.0	36.1	7.8	36.6	33.0	8.7
LOS	F	F	B	F	C	A	D	D	A	D	C	A
Approach Delay		80.0			90.7			25.0			21.3	
Approach LOS		E			F			C			C	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 87.4	
Natural Cycle: 130	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.64	
Intersection Signal Delay: 74.3	Intersection LOS: E
Intersection Capacity Utilization 77.5%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 18: Cataba Av. & Main St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	108	1918	124	324	1274	61	218	71	193	98	41	156
Future Volume (veh/h)	108	1918	124	324	1274	61	218	71	193	98	41	156
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	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	1800	1900	1900	1700	1900	1900	1800	1900	1900	1800	1900	1900
Adj Flow Rate, veh/h	110	1957	88	331	1300	50	147	177	94	100	42	69
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	138	1957	607	224	1908	591	270	299	251	223	248	210
Arrive On Green	0.08	0.38	0.38	0.07	0.37	0.37	0.16	0.16	0.16	0.13	0.13	0.13
Sat Flow, veh/h	1714	5187	1609	3141	5187	1608	1714	1900	1595	1714	1900	1610
Grp Volume(v), veh/h	110	1957	88	331	1300	50	147	177	94	100	42	69
Grp Sat Flow(s),veh/h/ln	1714	1729	1609	1570	1729	1608	1714	1900	1595	1714	1900	1610
Q Serve(g_s), s	4.8	28.6	2.7	5.4	16.0	1.5	6.0	6.6	4.0	4.1	1.5	3.0
Cycle Q Clear(g_c), s	4.8	28.6	2.7	5.4	16.0	1.5	6.0	6.6	4.0	4.1	1.5	3.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	138	1957	607	224	1908	591	270	299	251	223	248	210
V/C Ratio(X)	0.80	1.00	0.14	1.48	0.68	0.08	0.54	0.59	0.37	0.45	0.17	0.33
Avail Cap(c_a), veh/h	145	1957	607	224	1908	591	882	977	820	837	927	786
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.2	23.6	15.6	35.2	20.2	15.6	29.4	29.7	28.6	30.4	29.3	30.0
Incr Delay (d2), s/veh	22.8	20.4	0.5	238.2	2.0	0.3	1.7	1.9	0.9	1.4	0.3	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	2.7	13.2	0.9	9.3	5.9	0.5	2.5	3.1	1.6	1.7	0.7	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	57.0	44.0	16.1	273.5	22.2	15.9	31.2	31.5	29.5	31.8	29.6	30.9
LnGrp LOS	E	F	B	F	C	B	C	C	C	C	C	C
Approach Vol, veh/h		2155			1681			418			211	
Approach Delay, s/veh		43.5			71.5			31.0			31.1	
Approach LOS		D			E			C			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.0	34.8		14.5	10.7	34.1		16.5				
Change Period (Y+Rc), s	4.6	6.2		4.6	4.6	6.2		4.6				
Max Green Setting (Gmax), s	5.4	28.6		37.0	6.4	27.6		39.0				
Max Q Clear Time (g_c+I1), s	7.4	30.6		6.1	6.8	18.0		8.6				
Green Ext Time (p_c), s	0.0	0.0		0.8	0.0	5.5		1.9				

Intersection Summary		
HCM 6th Ctrl Delay		52.3
HCM 6th LOS		D

Notes

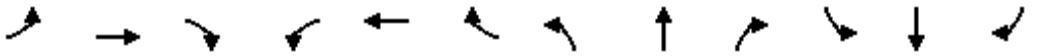
User approved pedestrian interval to be less than phase max green.
User approved volume balancing among the lanes for turning movement.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	85	2212	34	303	1739	41	100	325	254	119
Future Volume (vph)	85	2212	34	303	1739	41	100	325	254	119
Turn Type	Prot	NA	Perm	Prot	NA	Perm	NA	Perm	Perm	NA
Protected Phases	5	2		1	6		8			4
Permitted Phases			2			8		8	4	
Detector Phase	5	2	2	1	6	8	8	8	4	4
Switch Phase										
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	29.2	29.2	9.6	30.2	38.6	38.6	38.6	41.6	41.6
Total Split (s)	12.0	55.4	55.4	23.0	66.4	41.6	41.6	41.6	41.6	41.6
Total Split (%)	10.0%	46.2%	46.2%	19.2%	55.3%	34.7%	34.7%	34.7%	34.7%	34.7%
Yellow Time (s)	3.6	5.2	5.2	3.6	5.2	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	6.2	4.6	6.2	4.6	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes					
Recall Mode	None	Max	Max	None	Max	None	None	None	None	None
Act Effct Green (s)	7.3	49.4	49.4	18.5	60.5	27.6	27.6	27.6	27.6	27.6
Actuated g/C Ratio	0.07	0.45	0.45	0.17	0.55	0.25	0.25	0.25	0.25	0.25
v/c Ratio	0.77	0.98	0.05	1.09	0.87	0.17	0.22	0.58	0.85	0.36
Control Delay	93.0	45.5	0.1	123.6	26.3	33.1	33.3	14.3	64.2	32.3
Queue Delay	0.0	0.0	0.0	0.0	14.3	0.0	0.0	0.0	0.0	0.0
Total Delay	93.0	45.5	0.1	123.6	40.6	33.1	33.3	14.3	64.2	32.3
LOS	F	D	A	F	D	C	C	B	E	C
Approach Delay		46.6			50.1		20.0			51.8
Approach LOS		D			D		C			D

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 111	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.09	
Intersection Signal Delay: 46.5	Intersection LOS: D
Intersection Capacity Utilization 101.6%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 19: Key Point Av. & Main St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	85	2212	34	303	1739	607	41	100	325	254	119	43
Future Volume (veh/h)	85	2212	34	303	1739	607	41	100	325	254	119	43
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		0.98	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	1800	1900	1900	1800	1900	1900	1800	1900	1900	1800	1900	1900
Adj Flow Rate, veh/h	87	2257	31	309	1774	466	42	102	191	259	121	23
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	108	2171	674	268	2106	540	356	559	466	341	456	87
Arrive On Green	0.06	0.42	0.42	0.16	0.51	0.51	0.29	0.29	0.29	0.29	0.29	0.29
Sat Flow, veh/h	1714	5187	1610	1714	4113	1054	1260	1900	1585	1102	1551	295
Grp Volume(v), veh/h	87	2257	31	309	1485	755	42	102	191	259	0	144
Grp Sat Flow(s),veh/h/ln	1714	1729	1610	1714	1729	1709	1260	1900	1585	1102	0	1846
Q Serve(g_s), s	5.9	49.2	1.3	18.4	43.2	45.4	3.1	4.7	11.4	26.9	0.0	7.0
Cycle Q Clear(g_c), s	5.9	49.2	1.3	18.4	43.2	45.4	10.1	4.7	11.4	31.7	0.0	7.0
Prop In Lane	1.00		1.00	1.00		0.62	1.00		1.00	1.00		0.16
Lane Grp Cap(c), veh/h	108	2171	674	268	1771	875	356	559	466	341	0	543
V/C Ratio(X)	0.81	1.04	0.05	1.15	0.84	0.86	0.12	0.18	0.41	0.76	0.00	0.27
Avail Cap(c_a), veh/h	108	2171	674	268	1771	875	383	598	499	364	0	581
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	54.4	34.2	20.3	49.6	24.5	25.1	35.7	31.0	33.3	42.8	0.0	31.8
Incr Delay (d2), s/veh	32.5	30.6	0.1	102.3	4.9	11.0	0.1	0.2	0.6	8.5	0.0	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	3.4	25.1	0.5	15.2	17.0	19.1	1.0	2.2	4.5	8.2	0.0	3.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	86.9	64.8	20.4	151.8	29.5	36.1	35.8	31.1	33.9	51.2	0.0	32.0
LnGrp LOS	F	F	C	F	C	D	D	C	C	D	A	C
Approach Vol, veh/h		2375			2549			335			403	
Approach Delay, s/veh		65.0			46.3			33.3			44.4	
Approach LOS		E			D			C			D	

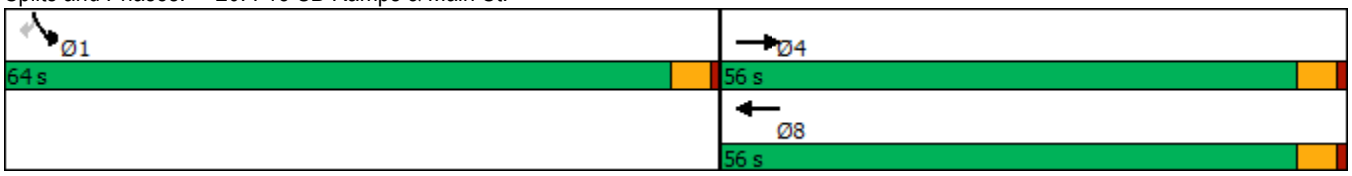
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	23.0	55.4		39.2	12.0	66.4		39.2				
Change Period (Y+Rc), s	4.6	6.2		4.6	4.6	6.2		4.6				
Max Green Setting (Gmax), s	18.4	49.2		37.0	7.4	60.2		37.0				
Max Q Clear Time (g_c+I1), s	20.4	51.2		33.7	7.9	47.4		13.4				
Green Ext Time (p_c), s	0.0	0.0		0.7	0.0	10.2		1.4				

Intersection Summary												
HCM 6th Ctrl Delay			53.2									
HCM 6th LOS			D									

Lane Group	EBT	EBR	WBT	SBL	SBR
Lane Configurations					
Traffic Volume (vph)	2252	438	1953	763	642
Future Volume (vph)	2252	438	1953	763	642
Turn Type	NA	Free	NA	Prot	Perm
Protected Phases	4		8	1	
Permitted Phases		Free			1
Detector Phase	4		8	1	1
Switch Phase					
Minimum Initial (s)	5.0		5.0	5.0	5.0
Minimum Split (s)	9.6		22.6	9.6	9.6
Total Split (s)	56.0		56.0	64.0	64.0
Total Split (%)	46.7%		46.7%	53.3%	53.3%
Yellow Time (s)	3.6		3.6	3.6	3.6
All-Red Time (s)	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.6		4.6	4.6	4.6
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	None		None	None	None
Act Effct Green (s)	51.8	110.8	51.8	49.7	49.7
Actuated g/C Ratio	0.47	1.00	0.47	0.45	0.45
v/c Ratio	0.96	0.28	0.83	0.50	0.90
Control Delay	40.9	0.4	31.0	22.4	44.3
Queue Delay	36.2	0.0	0.0	0.0	0.0
Total Delay	77.1	0.4	31.0	22.4	44.3
LOS	E	A	C	C	D
Approach Delay	64.6		31.0		
Approach LOS	E		C		

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 110.8	
Natural Cycle: 75	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.96	
Intersection Signal Delay: 46.3	Intersection LOS: D
Intersection Capacity Utilization 85.2%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 20: I-15 SB Ramps & Main St.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↱		↑↑↑	↱				↰↰		↱
Traffic Volume (veh/h)	0	2252	438	0	1953	0	0	0	0	763	0	642
Future Volume (veh/h)	0	2252	438	0	1953	0	0	0	0	763	0	642
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	1900	1900	0	1900	1900				1900	0	1900
Adj Flow Rate, veh/h	0	2322	0	0	2013	0				787	0	549
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	0	0	0	0	0				0	0	0
Cap, veh/h	0	2648		0	2648					1387	0	636
Arrive On Green	0.00	0.51	0.00	0.00	0.51	0.00				0.40	0.00	0.40
Sat Flow, veh/h	0	5358	1610	0	5358	1610				3510	0	1610
Grp Volume(v), veh/h	0	2322	0	0	2013	0				787	0	549
Grp Sat Flow(s),veh/h/ln	0	1729	1610	0	1729	1610				1755	0	1610
Q Serve(g_s), s	0.0	38.7	0.0	0.0	30.3	0.0				17.0	0.0	30.5
Cycle Q Clear(g_c), s	0.0	38.7	0.0	0.0	30.3	0.0				17.0	0.0	30.5
Prop In Lane	0.00		1.00	0.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2648		0	2648					1387	0	636
V/C Ratio(X)	0.00	0.88		0.00	0.76					0.57	0.00	0.86
Avail Cap(c_a), veh/h	0	2734		0	2734					2138	0	981
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	21.1	0.0	0.0	19.1	0.0				23.0	0.0	27.1
Incr Delay (d2), s/veh	0.0	3.5	0.0	0.0	1.2	0.0				0.4	0.0	5.1
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	14.1	0.0	0.0	10.7	0.0				7.0	0.0	12.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	24.6	0.0	0.0	20.3	0.0				23.4	0.0	32.2
LnGrp LOS	A	C		A	C					C	A	C
Approach Vol, veh/h		2322	A		2013	A					1336	
Approach Delay, s/veh		24.6			20.3						27.0	
Approach LOS		C			C						C	

Timer - Assigned Phs		4		6		8						
Phs Duration (G+Y+Rc), s		54.4		43.1		54.4						
Change Period (Y+Rc), s		4.6		4.6		4.6						
Max Green Setting (Gmax), s		51.4		59.4		51.4						
Max Q Clear Time (g_c+I1), s		40.7		32.5		32.3						
Green Ext Time (p_c), s		9.1		6.0		13.2						

Intersection Summary												
HCM 6th Ctrl Delay		23.7										
HCM 6th LOS		C										

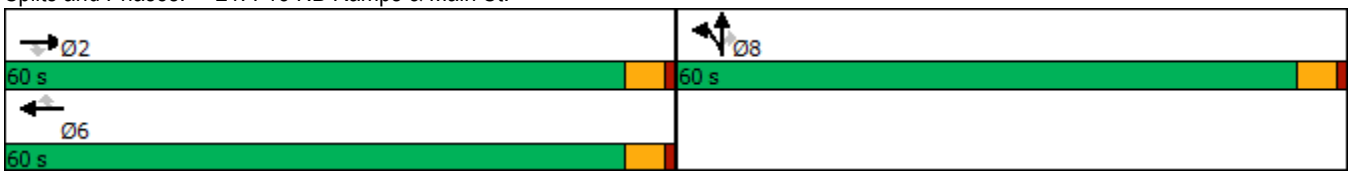
Notes

Unsignalized Delay for [EBR, WBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBT	EBR	WBT	WBR	NBL	NBT	NBR
Lane Configurations							
Traffic Volume (vph)	2288	727	1865	560	344	0	1174
Future Volume (vph)	2288	727	1865	560	344	0	1174
Turn Type	NA	Perm	NA	Perm	Split	NA	Perm
Protected Phases	2		6		8	8	
Permitted Phases		2		6			8
Detector Phase	2	2	6	6	8	8	8
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.6	22.6	22.6	22.6	9.6	9.6	9.6
Total Split (s)	60.0	60.0	60.0	60.0	60.0	60.0	60.0
Total Split (%)	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Lead/Lag							
Lead-Lag Optimize?							
Recall Mode	None	None	None	None	Min	Min	Min
Act Effct Green (s)	55.6	55.6	55.6	55.6	51.8	51.8	51.8
Actuated g/C Ratio	0.48	0.48	0.48	0.48	0.44	0.44	0.44
v/c Ratio	0.95	0.72	0.78	0.56	0.44	0.88	0.88
Control Delay	40.5	11.2	28.8	5.6	24.2	44.1	44.1
Queue Delay	0.0	0.0	47.5	0.9	0.0	0.0	0.0
Total Delay	40.5	11.2	76.3	6.5	24.2	44.1	44.1
LOS	D	B	E	A	C	D	D
Approach Delay	33.4		60.2			39.6	
Approach LOS	C		E			D	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 116.6	
Natural Cycle: 75	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.95	
Intersection Signal Delay: 44.1	Intersection LOS: D
Intersection Capacity Utilization 100.3%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 21: I-15 NB Ramps & Main St.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↱		↑↑↑	↱	↰	↑	↱			
Traffic Volume (veh/h)	0	2288	727	0	1865	560	344	0	1174	0	0	0
Future Volume (veh/h)	0	2288	727	0	1865	560	344	0	1174	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	0	1900	1900	0	1900	1900	1900	1900	1900			
Adj Flow Rate, veh/h	0	2359	0	0	1923	430	355	0	1063			
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	0	0	0	0	0	0	0	0			
Cap, veh/h	0	2711		0	2711	842	701	0	1247			
Arrive On Green	0.00	0.52	0.00	0.00	0.52	0.52	0.39	0.00	0.39			
Sat Flow, veh/h	0	5358	1610	0	5358	1610	1810	0	3220			
Grp Volume(v), veh/h	0	2359	0	0	1923	430	355	0	1063			
Grp Sat Flow(s),veh/h/ln	0	1729	1610	0	1729	1610	1810	0	1610			
Q Serve(g_s), s	0.0	40.7	0.0	0.0	28.7	17.8	15.3	0.0	30.8			
Cycle Q Clear(g_c), s	0.0	40.7	0.0	0.0	28.7	17.8	15.3	0.0	30.8			
Prop In Lane	0.00		1.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	0	2711		0	2711	842	701	0	1247			
V/C Ratio(X)	0.00	0.87		0.00	0.71	0.51	0.51	0.00	0.85			
Avail Cap(c_a), veh/h	0	2814		0	2814	873	982	0	1747			
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	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	0.0	21.3	0.0	0.0	18.5	15.9	23.9	0.0	28.6			
Incr Delay (d2), s/veh	0.0	3.2	0.0	0.0	0.8	0.5	0.6	0.0	3.1			
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	14.9	0.0	0.0	10.1	5.8	6.6	0.0	12.2			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	24.5	0.0	0.0	19.3	16.4	24.4	0.0	31.7			
LnGrp LOS	A	C		A	B	B	C	A	C			
Approach Vol, veh/h		2359	A		2353			1418				
Approach Delay, s/veh		24.5			18.8			29.9				
Approach LOS		C			B			C				

Timer - Assigned Phs	2				6		8					
Phs Duration (G+Y+Rc), s	58.0				58.0		44.2					
Change Period (Y+Rc), s	4.6				4.6		4.6					
Max Green Setting (Gmax), s	55.4				55.4		55.4					
Max Q Clear Time (g_c+I1), s	42.7				30.7		32.8					
Green Ext Time (p_c), s	10.7				16.7		6.7					

Intersection Summary												
HCM 6th Ctrl Delay			23.5									
HCM 6th LOS			C									

Notes

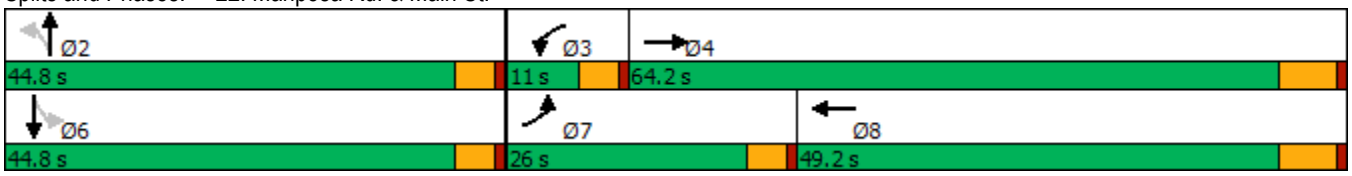
User approved volume balancing among the lanes for turning movement.

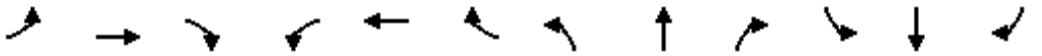
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	326	2911	119	1948	210	114	186	78
Future Volume (vph)	326	2911	119	1948	210	114	186	78
Turn Type	Prot	NA	Prot	NA	Perm	NA	Perm	NA
Protected Phases	7	4	3	8		2		6
Permitted Phases					2		6	
Detector Phase	7	4	3	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	24.2	9.6	24.2	44.6	44.6	44.6	44.6
Total Split (s)	26.0	64.2	11.0	49.2	44.8	44.8	44.8	44.8
Total Split (%)	21.7%	53.5%	9.2%	41.0%	37.3%	37.3%	37.3%	37.3%
Yellow Time (s)	3.6	5.2	3.6	5.2	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	4.6	6.2	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes				
Recall Mode	None	Max	Max	None	None	None	None	None
Act Effct Green (s)	21.4	58.0	6.4	43.0	40.2	40.2	40.2	40.2
Actuated g/C Ratio	0.18	0.48	0.05	0.36	0.34	0.34	0.34	0.34
v/c Ratio	1.10	1.02	1.33	0.92	1.02	0.35	0.60	0.53
Control Delay	125.6	52.6	249.2	44.0	107.8	26.2	42.6	20.8
Queue Delay	0.0	32.4	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	125.6	85.1	249.2	44.0	107.8	26.2	42.6	20.8
LOS	F	F	F	D	F	C	D	C
Approach Delay		88.9		55.0		66.9		28.4
Approach LOS		F		E		E		C

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.33	
Intersection Signal Delay: 71.4	Intersection LOS: E
Intersection Capacity Utilization 102.3%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 22: Mariposa Rd. & Main St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	326	2911	226	119	1948	144	210	114	97	186	78	266
Future Volume (veh/h)	326	2911	226	119	1948	144	210	114	97	186	78	266
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		0.99	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	1800	1900	1900	1800	1900	1900	1800	1900	1900	1800	1900	1900
Adj Flow Rate, veh/h	333	2970	215	121	1988	131	214	116	72	190	80	200
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	306	3032	217	91	2262	149	286	365	227	371	161	403
Arrive On Green	0.18	0.48	0.48	0.05	0.36	0.36	0.33	0.33	0.33	0.33	0.33	0.33
Sat Flow, veh/h	1714	6273	448	1714	6311	416	1117	1091	677	1214	481	1203
Grp Volume(v), veh/h	333	2312	873	121	1544	575	214	0	188	190	0	280
Grp Sat Flow(s),veh/h/ln	1714	1634	1819	1714	1634	1825	1117	0	1768	1214	0	1684
Q Serve(g_s), s	21.4	55.3	57.2	6.4	35.4	35.4	22.7	0.0	9.5	16.6	0.0	15.9
Cycle Q Clear(g_c), s	21.4	55.3	57.2	6.4	35.4	35.4	38.6	0.0	9.5	26.1	0.0	15.9
Prop In Lane	1.00		0.25	1.00		0.23	1.00		0.38	1.00		0.71
Lane Grp Cap(c), veh/h	306	2369	879	91	1757	654	286	0	592	371	0	564
V/C Ratio(X)	1.09	0.98	0.99	1.32	0.88	0.88	0.75	0.00	0.32	0.51	0.00	0.50
Avail Cap(c_a), veh/h	306	2369	879	91	1757	654	286	0	592	371	0	564
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	49.3	30.3	30.8	56.8	36.1	36.1	47.2	0.0	29.7	39.4	0.0	31.8
Incr Delay (d2), s/veh	77.4	13.6	28.7	203.2	5.5	13.1	10.4	0.0	0.3	1.2	0.0	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	15.4	22.6	29.5	7.8	14.1	17.2	7.2	0.0	4.1	5.1	0.0	6.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	126.7	43.9	59.5	260.0	41.5	49.2	57.6	0.0	30.0	40.6	0.0	32.5
LnGrp LOS	F	D	E	F	D	D	E	A	C	D	A	C
Approach Vol, veh/h		3518			2240			402			470	
Approach Delay, s/veh		55.6			55.3			44.7			35.8	
Approach LOS		E			E			D			D	

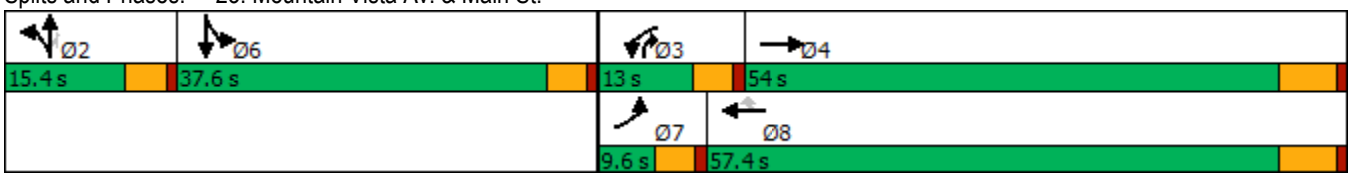
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		44.8	11.0	64.2		44.8	26.0	49.2				
Change Period (Y+Rc), s		4.6	4.6	6.2		4.6	4.6	6.2				
Max Green Setting (Gmax), s		40.2	6.4	58.0		40.2	21.4	43.0				
Max Q Clear Time (g_c+I1), s		40.6	8.4	59.2		28.1	23.4	37.4				
Green Ext Time (p_c), s		0.0	0.0	0.0		2.1	0.0	4.7				

Intersection Summary												
HCM 6th Ctrl Delay			53.4									
HCM 6th LOS			D									

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	67	2521	86	2012	96	45	7	37	108	10
Future Volume (vph)	67	2521	86	2012	96	45	7	37	108	10
Turn Type	Prot	NA	Prot	NA	Perm	Split	NA	pm+ov	Split	NA
Protected Phases	7	4	3	8		2	2	3	6	6
Permitted Phases					8			2		
Detector Phase	7	4	3	8	8	2	2	3	6	6
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	43.2	9.6	32.2	32.2	14.6	14.6	9.6	37.6	37.6
Total Split (s)	9.6	54.0	13.0	57.4	57.4	15.4	15.4	13.0	37.6	37.6
Total Split (%)	8.0%	45.0%	10.8%	47.8%	47.8%	12.8%	12.8%	10.8%	31.3%	31.3%
Yellow Time (s)	3.6	5.2	3.6	5.2	5.2	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	4.6	6.2	6.2	4.6	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lead	Lag	Lag			Lead		
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes			Yes		
Recall Mode	None	Max	None	Max	Max	None	None	None	None	None
Act Effct Green (s)	5.1	52.4	8.1	59.1	59.1	10.2	10.2	13.6	14.0	14.0
Actuated g/C Ratio	0.05	0.55	0.09	0.62	0.62	0.11	0.11	0.14	0.15	0.15
v/c Ratio	0.42	0.74	0.62	0.65	0.10	0.14	0.09	0.08	0.28	0.26
Control Delay	56.0	21.8	64.9	18.9	4.1	46.6	44.3	1.7	39.8	36.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	56.0	21.8	64.9	18.9	4.1	46.6	44.3	1.7	39.8	36.3
LOS	E	C	E	B	A	D	D	A	D	D
Approach Delay		22.7		20.1			27.0			38.0
Approach LOS		C		C			C			D

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 94.8	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.74	
Intersection Signal Delay: 22.0	Intersection LOS: C
Intersection Capacity Utilization 66.0%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 23: Mountain Vista Av. & Main St.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	67	2521	25	86	2012	96	45	7	37	108	10	8
Future Volume (veh/h)	67	2521	25	86	2012	96	45	7	37	108	10	8
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	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	1700	1900	1900	1800	1900	1900	1800	1900	1900	1800	1900	1900
Adj Flow Rate, veh/h	71	2654	24	91	2118	86	47	7	24	128	0	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	141	3527	32	115	2833	879	318	176	514	353	195	0
Arrive On Green	0.04	0.52	0.52	0.07	0.55	0.55	0.09	0.09	0.09	0.10	0.00	0.00
Sat Flow, veh/h	3141	6729	61	1714	5187	1610	3429	1900	3220	3429	1900	0
Grp Volume(v), veh/h	71	1933	745	91	2118	86	47	7	24	128	0	0
Grp Sat Flow(s),veh/h/ln	1570	1634	1887	1714	1729	1610	1714	1900	1610	1714	1900	0
Q Serve(g_s), s	2.1	29.0	29.1	4.9	29.4	2.4	1.2	0.3	0.6	3.3	0.0	0.0
Cycle Q Clear(g_c), s	2.1	29.0	29.1	4.9	29.4	2.4	1.2	0.3	0.6	3.3	0.0	0.0
Prop In Lane	1.00		0.03	1.00		1.00	1.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	141	2570	989	115	2833	879	318	176	514	353	195	0
V/C Ratio(X)	0.50	0.75	0.75	0.79	0.75	0.10	0.15	0.04	0.05	0.36	0.00	0.00
Avail Cap(c_a), veh/h	168	2570	989	154	2833	879	395	219	586	1207	669	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	43.7	17.5	17.5	43.1	16.3	10.2	39.1	38.7	33.4	39.2	0.0	0.0
Incr Delay (d2), s/veh	1.0	2.1	5.3	13.2	1.9	0.2	0.2	0.1	0.0	0.6	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	9.7	12.0	2.4	10.1	0.8	0.5	0.2	0.2	1.4	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	44.8	19.6	22.8	56.3	18.2	10.4	39.3	38.8	33.4	39.8	0.0	0.0
LnGrp LOS	D	B	C	E	B	B	D	D	C	D	A	A
Approach Vol, veh/h		2749			2295			78			128	
Approach Delay, s/veh		21.1			19.4			37.5			39.8	
Approach LOS		C			B			D			D	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		13.3	10.9	55.3		14.2	8.8	57.4				
Change Period (Y+Rc), s		4.6	4.6	6.2		4.6	4.6	6.2				
Max Green Setting (Gmax), s		10.8	8.4	47.8		33.0	5.0	51.2				
Max Q Clear Time (g_c+I1), s		3.2	6.9	31.1		5.3	4.1	31.4				
Green Ext Time (p_c), s		0.1	0.0	14.0		0.4	0.0	14.4				

Intersection Summary		
HCM 6th Ctrl Delay		21.1
HCM 6th LOS		C

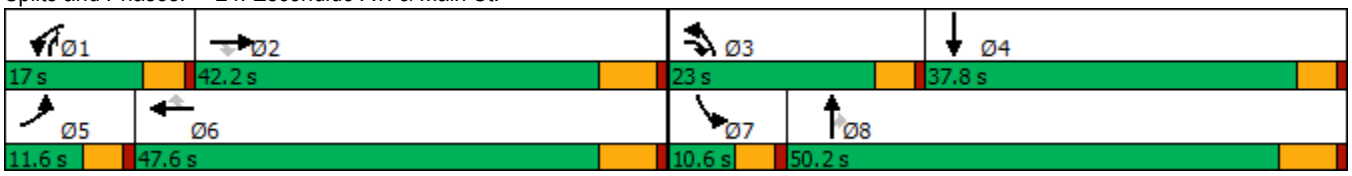
Notes

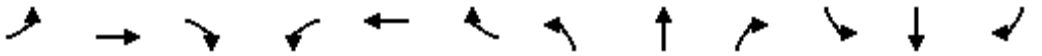
User approved volume balancing among the lanes for turning movement.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations											
Traffic Volume (vph)	74	1762	830	504	1329	14	791	71	276	77	52
Future Volume (vph)	74	1762	830	504	1329	14	791	71	276	77	52
Turn Type	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA
Protected Phases	5	2	3	1	6		3	8	1	7	4
Permitted Phases			2			6			8		
Detector Phase	5	2	3	1	6	6	3	8	1	7	4
Switch Phase											
Minimum Initial (s)	5.0	10.0	5.0	5.0	10.0	10.0	5.0	10.0	5.0	5.0	10.0
Minimum Split (s)	9.6	41.2	9.6	9.6	31.2	31.2	9.6	49.2	9.6	9.6	37.6
Total Split (s)	11.6	42.2	23.0	17.0	47.6	47.6	23.0	50.2	17.0	10.6	37.8
Total Split (%)	9.7%	35.2%	19.2%	14.2%	39.7%	39.7%	19.2%	41.8%	14.2%	8.8%	31.5%
Yellow Time (s)	3.6	5.2	3.6	3.6	5.2	5.2	3.6	5.2	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	4.6	4.6	6.2	6.2	4.6	6.2	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Max	None	None	Max	Max	None	None	None	None	None
Act Effct Green (s)	6.9	36.3	56.4	12.5	41.8	41.8	18.5	22.9	38.2	11.7	14.3
Actuated g/C Ratio	0.07	0.36	0.55	0.12	0.41	0.41	0.18	0.23	0.38	0.12	0.14
v/c Ratio	0.67	0.99	0.73	1.37	0.93	0.02	1.44	0.17	0.44	0.41	0.44
Control Delay	75.5	52.6	7.5	216.2	41.8	0.1	242.1	30.1	17.7	55.6	26.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	75.5	52.6	7.5	216.2	41.8	0.1	242.1	30.1	17.7	55.6	26.7
LOS	E	D	A	F	D	A	F	C	B	E	C
Approach Delay		39.2			89.1			174.4			37.7
Approach LOS		D			F			F			D

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 101.7	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.44	
Intersection Signal Delay: 81.2	Intersection LOS: F
Intersection Capacity Utilization 100.3%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 24: Escondido Av. & Main St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	74	1762	830	504	1329	14	791	71	276	77	52	73
Future Volume (veh/h)	74	1762	830	504	1329	14	791	71	276	77	52	73
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	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	1800	1900	1900	1700	1900	1900	1700	1900	1900	1800	1900	1900
Adj Flow Rate, veh/h	77	1835	675	525	1384	13	824	74	207	80	54	73
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	97	1904	892	397	1576	688	589	432	570	101	72	98
Arrive On Green	0.06	0.37	0.37	0.13	0.44	0.44	0.19	0.23	0.23	0.06	0.10	0.10
Sat Flow, veh/h	1714	5187	1608	3141	3610	1577	3141	1900	1610	1714	732	990
Grp Volume(v), veh/h	77	1835	675	525	1384	13	824	74	207	80	0	127
Grp Sat Flow(s),veh/h/ln	1714	1729	1608	1570	1805	1577	1570	1900	1610	1714	0	1722
Q Serve(g_s), s	4.4	34.0	31.6	12.4	34.4	0.5	18.4	3.1	9.4	4.5	0.0	7.0
Cycle Q Clear(g_c), s	4.4	34.0	31.6	12.4	34.4	0.5	18.4	3.1	9.4	4.5	0.0	7.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.57
Lane Grp Cap(c), veh/h	97	1904	892	397	1576	688	589	432	570	101	0	170
V/C Ratio(X)	0.79	0.96	0.76	1.32	0.88	0.02	1.40	0.17	0.36	0.79	0.00	0.75
Avail Cap(c_a), veh/h	122	1904	892	397	1576	688	589	852	926	105	0	583
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	45.7	30.4	16.8	42.8	25.2	15.7	39.8	30.5	23.5	45.6	0.0	43.0
Incr Delay (d2), s/veh	18.5	13.7	6.0	161.7	7.3	0.1	189.5	0.2	0.4	29.1	0.0	6.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.3	15.2	12.5	13.5	14.6	0.2	22.6	1.4	3.6	2.7	0.0	3.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	64.2	44.1	22.7	204.5	32.5	15.7	229.3	30.6	23.9	74.7	0.0	49.4
LnGrp LOS	E	D	C	F	C	B	F	C	C	E	A	D
Approach Vol, veh/h		2587			1922			1105			207	
Approach Delay, s/veh		39.1			79.4			177.5			59.2	
Approach LOS		D			E			F			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.0	42.2	23.0	15.9	10.2	49.0	10.4	28.5
Change Period (Y+Rc), s	4.6	6.2	4.6	* 6.2	4.6	6.2	4.6	6.2
Max Green Setting (Gmax), s	12.4	36.0	18.4	* 33	7.0	41.4	6.0	44.0
Max Q Clear Time (g_c+I1), s	14.4	36.0	20.4	9.0	6.4	36.4	6.5	11.4
Green Ext Time (p_c), s	0.0	0.0	0.0	0.7	0.0	3.5	0.0	1.2

Intersection Summary	
HCM 6th Ctrl Delay	79.4
HCM 6th LOS	E

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	3.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	23	183	776	23	352	1073
Future Vol, veh/h	23	183	776	23	352	1073
Conflicting Peds, #/hr	0	0	0	4	1	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	100	0	-	-	195	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	24	191	808	24	367	1118

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	2117	420	0	0	836	0
Stage 1	824	-	-	-	-	-
Stage 2	1293	-	-	-	-	-
Critical Hdwy	6.8	6.9	-	-	4.1	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	45	588	-	-	807	-
Stage 1	396	-	-	-	-	-
Stage 2	225	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	24	586	-	-	804	-
Mov Cap-2 Maneuver	93	-	-	-	-	-
Stage 1	394	-	-	-	-	-
Stage 2	122	-	-	-	-	-

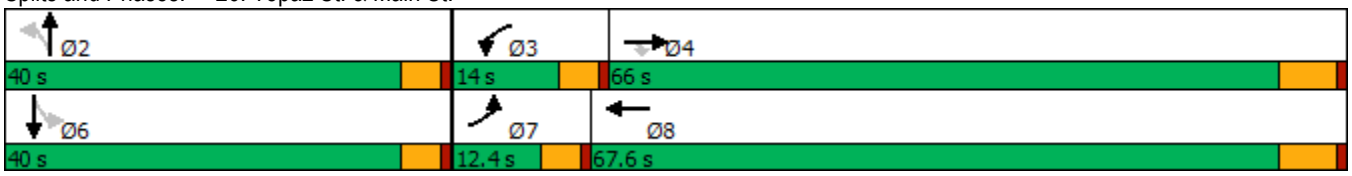
Approach	WB	NB	SB
HCM Control Delay, s	18.8	0	3.3
HCM LOS	C		

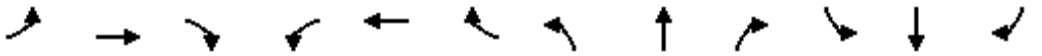
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	93	586	804	-
HCM Lane V/C Ratio	-	-	0.258	0.325	0.456	-
HCM Control Delay (s)	-	-	56.6	14.1	13.2	-
HCM Lane LOS	-	-	F	B	B	-
HCM 95th %tile Q(veh)	-	-	0.9	1.4	2.4	-

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	96	1983	322	144	1629	298	45	86	49
Future Volume (vph)	96	1983	322	144	1629	298	45	86	49
Turn Type	Prot	NA	Perm	Prot	NA	Perm	NA	Perm	NA
Protected Phases	7	4		3	8		2		6
Permitted Phases			4			2		6	
Detector Phase	7	4	4	3	8	2	2	6	6
Switch Phase									
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	25.2	25.2	9.6	23.2	32.6	32.6	38.6	38.6
Total Split (s)	12.4	66.0	66.0	14.0	67.6	40.0	40.0	40.0	40.0
Total Split (%)	10.3%	55.0%	55.0%	11.7%	56.3%	33.3%	33.3%	33.3%	33.3%
Yellow Time (s)	3.6	5.2	5.2	3.6	5.2	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	6.2	4.6	6.2	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes				
Recall Mode	None	None	None	Max	None	None	None	None	None
Act Effct Green (s)	7.8	59.9	59.9	9.4	61.5	32.8	32.8	32.8	32.8
Actuated g/C Ratio	0.07	0.51	0.51	0.08	0.52	0.28	0.28	0.28	0.28
v/c Ratio	0.88	1.11	0.36	1.09	0.95	0.93	0.32	0.32	0.22
Control Delay	111.2	87.6	7.9	153.2	39.0	76.8	12.8	37.1	18.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	111.2	87.6	7.9	153.2	39.0	76.8	12.8	37.1	18.8
LOS	F	F	A	F	D	E	B	D	B
Approach Delay		77.9			47.7		53.0		26.8
Approach LOS		E			D		D		C

Intersection Summary			
Cycle Length: 120			
Actuated Cycle Length: 117.5			
Natural Cycle: 120			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.11			
Intersection Signal Delay: 62.0		Intersection LOS: E	
Intersection Capacity Utilization 110.8%		ICU Level of Service H	
Analysis Period (min) 15			

Splits and Phases: 26: Topaz St. & Main St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	96	1983	322	144	1629	95	298	45	132	86	49	63
Future Volume (veh/h)	96	1983	322	144	1629	95	298	45	132	86	49	63
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	0.99		1.00	1.00		0.99
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	1800	1900	1900	1800	1900	1900	1800	1900	1900	1800	1900	1900
Adj Flow Rate, veh/h	99	2044	260	148	1679	91	307	46	105	89	51	34
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	113	1826	814	136	1809	97	389	146	334	330	301	201
Arrive On Green	0.07	0.51	0.51	0.08	0.52	0.52	0.28	0.28	0.28	0.28	0.28	0.28
Sat Flow, veh/h	1714	3610	1610	1714	3484	188	1323	514	1174	1256	1059	706
Grp Volume(v), veh/h	99	2044	260	148	865	905	307	0	151	89	0	85
Grp Sat Flow(s),veh/h/ln	1714	1805	1610	1714	1805	1866	1323	0	1689	1256	0	1765
Q Serve(g_s), s	6.8	59.8	11.3	9.4	52.3	53.5	26.9	0.0	8.3	7.1	0.0	4.3
Cycle Q Clear(g_c), s	6.8	59.8	11.3	9.4	52.3	53.5	31.1	0.0	8.3	15.4	0.0	4.3
Prop In Lane	1.00		1.00	1.00		0.10	1.00		0.70	1.00		0.40
Lane Grp Cap(c), veh/h	113	1826	814	136	937	969	389	0	480	330	0	502
V/C Ratio(X)	0.88	1.12	0.32	1.09	0.92	0.93	0.79	0.00	0.31	0.27	0.00	0.17
Avail Cap(c_a), veh/h	113	1826	814	136	937	969	409	0	506	349	0	528
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	54.7	29.2	17.2	54.4	26.2	26.5	43.5	0.0	33.2	39.3	0.0	31.8
Incr Delay (d2), s/veh	46.9	61.8	0.2	101.9	14.3	15.5	9.5	0.0	0.4	0.4	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.3	38.7	3.9	7.8	23.7	25.3	9.8	0.0	3.5	2.3	0.0	1.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	101.6	91.0	17.4	156.4	40.5	42.0	53.0	0.0	33.6	39.7	0.0	32.0
LnGrp LOS	F	F	B	F	D	D	D	A	C	D	A	C
Approach Vol, veh/h		2403			1918			458			174	
Approach Delay, s/veh		83.5			50.1			46.6			35.9	
Approach LOS		F			D			D			D	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		38.2	14.0	66.0		38.2	12.4	67.6				
Change Period (Y+Rc), s		4.6	4.6	6.2		4.6	4.6	6.2				
Max Green Setting (Gmax), s		35.4	9.4	59.8		35.4	7.8	61.4				
Max Q Clear Time (g_c+I1), s		33.1	11.4	61.8		17.4	8.8	55.5				
Green Ext Time (p_c), s		0.5	0.0	0.0		0.7	0.0	4.6				

Intersection Summary	
HCM 6th Ctrl Delay	65.5
HCM 6th LOS	E

APPENDIX 7.3:

HORIZON YEAR (2040) WITHOUT PROJECT CONDITIONS TRAFFIC SIGNAL WARRANT ANALYSIS WORKSHEETS

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Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

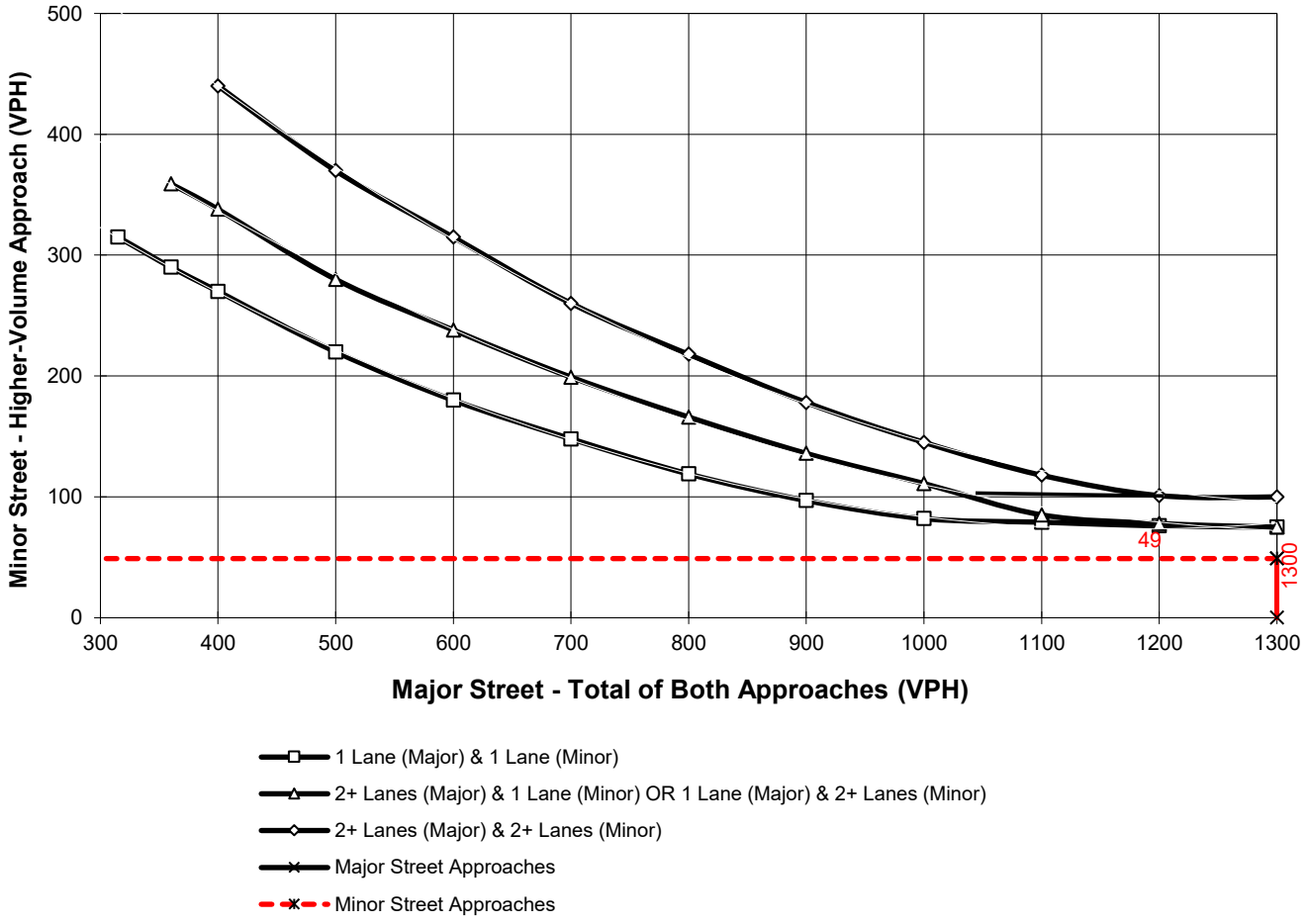
(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **Horizon Year (2040) Without Project Conditions - Weekday AM Peak Hour**

Major Street Name = **Phelan Road** — Total of Both Approaches (VPH) = **1796**
Number of Approach Lanes Major Street = **1**

Minor Street Name = **Verbena Road** — High Volume Approach (VPH) = **49**
Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold for a minor-street approach with one lane

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

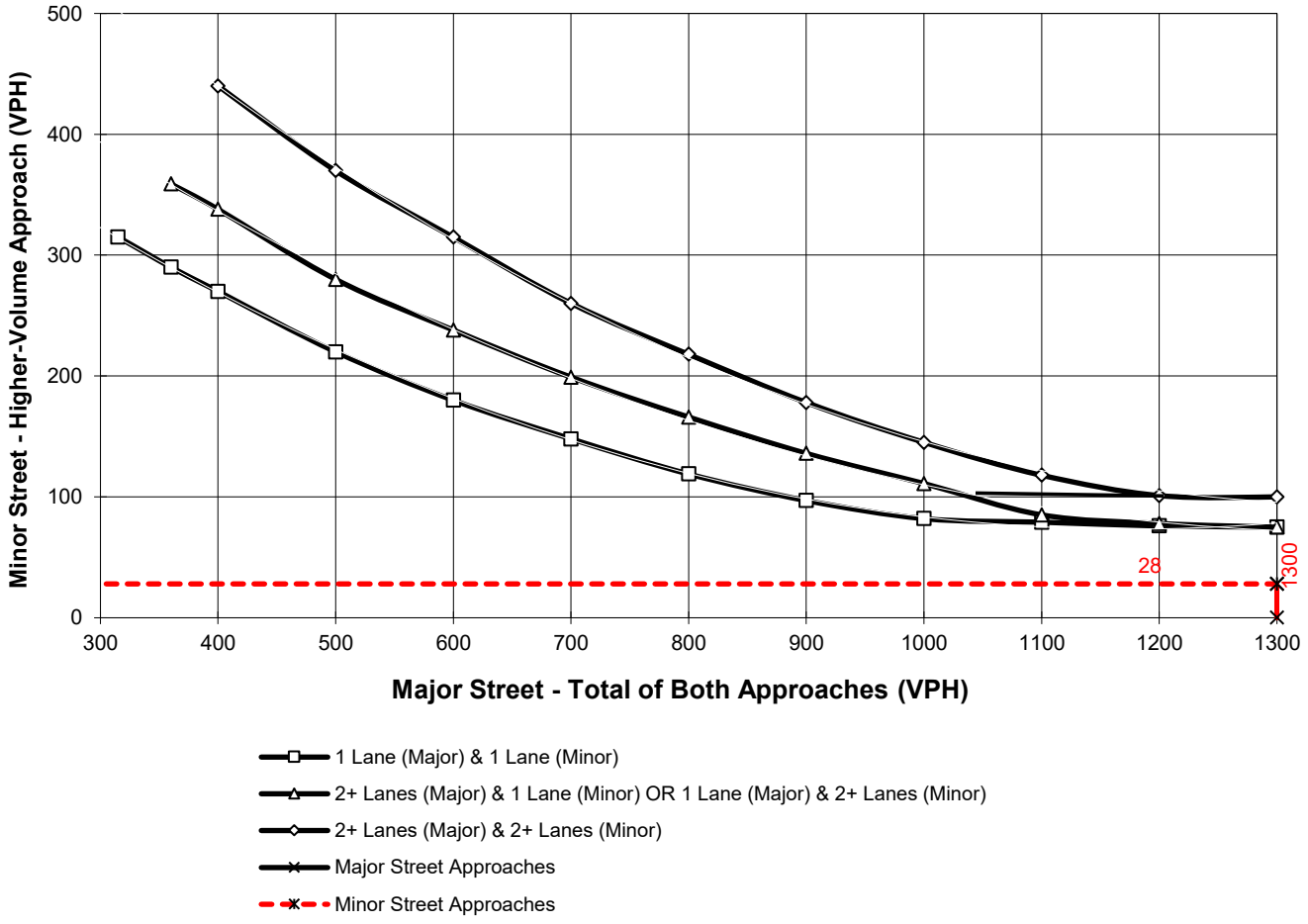
(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **Horizon Year (2040) Without Project Conditions - Weekday AM Peak Hour**

Major Street Name = **Phelan Road** Total of Both Approaches (VPH) = **1992**
Number of Approach Lanes Major Street = **1**

Minor Street Name = **Bellflower Street** High Volume Approach (VPH) = **28**
Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold for a minor-street approach with one lane

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet
(Average Traffic Estimate Form)

Horizon Year (2040) Without Project

DIST	CO	RTE	PM	TRAFFIC CONDITIONS		
				CALC CH	DATE	01/27/20
				CHK CH	DATE	01/27/20

Jurisdiction: **City of Hesperia**

Major Street: **Yucca Terrace Dr.** — Critical Approach Speed (Major) 45 mph

Minor Street: **Driveway 2** — Critical Approach Speed (Minor) 25 mph

Major Street Approach Lanes = **1** lane — Minor Street Approach Lanes **1** lane

Major Street Future ADT = **286** vpd — Minor Street Future ADT = **0** vpd

Speed limit or critical speed on major street traffic > 64 km/h (40 mph); ……... [√]

or

In built up area of isolated community of < 10,000 population …….. [ ]

RURAL (R)

(Based on Estimated Average Daily Traffic - See Note)

URBAN / RURAL: XX

CONDITION A - Minimum Vehicular Volume

Satisfied / Not Satisfied: XX

Number of lanes for moving traffic on each approach

Major Street	Minor Street	Minimum Requirements EADT: Vehicles Per Day on Major Street (Total of Both Approaches) Urban	Rural	Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only) Urban	Rural
1 **286**	1 **0**	8,000	5,600	2,400	1,680
2 +	1	9,600	6,720	2,400	1,680
2 +	2 +	9,600	6,720	3,200	2,240
1	2 +	8,000	5,600	3,200	2,240

CONDITION B - Interruption of Continuous Traffic

Satisfied / Not Satisfied: XX

Number of lanes for moving traffic on each approach

Major Street	Minor Street	Vehicles Per Day on Major Street (Total of Both Approaches) Urban	Rural	Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only) Urban	Rural
1 **286**	1 **0**	12,000	8,400	1,200	850
2 +	1	14,400	10,080	1,200	850
2 +	2 +	14,400	10,080	1,600	1,120
1	2 +	12,000	8,400	1,600	1,120

Combination of CONDITIONS A + B

Satisfied / Not Satisfied: XX

No one condition satisfied, but following conditions fulfilled 80% of more ….. **A** 5% **B** 3%

2 CONDITIONS 80%

2 CONDITIONS 80%

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet
(Average Traffic Estimate Form)

Horizon Year (2040) Without Project

DIST	CO	RTE	PM	TRAFFIC CONDITIONS			
				CALC	CH	DATE	01/27/20
				CHK	CH	DATE	01/27/20

Jurisdiction: **City of Hesperia**

Major Street: **Yucca Terrace Drive** — Critical Approach Speed (Major) 45 mph

Minor Street: **Driveway 3** — Critical Approach Speed (Minor) 25 mph

Major Street Approach Lanes = **1** lane — Minor Street Approach Lanes **1** lane

Major Street Future ADT = **286** vpd — Minor Street Future ADT = **0** vpd

Speed limit or critical speed on major street traffic > 64 km/h (40 mph); ..... √

or

In built up area of isolated community of < 10,000 population .....

RURAL (R)

(Based on Estimated Average Daily Traffic - See Note)

URBAN	RURAL	Minimum Requirements EADT			
	XX				
CONDITION A - Minimum Vehicular Volume		Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Satisfied	Not Satisfied XX				
Number of lanes for moving traffic on each approach					
Major Street	Minor Street	Urban	Rural	Urban	Rural
1 **286**	*1* **0**	8,000	5,600	2,400	1,680
2 +	*1*	9,600	6,720	2,400	1,680
2 +	*2* +	9,600	6,720	3,200	2,240
1	*2* +	8,000	5,600	3,200	2,240
CONDITION B - Interruption of Continuous Traffic		Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Satisfied	Not Satisfied XX				
Number of lanes for moving traffic on each approach					
Major Street	Minor Street	Urban	Rural	Urban	Rural
1 **286**	*1* **0**	12,000	8,400	1,200	850
2 +	*1*	14,400	10,080	1,200	850
2 +	*2* +	14,400	10,080	1,600	1,120
1	*2* +	12,000	8,400	1,600	1,120
Combination of CONDITIONS A + B					
Satisfied	Not Satisfied XX	2 CONDITIONS 80%		2 CONDITIONS 80%	
No one condition satisfied, but following conditions fulfilled 80% of more	**A** 5% **B** 3%				

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

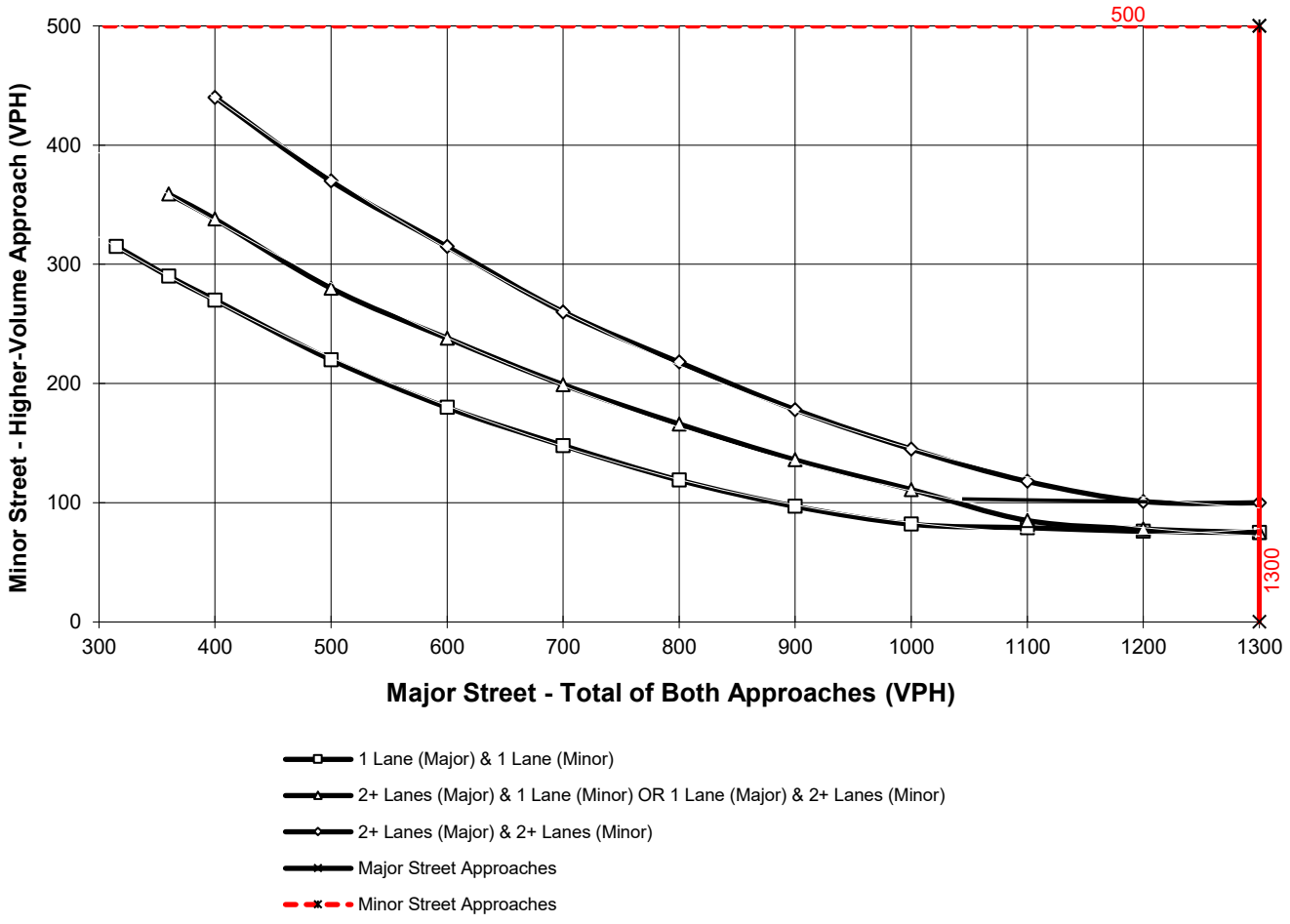
(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **Horizon Year (2040) Without Project Conditions - Weekday PM Peak Hour**

Major Street Name = **US Highway 395** Total of Both Approaches (VPH) = **3792**
Number of Approach Lanes Major Street = **2**

Minor Street Name = **Poplar Street** High Volume Approach (VPH) = **554**
Number of Approach Lanes Minor Street = **2**

WARRANTED FOR A SIGNAL



*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold for a minor-street approach with one lane

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APPENDIX 7.4:

HORIZON YEAR (2040) WITH PROJECT CONDITIONS TRAFFIC SIGNAL WARRANT ANALYSIS WORKSHEETS

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Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

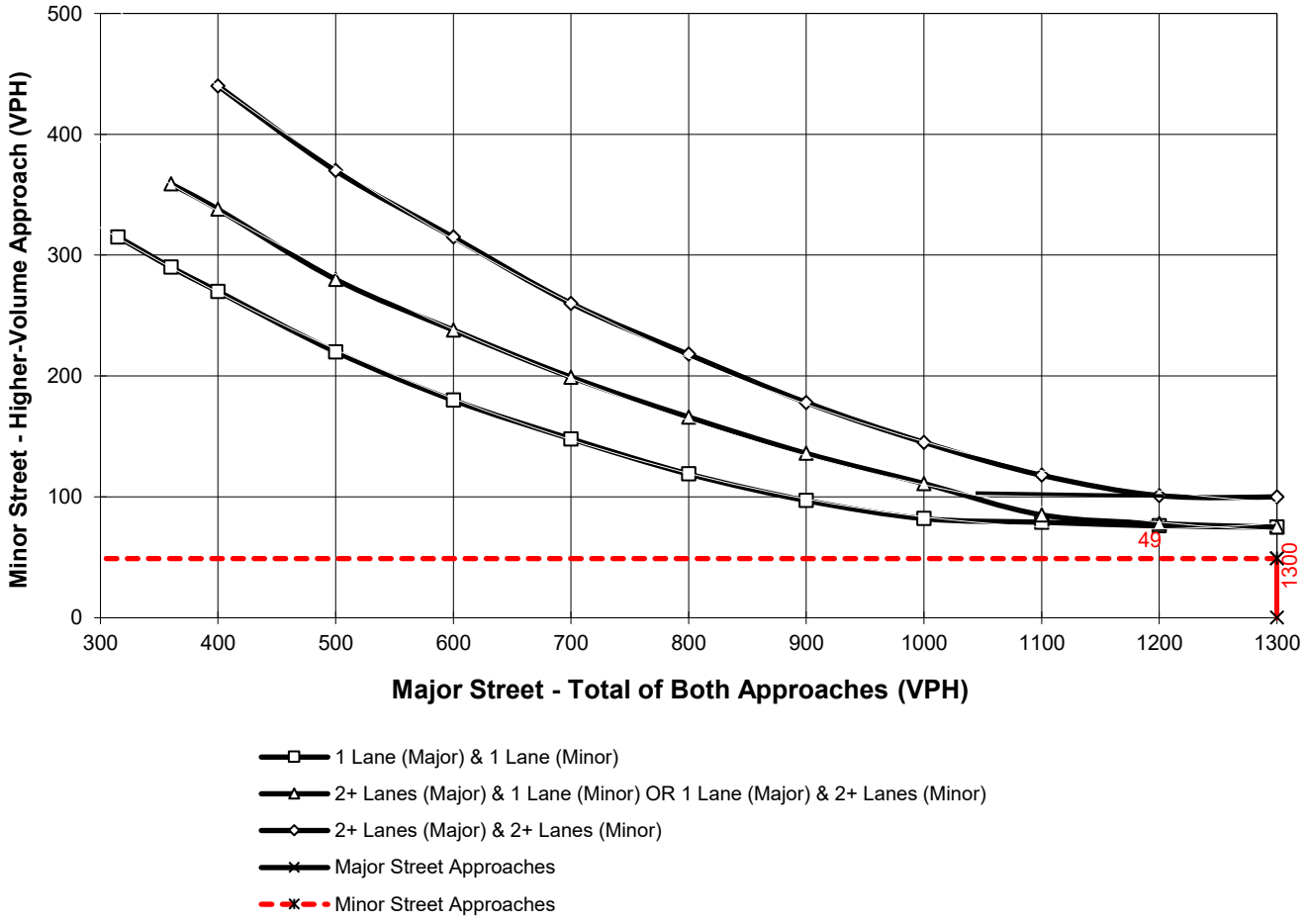
(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **Horizon Year (2040) With Project Conditions - Weekday AM Peak Hour**

Major Street Name = **Phelan Road** — Total of Both Approaches (VPH) = **1887**
Number of Approach Lanes Major Street = **1**

Minor Street Name = **Verbena Road** — High Volume Approach (VPH) = **49**
Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold for a minor-street approach with one lane

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

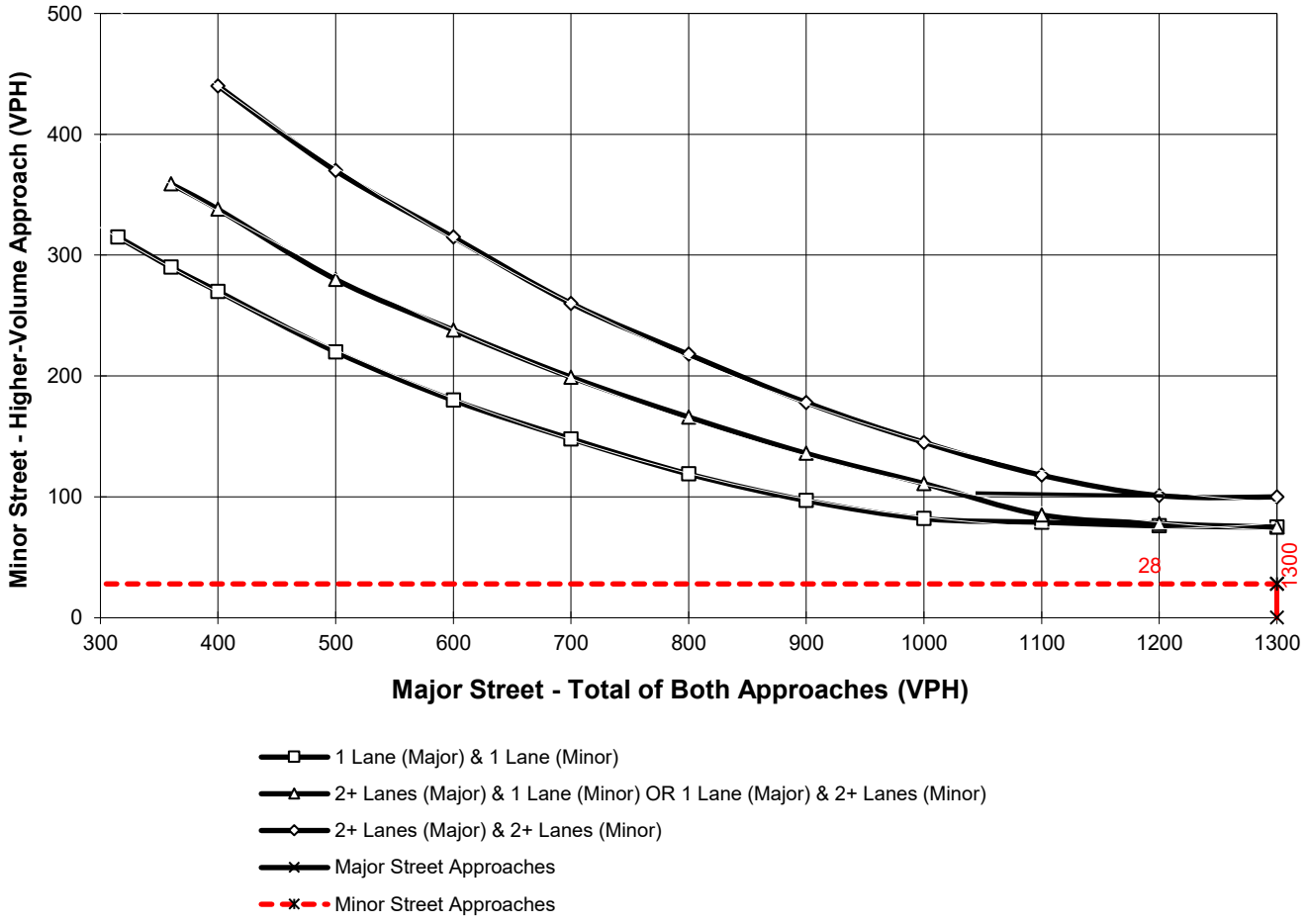
(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **Horizon Year (2040) With Project Conditions - Weekday AM Peak Hour**

Major Street Name = **Phelan Road** — Total of Both Approaches (VPH) = **1891**
Number of Approach Lanes Major Street = **1**

Minor Street Name = **Bellflower Street** — High Volume Approach (VPH) = **28**
Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold for a minor-street approach with one lane

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet
(Average Traffic Estimate Form)

Horizon Year (2040) With Project

DIST	CO	RTE	PM	TRAFFIC CONDITIONS		
				CALC CH	DATE	01/28/20
Jurisdiction: **City of Hesperia**				CHK CH	DATE	01/28/20
Major Street: **Yucca Terrace Dr.**				Critical Approach Speed (Major)		45 mph
Minor Street: **Driveway 2**				Critical Approach Speed (Minor)		25 mph

Major Street Approach Lanes = **1** lane Minor Street Approach Lanes = **1** lane

Major Street Future ADT = **1,422** vpd Minor Street Future ADT = **1,136** vpd

Speed limit or critical speed on major street traffic > 64 km/h (40 mph); …….. √

or

In built up area of isolated community of < 10,000 population ……..

RURAL (R)

(Based on Estimated Average Daily Traffic - See Note)

URBAN	RURAL	Minimum Requirements EADT			
	XX				
CONDITION A - Minimum Vehicular Volume		Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Satisfied	Not Satisfied XX				
Number of lanes for moving traffic on each approach					
Major Street	Minor Street	Urban	Rural	Urban	Rural
1 **1,422**	*1* **1,136**	8,000	5,600	2,400	1,680
2 +	*1*	9,600	6,720	2,400	1,680
2 +	*2* +	9,600	6,720	3,200	2,240
1	*2* +	8,000	5,600	3,200	2,240
CONDITION B - Interruption of Continuous Traffic		Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Satisfied	Not Satisfied XX				
Number of lanes for moving traffic on each approach					
Major Street	Minor Street	Urban	Rural	Urban	Rural
1 **1,422**	*1* **1,136**	12,000	8,400	1,200	850 *
2 +	*1*	14,400	10,080	1,200	850
2 +	*2* +	14,400	10,080	1,600	1,120
1	*2* +	12,000	8,400	1,600	1,120
Combination of CONDITIONS A + B					
Satisfied	Not Satisfied XX	2 CONDITIONS 80%		2 CONDITIONS 80%	
No one condition satisfied, but following conditions fulfilled 80% of more …..	A 25% B 17%				

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet
(Average Traffic Estimate Form)

Horizon Year (2040) With Project

DIST	CO	RTE	PM	TRAFFIC CONDITIONS			
				CALC	CH	DATE	01/28/20
Jurisdiction:	**City of Hesperia**			CHK	CH	DATE	01/28/20
Major Street:	**Yucca Terrace Drive**			Critical Approach Speed (Major)			45 mph
Minor Street:	**Driveway 3**			Critical Approach Speed (Minor)			25 mph

Major Street Approach Lanes = **1** lane Minor Street Approach Lanes = **1** lane

Major Street Future ADT = **4,046** vpd Minor Street Future ADT = **1,488** vpd

Speed limit or critical speed on major street traffic > 64 km/h (40 mph); …….. √

or

In built up area of isolated community of < 10,000 population ……..

RURAL (R)

(Based on Estimated Average Daily Traffic - See Note)

URBAN	RURAL	Minimum Requirements EADT			
	XX				
CONDITION A - Minimum Vehicular Volume		Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Satisfied	Not Satisfied				
	XX				
Number of lanes for moving traffic on each approach					
Major Street	Minor Street	Urban	Rural	Urban	Rural
1 **4,046**	*1* **1,488**	8,000	5,600	2,400	1,680
2 +	*1*	9,600	6,720	2,400	1,680
2 +	*2* +	9,600	6,720	3,200	2,240
1	*2* +	8,000	5,600	3,200	2,240
CONDITION B - Interruption of Continuous Traffic		Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Satisfied	Not Satisfied				
	XX				
Number of lanes for moving traffic on each approach					
Major Street	Minor Street	Urban	Rural	Urban	Rural
1 **4,046**	*1* **1,488**	12,000	8,400	1,200	850 *
2 +	*1*	14,400	10,080	1,200	850
2 +	*2* +	14,400	10,080	1,600	1,120
1	*2* +	12,000	8,400	1,600	1,120
Combination of CONDITIONS A + B					
Satisfied	Not Satisfied				
	XX	2 CONDITIONS 80%		2 CONDITIONS 80%	
No one condition satisfied, but following conditions fulfilled 80% of more …..	**A** 72% **B** 48%				

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet
(Average Traffic Estimate Form)

Horizon Year (2040) With Project

DIST	CO	RTE	PM	TRAFFIC CONDITIONS			
				CALC	CH	DATE	01/23/20
Jurisdiction:	**City of Hesperia**			CHK	CH	DATE	01/23/20
Major Street:	**US Highway 395**			Critical Approach Speed (Major)			45 mph
Minor Street:	**Driveway 5**			Critical Approach Speed (Minor)			25 mph

Major Street Approach Lanes = **2** lane Minor Street Approach Lanes = **1** lane

Major Street Future ADT = **43,745** vpd Minor Street Future ADT = **449** vpd

Speed limit or critical speed on major street traffic > 64 km/h (40 mph); …….. √

or

In built up area of isolated community of < 10,000 population ……..

RURAL (R)

(Based on Estimated Average Daily Traffic - See Note)

URBAN	RURAL	Minimum Requirements EADT			
	XX				
CONDITION A - Minimum Vehicular Volume		Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Satisfied	Not Satisfied				
	XX				
Number of lanes for moving traffic on each approach					
Major Street	Minor Street	Urban	Rural	Urban	Rural
1	*1*	8,000	5,600	2,400	1,680
2 + **43,745**	*1* **449**	9,600	6,720 *	2,400	1,680
2 +	*2* +	9,600	6,720	3,200	2,240
1	*2* +	8,000	5,600	3,200	2,240
CONDITION B - Interruption of Continuous Traffic		Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Satisfied	Not Satisfied				
	XX				
Number of lanes for moving traffic on each approach					
Major Street	Minor Street	Urban	Rural	Urban	Rural
1	*1*	12,000	8,400	1,200	850
2 + **43,745**	*1* **449**	14,400	10,080 *	1,200	850
2 +	*2* +	14,400	10,080	1,600	1,120
1	*2* +	12,000	8,400	1,600	1,120
Combination of CONDITIONS A + B					
Satisfied	Not Satisfied				
	XX				
No one condition satisfied, but following conditions fulfilled 80% of more …..	A: 27% B: 53%	2 CONDITIONS 80%		2 CONDITIONS 80%	

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

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APPENDIX 7.5:

HORIZON YEAR (2040) WITHOUT PROJECT CONDITIONS QUEUING ANALYSIS WORKSHEETS

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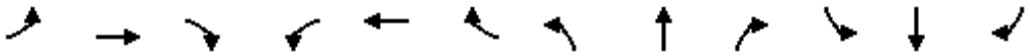
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	75	187	138	107	544	68	1224	66	323	1908	128
v/c Ratio	1.15	0.30	0.23	0.31	0.86	0.76	0.98	0.11	0.88	1.06	0.15
Control Delay	198.9	32.0	9.2	33.4	44.3	101.0	61.0	3.1	70.3	68.2	3.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	198.9	32.0	9.2	33.4	44.3	101.0	61.0	3.1	70.3	68.2	3.1
Queue Length 50th (ft)	~69	108	14	62	313	53	~536	0	239	~853	0
Queue Length 95th (ft)	#170	170	61	113	#516	#134	#677	18	#377	#992	31
Internal Link Dist (ft)		549			898		7898			714	
Turn Bay Length (ft)	120		120	425		415		460	400		400
Base Capacity (vph)	65	617	599	350	629	90	1247	602	406	1805	871
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.15	0.30	0.23	0.31	0.86	0.76	0.98	0.11	0.80	1.06	0.15

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	82	478	327	224	358	142	153	1075	138	320	1779	48
v/c Ratio	0.78	0.67	0.66	1.42	0.44	0.30	0.79	0.80	0.20	1.13	1.17	0.07
Control Delay	93.0	42.4	19.2	256.3	35.1	6.6	74.5	35.7	6.1	136.2	114.2	0.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	93.0	42.4	19.2	256.3	35.1	6.6	74.5	35.7	6.1	136.2	114.2	0.8
Queue Length 50th (ft)	53	153	62	~191	106	0	97	315	3	~236	~707	0
Queue Length 95th (ft)	#166	203	150	#412	145	44	#250	#561	50	#504	#1099	4
Internal Link Dist (ft)		876			804			5210			7898	
Turn Bay Length (ft)	225		225	1000		250	220		280	230		160
Base Capacity (vph)	105	1341	736	158	1447	732	194	1341	682	282	1517	731
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.78	0.36	0.44	1.42	0.25	0.19	0.79	0.80	0.20	1.13	1.17	0.07

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

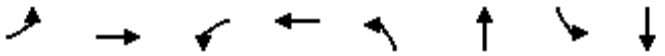
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	14	26	113	41	10	1275	87	10	2424	12
v/c Ratio	0.12	0.08	0.54	0.11	0.09	0.58	0.08	0.09	1.10	0.01
Control Delay	46.5	15.5	48.7	10.7	46.0	16.1	3.6	46.0	71.8	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	46.5	15.5	48.7	10.7	46.0	16.1	3.6	46.0	71.8	0.0
Queue Length 50th (ft)	5	3	41	3	4	108	0	4	406	0
Queue Length 95th (ft)	33	24	#206	28	26	#657	27	26	#1627	0
Internal Link Dist (ft)		810		782		6483			5210	
Turn Bay Length (ft)	200		250		500		350	430		300
Base Capacity (vph)	113	927	211	972	113	2207	1026	113	2207	1026
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.12	0.03	0.54	0.04	0.09	0.58	0.08	0.09	1.10	0.01

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	107	1170	24	901	157	1574	330	2448
v/c Ratio	0.86	0.97	0.31	0.83	0.82	1.54	0.94	1.83
Control Delay	105.8	58.2	66.3	37.9	82.8	278.7	82.1	400.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	105.8	58.2	66.3	37.9	82.8	278.7	82.1	400.9
Queue Length 50th (ft)	84	~479	18	267	121	~923	255	~1545
Queue Length 95th (ft)	#193	#633	48	348	#234	#1064	#439	#1681
Internal Link Dist (ft)		1117		1265		3985		1763
Turn Bay Length (ft)	340		250		280		250	
Base Capacity (vph)	124	1203	77	1176	201	1023	357	1340
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.86	0.97	0.31	0.77	0.78	1.54	0.92	1.83

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Intersection	
Int Delay, s/veh	18.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	122	432	1230	68	565	1929
Future Vol, veh/h	122	432	1230	68	565	1929
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	375	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	131	465	1323	73	608	2074

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	4650	698	0	0	1396	0
Stage 1	1360	-	-	-	-	-
Stage 2	3290	-	-	-	-	-
Critical Hdwy	6.6	6.9	-	-	4.1	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	~ 1	~ 388	-	-	~ 496	-
Stage 1	207	-	-	-	-	-
Stage 2	~ 25	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	0	~ 388	-	-	~ 496	-
Mov Cap-2 Maneuver	0	-	-	-	-	-
Stage 1	207	-	-	-	-	-
Stage 2	0	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s		0	32.6
HCM LOS	-		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	-	388	~ 496	-
HCM Lane V/C Ratio	-	-	-	1.197	1.225	-
HCM Control Delay (s)	-	-	-	142.1	143.8	-
HCM Lane LOS	-	-	-	F	F	-
HCM 95th %tile Q(veh)	-	-	-	18.8	23.6	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	76	298	252	2	63	268	1272	154	48	2037	145
v/c Ratio	0.19	0.56	1.29	0.00	0.13	1.79	0.65	0.17	0.49	1.13	0.17
Control Delay	34.9	26.8	198.3	31.5	6.6	411.4	21.6	2.7	72.5	95.2	8.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	34.9	26.8	198.3	31.5	6.6	411.4	21.6	2.7	72.5	95.2	8.0
Queue Length 50th (ft)	45	119	~248	1	0	~311	366	0	37	~962	25
Queue Length 95th (ft)	87	213	#415	8	29	#482	443	32	78	#1100	61
Internal Link Dist (ft)		773		663			859			1974	
Turn Bay Length (ft)	50		400		400	190			225		225
Base Capacity (vph)	395	529	196	522	490	150	1971	933	105	1805	848
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.19	0.56	1.29	0.00	0.13	1.79	0.65	0.17	0.46	1.13	0.17

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

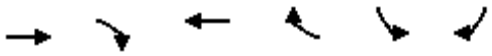
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	67	84	140	97	259	14	1370	90	296	2033	258
v/c Ratio	0.25	0.22	0.52	0.25	0.49	0.14	0.84	0.12	0.79	0.82	0.22
Control Delay	31.5	29.4	38.1	30.7	6.9	50.3	30.6	5.8	50.7	16.7	4.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	31.5	29.4	38.1	30.7	6.9	50.3	30.6	5.8	50.7	16.7	4.5
Queue Length 50th (ft)	31	37	68	44	0	7	313	0	144	282	14
Queue Length 95th (ft)	69	79	131	90	56	33	#806	36	314	#1082	94
Internal Link Dist (ft)		1110		807			892			859	
Turn Bay Length (ft)	100		65		65	190			195		230
Base Capacity (vph)	633	921	650	926	910	102	1631	779	552	2491	1160
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.11	0.09	0.22	0.10	0.28	0.14	0.84	0.12	0.54	0.82	0.22

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBT	EBR	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	1461	37	1206	24	457	308
v/c Ratio	0.56	0.02	0.46	0.01	0.43	0.58
Control Delay	9.9	0.0	9.0	0.0	16.4	18.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	9.9	0.0	9.0	0.0	16.4	18.0
Queue Length 50th (ft)	95	0	73	0	53	59
Queue Length 95th (ft)	183	0	143	0	112	155
Internal Link Dist (ft)	480		822			
Turn Bay Length (ft)		250		150	1000	540
Base Capacity (vph)	5116	1615	5116	1615	3009	1396
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.29	0.02	0.24	0.01	0.15	0.22

Intersection Summary



Lane Group	EBT	EBR	WBT	WBR	NBL	NBT	NBR
Lane Group Flow (vph)	1439	419	1777	684	164	281	285
v/c Ratio	0.45	0.36	0.55	0.54	0.35	0.65	0.66
Control Delay	9.5	1.8	10.6	2.5	30.2	32.6	33.1
Queue Delay	0.0	0.0	0.1	0.3	0.0	0.0	0.0
Total Delay	9.5	1.8	10.7	2.8	30.2	32.6	33.1
Queue Length 50th (ft)	127	0	173	0	70	114	116
Queue Length 95th (ft)	239	38	320	45	155	253	258
Internal Link Dist (ft)	822		339			457	
Turn Bay Length (ft)		250			1000		615
Base Capacity (vph)	4354	1423	4354	1465	875	770	767
Starvation Cap Reductn	0	0	1088	266	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.33	0.29	0.54	0.57	0.19	0.36	0.37

Intersection Summary



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	106	102	85	72	478	124	1945	128	315	1499	127
v/c Ratio	1.14	0.17	0.15	0.18	0.82	0.84	1.45	0.19	0.89	0.86	0.15
Control Delay	175.7	31.4	4.9	31.9	43.5	95.4	238.7	7.0	74.8	33.5	3.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	175.7	31.4	4.9	31.9	43.5	95.4	238.7	7.0	74.8	33.5	3.3
Queue Length 50th (ft)	~96	58	0	41	283	96	~1101	8	236	525	0
Queue Length 95th (ft)	#214	102	28	79	#457	#204	#1239	49	#387	631	32
Internal Link Dist (ft)		549			898		7898			714	
Turn Bay Length (ft)	120		120	425		415		460	400		400
Base Capacity (vph)	93	586	568	405	585	150	1339	670	376	1746	847
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.14	0.17	0.15	0.18	0.82	0.83	1.45	0.19	0.84	0.86	0.15

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
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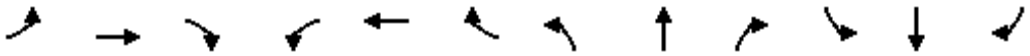

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	117	463	198	157	537	220	427	1843	300	241	1397	100
v/c Ratio	1.12	0.62	0.40	1.51	0.72	0.44	1.29	1.29	0.40	0.87	1.06	0.16
Control Delay	171.6	40.6	6.9	306.6	43.5	7.0	188.2	165.1	12.2	73.5	73.9	7.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	171.6	40.6	6.9	306.6	43.5	7.0	188.2	165.1	12.2	73.5	73.9	7.4
Queue Length 50th (ft)	~86	147	0	~140	175	0	~348	~790	52	153	~511	4
Queue Length 95th (ft)	#238	196	53	#319	228	56	#659	#1179	152	#359	#839	44
Internal Link Dist (ft)		876			804			5210			7898	
Turn Bay Length (ft)	225		225	1000		250	220		280	230		160
Base Capacity (vph)	104	1324	717	104	1324	723	331	1429	743	278	1324	642
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.13	0.35	0.28	1.51	0.41	0.30	1.29	1.29	0.40	0.87	1.06	0.16

Intersection Summary

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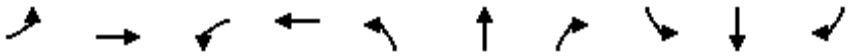
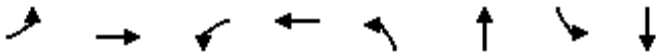


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	8	4	65	17	13	2580	126	17	1589	17
v/c Ratio	0.07	0.01	0.32	0.06	0.12	1.08	0.11	0.16	0.67	0.02
Control Delay	44.9	0.0	44.2	14.2	45.5	62.7	4.8	46.2	15.3	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	44.9	0.0	44.2	14.2	45.5	62.7	4.8	46.2	15.3	0.0
Queue Length 50th (ft)	4	0	28	1	6	498	3	8	155	0
Queue Length 95th (ft)	23	0	#139	18	32	#1719	52	38	#887	0
Internal Link Dist (ft)		810		782		6483			5210	
Turn Bay Length (ft)	200		250		500		350	430		300
Base Capacity (vph)	108	889	202	867	108	2384	1100	108	2384	1100
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.07	0.00	0.32	0.02	0.12	1.08	0.11	0.16	0.67	0.02

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	104	961	28	1353	293	2939	402	1748
v/c Ratio	1.39	0.78	0.37	1.20	0.98	2.48	1.58	1.58
Control Delay	279.2	40.6	70.2	133.6	96.6	687.6	312.1	296.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	279.2	40.6	70.2	133.6	96.6	687.6	312.1	296.0
Queue Length 50th (ft)	~107	360	22	~656	228	~2009	~442	~1021
Queue Length 95th (ft)	#223	446	54	#797	#406	#2134	#640	#1163
Internal Link Dist (ft)		1117		1265		3985		1763
Turn Bay Length (ft)	340		250		280		250	
Base Capacity (vph)	75	1231	75	1129	300	1187	255	1106
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.39	0.78	0.37	1.20	0.98	2.48	1.58	1.58

Intersection Summary

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Queue shown is maximum after two cycles.

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Queue shown is maximum after two cycles.

Intersection	
Int Delay, s/veh	94.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	91	762	2308	188	512	1191
Future Vol, veh/h	91	762	2308	188	512	1191
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	375	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	98	98	98	98	98	98
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	93	778	2355	192	522	1215

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	4710	1274	0	0	2547	0
Stage 1	2451	-	-	-	-	-
Stage 2	2259	-	-	-	-	-
Critical Hdwy	6.6	6.9	-	-	4.1	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	~ 1	~ 161	-	-	~ 177	-
Stage 1	~ 52	-	-	-	-	-
Stage 2	~ 86	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	0	~ 161	-	-	~ 177	-
Mov Cap-2 Maneuver	0	-	-	-	-	-
Stage 1	~ 52	-	-	-	-	-
Stage 2	0	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s		0	280.6
HCM LOS	-		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	-	161	~ 177	-
HCM Lane V/C Ratio	-	-	-	4.83	2.952	-
HCM Control Delay (s)	-	-	$ 1778.4	$ 933.4		-
HCM Lane LOS	-	-	-	F	F	-
HCM 95th %tile Q(veh)	-	-	-	80.7	47.3	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	90	291	234	8	179	236	2279	212	69	1126	113
v/c Ratio	0.30	0.51	2.02	0.02	0.42	0.81	1.04	0.21	0.92	0.64	0.13
Control Delay	43.5	8.1	513.4	38.1	18.3	69.4	54.0	3.8	141.0	25.6	3.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	10.1	0.0	0.0	0.0	0.0
Total Delay	43.5	8.1	513.4	38.1	18.3	69.4	64.1	3.8	141.0	25.6	3.5
Queue Length 50th (ft)	59	1	~283	5	39	177	~1002	19	54	335	0
Queue Length 95th (ft)	110	75	#446	19	107	259	#1136	51	#149	437	31
Internal Link Dist (ft)		773		663			859			1974	
Turn Bay Length (ft)	50		400		400	190			225		225
Base Capacity (vph)	297	566	116	395	429	361	2196	1020	75	1764	849
Starvation Cap Reductn	0	0	0	0	0	0	53	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.30	0.51	2.02	0.02	0.42	0.65	1.06	0.21	0.92	0.64	0.13

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	418	173	118	78	488	36	1849	126	206	1391	68
v/c Ratio	0.92	0.27	0.32	0.12	0.59	0.44	1.30	0.18	0.72	0.71	0.08
Control Delay	62.7	27.2	30.3	26.2	7.1	72.5	170.9	10.0	60.1	23.3	5.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	62.7	27.2	30.3	26.2	7.1	72.5	170.9	10.0	60.1	23.3	5.5
Queue Length 50th (ft)	299	90	65	40	22	28	~975	17	154	447	4
Queue Length 95th (ft)	#486	147	116	76	110	#70	#1197	63	224	538	28
Internal Link Dist (ft)		1110		807			892			859	
Turn Bay Length (ft)	100		65		65	190			195		230
Base Capacity (vph)	522	731	428	739	892	81	1422	691	457	1961	903
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.80	0.24	0.28	0.11	0.55	0.44	1.30	0.18	0.45	0.71	0.08

Intersection Summary

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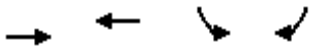
Queue shown is maximum after two cycles.



Lane Group	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	1807	1901	787	572
v/c Ratio	0.75	0.79	0.52	0.81
Control Delay	24.6	25.8	21.4	33.7
Queue Delay	0.2	0.0	0.0	0.0
Total Delay	24.8	25.8	21.4	33.7
Queue Length 50th (ft)	319	346	191	315
Queue Length 95th (ft)	506	546	250	467
Internal Link Dist (ft)	480	822		
Turn Bay Length (ft)			1000	540
Base Capacity (vph)	2891	2891	2256	1045
Starvation Cap Reductn	324	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.70	0.66	0.35	0.55

Intersection Summary



Lane Group	EBT	EBR	WBT	WBR	NBL	NBT	NBR
Lane Group Flow (vph)	2272	322	1904	577	261	605	605
v/c Ratio	0.91	0.36	0.77	0.56	0.33	0.88	0.88
Control Delay	35.7	6.8	28.2	5.4	22.2	44.9	44.9
Queue Delay	0.0	0.0	46.1	0.9	0.0	0.0	0.0
Total Delay	35.7	6.8	74.3	6.3	22.2	44.9	44.9
Queue Length 50th (ft)	602	37	448	30	124	416	416
Queue Length 95th (ft)	#702	98	512	113	187	#648	#648
Internal Link Dist (ft)	822		339			457	
Turn Bay Length (ft)		250			1000		615
Base Capacity (vph)	2486	897	2486	1038	865	743	743
Starvation Cap Reductn	0	0	750	216	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.91	0.36	1.10	0.70	0.30	0.81	0.81

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

APPENDIX 7.6:

HORIZON YEAR (2040) WITH PROJECT CONDITIONS QUEUING ANALYSIS WORKSHEETS

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Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	75	187	138	116	544	68	1232	67	323	1953	128
v/c Ratio	1.15	0.30	0.23	0.33	0.86	0.76	0.99	0.11	0.88	1.08	0.15
Control Delay	198.9	32.0	9.3	34.0	44.3	101.0	62.5	3.1	70.3	77.1	3.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	198.9	32.0	9.3	34.0	44.3	101.0	62.5	3.1	70.3	77.1	3.2
Queue Length 50th (ft)	~69	108	15	68	313	53	~543	0	239	~891	0
Queue Length 95th (ft)	#170	170	62	122	#516	#134	#684	19	#377	#1029	32
Internal Link Dist (ft)		549			898		7898			714	
Turn Bay Length (ft)	120		120	425		415		460	400		400
Base Capacity (vph)	65	617	599	350	629	90	1247	602	406	1805	871
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.15	0.30	0.23	0.33	0.86	0.76	0.99	0.11	0.80	1.08	0.15

Intersection Summary

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Queue shown is maximum after two cycles.

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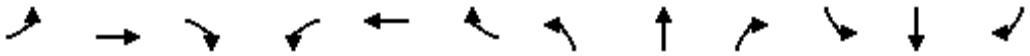
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	82	478	327	259	358	142	153	1085	144	320	1832	48
v/c Ratio	0.78	0.67	0.66	1.64	0.44	0.30	0.79	0.81	0.21	1.13	1.21	0.07
Control Delay	93.0	42.4	19.4	345.3	35.1	6.6	74.5	36.0	6.2	136.2	128.7	0.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	93.0	42.4	19.4	345.3	35.1	6.6	74.5	36.0	6.2	136.2	128.7	0.8
Queue Length 50th (ft)	53	153	63	~238	106	0	97	319	4	~236	~745	0
Queue Length 95th (ft)	#166	203	151	#478	145	44	#250	#570	52	#504	#1144	4
Internal Link Dist (ft)		876			804			5210			7898	
Turn Bay Length (ft)	225		225	1000		250	220		280	230		160
Base Capacity (vph)	105	1341	735	158	1447	732	194	1341	684	282	1517	731
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.78	0.36	0.44	1.64	0.25	0.19	0.79	0.81	0.21	1.13	1.21	0.07

Intersection Summary

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Queue shown is maximum after two cycles.

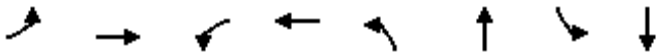


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	14	36	131	41	11	1290	90	10	2515	12
v/c Ratio	0.13	0.11	0.67	0.09	0.10	0.61	0.09	0.09	1.19	0.01
Control Delay	47.8	13.7	57.9	10.4	47.2	17.7	3.9	47.1	111.2	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	47.8	13.7	57.9	10.4	47.2	17.7	3.9	47.1	111.2	0.0
Queue Length 50th (ft)	7	4	63	3	5	205	0	5	~810	0
Queue Length 95th (ft)	33	27	#243	28	29	#671	29	26	#1703	0
Internal Link Dist (ft)		810		782		6483			5210	
Turn Bay Length (ft)	200		250		500		350	430		300
Base Capacity (vph)	109	891	195	943	109	2115	987	109	2115	987
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.13	0.04	0.67	0.04	0.10	0.61	0.09	0.09	1.19	0.01

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	107	1300	24	1931	247	1663	391	2463
v/c Ratio	0.89	1.03	0.32	1.78	1.27	1.68	1.13	1.91
Control Delay	113.0	71.4	67.3	381.6	197.5	339.4	133.8	438.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	113.0	71.4	67.3	381.6	197.5	339.4	133.8	438.2
Queue Length 50th (ft)	84	~607	18	~1163	~241	~999	~351	~1558
Queue Length 95th (ft)	#193	#747	48	#1303	#407	#1141	#546	#1693
Internal Link Dist (ft)		1117		1265		3985		1763
Turn Bay Length (ft)	340		250		280		250	
Base Capacity (vph)	120	1262	75	1085	195	991	345	1289
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.89	1.03	0.32	1.78	1.27	1.68	1.13	1.91

Intersection Summary

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Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Intersection	
Int Delay, s/veh	29.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	122	432	1401	68	565	1958
Future Vol, veh/h	122	432	1401	68	565	1958
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	375	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	131	465	1506	73	608	2105

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	4864	790	0	0	1579	0
Stage 1	1543	-	-	-	-	-
Stage 2	3321	-	-	-	-	-
Critical Hdwy	6.6	6.9	-	-	4.1	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	~ 1	~ 337	-	-	~ 422	-
Stage 1	165	-	-	-	-	-
Stage 2	~ 24	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	0	~ 337	-	-	~ 422	-
Mov Cap-2 Maneuver	0	-	-	-	-	-
Stage 1	165	-	-	-	-	-
Stage 2	0	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s		0	52.9
HCM LOS	-		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	-	337	~ 422	-
HCM Lane V/C Ratio	-	-	-	1.378	1.44	-
HCM Control Delay (s)	-	-	-	218.6	236.2	-
HCM Lane LOS	-	-	-	F	F	-
HCM 95th %tile Q(veh)	-	-	-	23.4	30.6	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	76	298	252	2	63	268	1458	154	48	2068	145
v/c Ratio	0.19	0.56	1.29	0.00	0.13	1.79	0.74	0.17	0.49	1.15	0.17
Control Delay	34.9	26.8	198.3	31.5	6.6	411.4	24.3	3.5	72.5	102.2	8.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	34.9	26.8	198.3	31.5	6.6	411.4	24.3	3.5	72.5	102.2	8.1
Queue Length 50th (ft)	45	119	~248	1	0	~311	456	5	37	~988	25
Queue Length 95th (ft)	87	213	#415	8	29	#482	550	38	78	#1126	61
Internal Link Dist (ft)		773		663			859			1974	
Turn Bay Length (ft)	50		400		400	190			225		225
Base Capacity (vph)	395	529	196	522	490	150	1971	926	105	1805	847
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.19	0.56	1.29	0.00	0.13	1.79	0.74	0.17	0.46	1.15	0.17

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	67	84	140	97	296	14	1518	90	302	2059	258
v/c Ratio	0.25	0.22	0.52	0.25	0.53	0.14	0.94	0.12	0.79	0.83	0.22
Control Delay	31.6	29.5	38.2	30.8	7.0	50.5	38.5	5.8	50.8	17.1	4.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	31.6	29.5	38.2	30.8	7.0	50.5	38.5	5.8	50.8	17.1	4.5
Queue Length 50th (ft)	31	37	68	45	0	7	378	0	148	291	14
Queue Length 95th (ft)	69	79	131	90	59	33	#931	36	#324	#1104	95
Internal Link Dist (ft)		1110		807			892			859	
Turn Bay Length (ft)	100		65		65	190			195		230
Base Capacity (vph)	632	918	648	923	927	102	1621	775	550	2492	1160
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.11	0.09	0.22	0.11	0.32	0.14	0.94	0.12	0.55	0.83	0.22

Intersection Summary

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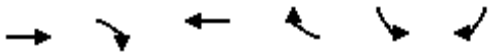

Lane Group	EBT	EBR	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	1555	119	1785	24	457	771
v/c Ratio	0.65	0.07	0.75	0.01	0.29	1.06
Control Delay	21.8	0.1	24.0	0.0	19.7	78.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	21.9	0.1	24.0	0.0	19.7	78.9
Queue Length 50th (ft)	269	0	330	0	92	~535
Queue Length 95th (ft)	313	0	381	0	160	#923
Internal Link Dist (ft)	480		822			
Turn Bay Length (ft)		250		150	1000	540
Base Capacity (vph)	3463	1615	3463	1615	1563	729
Starvation Cap Reductn	354	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.50	0.07	0.52	0.01	0.29	1.06

Intersection Summary

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95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBT	EBR	WBT	WBR	NBL	NBT	NBR
Lane Group Flow (vph)	1454	495	1864	684	638	281	285
v/c Ratio	0.50	0.44	0.63	0.56	1.02	0.50	0.51
Control Delay	14.5	2.2	16.7	2.7	77.5	29.1	29.4
Queue Delay	0.0	0.0	0.6	0.6	0.0	0.0	0.0
Total Delay	14.5	2.2	17.3	3.3	77.5	29.1	29.4
Queue Length 50th (ft)	208	0	300	0	~502	141	144
Queue Length 95th (ft)	243	40	344	45	#802	254	258
Internal Link Dist (ft)	822		339			457	
Turn Bay Length (ft)		250			1000		615
Base Capacity (vph)	3543	1260	3543	1320	628	565	563
Starvation Cap Reductn	0	0	1140	292	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.41	0.39	0.78	0.67	1.02	0.50	0.51

Intersection Summary

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Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	106	102	85	74	478	124	1986	136	315	1507	127
v/c Ratio	1.14	0.17	0.15	0.18	0.82	0.84	1.48	0.20	0.89	0.86	0.15
Control Delay	175.7	31.4	4.9	32.0	43.5	95.4	251.9	7.2	74.8	33.8	3.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	175.7	31.4	4.9	32.0	43.5	95.4	251.9	7.2	74.8	33.8	3.3
Queue Length 50th (ft)	~96	58	0	42	283	96	~1136	9	236	529	0
Queue Length 95th (ft)	#214	102	28	82	#457	#204	#1274	52	#387	636	32
Internal Link Dist (ft)		549			898		7898			714	
Turn Bay Length (ft)	120		120	425		415		460	400		400
Base Capacity (vph)	93	586	568	405	585	150	1339	673	376	1746	847
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.14	0.17	0.15	0.18	0.82	0.83	1.48	0.20	0.84	0.86	0.15

Intersection Summary

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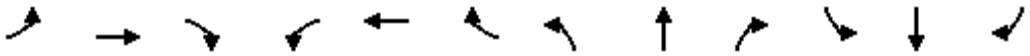

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	117	463	198	164	537	220	427	1894	336	241	1407	100
v/c Ratio	1.12	0.62	0.40	1.58	0.72	0.44	1.29	1.33	0.45	0.87	1.06	0.16
Control Delay	171.6	40.6	6.9	333.2	43.5	7.0	188.2	180.4	12.9	73.5	76.4	7.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	171.6	40.6	6.9	333.2	43.5	7.0	188.2	180.4	12.9	73.5	76.4	7.4
Queue Length 50th (ft)	~86	147	0	~149	175	0	~348	~826	62	153	~518	4
Queue Length 95th (ft)	#238	196	53	#332	228	56	#659	#1222	175	#359	#847	44
Internal Link Dist (ft)		876			804			5210			7898	
Turn Bay Length (ft)	225		225	1000		250	220		280	230		160
Base Capacity (vph)	104	1324	717	104	1324	723	331	1429	752	278	1324	642
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.13	0.35	0.28	1.58	0.41	0.30	1.29	1.33	0.45	0.87	1.06	0.16

Intersection Summary

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Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	8	6	69	17	21	2666	144	17	1607	17
v/c Ratio	0.07	0.02	0.34	0.06	0.19	1.12	0.13	0.16	0.68	0.02
Control Delay	44.8	0.0	44.2	14.1	46.6	78.7	5.3	45.9	15.5	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	44.8	0.0	44.2	14.1	46.6	78.7	5.3	45.9	15.5	0.0
Queue Length 50th (ft)	4	0	29	1	9	~704	5	8	158	0
Queue Length 95th (ft)	23	0	#149	18	44	#1791	64	38	#902	0
Internal Link Dist (ft)		810		782		6483			5210	
Turn Bay Length (ft)	200		250		500		350	430		300
Base Capacity (vph)	109	894	203	874	109	2378	1098	109	2378	1098
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.07	0.01	0.34	0.02	0.19	1.12	0.13	0.16	0.68	0.02

Intersection Summary

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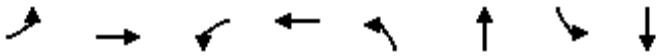

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	104	1694	28	1559	312	2958	744	1836
v/c Ratio	1.39	1.38	0.37	1.38	1.04	2.49	2.92	1.66
Control Delay	279.2	206.4	70.2	210.1	111.5	694.7	893.1	329.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	279.2	206.4	70.2	210.1	111.5	694.7	893.1	329.7
Queue Length 50th (ft)	~107	~963	22	~836	~260	~2025	~993	~1096
Queue Length 95th (ft)	#223	#1105	54	#978	#441	#2151	#1230	#1237
Internal Link Dist (ft)		1117		1265		3985		1763
Turn Bay Length (ft)	340		250		280		250	
Base Capacity (vph)	75	1232	75	1128	300	1187	255	1107
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.39	1.38	0.37	1.38	1.04	2.49	2.92	1.66

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Intersection	
Int Delay, s/veh	95.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	91	762	2345	188	512	1359
Future Vol, veh/h	91	762	2345	188	512	1359
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	375	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	98	98	98	98	98	98
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	93	778	2393	192	522	1387

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	4920	1293	0	0	2585	0
Stage 1	2489	-	-	-	-	-
Stage 2	2431	-	-	-	-	-
Critical Hdwy	6.6	6.9	-	-	4.1	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	~ 1	~ 156	-	-	~ 171	-
Stage 1	~ 50	-	-	-	-	-
Stage 2	~ 70	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	0	~ 156	-	-	~ 171	-
Mov Cap-2 Maneuver	0	-	-	-	-	-
Stage 1	~ 50	-	-	-	-	-
Stage 2	0	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s		0	268.5
HCM LOS	-		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	-	156	~ 171	-
HCM Lane V/C Ratio	-	-	-	4.984	3.055	-
HCM Control Delay (s)	-	-	$ 1849.4	$ 981.2		-
HCM Lane LOS	-	-	-	F	F	-
HCM 95th %tile Q(veh)	-	-	-	81.3	48	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	90	291	234	8	179	236	2316	212	69	1297	113
v/c Ratio	0.30	0.51	2.02	0.02	0.42	0.81	1.05	0.21	0.92	0.74	0.13
Control Delay	43.5	8.1	513.4	38.1	18.3	69.4	59.7	3.9	141.0	28.4	3.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	10.3	0.0	0.0	0.0	0.0
Total Delay	43.5	8.1	513.4	38.1	18.3	69.4	70.1	3.9	141.0	28.4	3.5
Queue Length 50th (ft)	59	1	~283	5	39	177	~1033	19	54	414	0
Queue Length 95th (ft)	110	75	#446	19	107	259	#1167	51	#149	537	31
Internal Link Dist (ft)		773		663			859			1974	
Turn Bay Length (ft)	50		400		400	190			225		225
Base Capacity (vph)	297	566	116	395	429	361	2196	1019	75	1764	849
Starvation Cap Reductn	0	0	0	0	0	0	51	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.30	0.51	2.02	0.02	0.42	0.65	1.08	0.21	0.92	0.74	0.13

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	418	173	118	78	495	36	1879	126	241	1530	68
v/c Ratio	0.92	0.27	0.32	0.12	0.59	0.44	1.39	0.19	0.76	0.78	0.08
Control Delay	62.7	27.2	30.3	26.2	7.5	72.5	209.1	10.7	59.4	25.7	5.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	62.7	27.2	30.3	26.2	7.5	72.5	209.1	10.7	59.4	25.7	5.8
Queue Length 50th (ft)	299	90	65	40	26	28	~1030	17	180	524	5
Queue Length 95th (ft)	#486	147	116	76	118	#70	#1258	65	254	630	29
Internal Link Dist (ft)		1110		807			892			859	
Turn Bay Length (ft)	100		65		65	190			195		230
Base Capacity (vph)	522	731	428	739	892	81	1354	662	457	1961	902
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.80	0.24	0.28	0.11	0.55	0.44	1.39	0.19	0.53	0.78	0.08

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBT	EBR	WBT	SBL	SBR
Lane Group Flow (vph)	2322	452	2013	787	662
v/c Ratio	0.96	0.28	0.83	0.50	0.90
Control Delay	40.9	0.4	31.0	22.4	44.3
Queue Delay	36.2	0.0	0.0	0.0	0.0
Total Delay	77.1	0.4	31.0	22.4	44.3
Queue Length 50th (ft)	605	0	473	198	415
Queue Length 95th (ft)	#808	0	596	250	597
Internal Link Dist (ft)	480		822		
Turn Bay Length (ft)		250		1000	540
Base Capacity (vph)	2424	1615	2424	1891	879
Starvation Cap Reductn	280	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	1.08	0.28	0.83	0.42	0.75

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBT	EBR	WBT	WBR	NBL	NBT	NBR
Lane Group Flow (vph)	2359	749	1923	577	355	605	605
v/c Ratio	0.95	0.72	0.78	0.56	0.44	0.88	0.88
Control Delay	40.5	11.2	28.8	5.6	24.2	44.1	44.1
Queue Delay	0.0	0.0	47.5	0.9	0.0	0.0	0.0
Total Delay	40.5	11.2	76.3	6.5	24.2	44.1	44.1
Queue Length 50th (ft)	645	125	455	32	180	416	416
Queue Length 95th (ft)	#779	284	520	117	261	#648	#648
Internal Link Dist (ft)	822		339			457	
Turn Bay Length (ft)		250			1000		615
Base Capacity (vph)	2472	1047	2472	1032	860	739	739
Starvation Cap Reductn	0	0	745	215	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.95	0.72	1.11	0.71	0.41	0.82	0.82

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

APPENDIX 7.7:

HORIZON YEAR (2040) WITHOUT PROJECT CONDITIONS FREEWAY FACILITY ANALYSIS WORKSHEETS

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HCS7 Freeway Facilities Report

Project Information

Analyst	JB	Date	6/30/2020
Agency	Urban Crossroads, Inc.	Analysis Year	Horizon Year (2040) Without Project
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	Hesperia Commerce Center II (JN 12778) - I-15 SB at Main		

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	7
Total Time Periods	1	Time Period Duration, min	15

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	I-15 SB, North of Main St.	16360	3
2	Diverge	Diverge	I-15 SB, Off-Ramp at Main St.	1500	3
3	Basic	Basic	I-15 SB, Between Off and Loop On-Ramp	975	3
4	Merge	Merge	I-15 SB, Loop On-Ramp at Main St.	1500	3
5	Basic	Basic	I-15 SB, Between Loop On-Ramp and On-Ramp	1415	3
6	Merge	Merge	I-15 SB, On-Ramp at Main St.	1500	3
7	Basic	Basic	I-15 SB, South of Main St.	5900	3

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.962	6409	7146	0.90	59.0	36.2	E

Segment 2: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.962	0.901	6409	807	7200	2100	0.89	0.38	63.5	59.6	33.6	37.3	E

Segment 3: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.971	5600	7146	0.78	63.8	29.3	D

Segment 4: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.971	0.971	6355	755	7200	1900	0.88	0.40	58.0	55.3	36.5	34.5	D

Segment 5: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.971	6355	7146	0.89	59.3	35.7	E

Segment 6: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.971	0.971	6796	441	7200	2100	0.94	0.21	57.4	55.0	39.5	35.0	D

Segment 7: Basic

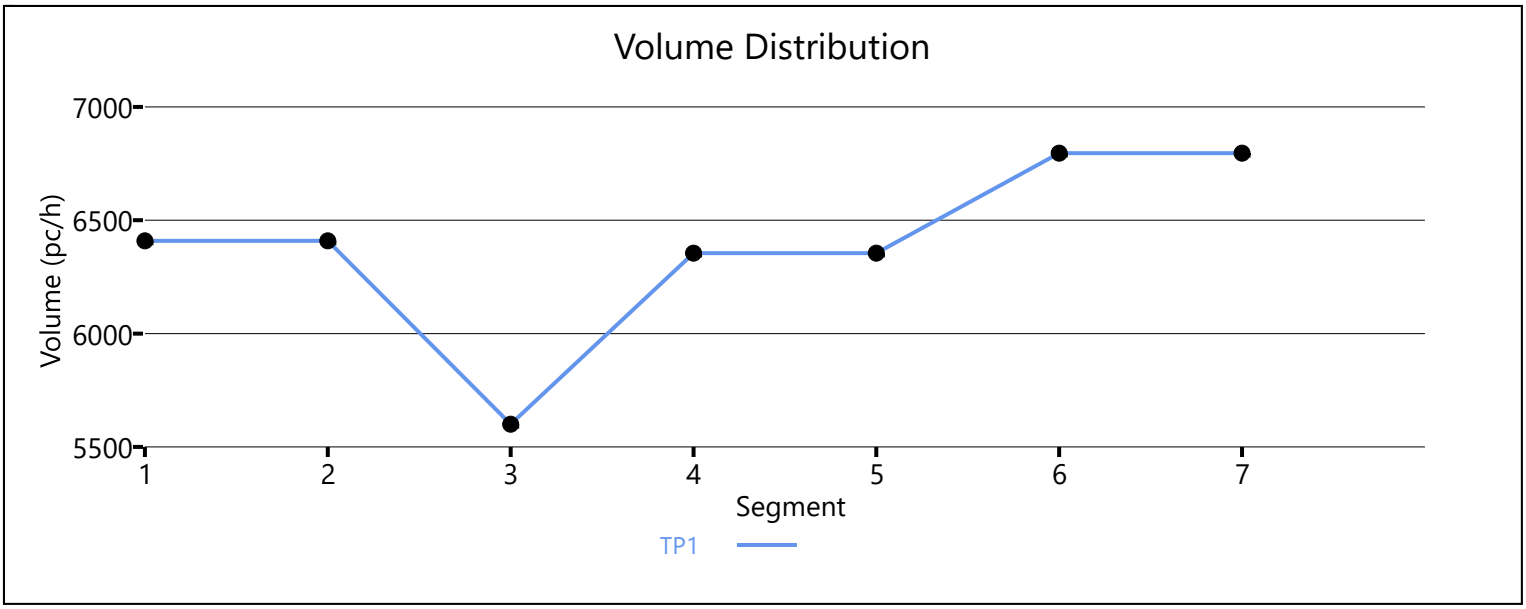
Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.971	6796	7146	0.95	56.0	40.4	E

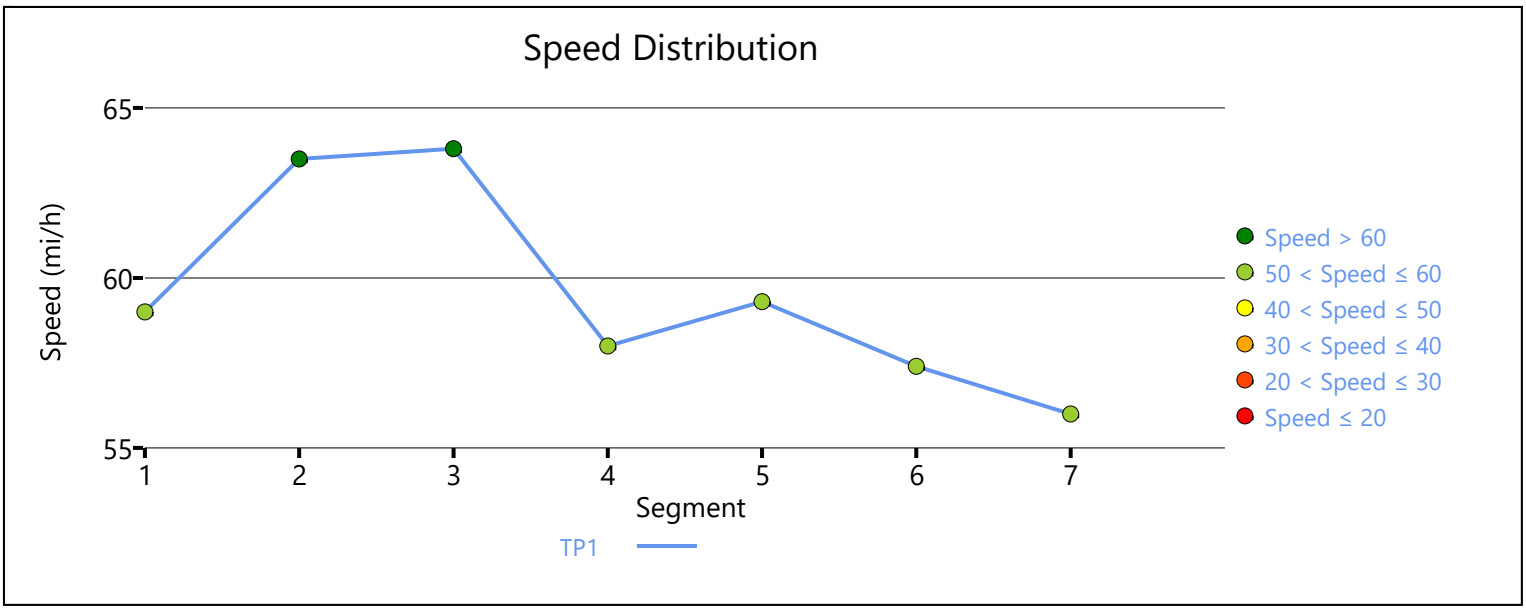
Facility Time Period Results

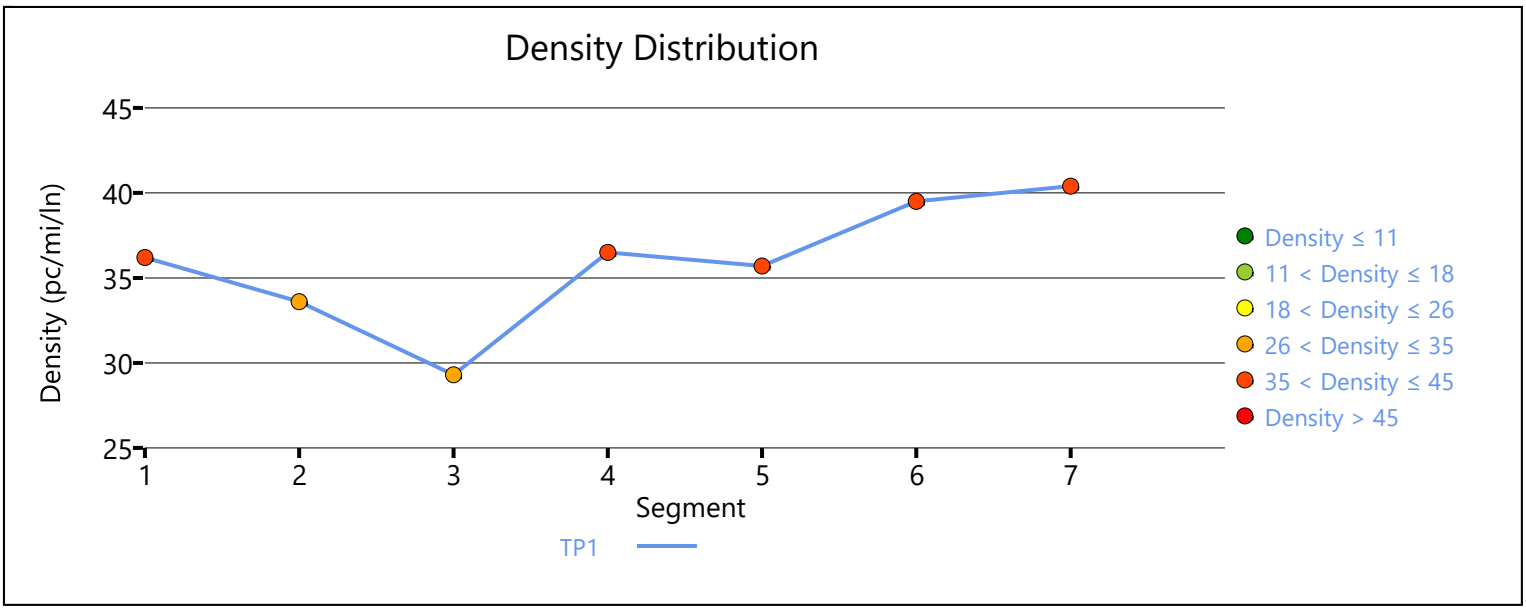
T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	58.5	36.9	35.6	5.7	E

Facility Overall Results

Space Mean Speed, mi/h	58.5	Density, veh/mi/ln	35.6
Average Travel Time, min	5.7	Density, pc/mi/ln	36.9







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HCS7 Freeway Facilities Report

Project Information

Analyst	JB	Date	6/30/2020
Agency	Urban Crossroads, Inc.	Analysis Year	Horizon Year (2040) Without Project
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	Hesperia Commerce Center II (JN:12778) - I-15 Southbound at US Highway 395		

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	3
Total Time Periods	1	Time Period Duration, min	15

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	North of US 395	4200	3
2	Merge	Basic	On-Ramp at US 395	1500	4
3	Basic	Basic	South of US 395	4200	4

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.971	8043	7179	1.12	53.2	45.0	F

Segment 2: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.971	0.893	8542	2438	9600	2100	0.84	1.16	53.1	-	40.2	-	F

Segment 3: Basic

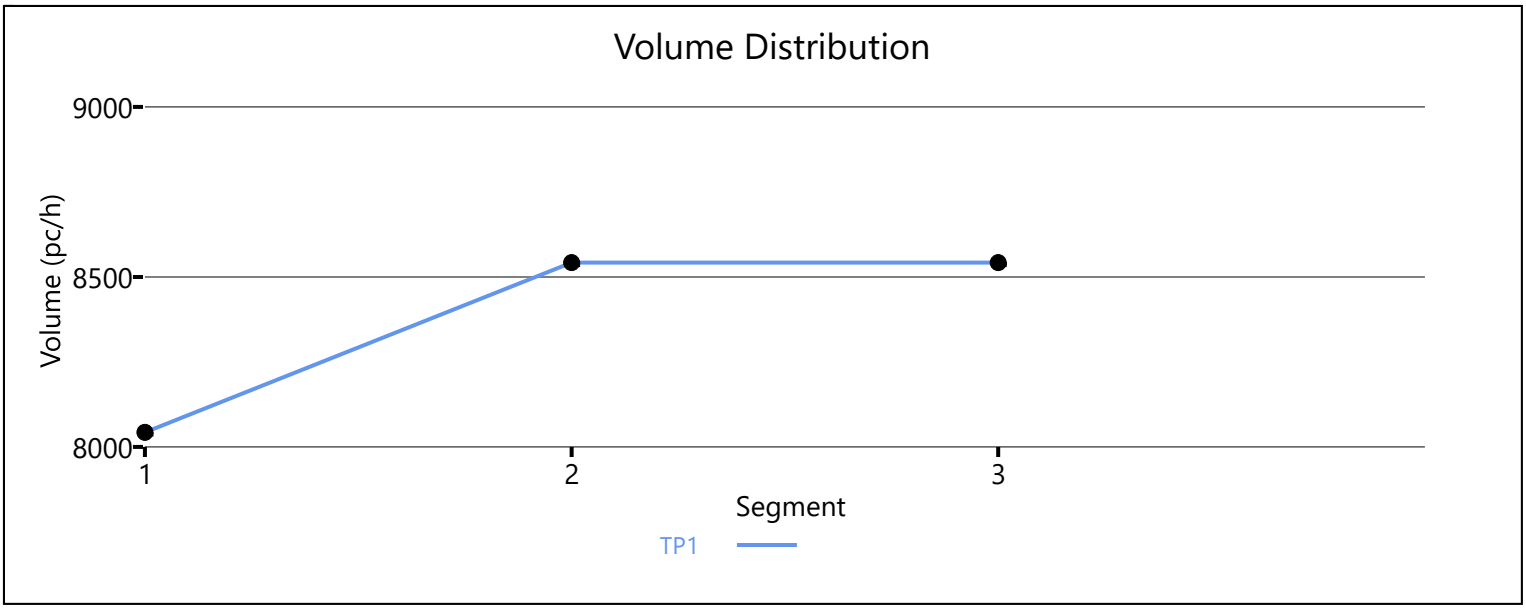
Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.952	8542	9572	1.10	59.9	35.7	F

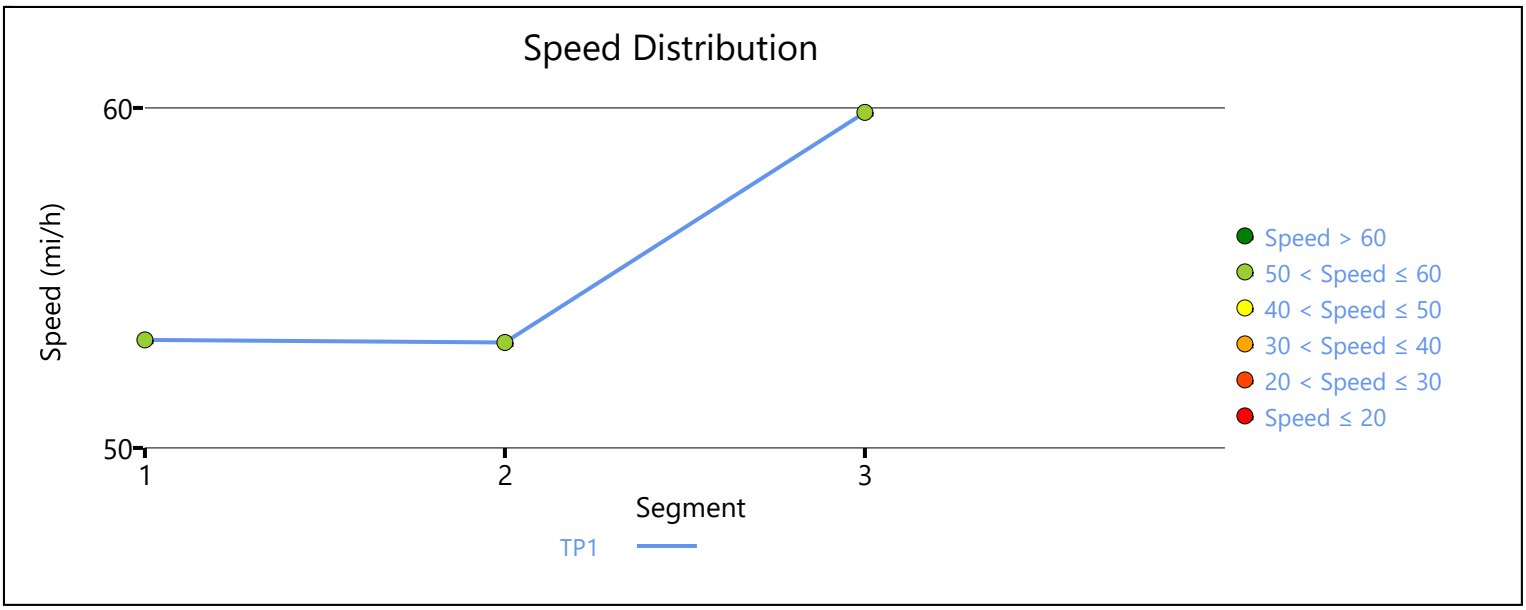
Facility Time Period Results

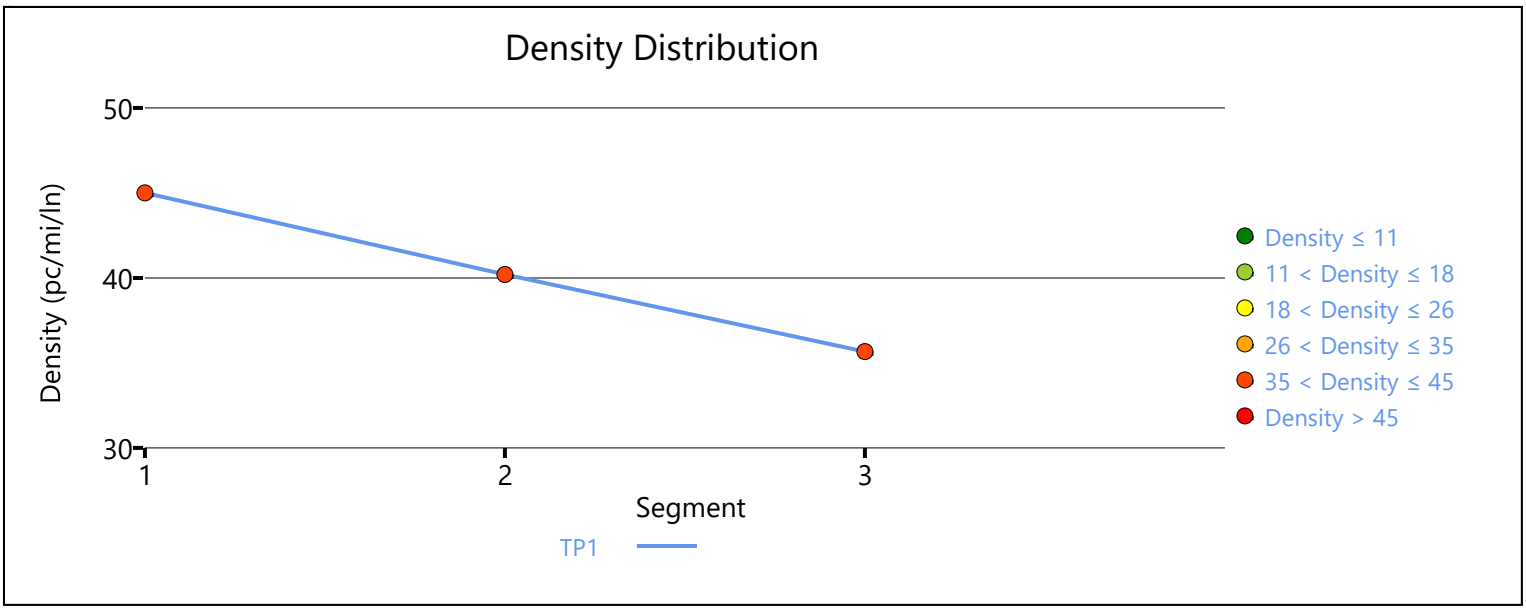
T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	55.5	40.0	38.5	2.0	F

Facility Overall Results

Space Mean Speed, mi/h	55.5	Density, veh/mi/ln	38.5
Average Travel Time, min	2.0	Density, pc/mi/ln	40.0







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HCS7 Freeway Facilities Report

Project Information

Analyst	JB	Date	6/30/2020
Agency	Urban Crossroads, Inc.	Analysis Year	Horizon Year (2040) Without Project
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	Hesperia Commerce Center II (JN 12778) - I-15 NB at Main		

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	7
Total Time Periods	1	Time Period Duration, min	15

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	I-15 NB, South of Main St.	6140	3
2	Diverge	Diverge	I-15 NB, Off-Ramp at Main St.	1500	3
3	Basic	Basic	I-15 NB, Between Off-Ramp and Loop On-Ramp	1125	3
4	Merge	Merge	I-15 NB, Loop On-Ramp at Main St.	1500	3
5	Basic	Basic	I-15 NB, Between Loop On-Ramp and On-Ramp	1215	3
6	Merge	Merge	I-15 NB, On-Ramp at Main St.	1500	3
7	Basic	Basic	I-15 NB, North of Main St.	16370	3

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.971	4789	7146	0.67	66.9	23.9	C

Segment 2: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.971	0.926	4789	840	7200	2100	0.67	0.40	63.7	59.5	25.1	30.7	D

Segment 3: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.980	3951	7146	0.55	68.2	19.3	C

Segment 4: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.980	0.962	4415	464	7200	1900	0.61	0.24	62.0	59.9	23.7	24.1	C

Segment 5: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.971	4447	7146	0.62	67.7	21.9	C

Segment 6: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.971	0.971	5206	759	7200	2100	0.72	0.36	60.9	58.8	28.5	29.0	D

Segment 7: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.971	5206	7146	0.73	65.5	26.5	D

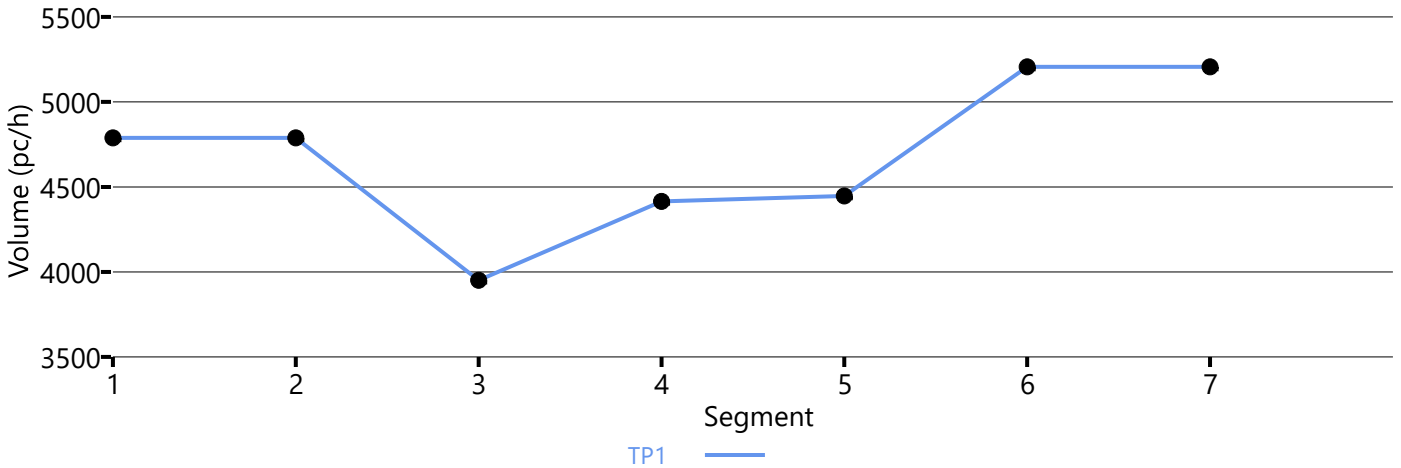
Facility Time Period Results

T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	65.4	25.4	24.6	5.1	C

Facility Overall Results

Space Mean Speed, mi/h	65.4	Density, veh/mi/ln	24.6
Average Travel Time, min	5.1	Density, pc/mi/ln	25.4

Volume Distribution



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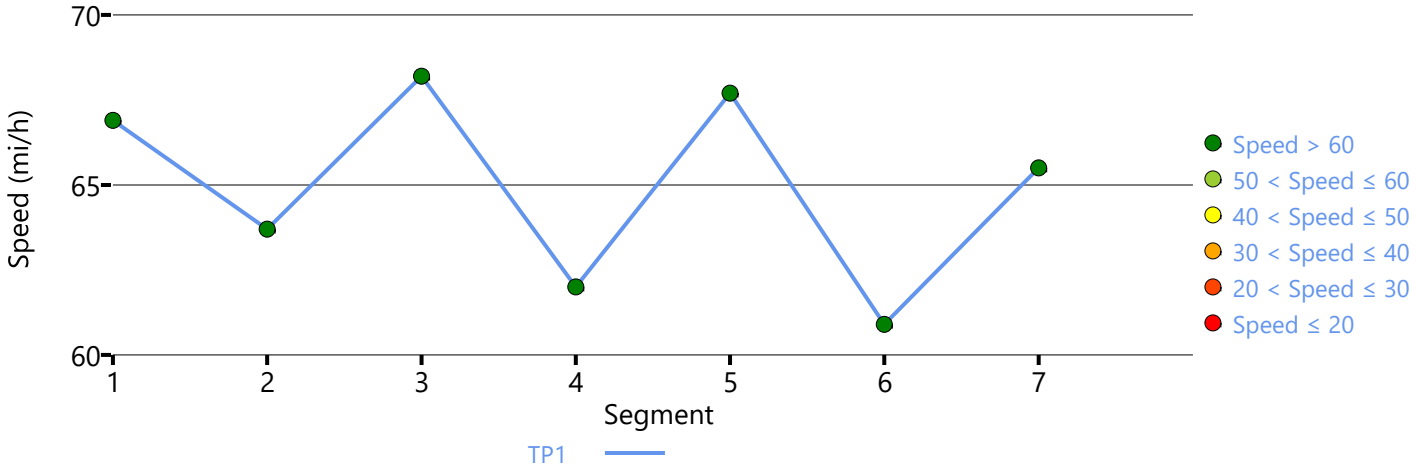

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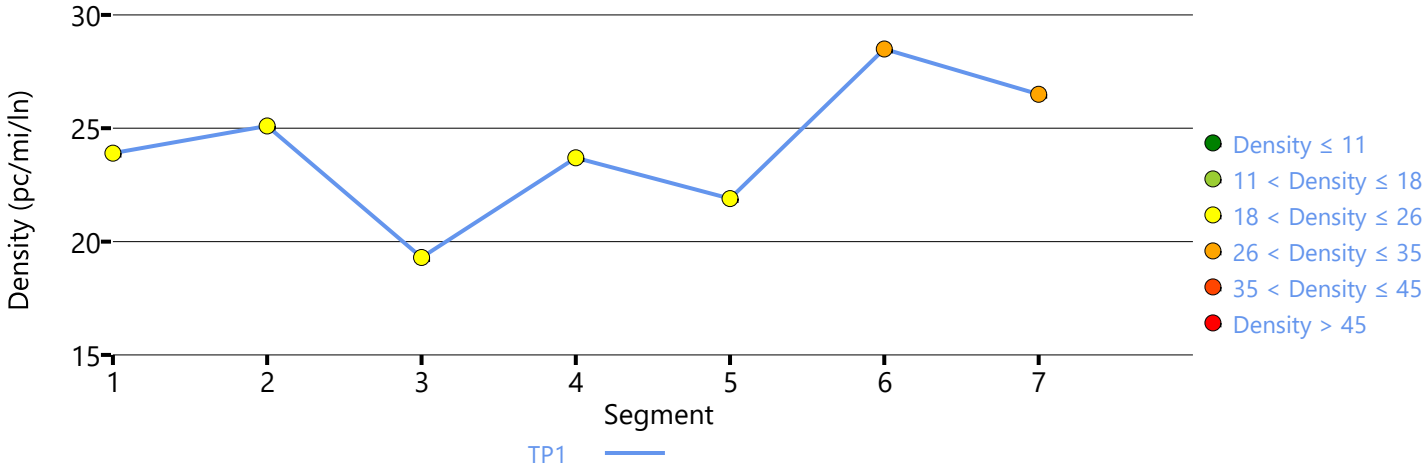

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HCS7 Freeway Facilities Report

Project Information

Analyst	JB	Date	6/30/2020
Agency	Urban Crossroads, Inc.	Analysis Year	Horizon Year (2040) Without Project
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	Hesperia Commerce Center II (JN:12778) - I-15 NB at US 395		

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	3
Total Time Periods	1	Time Period Duration, min	15

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	South of US 395	2000	4
2	Diverge	Diverge	Off-Ramp at US 395	1500	4
3	Basic	Basic	North of US 395	6350	4

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.943	7050	9572	0.74	65.9	26.7	D

Segment 2: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.943	0.870	7050	1694	9600	2100	0.73	0.81	63.8	57.4	27.6	33.6	D

Segment 3: Basic

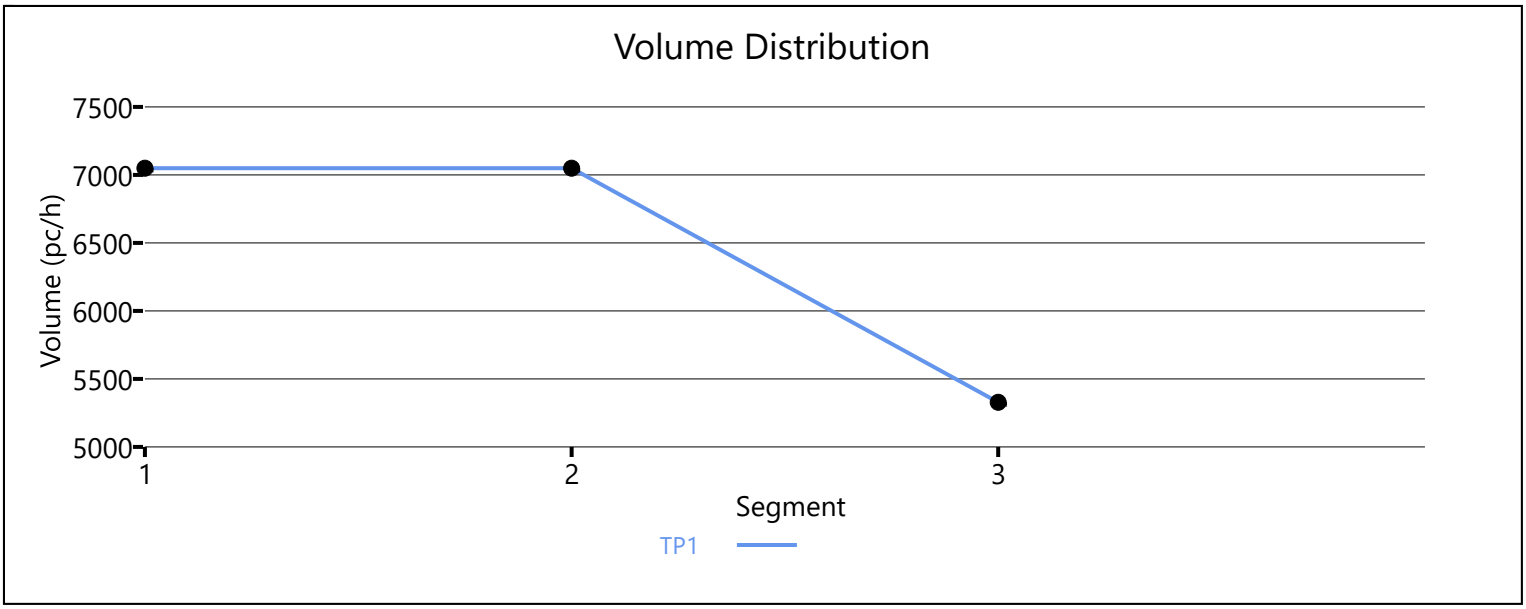
Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.971	5328	9572	0.56	69.2	19.2	C

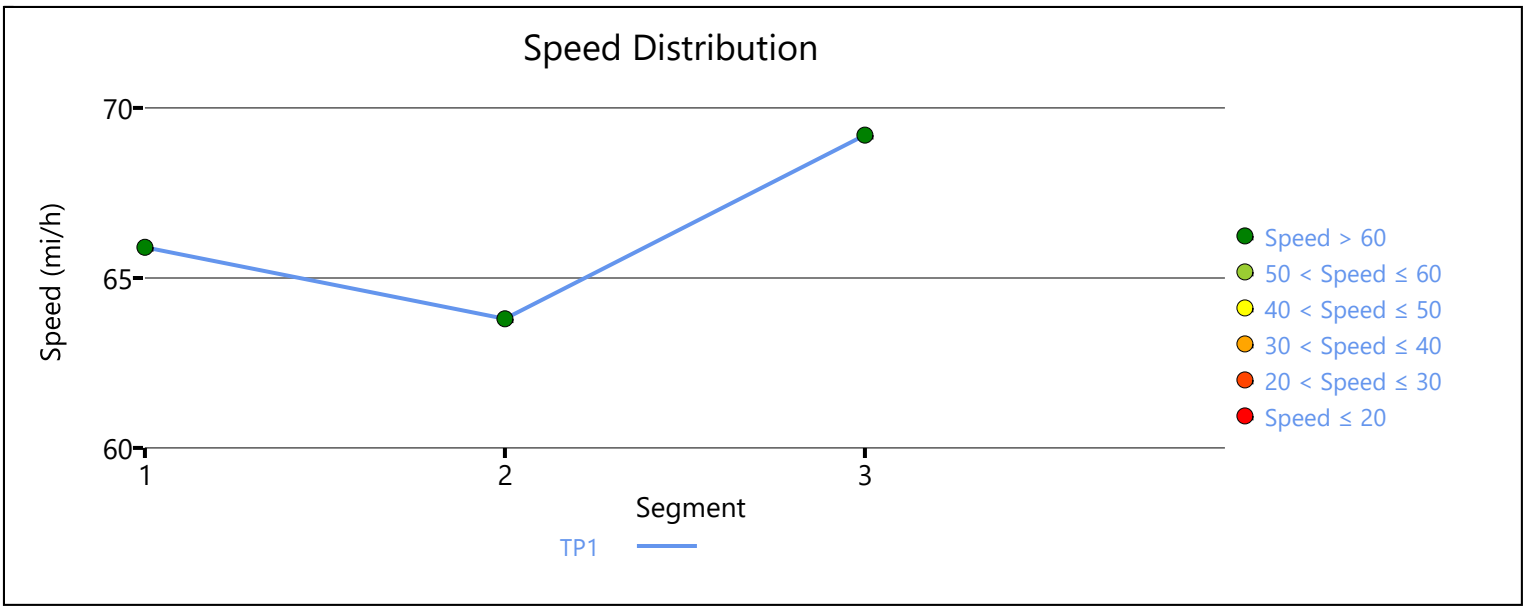
Facility Time Period Results

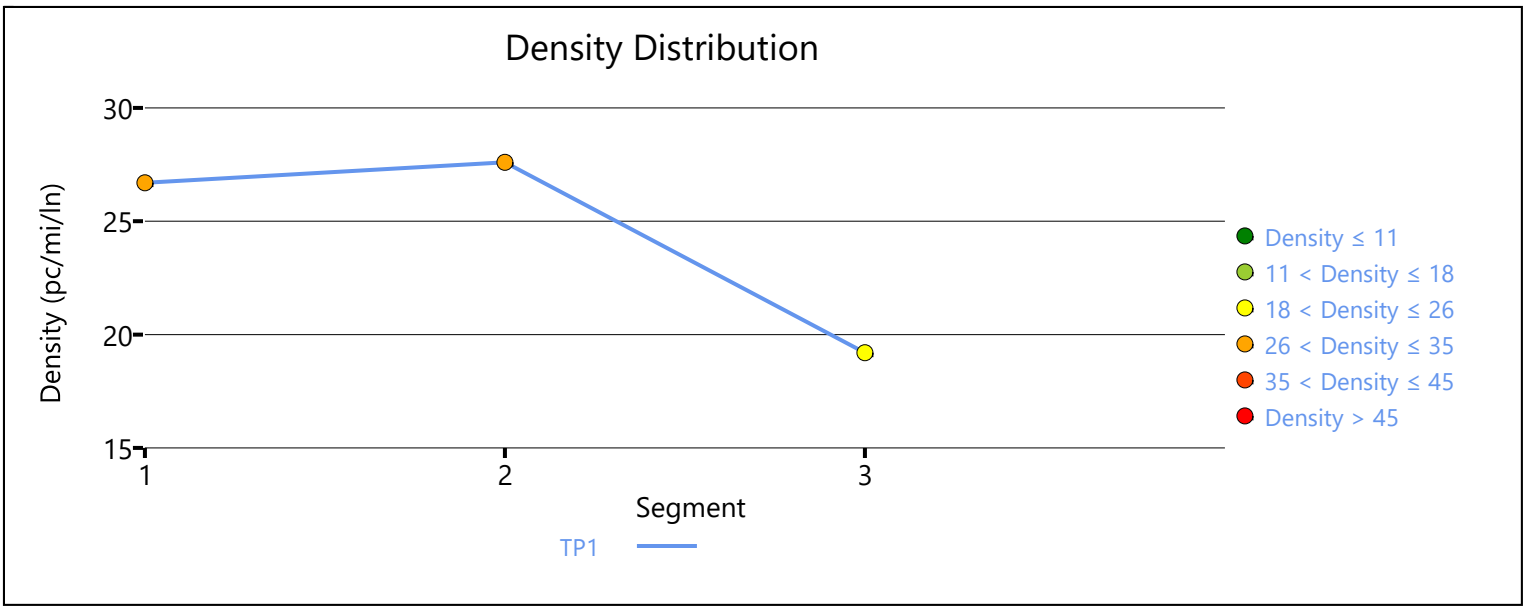
T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	67.4	22.0	21.1	1.7	C

Facility Overall Results

Space Mean Speed, mi/h	67.4	Density, veh/mi/ln	21.1
Average Travel Time, min	1.7	Density, pc/mi/ln	22.0







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HCS7 Freeway Facilities Report

Project Information

Analyst	JB	Date	6/30/2020
Agency	Urban Crossroads, Inc.	Analysis Year	Horizon Year (2040) Without Project
Jurisdiction	Caltrans	Time Period Analyzed	PM Peak Hour
Project Description	Hesperia Commerce Center II (JN 12778) - I-15 SB at Main		

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	7
Total Time Periods	1	Time Period Duration, min	15

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	I-15 SB, North of Main St.	16360	3
2	Diverge	Diverge	I-15 SB, Off-Ramp at Main St.	1500	3
3	Basic	Basic	I-15 SB, Between Off and Loop On-Ramp	975	3
4	Merge	Merge	I-15 SB, Loop On-Ramp at Main St.	1500	3
5	Basic	Basic	I-15 SB, Between Loop On-Ramp and On-Ramp	1415	3
6	Merge	Merge	I-15 SB, On-Ramp at Main St.	1500	3
7	Basic	Basic	I-15 SB, South of Main St.	5900	3

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.962	6685	7146	0.94	56.9	39.2	E

Segment 2: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.962	0.971	6685	1357	7200	2100	0.93	0.65	62.4	58.2	35.7	39.2	E

Segment 3: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.962	5315	7146	0.74	65.1	27.2	D

Segment 4: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.962	0.917	5594	279	7200	1900	0.78	0.15	60.3	58.2	30.9	29.7	D

Segment 5: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.962	5581	7146	0.78	63.9	29.1	D

Segment 6: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.962	0.847	5700	119	7200	2100	0.79	0.06	60.7	58.9	31.3	29.1	D

Segment 7: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.962	5686	7146	0.80	63.4	29.9	D

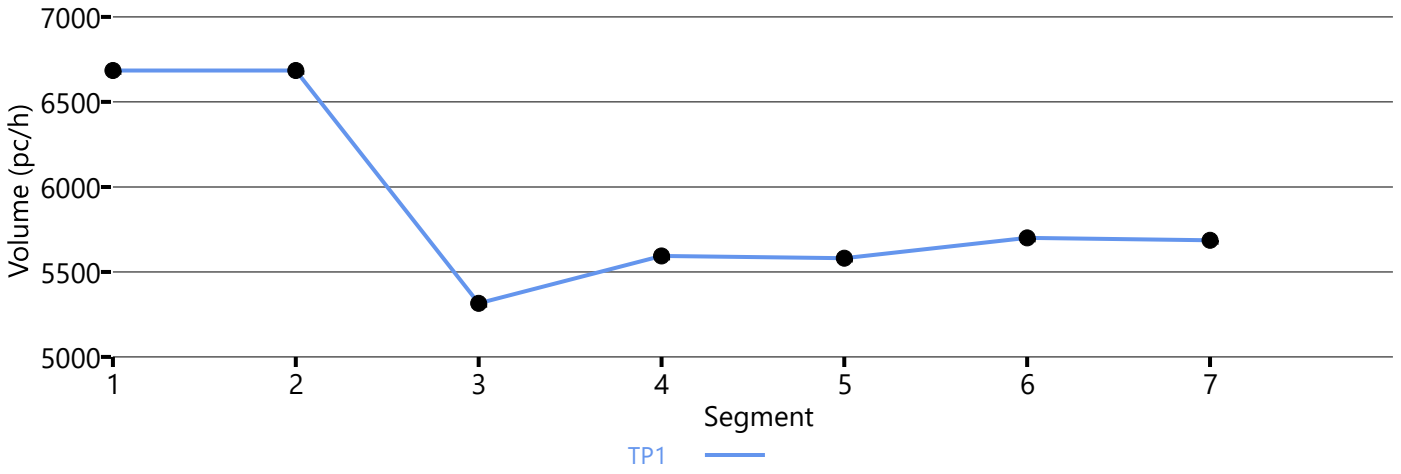
Facility Time Period Results

T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	59.1	35.4	34.1	5.6	E

Facility Overall Results

Space Mean Speed, mi/h	59.1	Density, veh/mi/ln	34.1
Average Travel Time, min	5.6	Density, pc/mi/ln	35.4

Volume Distribution



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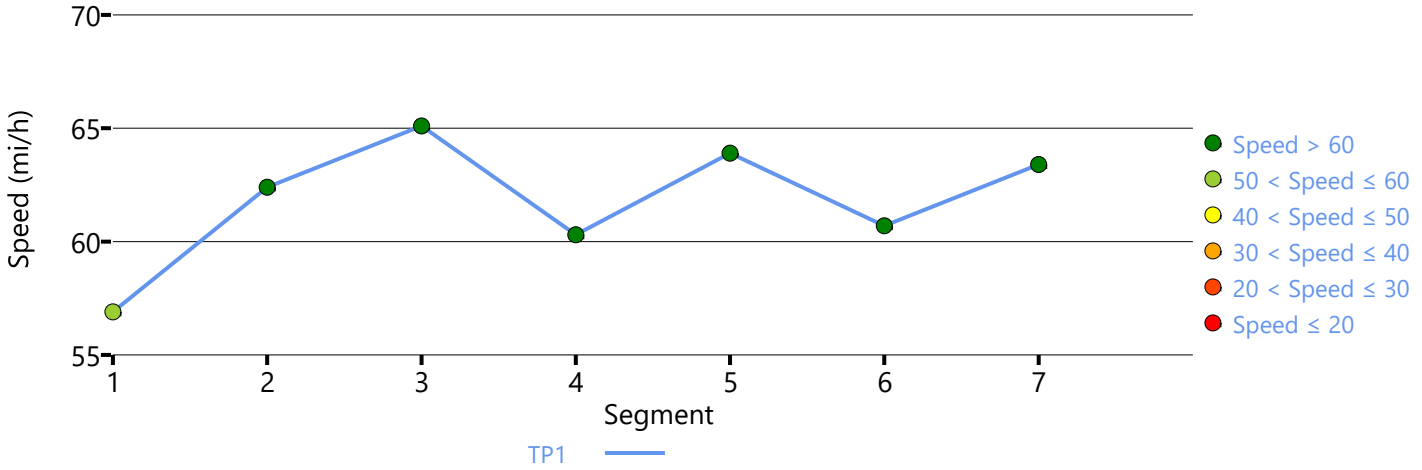
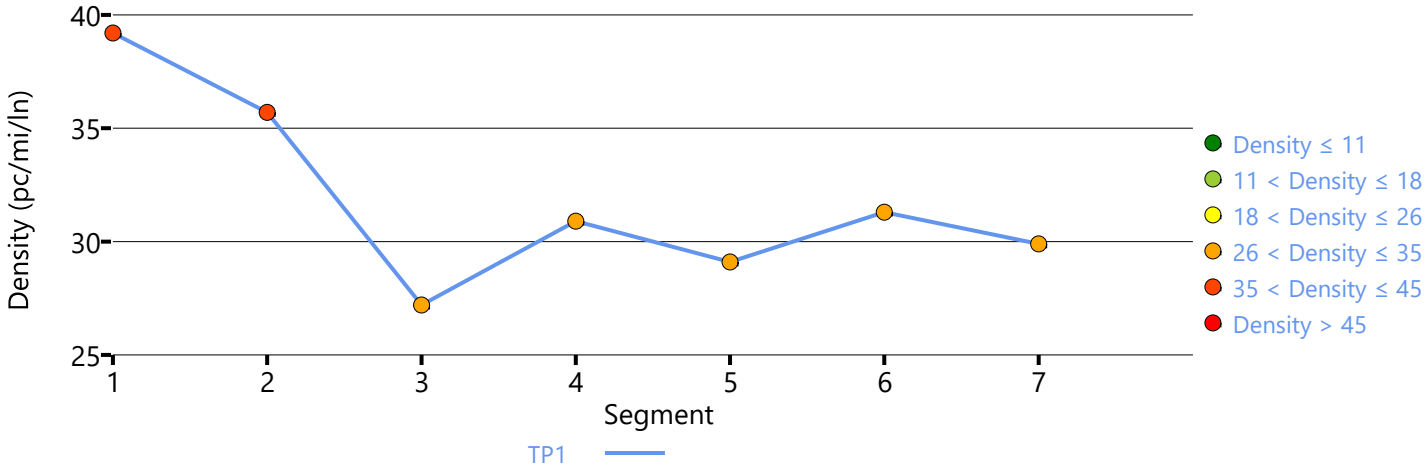


Density Distribution



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HCS7 Freeway Facilities Report

Project Information

Analyst	JB	Date	6/30/2020
Agency	Urban Crossroads, Inc.	Analysis Year	Horizon Year (2040) With Project
Jurisdiction	Caltrans	Time Period Analyzed	PM Peak Hour
Project Description	Hesperia Commerce Center II (JN:12778) - I-15 Southbound at US Highway 395		

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	3
Total Time Periods	1	Time Period Duration, min	15

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	North of US 395	4200	3
2	Merge	Basic	On-Ramp at US 395	1500	4
3	Basic	Basic	South of US 395	4200	4

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.962	7017	7179	0.98	54.6	42.8	E

Segment 2: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.952	0.870	8940	1850	9600	2100	0.74	0.88	66.2	-	26.8	-	D

Segment 3: Basic

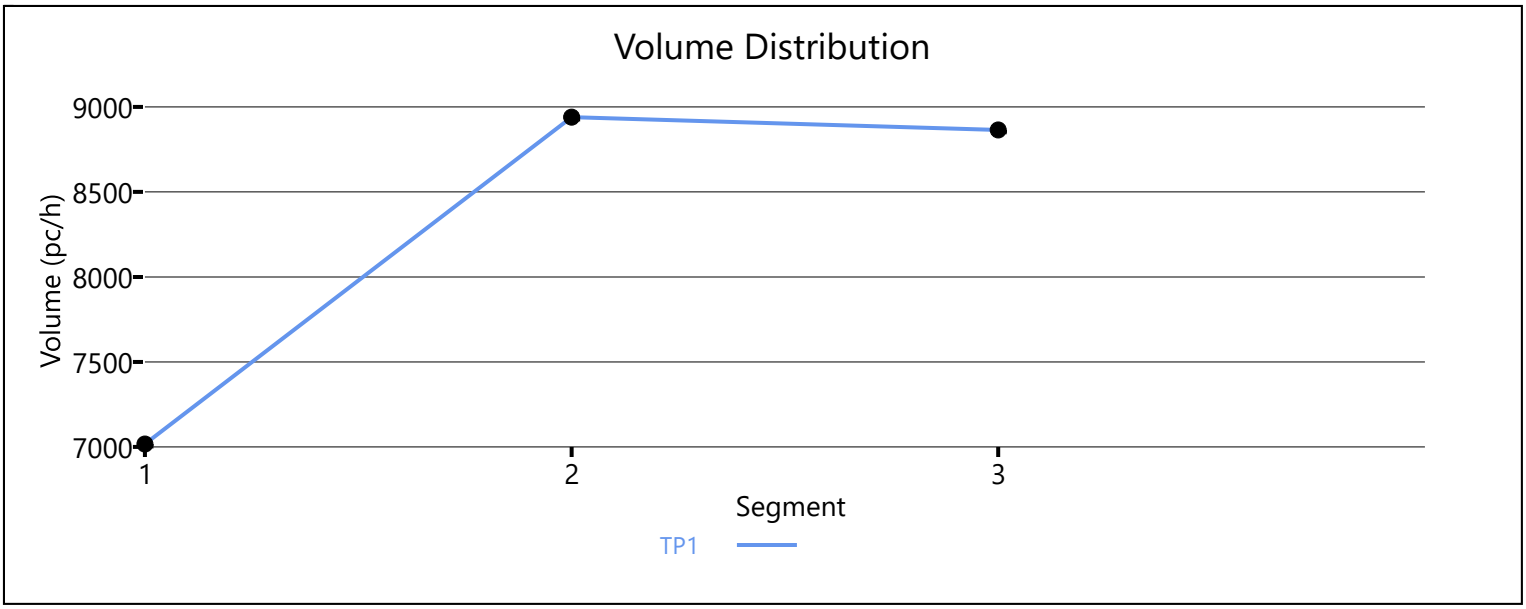
Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.943	8865	9572	0.93	57.7	38.4	E

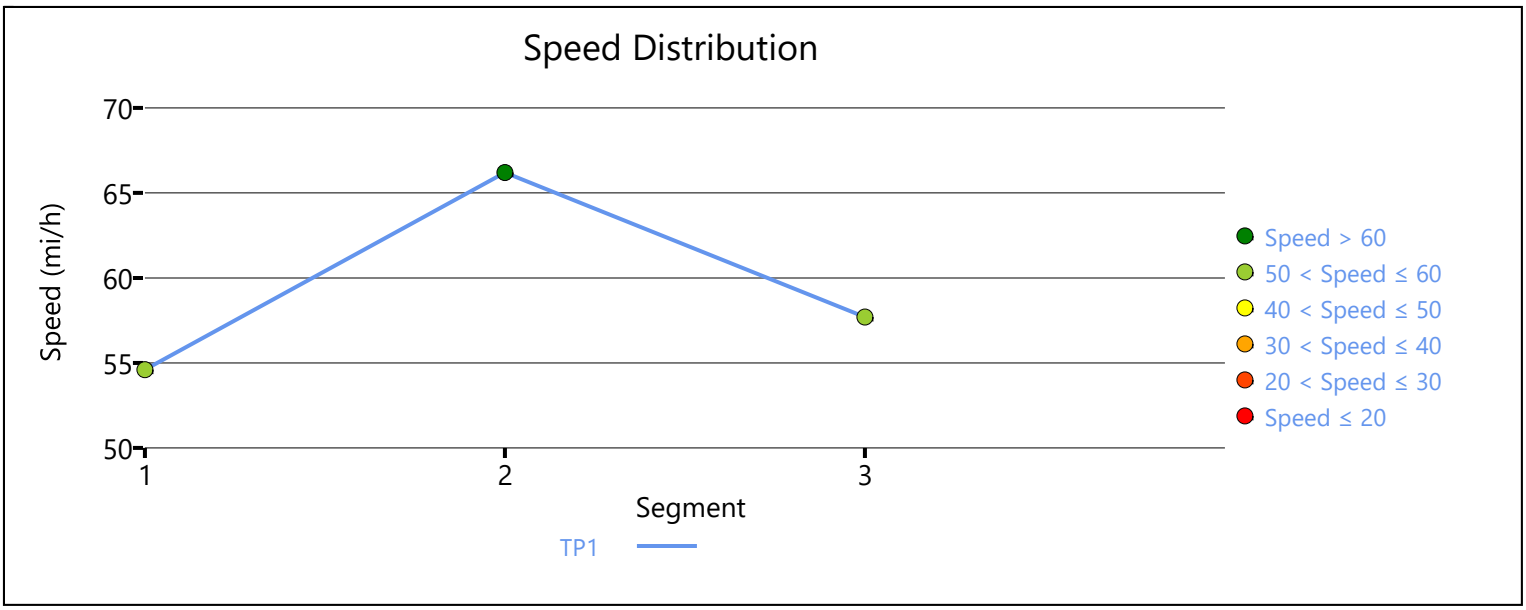
Facility Time Period Results

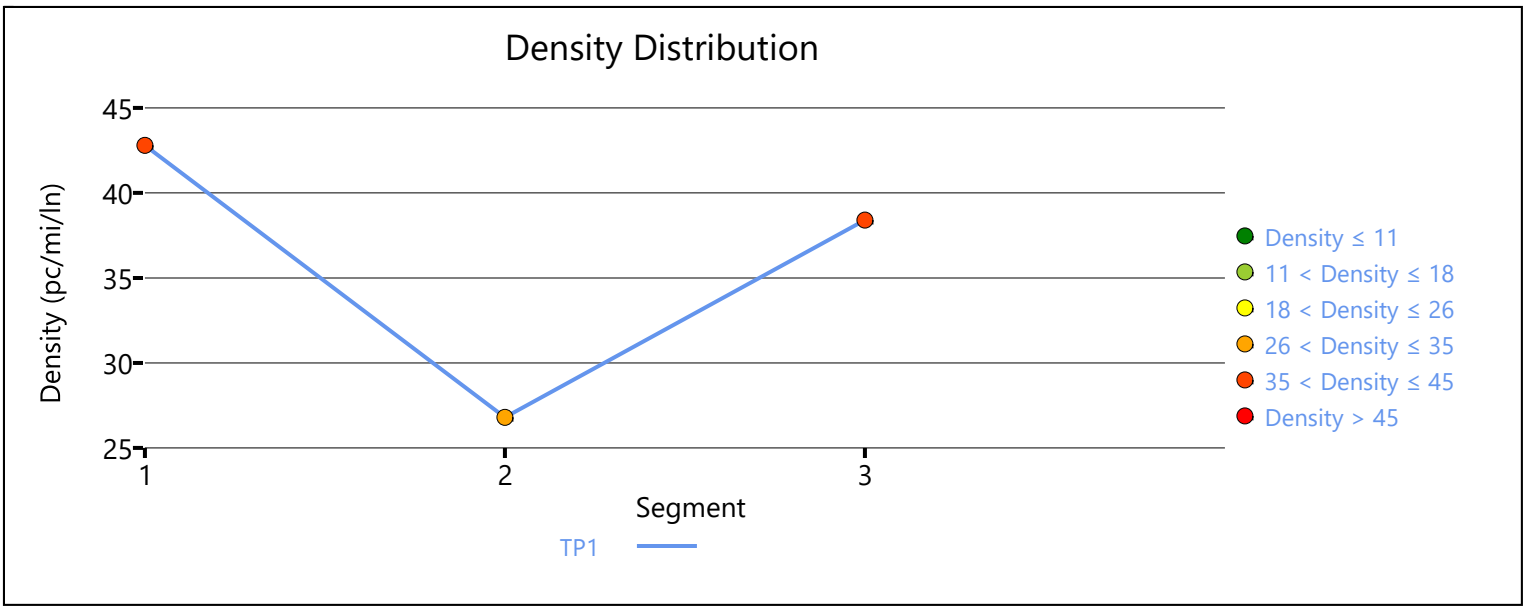
T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	57.7	38.0	36.2	1.9	E

Facility Overall Results

Space Mean Speed, mi/h	57.7	Density, veh/mi/ln	36.2
Average Travel Time, min	1.9	Density, pc/mi/ln	38.0







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HCS7 Freeway Facilities Report

Project Information

Analyst	JB	Date	6/30/2020
Agency	Urban Crossroads, Inc.	Analysis Year	Horizon Year (2040) With Project
Jurisdiction	Caltrans	Time Period Analyzed	PM Peak Hour
Project Description	Hesperia Commerce Center II (JN 12778) - I-15 NB at Main		

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	7
Total Time Periods	1	Time Period Duration, min	15

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	I-15 NB, South of Main St.	6140	3
2	Diverge	Diverge	I-15 NB, Off-Ramp at Main St.	1500	3
3	Basic	Basic	I-15 NB, Between Off-Ramp and Loop On-Ramp	1125	3
4	Merge	Merge	I-15 NB, Loop On-Ramp at Main St.	1500	3
5	Basic	Basic	I-15 NB, Between Loop On-Ramp and On-Ramp	1215	3
6	Merge	Merge	I-15 NB, On-Ramp at Main St.	1500	3
7	Basic	Basic	I-15 NB, North of Main St.	16370	3

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.971	8189	7146	1.15	52.9	45.0	F

Segment 2: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.971	0.935	7146	1659	7200	2100	1.14	0.79	61.7	57.5	38.6	41.2	F

Segment 3: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.980	5487	7146	0.91	65.4	28.0	D

Segment 4: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.980	0.962	5840	353	7200	1900	0.96	0.19	59.9	57.7	32.5	30.3	D

Segment 5: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.980	5840	7146	0.96	63.5	30.6	D

Segment 6: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.962	0.962	6473	633	7200	2100	1.06	0.30	58.1	55.6	37.1	34.5	F

Segment 7: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.971	6473	7146	1.06	59.4	36.3	F

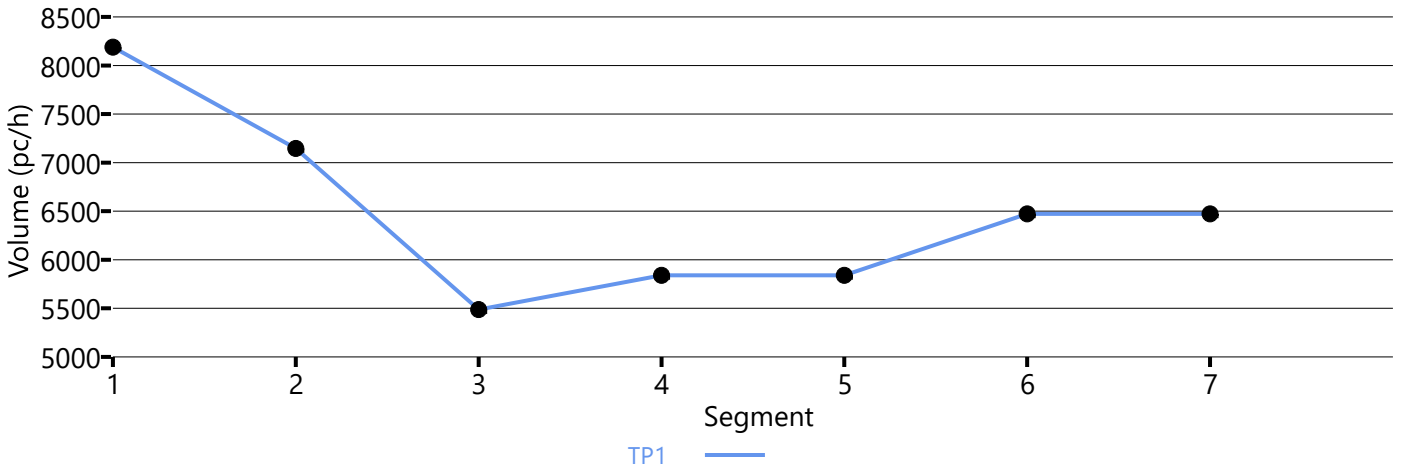
Facility Time Period Results

T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	58.4	37.4	36.3	5.7	F

Facility Overall Results

Space Mean Speed, mi/h	58.4	Density, veh/mi/ln	36.3
Average Travel Time, min	5.7	Density, pc/mi/ln	37.4

Volume Distribution



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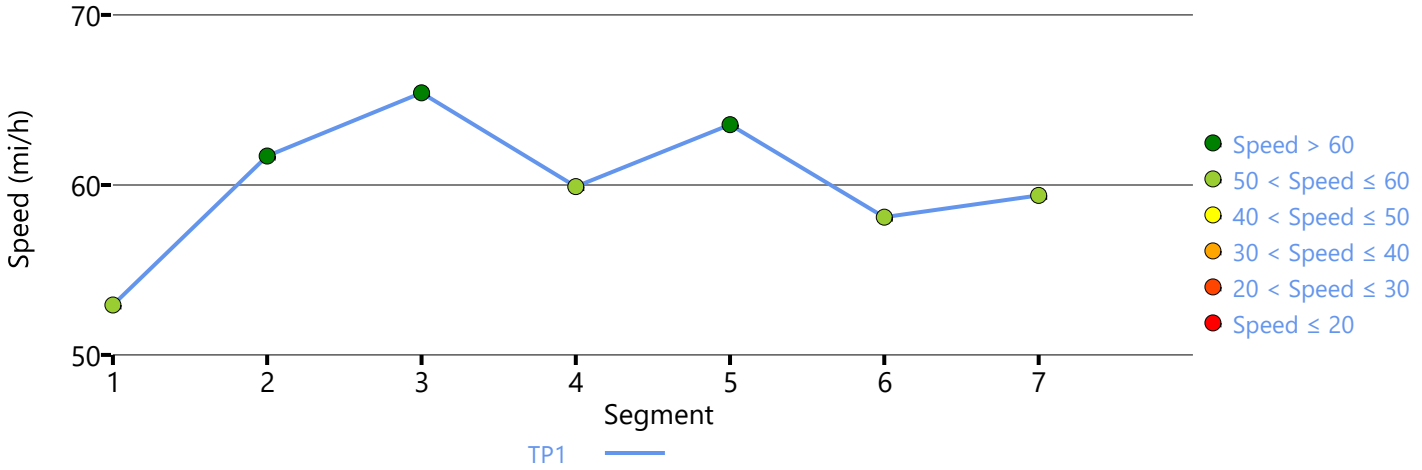

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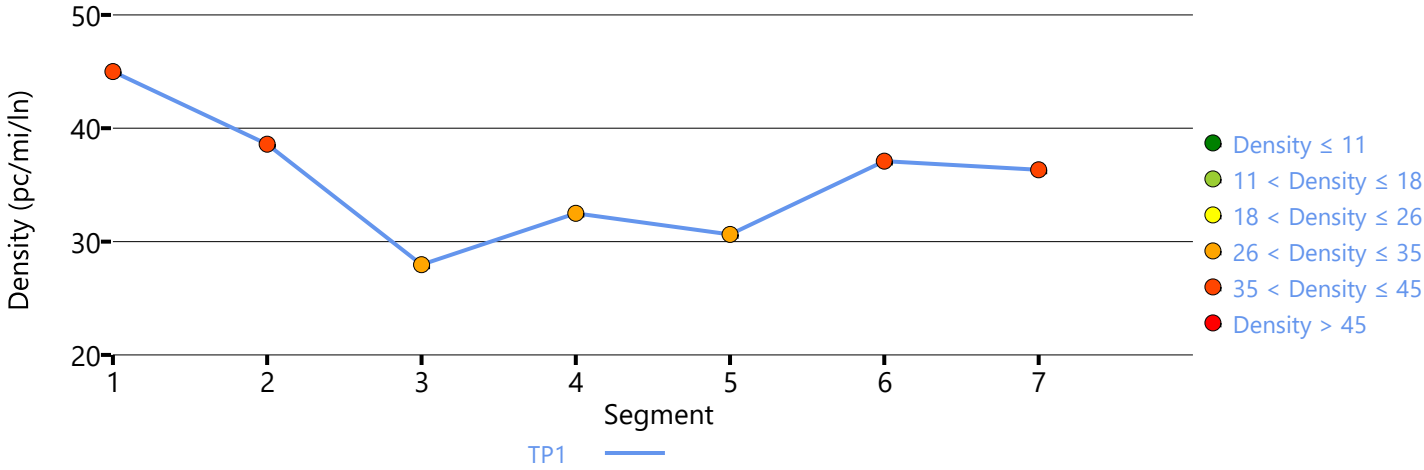

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HCS7 Freeway Facilities Report

Project Information

Analyst	JB	Date	6/30/2020
Agency	Urban Crossroads, Inc.	Analysis Year	Horizon Year (2040) Without Project
Jurisdiction	Caltrans	Time Period Analyzed	PM Peak Hour
Project Description	Hesperia Commerce Center II (JN:12778) - I-15 NB at US 395		

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	3
Total Time Periods	1	Time Period Duration, min	15

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	South of US 395	2000	4
2	Diverge	Diverge	Off-Ramp at US 395	1500	4
3	Basic	Basic	North of US 395	6350	4

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.952	11432	9572	1.19	53.2	45.0	F

Segment 2: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.943	0.901	9572	2354	9600	2100	1.20	1.12	53.3	55.7	45.0	46.3	F

Segment 3: Basic

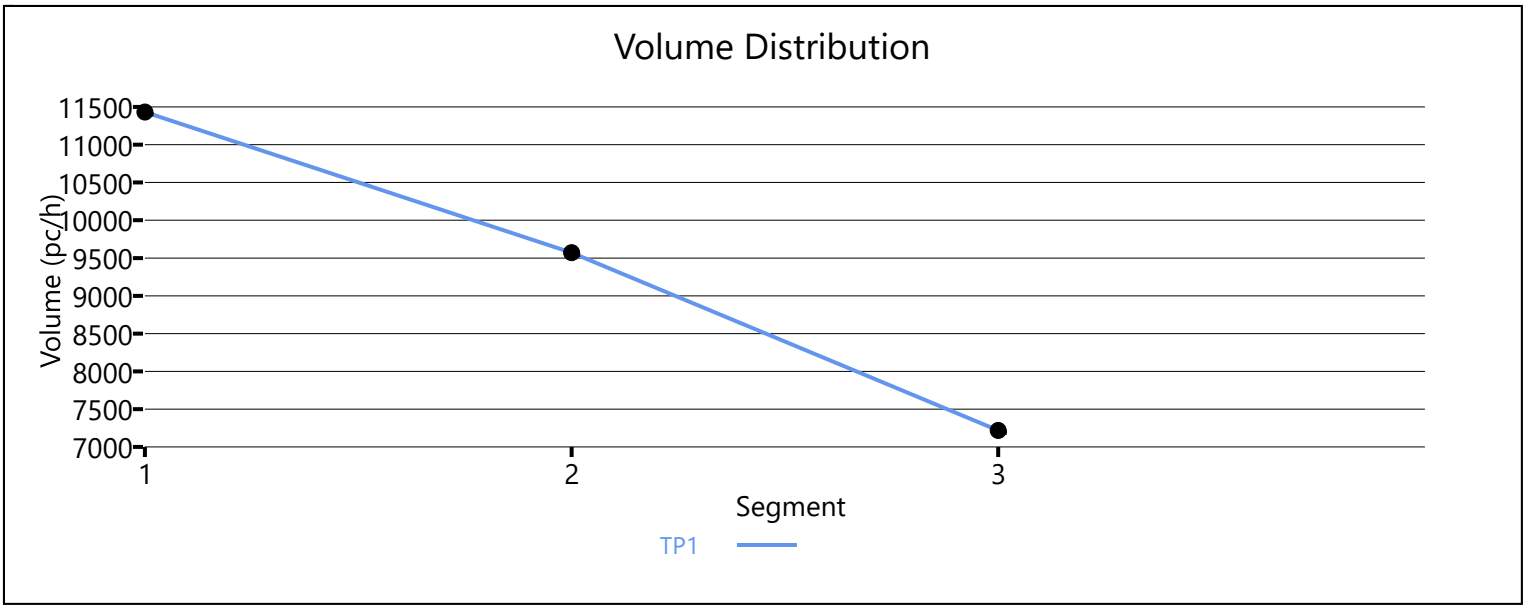
Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.971	7218	9572	0.94	65.8	27.4	D

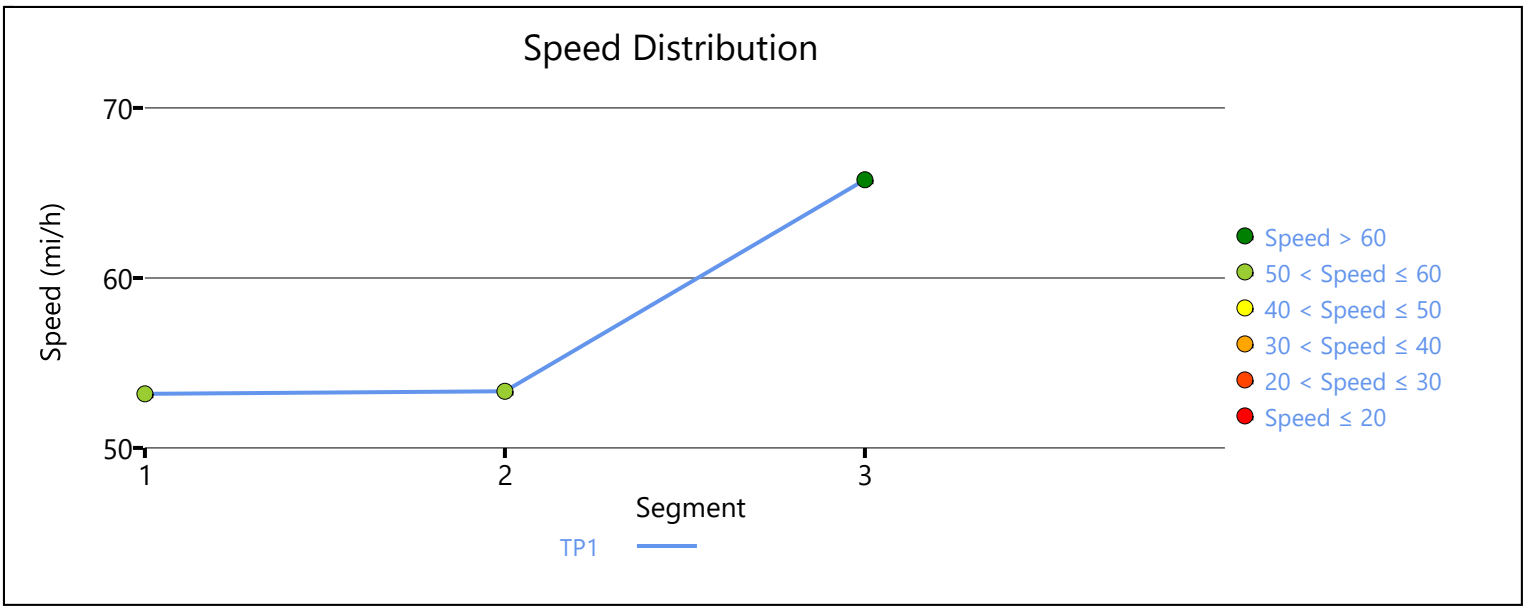
Facility Time Period Results

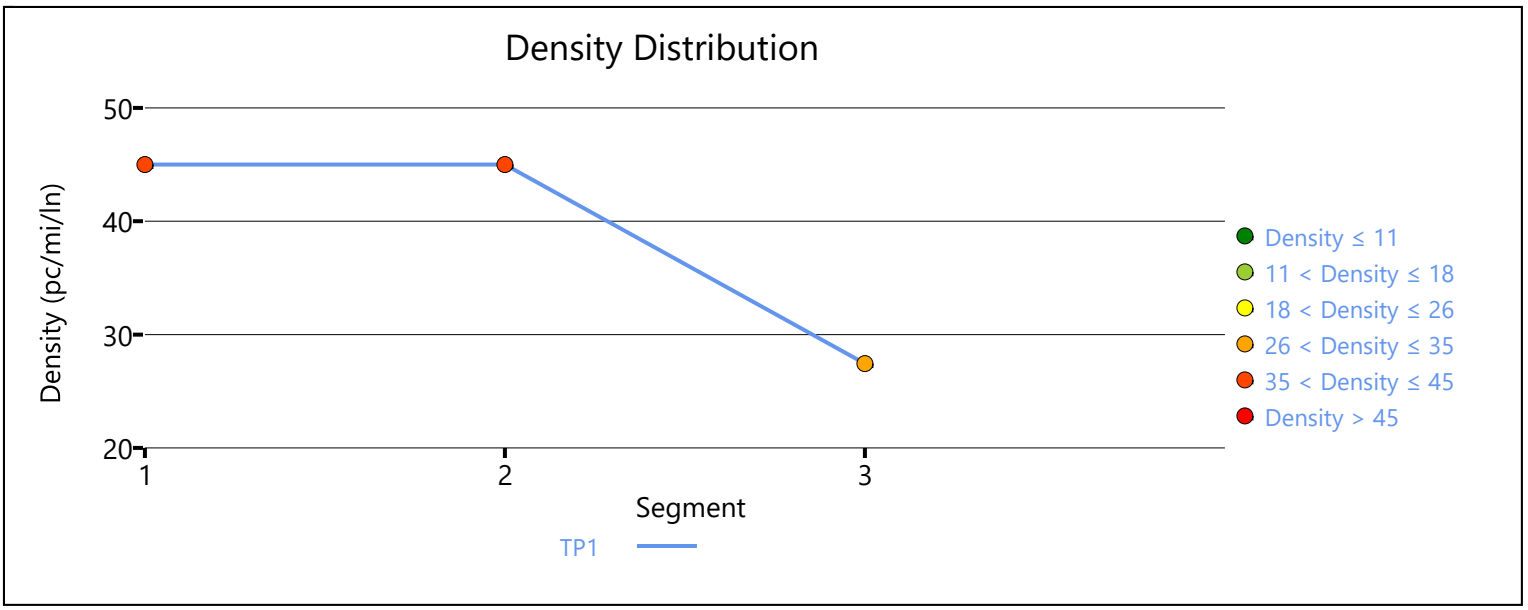
T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	60.0	33.6	32.3	1.9	F

Facility Overall Results

Space Mean Speed, mi/h	60.0	Density, veh/mi/ln	32.3
Average Travel Time, min	1.9	Density, pc/mi/ln	33.6







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APPENDIX 7.8:

HORIZON YEAR (2040) WITH PROJECT CONDITIONS FREEWAY FACILITY ANALYSIS WORKSHEETS

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HCS7 Freeway Facilities Report

Project Information

Analyst	JB	Date	6/30/2020
Agency	Urban Crossroads, Inc.	Analysis Year	Horizon Year (2040) With Project
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	Hesperia Commerce Center II (JN 12778) - I-15 SB at Main		

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	7
Total Time Periods	1	Time Period Duration, min	15

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	I-15 SB, North of Main St.	16360	3
2	Diverge	Diverge	I-15 SB, Off-Ramp at Main St.	1500	3
3	Basic	Basic	I-15 SB, Between Off and Loop On-Ramp	975	3
4	Merge	Merge	I-15 SB, Loop On-Ramp at Main St.	1500	3
5	Basic	Basic	I-15 SB, Between Loop On-Ramp and On-Ramp	1415	3
6	Merge	Merge	I-15 SB, On-Ramp at Main St.	1500	3
7	Basic	Basic	I-15 SB, South of Main St.	5900	3

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.952	6805	7146	0.95	55.9	40.6	E

Segment 2: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.952	0.855	6805	1216	7200	2100	0.95	0.58	62.6	58.6	36.2	39.4	E

Segment 3: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.971	5600	7146	0.78	63.8	29.3	D

Segment 4: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.971	0.971	6355	755	7200	1900	0.88	0.40	58.0	55.3	36.5	34.5	D

Segment 5: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.971	6355	7146	0.89	59.3	35.7	E

Segment 6: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.971	0.943	6866	511	7200	2100	0.95	0.24	56.9	54.4	40.2	35.5	E

Segment 7: Basic

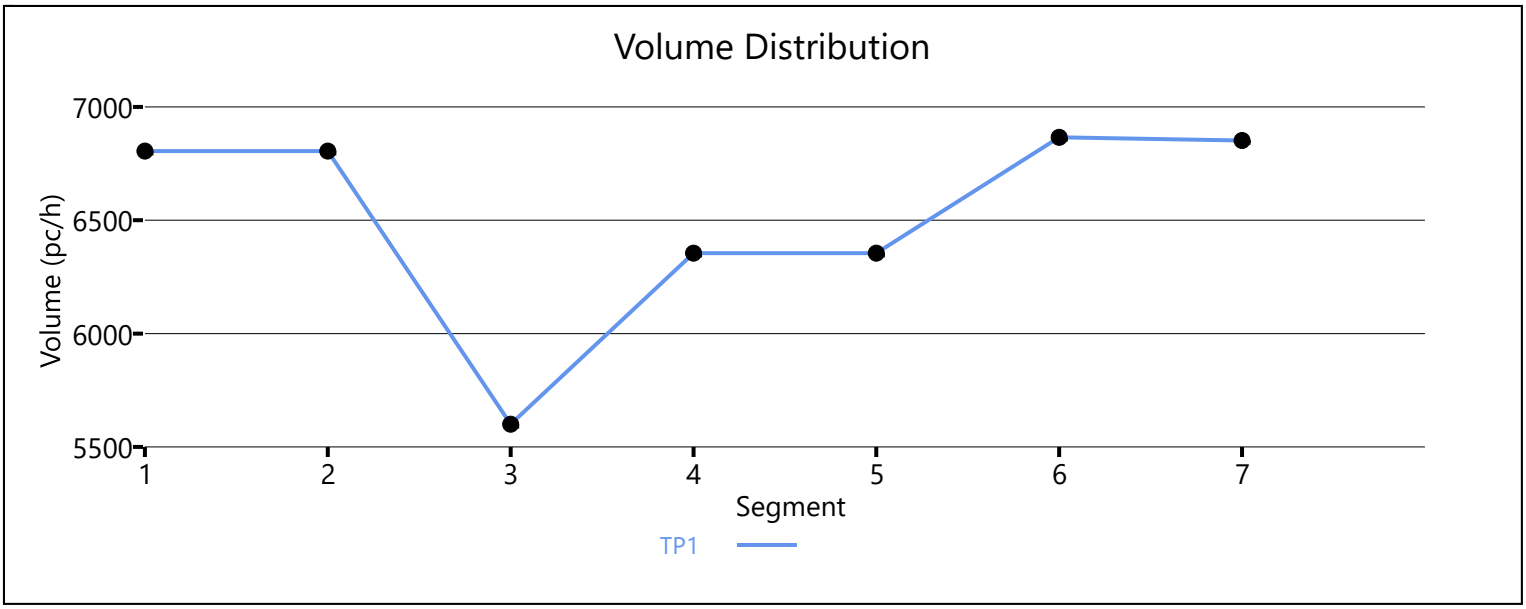
Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.971	6852	7146	0.96	55.5	41.2	E

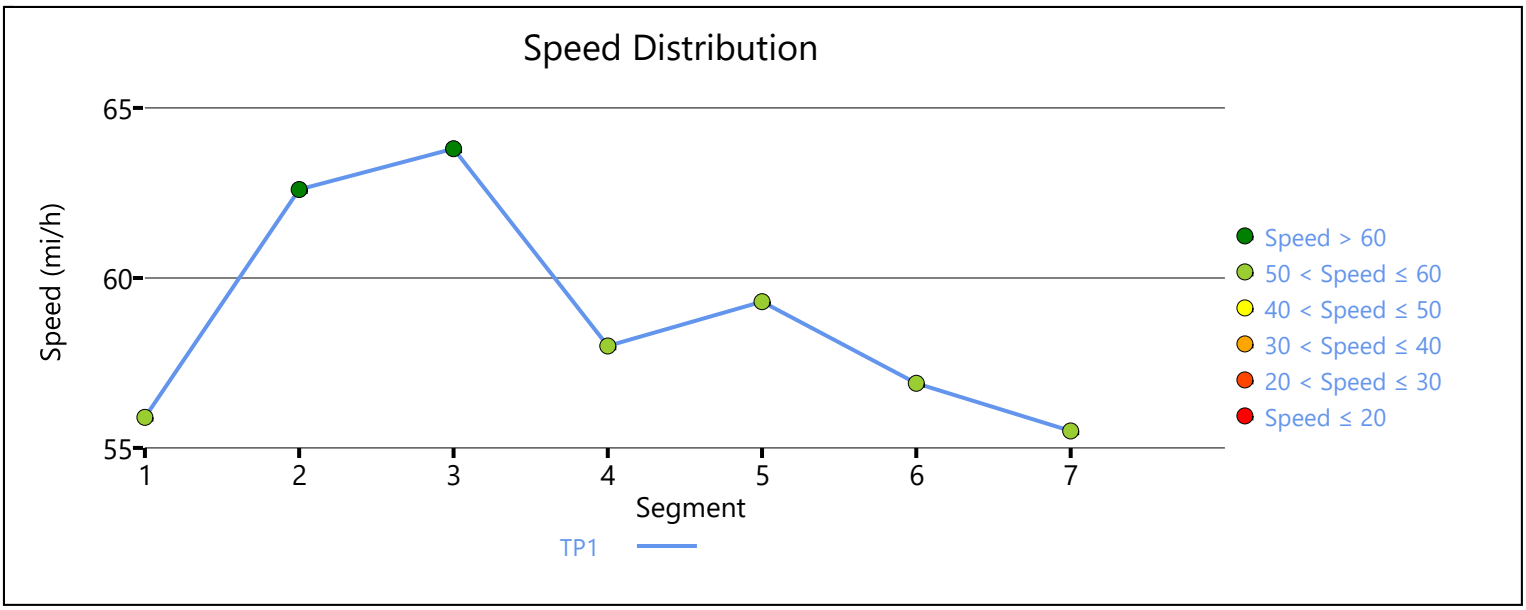
Facility Time Period Results

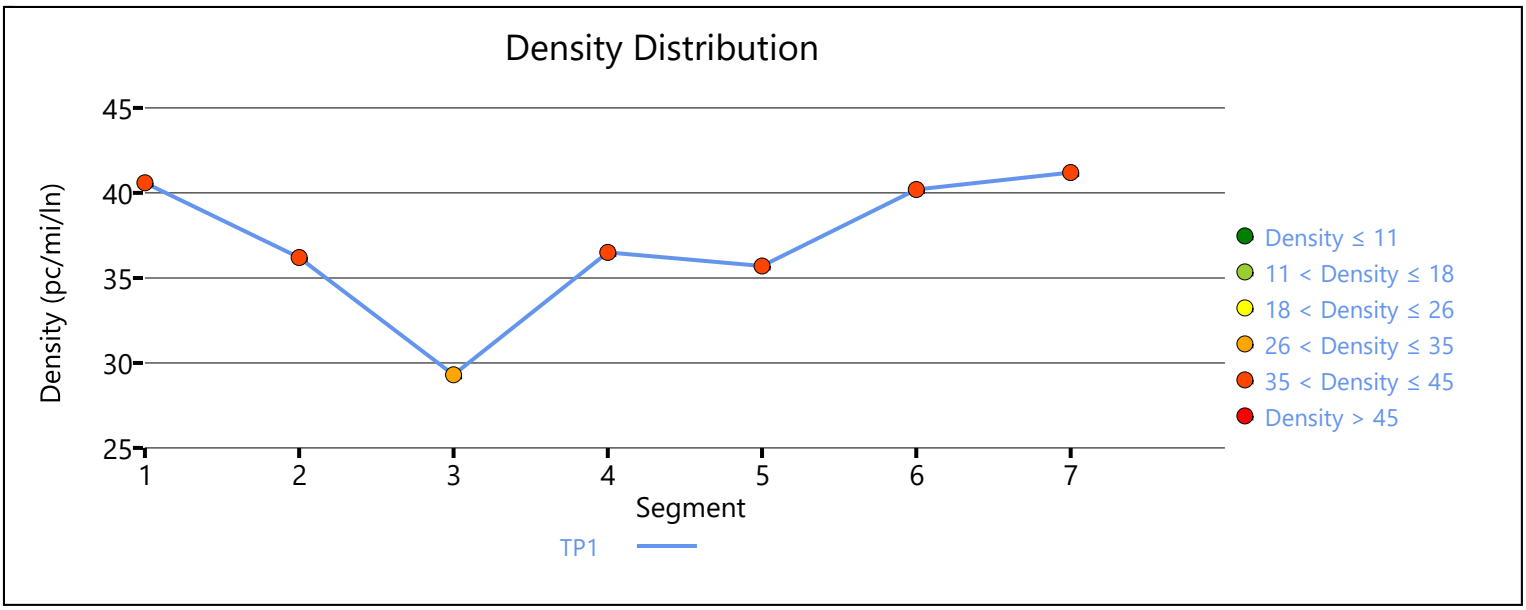
T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	56.6	39.7	38.1	5.8	E

Facility Overall Results

Space Mean Speed, mi/h	56.6	Density, veh/mi/ln	38.1
Average Travel Time, min	5.8	Density, pc/mi/ln	39.7







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HCS7 Freeway Facilities Report

Project Information

Analyst	JB	Date	6/30/2020
Agency	Urban Crossroads, Inc.	Analysis Year	Horizon Year (2040) With Project
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	Hesperia Commerce Center II (JN:12778) - I-15 Southbound at US Highway 395		

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	3
Total Time Periods	1	Time Period Duration, min	15

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	North of US 395	4200	3
2	Merge	Basic	On-Ramp at US 395	1500	4
3	Basic	Basic	South of US 395	4200	4

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.971	8103	7179	1.13	53.2	45.0	F

Segment 2: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.971	0.893	8539	2467	9600	2100	0.84	1.17	52.9	-	40.4	-	F

Segment 3: Basic

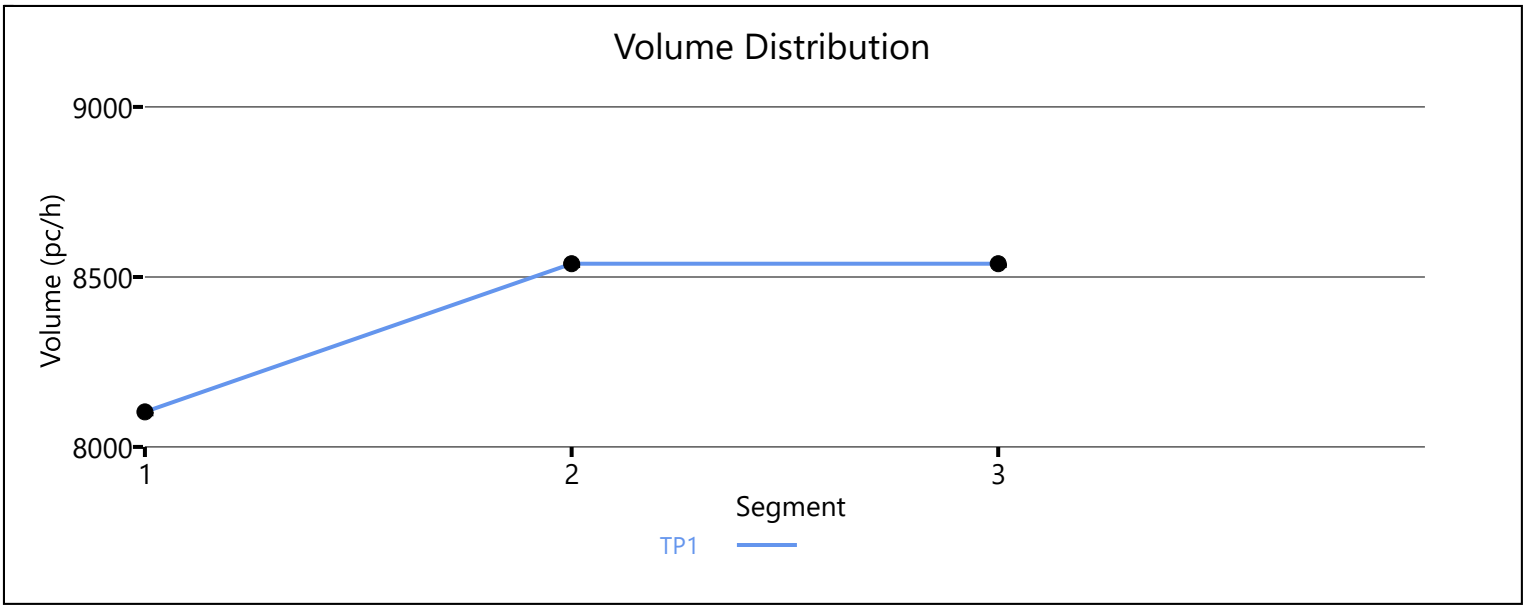
Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.952	8539	9572	1.11	59.9	35.6	F

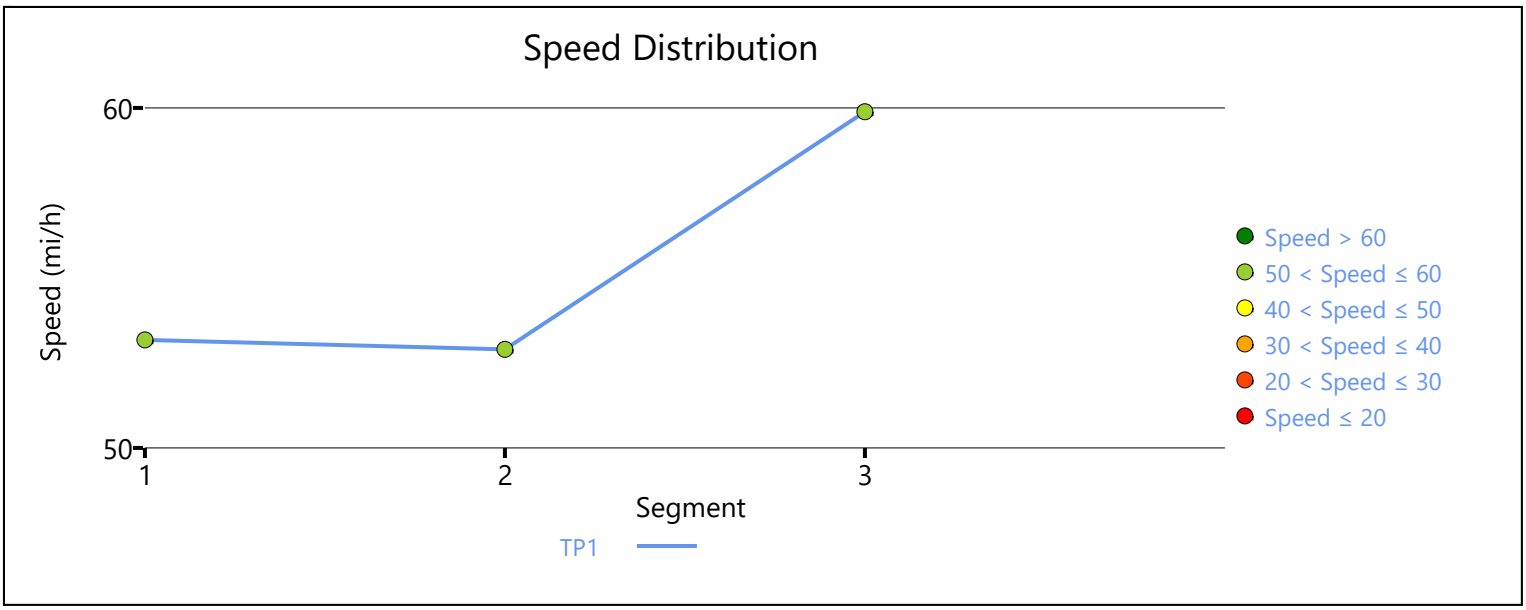
Facility Time Period Results

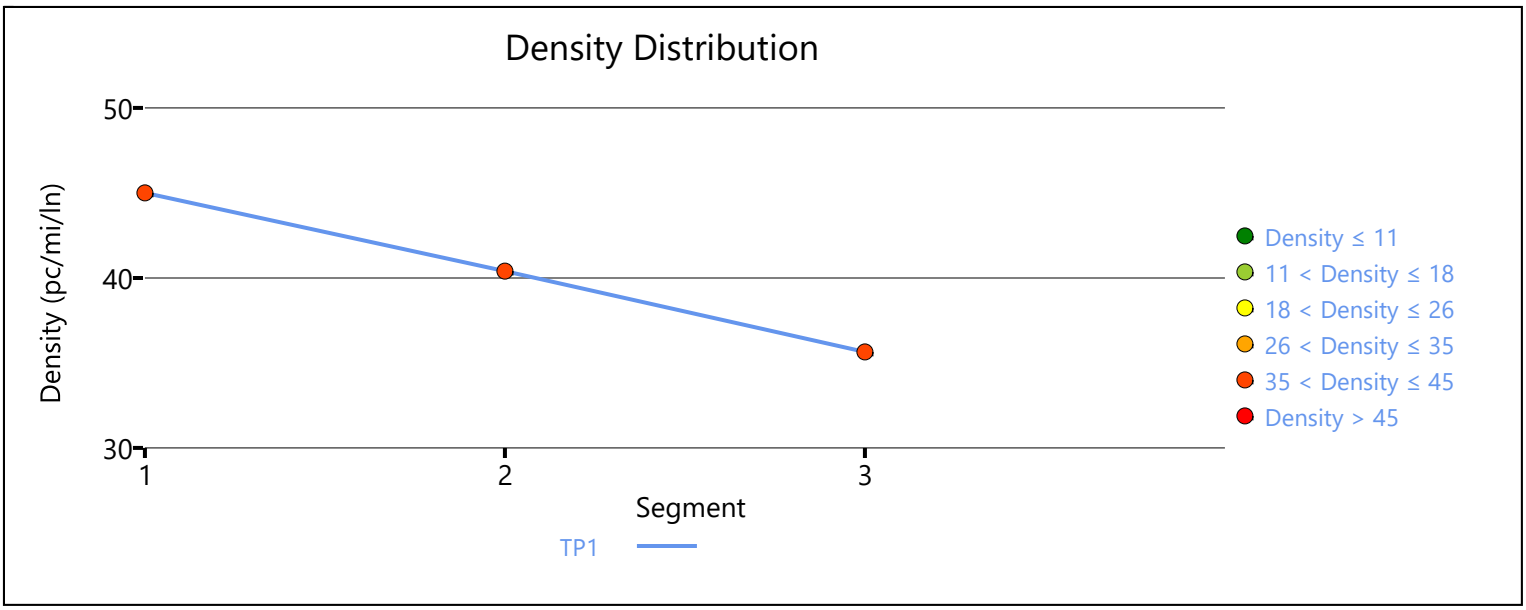
T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	55.5	40.0	38.6	2.0	F

Facility Overall Results

Space Mean Speed, mi/h	55.5	Density, veh/mi/ln	38.6
Average Travel Time, min	2.0	Density, pc/mi/ln	40.0







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HCS7 Freeway Facilities Report

Project Information

Analyst	JB	Date	6/30/2020
Agency	Urban Crossroads, Inc.	Analysis Year	Horizon Year (2040) With Project
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	Hesperia Commerce Center II (JN 12778) - I-15 NB at Main		

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	7
Total Time Periods	1	Time Period Duration, min	15

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	I-15 NB, South of Main St.	6140	3
2	Diverge	Diverge	I-15 NB, Off-Ramp at Main St.	1500	3
3	Basic	Basic	I-15 NB, Between Off-Ramp and Loop On-Ramp	1125	3
4	Merge	Merge	I-15 NB, Loop On-Ramp at Main St.	1500	3
5	Basic	Basic	I-15 NB, Between Loop On-Ramp and On-Ramp	1215	3
6	Merge	Merge	I-15 NB, On-Ramp at Main St.	1500	3
7	Basic	Basic	I-15 NB, North of Main St.	16370	3

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.943	5305	7146	0.74	65.2	27.1	D

Segment 2: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.943	0.862	5305	1311	7200	2100	0.74	0.62	62.7	58.4	28.2	33.7	D

Segment 3: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.980	3951	7146	0.55	68.2	19.3	C

Segment 4: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.980	0.935	4490	539	7200	1900	0.62	0.28	61.9	59.8	24.2	24.6	C

Segment 5: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.971	4507	7146	0.63	67.5	22.3	C

Segment 6: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.971	0.971	5266	759	7200	2100	0.73	0.36	60.8	58.7	28.9	29.3	D

Segment 7: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.971	5266	7146	0.74	65.3	26.9	D

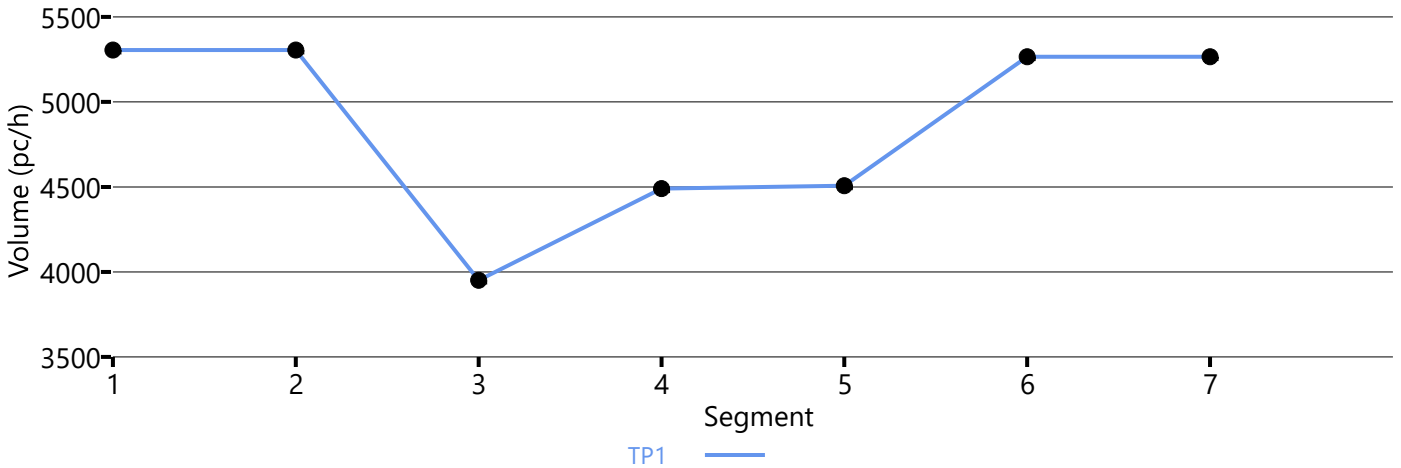
Facility Time Period Results

T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	64.9	26.5	25.5	5.1	D

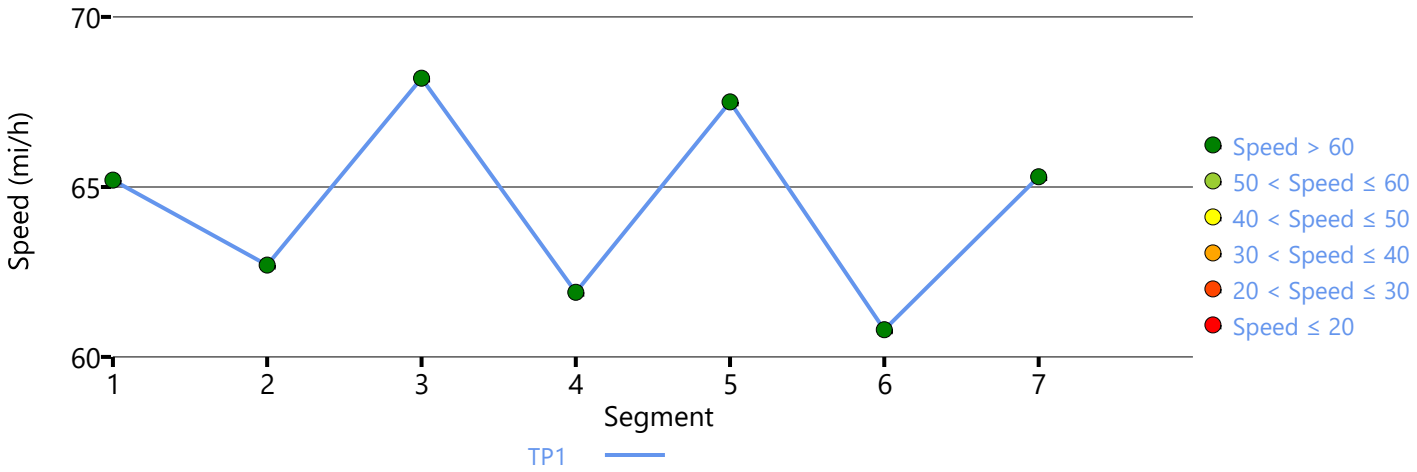
Facility Overall Results

Space Mean Speed, mi/h	64.9	Density, veh/mi/ln	25.5
Average Travel Time, min	5.1	Density, pc/mi/ln	26.5

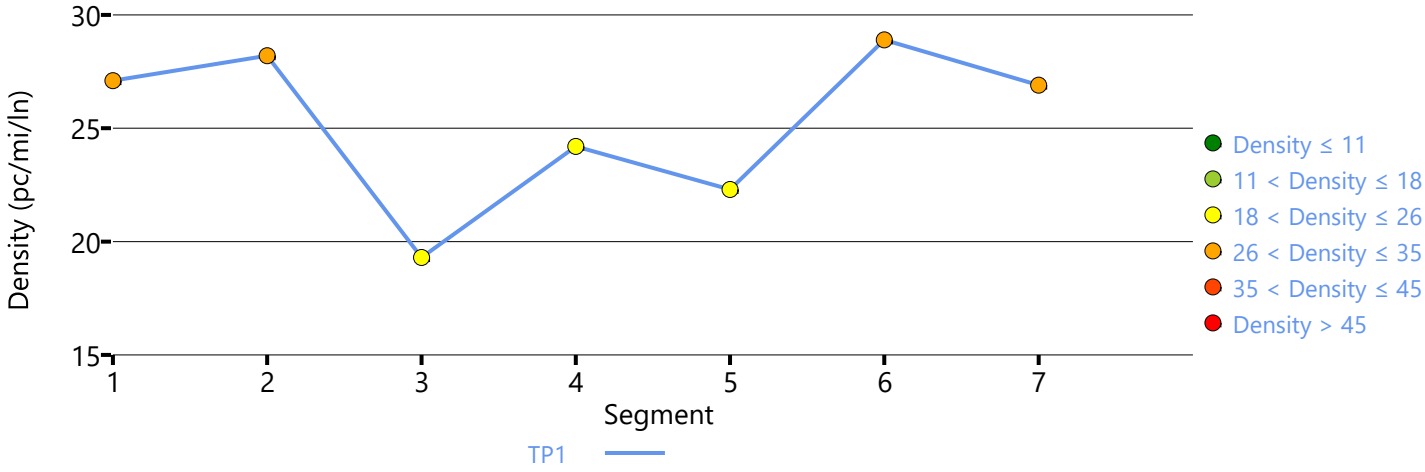
Volume Distribution



Speed Distribution



Density Distribution



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HCS7 Freeway Facilities Report

Project Information

Analyst	JB	Date	6/30/2020
Agency	Urban Crossroads, Inc.	Analysis Year	Horizon Year (2040) With Project
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	Hesperia Commerce Center II (JN:12778) - I-15 NB at US 395		

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	3
Total Time Periods	1	Time Period Duration, min	15

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	South of US 395	2000	4
2	Diverge	Diverge	Off-Ramp at US 395	1500	4
3	Basic	Basic	North of US 395	6350	4

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.935	7646	9572	0.80	63.7	30.0	D

Segment 2: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.935	0.877	7646	1850	9600	2100	0.80	0.88	63.3	57.0	30.2	36.6	E

Segment 3: Basic

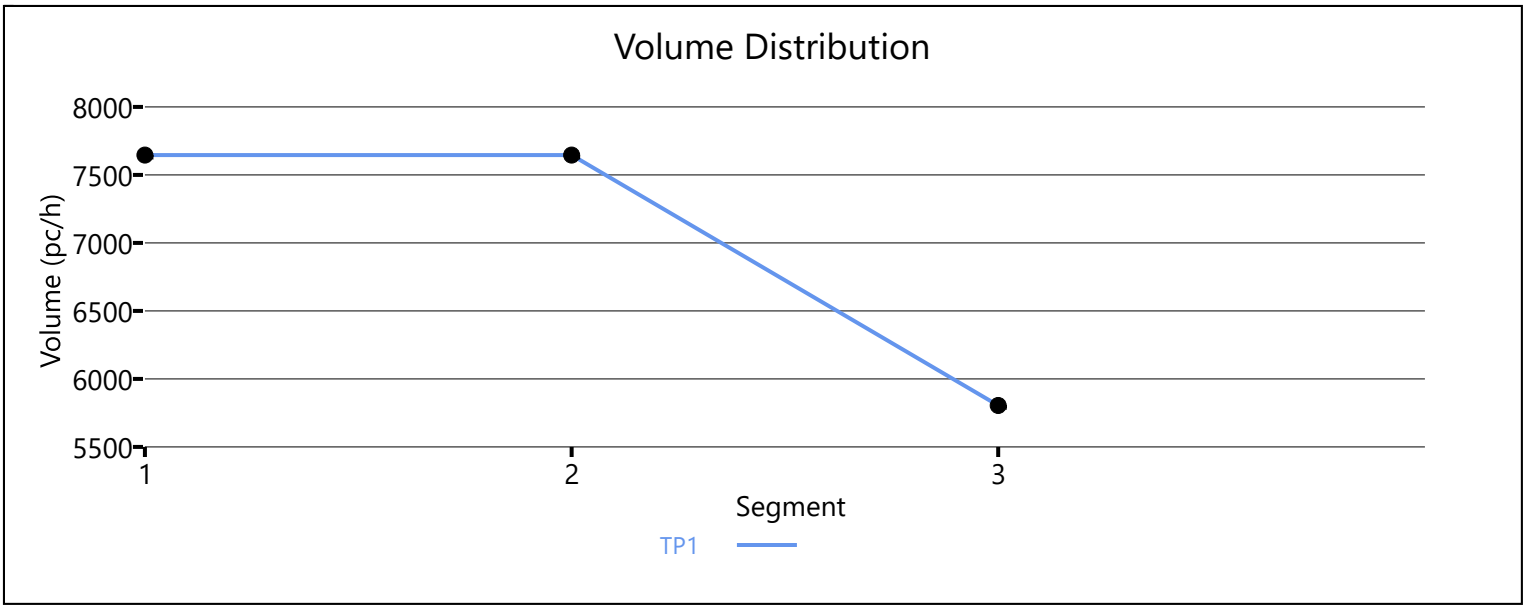
Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.952	5805	9572	0.61	68.7	21.1	C

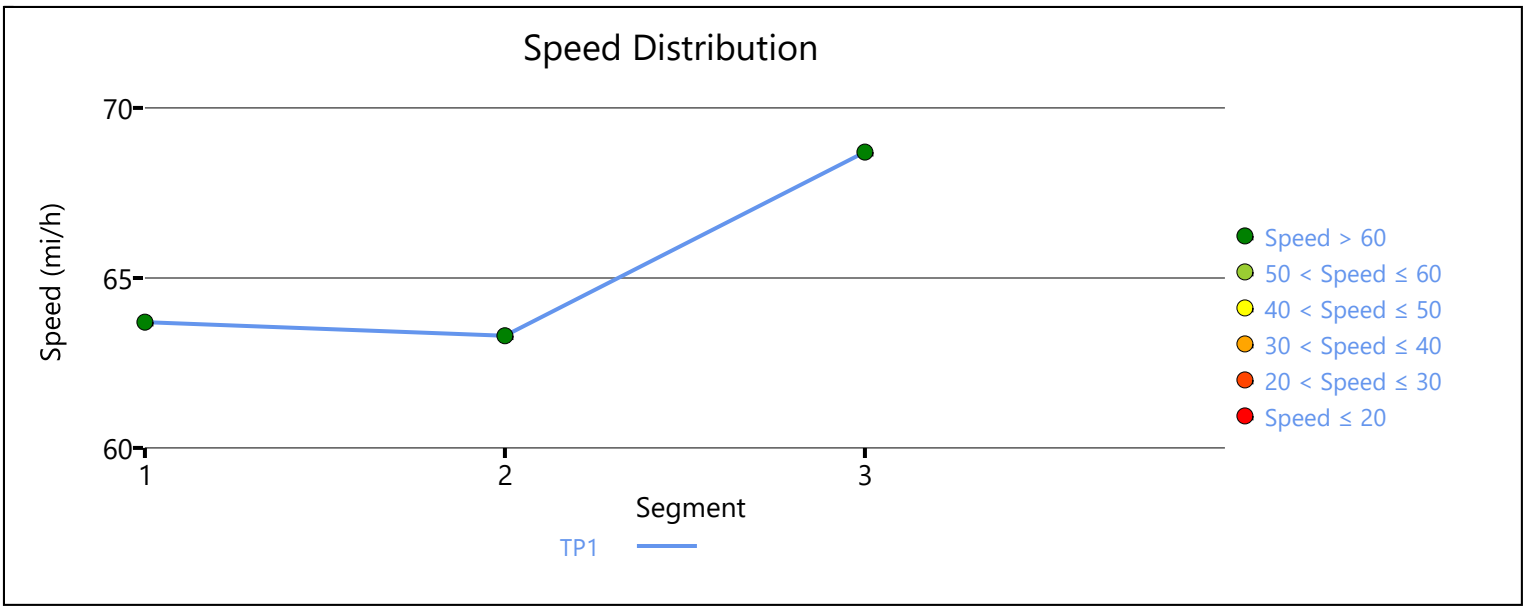
Facility Time Period Results

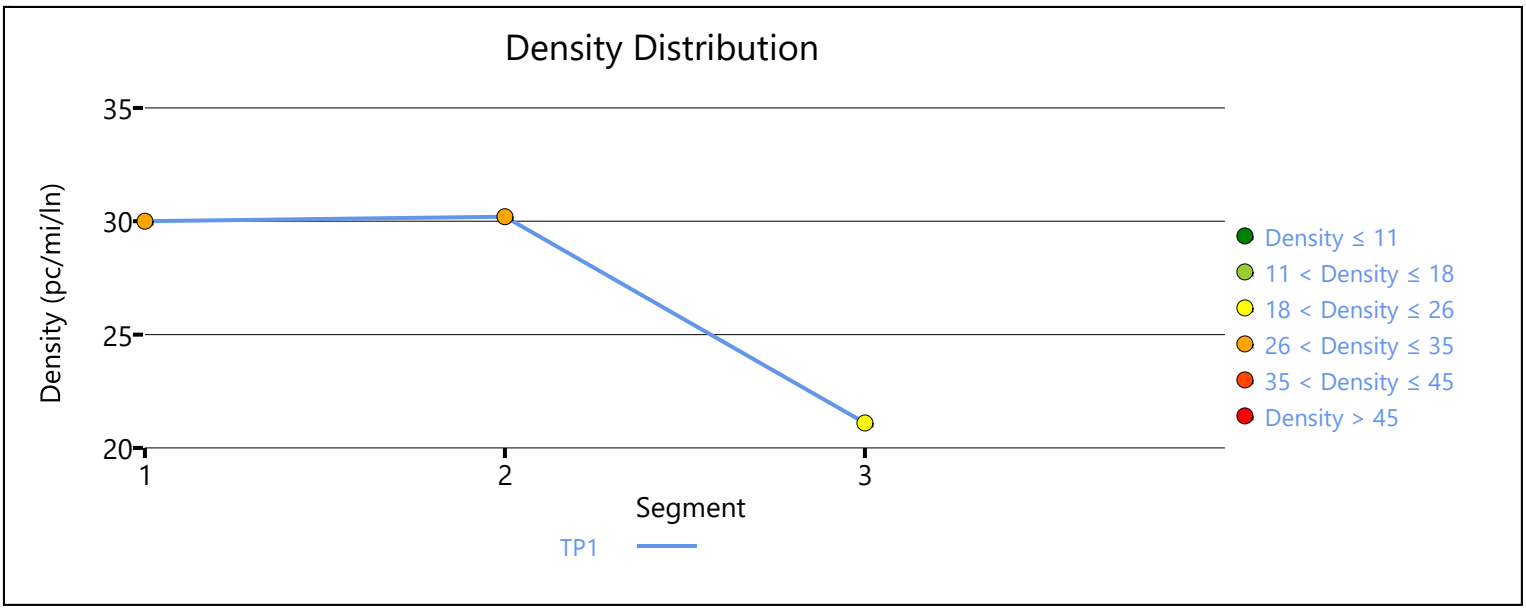
T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	66.5	24.3	22.9	1.7	C

Facility Overall Results

Space Mean Speed, mi/h	66.5	Density, veh/mi/ln	22.9
Average Travel Time, min	1.7	Density, pc/mi/ln	24.3







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HCS7 Freeway Facilities Report

Project Information

Analyst	JB	Date	6/30/2020
Agency	Urban Crossroads, Inc.	Analysis Year	Horizon Year (2040) With Project
Jurisdiction	Caltrans	Time Period Analyzed	PM Peak Hour
Project Description	Hesperia Commerce Center II (JN 12778) - I-15 SB at Main		

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	7
Total Time Periods	1	Time Period Duration, min	15

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	I-15 SB, North of Main St.	16360	3
2	Diverge	Diverge	I-15 SB, Off-Ramp at Main St.	1500	3
3	Basic	Basic	I-15 SB, Between Off and Loop On-Ramp	975	3
4	Merge	Merge	I-15 SB, Loop On-Ramp at Main St.	1500	3
5	Basic	Basic	I-15 SB, Between Loop On-Ramp and On-Ramp	1415	3
6	Merge	Merge	I-15 SB, On-Ramp at Main St.	1500	3
7	Basic	Basic	I-15 SB, South of Main St.	5900	3

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.962	6751	7146	0.94	56.3	40.0	E

Segment 2: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.962	0.962	6751	1436	7200	2100	0.94	0.68	62.2	58.0	36.2	39.6	E

Segment 3: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.962	5315	7146	0.74	65.1	27.2	D

Segment 4: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.962	0.917	5594	279	7200	1900	0.78	0.15	60.3	58.2	30.9	29.7	D

Segment 5: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.962	5581	7146	0.78	63.9	29.1	D

Segment 6: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.962	0.775	6110	529	7200	2100	0.85	0.25	59.4	57.2	34.3	32.1	D

Segment 7: Basic

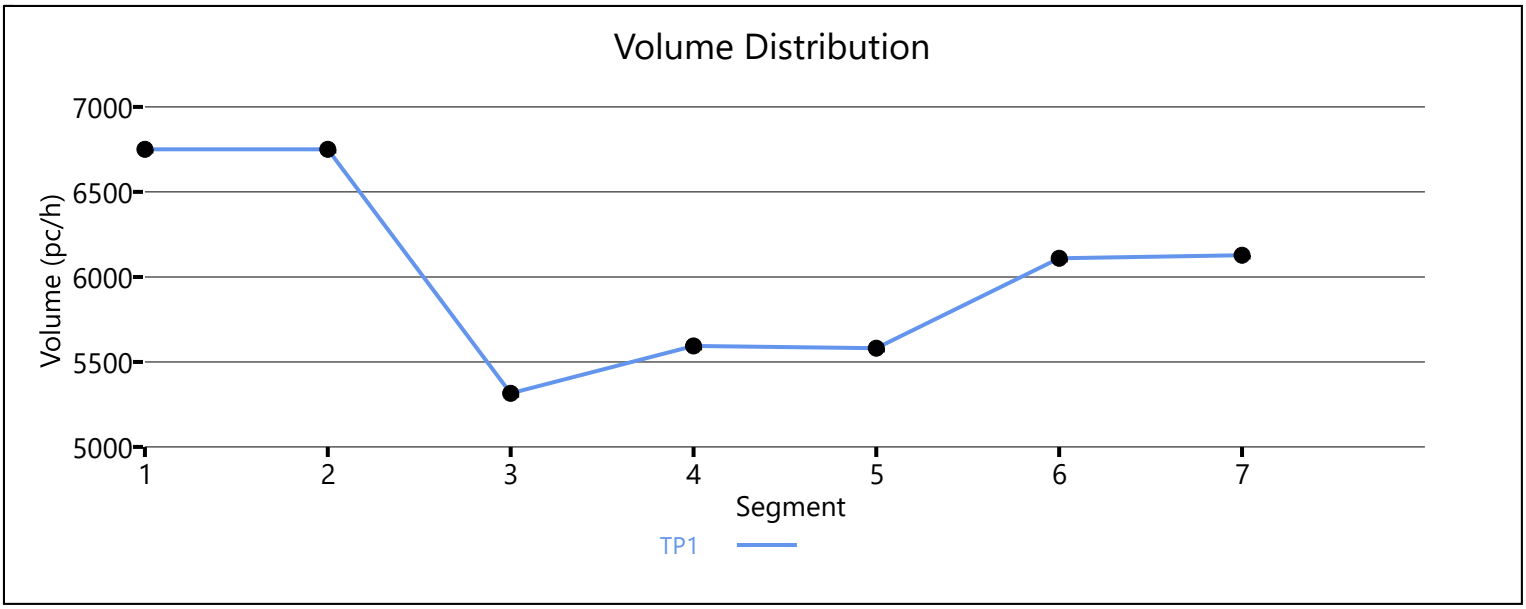
Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.943	6128	7146	0.86	60.8	33.6	D

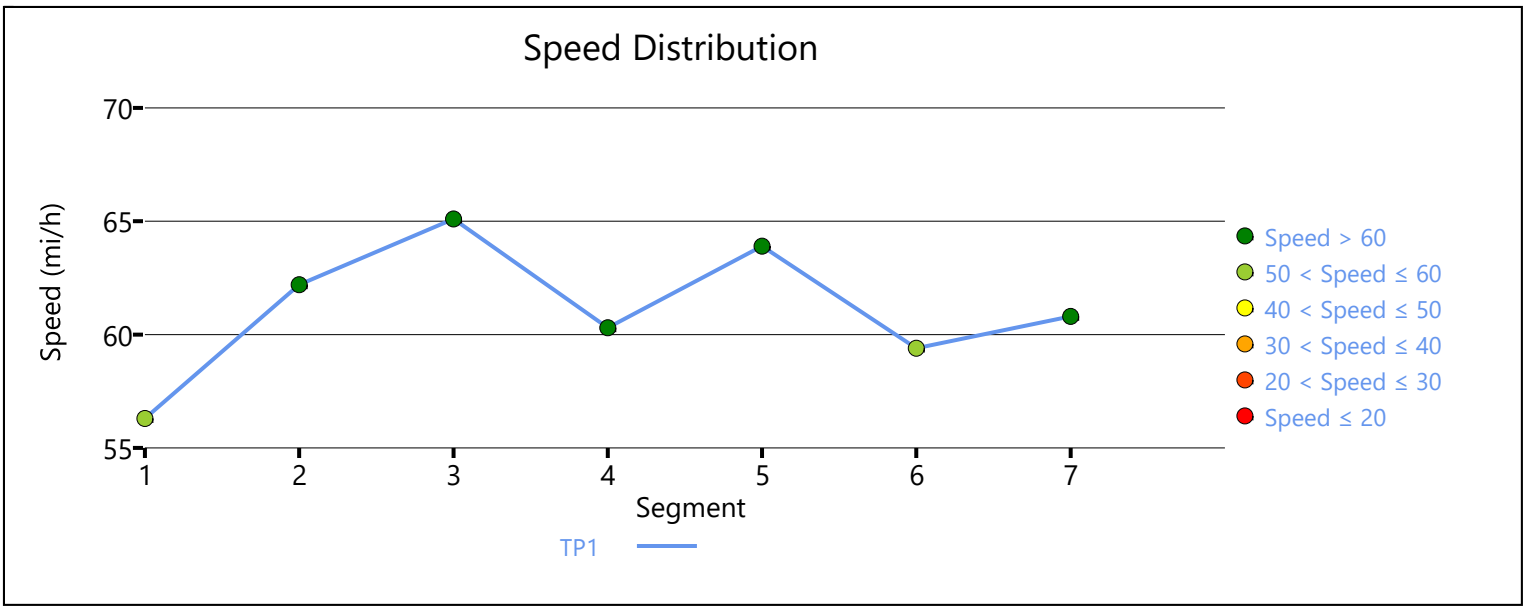
Facility Time Period Results

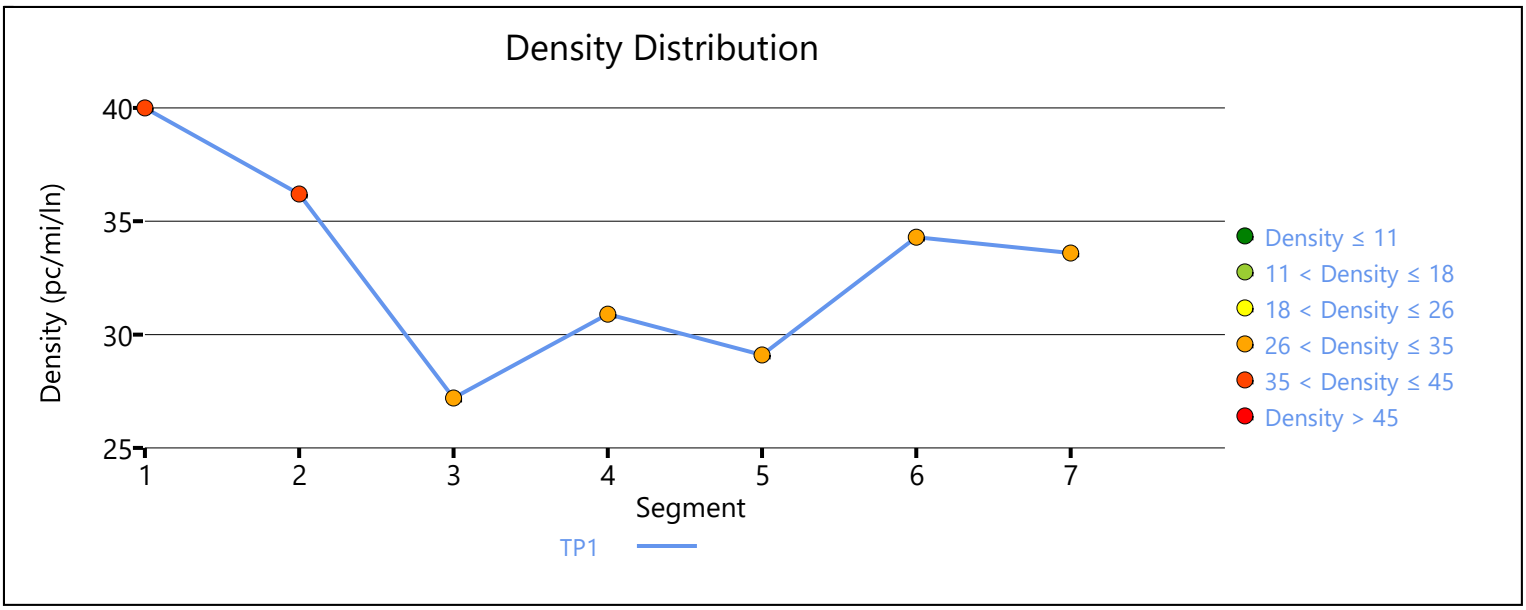
T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	58.3	36.8	35.3	5.7	E

Facility Overall Results

Space Mean Speed, mi/h	58.3	Density, veh/mi/ln	35.3
Average Travel Time, min	5.7	Density, pc/mi/ln	36.8







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HCS7 Freeway Facilities Report

Project Information

Analyst	JB	Date	6/30/2020
Agency	Urban Crossroads, Inc.	Analysis Year	Horizon Year (2040) Without Project
Jurisdiction	Caltrans	Time Period Analyzed	PM Peak Hour
Project Description	Hesperia Commerce Center II (JN:12778) - I-15 Southbound at US Highway 395		

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	3
Total Time Periods	1	Time Period Duration, min	15

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	North of US 395	4200	3
2	Merge	Basic	On-Ramp at US 395	1500	4
3	Basic	Basic	South of US 395	4200	4

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.962	7366	7179	1.03	53.2	45.0	F

Segment 2: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.962	0.885	9164	1985	9600	2100	0.77	0.95	53.7	-	42.7	-	E

Segment 3: Basic

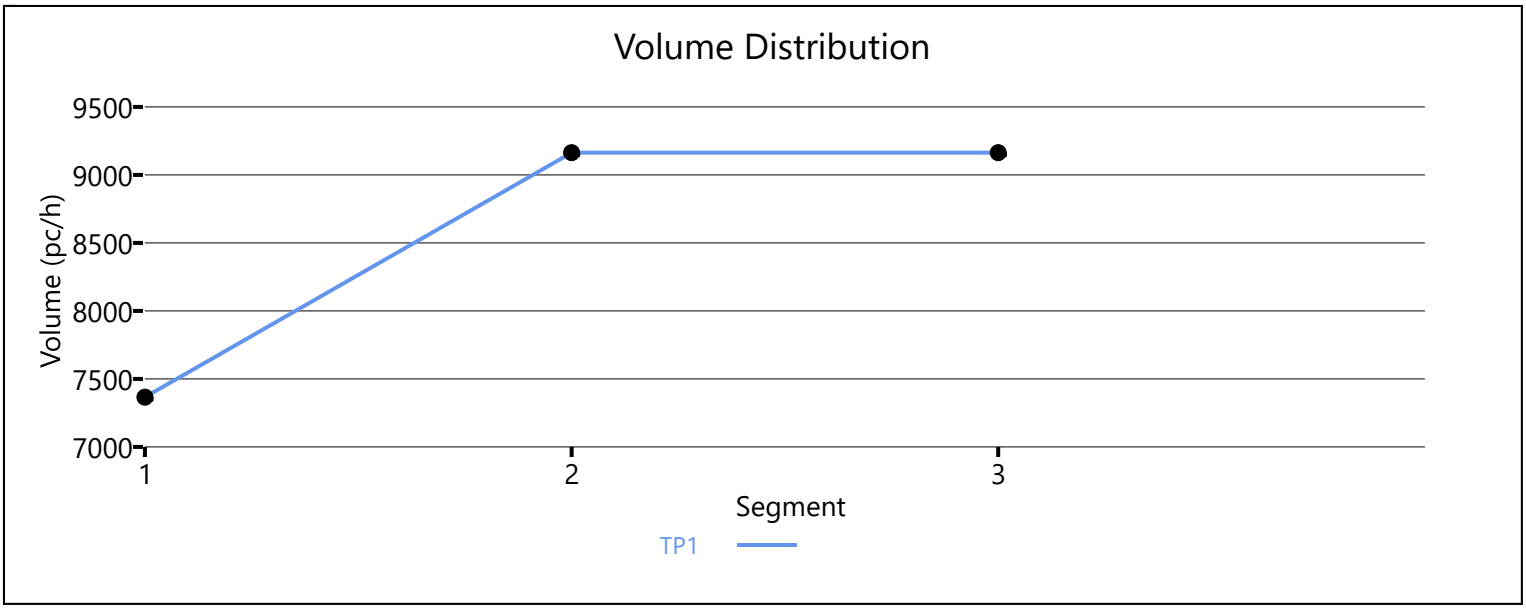
Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.935	9164	9572	0.99	56.2	40.7	E

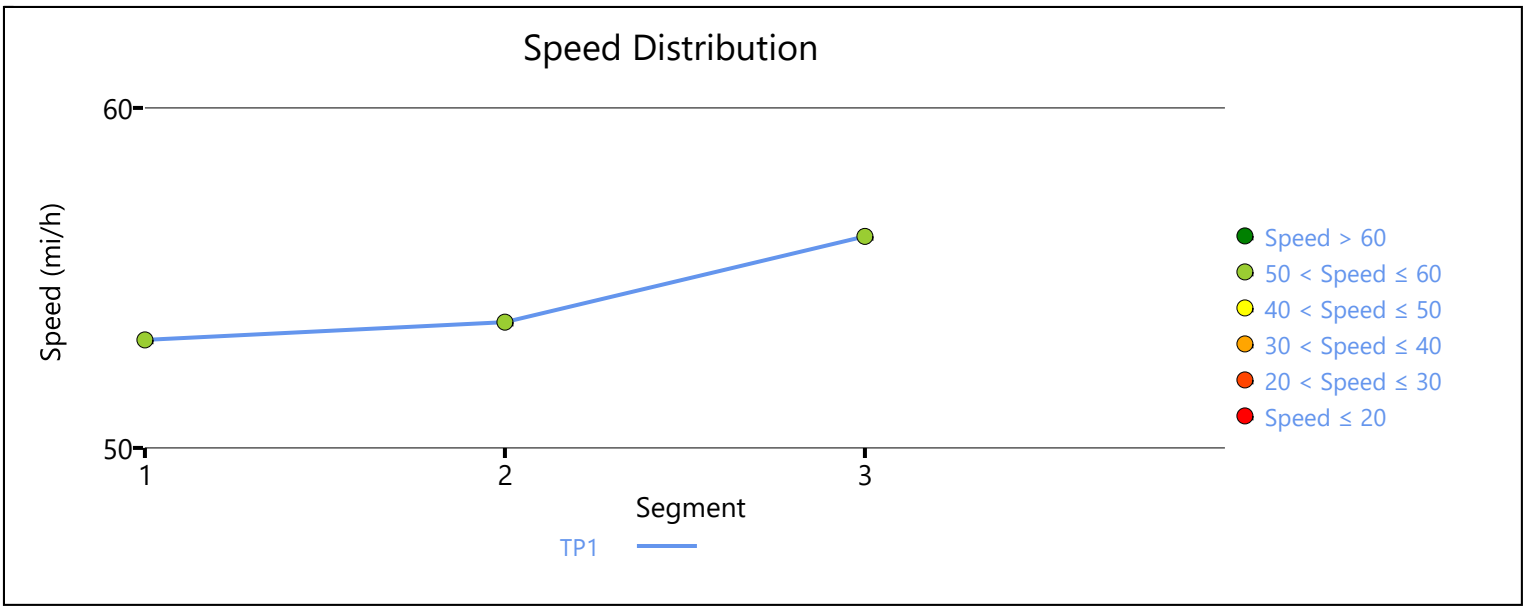
Facility Time Period Results

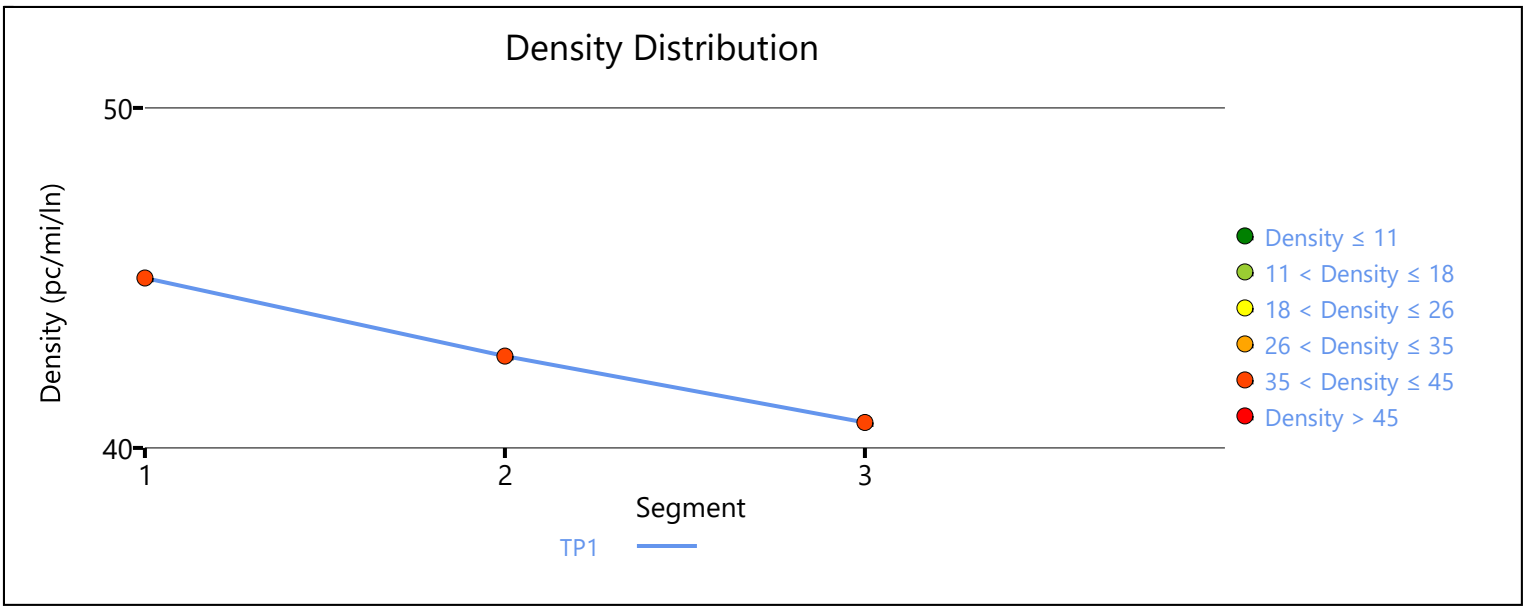
T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	54.8	42.5	40.4	2.1	F

Facility Overall Results

Space Mean Speed, mi/h	54.8	Density, veh/mi/ln	40.4
Average Travel Time, min	2.1	Density, pc/mi/ln	42.5







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HCS7 Freeway Facilities Report

Project Information

Analyst	JB	Date	6/30/2020
Agency	Urban Crossroads, Inc.	Analysis Year	Horizon Year (2040) Without Project
Jurisdiction	Caltrans	Time Period Analyzed	PM Peak Hour
Project Description	Hesperia Commerce Center II (JN 12778) - I-15 NB at Main		

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	7
Total Time Periods	1	Time Period Duration, min	15

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	I-15 NB, South of Main St.	6140	3
2	Diverge	Diverge	I-15 NB, Off-Ramp at Main St.	1500	3
3	Basic	Basic	I-15 NB, Between Off-Ramp and Loop On-Ramp	1125	3
4	Merge	Merge	I-15 NB, Loop On-Ramp at Main St.	1500	3
5	Basic	Basic	I-15 NB, Between Loop On-Ramp and On-Ramp	1215	3
6	Merge	Merge	I-15 NB, On-Ramp at Main St.	1500	3
7	Basic	Basic	I-15 NB, North of Main St.	16370	3

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.962	8339	7146	1.17	52.9	45.0	F

Segment 2: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.962	0.926	7146	1751	7200	2100	1.16	0.83	61.5	57.2	38.7	41.3	F

Segment 3: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.980	5395	7146	0.91	65.9	27.3	D

Segment 4: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.980	0.862	6165	770	7200	1900	1.01	0.41	58.6	56.0	35.1	33.0	F

Segment 5: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.962	6165	7146	1.03	61.5	33.4	F

Segment 6: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.962	0.962	6798	633	7200	2100	1.11	0.30	57.0	54.3	39.8	36.0	F

Segment 7: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.962	6798	7146	1.12	56.8	39.9	F

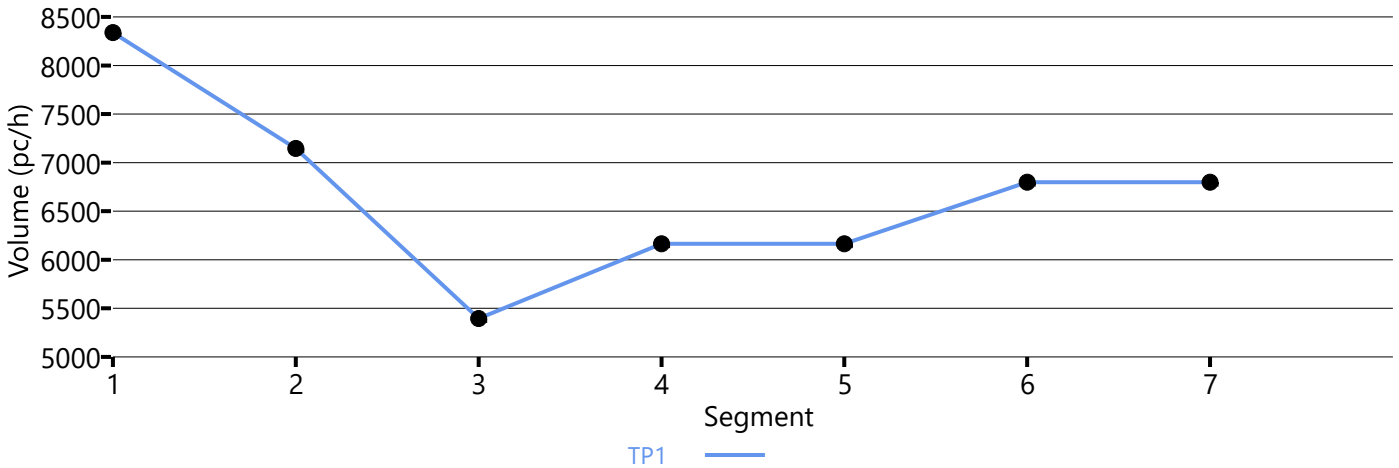
Facility Time Period Results

T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	56.9	39.7	38.3	5.9	F

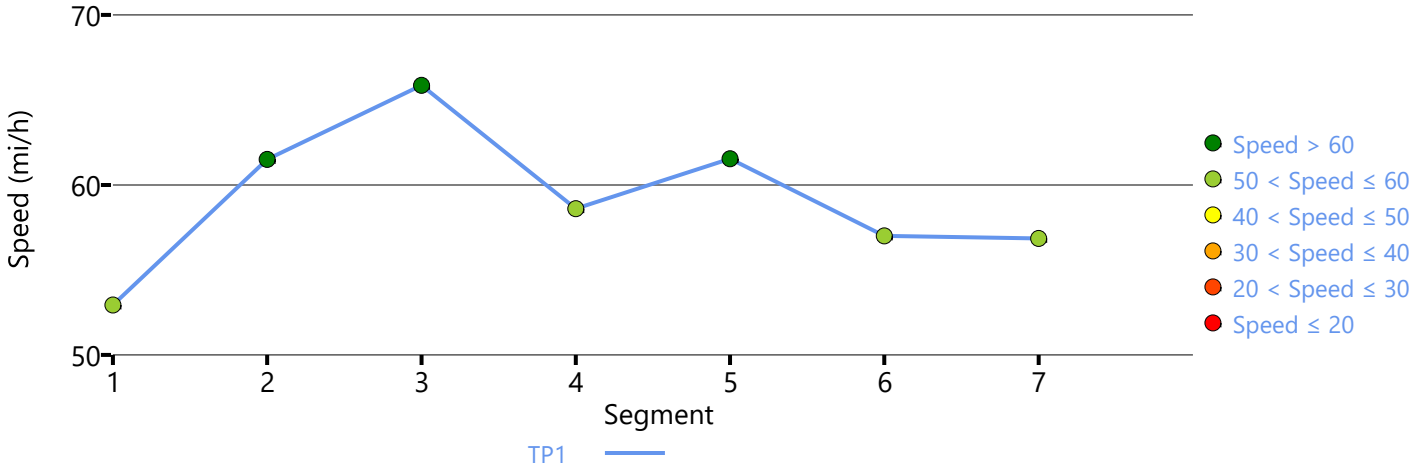
Facility Overall Results

Space Mean Speed, mi/h	56.9	Density, veh/mi/ln	38.3
Average Travel Time, min	5.9	Density, pc/mi/ln	39.7

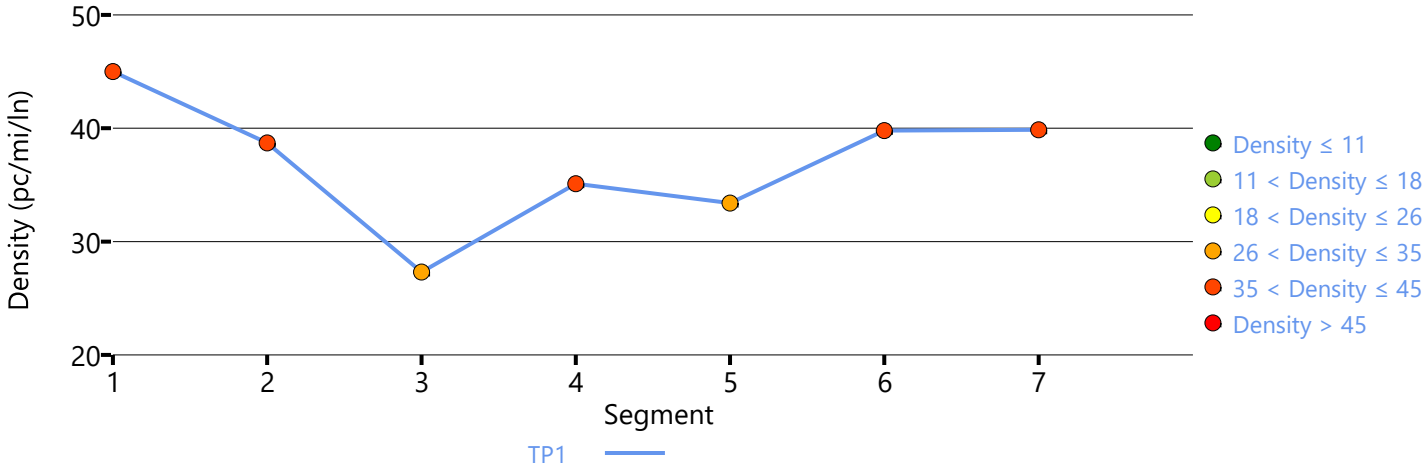
Volume Distribution



Speed Distribution



Density Distribution



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HCS7 Freeway Facilities Report

Project Information

Analyst	JB	Date	6/30/2020
Agency	Urban Crossroads, Inc.	Analysis Year	Horizon Year (2040) With Project
Jurisdiction	Caltrans	Time Period Analyzed	PM Peak Hour
Project Description	Hesperia Commerce Center II (JN:12778) - I-15 NB at US 395		

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	3
Total Time Periods	1	Time Period Duration, min	15

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	South of US 395	2000	4
2	Diverge	Diverge	Off-Ramp at US 395	1500	4
3	Basic	Basic	North of US 395	6350	4

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.952	11540	9572	1.21	53.2	45.0	F

Segment 2: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.952	0.901	9572	2389	9600	2100	1.20	1.14	53.3	55.6	45.0	46.5	F

Segment 3: Basic

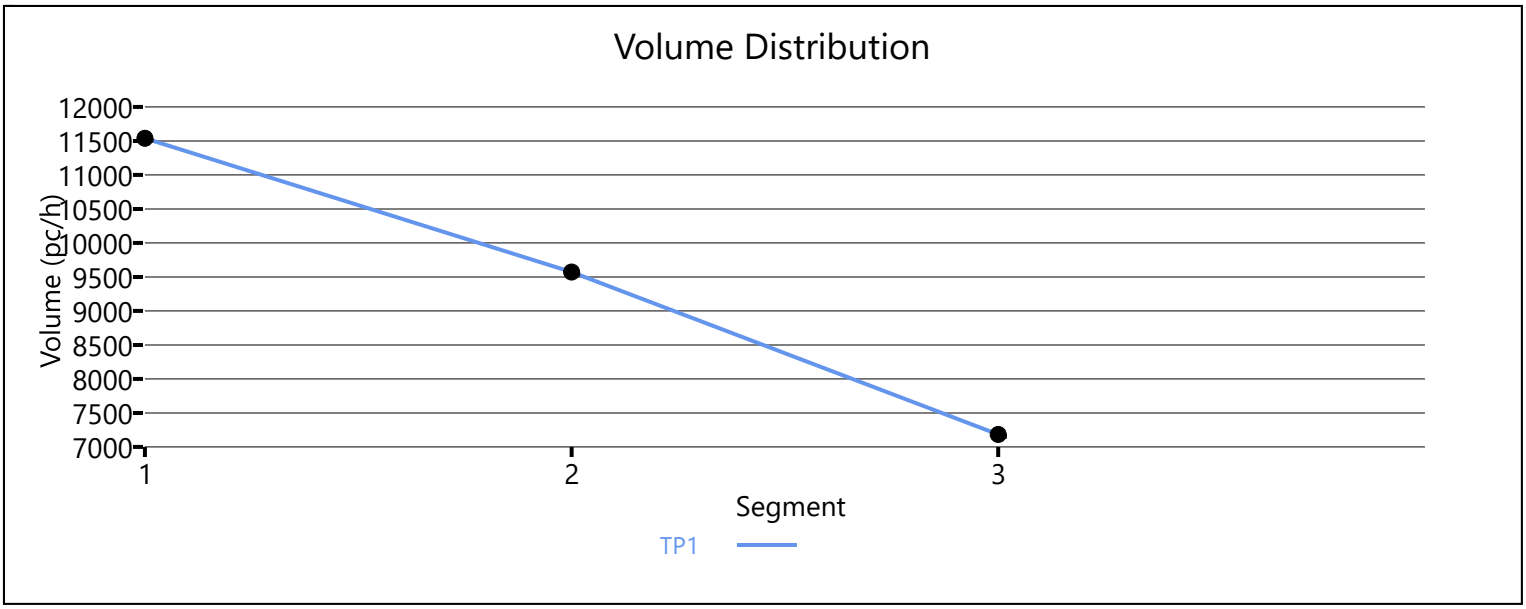
Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.971	7183	9572	0.95	65.9	27.3	D

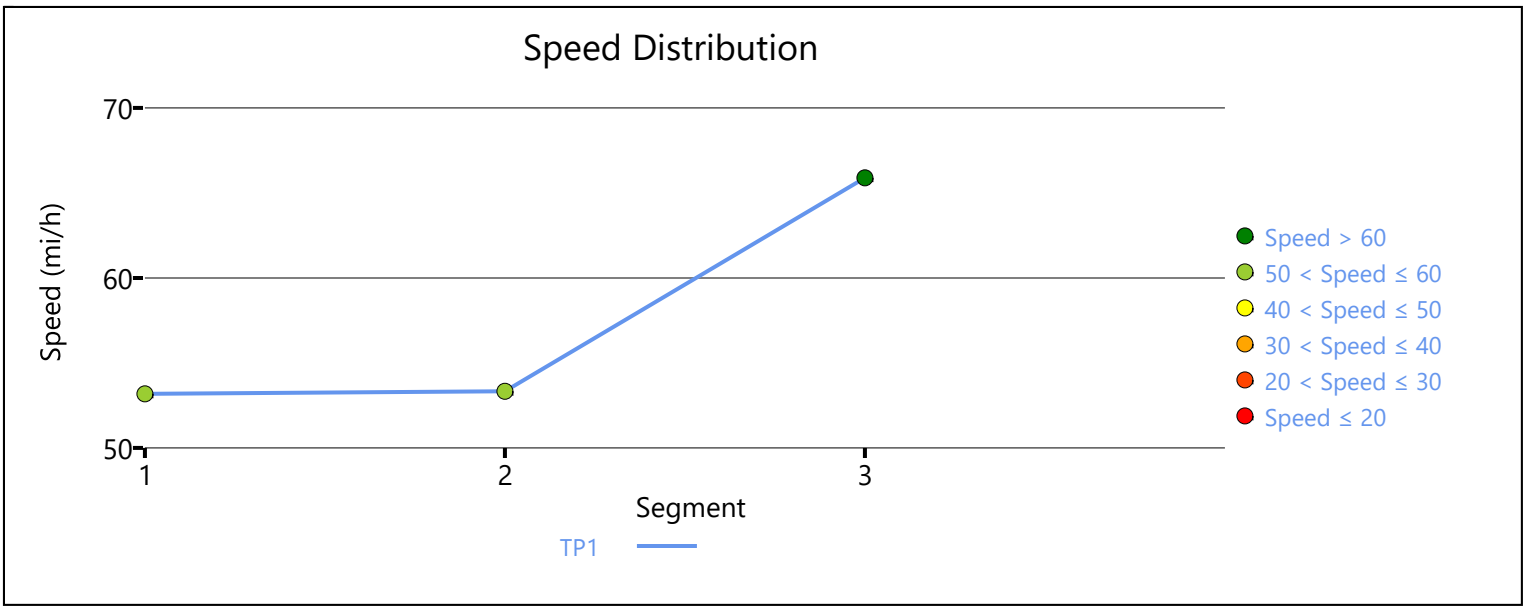
Facility Time Period Results

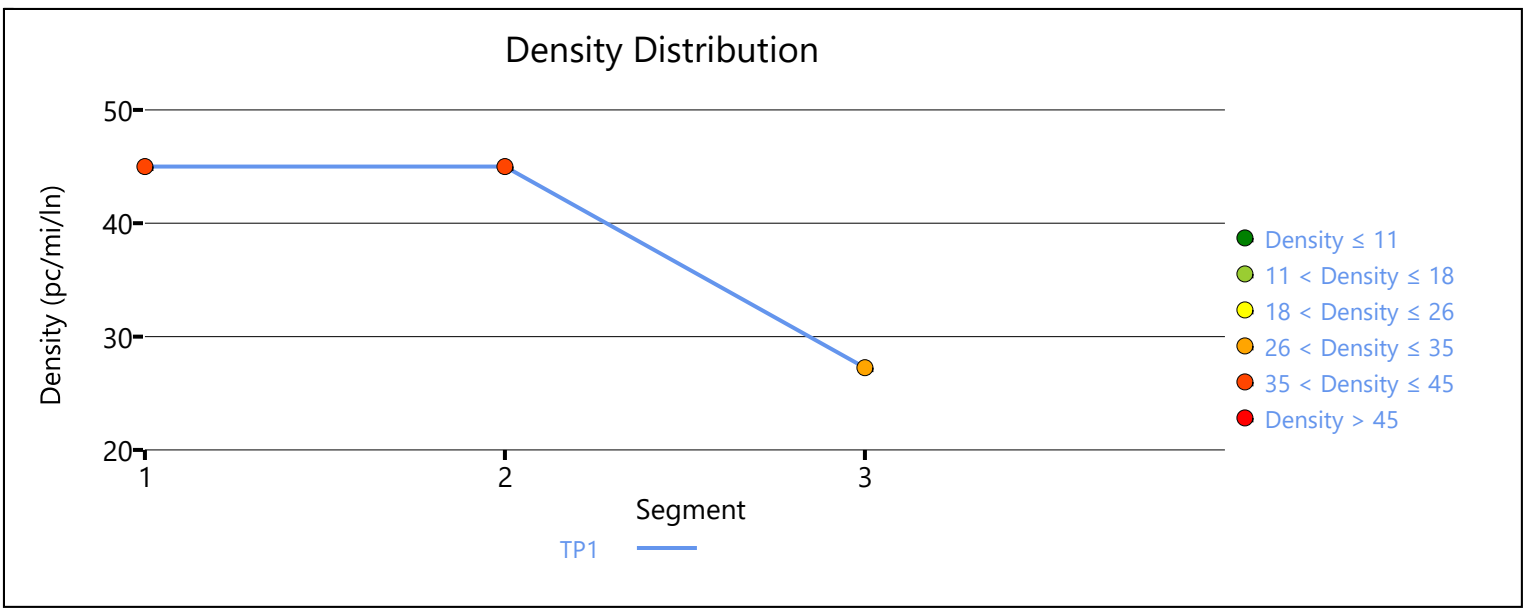
T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	60.0	33.5	32.2	1.9	F

Facility Overall Results

Space Mean Speed, mi/h	60.0	Density, veh/mi/ln	32.2
Average Travel Time, min	1.9	Density, pc/mi/ln	33.5







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APPENDIX 7.9:

HORIZON YEAR (2040) WITHOUT PROJECT CONDITIONS INTERSECTION OPERATIONS ANALYSIS WORKSHEETS WITH IMPROVEMENTS

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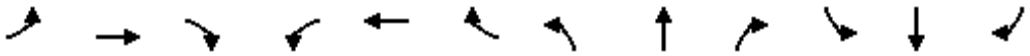
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	69	172	127	98	129	63	1126	61	297	1755
Future Volume (vph)	69	172	127	98	129	63	1126	61	297	1755
Turn Type	Perm	NA	Perm	Perm	NA	Prot	NA	Perm	Prot	NA
Protected Phases		4			8	5	2		1	6
Permitted Phases	4		4	8				2		
Detector Phase	4	4	4	8	8	5	2	2	1	6
Switch Phase										
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	15.0	15.0	15.0	42.0	42.0	9.0	28.0	28.0	9.0	37.0
Total Split (s)	44.0	44.0	44.0	44.0	44.0	10.0	45.0	45.0	31.0	66.0
Total Split (%)	36.7%	36.7%	36.7%	36.7%	36.7%	8.3%	37.5%	37.5%	25.8%	55.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	3.0	5.0	5.0	3.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	4.0	6.0	6.0	4.0	6.0
Lead/Lag						Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?						Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Max	Max	None	Max
Act Effct Green (s)	39.0	39.0	39.0	39.0	39.0	6.0	41.5	41.5	24.5	60.0
Actuated g/C Ratio	0.32	0.32	0.32	0.32	0.32	0.05	0.35	0.35	0.20	0.50
v/c Ratio	1.15	0.30	0.23	0.31	0.86	0.76	0.68	0.11	0.88	0.79
Control Delay	198.9	32.0	9.2	33.4	44.3	101.0	36.5	3.1	70.3	27.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	198.9	32.0	9.2	33.4	44.3	101.0	36.5	3.1	70.3	27.5
LOS	F	C	A	C	D	F	D	A	E	C
Approach Delay		55.4			42.5		38.1			33.4
Approach LOS		E			D		D			C

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.15	
Intersection Signal Delay: 37.8	Intersection LOS: D
Intersection Capacity Utilization 95.6%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 8: US-395 & Luna Rd.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	69	172	127	98	129	372	63	1126	61	297	1755	118
Future Volume (veh/h)	69	172	127	98	129	372	63	1126	61	297	1755	118
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	75	187	105	107	140	338	68	1224	50	323	1908	110
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	117	619	524	354	161	388	87	1842	569	351	2513	145
Arrive On Green	0.33	0.33	0.33	0.33	0.33	0.33	0.05	0.36	0.36	0.19	0.50	0.50
Sat Flow, veh/h	982	1900	1610	1166	493	1190	1810	5187	1603	1810	5018	288
Grp Volume(v), veh/h	75	187	105	107	0	478	68	1224	50	323	1313	705
Grp Sat Flow(s),veh/h/ln	982	1900	1610	1166	0	1683	1810	1729	1603	1810	1729	1848
Q Serve(g_s), s	7.0	8.8	5.6	9.1	0.0	32.0	4.5	23.9	2.5	21.0	36.6	36.8
Cycle Q Clear(g_c), s	39.0	8.8	5.6	17.9	0.0	32.0	4.5	23.9	2.5	21.0	36.6	36.8
Prop In Lane	1.00		1.00	1.00		0.71	1.00		1.00	1.00		0.16
Lane Grp Cap(c), veh/h	117	619	524	354	0	548	87	1842	569	351	1732	926
V/C Ratio(X)	0.64	0.30	0.20	0.30	0.00	0.87	0.78	0.66	0.09	0.92	0.76	0.76
Avail Cap(c_a), veh/h	117	619	524	354	0	548	91	1842	569	408	1732	926
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	57.2	30.2	29.1	36.9	0.0	38.0	56.4	32.6	25.7	47.4	24.1	24.1
Incr Delay (d2), s/veh	8.7	0.1	0.1	0.2	0.0	13.8	31.9	1.9	0.3	23.2	3.2	5.9
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	2.5	4.0	2.2	2.6	0.0	14.8	2.7	9.6	0.9	11.2	14.1	15.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	66.0	30.3	29.2	37.1	0.0	51.9	88.3	34.5	26.0	70.6	27.2	30.0
LnGrp LOS	E	C	C	D	A	D	F	C	C	E	C	C
Approach Vol, veh/h		367			585			1342			2341	
Approach Delay, s/veh		37.3			49.2			36.9			34.0	
Approach LOS		D			D			D			C	

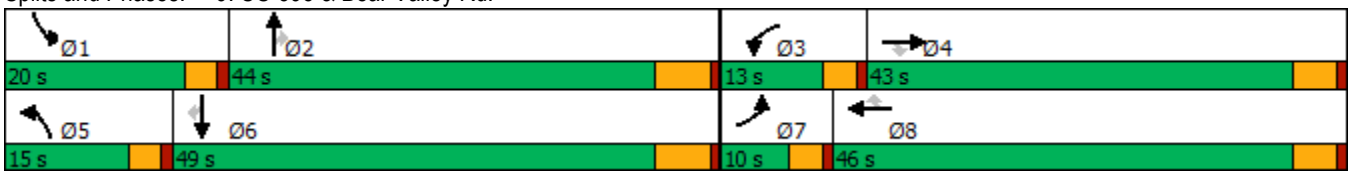
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	27.2	48.5		44.0	9.8	66.0		44.0				
Change Period (Y+Rc), s	4.0	6.0		5.0	4.0	6.0		5.0				
Max Green Setting (Gmax), s	27.0	39.0		39.0	6.0	60.0		39.0				
Max Q Clear Time (g_c+I1), s	23.0	25.9		41.0	6.5	38.8		34.0				
Green Ext Time (p_c), s	0.3	5.3		0.0	0.0	11.2		1.1				

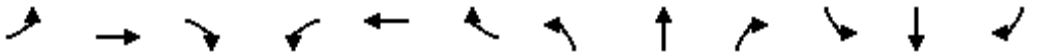
Intersection Summary			
HCM 6th Ctrl Delay		37.0	
HCM 6th LOS		D	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	80	464	317	217	347	138	148	1043	134	310	1726	47
Future Volume (vph)	80	464	317	217	347	138	148	1043	134	310	1726	47
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.0	43.0	43.0	9.0	43.0	43.0	9.0	44.0	44.0	9.0	44.0	44.0
Total Split (s)	10.0	43.0	43.0	13.0	46.0	46.0	15.0	44.0	44.0	20.0	49.0	49.0
Total Split (%)	8.3%	35.8%	35.8%	10.8%	38.3%	38.3%	12.5%	36.7%	36.7%	16.7%	40.8%	40.8%
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0	4.0	3.0	5.0	5.0	3.0	5.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	5.0	5.0	4.0	5.0	5.0	4.0	6.0	6.0	4.0	6.0	6.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Max	Max	None	Max	Max
Act Effct Green (s)	6.1	20.2	20.2	9.1	23.2	23.2	9.0	39.1	39.1	13.3	43.5	43.5
Actuated g/C Ratio	0.06	0.20	0.20	0.09	0.23	0.23	0.09	0.39	0.39	0.13	0.43	0.43
v/c Ratio	0.76	0.66	0.66	1.38	0.43	0.30	0.49	0.53	0.19	0.69	0.80	0.06
Control Delay	89.0	41.4	19.0	242.3	34.3	6.5	51.1	26.6	5.3	51.4	29.7	0.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	89.0	41.4	19.0	242.3	34.3	6.5	51.1	26.6	5.3	51.4	29.7	0.8
LOS	F	D	B	F	C	A	D	C	A	D	C	A
Approach Delay		37.5			93.2			27.2			32.3	
Approach LOS		D			F			C			C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 100.9	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.38	
Intersection Signal Delay: 40.4	Intersection LOS: D
Intersection Capacity Utilization 78.3%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 9: US-395 & Bear Valley Rd.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	80	464	317	217	347	138	148	1043	134	310	1726	47
Future Volume (veh/h)	80	464	317	217	347	138	148	1043	134	310	1726	47
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	82	478	246	224	358	108	153	1075	111	320	1779	42
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	105	681	304	171	813	363	224	2088	648	401	2348	729
Arrive On Green	0.06	0.19	0.19	0.09	0.23	0.23	0.06	0.40	0.40	0.11	0.45	0.45
Sat Flow, veh/h	1810	3610	1610	1810	3610	1610	3510	5187	1610	3510	5187	1610
Grp Volume(v), veh/h	82	478	246	224	358	108	153	1075	111	320	1779	42
Grp Sat Flow(s),veh/h/ln	1810	1805	1610	1810	1805	1610	1755	1729	1610	1755	1729	1610
Q Serve(g_s), s	4.2	11.8	13.9	9.0	8.1	5.3	4.1	14.8	4.2	8.4	27.1	1.4
Cycle Q Clear(g_c), s	4.2	11.8	13.9	9.0	8.1	5.3	4.1	14.8	4.2	8.4	27.1	1.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	105	681	304	171	813	363	224	2088	648	401	2348	729
V/C Ratio(X)	0.78	0.70	0.81	1.31	0.44	0.30	0.68	0.51	0.17	0.80	0.76	0.06
Avail Cap(c_a), veh/h	114	1444	644	171	1558	695	406	2088	648	591	2348	729
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.1	36.0	36.9	43.0	31.7	30.6	43.5	21.4	18.2	41.0	21.7	14.6
Incr Delay (d2), s/veh	25.2	0.5	2.0	173.6	0.1	0.2	2.7	0.9	0.6	3.9	2.3	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	4.8	5.2	12.0	3.3	1.9	1.7	5.5	1.5	3.6	9.9	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	69.3	36.5	38.9	216.6	31.8	30.7	46.2	22.3	18.8	44.9	24.0	14.8
LnGrp LOS	E	D	D	F	C	C	D	C	B	D	C	B
Approach Vol, veh/h		806			690			1339			2141	
Approach Delay, s/veh		40.6			91.6			24.7			27.0	
Approach LOS		D			F			C			C	

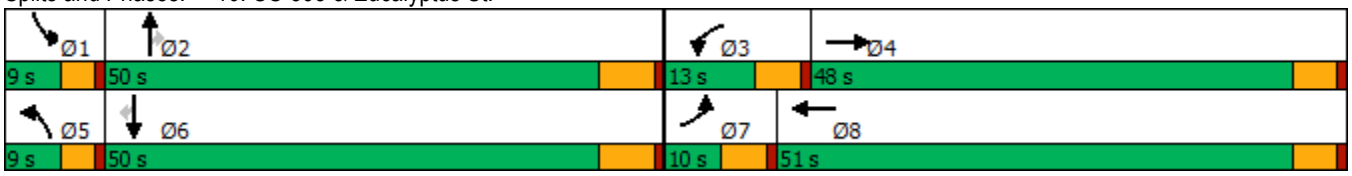
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.8	44.2	13.0	22.9	10.1	49.0	9.5	26.4
Change Period (Y+Rc), s	4.0	6.0	4.0	5.0	4.0	6.0	4.0	5.0
Max Green Setting (Gmax), s	16.0	38.0	9.0	38.0	11.0	43.0	6.0	41.0
Max Q Clear Time (g_c+I1), s	10.4	16.8	11.0	15.9	6.1	29.1	6.2	10.1
Green Ext Time (p_c), s	0.4	4.5	0.0	2.0	0.1	6.8	0.0	1.4

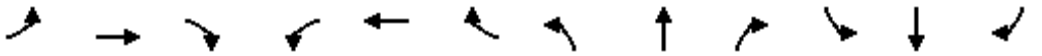
Intersection Summary	
HCM 6th Ctrl Delay	37.5
HCM 6th LOS	D

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	13	7	105	8	9	1186	81	9	2254	11
Future Volume (vph)	13	7	105	8	9	1186	81	9	2254	11
Turn Type	Prot	NA	Prot	NA	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4	3	8	5	2		1	6	
Permitted Phases							2			6
Detector Phase	7	4	3	8	5	2	2	1	6	6
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	10.0	48.0	10.0	48.0	9.0	41.0	41.0	9.0	41.0	41.0
Total Split (s)	10.0	48.0	13.0	51.0	9.0	50.0	50.0	9.0	50.0	50.0
Total Split (%)	8.3%	40.0%	10.8%	42.5%	7.5%	41.7%	41.7%	7.5%	41.7%	41.7%
Yellow Time (s)	4.0	4.0	4.0	4.0	3.0	5.0	5.0	3.0	5.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	4.0	6.0	6.0	4.0	6.0	6.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	Max	Max	None	Max	Max
Act Effct Green (s)	5.2	15.0	9.7	18.2	5.2	50.9	50.9	5.2	50.9	50.9
Actuated g/C Ratio	0.06	0.18	0.12	0.22	0.06	0.61	0.61	0.06	0.61	0.61
v/c Ratio	0.12	0.08	0.54	0.11	0.09	0.40	0.08	0.09	0.76	0.01
Control Delay	46.5	15.5	48.7	10.7	46.0	13.0	3.6	46.0	18.4	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	46.5	15.5	48.7	10.7	46.0	13.0	3.6	46.0	18.4	0.0
LOS	D	B	D	B	D	B	A	D	B	A
Approach Delay		26.3		38.6		12.6			18.4	
Approach LOS		C		D		B			B	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 83.2	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.76	
Intersection Signal Delay: 17.3	Intersection LOS: B
Intersection Capacity Utilization 66.0%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 10: US-395 & Eucalyptus St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	13	7	17	105	8	30	9	1186	81	9	2254	11
Future Volume (veh/h)	13	7	17	105	8	30	9	1186	81	9	2254	11
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	14	8	10	113	9	21	10	1275	83	10	2424	11
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	30	76	95	144	82	191	23	2885	896	23	2885	896
Arrive On Green	0.02	0.10	0.10	0.08	0.16	0.16	0.01	0.56	0.56	0.01	0.56	0.56
Sat Flow, veh/h	1810	768	960	1810	506	1180	1810	5187	1610	1810	5187	1610
Grp Volume(v), veh/h	14	0	18	113	0	30	10	1275	83	10	2424	11
Grp Sat Flow(s),veh/h/ln	1810	0	1727	1810	0	1685	1810	1729	1610	1810	1729	1610
Q Serve(g_s), s	0.6	0.0	0.8	4.9	0.0	1.2	0.4	11.4	1.9	0.4	30.8	0.2
Cycle Q Clear(g_c), s	0.6	0.0	0.8	4.9	0.0	1.2	0.4	11.4	1.9	0.4	30.8	0.2
Prop In Lane	1.00		0.56	1.00		0.70	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	30	0	171	144	0	273	23	2885	896	23	2885	896
V/C Ratio(X)	0.46	0.00	0.11	0.79	0.00	0.11	0.44	0.44	0.09	0.44	0.84	0.01
Avail Cap(c_a), veh/h	114	0	939	183	0	980	114	2885	896	114	2885	896
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.5	0.0	32.4	35.7	0.0	28.3	38.8	10.3	8.2	38.8	14.6	7.8
Incr Delay (d2), s/veh	4.0	0.0	0.3	12.1	0.0	0.2	5.0	0.5	0.2	5.0	3.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	0.3	2.5	0.0	0.5	0.2	3.4	0.6	0.2	11.6	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	42.6	0.0	32.7	47.8	0.0	28.5	43.8	10.8	8.4	43.8	17.8	7.9
LnGrp LOS	D	A	C	D	A	C	D	B	A	D	B	A
Approach Vol, veh/h		32			143			1368			2445	
Approach Delay, s/veh		37.0			43.8			10.9			17.8	
Approach LOS		D			D			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.0	50.0	11.3	12.8	5.0	50.0	6.3	17.8
Change Period (Y+Rc), s	4.0	6.0	5.0	5.0	4.0	6.0	5.0	5.0
Max Green Setting (Gmax), s	5.0	44.0	8.0	43.0	5.0	44.0	5.0	46.0
Max Q Clear Time (g_c+I1), s	2.4	13.4	6.9	2.8	2.4	32.8	2.6	3.2
Green Ext Time (p_c), s	0.0	9.7	0.0	0.1	0.0	10.2	0.0	0.1

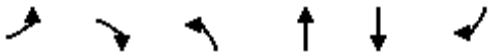
Intersection Summary	
HCM 6th Ctrl Delay	16.5
HCM 6th LOS	B

Lane Group	EBR	NBL	NBT	SBT
Lane Configurations				
Traffic Volume (vph)	1	4	1920	2656
Future Volume (vph)	1	4	1920	2656
Turn Type	Perm	Prot	NA	NA
Protected Phases		5	2	6
Permitted Phases	4			
Detector Phase	4	5	2	6
Switch Phase				
Minimum Initial (s)	10.0	5.0	10.0	10.0
Minimum Split (s)	26.6	9.6	16.5	23.5
Total Split (s)	26.6	26.0	93.4	67.4
Total Split (%)	22.2%	21.7%	77.8%	56.2%
Yellow Time (s)	3.6	3.6	5.5	5.5
All-Red Time (s)	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	6.5	6.5
Lead/Lag		Lead		Lag
Lead-Lag Optimize?		Yes		Yes
Recall Mode	None	None	Max	Max
Act Effct Green (s)	12.2	5.1	104.6	102.7
Actuated g/C Ratio	0.11	0.05	0.94	0.93
v/c Ratio	0.00	0.05	0.43	0.60
Control Delay	0.0	53.8	2.2	5.3
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	0.0	53.8	2.2	5.3
LOS	A	D	A	A
Approach Delay			2.3	5.3
Approach LOS			A	A

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 110.7	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.60	
Intersection Signal Delay: 4.1	Intersection LOS: A
Intersection Capacity Utilization 68.9%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 11: US-395 & Yucca Terrace Dr.





Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	1	4	1920	2656	0
Future Volume (veh/h)	0	1	4	1920	2656	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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	0	1	4	2087	2887	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	5	4	10	4587	4317	0
Arrive On Green	0.00	0.00	0.01	0.88	0.83	0.00
Sat Flow, veh/h	1810	1610	1810	5358	5529	0
Grp Volume(v), veh/h	0	1	4	2087	2887	0
Grp Sat Flow(s),veh/h/ln	1810	1610	1810	1729	1729	0
Q Serve(g_s), s	0.0	0.1	0.2	7.7	20.7	0.0
Cycle Q Clear(g_c), s	0.0	0.1	0.2	7.7	20.7	0.0
Prop In Lane	1.00	1.00	1.00			0.00
Lane Grp Cap(c), veh/h	5	4	10	4587	4317	0
V/C Ratio(X)	0.00	0.23	0.42	0.45	0.67	0.00
Avail Cap(c_a), veh/h	405	360	394	4587	4317	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	48.9	48.7	1.1	3.1	0.0
Incr Delay (d2), s/veh	0.0	24.2	10.6	0.3	0.8	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	0.0	0.1	0.1	0.1	1.6	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.0	73.1	59.3	1.4	4.0	0.0
LnGrp LOS	A	E	E	A	A	A
Approach Vol, veh/h	1			2091	2887	
Approach Delay, s/veh	73.1			1.5	4.0	
Approach LOS	E			A	A	

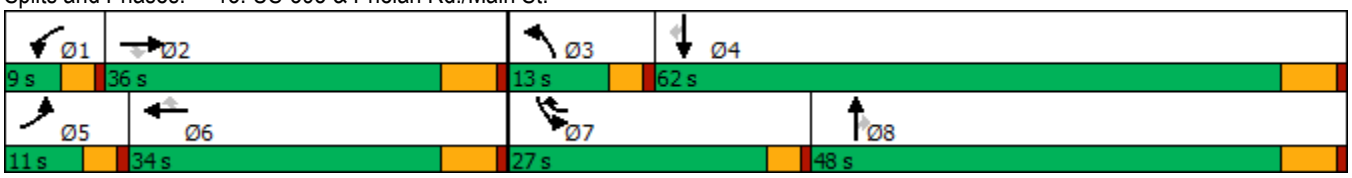
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		93.4		4.9	5.1	88.3
Change Period (Y+Rc), s		6.5		4.6	4.6	6.5
Max Green Setting (Gmax), s		86.9		22.0	21.4	60.9
Max Q Clear Time (g_c+I1), s		9.7		2.1	2.2	22.7
Green Ext Time (p_c), s		27.3		0.0	0.0	31.4

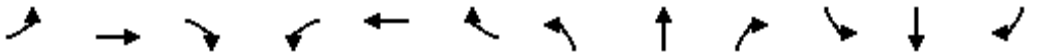
Intersection Summary	
HCM 6th Ctrl Delay	3.0
HCM 6th LOS	A

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	103	921	203	23	449	416	151	1485	26	317	2268	82
Future Volume (vph)	103	921	203	23	449	416	151	1485	26	317	2268	82
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2		1	6	7	3	8		7	4	
Permitted Phases			2			6			8			4
Detector Phase	5	2	2	1	6	7	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	5.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.0	16.0	16.0	9.0	16.0	9.0	9.0	16.0	16.0	9.0	16.0	16.0
Total Split (s)	11.0	36.0	36.0	9.0	34.0	27.0	13.0	48.0	48.0	27.0	62.0	62.0
Total Split (%)	9.2%	30.0%	30.0%	7.5%	28.3%	22.5%	10.8%	40.0%	40.0%	22.5%	51.7%	51.7%
Yellow Time (s)	3.0	5.0	5.0	3.0	5.0	3.0	3.0	5.0	5.0	3.0	5.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	6.0	6.0	4.0	6.0	4.0	4.0	6.0	6.0	4.0	6.0	6.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	7.0	27.5	27.5	5.0	21.5	43.3	8.5	49.1	49.1	15.7	56.3	56.3
Actuated g/C Ratio	0.06	0.24	0.24	0.04	0.19	0.38	0.07	0.43	0.43	0.14	0.50	0.50
v/c Ratio	0.96	0.76	0.40	0.30	0.48	0.66	0.60	0.69	0.03	0.68	0.92	0.10
Control Delay	130.0	44.9	9.5	65.3	42.0	28.7	62.3	29.8	0.1	54.5	34.6	2.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	130.0	44.9	9.5	65.3	42.0	28.7	62.3	29.8	0.1	54.5	34.6	2.8
LOS	F	D	A	E	D	C	E	C	A	D	C	A
Approach Delay		46.2			36.4			32.2			36.0	
Approach LOS		D			D			C			D	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 113.5	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.96	
Intersection Signal Delay: 37.0	Intersection LOS: D
Intersection Capacity Utilization 86.8%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 13: US-395 & Phelan Rd./Main St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	103	921	203	23	449	416	151	1485	26	317	2268	82
Future Volume (veh/h)	103	921	203	23	449	416	151	1485	26	317	2268	82
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	107	959	155	24	468	225	157	1547	18	330	2362	64
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	115	1192	370	43	984	492	218	2330	723	406	2607	809
Arrive On Green	0.06	0.23	0.23	0.02	0.19	0.19	0.06	0.45	0.45	0.12	0.50	0.50
Sat Flow, veh/h	1810	5187	1610	1810	5187	1610	3510	5187	1610	3510	5187	1610
Grp Volume(v), veh/h	107	959	155	24	468	225	157	1547	18	330	2362	64
Grp Sat Flow(s),veh/h/ln	1810	1729	1610	1810	1729	1610	1755	1729	1610	1755	1729	1610
Q Serve(g_s), s	6.5	19.2	9.0	1.4	8.8	12.4	4.8	25.7	0.7	10.1	45.7	2.3
Cycle Q Clear(g_c), s	6.5	19.2	9.0	1.4	8.8	12.4	4.8	25.7	0.7	10.1	45.7	2.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	115	1192	370	43	984	492	218	2330	723	406	2607	809
V/C Ratio(X)	0.93	0.80	0.42	0.56	0.48	0.46	0.72	0.66	0.02	0.81	0.91	0.08
Avail Cap(c_a), veh/h	115	1414	439	82	1320	596	287	2330	723	734	2640	820
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	51.3	40.0	36.1	53.1	39.7	30.9	50.6	23.8	16.9	47.5	25.0	14.2
Incr Delay (d2), s/veh	61.7	3.0	0.8	8.3	0.4	0.7	4.9	0.8	0.0	3.0	5.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.8	8.0	3.4	0.7	3.6	4.6	2.2	9.6	0.2	4.4	17.4	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	112.9	43.0	36.9	61.4	40.1	31.5	55.5	24.5	16.9	50.5	30.0	14.2
LnGrp LOS	F	D	D	E	D	C	E	C	B	D	C	B
Approach Vol, veh/h		1221			717			1722			2756	
Approach Delay, s/veh		48.4			38.1			27.3			32.1	
Approach LOS		D			D			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.6	31.3	10.8	61.3	11.0	26.9	16.7	55.4
Change Period (Y+Rc), s	4.0	6.0	4.0	6.0	4.0	6.0	4.0	6.0
Max Green Setting (Gmax), s	5.0	30.0	9.0	56.0	7.0	28.0	23.0	42.0
Max Q Clear Time (g_c+I1), s	3.4	21.2	6.8	47.7	8.5	14.4	12.1	27.7
Green Ext Time (p_c), s	0.0	4.1	0.1	7.5	0.0	2.9	0.6	9.2

Intersection Summary	
HCM 6th Ctrl Delay	34.6
HCM 6th LOS	C

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	122	432	1230	68	565	1929
Future Volume (vph)	122	432	1230	68	565	1929
Turn Type	Prot	Perm	NA	Perm	Prot	NA
Protected Phases	8		2		1	6
Permitted Phases		8		2		
Detector Phase	8	8	2	2	1	6
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0	10.0	5.0	10.0
Minimum Split (s)	26.7	26.7	23.5	23.5	9.6	16.5
Total Split (s)	31.0	31.0	55.2	55.2	33.8	89.0
Total Split (%)	25.8%	25.8%	46.0%	46.0%	28.2%	74.2%
Yellow Time (s)	3.7	3.7	5.5	5.5	3.6	5.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.7	4.7	6.5	6.5	4.6	6.5
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Recall Mode	None	None	Max	Max	None	Max
Act Effct Green (s)	14.7	14.7	55.6	55.6	22.5	82.7
Actuated g/C Ratio	0.14	0.14	0.51	0.51	0.21	0.76
v/c Ratio	0.54	0.80	0.50	0.08	0.84	0.53
Control Delay	51.6	18.2	19.7	5.6	52.5	6.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	51.6	18.2	19.7	5.6	52.5	6.3
LOS	D	B	B	A	D	A
Approach Delay	25.5		19.0			16.8
Approach LOS	C		B			B

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 108.7	
Natural Cycle: 75	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.84	
Intersection Signal Delay: 18.5	Intersection LOS: B
Intersection Capacity Utilization 61.4%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 14: US-395 & Poplar St.





Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	122	432	1230	68	565	1929
Future Volume (veh/h)	122	432	1230	68	565	1929
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	131	357	1323	57	608	2074
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	397	353	2370	736	675	3566
Arrive On Green	0.22	0.22	0.46	0.46	0.19	0.69
Sat Flow, veh/h	1810	1610	5358	1610	3510	5358
Grp Volume(v), veh/h	131	357	1323	57	608	2074
Grp Sat Flow(s),veh/h/ln	1810	1610	1729	1610	1755	1729
Q Serve(g_s), s	7.3	26.3	22.3	2.4	20.3	25.0
Cycle Q Clear(g_c), s	7.3	26.3	22.3	2.4	20.3	25.0
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	397	353	2370	736	675	3566
V/C Ratio(X)	0.33	1.01	0.56	0.08	0.90	0.58
Avail Cap(c_a), veh/h	397	353	2370	736	854	3566
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	39.4	46.8	23.8	18.3	47.4	9.8
Incr Delay (d2), s/veh	0.5	50.9	1.0	0.2	9.4	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	3.3	15.4	8.5	0.9	9.3	7.6
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	39.9	97.7	24.7	18.5	56.8	10.5
LnGrp LOS	D	F	C	B	E	B
Approach Vol, veh/h	488		1380			2682
Approach Delay, s/veh	82.2		24.5			21.0
Approach LOS	F		C			C

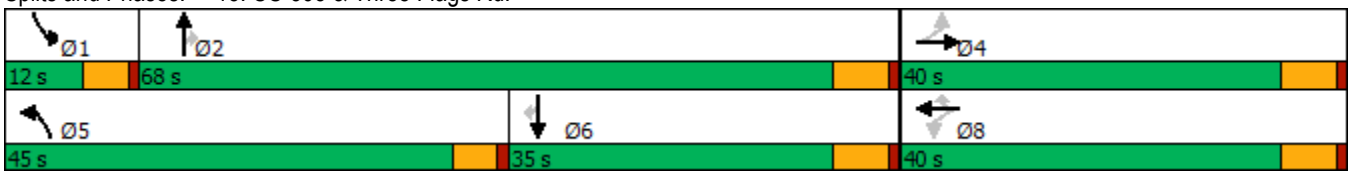
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	27.7	61.3			89.0	31.0
Change Period (Y+Rc), s	4.6	6.5			6.5	4.7
Max Green Setting (Gmax), s	29.2	48.7			82.5	26.3
Max Q Clear Time (g_c+I1), s	22.3	24.3			27.0	28.3
Green Ext Time (p_c), s	0.8	9.3			24.3	0.0

Intersection Summary	
HCM 6th Ctrl Delay	28.6
HCM 6th LOS	C

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	70	1	232	2	58	247	1170	142	44	1874	133
Future Volume (vph)	70	1	232	2	58	247	1170	142	44	1874	133
Turn Type	Perm	NA	Perm	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		4		8		5	2		1	6	
Permitted Phases	4		8		8			2			6
Detector Phase	4	4	8	8	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	16.0	16.0	16.0	16.0	16.0	10.0	16.0	16.0	10.0	16.0	16.0
Total Split (s)	40.0	40.0	40.0	40.0	40.0	45.0	68.0	68.0	12.0	35.0	35.0
Total Split (%)	33.3%	33.3%	33.3%	33.3%	33.3%	37.5%	56.7%	56.7%	10.0%	29.2%	29.2%
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	5.0	6.0	6.0	5.0	6.0	6.0
Lead/Lag						Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?						Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Max	Max	None	Max	Max
Act Effct Green (s)	34.1	34.1	34.1	34.1	34.1	22.1	62.1	62.1	6.4	44.3	44.3
Actuated g/C Ratio	0.29	0.29	0.29	0.29	0.29	0.19	0.53	0.53	0.05	0.38	0.38
v/c Ratio	0.18	0.44	1.16	0.00	0.12	0.79	0.46	0.17	0.48	1.04	0.21
Control Delay	33.9	6.0	148.9	31.0	0.5	62.0	18.4	2.8	71.6	68.8	8.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	33.9	6.0	148.9	31.0	0.5	62.0	18.4	2.8	71.6	68.8	8.4
LOS	C	A	F	C	A	E	B	A	E	E	A
Approach Delay		11.6		118.7			23.8			64.9	
Approach LOS		B		F			C			E	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 117.5	
Natural Cycle: 110	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.16	
Intersection Signal Delay: 49.2	Intersection LOS: D
Intersection Capacity Utilization 98.9%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 15: US-395 & Three Flags Rd.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	70	1	273	232	2	58	247	1170	142	44	1874	133
Future Volume (veh/h)	70	1	273	232	2	58	247	1170	142	44	1874	133
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	76	1	260	252	2	54	268	1272	142	48	2037	124
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	480	2	466	246	552	467	298	2748	852	62	2071	643
Arrive On Green	0.29	0.29	0.29	0.29	0.29	0.29	0.16	0.53	0.53	0.03	0.40	0.40
Sat Flow, veh/h	1442	6	1605	1199	1900	1607	1810	5187	1609	1810	5187	1610
Grp Volume(v), veh/h	76	0	261	252	2	54	268	1272	142	48	2037	124
Grp Sat Flow(s),veh/h/ln	1442	0	1611	1199	1900	1607	1810	1729	1609	1810	1729	1610
Q Serve(g_s), s	4.6	0.0	16.0	18.0	0.1	2.9	17.0	17.9	5.3	3.1	45.5	5.9
Cycle Q Clear(g_c), s	4.7	0.0	16.0	34.0	0.1	2.9	17.0	17.9	5.3	3.1	45.5	5.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	480	0	468	246	552	467	298	2748	852	62	2071	643
V/C Ratio(X)	0.16	0.00	0.56	1.03	0.00	0.12	0.90	0.46	0.17	0.77	0.98	0.19
Avail Cap(c_a), veh/h	480	0	468	246	552	467	619	2748	852	108	2071	643
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	31.2	0.0	35.1	51.8	29.5	30.5	47.9	17.1	14.2	56.0	34.8	22.9
Incr Delay (d2), s/veh	0.1	0.0	0.9	64.4	0.0	0.0	3.9	0.6	0.4	7.4	16.3	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	0.0	6.4	11.7	0.0	1.1	7.6	6.5	1.9	1.5	20.5	2.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	31.2	0.0	36.0	116.2	29.5	30.5	51.8	17.7	14.6	63.4	51.1	23.5
LnGrp LOS	C	A	D	F	C	C	D	B	B	E	D	C
Approach Vol, veh/h		337			308			1682			2209	
Approach Delay, s/veh		34.9			100.6			22.9			49.8	
Approach LOS		C			F			C			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.0	68.0		40.0	24.3	52.7		40.0				
Change Period (Y+Rc), s	5.0	6.0		6.0	5.0	6.0		6.0				
Max Green Setting (Gmax), s	7.0	62.0		34.0	40.0	29.0		34.0				
Max Q Clear Time (g_c+I1), s	5.1	19.9		18.0	19.0	47.5		36.0				
Green Ext Time (p_c), s	0.0	10.8		1.1	0.3	0.0		0.0				

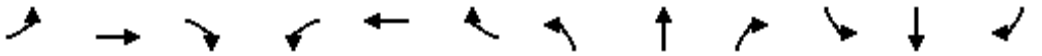
Intersection Summary			
HCM 6th Ctrl Delay		42.2	
HCM 6th LOS		D	

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	62	74	129	89	238	13	1260	83	272	1870	237
Future Volume (vph)	62	74	129	89	238	13	1260	83	272	1870	237
Turn Type	Perm	NA	Perm	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		4		8		5	2		1	6	
Permitted Phases	4		8		8			2			6
Detector Phase	4	4	8	8	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	15.0	15.0	46.0	46.0	46.0	9.0	34.0	34.0	9.0	34.0	34.0
Total Split (s)	46.0	46.0	46.0	46.0	46.0	18.0	34.0	34.0	40.0	56.0	56.0
Total Split (%)	38.3%	38.3%	38.3%	38.3%	38.3%	15.0%	28.3%	28.3%	33.3%	46.7%	46.7%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	3.0	5.0	5.0	3.0	5.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	0.0	-2.0	-2.0	0.0	-2.0	-2.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag						Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?						Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Max	Max	None	Max	Max
Act Effct Green (s)	17.7	17.7	17.7	17.7	17.7	5.9	34.1	34.1	17.5	54.0	54.0
Actuated g/C Ratio	0.22	0.22	0.22	0.22	0.22	0.07	0.42	0.42	0.21	0.66	0.66
v/c Ratio	0.24	0.20	0.49	0.24	0.47	0.11	0.63	0.12	0.73	0.59	0.23
Control Delay	27.5	25.8	33.1	26.8	6.3	43.8	23.9	6.6	41.7	11.8	4.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	27.5	25.8	33.1	26.8	6.3	43.8	23.9	6.6	41.7	11.8	4.0
LOS	C	C	C	C	A	D	C	A	D	B	A
Approach Delay		26.6		17.9			23.1			14.4	
Approach LOS		C		B			C			B	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 81.6	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.73	
Intersection Signal Delay: 17.9	Intersection LOS: B
Intersection Capacity Utilization 64.8%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 16: US-395 & Joshua St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	62	74	4	129	89	238	13	1260	83	272	1870	237
Future Volume (veh/h)	62	74	4	129	89	238	13	1260	83	272	1870	237
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	67	80	1	140	97	205	14	1370	76	296	2033	253
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	250	342	4	297	347	294	30	2475	768	344	3374	1047
Arrive On Green	0.18	0.18	0.17	0.18	0.18	0.18	0.02	0.48	0.48	0.19	0.65	0.65
Sat Flow, veh/h	1154	1872	23	1413	1900	1608	1810	5187	1610	1810	5187	1610
Grp Volume(v), veh/h	67	0	81	140	97	205	14	1370	76	296	2033	253
Grp Sat Flow(s),veh/h/ln	1154	0	1896	1413	1900	1608	1810	1729	1610	1810	1729	1610
Q Serve(g_s), s	4.2	0.0	2.9	7.5	3.5	9.5	0.6	15.0	2.1	12.7	18.0	5.2
Cycle Q Clear(g_c), s	7.8	0.0	2.9	10.4	3.5	9.5	0.6	15.0	2.1	12.7	18.0	5.2
Prop In Lane	1.00		0.01	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	250	0	346	297	347	294	30	2475	768	344	3374	1047
V/C Ratio(X)	0.27	0.00	0.23	0.47	0.28	0.70	0.46	0.55	0.10	0.86	0.60	0.24
Avail Cap(c_a), veh/h	646	0	996	781	998	844	317	2475	768	815	3374	1047
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	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	31.5	0.0	27.9	32.3	28.1	30.6	39.0	14.8	11.5	31.4	8.0	5.8
Incr Delay (d2), s/veh	0.2	0.0	0.1	0.4	0.2	1.1	8.0	0.9	0.3	4.8	0.8	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	0.0	1.3	2.5	1.6	3.7	0.3	4.9	0.7	5.4	4.4	1.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	31.7	0.0	28.0	32.8	28.3	31.7	46.9	15.7	11.7	36.2	8.8	6.3
LnGrp LOS	C	A	C	C	C	C	D	B	B	D	A	A
Approach Vol, veh/h		148			442			1460			2582	
Approach Delay, s/veh		29.7			31.3			15.8			11.7	
Approach LOS		C			C			B			B	

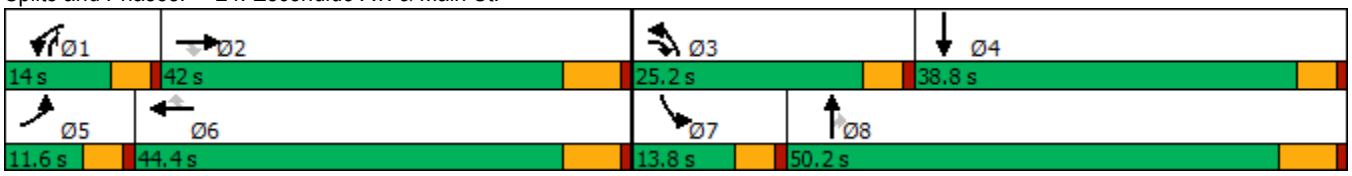
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	19.2	42.1		18.6	5.3	56.0		18.6				
Change Period (Y+Rc), s	4.0	6.0		5.0	4.0	6.0		5.0				
Max Green Setting (Gmax), s	36.0	28.0		41.0	14.0	50.0		41.0				
Max Q Clear Time (g_c+I1), s	14.7	17.0		9.8	2.6	20.0		12.4				
Green Ext Time (p_c), s	0.5	8.7		0.4	0.0	26.6		0.9				

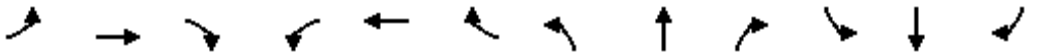
Intersection Summary			
HCM 6th Ctrl Delay		15.5	
HCM 6th LOS		B	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations											
Traffic Volume (vph)	6	1103	505	359	1369	4	814	30	379	1	4
Future Volume (vph)	6	1103	505	359	1369	4	814	30	379	1	4
Turn Type	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA
Protected Phases	5	2	3	1	6		3	8	1	7	4
Permitted Phases			2			6			8		
Detector Phase	5	2	3	1	6	6	3	8	1	7	4
Switch Phase											
Minimum Initial (s)	5.0	10.0	5.0	5.0	10.0	10.0	5.0	10.0	5.0	5.0	10.0
Minimum Split (s)	9.6	41.2	9.6	9.6	31.2	31.2	9.6	49.2	9.6	9.6	37.6
Total Split (s)	11.6	42.0	25.2	14.0	44.4	44.4	25.2	50.2	14.0	13.8	38.8
Total Split (%)	9.7%	35.0%	21.0%	11.7%	37.0%	37.0%	21.0%	41.8%	11.7%	11.5%	32.3%
Yellow Time (s)	3.6	5.2	3.6	3.6	5.2	5.2	3.6	5.2	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	4.6	4.6	6.2	6.2	4.6	6.2	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	None	None	Min	Min	None	None	None	None	None
Act Effct Green (s)	5.5	25.3	53.7	10.0	38.7	38.7	21.8	26.6	43.1	5.3	13.7
Actuated g/C Ratio	0.07	0.31	0.66	0.12	0.48	0.48	0.27	0.33	0.53	0.07	0.17
v/c Ratio	0.05	0.70	0.42	0.96	0.57	0.00	1.00	0.05	0.41	0.01	0.07
Control Delay	47.2	28.5	2.2	77.8	19.5	0.0	63.9	20.1	6.6	48.0	17.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	47.2	28.5	2.2	77.8	19.5	0.0	63.9	20.1	6.6	48.0	17.2
LOS	D	C	A	E	B	A	E	C	A	D	B
Approach Delay		20.3			31.5			45.0			18.6
Approach LOS		C			C			D			B

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 81.2	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.00	
Intersection Signal Delay: 31.1	Intersection LOS: C
Intersection Capacity Utilization 79.5%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 24: Escondido Av. & Main St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	6	1103	505	359	1369	4	814	30	379	1	4	17
Future Volume (veh/h)	6	1103	505	359	1369	4	814	30	379	1	4	17
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1800	1900	1900	1700	1900	1900	1700	1900	1900	1800	1900	1900
Adj Flow Rate, veh/h	6	1137	407	370	1411	4	839	31	229	1	4	17
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	13	1592	868	332	2101	652	728	651	722	2	36	151
Arrive On Green	0.01	0.31	0.31	0.11	0.40	0.40	0.23	0.34	0.34	0.00	0.11	0.11
Sat Flow, veh/h	1714	5187	1610	3141	5187	1610	3141	1900	1610	1714	316	1342
Grp Volume(v), veh/h	6	1137	407	370	1411	4	839	31	229	1	0	21
Grp Sat Flow(s),veh/h/ln	1714	1729	1610	1570	1729	1610	1570	1900	1610	1714	0	1658
Q Serve(g_s), s	0.3	17.3	13.9	9.4	19.8	0.1	20.6	1.0	8.1	0.1	0.0	1.0
Cycle Q Clear(g_c), s	0.3	17.3	13.9	9.4	19.8	0.1	20.6	1.0	8.1	0.1	0.0	1.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.81
Lane Grp Cap(c), veh/h	13	1592	868	332	2101	652	728	651	722	2	0	186
V/C Ratio(X)	0.45	0.71	0.47	1.11	0.67	0.01	1.15	0.05	0.32	0.43	0.00	0.11
Avail Cap(c_a), veh/h	135	2089	1022	332	2230	692	728	941	967	177	0	638
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	43.9	27.3	12.7	39.7	21.6	15.8	34.1	19.5	15.7	44.3	0.0	35.5
Incr Delay (d2), s/veh	8.7	0.8	0.4	83.6	0.7	0.0	83.9	0.0	0.2	39.4	0.0	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	0.2	6.6	4.8	7.3	7.2	0.0	16.2	0.4	3.0	0.0	0.0	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	52.6	28.1	13.0	123.4	22.4	15.8	118.0	19.5	16.0	83.8	0.0	35.7
LnGrp LOS	D	C	B	F	C	B	F	B	B	F	A	D
Approach Vol, veh/h		1550			1785			1099			22	
Approach Delay, s/veh		24.3			43.3			94.0			37.9	
Approach LOS		C			D			F			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.0	33.5	25.2	16.2	5.3	42.2	4.7	36.7
Change Period (Y+Rc), s	4.6	6.2	4.6	* 6.2	4.6	6.2	4.6	6.2
Max Green Setting (Gmax), s	9.4	35.8	20.6	* 34	7.0	38.2	9.2	44.0
Max Q Clear Time (g_c+I1), s	11.4	19.3	22.6	3.0	2.3	21.8	2.1	10.1
Green Ext Time (p_c), s	0.0	8.0	0.0	0.1	0.0	8.3	0.0	1.0

Intersection Summary	
HCM 6th Ctrl Delay	49.1
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	WBL	WBR	NBT	SBL	SBT
Lane Configurations					
Traffic Volume (vph)	33	293	1121	122	693
Future Volume (vph)	33	293	1121	122	693
Turn Type	Prot	Perm	NA	Prot	NA
Protected Phases	8		2	1	6
Permitted Phases		8			
Detector Phase	8	8	2	1	6
Switch Phase					
Minimum Initial (s)	10.0	10.0	10.0	5.0	10.0
Minimum Split (s)	26.6	26.6	23.2	9.6	16.2
Total Split (s)	31.0	31.0	65.7	23.3	89.0
Total Split (%)	25.8%	25.8%	54.8%	19.4%	74.2%
Yellow Time (s)	3.6	3.6	5.2	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	6.2	4.6	6.2
Lead/Lag			Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	
Recall Mode	None	None	Max	None	Max
Act Effct Green (s)	12.5	12.5	65.8	12.5	83.0
Actuated g/C Ratio	0.12	0.12	0.62	0.12	0.78
v/c Ratio	0.18	0.71	0.57	0.66	0.27
Control Delay	43.5	16.6	14.5	60.6	3.9
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	43.5	16.6	14.5	60.6	3.9
LOS	D	B	B	E	A
Approach Delay	19.3		14.5		12.4
Approach LOS	B		B		B

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 106.3	
Natural Cycle: 75	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.71	
Intersection Signal Delay: 14.4	Intersection LOS: B
Intersection Capacity Utilization 60.7%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 25: Escondido Av. & Sultana St.





Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	33	293	1121	45	122	693
Future Volume (veh/h)	33	293	1121	45	122	693
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		0.98	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	1800	1900	1900	1900	1800	1900
Adj Flow Rate, veh/h	36	318	1218	49	133	753
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	364	342	1998	80	159	2515
Arrive On Green	0.21	0.21	0.57	0.57	0.09	0.70
Sat Flow, veh/h	1714	1610	3629	142	1714	3705
Grp Volume(v), veh/h	36	318	622	645	133	753
Grp Sat Flow(s),veh/h/ln	1714	1610	1805	1871	1714	1805
Q Serve(g_s), s	2.0	23.0	27.1	27.2	9.1	9.5
Cycle Q Clear(g_c), s	2.0	23.0	27.1	27.2	9.1	9.5
Prop In Lane	1.00	1.00		0.08	1.00	
Lane Grp Cap(c), veh/h	364	342	1020	1058	159	2515
V/C Ratio(X)	0.10	0.93	0.61	0.61	0.84	0.30
Avail Cap(c_a), veh/h	381	358	1020	1058	270	2515
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	37.7	45.9	17.1	17.1	53.0	6.9
Incr Delay (d2), s/veh	0.1	29.8	2.7	2.6	4.4	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	12.1	11.9	12.3	4.1	3.6
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	37.8	75.7	19.8	19.8	57.4	7.2
LnGrp LOS	D	E	B	B	E	A
Approach Vol, veh/h	354		1267			886
Approach Delay, s/veh	71.8		19.8			14.7
Approach LOS	E		B			B

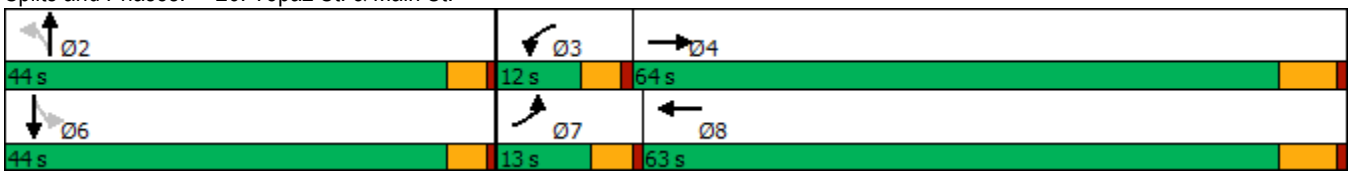
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	15.6	73.4			89.0	29.8
Change Period (Y+Rc), s	4.6	6.2			6.2	4.6
Max Green Setting (Gmax), s	18.7	59.5			82.8	26.4
Max Q Clear Time (g_c+I1), s	11.1	29.2			11.5	25.0
Green Ext Time (p_c), s	0.1	11.3			6.8	0.2

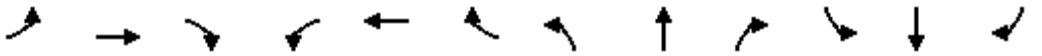
Intersection Summary	
HCM 6th Ctrl Delay	25.4
HCM 6th LOS	C

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	60	1357	45	1362	233	113	134	87
Future Volume (vph)	60	1357	45	1362	233	113	134	87
Turn Type	Prot	NA	Prot	NA	Perm	NA	Perm	NA
Protected Phases	7	4	3	8		2		6
Permitted Phases					2		6	
Detector Phase	7	4	3	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	25.2	9.6	23.2	32.6	32.6	38.6	38.6
Total Split (s)	13.0	64.0	12.0	63.0	44.0	44.0	44.0	44.0
Total Split (%)	10.8%	53.3%	10.0%	52.5%	36.7%	36.7%	36.7%	36.7%
Yellow Time (s)	3.6	5.2	3.6	5.2	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	4.6	6.2	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes				
Recall Mode	None	None	Max	None	None	None	None	None
Act Effct Green (s)	7.4	42.4	7.7	45.5	30.5	30.5	30.5	30.5
Actuated g/C Ratio	0.08	0.44	0.08	0.47	0.32	0.32	0.32	0.32
v/c Ratio	0.50	0.71	0.36	0.67	0.82	0.36	0.48	0.35
Control Delay	62.6	24.1	57.4	23.0	54.8	24.6	34.6	21.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	62.6	24.1	57.4	23.0	54.8	24.6	34.6	21.6
LOS	E	C	E	C	D	C	C	C
Approach Delay		25.6		24.0		41.1		27.0
Approach LOS		C		C		D		C

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 96.8	
Natural Cycle: 80	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.82	
Intersection Signal Delay: 26.8	Intersection LOS: C
Intersection Capacity Utilization 74.6%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 26: Topaz St. & Main St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	60	1357	114	45	1362	131	233	113	81	134	87	104
Future Volume (veh/h)	60	1357	114	45	1362	131	233	113	81	134	87	104
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	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	1800	1900	1900	1800	1900	1900	1800	1900	1900	1800	1900	1900
Adj Flow Rate, veh/h	65	1475	111	49	1480	139	253	123	70	146	95	66
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	82	2075	156	149	2226	209	384	351	200	357	323	224
Arrive On Green	0.05	0.42	0.42	0.09	0.46	0.46	0.31	0.31	0.31	0.31	0.31	0.31
Sat Flow, veh/h	1714	4913	370	1714	4823	453	1245	1135	646	1207	1044	725
Grp Volume(v), veh/h	65	1038	548	49	1061	558	253	0	193	146	0	161
Grp Sat Flow(s),veh/h/ln	1714	1729	1824	1714	1729	1818	1245	0	1781	1207	0	1769
Q Serve(g_s), s	3.2	21.1	21.1	2.3	20.3	20.3	16.5	0.0	7.1	9.1	0.0	5.9
Cycle Q Clear(g_c), s	3.2	21.1	21.1	2.3	20.3	20.3	22.3	0.0	7.1	16.2	0.0	5.9
Prop In Lane	1.00		0.20	1.00		0.25	1.00		0.36	1.00		0.41
Lane Grp Cap(c), veh/h	82	1461	770	149	1596	839	384	0	551	357	0	547
V/C Ratio(X)	0.79	0.71	0.71	0.33	0.66	0.67	0.66	0.00	0.35	0.41	0.00	0.29
Avail Cap(c_a), veh/h	169	2352	1241	149	2311	1215	576	0	826	543	0	820
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	40.0	20.3	20.3	36.5	17.8	17.8	30.8	0.0	22.7	29.0	0.0	22.3
Incr Delay (d2), s/veh	6.2	0.7	1.2	5.8	0.5	0.9	1.9	0.0	0.4	0.8	0.0	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	1.4	7.4	8.0	1.1	6.9	7.4	5.1	0.0	3.0	2.7	0.0	2.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	46.2	20.9	21.5	42.2	18.3	18.7	32.7	0.0	23.1	29.8	0.0	22.6
LnGrp LOS	D	C	C	D	B	B	C	A	C	C	A	C
Approach Vol, veh/h		1651			1668			446			307	
Approach Delay, s/veh		22.1			19.1			28.6			26.0	
Approach LOS		C			B			C			C	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		30.9	12.0	42.1		30.9	8.7	45.4				
Change Period (Y+Rc), s		4.6	4.6	6.2		4.6	4.6	6.2				
Max Green Setting (Gmax), s		39.4	7.4	57.8		39.4	8.4	56.8				
Max Q Clear Time (g_c+I1), s		24.3	4.3	23.1		18.2	5.2	22.3				
Green Ext Time (p_c), s		1.9	0.0	12.8		1.5	0.0	13.2				

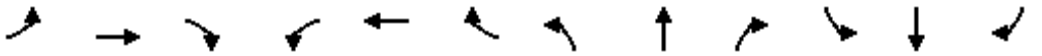
Intersection Summary												
HCM 6th Ctrl Delay			21.9									
HCM 6th LOS			C									

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	102	98	82	69	148	119	1867	123	302	1439
Future Volume (vph)	102	98	82	69	148	119	1867	123	302	1439
Turn Type	Perm	NA	Perm	Perm	NA	Prot	NA	Perm	Prot	NA
Protected Phases		4			8	5	2		1	6
Permitted Phases	4		4	8				2		
Detector Phase	4	4	4	8	8	5	2	2	1	6
Switch Phase										
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	15.0	15.0	15.0	42.0	42.0	9.0	28.0	28.0	9.0	37.0
Total Split (s)	42.0	42.0	42.0	42.0	42.0	14.0	49.0	49.0	29.0	64.0
Total Split (%)	35.0%	35.0%	35.0%	35.0%	35.0%	11.7%	40.8%	40.8%	24.2%	53.3%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	3.0	5.0	5.0	3.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	4.0	6.0	6.0	4.0	6.0
Lead/Lag						Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?						Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Max	Max	None	Max
Act Effct Green (s)	37.0	37.0	37.0	37.0	37.0	9.8	44.5	44.5	23.4	58.0
Actuated g/C Ratio	0.31	0.31	0.31	0.31	0.31	0.08	0.37	0.37	0.20	0.48
v/c Ratio	1.14	0.17	0.15	0.18	0.82	0.84	1.01	0.19	0.89	0.65
Control Delay	175.7	31.4	4.9	31.9	43.5	95.4	61.1	5.1	74.8	24.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	175.7	31.4	4.9	31.9	43.5	95.4	61.1	5.1	74.8	24.7
LOS	F	C	A	C	D	F	E	A	E	C
Approach Delay		75.9			42.0		59.8			32.8
Approach LOS		E			D		E			C

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 119.8	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.14	
Intersection Signal Delay: 48.3	Intersection LOS: D
Intersection Capacity Utilization 104.9%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 8: US-395 & Luna Rd.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	102	98	82	69	148	311	119	1867	123	302	1439	122
Future Volume (veh/h)	102	98	82	69	148	311	119	1867	123	302	1439	122
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	106	102	66	72	154	262	124	1945	103	315	1499	108
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	149	586	497	412	195	331	150	1957	607	342	2388	172
Arrive On Green	0.31	0.31	0.31	0.31	0.31	0.31	0.08	0.38	0.38	0.19	0.48	0.48
Sat Flow, veh/h	1040	1900	1610	1305	631	1074	1810	5187	1610	1810	4938	356
Grp Volume(v), veh/h	106	102	66	72	0	416	124	1945	103	315	1050	557
Grp Sat Flow(s),veh/h/ln	1040	1900	1610	1305	0	1705	1810	1729	1610	1810	1729	1836
Q Serve(g_s), s	10.2	4.7	3.5	5.1	0.0	26.8	8.1	44.8	5.1	20.5	27.0	27.0
Cycle Q Clear(g_c), s	37.0	4.7	3.5	9.8	0.0	26.8	8.1	44.8	5.1	20.5	27.0	27.0
Prop In Lane	1.00		1.00	1.00		0.63	1.00		1.00	1.00		0.19
Lane Grp Cap(c), veh/h	149	586	497	412	0	526	150	1957	607	342	1672	888
V/C Ratio(X)	0.71	0.17	0.13	0.17	0.00	0.79	0.83	0.99	0.17	0.92	0.63	0.63
Avail Cap(c_a), veh/h	149	586	497	412	0	526	151	1957	607	377	1672	888
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	55.7	30.3	29.9	33.9	0.0	37.9	54.2	37.2	24.8	47.7	23.0	23.0
Incr Delay (d2), s/veh	12.8	0.1	0.0	0.1	0.0	7.4	29.3	19.0	0.6	25.6	1.8	3.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.7	2.1	1.4	1.6	0.0	11.9	4.8	20.8	1.9	11.2	10.4	11.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	68.5	30.4	29.9	34.0	0.0	45.3	83.5	56.2	25.5	73.3	24.8	26.3
LnGrp LOS	E	C	C	C	A	D	F	E	C	E	C	C
Approach Vol, veh/h		274			488			2172			1922	
Approach Delay, s/veh		45.0			43.6			56.3			33.2	
Approach LOS		D			D			E			C	

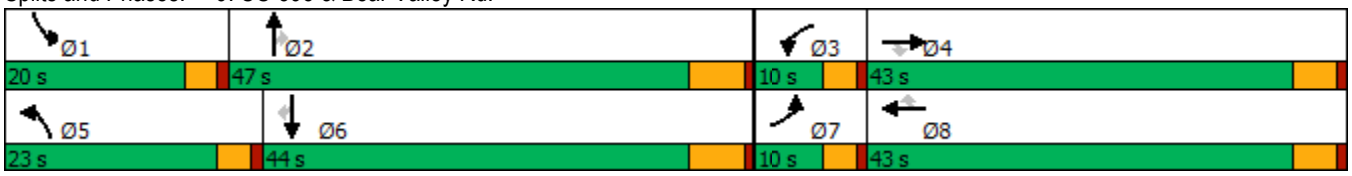
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	26.7	51.2		42.0	13.9	64.0		42.0				
Change Period (Y+Rc), s	4.0	6.0		5.0	4.0	6.0		5.0				
Max Green Setting (Gmax), s	25.0	43.0		37.0	10.0	58.0		37.0				
Max Q Clear Time (g_c+I1), s	22.5	46.8		39.0	10.1	29.0		28.8				
Green Ext Time (p_c), s	0.2	0.0		0.0	0.0	9.9		1.3				

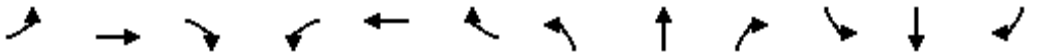
Intersection Summary												
HCM 6th Ctrl Delay			45.2									
HCM 6th LOS			D									

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	111	440	188	149	510	209	406	1751	285	229	1327	95
Future Volume (vph)	111	440	188	149	510	209	406	1751	285	229	1327	95
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.0	43.0	43.0	9.0	43.0	43.0	9.0	44.0	44.0	9.0	44.0	44.0
Total Split (s)	10.0	43.0	43.0	10.0	43.0	43.0	23.0	47.0	47.0	20.0	44.0	44.0
Total Split (%)	8.3%	35.8%	35.8%	8.3%	35.8%	35.8%	19.2%	39.2%	39.2%	16.7%	36.7%	36.7%
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0	4.0	3.0	5.0	5.0	3.0	5.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	5.0	5.0	4.0	5.0	5.0	4.0	6.0	6.0	4.0	6.0	6.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Max	Max	None	Max	Max
Act Effct Green (s)	6.1	21.4	21.4	6.1	21.4	21.4	16.3	43.0	43.0	11.7	38.4	38.4
Actuated g/C Ratio	0.06	0.21	0.21	0.06	0.21	0.21	0.16	0.42	0.42	0.12	0.38	0.38
v/c Ratio	1.09	0.61	0.40	1.47	0.70	0.43	0.76	0.84	0.37	0.60	0.71	0.15
Control Delay	160.3	39.3	6.9	287.6	42.1	7.0	51.2	32.0	7.3	50.1	30.8	7.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	160.3	39.3	6.9	287.6	42.1	7.0	51.2	32.0	7.3	50.1	30.8	7.4
LOS	F	D	A	F	D	A	D	C	A	D	C	A
Approach Delay		49.3			75.8			32.3			32.1	
Approach LOS		D			E			C			C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 101.4	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.47	
Intersection Signal Delay: 41.1	Intersection LOS: D
Intersection Capacity Utilization 80.5%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 9: US-395 & Bear Valley Rd.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	111	440	188	149	510	209	406	1751	285	229	1327	95
Future Volume (veh/h)	111	440	188	149	510	209	406	1751	285	229	1327	95
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	117	463	116	157	537	151	427	1843	239	241	1397	87
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	114	692	309	114	692	308	512	2354	731	322	2072	643
Arrive On Green	0.06	0.19	0.19	0.06	0.19	0.19	0.15	0.45	0.45	0.09	0.40	0.40
Sat Flow, veh/h	1810	3610	1610	1810	3610	1605	3510	5187	1610	3510	5187	1609
Grp Volume(v), veh/h	117	463	116	157	537	151	427	1843	239	241	1397	87
Grp Sat Flow(s),veh/h/ln	1810	1805	1610	1810	1805	1605	1755	1729	1610	1755	1729	1609
Q Serve(g_s), s	6.0	11.3	6.0	6.0	13.4	8.0	11.2	28.6	9.1	6.4	21.1	3.3
Cycle Q Clear(g_c), s	6.0	11.3	6.0	6.0	13.4	8.0	11.2	28.6	9.1	6.4	21.1	3.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	114	692	309	114	692	308	512	2354	731	322	2072	643
V/C Ratio(X)	1.03	0.67	0.38	1.38	0.78	0.49	0.83	0.78	0.33	0.75	0.67	0.14
Avail Cap(c_a), veh/h	114	1442	643	114	1442	641	701	2354	731	590	2072	643
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.6	35.6	33.5	44.6	36.5	34.3	39.5	22.0	16.7	42.1	23.5	18.1
Incr Delay (d2), s/veh	91.1	0.4	0.3	214.5	0.7	0.5	5.6	2.7	1.2	2.6	1.8	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.4	4.6	2.2	9.3	5.5	2.9	4.9	10.5	3.2	2.7	7.9	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	135.7	36.1	33.8	259.0	37.2	34.8	45.1	24.7	17.9	44.8	25.2	18.6
LnGrp LOS	F	D	C	F	D	C	D	C	B	D	C	B
Approach Vol, veh/h		696			845			2509			1725	
Approach Delay, s/veh		52.4			78.0			27.5			27.6	
Approach LOS		D			E			C			C	

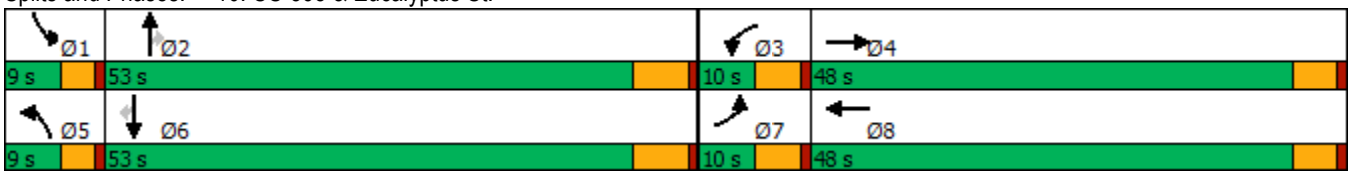
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.7	49.2	10.0	23.2	17.9	44.0	10.0	23.2
Change Period (Y+Rc), s	4.0	6.0	4.0	5.0	4.0	6.0	4.0	5.0
Max Green Setting (Gmax), s	16.0	41.0	6.0	38.0	19.0	38.0	6.0	38.0
Max Q Clear Time (g_c+I1), s	8.4	30.6	8.0	13.3	13.2	23.1	8.0	15.4
Green Ext Time (p_c), s	0.4	6.4	0.0	1.9	0.6	5.7	0.0	2.3

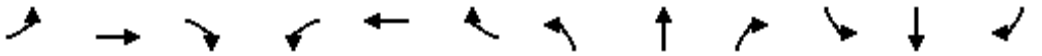
Intersection Summary	
HCM 6th Ctrl Delay	37.9
HCM 6th LOS	D

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	8	0	62	3	12	2451	120	16	1510	16
Future Volume (vph)	8	0	62	3	12	2451	120	16	1510	16
Turn Type	Prot	NA	Prot	NA	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4	3	8	5	2		1	6	
Permitted Phases							2			6
Detector Phase	7	4	3	8	5	2	2	1	6	6
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	10.0	48.0	10.0	48.0	9.0	41.0	41.0	9.0	41.0	41.0
Total Split (s)	10.0	48.0	10.0	48.0	9.0	53.0	53.0	9.0	53.0	53.0
Total Split (%)	8.3%	40.0%	8.3%	40.0%	7.5%	44.2%	44.2%	7.5%	44.2%	44.2%
Yellow Time (s)	4.0	4.0	4.0	4.0	3.0	5.0	5.0	3.0	5.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	4.0	6.0	6.0	4.0	6.0	6.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	Max	Max	None	Max	Max
Act Effct Green (s)	5.2	15.1	9.6	15.1	5.2	56.9	56.9	5.2	56.9	56.9
Actuated g/C Ratio	0.06	0.18	0.11	0.18	0.06	0.66	0.66	0.06	0.66	0.66
v/c Ratio	0.07	0.01	0.32	0.06	0.12	0.75	0.11	0.16	0.46	0.02
Control Delay	44.9	0.0	44.2	14.2	45.5	15.9	4.8	46.2	11.8	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	44.9	0.0	44.2	14.2	45.5	15.9	4.8	46.2	11.8	0.0
LOS	D	A	D	B	D	B	A	D	B	A
Approach Delay		29.9		38.0		15.5			12.0	
Approach LOS		C		D		B			B	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 86.1	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.75	
Intersection Signal Delay: 14.7	Intersection LOS: B
Intersection Capacity Utilization 66.6%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 10: US-395 & Eucalyptus St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	8	0	4	62	3	13	12	2451	120	16	1510	16
Future Volume (veh/h)	8	0	4	62	3	13	12	2451	120	16	1510	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	8	0	1	65	3	6	13	2580	123	17	1589	16
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	18	0	105	88	59	117	29	3153	979	36	3174	985
Arrive On Green	0.01	0.00	0.07	0.05	0.10	0.10	0.02	0.61	0.61	0.02	0.61	0.61
Sat Flow, veh/h	1810	0	1610	1810	565	1131	1810	5187	1610	1810	5187	1610
Grp Volume(v), veh/h	8	0	1	65	0	9	13	2580	123	17	1589	16
Grp Sat Flow(s),veh/h/ln	1810	0	1610	1810	0	1696	1810	1729	1610	1810	1729	1610
Q Serve(g_s), s	0.3	0.0	0.0	2.7	0.0	0.4	0.6	30.0	2.5	0.7	13.3	0.3
Cycle Q Clear(g_c), s	0.3	0.0	0.0	2.7	0.0	0.4	0.6	30.0	2.5	0.7	13.3	0.3
Prop In Lane	1.00		1.00	1.00		0.67	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	18	0	105	88	0	176	29	3153	979	36	3174	985
V/C Ratio(X)	0.43	0.00	0.01	0.74	0.00	0.05	0.46	0.82	0.13	0.47	0.50	0.02
Avail Cap(c_a), veh/h	117	0	895	117	0	943	117	3153	979	117	3174	985
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.0	0.0	33.8	36.3	0.0	31.2	37.7	11.8	6.4	37.5	8.4	5.9
Incr Delay (d2), s/veh	5.8	0.0	0.0	9.7	0.0	0.1	4.2	2.5	0.3	3.6	0.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	0.0	1.4	0.0	0.1	0.3	8.3	0.7	0.4	4.5	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	43.9	0.0	33.9	46.0	0.0	31.4	41.9	14.3	6.7	41.1	9.0	5.9
LnGrp LOS	D	A	C	D	A	C	D	B	A	D	A	A
Approach Vol, veh/h		9			74			2716			1622	
Approach Delay, s/veh		42.8			44.2			14.1			9.3	
Approach LOS		D			D			B			A	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.5	53.0	8.8	10.0	5.2	53.3	5.8	13.0
Change Period (Y+Rc), s	4.0	6.0	5.0	5.0	4.0	6.0	5.0	5.0
Max Green Setting (Gmax), s	5.0	47.0	5.0	43.0	5.0	47.0	5.0	43.0
Max Q Clear Time (g_c+I1), s	2.7	32.0	4.7	2.0	2.6	15.3	2.3	2.4
Green Ext Time (p_c), s	0.0	13.2	0.0	0.0	0.0	17.0	0.0	0.0

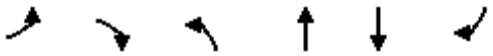
Intersection Summary	
HCM 6th Ctrl Delay	12.9
HCM 6th LOS	B

Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Configurations					
Traffic Volume (vph)	4	6	11	2789	2005
Future Volume (vph)	4	6	11	2789	2005
Turn Type	Prot	Perm	Prot	NA	NA
Protected Phases	4		5	2	6
Permitted Phases		4			
Detector Phase	4	4	5	2	6
Switch Phase					
Minimum Initial (s)	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	26.6	26.6	11.5	14.6	23.5
Total Split (s)	26.6	26.6	11.5	93.4	81.9
Total Split (%)	22.2%	22.2%	9.6%	77.8%	68.3%
Yellow Time (s)	3.6	3.6	5.5	3.6	5.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	6.5	4.6	6.5
Lead/Lag			Lead		Lag
Lead-Lag Optimize?			Yes		Yes
Recall Mode	None	None	None	Max	Max
Act Effct Green (s)	12.2	12.2	5.0	100.9	98.1
Actuated g/C Ratio	0.11	0.11	0.05	0.91	0.89
v/c Ratio	0.02	0.03	0.14	0.61	0.46
Control Delay	42.5	24.2	56.4	4.0	4.7
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	42.5	24.2	56.4	4.0	4.7
LOS	D	C	E	A	A
Approach Delay	31.5			4.2	4.7
Approach LOS	C			A	A

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 110.6	
Natural Cycle: 80	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.61	
Intersection Signal Delay: 4.4	Intersection LOS: A
Intersection Capacity Utilization 69.9%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 11: US-395 & Yucca Terrace Dr.





Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	4	6	11	2789	2005	6
Future Volume (veh/h)	4	6	11	2789	2005	6
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	4	6	11	2905	2089	6
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	44	39	24	4499	4223	12
Arrive On Green	0.02	0.02	0.01	0.87	0.79	0.79
Sat Flow, veh/h	1810	1610	1810	5358	5511	15
Grp Volume(v), veh/h	4	6	11	2905	1353	742
Grp Sat Flow(s),veh/h/ln	1810	1610	1810	1729	1729	1897
Q Serve(g_s), s	0.2	0.4	0.6	17.3	13.8	13.8
Cycle Q Clear(g_c), s	0.2	0.4	0.6	17.3	13.8	13.8
Prop In Lane	1.00	1.00	1.00			0.01
Lane Grp Cap(c), veh/h	44	39	24	4499	2735	1500
V/C Ratio(X)	0.09	0.15	0.46	0.65	0.49	0.49
Avail Cap(c_a), veh/h	389	346	88	4499	2735	1500
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	48.9	48.9	50.2	2.0	3.7	3.7
Incr Delay (d2), s/veh	0.9	1.8	5.1	0.7	0.6	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.4	0.3	0.3	2.4	2.9
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	49.7	50.7	55.3	2.8	4.3	4.8
LnGrp LOS	D	D	E	A	A	A
Approach Vol, veh/h	10			2916	2095	
Approach Delay, s/veh	50.3			3.0	4.5	
Approach LOS	D			A	A	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		95.3		7.1	7.8	87.5
Change Period (Y+Rc), s		* 6.5		4.6	6.5	6.5
Max Green Setting (Gmax), s		* 89		22.0	5.0	75.4
Max Q Clear Time (g_c+I1), s		19.3		2.4	2.6	15.8
Green Ext Time (p_c), s		51.9		0.0	0.0	24.7

Intersection Summary		
HCM 6th Ctrl Delay		3.7
HCM 6th LOS		A

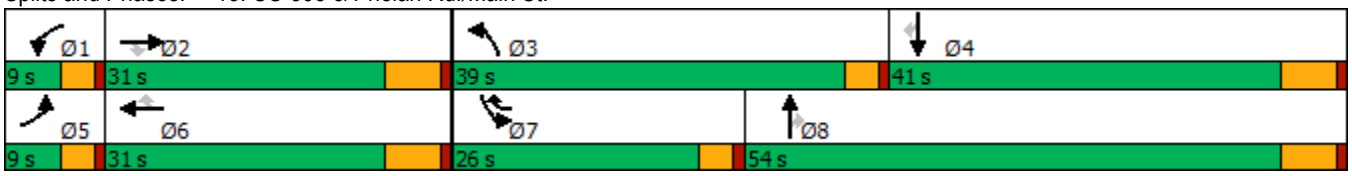
Notes

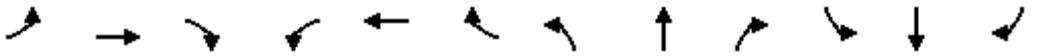
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	99	787	126	27	925	360	278	2369	423	382	1551	109
Future Volume (vph)	99	787	126	27	925	360	278	2369	423	382	1551	109
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2		1	6	7	3	8		7	4	
Permitted Phases			2			6			8			4
Detector Phase	5	2	2	1	6	7	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	5.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.0	16.0	16.0	9.0	16.0	9.0	9.0	16.0	16.0	9.0	16.0	16.0
Total Split (s)	9.0	31.0	31.0	9.0	31.0	26.0	39.0	54.0	54.0	26.0	41.0	41.0
Total Split (%)	7.5%	25.8%	25.8%	7.5%	25.8%	21.7%	32.5%	45.0%	45.0%	21.7%	34.2%	34.2%
Yellow Time (s)	3.0	5.0	5.0	3.0	5.0	3.0	3.0	5.0	5.0	3.0	5.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	-2.0	0.0	0.0	-2.0	0.0	0.0	-2.0	0.0	-0.5	-2.0	0.0
Total Lost Time (s)	4.0	4.0	6.0	4.0	4.0	4.0	4.0	4.0	6.0	3.5	4.0	6.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	5.0	29.5	27.5	5.0	25.8	46.6	14.2	50.1	48.1	17.3	52.7	50.7
Actuated g/C Ratio	0.04	0.26	0.24	0.04	0.23	0.41	0.12	0.44	0.42	0.15	0.46	0.45
v/c Ratio	1.32	0.56	0.27	0.35	0.75	0.53	0.65	0.99	0.59	0.70	0.62	0.14
Control Delay	250.5	39.3	7.8	67.3	45.6	20.8	54.8	48.9	21.4	52.6	24.7	2.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	250.5	39.3	7.8	67.3	45.6	20.8	54.8	48.9	21.4	52.6	24.7	2.7
LOS	F	D	A	E	D	C	D	D	C	D	C	A
Approach Delay		56.0			39.2			45.6			28.7	
Approach LOS		E			D			D			C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 113.7	
Natural Cycle: 80	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.32	
Intersection Signal Delay: 41.3	Intersection LOS: D
Intersection Capacity Utilization 93.4%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 13: US-395 & Phelan Rd./Main St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	99	787	126	27	925	360	278	2369	423	382	1551	109
Future Volume (veh/h)	99	787	126	27	925	360	278	2369	423	382	1551	109
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	104	828	133	28	974	379	293	2494	392	402	1633	89
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	80	1463	380	47	1358	568	374	2528	686	494	2692	732
Arrive On Green	0.04	0.26	0.24	0.03	0.24	0.22	0.10	0.44	0.43	0.14	0.47	0.45
Sat Flow, veh/h	1810	5700	1589	1810	5700	1610	3619	5700	1610	3619	5700	1610
Grp Volume(v), veh/h	104	828	133	28	974	379	293	2494	392	402	1633	89
Grp Sat Flow(s),veh/h/ln	1810	1900	1589	1810	1900	1610	1810	1900	1610	1810	1900	1610
Q Serve(g_s), s	5.0	14.2	7.8	1.7	17.7	22.5	8.9	48.8	20.8	12.2	23.9	3.6
Cycle Q Clear(g_c), s	5.0	14.2	7.8	1.7	17.7	22.5	8.9	48.8	20.8	12.2	23.9	3.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	80	1463	380	47	1358	568	374	2528	686	494	2692	732
V/C Ratio(X)	1.30	0.57	0.35	0.60	0.72	0.67	0.78	0.99	0.57	0.81	0.61	0.12
Avail Cap(c_a), veh/h	80	1463	380	80	1365	570	1124	2528	686	722	2692	732
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.9	36.4	35.6	54.3	39.5	30.9	49.3	31.0	24.6	47.3	22.0	17.8
Incr Delay (d2), s/veh	198.9	0.5	0.6	8.7	1.8	3.0	2.7	14.8	1.3	3.9	0.4	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.6	6.3	2.9	0.9	8.0	8.5	4.0	23.3	7.5	5.5	9.6	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	252.7	36.9	36.2	63.0	41.3	33.9	52.1	45.9	25.8	51.2	22.4	17.8
LnGrp LOS	F	D	D	E	D	C	D	D	C	D	C	B
Approach Vol, veh/h		1065			1381			3179			2124	
Approach Delay, s/veh		57.9			39.7			44.0			27.7	
Approach LOS		E			D			D			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.9	32.9	15.6	57.2	9.0	30.9	18.9	54.0
Change Period (Y+Rc), s	4.0	6.0	4.0	6.0	4.0	6.0	4.0	6.0
Max Green Setting (Gmax), s	5.0	25.0	35.0	35.0	5.0	25.0	22.0	48.0
Max Q Clear Time (g_c+I1), s	3.7	16.2	10.9	25.9	7.0	24.5	14.2	50.8
Green Ext Time (p_c), s	0.0	3.6	0.7	7.0	0.0	0.4	0.7	0.0

Intersection Summary	
HCM 6th Ctrl Delay	40.7
HCM 6th LOS	D

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	91	762	2308	188	512	1191
Future Volume (vph)	91	762	2308	188	512	1191
Turn Type	Prot	Perm	NA	Perm	Prot	NA
Protected Phases	8		2		1	6
Permitted Phases		8		2		
Detector Phase	8	8	2	2	1	6
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0	10.0	5.0	10.0
Minimum Split (s)	26.7	26.7	23.5	23.5	9.6	16.5
Total Split (s)	41.0	41.0	58.0	58.0	21.0	79.0
Total Split (%)	34.2%	34.2%	48.3%	48.3%	17.5%	65.8%
Yellow Time (s)	3.7	3.7	5.5	5.5	3.6	5.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.7	4.7	6.5	6.5	4.6	6.5
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Recall Mode	None	None	Max	Max	None	Max
Act Effct Green (s)	36.3	36.3	51.5	51.5	16.4	72.5
Actuated g/C Ratio	0.30	0.30	0.43	0.43	0.14	0.60
v/c Ratio	0.17	1.16	1.06	0.25	1.09	0.39
Control Delay	31.9	113.1	70.4	10.8	116.6	12.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	31.9	113.1	70.4	10.8	116.6	12.7
LOS	C	F	E	B	F	B
Approach Delay	104.4		65.9			43.9
Approach LOS	F		E			D

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.16	
Intersection Signal Delay: 65.0	Intersection LOS: E
Intersection Capacity Utilization 101.1%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 14: US-395 & Poplar St.





Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	91	762	2308	188	512	1191
Future Volume (veh/h)	91	762	2308	188	512	1191
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	93	421	2355	151	522	1215
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	507	451	2298	713	495	3235
Arrive On Green	0.28	0.28	0.44	0.44	0.14	0.62
Sat Flow, veh/h	1810	1610	5358	1610	3510	5358
Grp Volume(v), veh/h	93	421	2355	151	522	1215
Grp Sat Flow(s),veh/h/ln	1810	1610	1729	1610	1755	1729
Q Serve(g_s), s	4.5	29.6	51.5	6.7	16.4	13.4
Cycle Q Clear(g_c), s	4.5	29.6	51.5	6.7	16.4	13.4
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	507	451	2298	713	495	3235
V/C Ratio(X)	0.18	0.93	1.02	0.21	1.05	0.38
Avail Cap(c_a), veh/h	565	503	2298	713	495	3235
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	31.8	40.8	32.4	19.9	49.9	10.8
Incr Delay (d2), s/veh	0.2	23.4	25.4	0.7	55.4	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	14.5	24.6	2.5	10.6	4.4
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	31.9	64.2	57.8	20.6	105.4	11.1
LnGrp LOS	C	E	F	C	F	B
Approach Vol, veh/h	514		2506			1737
Approach Delay, s/veh	58.4		55.6			39.4
Approach LOS	E		E			D

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	21.0	58.0			79.0	37.3
Change Period (Y+Rc), s	4.6	6.5			6.5	4.7
Max Green Setting (Gmax), s	16.4	51.5			72.5	36.3
Max Q Clear Time (g_c+I1), s	18.4	53.5			15.4	31.6
Green Ext Time (p_c), s	0.0	0.0			10.3	0.9

Intersection Summary			
HCM 6th Ctrl Delay		50.0	
HCM 6th LOS		D	

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	88	1	229	8	175	231	2233	208	68	1103	111
Future Volume (vph)	88	1	229	8	175	231	2233	208	68	1103	111
Turn Type	Perm	NA	Perm	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		4		8		5	2		1	6	
Permitted Phases	4		8		8			2			6
Detector Phase	4	4	8	8	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	16.0	16.0	16.0	16.0	16.0	10.0	16.0	16.0	10.0	16.0	16.0
Total Split (s)	32.0	32.0	32.0	32.0	32.0	29.0	78.0	78.0	10.0	59.0	59.0
Total Split (%)	26.7%	26.7%	26.7%	26.7%	26.7%	24.2%	65.0%	65.0%	8.3%	49.2%	49.2%
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	5.0	6.0	6.0	5.0	6.0	6.0
Lead/Lag						Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?						Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Max	Max	None	Max	Max
Act Effct Green (s)	26.0	26.0	26.0	26.0	26.0	19.4	72.0	72.0	5.0	57.6	57.6
Actuated g/C Ratio	0.22	0.22	0.22	0.22	0.22	0.16	0.60	0.60	0.04	0.48	0.48
v/c Ratio	0.29	0.50	1.84	0.02	0.40	0.81	0.73	0.21	0.92	0.45	0.14
Control Delay	42.4	7.8	436.7	37.2	17.8	69.4	18.9	1.9	141.0	22.0	3.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	42.4	7.8	436.7	37.2	17.8	69.4	18.9	1.9	141.0	22.0	3.6
LOS	D	A	F	D	B	E	B	A	F	C	A
Approach Delay		16.0		251.0			22.0			26.7	
Approach LOS		B		F			C			C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.84	
Intersection Signal Delay: 42.7	Intersection LOS: D
Intersection Capacity Utilization 96.8%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 15: US-395 & Three Flags Rd.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	88	1	284	229	8	175	231	2233	208	68	1103	111
Future Volume (veh/h)	88	1	284	229	8	175	231	2233	208	68	1103	111
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	90	1	198	234	8	113	236	2279	161	69	1126	77
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	351	2	347	195	412	349	265	3112	965	75	2570	798
Arrive On Green	0.22	0.22	0.22	0.22	0.22	0.22	0.15	0.60	0.60	0.04	0.50	0.50
Sat Flow, veh/h	1362	8	1603	1269	1900	1610	1810	5187	1609	1810	5187	1610
Grp Volume(v), veh/h	90	0	199	234	8	113	236	2279	161	69	1126	77
Grp Sat Flow(s),veh/h/ln	1362	0	1611	1269	1900	1610	1810	1729	1609	1810	1729	1610
Q Serve(g_s), s	6.7	0.0	13.2	12.8	0.4	7.1	15.4	37.6	5.3	4.6	16.8	3.0
Cycle Q Clear(g_c), s	7.1	0.0	13.2	26.0	0.4	7.1	15.4	37.6	5.3	4.6	16.8	3.0
Prop In Lane	1.00		0.99	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	351	0	349	195	412	349	265	3112	965	75	2570	798
V/C Ratio(X)	0.26	0.00	0.57	1.20	0.02	0.32	0.89	0.73	0.17	0.92	0.44	0.10
Avail Cap(c_a), veh/h	351	0	349	195	412	349	362	3112	965	75	2570	798
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	39.8	0.0	42.0	55.6	37.0	39.6	50.3	17.1	10.7	57.3	19.5	16.0
Incr Delay (d2), s/veh	0.1	0.0	1.4	129.0	0.0	0.2	15.4	1.6	0.4	74.0	0.5	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.3	0.0	5.4	12.9	0.2	2.8	7.8	13.1	1.8	3.6	6.3	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	39.9	0.0	43.4	184.6	37.0	39.8	65.7	18.7	11.0	131.3	20.1	16.3
LnGrp LOS	D	A	D	F	D	D	E	B	B	F	C	B
Approach Vol, veh/h		289			355			2676			1272	
Approach Delay, s/veh		42.3			135.2			22.4			25.9	
Approach LOS		D			F			C			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.0	78.0		32.0	22.5	65.5		32.0				
Change Period (Y+Rc), s	5.0	6.0		6.0	5.0	6.0		6.0				
Max Green Setting (Gmax), s	5.0	72.0		26.0	24.0	53.0		26.0				
Max Q Clear Time (g_c+I1), s	6.6	39.6		15.2	17.4	18.8		28.0				
Green Ext Time (p_c), s	0.0	22.7		0.8	0.2	8.9		0.0				

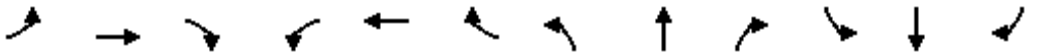
Intersection Summary			
HCM 6th Ctrl Delay		33.3	
HCM 6th LOS		C	

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	405	149	114	76	473	35	1794	122	200	1349	66
Future Volume (vph)	405	149	114	76	473	35	1794	122	200	1349	66
Turn Type	Perm	NA	Perm	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		4		8		5	2		1	6	
Permitted Phases	4		8		8			2			6
Detector Phase	4	4	8	8	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	15.0	15.0	46.0	46.0	46.0	9.0	34.0	34.0	9.0	34.0	34.0
Total Split (s)	47.0	47.0	47.0	47.0	47.0	9.0	41.0	41.0	32.0	64.0	64.0
Total Split (%)	39.2%	39.2%	39.2%	39.2%	39.2%	7.5%	34.2%	34.2%	26.7%	53.3%	53.3%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	3.0	5.0	5.0	3.0	5.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	0.0	-2.0	-2.0	0.0	-2.0	-2.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag						Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?						Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Max	Max	None	Max	Max
Act Effct Green (s)	37.8	37.8	37.8	37.8	37.8	5.0	43.9	43.9	17.6	60.6	60.6
Actuated g/C Ratio	0.34	0.34	0.34	0.34	0.34	0.04	0.39	0.39	0.16	0.54	0.54
v/c Ratio	0.92	0.27	0.32	0.12	0.59	0.44	0.90	0.18	0.72	0.49	0.07
Control Delay	62.7	27.2	30.3	26.2	7.1	72.5	40.9	10.0	60.1	18.0	4.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	62.7	27.2	30.3	26.2	7.1	72.5	40.9	10.0	60.1	18.0	4.0
LOS	E	C	C	C	A	E	D	A	E	B	A
Approach Delay		52.3		13.3			39.5			22.7	
Approach LOS		D		B			D			C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 111.5	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.92	
Intersection Signal Delay: 31.7	Intersection LOS: C
Intersection Capacity Utilization 96.7%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 16: US-395 & Joshua St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	405	149	18	114	76	473	35	1794	122	200	1349	66
Future Volume (veh/h)	405	149	18	114	76	473	35	1794	122	200	1349	66
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	418	154	16	118	78	430	36	1849	114	206	1391	61
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	382	614	64	451	690	584	53	2099	652	237	2627	815
Arrive On Green	0.36	0.36	0.35	0.36	0.36	0.36	0.03	0.40	0.40	0.13	0.51	0.51
Sat Flow, veh/h	956	1693	176	1303	1900	1609	1810	5187	1610	1810	5187	1610
Grp Volume(v), veh/h	418	0	170	118	78	430	36	1849	114	206	1391	61
Grp Sat Flow(s),veh/h/ln	956	0	1868	1303	1900	1609	1810	1729	1610	1810	1729	1610
Q Serve(g_s), s	39.8	0.0	7.6	8.3	3.2	27.5	2.3	39.1	5.4	13.2	21.4	2.3
Cycle Q Clear(g_c), s	43.0	0.0	7.6	15.8	3.2	27.5	2.3	39.1	5.4	13.2	21.4	2.3
Prop In Lane	1.00		0.09	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	382	0	678	451	690	584	53	2099	652	237	2627	815
V/C Ratio(X)	1.10	0.00	0.25	0.26	0.11	0.74	0.68	0.88	0.17	0.87	0.53	0.07
Avail Cap(c_a), veh/h	382	0	678	451	690	584	76	2099	652	428	2627	815
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	42.5	0.0	26.5	32.0	25.1	32.8	56.9	32.6	22.6	50.5	19.7	15.0
Incr Delay (d2), s/veh	74.3	0.0	0.1	0.1	0.0	4.3	10.7	5.7	0.6	7.2	0.8	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	19.3	0.0	3.4	2.6	1.5	11.3	1.2	16.0	2.0	6.2	7.9	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	116.8	0.0	26.6	32.1	25.1	37.1	67.7	38.4	23.2	57.6	20.5	15.2
LnGrp LOS	F	A	C	C	C	D	E	D	C	E	C	B
Approach Vol, veh/h		588			626			1999			1658	
Approach Delay, s/veh		90.7			34.7			38.0			24.9	
Approach LOS		F			C			D			C	

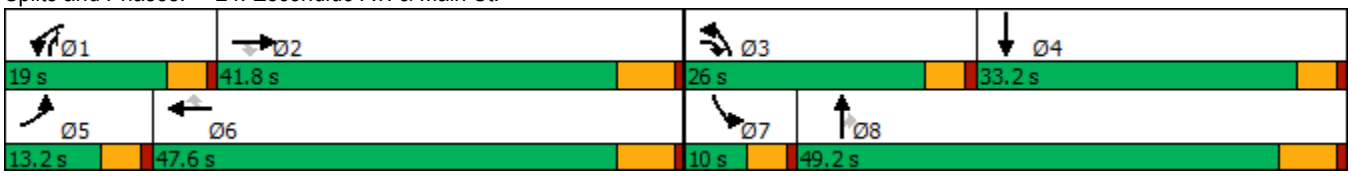
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	19.5	51.9		47.0	7.5	64.0		47.0				
Change Period (Y+Rc), s	4.0	6.0		5.0	4.0	6.0		5.0				
Max Green Setting (Gmax), s	28.0	35.0		42.0	5.0	58.0		42.0				
Max Q Clear Time (g_c+I1), s	15.2	41.1		45.0	4.3	23.4		29.5				
Green Ext Time (p_c), s	0.3	0.0		0.0	0.0	21.5		1.3				

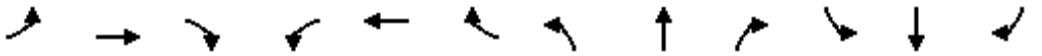
Intersection Summary			
HCM 6th Ctrl Delay		39.5	
HCM 6th LOS		D	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations											
Traffic Volume (vph)	74	1712	796	504	1318	14	784	71	276	77	52
Future Volume (vph)	74	1712	796	504	1318	14	784	71	276	77	52
Turn Type	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA
Protected Phases	5	2	3	1	6		3	8	1	7	4
Permitted Phases			2			6			8		
Detector Phase	5	2	3	1	6	6	3	8	1	7	4
Switch Phase											
Minimum Initial (s)	5.0	10.0	5.0	5.0	10.0	10.0	5.0	10.0	5.0	5.0	10.0
Minimum Split (s)	9.6	41.2	9.6	9.6	31.2	31.2	9.6	49.2	9.6	9.6	29.6
Total Split (s)	13.2	41.8	26.0	19.0	47.6	47.6	26.0	49.2	19.0	10.0	33.2
Total Split (%)	11.0%	34.8%	21.7%	15.8%	39.7%	39.7%	21.7%	41.0%	15.8%	8.3%	27.7%
Yellow Time (s)	3.6	5.2	3.6	3.6	5.2	5.2	3.6	5.2	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	4.6	4.6	6.2	6.2	4.6	6.2	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	None	None	Min	Min	None	None	None	None	None
Act Effct Green (s)	7.8	35.8	58.9	14.5	44.5	44.5	21.5	25.2	42.5	11.8	13.7
Actuated g/C Ratio	0.07	0.34	0.56	0.14	0.42	0.42	0.20	0.24	0.40	0.11	0.13
v/c Ratio	0.61	0.92	0.72	1.19	0.57	0.02	1.24	0.16	0.42	0.42	0.48
Control Delay	69.0	43.3	8.1	145.4	25.9	0.1	158.3	29.9	16.5	58.2	30.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	69.0	43.3	8.1	145.4	25.9	0.1	158.3	29.9	16.5	58.2	30.2
LOS	E	D	A	F	C	A	F	C	B	E	C
Approach Delay		33.2			58.5			115.6			40.8
Approach LOS		C			E			F			D

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 105.5	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.24	
Intersection Signal Delay: 57.7	Intersection LOS: E
Intersection Capacity Utilization 99.1%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 24: Escondido Av. & Main St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	74	1712	796	504	1318	14	784	71	276	77	52	73
Future Volume (veh/h)	74	1712	796	504	1318	14	784	71	276	77	52	73
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	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	1800	1900	1900	1700	1900	1900	1700	1900	1900	1800	1900	1900
Adj Flow Rate, veh/h	77	1783	605	525	1373	13	817	74	207	80	54	55
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	97	1960	891	457	2442	675	679	476	630	91	81	82
Arrive On Green	0.08	0.52	0.34	0.21	0.64	0.43	0.21	0.25	0.25	0.05	0.09	0.09
Sat Flow, veh/h	1714	5700	1607	3238	5700	1577	3238	1900	1610	1714	863	879
Grp Volume(v), veh/h	77	1783	605	525	1373	13	817	74	207	80	0	109
Grp Sat Flow(s),veh/h/ln	1714	1900	1607	1619	1900	1577	1619	1900	1610	1714	0	1742
Q Serve(g_s), s	4.5	29.1	27.5	14.4	13.8	0.5	21.4	3.1	9.2	4.7	0.0	6.2
Cycle Q Clear(g_c), s	4.5	29.1	27.5	14.4	13.8	0.5	21.4	3.1	9.2	4.7	0.0	6.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.50
Lane Grp Cap(c), veh/h	97	1960	891	457	2442	675	679	476	630	91	0	163
V/C Ratio(X)	0.79	0.91	0.68	1.15	0.56	0.02	1.20	0.16	0.33	0.88	0.00	0.67
Avail Cap(c_a), veh/h	144	1989	898	457	2442	675	679	801	906	91	0	488
HCM Platoon Ratio	1.50	1.50	1.00	1.50	1.50	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	46.1	23.3	16.3	40.2	12.9	16.8	40.3	29.8	21.7	48.0	0.0	44.7
Incr Delay (d2), s/veh	9.1	6.6	2.1	89.7	0.3	0.0	105.0	0.2	0.3	56.3	0.0	4.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	10.2	10.2	10.6	4.2	0.2	18.4	1.5	3.5	3.4	0.0	2.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	55.2	29.9	18.4	129.9	13.2	16.8	145.4	30.0	22.0	104.3	0.0	49.4
LnGrp LOS	E	C	B	F	B	B	F	C	C	F	A	D
Approach Vol, veh/h		2465			1911			1098			189	
Approach Delay, s/veh		27.9			45.3			114.3			72.6	
Approach LOS		C			D			F			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	19.0	41.3	26.0	15.7	10.4	49.9	10.0	31.7
Change Period (Y+Rc), s	4.6	6.2	4.6	* 6.2	4.6	6.2	4.6	6.2
Max Green Setting (Gmax), s	14.4	35.6	21.4	* 29	8.6	41.4	5.4	43.0
Max Q Clear Time (g_c+I1), s	16.4	31.1	23.4	8.2	6.5	15.8	6.7	11.2
Green Ext Time (p_c), s	0.0	4.0	0.0	0.6	0.0	10.5	0.0	1.3

Intersection Summary	
HCM 6th Ctrl Delay	52.0
HCM 6th LOS	D

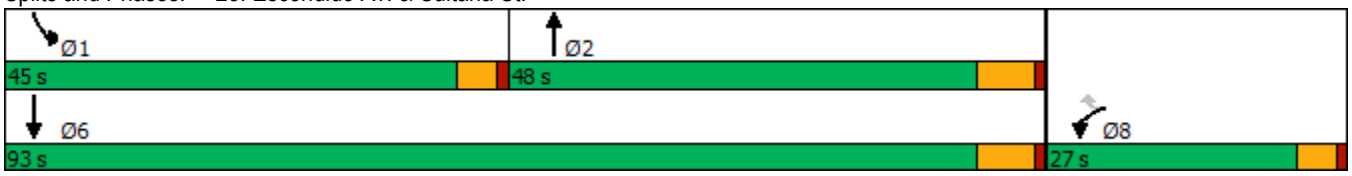
Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	WBL	WBR	NBT	SBL	SBT
Lane Configurations					
Traffic Volume (vph)	23	179	772	335	1056
Future Volume (vph)	23	179	772	335	1056
Turn Type	Prot	Perm	NA	Prot	NA
Protected Phases	8		2	1	6
Permitted Phases		8			
Detector Phase	8	8	2	1	6
Switch Phase					
Minimum Initial (s)	10.0	10.0	10.0	5.0	10.0
Minimum Split (s)	26.6	26.6	23.2	9.6	16.2
Total Split (s)	27.0	27.0	48.0	45.0	93.0
Total Split (%)	22.5%	22.5%	40.0%	37.5%	77.5%
Yellow Time (s)	3.6	3.6	5.2	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	6.2	4.6	6.2
Lead/Lag			Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	
Recall Mode	None	None	Max	None	Max
Act Effct Green (s)	12.2	12.2	55.7	26.7	87.0
Actuated g/C Ratio	0.11	0.11	0.51	0.24	0.79
v/c Ratio	0.13	0.54	0.46	0.84	0.39
Control Delay	44.7	12.4	20.4	57.7	4.3
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	44.7	12.4	20.4	57.7	4.3
LOS	D	B	C	E	A
Approach Delay	16.1		20.4		17.1
Approach LOS	B		C		B

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 110	
Natural Cycle: 75	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.84	
Intersection Signal Delay: 18.1	Intersection LOS: B
Intersection Capacity Utilization 62.8%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 25: Escondido Av. & Sultana St.





Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	23	179	772	23	335	1056
Future Volume (veh/h)	23	179	772	23	335	1056
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	1800	1900	1900	1900	1800	1900
Adj Flow Rate, veh/h	24	186	804	24	349	1100
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	230	216	1816	54	380	2779
Arrive On Green	0.13	0.13	0.51	0.51	0.22	0.77
Sat Flow, veh/h	1714	1610	3673	107	1714	3705
Grp Volume(v), veh/h	24	186	405	423	349	1100
Grp Sat Flow(s),veh/h/ln	1714	1610	1805	1880	1714	1805
Q Serve(g_s), s	1.4	12.7	16.1	16.1	22.4	11.4
Cycle Q Clear(g_c), s	1.4	12.7	16.1	16.1	22.4	11.4
Prop In Lane	1.00	1.00		0.06	1.00	
Lane Grp Cap(c), veh/h	230	216	916	954	380	2779
V/C Ratio(X)	0.10	0.86	0.44	0.44	0.92	0.40
Avail Cap(c_a), veh/h	341	320	916	954	614	2779
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	47.8	17.6	17.6	42.9	4.3
Incr Delay (d2), s/veh	0.2	14.3	1.6	1.5	8.8	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	6.0	7.1	7.4	10.4	3.8
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	43.0	62.1	19.2	19.1	51.7	4.7
LnGrp LOS	D	E	B	B	D	A
Approach Vol, veh/h	210		828			1449
Approach Delay, s/veh	59.9		19.2			16.0
Approach LOS	E		B			B

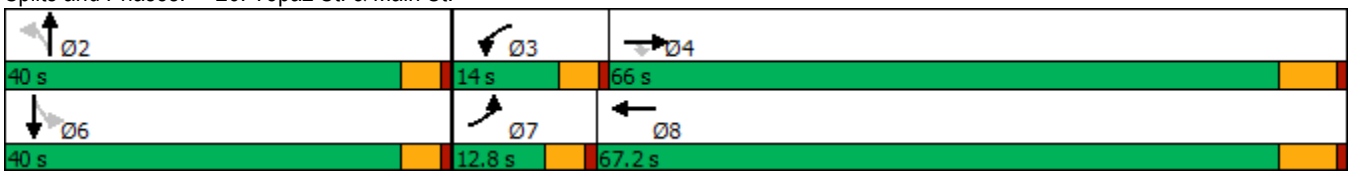
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	29.6	63.4			93.0	19.7
Change Period (Y+Rc), s	4.6	6.2			6.2	4.6
Max Green Setting (Gmax), s	40.4	41.8			86.8	22.4
Max Q Clear Time (g_c+I1), s	24.4	18.1			13.4	14.7
Green Ext Time (p_c), s	0.6	6.2			12.8	0.4

Intersection Summary	
HCM 6th Ctrl Delay	20.8
HCM 6th LOS	C

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	88	1958	305	144	1623	294	45	86	49
Future Volume (vph)	88	1958	305	144	1623	294	45	86	49
Turn Type	Prot	NA	Perm	Prot	NA	Perm	NA	Perm	NA
Protected Phases	7	4		3	8		2		6
Permitted Phases			4			2		6	
Detector Phase	7	4	4	3	8	2	2	6	6
Switch Phase									
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	25.2	25.2	9.6	23.2	32.6	32.6	38.6	38.6
Total Split (s)	12.8	66.0	66.0	14.0	67.2	40.0	40.0	40.0	40.0
Total Split (%)	10.7%	55.0%	55.0%	11.7%	56.0%	33.3%	33.3%	33.3%	33.3%
Yellow Time (s)	3.6	5.2	5.2	3.6	5.2	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	6.2	4.6	6.2	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes				
Recall Mode	None	None	None	Max	None	None	None	None	None
Act Effct Green (s)	8.0	57.1	57.1	9.5	58.7	32.0	32.0	32.0	32.0
Actuated g/C Ratio	0.07	0.50	0.50	0.08	0.51	0.28	0.28	0.28	0.28
v/c Ratio	0.76	0.84	0.35	1.05	0.67	0.91	0.32	0.32	0.22
Control Delay	92.1	28.7	4.6	141.4	22.3	71.5	12.9	36.8	19.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	92.1	28.7	4.6	141.4	22.3	71.5	12.9	36.8	19.1
LOS	F	C	A	F	C	E	B	D	B
Approach Delay		28.3			31.5		49.5		26.8
Approach LOS		C			C		D		C

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 114.2	
Natural Cycle: 100	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.05	
Intersection Signal Delay: 31.5	Intersection LOS: C
Intersection Capacity Utilization 95.9%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 26: Topaz St. & Main St.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	88	1958	305	144	1623	95	294	45	132	86	49	61
Future Volume (veh/h)	88	1958	305	144	1623	95	294	45	132	86	49	61
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	0.99		1.00	1.00		0.99
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	1800	1900	1900	1800	1900	1900	1800	1900	1900	1800	1900	1900
Adj Flow Rate, veh/h	91	2019	242	148	1673	91	303	46	105	89	51	32
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	114	2734	772	152	2527	137	401	147	337	340	312	196
Arrive On Green	0.07	0.48	0.48	0.09	0.50	0.50	0.29	0.29	0.29	0.29	0.29	0.29
Sat Flow, veh/h	1714	5700	1610	1714	5035	274	1325	514	1174	1256	1087	682
Grp Volume(v), veh/h	91	2019	242	148	1149	615	303	0	151	89	0	83
Grp Sat Flow(s),veh/h/ln	1714	1900	1610	1714	1729	1851	1325	0	1689	1256	0	1770
Q Serve(g_s), s	5.6	30.3	9.8	9.1	26.3	26.3	23.5	0.0	7.4	6.3	0.0	3.7
Cycle Q Clear(g_c), s	5.6	30.3	9.8	9.1	26.3	26.3	27.3	0.0	7.4	13.8	0.0	3.7
Prop In Lane	1.00		1.00	1.00		0.15	1.00		0.70	1.00		0.39
Lane Grp Cap(c), veh/h	114	2734	772	152	1735	929	401	0	484	340	0	507
V/C Ratio(X)	0.80	0.74	0.31	0.97	0.66	0.66	0.76	0.00	0.31	0.26	0.00	0.16
Avail Cap(c_a), veh/h	133	3213	908	152	1989	1064	464	0	564	399	0	591
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	48.8	22.2	16.9	48.2	19.7	19.7	38.5	0.0	29.6	35.0	0.0	28.3
Incr Delay (d2), s/veh	21.6	0.8	0.2	66.5	0.7	1.3	6.0	0.0	0.4	0.4	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.0	12.2	3.3	6.5	9.5	10.4	8.3	0.0	3.1	2.0	0.0	1.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	70.4	23.0	17.1	114.7	20.4	21.0	44.5	0.0	30.0	35.4	0.0	28.5
LnGrp LOS	E	C	B	F	C	C	D	A	C	D	A	C
Approach Vol, veh/h		2352			1912			454			172	
Approach Delay, s/veh		24.2			27.9			39.7			32.1	
Approach LOS		C			C			D			C	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		35.0	14.0	57.1		35.0	11.6	59.4				
Change Period (Y+Rc), s		4.6	4.6	6.2		4.6	4.6	6.2				
Max Green Setting (Gmax), s		35.4	9.4	59.8		35.4	8.2	61.0				
Max Q Clear Time (g_c+I1), s		29.3	11.1	32.3		15.8	7.6	28.3				
Green Ext Time (p_c), s		1.1	0.0	18.6		0.7	0.0	15.3				

Intersection Summary		
HCM 6th Ctrl Delay		27.4
HCM 6th LOS		C

Notes

User approved volume balancing among the lanes for turning movement.

APPENDIX 7.10:

HORIZON YEAR (2040) WITH PROJECT CONDITIONS INTERSECTION OPERATIONS ANALYSIS WORKSHEETS WITH IMPROVEMENTS

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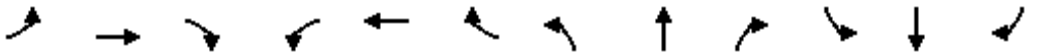
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	69	172	127	107	129	63	1133	62	297	1797
Future Volume (vph)	69	172	127	107	129	63	1133	62	297	1797
Turn Type	Perm	NA	Perm	Perm	NA	Prot	NA	Perm	Prot	NA
Protected Phases		4			8	5	2		1	6
Permitted Phases	4		4	8				2		
Detector Phase	4	4	4	8	8	5	2	2	1	6
Switch Phase										
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	15.0	15.0	15.0	42.0	42.0	9.0	28.0	28.0	9.0	37.0
Total Split (s)	44.0	44.0	44.0	44.0	44.0	10.0	45.0	45.0	31.0	66.0
Total Split (%)	36.7%	36.7%	36.7%	36.7%	36.7%	8.3%	37.5%	37.5%	25.8%	55.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	3.0	5.0	5.0	3.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	4.0	6.0	6.0	4.0	6.0
Lead/Lag						Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?						Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Max	Max	None	Max
Act Effct Green (s)	39.0	39.0	39.0	39.0	39.0	6.0	41.5	41.5	24.5	60.0
Actuated g/C Ratio	0.32	0.32	0.32	0.32	0.32	0.05	0.35	0.35	0.20	0.50
v/c Ratio	1.15	0.30	0.23	0.33	0.86	0.76	0.69	0.11	0.88	0.81
Control Delay	198.9	32.0	9.3	34.0	44.3	101.0	36.6	3.1	70.3	28.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	198.9	32.0	9.3	34.0	44.3	101.0	36.6	3.1	70.3	28.1
LOS	F	C	A	C	D	F	D	A	E	C
Approach Delay		55.5			42.5		38.2			33.8
Approach LOS		E			D		D			C

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.15	
Intersection Signal Delay: 38.0	Intersection LOS: D
Intersection Capacity Utilization 96.4%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 8: US-395 & Luna Rd.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	69	172	127	107	129	372	63	1133	62	297	1797	118
Future Volume (veh/h)	69	172	127	107	129	372	63	1133	62	297	1797	118
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	75	187	105	116	140	338	68	1232	51	323	1953	110
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	117	619	524	354	161	388	87	1842	569	351	2517	141
Arrive On Green	0.33	0.33	0.33	0.33	0.33	0.33	0.05	0.36	0.36	0.19	0.50	0.50
Sat Flow, veh/h	982	1900	1610	1166	493	1190	1810	5187	1603	1810	5025	282
Grp Volume(v), veh/h	75	187	105	116	0	478	68	1232	51	323	1342	721
Grp Sat Flow(s),veh/h/ln	982	1900	1610	1166	0	1683	1810	1729	1603	1810	1729	1849
Q Serve(g_s), s	7.0	8.8	5.6	9.9	0.0	32.0	4.5	24.1	2.5	21.0	37.9	38.2
Cycle Q Clear(g_c), s	39.0	8.8	5.6	18.7	0.0	32.0	4.5	24.1	2.5	21.0	37.9	38.2
Prop In Lane	1.00		1.00	1.00		0.71	1.00		1.00	1.00		0.15
Lane Grp Cap(c), veh/h	117	619	524	354	0	548	87	1842	569	351	1732	926
V/C Ratio(X)	0.64	0.30	0.20	0.33	0.00	0.87	0.78	0.67	0.09	0.92	0.77	0.78
Avail Cap(c_a), veh/h	117	619	524	354	0	548	91	1842	569	408	1732	926
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	57.2	30.2	29.1	37.2	0.0	38.0	56.4	32.7	25.7	47.4	24.4	24.4
Incr Delay (d2), s/veh	8.7	0.1	0.1	0.2	0.0	13.8	31.9	1.9	0.3	23.2	3.5	6.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	4.0	2.2	2.8	0.0	14.8	2.7	9.7	1.0	11.2	14.6	16.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	66.0	30.3	29.2	37.4	0.0	51.9	88.3	34.6	26.0	70.6	27.8	30.9
LnGrp LOS	E	C	C	D	A	D	F	C	C	E	C	C
Approach Vol, veh/h		367			594			1351			2386	
Approach Delay, s/veh		37.3			49.0			37.0			34.5	
Approach LOS		D			D			D			C	

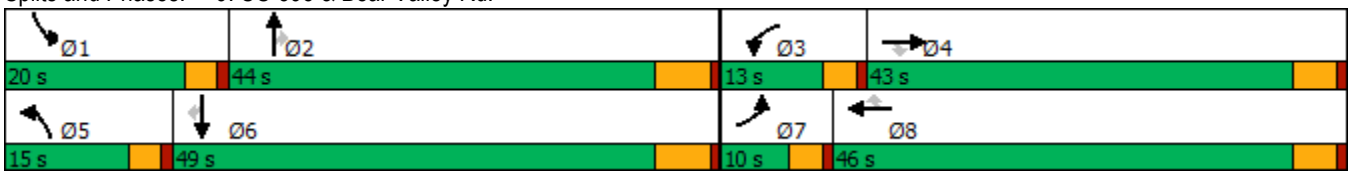
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	27.2	48.5		44.0	9.8	66.0		44.0				
Change Period (Y+Rc), s	4.0	6.0		5.0	4.0	6.0		5.0				
Max Green Setting (Gmax), s	27.0	39.0		39.0	6.0	60.0		39.0				
Max Q Clear Time (g_c+I1), s	23.0	26.1		41.0	6.5	40.2		34.0				
Green Ext Time (p_c), s	0.3	5.3		0.0	0.0	11.1		1.1				

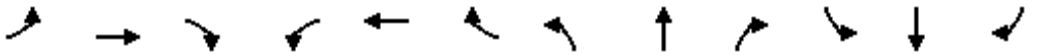
Intersection Summary												
HCM 6th Ctrl Delay			37.3									
HCM 6th LOS			D									

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	80	464	317	251	347	138	148	1052	140	310	1777	47
Future Volume (vph)	80	464	317	251	347	138	148	1052	140	310	1777	47
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.0	43.0	43.0	9.0	43.0	43.0	9.0	44.0	44.0	9.0	44.0	44.0
Total Split (s)	10.0	43.0	43.0	13.0	46.0	46.0	15.0	44.0	44.0	20.0	49.0	49.0
Total Split (%)	8.3%	35.8%	35.8%	10.8%	38.3%	38.3%	12.5%	36.7%	36.7%	16.7%	40.8%	40.8%
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0	4.0	3.0	5.0	5.0	3.0	5.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	5.0	5.0	4.0	5.0	5.0	4.0	6.0	6.0	4.0	6.0	6.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Max	Max	None	Max	Max
Act Effct Green (s)	6.1	20.2	20.2	9.1	23.2	23.2	9.0	39.1	39.1	13.3	43.5	43.5
Actuated g/C Ratio	0.06	0.20	0.20	0.09	0.23	0.23	0.09	0.39	0.39	0.13	0.43	0.43
v/c Ratio	0.76	0.66	0.66	1.60	0.43	0.30	0.49	0.54	0.20	0.69	0.82	0.06
Control Delay	89.0	41.4	19.1	328.6	34.3	6.5	51.1	26.7	5.2	51.4	30.5	0.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	89.0	41.4	19.1	328.6	34.3	6.5	51.1	26.7	5.2	51.4	30.5	0.8
LOS	F	D	B	F	C	A	D	C	A	D	C	A
Approach Delay		37.6			129.5			27.2			32.9	
Approach LOS		D			F			C			C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 100.9	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.60	
Intersection Signal Delay: 46.2	Intersection LOS: D
Intersection Capacity Utilization 81.1%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 9: US-395 & Bear Valley Rd.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	80	464	317	251	347	138	148	1052	140	310	1777	47
Future Volume (veh/h)	80	464	317	251	347	138	148	1052	140	310	1777	47
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	82	478	246	259	358	108	153	1085	117	320	1832	42
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	105	681	304	171	813	363	224	2088	648	401	2348	729
Arrive On Green	0.06	0.19	0.19	0.09	0.23	0.23	0.06	0.40	0.40	0.11	0.45	0.45
Sat Flow, veh/h	1810	3610	1610	1810	3610	1610	3510	5187	1610	3510	5187	1610
Grp Volume(v), veh/h	82	478	246	259	358	108	153	1085	117	320	1832	42
Grp Sat Flow(s),veh/h/ln	1810	1805	1610	1810	1805	1610	1755	1729	1610	1755	1729	1610
Q Serve(g_s), s	4.2	11.8	13.9	9.0	8.1	5.3	4.1	15.0	4.4	8.4	28.4	1.4
Cycle Q Clear(g_c), s	4.2	11.8	13.9	9.0	8.1	5.3	4.1	15.0	4.4	8.4	28.4	1.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	105	681	304	171	813	363	224	2088	648	401	2348	729
V/C Ratio(X)	0.78	0.70	0.81	1.51	0.44	0.30	0.68	0.52	0.18	0.80	0.78	0.06
Avail Cap(c_a), veh/h	114	1444	644	171	1558	695	406	2088	648	591	2348	729
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.1	36.0	36.9	43.0	31.7	30.6	43.5	21.4	18.3	41.0	22.0	14.6
Incr Delay (d2), s/veh	25.2	0.5	2.0	257.6	0.1	0.2	2.7	0.9	0.6	3.9	2.7	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	2.5	4.8	5.2	16.0	3.3	1.9	1.7	5.6	1.6	3.6	10.4	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	69.3	36.5	38.9	300.6	31.8	30.7	46.2	22.4	18.9	44.9	24.7	14.8
LnGrp LOS	E	D	D	F	C	C	D	C	B	D	C	B
Approach Vol, veh/h		806			725			1355			2194	
Approach Delay, s/veh		40.6			127.7			24.8			27.4	
Approach LOS		D			F			C			C	

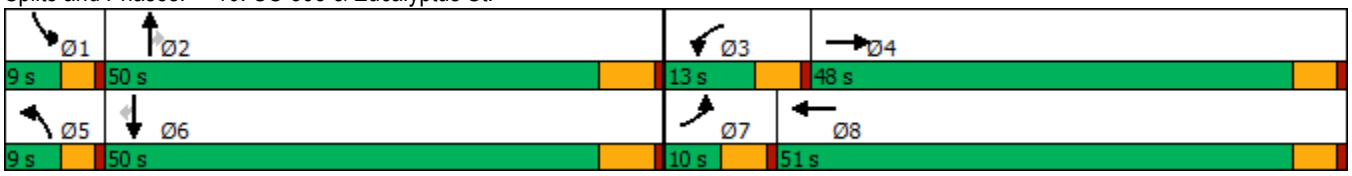
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.8	44.2	13.0	22.9	10.1	49.0	9.5	26.4
Change Period (Y+Rc), s	4.0	6.0	4.0	5.0	4.0	6.0	4.0	5.0
Max Green Setting (Gmax), s	16.0	38.0	9.0	38.0	11.0	43.0	6.0	41.0
Max Q Clear Time (g_c+I1), s	10.4	17.0	11.0	15.9	6.1	30.4	6.2	10.1
Green Ext Time (p_c), s	0.4	4.5	0.0	2.0	0.1	6.6	0.0	1.4

Intersection Summary	
HCM 6th Ctrl Delay	43.1
HCM 6th LOS	D

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	13	7	122	8	10	1200	84	9	2339	11
Future Volume (vph)	13	7	122	8	10	1200	84	9	2339	11
Turn Type	Prot	NA	Prot	NA	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4	3	8	5	2		1	6	
Permitted Phases							2			6
Detector Phase	7	4	3	8	5	2	2	1	6	6
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	10.0	48.0	10.0	48.0	9.0	41.0	41.0	9.0	41.0	41.0
Total Split (s)	10.0	48.0	13.0	51.0	9.0	50.0	50.0	9.0	50.0	50.0
Total Split (%)	8.3%	40.0%	10.8%	42.5%	7.5%	41.7%	41.7%	7.5%	41.7%	41.7%
Yellow Time (s)	4.0	4.0	4.0	4.0	3.0	5.0	5.0	3.0	5.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	4.0	6.0	6.0	4.0	6.0	6.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	Max	Max	None	Max	Max
Act Effct Green (s)	5.2	15.0	9.2	21.1	5.2	49.9	49.9	5.2	49.9	49.9
Actuated g/C Ratio	0.06	0.18	0.11	0.25	0.06	0.59	0.59	0.06	0.59	0.59
v/c Ratio	0.13	0.11	0.67	0.09	0.10	0.42	0.09	0.09	0.83	0.01
Control Delay	47.8	13.7	57.9	10.4	47.2	14.2	3.9	47.1	21.2	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	47.8	13.7	57.9	10.4	47.2	14.2	3.9	47.1	21.2	0.0
LOS	D	B	E	B	D	B	A	D	C	A
Approach Delay		23.2		46.6		13.8			21.2	
Approach LOS		C		D		B			C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 85.1	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.83	
Intersection Signal Delay: 19.8	Intersection LOS: B
Intersection Capacity Utilization 68.5%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 10: US-395 & Eucalyptus St.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	13	7	26	122	8	30	10	1200	84	9	2339	11
Future Volume (veh/h)	13	7	26	122	8	30	10	1200	84	9	2339	11
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	14	8	20	131	9	21	11	1290	86	10	2515	11
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	30	50	125	164	90	210	24	2829	878	23	2823	876
Arrive On Green	0.02	0.10	0.10	0.09	0.18	0.18	0.01	0.55	0.55	0.01	0.54	0.54
Sat Flow, veh/h	1810	481	1203	1810	506	1180	1810	5187	1610	1810	5187	1610
Grp Volume(v), veh/h	14	0	28	131	0	30	11	1290	86	10	2515	11
Grp Sat Flow(s),veh/h/ln	1810	0	1684	1810	0	1685	1810	1729	1610	1810	1729	1610
Q Serve(g_s), s	0.6	0.0	1.2	5.7	0.0	1.2	0.5	12.2	2.1	0.4	34.7	0.3
Cycle Q Clear(g_c), s	0.6	0.0	1.2	5.7	0.0	1.2	0.5	12.2	2.1	0.4	34.7	0.3
Prop In Lane	1.00		0.71	1.00		0.70	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	30	0	175	164	0	300	24	2829	878	23	2823	876
V/C Ratio(X)	0.46	0.00	0.16	0.80	0.00	0.10	0.45	0.46	0.10	0.44	0.89	0.01
Avail Cap(c_a), veh/h	112	0	896	179	0	959	112	2829	878	112	2823	876
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.4	0.0	33.0	36.0	0.0	27.8	39.6	11.1	8.8	39.6	16.3	8.5
Incr Delay (d2), s/veh	4.1	0.0	0.4	18.3	0.0	0.1	4.7	0.5	0.2	5.0	4.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	0.5	3.2	0.0	0.5	0.2	3.7	0.7	0.2	13.6	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	43.5	0.0	33.4	54.3	0.0	27.9	44.3	11.7	9.0	44.7	21.0	8.5
LnGrp LOS	D	A	C	D	A	C	D	B	A	D	C	A
Approach Vol, veh/h		42			161			1387			2536	
Approach Delay, s/veh		36.8			49.4			11.7			21.1	
Approach LOS		D			D			B			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.0	50.1	12.3	13.4	5.1	50.0	6.3	19.4
Change Period (Y+Rc), s	4.0	6.0	5.0	5.0	4.0	6.0	5.0	5.0
Max Green Setting (Gmax), s	5.0	44.0	8.0	43.0	5.0	44.0	5.0	46.0
Max Q Clear Time (g_c+I1), s	2.4	14.2	7.7	3.2	2.5	36.7	2.6	3.2
Green Ext Time (p_c), s	0.0	9.8	0.0	0.1	0.0	6.9	0.0	0.1

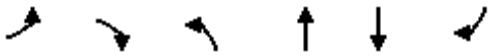
Intersection Summary	
HCM 6th Ctrl Delay	19.2
HCM 6th LOS	B

Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Configurations					
Traffic Volume (vph)	19	74	325	1920	2656
Future Volume (vph)	19	74	325	1920	2656
Turn Type	Prot	Perm	Prot	NA	NA
Protected Phases	4		5	2	6
Permitted Phases		4			
Detector Phase	4	4	5	2	6
Switch Phase					
Minimum Initial (s)	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	26.6	26.6	9.6	16.5	23.5
Total Split (s)	26.6	26.6	26.0	93.4	67.4
Total Split (%)	22.2%	22.2%	21.7%	77.8%	56.2%
Yellow Time (s)	3.6	3.6	3.6	5.5	5.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	6.5	6.5
Lead/Lag			Lead		Lag
Lead-Lag Optimize?			Yes		Yes
Recall Mode	None	None	None	Max	Max
Act Effct Green (s)	12.2	12.2	21.5	89.0	61.3
Actuated g/C Ratio	0.11	0.11	0.20	0.83	0.57
v/c Ratio	0.10	0.31	0.98	0.49	1.02
Control Delay	44.3	13.0	86.8	4.5	47.0
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	44.3	13.0	86.8	4.5	47.0
LOS	D	B	F	A	D
Approach Delay	19.5			16.4	47.0
Approach LOS	B			B	D

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 107.5	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.02	
Intersection Signal Delay: 33.0	Intersection LOS: C
Intersection Capacity Utilization 93.2%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 11: US-395 & Yucca Terrace Dr.





Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	19	74	325	1920	2656	111
Future Volume (veh/h)	19	74	325	1920	2656	111
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	21	80	353	2087	2887	121
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	160	142	360	4193	2894	120
Arrive On Green	0.09	0.09	0.20	0.81	0.57	0.57
Sat Flow, veh/h	1810	1610	1810	5358	5280	211
Grp Volume(v), veh/h	21	80	353	2087	1941	1067
Grp Sat Flow(s),veh/h/ln	1810	1610	1810	1729	1729	1862
Q Serve(g_s), s	1.2	5.1	20.9	13.9	59.7	60.9
Cycle Q Clear(g_c), s	1.2	5.1	20.9	13.9	59.7	60.9
Prop In Lane	1.00	1.00	1.00			0.11
Lane Grp Cap(c), veh/h	160	142	360	4193	1959	1055
V/C Ratio(X)	0.13	0.56	0.98	0.50	0.99	1.01
Avail Cap(c_a), veh/h	370	329	360	4193	1959	1055
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	45.2	47.0	42.8	3.3	23.0	23.3
Incr Delay (d2), s/veh	0.4	3.4	41.8	0.4	18.3	30.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.1	12.9	2.2	24.8	30.7
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	45.6	50.4	84.6	3.7	41.4	53.8
LnGrp LOS	D	D	F	A	D	F
Approach Vol, veh/h	101			2440	3008	
Approach Delay, s/veh	49.4			15.4	45.8	
Approach LOS	D			B	D	

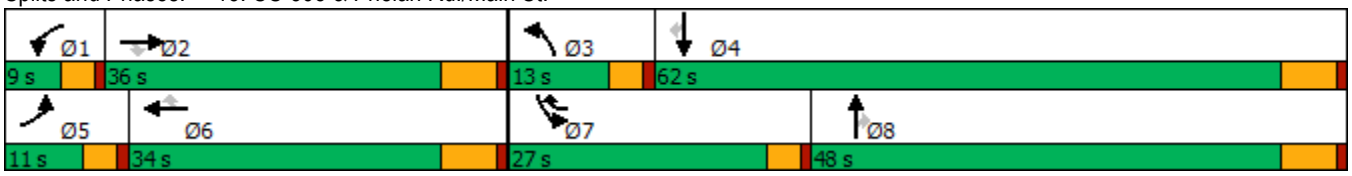
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		93.4		14.1	26.0	67.4
Change Period (Y+Rc), s		6.5		4.6	4.6	6.5
Max Green Setting (Gmax), s		86.9		22.0	21.4	60.9
Max Q Clear Time (g_c+I1), s		15.9		7.1	22.9	62.9
Green Ext Time (p_c), s		26.7		0.2	0.0	0.0

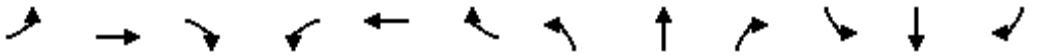
Intersection Summary		
HCM 6th Ctrl Delay		32.5
HCM 6th LOS		C

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	103	1030	218	23	1203	651	237	1571	26	375	2283	82
Future Volume (vph)	103	1030	218	23	1203	651	237	1571	26	375	2283	82
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2		1	6	7	3	8		7	4	
Permitted Phases			2			6			8			4
Detector Phase	5	2	2	1	6	7	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	5.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.0	16.0	16.0	9.0	16.0	9.0	9.0	16.0	16.0	9.0	16.0	16.0
Total Split (s)	11.0	36.0	36.0	9.0	34.0	27.0	13.0	48.0	48.0	27.0	62.0	62.0
Total Split (%)	9.2%	30.0%	30.0%	7.5%	28.3%	22.5%	10.8%	40.0%	40.0%	22.5%	51.7%	51.7%
Yellow Time (s)	3.0	5.0	5.0	3.0	5.0	3.0	3.0	5.0	5.0	3.0	5.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	6.0	6.0	4.0	6.0	4.0	4.0	6.0	6.0	4.0	6.0	6.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	7.0	33.6	33.6	5.0	28.0	54.2	9.0	44.8	44.8	20.2	56.0	56.0
Actuated g/C Ratio	0.06	0.28	0.28	0.04	0.23	0.45	0.08	0.37	0.37	0.17	0.47	0.47
v/c Ratio	1.02	0.74	0.39	0.32	1.04	0.89	0.94	0.84	0.04	0.66	0.98	0.11
Control Delay	148.9	43.6	10.4	67.3	80.5	42.0	98.1	40.0	0.1	52.2	46.4	2.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	148.9	43.6	10.4	67.3	80.5	42.0	98.1	40.0	0.1	52.2	46.4	2.8
LOS	F	D	B	E	F	D	F	D	A	D	D	A
Approach Delay		46.3			67.0			46.9			45.9	
Approach LOS		D			E			D			D	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.04	
Intersection Signal Delay: 51.3	Intersection LOS: D
Intersection Capacity Utilization 96.5%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 13: US-395 & Phelan Rd./Main St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	103	1030	218	23	1203	651	237	1571	26	375	2283	82
Future Volume (veh/h)	103	1030	218	23	1203	651	237	1571	26	375	2283	82
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	107	1073	171	24	1253	470	247	1636	18	391	2378	64
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	106	1394	433	42	1210	587	263	2130	661	460	2421	751
Arrive On Green	0.06	0.27	0.27	0.02	0.23	0.23	0.08	0.41	0.41	0.13	0.47	0.47
Sat Flow, veh/h	1810	5187	1610	1810	5187	1610	3510	5187	1610	3510	5187	1610
Grp Volume(v), veh/h	107	1073	171	24	1253	470	247	1636	18	391	2378	64
Grp Sat Flow(s),veh/h/ln	1810	1729	1610	1810	1729	1610	1755	1729	1610	1755	1729	1610
Q Serve(g_s), s	7.0	22.9	10.4	1.6	28.0	28.0	8.4	32.6	0.8	13.1	54.2	2.6
Cycle Q Clear(g_c), s	7.0	22.9	10.4	1.6	28.0	28.0	8.4	32.6	0.8	13.1	54.2	2.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	106	1394	433	42	1210	587	263	2130	661	460	2421	751
V/C Ratio(X)	1.01	0.77	0.40	0.58	1.04	0.80	0.94	0.77	0.03	0.85	0.98	0.09
Avail Cap(c_a), veh/h	106	1394	433	75	1210	587	263	2130	661	673	2421	751
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	56.5	40.5	35.9	58.0	46.0	34.2	55.2	30.4	21.1	51.0	31.5	17.8
Incr Delay (d2), s/veh	91.3	2.7	0.6	9.1	35.4	7.8	38.8	1.8	0.0	6.0	14.4	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.7	9.5	4.0	0.8	15.3	12.7	5.0	12.8	0.3	5.9	23.3	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	147.8	43.1	36.5	67.1	81.4	42.1	94.0	32.2	21.1	57.0	45.9	17.8
LnGrp LOS	F	D	D	E	F	D	F	C	C	E	D	B
Approach Vol, veh/h		1351			1747			1901			2833	
Approach Delay, s/veh		50.6			70.6			40.2			46.8	
Approach LOS		D			E			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.8	38.2	13.0	62.0	11.0	34.0	19.7	55.3
Change Period (Y+Rc), s	4.0	6.0	4.0	6.0	4.0	6.0	4.0	6.0
Max Green Setting (Gmax), s	5.0	30.0	9.0	56.0	7.0	28.0	23.0	42.0
Max Q Clear Time (g_c+I1), s	3.6	24.9	10.4	56.2	9.0	30.0	15.1	34.6
Green Ext Time (p_c), s	0.0	3.0	0.0	0.0	0.0	0.0	0.6	5.7

Intersection Summary	
HCM 6th Ctrl Delay	51.2
HCM 6th LOS	D

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	122	432	1401	68	565	1958
Future Volume (vph)	122	432	1401	68	565	1958
Turn Type	Prot	Perm	NA	Perm	Prot	NA
Protected Phases	8		2		1	6
Permitted Phases		8		2		
Detector Phase	8	8	2	2	1	6
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0	10.0	5.0	10.0
Minimum Split (s)	26.7	26.7	23.5	23.5	9.6	16.5
Total Split (s)	31.0	31.0	55.2	55.2	33.8	89.0
Total Split (%)	25.8%	25.8%	46.0%	46.0%	28.2%	74.2%
Yellow Time (s)	3.7	3.7	5.5	5.5	3.6	5.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.7	4.7	6.5	6.5	4.6	6.5
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Recall Mode	None	None	Max	Max	None	Max
Act Effct Green (s)	14.9	14.9	55.6	55.6	22.5	82.7
Actuated g/C Ratio	0.14	0.14	0.51	0.51	0.21	0.76
v/c Ratio	0.53	0.81	0.57	0.09	0.84	0.53
Control Delay	51.3	18.6	21.0	6.7	52.7	6.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	51.3	18.6	21.0	6.7	52.7	6.4
LOS	D	B	C	A	D	A
Approach Delay	25.8		20.3			16.8
Approach LOS	C		C			B

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 108.8	
Natural Cycle: 80	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.84	
Intersection Signal Delay: 19.0	Intersection LOS: B
Intersection Capacity Utilization 64.7%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 14: US-395 & Poplar St.





Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	122	432	1401	68	565	1958
Future Volume (veh/h)	122	432	1401	68	565	1958
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	131	357	1506	57	608	2105
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	397	353	2370	736	675	3566
Arrive On Green	0.22	0.22	0.46	0.46	0.19	0.69
Sat Flow, veh/h	1810	1610	5358	1610	3510	5358
Grp Volume(v), veh/h	131	357	1506	57	608	2105
Grp Sat Flow(s),veh/h/ln	1810	1610	1729	1610	1755	1729
Q Serve(g_s), s	7.3	26.3	26.7	2.4	20.3	25.6
Cycle Q Clear(g_c), s	7.3	26.3	26.7	2.4	20.3	25.6
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	397	353	2370	736	675	3566
V/C Ratio(X)	0.33	1.01	0.64	0.08	0.90	0.59
Avail Cap(c_a), veh/h	397	353	2370	736	854	3566
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	39.4	46.8	24.9	18.3	47.4	9.9
Incr Delay (d2), s/veh	0.5	50.9	1.3	0.2	9.4	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	3.3	15.4	10.3	0.9	9.3	7.8
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	39.9	97.7	26.2	18.5	56.8	10.6
LnGrp LOS	D	F	C	B	E	B
Approach Vol, veh/h	488		1563			2713
Approach Delay, s/veh	82.2		26.0			20.9
Approach LOS	F		C			C

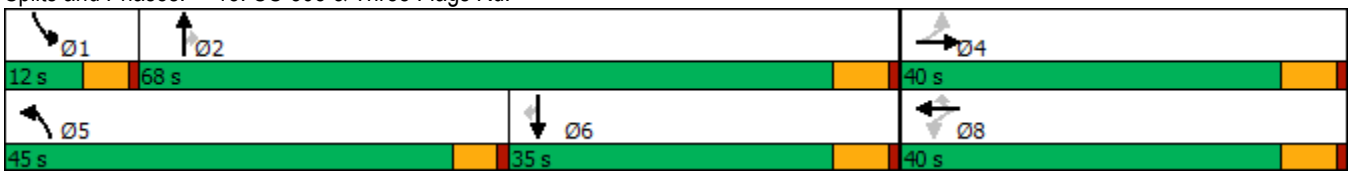
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	27.7	61.3			89.0	31.0
Change Period (Y+Rc), s	4.6	6.5			6.5	4.7
Max Green Setting (Gmax), s	29.2	48.7			82.5	26.3
Max Q Clear Time (g_c+I1), s	22.3	28.7			27.6	28.3
Green Ext Time (p_c), s	0.8	9.9			24.9	0.0

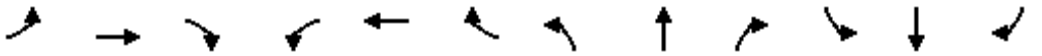
Intersection Summary	
HCM 6th Ctrl Delay	28.9
HCM 6th LOS	C

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	70	1	232	2	58	247	1341	142	44	1903	133
Future Volume (vph)	70	1	232	2	58	247	1341	142	44	1903	133
Turn Type	Perm	NA	Perm	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		4		8		5	2		1	6	
Permitted Phases	4		8		8			2			6
Detector Phase	4	4	8	8	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	16.0	16.0	16.0	16.0	16.0	10.0	16.0	16.0	10.0	16.0	16.0
Total Split (s)	40.0	40.0	40.0	40.0	40.0	45.0	68.0	68.0	12.0	35.0	35.0
Total Split (%)	33.3%	33.3%	33.3%	33.3%	33.3%	37.5%	56.7%	56.7%	10.0%	29.2%	29.2%
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	5.0	6.0	6.0	5.0	6.0	6.0
Lead/Lag						Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?						Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Max	Max	None	Max	Max
Act Effct Green (s)	34.1	34.1	34.1	34.1	34.1	22.1	62.1	62.1	6.4	44.3	44.3
Actuated g/C Ratio	0.29	0.29	0.29	0.29	0.29	0.19	0.53	0.53	0.05	0.38	0.38
v/c Ratio	0.18	0.44	1.16	0.00	0.12	0.79	0.53	0.17	0.48	1.06	0.21
Control Delay	33.9	6.0	148.9	31.0	0.5	62.0	19.4	2.8	71.6	73.9	8.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	33.9	6.0	148.9	31.0	0.5	62.0	19.4	2.8	71.6	73.9	8.4
LOS	C	A	F	C	A	E	B	A	E	E	A
Approach Delay		11.6		118.7			24.1			69.6	
Approach LOS		B		F			C			E	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 117.5	
Natural Cycle: 110	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.16	
Intersection Signal Delay: 50.7	Intersection LOS: D
Intersection Capacity Utilization 99.4%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 15: US-395 & Three Flags Rd.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	70	1	273	232	2	58	247	1341	142	44	1903	133
Future Volume (veh/h)	70	1	273	232	2	58	247	1341	142	44	1903	133
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	76	1	260	252	2	54	268	1458	142	48	2068	124
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	480	2	466	246	552	467	298	2748	852	62	2071	643
Arrive On Green	0.29	0.29	0.29	0.29	0.29	0.29	0.16	0.53	0.53	0.03	0.40	0.40
Sat Flow, veh/h	1442	6	1605	1199	1900	1607	1810	5187	1609	1810	5187	1610
Grp Volume(v), veh/h	76	0	261	252	2	54	268	1458	142	48	2068	124
Grp Sat Flow(s),veh/h/ln	1442	0	1611	1199	1900	1607	1810	1729	1609	1810	1729	1610
Q Serve(g_s), s	4.6	0.0	16.0	18.0	0.1	2.9	17.0	21.5	5.3	3.1	46.6	5.9
Cycle Q Clear(g_c), s	4.7	0.0	16.0	34.0	0.1	2.9	17.0	21.5	5.3	3.1	46.6	5.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	480	0	468	246	552	467	298	2748	852	62	2071	643
V/C Ratio(X)	0.16	0.00	0.56	1.03	0.00	0.12	0.90	0.53	0.17	0.77	1.00	0.19
Avail Cap(c_a), veh/h	480	0	468	246	552	467	619	2748	852	108	2071	643
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	31.2	0.0	35.1	51.8	29.5	30.5	47.9	18.0	14.2	56.0	35.1	22.9
Incr Delay (d2), s/veh	0.1	0.0	0.9	64.4	0.0	0.0	3.9	0.7	0.4	7.4	19.5	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	0.0	6.4	11.7	0.0	1.1	7.6	7.8	1.9	1.5	21.5	2.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	31.2	0.0	36.0	116.2	29.5	30.5	51.8	18.7	14.6	63.4	54.6	23.5
LnGrp LOS	C	A	D	F	C	C	D	B	B	E	D	C
Approach Vol, veh/h		337			308			1868			2240	
Approach Delay, s/veh		34.9			100.6			23.2			53.1	
Approach LOS		C			F			C			D	

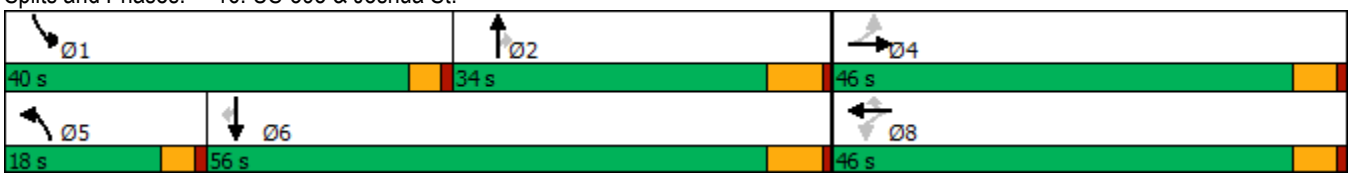
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.0	68.0		40.0	24.3	52.7		40.0				
Change Period (Y+Rc), s	5.0	6.0		6.0	5.0	6.0		6.0				
Max Green Setting (Gmax), s	7.0	62.0		34.0	40.0	29.0		34.0				
Max Q Clear Time (g_c+I1), s	5.1	23.5		18.0	19.0	48.6		36.0				
Green Ext Time (p_c), s	0.0	12.9		1.1	0.3	0.0		0.0				

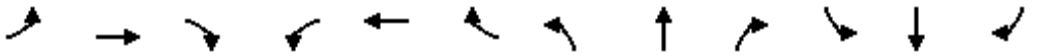
Intersection Summary			
HCM 6th Ctrl Delay		43.1	
HCM 6th LOS		D	

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	62	74	129	89	272	13	1397	83	278	1894	237
Future Volume (vph)	62	74	129	89	272	13	1397	83	278	1894	237
Turn Type	Perm	NA	Perm	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		4		8		5	2		1	6	
Permitted Phases	4		8		8			2			6
Detector Phase	4	4	8	8	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	15.0	15.0	46.0	46.0	46.0	9.0	34.0	34.0	9.0	34.0	34.0
Total Split (s)	46.0	46.0	46.0	46.0	46.0	18.0	34.0	34.0	40.0	56.0	56.0
Total Split (%)	38.3%	38.3%	38.3%	38.3%	38.3%	15.0%	28.3%	28.3%	33.3%	46.7%	46.7%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	3.0	5.0	5.0	3.0	5.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	0.0	-2.0	-2.0	0.0	-2.0	-2.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag						Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?						Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Max	Max	None	Max	Max
Act Effct Green (s)	17.7	17.7	17.7	17.7	17.7	5.9	33.9	33.9	17.8	54.2	54.2
Actuated g/C Ratio	0.22	0.22	0.22	0.22	0.22	0.07	0.41	0.41	0.22	0.66	0.66
v/c Ratio	0.24	0.21	0.49	0.24	0.51	0.11	0.71	0.12	0.73	0.60	0.23
Control Delay	27.6	26.0	33.2	26.9	6.5	43.9	25.4	6.6	41.6	11.9	4.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	27.6	26.0	33.2	26.9	6.5	43.9	25.4	6.6	41.6	11.9	4.0
LOS	C	C	C	C	A	D	C	A	D	B	A
Approach Delay		26.7		17.2			24.5			14.5	
Approach LOS		C		B			C			B	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 81.8	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.73	
Intersection Signal Delay: 18.5	Intersection LOS: B
Intersection Capacity Utilization 66.9%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 16: US-395 & Joshua St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	62	74	4	129	89	272	13	1397	83	278	1894	237
Future Volume (veh/h)	62	74	4	129	89	272	13	1397	83	278	1894	237
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	67	80	1	140	97	242	14	1518	76	302	2059	253
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	258	365	5	313	370	313	30	2408	748	349	3322	1031
Arrive On Green	0.19	0.19	0.18	0.19	0.19	0.19	0.02	0.46	0.46	0.19	0.64	0.64
Sat Flow, veh/h	1116	1872	23	1413	1900	1608	1810	5187	1610	1810	5187	1610
Grp Volume(v), veh/h	67	0	81	140	97	242	14	1518	76	302	2059	253
Grp Sat Flow(s),veh/h/ln	1116	0	1896	1413	1900	1608	1810	1729	1610	1810	1729	1610
Q Serve(g_s), s	4.4	0.0	2.9	7.5	3.5	11.6	0.6	18.0	2.2	13.1	19.2	5.4
Cycle Q Clear(g_c), s	7.9	0.0	2.9	10.4	3.5	11.6	0.6	18.0	2.2	13.1	19.2	5.4
Prop In Lane	1.00		0.01	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	258	0	370	313	370	313	30	2408	748	349	3322	1031
V/C Ratio(X)	0.26	0.00	0.22	0.45	0.26	0.77	0.46	0.63	0.10	0.87	0.62	0.25
Avail Cap(c_a), veh/h	618	0	981	769	983	832	312	2408	748	802	3322	1031
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	31.1	0.0	27.5	31.9	27.7	31.0	39.6	16.5	12.2	31.7	8.7	6.2
Incr Delay (d2), s/veh	0.2	0.0	0.1	0.4	0.1	1.5	8.0	1.3	0.3	4.9	0.9	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	0.0	1.3	2.5	1.6	4.5	0.3	6.0	0.7	5.6	4.9	1.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	31.3	0.0	27.6	32.2	27.9	32.5	47.6	17.7	12.5	36.6	9.6	6.8
LnGrp LOS	C	A	C	C	C	C	D	B	B	D	A	A
Approach Vol, veh/h		148			479			1608			2614	
Approach Delay, s/veh		29.3			31.5			17.7			12.4	
Approach LOS		C			C			B			B	

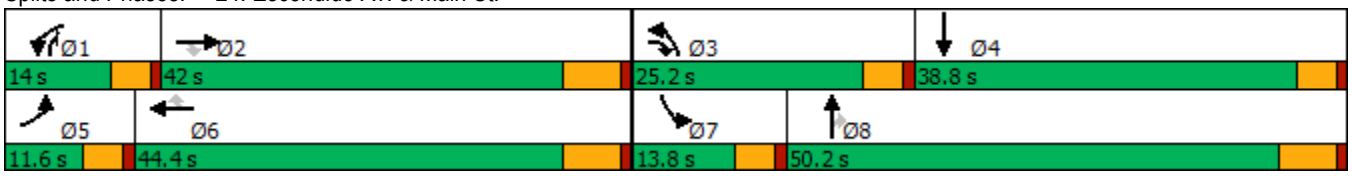
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	19.7	41.7		19.8	5.4	56.0		19.8				
Change Period (Y+Rc), s	4.0	6.0		5.0	4.0	6.0		5.0				
Max Green Setting (Gmax), s	36.0	28.0		41.0	14.0	50.0		41.0				
Max Q Clear Time (g_c+I1), s	15.1	20.0		9.9	2.6	21.2		13.6				
Green Ext Time (p_c), s	0.6	6.9		0.4	0.0	25.8		0.9				

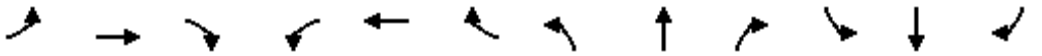
Intersection Summary			
HCM 6th Ctrl Delay		16.6	
HCM 6th LOS		B	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations											
Traffic Volume (vph)	6	1112	511	359	1420	4	848	30	379	1	4
Future Volume (vph)	6	1112	511	359	1420	4	848	30	379	1	4
Turn Type	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA
Protected Phases	5	2	3	1	6		3	8	1	7	4
Permitted Phases			2			6			8		
Detector Phase	5	2	3	1	6	6	3	8	1	7	4
Switch Phase											
Minimum Initial (s)	5.0	10.0	5.0	5.0	10.0	10.0	5.0	10.0	5.0	5.0	10.0
Minimum Split (s)	9.6	41.2	9.6	9.6	31.2	31.2	9.6	49.2	9.6	9.6	37.6
Total Split (s)	11.6	42.0	25.2	14.0	44.4	44.4	25.2	50.2	14.0	13.8	38.8
Total Split (%)	9.7%	35.0%	21.0%	11.7%	37.0%	37.0%	21.0%	41.8%	11.7%	11.5%	32.3%
Yellow Time (s)	3.6	5.2	3.6	3.6	5.2	5.2	3.6	5.2	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	4.6	4.6	6.2	6.2	4.6	6.2	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	None	None	Min	Min	None	None	None	None	None
Act Effct Green (s)	5.5	25.4	53.8	10.0	38.8	38.8	21.8	26.6	43.1	5.3	13.7
Actuated g/C Ratio	0.07	0.31	0.66	0.12	0.48	0.48	0.27	0.33	0.53	0.07	0.17
v/c Ratio	0.05	0.71	0.42	0.97	0.59	0.00	1.04	0.05	0.41	0.01	0.07
Control Delay	47.2	28.5	2.2	78.2	19.8	0.0	74.5	20.1	6.6	48.0	17.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	47.2	28.5	2.2	78.2	19.8	0.0	74.5	20.1	6.6	48.0	17.2
LOS	D	C	A	E	B	A	E	C	A	D	B
Approach Delay		20.3			31.5			52.8			18.6
Approach LOS		C			C			D			B

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 81.3	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.04	
Intersection Signal Delay: 33.3	Intersection LOS: C
Intersection Capacity Utilization 80.8%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 24: Escondido Av. & Main St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	6	1112	511	359	1420	4	848	30	379	1	4	17
Future Volume (veh/h)	6	1112	511	359	1420	4	848	30	379	1	4	17
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1800	1900	1900	1700	1900	1900	1700	1900	1900	1800	1900	1900
Adj Flow Rate, veh/h	6	1146	413	370	1464	4	874	31	229	1	4	17
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	13	1601	869	331	2108	654	726	650	721	2	35	151
Arrive On Green	0.01	0.31	0.31	0.11	0.41	0.41	0.23	0.34	0.34	0.00	0.11	0.11
Sat Flow, veh/h	1714	5187	1610	3141	5187	1610	3141	1900	1610	1714	316	1342
Grp Volume(v), veh/h	6	1146	413	370	1464	4	874	31	229	1	0	21
Grp Sat Flow(s),veh/h/ln	1714	1729	1610	1570	1729	1610	1570	1900	1610	1714	0	1658
Q Serve(g_s), s	0.3	17.5	14.1	9.4	20.8	0.1	20.6	1.0	8.2	0.1	0.0	1.0
Cycle Q Clear(g_c), s	0.3	17.5	14.1	9.4	20.8	0.1	20.6	1.0	8.2	0.1	0.0	1.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.81
Lane Grp Cap(c), veh/h	13	1601	869	331	2108	654	726	650	721	2	0	186
V/C Ratio(X)	0.45	0.72	0.48	1.12	0.69	0.01	1.20	0.05	0.32	0.43	0.00	0.11
Avail Cap(c_a), veh/h	135	2085	1019	331	2224	691	726	939	965	177	0	637
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	44.0	27.3	12.7	39.8	21.9	15.7	34.2	19.6	15.8	44.4	0.0	35.6
Incr Delay (d2), s/veh	8.7	0.8	0.4	84.6	0.9	0.0	104.3	0.0	0.3	39.4	0.0	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	0.2	6.7	4.9	7.3	7.6	0.0	18.3	0.4	3.0	0.0	0.0	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	52.7	28.2	13.1	124.4	22.8	15.7	138.6	19.6	16.1	83.9	0.0	35.8
LnGrp LOS	D	C	B	F	C	B	F	B	B	F	A	D
Approach Vol, veh/h		1565			1838			1134			22	
Approach Delay, s/veh		24.3			43.2			110.6			38.0	
Approach LOS		C			D			F			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.0	33.7	25.2	16.2	5.3	42.4	4.7	36.7
Change Period (Y+Rc), s	4.6	6.2	4.6	* 6.2	4.6	6.2	4.6	6.2
Max Green Setting (Gmax), s	9.4	35.8	20.6	* 34	7.0	38.2	9.2	44.0
Max Q Clear Time (g_c+I1), s	11.4	19.5	22.6	3.0	2.3	22.8	2.1	10.2
Green Ext Time (p_c), s	0.0	8.0	0.0	0.1	0.0	8.3	0.0	1.0

Intersection Summary	
HCM 6th Ctrl Delay	53.4
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	WBL	WBR	NBT	SBL	SBT
Lane Configurations					
Traffic Volume (vph)	33	310	1138	125	696
Future Volume (vph)	33	310	1138	125	696
Turn Type	Prot	Perm	NA	Prot	NA
Protected Phases	8		2	1	6
Permitted Phases		8			
Detector Phase	8	8	2	1	6
Switch Phase					
Minimum Initial (s)	10.0	10.0	10.0	5.0	10.0
Minimum Split (s)	26.6	26.6	23.2	9.6	16.2
Total Split (s)	31.0	31.0	65.7	23.3	89.0
Total Split (%)	25.8%	25.8%	54.8%	19.4%	74.2%
Yellow Time (s)	3.6	3.6	5.2	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	6.2	4.6	6.2
Lead/Lag			Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	
Recall Mode	None	None	Max	None	Max
Act Effct Green (s)	12.9	12.9	65.6	12.7	83.0
Actuated g/C Ratio	0.12	0.12	0.61	0.12	0.78
v/c Ratio	0.17	0.75	0.58	0.67	0.27
Control Delay	43.2	19.5	15.0	61.0	4.0
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	43.2	19.5	15.0	61.0	4.0
LOS	D	B	B	E	A
Approach Delay	21.8		15.0		12.6
Approach LOS	C		B		B

Intersection Summary		
Cycle Length: 120		
Actuated Cycle Length: 106.7		
Natural Cycle: 75		
Control Type: Actuated-Uncoordinated		
Maximum v/c Ratio: 0.75		
Intersection Signal Delay: 15.2	Intersection LOS: B	
Intersection Capacity Utilization 61.4%	ICU Level of Service B	
Analysis Period (min) 15		

Splits and Phases: 25: Escondido Av. & Sultana St.





Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	33	310	1138	45	125	696
Future Volume (veh/h)	33	310	1138	45	125	696
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		0.98	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	1800	1900	1900	1900	1800	1900
Adj Flow Rate, veh/h	36	337	1237	49	136	757
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	377	354	1970	78	162	2491
Arrive On Green	0.22	0.22	0.56	0.56	0.09	0.69
Sat Flow, veh/h	1714	1610	3631	140	1714	3705
Grp Volume(v), veh/h	36	337	631	655	136	757
Grp Sat Flow(s),veh/h/ln	1714	1610	1805	1871	1714	1805
Q Serve(g_s), s	2.0	24.8	28.6	28.6	9.4	9.9
Cycle Q Clear(g_c), s	2.0	24.8	28.6	28.6	9.4	9.9
Prop In Lane	1.00	1.00		0.07	1.00	
Lane Grp Cap(c), veh/h	377	354	1006	1043	162	2491
V/C Ratio(X)	0.10	0.95	0.63	0.63	0.84	0.30
Avail Cap(c_a), veh/h	377	354	1006	1043	267	2491
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	37.3	46.2	18.1	18.1	53.4	7.3
Incr Delay (d2), s/veh	0.1	35.2	3.0	2.9	5.3	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	13.4	12.6	13.0	4.3	3.8
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	37.4	81.4	21.0	21.0	58.7	7.6
LnGrp LOS	D	F	C	C	E	A
Approach Vol, veh/h	373		1286			893
Approach Delay, s/veh	77.1		21.0			15.4
Approach LOS	E		C			B

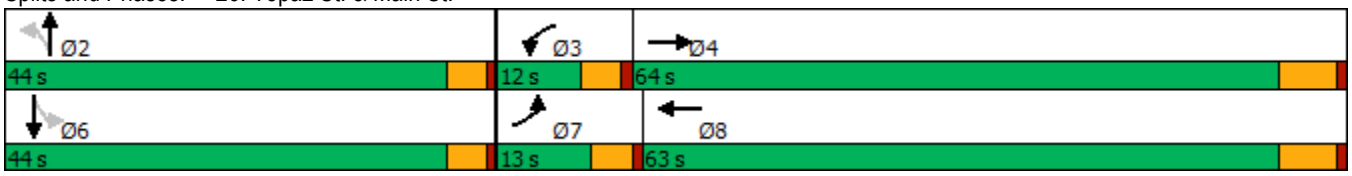
Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	15.9	73.1				89.0	31.0
Change Period (Y+Rc), s	4.6	6.2				6.2	4.6
Max Green Setting (Gmax), s	18.7	59.5				82.8	26.4
Max Q Clear Time (g_c+I1), s	11.4	30.6				11.9	26.8
Green Ext Time (p_c), s	0.1	11.4				6.8	0.0

Intersection Summary	
HCM 6th Ctrl Delay	27.2
HCM 6th LOS	C

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	61	1361	45	1388	250	113	134	87
Future Volume (vph)	61	1361	45	1388	250	113	134	87
Turn Type	Prot	NA	Prot	NA	Perm	NA	Perm	NA
Protected Phases	7	4	3	8		2		6
Permitted Phases					2		6	
Detector Phase	7	4	3	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	25.2	9.6	23.2	32.6	32.6	38.6	38.6
Total Split (s)	13.0	64.0	12.0	63.0	44.0	44.0	44.0	44.0
Total Split (%)	10.8%	53.3%	10.0%	52.5%	36.7%	36.7%	36.7%	36.7%
Yellow Time (s)	3.6	5.2	3.6	5.2	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	4.6	6.2	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes				
Recall Mode	None	None	Max	None	None	None	None	None
Act Effct Green (s)	7.4	44.4	7.6	47.3	34.2	34.2	34.2	34.2
Actuated g/C Ratio	0.07	0.43	0.07	0.46	0.33	0.33	0.33	0.33
v/c Ratio	0.53	0.72	0.39	0.70	0.85	0.34	0.45	0.35
Control Delay	66.8	25.6	60.3	24.7	57.8	24.6	33.7	21.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	66.8	25.6	60.3	24.7	57.8	24.6	33.7	21.4
LOS	E	C	E	C	E	C	C	C
Approach Delay		27.2		25.8		43.3		26.4
Approach LOS		C		C		D		C

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 102.1	
Natural Cycle: 80	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.85	
Intersection Signal Delay: 28.4	Intersection LOS: C
Intersection Capacity Utilization 76.7%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 26: Topaz St. & Main St.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	61	1361	117	45	1388	131	250	113	81	134	87	113
Future Volume (veh/h)	61	1361	117	45	1388	131	250	113	81	134	87	113
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	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	1800	1900	1900	1800	1900	1900	1800	1900	1900	1800	1900	1900
Adj Flow Rate, veh/h	66	1479	114	49	1509	139	272	123	70	146	95	76
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	84	2047	158	143	2183	201	394	370	211	376	319	255
Arrive On Green	0.05	0.42	0.42	0.08	0.45	0.45	0.33	0.33	0.33	0.33	0.33	0.33
Sat Flow, veh/h	1714	4903	378	1714	4832	445	1233	1135	646	1207	977	782
Grp Volume(v), veh/h	66	1043	550	49	1080	568	272	0	193	146	0	171
Grp Sat Flow(s),veh/h/ln	1714	1729	1822	1714	1729	1819	1233	0	1782	1207	0	1759
Q Serve(g_s), s	3.4	22.4	22.4	2.4	22.1	22.2	18.8	0.0	7.3	9.3	0.0	6.5
Cycle Q Clear(g_c), s	3.4	22.4	22.4	2.4	22.1	22.2	25.2	0.0	7.3	16.5	0.0	6.5
Prop In Lane	1.00		0.21	1.00		0.24	1.00		0.36	1.00		0.44
Lane Grp Cap(c), veh/h	84	1444	761	143	1562	822	394	0	581	376	0	574
V/C Ratio(X)	0.79	0.72	0.72	0.34	0.69	0.69	0.69	0.00	0.33	0.39	0.00	0.30
Avail Cap(c_a), veh/h	162	2247	1184	143	2208	1162	538	0	789	517	0	779
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	41.9	21.6	21.6	38.5	19.4	19.4	31.8	0.0	22.6	28.9	0.0	22.4
Incr Delay (d2), s/veh	6.0	0.7	1.3	6.5	0.6	1.1	2.3	0.0	0.3	0.7	0.0	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	1.5	8.1	8.6	1.2	7.8	8.3	5.7	0.0	3.1	2.7	0.0	2.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	47.9	22.3	22.9	45.0	20.0	20.5	34.0	0.0	23.0	29.5	0.0	22.7
LnGrp LOS	D	C	C	D	B	C	C	A	C	C	A	C
Approach Vol, veh/h		1659			1697			465			317	
Approach Delay, s/veh		23.5			20.9			29.5			25.8	
Approach LOS		C			C			C			C	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		33.6	12.0	43.3		33.6	8.9	46.4				
Change Period (Y+Rc), s		4.6	4.6	6.2		4.6	4.6	6.2				
Max Green Setting (Gmax), s		39.4	7.4	57.8		39.4	8.4	56.8				
Max Q Clear Time (g_c+I1), s		27.2	4.4	24.4		18.5	5.4	24.2				
Green Ext Time (p_c), s		1.8	0.0	12.7		1.5	0.0	13.3				

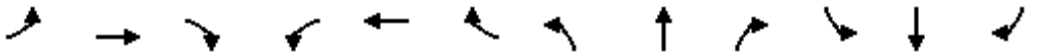
Intersection Summary	
HCM 6th Ctrl Delay	23.3
HCM 6th LOS	C

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	102	98	82	71	148	119	1907	131	302	1447
Future Volume (vph)	102	98	82	71	148	119	1907	131	302	1447
Turn Type	Perm	NA	Perm	Perm	NA	Prot	NA	Perm	Prot	NA
Protected Phases		4			8	5	2		1	6
Permitted Phases	4		4	8				2		
Detector Phase	4	4	4	8	8	5	2	2	1	6
Switch Phase										
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	15.0	15.0	15.0	42.0	42.0	9.0	28.0	28.0	9.0	37.0
Total Split (s)	42.0	42.0	42.0	42.0	42.0	14.0	49.0	49.0	29.0	64.0
Total Split (%)	35.0%	35.0%	35.0%	35.0%	35.0%	11.7%	40.8%	40.8%	24.2%	53.3%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	3.0	5.0	5.0	3.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	4.0	6.0	6.0	4.0	6.0
Lead/Lag						Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?						Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Max	Max	None	Max
Act Effct Green (s)	37.0	37.0	37.0	37.0	37.0	9.8	44.5	44.5	23.4	58.0
Actuated g/C Ratio	0.31	0.31	0.31	0.31	0.31	0.08	0.37	0.37	0.20	0.48
v/c Ratio	1.14	0.17	0.15	0.18	0.82	0.84	1.03	0.20	0.89	0.66
Control Delay	175.7	31.4	4.9	32.0	43.5	95.4	66.8	5.1	74.8	24.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	175.7	31.4	4.9	32.0	43.5	95.4	66.8	5.1	74.8	24.7
LOS	F	C	A	C	D	F	E	A	E	C
Approach Delay		75.9			42.0		64.6			32.8
Approach LOS		E			D		E			C

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 119.8	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.14	
Intersection Signal Delay: 50.5	Intersection LOS: D
Intersection Capacity Utilization 105.7%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 8: US-395 & Luna Rd.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	102	98	82	71	148	311	119	1907	131	302	1447	122
Future Volume (veh/h)	102	98	82	71	148	311	119	1907	131	302	1447	122
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	106	102	66	74	154	262	124	1986	111	315	1507	108
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	149	586	497	412	195	331	150	1957	607	342	2389	171
Arrive On Green	0.31	0.31	0.31	0.31	0.31	0.31	0.08	0.38	0.38	0.19	0.48	0.48
Sat Flow, veh/h	1040	1900	1610	1305	631	1074	1810	5187	1610	1810	4940	354
Grp Volume(v), veh/h	106	102	66	74	0	416	124	1986	111	315	1055	560
Grp Sat Flow(s),veh/h/ln	1040	1900	1610	1305	0	1705	1810	1729	1610	1810	1729	1836
Q Serve(g_s), s	10.2	4.7	3.5	5.3	0.0	26.8	8.1	45.2	5.5	20.5	27.2	27.2
Cycle Q Clear(g_c), s	37.0	4.7	3.5	10.0	0.0	26.8	8.1	45.2	5.5	20.5	27.2	27.2
Prop In Lane	1.00		1.00	1.00		0.63	1.00		1.00	1.00		0.19
Lane Grp Cap(c), veh/h	149	586	497	412	0	526	150	1957	607	342	1672	888
V/C Ratio(X)	0.71	0.17	0.13	0.18	0.00	0.79	0.83	1.01	0.18	0.92	0.63	0.63
Avail Cap(c_a), veh/h	149	586	497	412	0	526	151	1957	607	377	1672	888
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	55.7	30.3	29.9	33.9	0.0	37.9	54.2	37.3	25.0	47.7	23.0	23.0
Incr Delay (d2), s/veh	12.8	0.1	0.0	0.1	0.0	7.4	29.3	24.1	0.7	25.6	1.8	3.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.7	2.1	1.4	1.7	0.0	11.9	4.8	21.9	2.1	11.2	10.4	11.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	68.5	30.4	29.9	34.0	0.0	45.3	83.5	61.5	25.6	73.3	24.8	26.4
LnGrp LOS	E	C	C	C	A	D	F	F	C	E	C	C
Approach Vol, veh/h		274			490			2221			1930	
Approach Delay, s/veh		45.0			43.6			60.9			33.2	
Approach LOS		D			D			E			C	

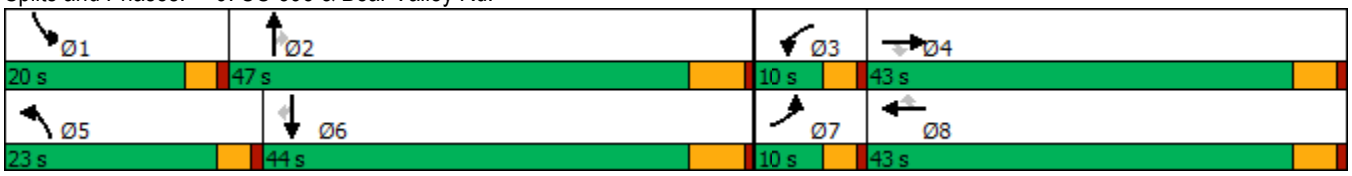
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	26.7	51.2		42.0	13.9	64.0		42.0				
Change Period (Y+Rc), s	4.0	6.0		5.0	4.0	6.0		5.0				
Max Green Setting (Gmax), s	25.0	43.0		37.0	10.0	58.0		37.0				
Max Q Clear Time (g_c+I1), s	22.5	47.2		39.0	10.1	29.2		28.8				
Green Ext Time (p_c), s	0.2	0.0		0.0	0.0	10.0		1.3				

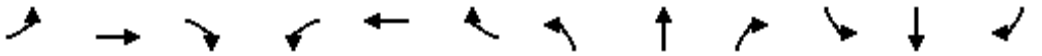
Intersection Summary			
HCM 6th Ctrl Delay		47.4	
HCM 6th LOS		D	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	111	440	188	156	510	209	406	1799	319	229	1337	95
Future Volume (vph)	111	440	188	156	510	209	406	1799	319	229	1337	95
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.0	43.0	43.0	9.0	43.0	43.0	9.0	44.0	44.0	9.0	44.0	44.0
Total Split (s)	10.0	43.0	43.0	10.0	43.0	43.0	23.0	47.0	47.0	20.0	44.0	44.0
Total Split (%)	8.3%	35.8%	35.8%	8.3%	35.8%	35.8%	19.2%	39.2%	39.2%	16.7%	36.7%	36.7%
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0	4.0	3.0	5.0	5.0	3.0	5.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	5.0	5.0	4.0	5.0	5.0	4.0	6.0	6.0	4.0	6.0	6.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Max	Max	None	Max	Max
Act Effct Green (s)	6.1	21.4	21.4	6.1	21.4	21.4	16.3	43.0	43.0	11.7	38.4	38.4
Actuated g/C Ratio	0.06	0.21	0.21	0.06	0.21	0.21	0.16	0.42	0.42	0.12	0.38	0.38
v/c Ratio	1.09	0.61	0.40	1.53	0.70	0.43	0.76	0.86	0.41	0.60	0.72	0.15
Control Delay	160.3	39.3	6.9	313.0	42.1	7.0	51.2	33.0	9.0	50.1	30.9	7.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	160.3	39.3	6.9	313.0	42.1	7.0	51.2	33.0	9.0	50.1	30.9	7.4
LOS	F	D	A	F	D	A	D	C	A	D	C	A
Approach Delay		49.3			81.9			32.9			32.2	
Approach LOS		D			F			C			C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 101.4	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.53	
Intersection Signal Delay: 42.2	Intersection LOS: D
Intersection Capacity Utilization 80.5%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 9: US-395 & Bear Valley Rd.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	111	440	188	156	510	209	406	1799	319	229	1337	95
Future Volume (veh/h)	111	440	188	156	510	209	406	1799	319	229	1337	95
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	117	463	116	164	537	151	427	1894	275	241	1407	87
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	114	692	309	114	692	308	512	2354	731	322	2072	643
Arrive On Green	0.06	0.19	0.19	0.06	0.19	0.19	0.15	0.45	0.45	0.09	0.40	0.40
Sat Flow, veh/h	1810	3610	1610	1810	3610	1605	3510	5187	1610	3510	5187	1609
Grp Volume(v), veh/h	117	463	116	164	537	151	427	1894	275	241	1407	87
Grp Sat Flow(s),veh/h/ln	1810	1805	1610	1810	1805	1605	1755	1729	1610	1755	1729	1609
Q Serve(g_s), s	6.0	11.3	6.0	6.0	13.4	8.0	11.2	29.9	10.7	6.4	21.3	3.3
Cycle Q Clear(g_c), s	6.0	11.3	6.0	6.0	13.4	8.0	11.2	29.9	10.7	6.4	21.3	3.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	114	692	309	114	692	308	512	2354	731	322	2072	643
V/C Ratio(X)	1.03	0.67	0.38	1.44	0.78	0.49	0.83	0.80	0.38	0.75	0.68	0.14
Avail Cap(c_a), veh/h	114	1442	643	114	1442	641	701	2354	731	590	2072	643
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.6	35.6	33.5	44.6	36.5	34.3	39.5	22.3	17.1	42.1	23.5	18.1
Incr Delay (d2), s/veh	91.1	0.4	0.3	239.2	0.7	0.5	5.6	3.0	1.5	2.6	1.8	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.4	4.6	2.2	10.1	5.5	2.9	4.9	11.0	3.8	2.7	8.0	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	135.7	36.1	33.8	283.8	37.2	34.8	45.1	25.4	18.6	44.8	25.3	18.6
LnGrp LOS	F	D	C	F	D	C	D	C	B	D	C	B
Approach Vol, veh/h		696			852			2596			1735	
Approach Delay, s/veh		52.4			84.2			27.9			27.7	
Approach LOS		D			F			C			C	

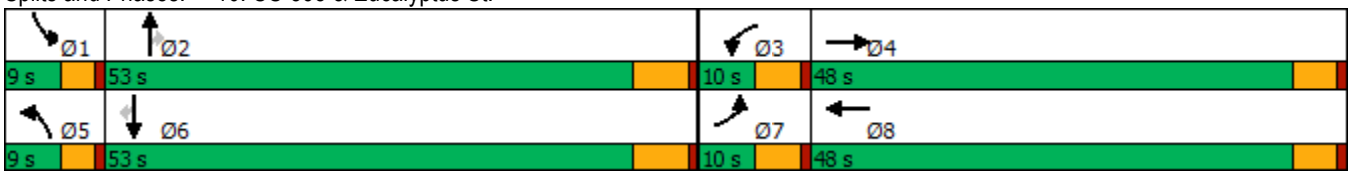
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.7	49.2	10.0	23.2	17.9	44.0	10.0	23.2
Change Period (Y+Rc), s	4.0	6.0	4.0	5.0	4.0	6.0	4.0	5.0
Max Green Setting (Gmax), s	16.0	41.0	6.0	38.0	19.0	38.0	6.0	38.0
Max Q Clear Time (g_c+I1), s	8.4	31.9	8.0	13.3	13.2	23.3	8.0	15.4
Green Ext Time (p_c), s	0.4	6.0	0.0	1.9	0.6	5.7	0.0	2.3

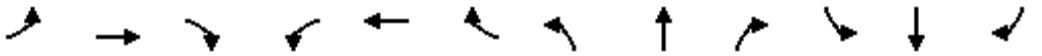
Intersection Summary	
HCM 6th Ctrl Delay	38.9
HCM 6th LOS	D

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	8	0	66	3	20	2533	137	16	1527	16
Future Volume (vph)	8	0	66	3	20	2533	137	16	1527	16
Turn Type	Prot	NA	Prot	NA	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4	3	8	5	2		1	6	
Permitted Phases							2			6
Detector Phase	7	4	3	8	5	2	2	1	6	6
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	10.0	48.0	10.0	48.0	9.0	41.0	41.0	9.0	41.0	41.0
Total Split (s)	10.0	48.0	10.0	48.0	9.0	53.0	53.0	9.0	53.0	53.0
Total Split (%)	8.3%	40.0%	8.3%	40.0%	7.5%	44.2%	44.2%	7.5%	44.2%	44.2%
Yellow Time (s)	4.0	4.0	4.0	4.0	3.0	5.0	5.0	3.0	5.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	4.0	6.0	6.0	4.0	6.0	6.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	Max	Max	None	Max	Max
Act Effct Green (s)	5.2	15.1	9.7	15.1	5.2	56.4	56.4	5.2	56.4	56.4
Actuated g/C Ratio	0.06	0.18	0.11	0.18	0.06	0.66	0.66	0.06	0.66	0.66
v/c Ratio	0.07	0.02	0.34	0.06	0.19	0.78	0.13	0.16	0.47	0.02
Control Delay	44.8	0.0	44.2	14.1	46.6	16.5	4.8	45.9	11.9	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	44.8	0.0	44.2	14.1	46.6	16.5	4.8	45.9	11.9	0.0
LOS	D	A	D	B	D	B	A	D	B	A
Approach Delay		25.6		38.2		16.1			12.1	
Approach LOS		C		D		B			B	

Intersection Summary		
Cycle Length: 120		
Actuated Cycle Length: 85.6		
Natural Cycle: 120		
Control Type: Actuated-Uncoordinated		
Maximum v/c Ratio: 0.78		
Intersection Signal Delay: 15.1	Intersection LOS: B	
Intersection Capacity Utilization 68.4%	ICU Level of Service C	
Analysis Period (min) 15		

Splits and Phases: 10: US-395 & Eucalyptus St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	8	0	6	66	3	13	20	2533	137	16	1527	16
Future Volume (veh/h)	8	0	6	66	3	13	20	2533	137	16	1527	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	8	0	3	69	3	6	21	2666	141	17	1607	16
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	18	0	107	90	60	120	42	3149	978	36	3130	972
Arrive On Green	0.01	0.00	0.07	0.05	0.11	0.11	0.02	0.61	0.61	0.02	0.60	0.60
Sat Flow, veh/h	1810	0	1610	1810	565	1131	1810	5187	1610	1810	5187	1610
Grp Volume(v), veh/h	8	0	3	69	0	9	21	2666	141	17	1607	16
Grp Sat Flow(s),veh/h/ln	1810	0	1610	1810	0	1696	1810	1729	1610	1810	1729	1610
Q Serve(g_s), s	0.3	0.0	0.1	2.9	0.0	0.4	0.9	32.4	2.9	0.7	13.9	0.3
Cycle Q Clear(g_c), s	0.3	0.0	0.1	2.9	0.0	0.4	0.9	32.4	2.9	0.7	13.9	0.3
Prop In Lane	1.00		1.00	1.00		0.67	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	18	0	107	90	0	180	42	3149	978	36	3130	972
V/C Ratio(X)	0.43	0.00	0.03	0.77	0.00	0.05	0.50	0.85	0.14	0.48	0.51	0.02
Avail Cap(c_a), veh/h	116	0	889	116	0	937	116	3149	978	116	3130	972
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.3	0.0	34.0	36.6	0.0	31.3	37.6	12.4	6.6	37.8	8.9	6.2
Incr Delay (d2), s/veh	5.8	0.0	0.1	14.6	0.0	0.1	3.3	3.0	0.3	3.6	0.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	0.1	1.6	0.0	0.2	0.4	9.1	0.9	0.4	4.8	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	44.2	0.0	34.1	51.1	0.0	31.4	40.9	15.4	6.9	41.4	9.5	6.2
LnGrp LOS	D	A	C	D	A	C	D	B	A	D	A	A
Approach Vol, veh/h		11			78			2828			1640	
Approach Delay, s/veh		41.4			48.8			15.2			9.8	
Approach LOS		D			D			B			A	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.5	53.3	8.9	10.2	5.8	53.0	5.8	13.3
Change Period (Y+Rc), s	4.0	6.0	5.0	5.0	4.0	6.0	5.0	5.0
Max Green Setting (Gmax), s	5.0	47.0	5.0	43.0	5.0	47.0	5.0	43.0
Max Q Clear Time (g_c+I1), s	2.7	34.4	4.9	2.1	2.9	15.9	2.3	2.4
Green Ext Time (p_c), s	0.0	11.5	0.0	0.0	0.0	17.1	0.0	0.0

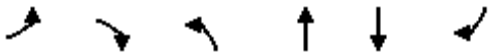
Intersection Summary	
HCM 6th Ctrl Delay	13.9
HCM 6th LOS	B

Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Configurations					
Traffic Volume (vph)	111	415	74	2789	2005
Future Volume (vph)	111	415	74	2789	2005
Turn Type	Prot	Perm	Prot	NA	NA
Protected Phases	4		5	2	6
Permitted Phases		4			
Detector Phase	4	4	5	2	6
Switch Phase					
Minimum Initial (s)	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	26.6	26.6	11.5	14.6	23.5
Total Split (s)	26.6	26.6	11.5	93.4	81.9
Total Split (%)	22.2%	22.2%	9.6%	77.8%	68.3%
Yellow Time (s)	3.6	3.6	5.5	3.6	5.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	6.5	4.6	6.5
Lead/Lag			Lead		Lag
Lead-Lag Optimize?			Yes		Yes
Recall Mode	None	None	None	Max	Max
Act Effct Green (s)	22.0	22.0	5.0	88.8	75.4
Actuated g/C Ratio	0.18	0.18	0.04	0.74	0.63
v/c Ratio	0.35	1.20	1.03	0.76	0.65
Control Delay	46.3	150.1	167.9	10.9	15.2
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	46.3	150.1	167.9	10.9	15.2
LOS	D	F	F	B	B
Approach Delay	128.1			14.9	15.2
Approach LOS	F			B	B

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Natural Cycle: 80	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.20	
Intersection Signal Delay: 26.0	Intersection LOS: C
Intersection Capacity Utilization 74.3%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 11: US-395 & Yucca Terrace Dr.





Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	111	415	74	2789	2005	29
Future Volume (veh/h)	111	415	74	2789	2005	29
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	116	432	77	2905	2089	30
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	327	291	74	3779	3341	48
Arrive On Green	0.18	0.18	0.04	0.73	0.63	0.63
Sat Flow, veh/h	1810	1610	1810	5358	5440	76
Grp Volume(v), veh/h	116	432	77	2905	1370	749
Grp Sat Flow(s),veh/h/ln	1810	1610	1810	1729	1729	1886
Q Serve(g_s), s	6.8	22.0	5.0	42.1	29.3	29.3
Cycle Q Clear(g_c), s	6.8	22.0	5.0	42.1	29.3	29.3
Prop In Lane	1.00	1.00	1.00			0.04
Lane Grp Cap(c), veh/h	327	291	74	3779	2193	1196
V/C Ratio(X)	0.36	1.49	1.04	0.77	0.62	0.63
Avail Cap(c_a), veh/h	327	291	74	3779	2193	1196
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	43.7	50.0	58.5	10.2	13.5	13.5
Incr Delay (d2), s/veh	0.7	236.5	115.2	1.6	1.4	2.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.2	37.0	4.6	12.0	9.9	11.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	44.4	286.4	173.6	11.8	14.9	16.0
LnGrp LOS	D	F	F	B	B	B
Approach Vol, veh/h	548			2982	2119	
Approach Delay, s/veh	235.2			16.0	15.3	
Approach LOS	F			B	B	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		95.3		26.6	11.5	83.8
Change Period (Y+Rc), s		* 6.5		4.6	6.5	6.5
Max Green Setting (Gmax), s		* 89		22.0	5.0	75.4
Max Q Clear Time (g_c+I1), s		44.1		24.0	7.0	31.3
Green Ext Time (p_c), s		36.7		0.0	0.0	22.3

Intersection Summary		
HCM 6th Ctrl Delay		37.0
HCM 6th LOS		D

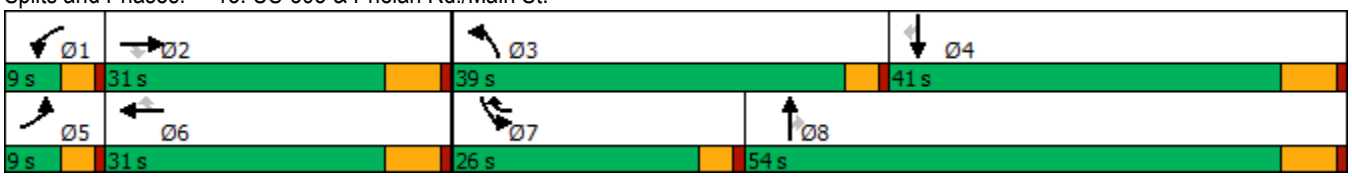
Notes

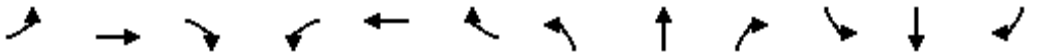
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	99	1399	210	27	1077	404	296	2387	423	707	1635	109
Future Volume (vph)	99	1399	210	27	1077	404	296	2387	423	707	1635	109
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2		1	6	7	3	8		7	4	
Permitted Phases			2			6			8			4
Detector Phase	5	2	2	1	6	7	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	5.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.0	16.0	16.0	9.0	16.0	9.0	9.0	16.0	16.0	9.0	16.0	16.0
Total Split (s)	9.0	31.0	31.0	9.0	31.0	26.0	39.0	54.0	54.0	26.0	41.0	41.0
Total Split (%)	7.5%	25.8%	25.8%	7.5%	25.8%	21.7%	32.5%	45.0%	45.0%	21.7%	34.2%	34.2%
Yellow Time (s)	3.0	5.0	5.0	3.0	5.0	3.0	3.0	5.0	5.0	3.0	5.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	-2.0	0.0	0.0	-2.0	0.0	0.0	-2.0	0.0	-0.5	-2.0	0.0
Total Lost Time (s)	4.0	4.0	6.0	4.0	4.0	4.0	4.0	4.0	6.0	3.5	4.0	6.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	5.0	30.6	28.6	5.0	27.0	53.0	15.3	50.0	48.0	22.5	56.7	54.7
Actuated g/C Ratio	0.04	0.26	0.24	0.04	0.22	0.44	0.13	0.42	0.40	0.19	0.47	0.46
v/c Ratio	1.39	1.01	0.42	0.37	0.88	0.55	0.68	1.06	0.63	1.04	0.64	0.14
Control Delay	279.2	71.7	11.5	70.2	54.4	21.6	57.5	70.6	26.0	93.3	25.7	2.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	279.2	71.7	11.5	70.2	54.4	21.6	57.5	70.6	26.0	93.3	25.7	2.7
LOS	F	E	B	E	D	C	E	E	C	F	C	A
Approach Delay		76.3			45.9			63.3			44.1	
Approach LOS		E			D			E			D	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.39	
Intersection Signal Delay: 57.5	Intersection LOS: E
Intersection Capacity Utilization 110.8%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 13: US-395 & Phelan Rd./Main St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	99	1399	210	27	1077	404	296	2387	423	707	1635	109
Future Volume (veh/h)	99	1399	210	27	1077	404	296	2387	423	707	1635	109
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	104	1473	221	28	1134	425	312	2513	392	744	1721	89
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	75	1376	357	46	1282	631	385	2375	644	679	2814	768
Arrive On Green	0.06	0.36	0.34	0.04	0.34	0.31	0.16	0.63	0.60	0.28	0.74	0.72
Sat Flow, veh/h	1810	5700	1589	1810	5700	1610	3619	5700	1610	3619	5700	1610
Grp Volume(v), veh/h	104	1473	221	28	1134	425	312	2513	392	744	1721	89
Grp Sat Flow(s),veh/h/ln	1810	1900	1589	1810	1900	1610	1810	1900	1610	1810	1900	1610
Q Serve(g_s), s	5.0	29.0	14.0	1.8	22.5	25.0	10.0	50.0	18.4	22.5	17.2	2.1
Cycle Q Clear(g_c), s	5.0	29.0	14.0	1.8	22.5	25.0	10.0	50.0	18.4	22.5	17.2	2.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	75	1376	357	46	1283	631	385	2375	644	679	2814	768
V/C Ratio(X)	1.38	1.07	0.62	0.61	0.88	0.67	0.81	1.06	0.61	1.10	0.61	0.12
Avail Cap(c_a), veh/h	75	1376	357	75	1283	631	1056	2375	644	679	2814	768
HCM Platoon Ratio	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	56.2	38.3	35.5	57.1	38.3	26.6	49.3	22.5	18.1	43.1	10.1	9.2
Incr Delay (d2), s/veh	234.0	45.6	3.2	9.4	7.6	2.8	3.1	36.1	1.8	63.9	0.4	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.0	16.8	5.0	0.9	9.6	8.7	4.3	21.7	5.3	14.5	4.6	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	290.3	83.9	38.7	66.6	45.9	29.4	52.4	58.6	19.9	107.0	10.5	9.3
LnGrp LOS	F	F	D	E	D	C	D	F	B	F	B	A
Approach Vol, veh/h		1798			1587			3217			2554	
Approach Delay, s/veh		90.2			41.9			53.3			38.6	
Approach LOS		F			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.0	33.0	16.8	63.2	9.0	31.0	26.0	54.0
Change Period (Y+Rc), s	4.0	6.0	4.0	6.0	4.0	6.0	4.0	6.0
Max Green Setting (Gmax), s	5.0	25.0	35.0	35.0	5.0	25.0	22.0	48.0
Max Q Clear Time (g_c+I1), s	3.8	31.0	12.0	19.2	7.0	27.0	24.5	52.0
Green Ext Time (p_c), s	0.0	0.0	0.8	11.3	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	54.5
HCM 6th LOS	D

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	91	762	2345	188	512	1359
Future Volume (vph)	91	762	2345	188	512	1359
Turn Type	Prot	Perm	NA	Perm	Prot	NA
Protected Phases	8		2		1	6
Permitted Phases		8		2		
Detector Phase	8	8	2	2	1	6
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0	10.0	5.0	10.0
Minimum Split (s)	26.7	26.7	23.5	23.5	9.6	16.5
Total Split (s)	41.0	41.0	58.0	58.0	21.0	79.0
Total Split (%)	34.2%	34.2%	48.3%	48.3%	17.5%	65.8%
Yellow Time (s)	3.7	3.7	5.5	5.5	3.6	5.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.7	4.7	6.5	6.5	4.6	6.5
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Recall Mode	None	None	Max	Max	None	Max
Act Effct Green (s)	36.3	36.3	51.5	51.5	16.4	72.5
Actuated g/C Ratio	0.30	0.30	0.43	0.43	0.14	0.60
v/c Ratio	0.17	1.16	1.08	0.26	1.09	0.44
Control Delay	31.9	113.1	76.4	10.9	116.6	13.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	31.9	113.1	76.4	10.9	116.6	13.4
LOS	C	F	E	B	F	B
Approach Delay	104.4		71.6			41.6
Approach LOS	F		E			D

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.16	
Intersection Signal Delay: 66.2	Intersection LOS: E
Intersection Capacity Utilization 101.8%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 14: US-395 & Poplar St.





Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	91	762	2345	188	512	1359
Future Volume (veh/h)	91	762	2345	188	512	1359
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	93	421	2393	151	522	1387
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	507	451	2298	713	495	3235
Arrive On Green	0.28	0.28	0.44	0.44	0.14	0.62
Sat Flow, veh/h	1810	1610	5358	1610	3510	5358
Grp Volume(v), veh/h	93	421	2393	151	522	1387
Grp Sat Flow(s),veh/h/ln	1810	1610	1729	1610	1755	1729
Q Serve(g_s), s	4.5	29.6	51.5	6.7	16.4	16.0
Cycle Q Clear(g_c), s	4.5	29.6	51.5	6.7	16.4	16.0
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	507	451	2298	713	495	3235
V/C Ratio(X)	0.18	0.93	1.04	0.21	1.05	0.43
Avail Cap(c_a), veh/h	565	503	2298	713	495	3235
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	31.8	40.8	32.4	19.9	49.9	11.2
Incr Delay (d2), s/veh	0.2	23.4	30.6	0.7	55.4	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	2.0	14.5	25.7	2.5	10.6	5.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	31.9	64.2	63.0	20.6	105.4	11.7
LnGrp LOS	C	E	F	C	F	B
Approach Vol, veh/h	514		2544			1909
Approach Delay, s/veh	58.4		60.5			37.3
Approach LOS	E		E			D

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	21.0	58.0			79.0	37.3
Change Period (Y+Rc), s	4.6	6.5			6.5	4.7
Max Green Setting (Gmax), s	16.4	51.5			72.5	36.3
Max Q Clear Time (g_c+I1), s	18.4	53.5			18.0	31.6
Green Ext Time (p_c), s	0.0	0.0			12.6	0.9

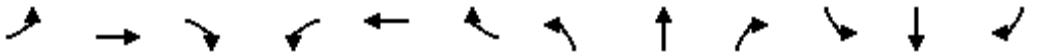
Intersection Summary			
HCM 6th Ctrl Delay		51.4	
HCM 6th LOS		D	

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	88	1	229	8	175	231	2270	208	68	1271	111
Future Volume (vph)	88	1	229	8	175	231	2270	208	68	1271	111
Turn Type	Perm	NA	Perm	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		4		8		5	2		1	6	
Permitted Phases	4		8		8			2			6
Detector Phase	4	4	8	8	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	16.0	16.0	16.0	16.0	16.0	10.0	16.0	16.0	10.0	16.0	16.0
Total Split (s)	31.0	31.0	31.0	31.0	31.0	29.0	79.0	79.0	10.0	60.0	60.0
Total Split (%)	25.8%	25.8%	25.8%	25.8%	25.8%	24.2%	65.8%	65.8%	8.3%	50.0%	50.0%
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	5.0	6.0	6.0	5.0	6.0	6.0
Lead/Lag						Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?						Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Max	Max	None	Max	Max
Act Effct Green (s)	25.0	25.0	25.0	25.0	25.0	19.4	73.0	73.0	5.0	58.6	58.6
Actuated g/C Ratio	0.21	0.21	0.21	0.21	0.21	0.16	0.61	0.61	0.04	0.49	0.49
v/c Ratio	0.30	0.51	2.02	0.02	0.42	0.81	0.73	0.20	0.92	0.51	0.13
Control Delay	43.5	8.1	513.4	38.1	18.3	69.4	18.4	1.8	141.0	22.4	3.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	43.5	8.1	513.4	38.1	18.3	69.4	18.4	1.8	141.0	22.4	3.5
LOS	D	A	F	D	B	E	B	A	F	C	A
Approach Delay		16.5		293.9			21.5			26.5	
Approach LOS		B		F			C			C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 2.02	
Intersection Signal Delay: 45.3	Intersection LOS: D
Intersection Capacity Utilization 97.5%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 15: US-395 & Three Flags Rd.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	88	1	284	229	8	175	231	2270	208	68	1271	111
Future Volume (veh/h)	88	1	284	229	8	175	231	2270	208	68	1271	111
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	90	1	198	234	8	113	236	2316	161	69	1297	77
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	339	2	334	183	396	335	265	3155	979	75	2613	811
Arrive On Green	0.21	0.21	0.21	0.21	0.21	0.21	0.15	0.61	0.61	0.04	0.50	0.50
Sat Flow, veh/h	1362	8	1603	1269	1900	1610	1810	5187	1609	1810	5187	1610
Grp Volume(v), veh/h	90	0	199	234	8	113	236	2316	161	69	1297	77
Grp Sat Flow(s),veh/h/ln	1362	0	1611	1269	1900	1610	1810	1729	1609	1810	1729	1610
Q Serve(g_s), s	6.7	0.0	13.4	11.6	0.4	7.2	15.4	37.9	5.2	4.6	19.9	3.0
Cycle Q Clear(g_c), s	7.2	0.0	13.4	25.0	0.4	7.2	15.4	37.9	5.2	4.6	19.9	3.0
Prop In Lane	1.00		0.99	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	339	0	336	183	396	335	265	3155	979	75	2613	811
V/C Ratio(X)	0.27	0.00	0.59	1.28	0.02	0.34	0.89	0.73	0.16	0.92	0.50	0.09
Avail Cap(c_a), veh/h	339	0	336	183	396	335	362	3155	979	75	2613	811
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	40.6	0.0	42.9	56.1	37.8	40.4	50.3	16.6	10.2	57.3	19.7	15.5
Incr Delay (d2), s/veh	0.2	0.0	1.9	161.1	0.0	0.2	15.4	1.6	0.4	74.0	0.7	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	2.3	0.0	5.5	13.7	0.2	2.9	7.8	13.0	1.7	3.6	7.4	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	40.8	0.0	44.8	217.2	37.8	40.7	65.7	18.2	10.6	131.3	20.4	15.7
LnGrp LOS	D	A	D	F	D	D	E	B	B	F	C	B
Approach Vol, veh/h		289			355			2713			1443	
Approach Delay, s/veh		43.6			157.0			21.9			25.4	
Approach LOS		D			F			C			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.0	79.0		31.0	22.5	66.5		31.0				
Change Period (Y+Rc), s	5.0	6.0		6.0	5.0	6.0		6.0				
Max Green Setting (Gmax), s	5.0	73.0		25.0	24.0	54.0		25.0				
Max Q Clear Time (g_c+I1), s	6.6	39.9		15.4	17.4	21.9		27.0				
Green Ext Time (p_c), s	0.0	23.5		0.7	0.2	10.6		0.0				

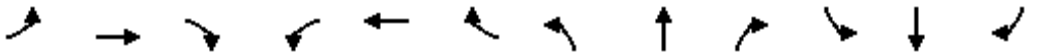
Intersection Summary			
HCM 6th Ctrl Delay		34.2	
HCM 6th LOS		C	

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	405	149	114	76	480	35	1823	122	234	1484	66
Future Volume (vph)	405	149	114	76	480	35	1823	122	234	1484	66
Turn Type	Perm	NA	Perm	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		4		8		5	2		1	6	
Permitted Phases	4		8		8			2			6
Detector Phase	4	4	8	8	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	15.0	15.0	46.0	46.0	46.0	9.0	34.0	34.0	9.0	34.0	34.0
Total Split (s)	47.0	47.0	47.0	47.0	47.0	9.0	41.0	41.0	32.0	64.0	64.0
Total Split (%)	39.2%	39.2%	39.2%	39.2%	39.2%	7.5%	34.2%	34.2%	26.7%	53.3%	53.3%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	3.0	5.0	5.0	3.0	5.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	0.0	-2.0	-2.0	0.0	-2.0	-2.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag						Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?						Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Max	Max	None	Max	Max
Act Effct Green (s)	37.8	37.8	37.8	37.8	37.8	5.0	41.8	41.8	19.7	60.6	60.6
Actuated g/C Ratio	0.34	0.34	0.34	0.34	0.34	0.04	0.37	0.37	0.18	0.54	0.54
v/c Ratio	0.92	0.27	0.32	0.12	0.59	0.44	0.97	0.19	0.76	0.54	0.07
Control Delay	62.7	27.2	30.3	26.2	7.5	72.5	49.6	10.7	59.4	18.8	4.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	62.7	27.2	30.3	26.2	7.5	72.5	49.6	10.7	59.4	18.8	4.0
LOS	E	C	C	C	A	E	D	B	E	B	A
Approach Delay		52.3		13.5			47.6			23.6	
Approach LOS		D		B			D			C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 111.5	
Natural Cycle: 100	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.97	
Intersection Signal Delay: 35.0	Intersection LOS: D
Intersection Capacity Utilization 97.6%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 16: US-395 & Joshua St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	405	149	18	114	76	480	35	1823	122	234	1484	66
Future Volume (veh/h)	405	149	18	114	76	480	35	1823	122	234	1484	66
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	418	154	16	118	78	437	36	1879	114	241	1530	61
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	379	614	64	451	690	584	53	1999	620	272	2627	815
Arrive On Green	0.36	0.36	0.35	0.36	0.36	0.36	0.03	0.39	0.39	0.15	0.51	0.51
Sat Flow, veh/h	949	1693	176	1303	1900	1609	1810	5187	1610	1810	5187	1610
Grp Volume(v), veh/h	418	0	170	118	78	437	36	1879	114	241	1530	61
Grp Sat Flow(s),veh/h/ln	949	0	1868	1303	1900	1609	1810	1729	1610	1810	1729	1610
Q Serve(g_s), s	39.8	0.0	7.6	8.3	3.2	28.1	2.3	41.4	5.5	15.5	24.5	2.3
Cycle Q Clear(g_c), s	43.0	0.0	7.6	15.8	3.2	28.1	2.3	41.4	5.5	15.5	24.5	2.3
Prop In Lane	1.00		0.09	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	379	0	678	451	690	584	53	1999	620	272	2627	815
V/C Ratio(X)	1.10	0.00	0.25	0.26	0.11	0.75	0.68	0.94	0.18	0.89	0.58	0.07
Avail Cap(c_a), veh/h	379	0	678	451	690	584	76	1999	620	428	2627	815
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	42.5	0.0	26.5	32.0	25.1	33.0	56.9	35.1	24.1	49.3	20.5	15.0
Incr Delay (d2), s/veh	76.4	0.0	0.1	0.1	0.0	4.7	10.7	10.2	0.7	11.2	1.0	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	19.4	0.0	3.4	2.6	1.5	11.6	1.2	17.8	2.1	7.5	9.1	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	119.0	0.0	26.6	32.1	25.1	37.7	67.7	45.3	24.7	60.5	21.4	15.2
LnGrp LOS	F	A	C	C	C	D	E	D	C	E	C	B
Approach Vol, veh/h		588			633			2029			1832	
Approach Delay, s/veh		92.3			35.1			44.6			26.4	
Approach LOS		F			D			D			C	

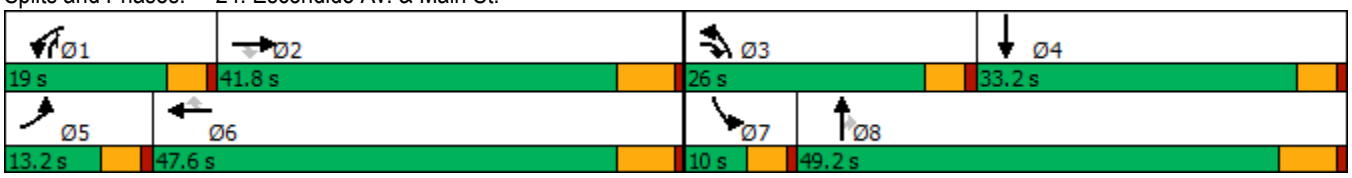
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	21.8	49.7		47.0	7.5	64.0		47.0				
Change Period (Y+Rc), s	4.0	6.0		5.0	4.0	6.0		5.0				
Max Green Setting (Gmax), s	28.0	35.0		42.0	5.0	58.0		42.0				
Max Q Clear Time (g_c+I1), s	17.5	43.4		45.0	4.3	26.5		30.1				
Green Ext Time (p_c), s	0.4	0.0		0.0	0.0	22.1		1.3				

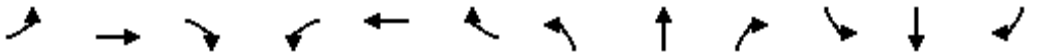
Intersection Summary			
HCM 6th Ctrl Delay		42.3	
HCM 6th LOS		D	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations											
Traffic Volume (vph)	74	1762	830	504	1329	14	791	71	276	77	52
Future Volume (vph)	74	1762	830	504	1329	14	791	71	276	77	52
Turn Type	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA
Protected Phases	5	2	3	1	6		3	8	1	7	4
Permitted Phases			2			6			8		
Detector Phase	5	2	3	1	6	6	3	8	1	7	4
Switch Phase											
Minimum Initial (s)	5.0	10.0	5.0	5.0	10.0	10.0	5.0	10.0	5.0	5.0	10.0
Minimum Split (s)	9.6	41.2	9.6	9.6	31.2	31.2	9.6	49.2	9.6	9.6	29.6
Total Split (s)	13.2	41.8	26.0	19.0	47.6	47.6	26.0	49.2	19.0	10.0	33.2
Total Split (%)	11.0%	34.8%	21.7%	15.8%	39.7%	39.7%	21.7%	41.0%	15.8%	8.3%	27.7%
Yellow Time (s)	3.6	5.2	3.6	3.6	5.2	5.2	3.6	5.2	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	4.6	4.6	6.2	6.2	4.6	6.2	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	None	None	Min	Min	None	None	None	None	None
Act Effct Green (s)	7.8	35.8	58.9	14.5	44.5	44.5	21.5	25.2	42.5	11.8	13.7
Actuated g/C Ratio	0.07	0.34	0.56	0.14	0.42	0.42	0.20	0.24	0.40	0.11	0.13
v/c Ratio	0.61	0.95	0.75	1.19	0.58	0.02	1.25	0.16	0.42	0.42	0.48
Control Delay	69.0	46.4	9.4	145.4	26.0	0.1	162.5	29.9	16.5	58.2	30.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	69.0	46.4	9.4	145.4	26.0	0.1	162.5	29.9	16.5	58.2	30.2
LOS	E	D	A	F	C	A	F	C	B	E	C
Approach Delay		35.5			58.4			118.8			40.8
Approach LOS		D			E			F			D

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 105.5	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.25	
Intersection Signal Delay: 59.1	Intersection LOS: E
Intersection Capacity Utilization 100.3%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 24: Escondido Av. & Main St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	74	1762	830	504	1329	14	791	71	276	77	52	73
Future Volume (veh/h)	74	1762	830	504	1329	14	791	71	276	77	52	73
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	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	1800	1900	1900	1700	1900	1900	1700	1900	1900	1800	1900	1900
Adj Flow Rate, veh/h	77	1835	641	525	1384	13	824	74	207	80	54	55
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	97	1970	892	456	2449	678	677	474	629	90	81	82
Arrive On Green	0.08	0.52	0.35	0.21	0.64	0.43	0.21	0.25	0.25	0.05	0.09	0.09
Sat Flow, veh/h	1714	5700	1607	3238	5700	1577	3238	1900	1610	1714	863	879
Grp Volume(v), veh/h	77	1835	641	525	1384	13	824	74	207	80	0	109
Grp Sat Flow(s),veh/h/ln	1714	1900	1607	1619	1900	1577	1619	1900	1610	1714	0	1742
Q Serve(g_s), s	4.5	30.7	30.2	14.4	13.9	0.5	21.4	3.1	9.2	4.7	0.0	6.2
Cycle Q Clear(g_c), s	4.5	30.7	30.2	14.4	13.9	0.5	21.4	3.1	9.2	4.7	0.0	6.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.50
Lane Grp Cap(c), veh/h	97	1970	892	456	2449	678	677	474	629	90	0	163
V/C Ratio(X)	0.79	0.93	0.72	1.15	0.57	0.02	1.22	0.16	0.33	0.88	0.00	0.67
Avail Cap(c_a), veh/h	144	1984	896	456	2449	678	677	799	903	90	0	487
HCM Platoon Ratio	1.50	1.50	1.00	1.50	1.50	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	46.2	23.5	16.9	40.4	12.8	16.8	40.5	30.0	21.8	48.1	0.0	44.9
Incr Delay (d2), s/veh	9.3	8.6	2.8	90.9	0.3	0.0	110.6	0.2	0.3	57.0	0.0	4.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	11.0	11.3	10.7	4.3	0.2	18.9	1.5	3.5	3.5	0.0	2.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	55.5	32.1	19.7	131.2	13.1	16.8	151.0	30.1	22.1	105.2	0.0	49.6
LnGrp LOS	E	C	B	F	B	B	F	C	C	F	A	D
Approach Vol, veh/h		2553			1922			1105			189	
Approach Delay, s/veh		29.7			45.4			118.8			73.1	
Approach LOS		C			D			F			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	19.0	41.6	26.0	15.7	10.4	50.2	10.0	31.7
Change Period (Y+Rc), s	4.6	6.2	4.6	* 6.2	4.6	6.2	4.6	6.2
Max Green Setting (Gmax), s	14.4	35.6	21.4	* 29	8.6	41.4	5.4	43.0
Max Q Clear Time (g_c+I1), s	16.4	32.7	23.4	8.2	6.5	15.9	6.7	11.2
Green Ext Time (p_c), s	0.0	2.7	0.0	0.6	0.0	10.6	0.0	1.3

Intersection Summary	
HCM 6th Ctrl Delay	53.4
HCM 6th LOS	D

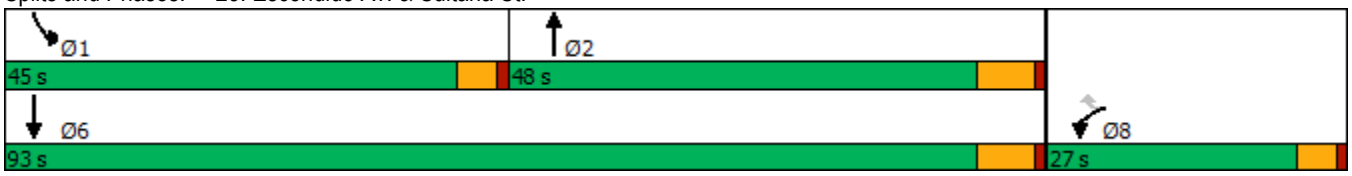
Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	WBL	WBR	NBT	SBL	SBT
Lane Configurations					
Traffic Volume (vph)	23	183	776	352	1073
Future Volume (vph)	23	183	776	352	1073
Turn Type	Prot	Perm	NA	Prot	NA
Protected Phases	8		2	1	6
Permitted Phases		8			
Detector Phase	8	8	2	1	6
Switch Phase					
Minimum Initial (s)	10.0	10.0	10.0	5.0	10.0
Minimum Split (s)	26.6	26.6	23.2	9.6	16.2
Total Split (s)	27.0	27.0	48.0	45.0	93.0
Total Split (%)	22.5%	22.5%	40.0%	37.5%	77.5%
Yellow Time (s)	3.6	3.6	5.2	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	6.2	4.6	6.2
Lead/Lag			Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	
Recall Mode	None	None	Max	None	Max
Act Effct Green (s)	12.2	12.2	54.6	27.7	87.0
Actuated g/C Ratio	0.11	0.11	0.50	0.25	0.79
v/c Ratio	0.13	0.55	0.47	0.85	0.39
Control Delay	44.7	12.4	21.2	57.5	4.3
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	44.7	12.4	21.2	57.5	4.3
LOS	D	B	C	E	A
Approach Delay	16.0		21.2		17.5
Approach LOS	B		C		B

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 110	
Natural Cycle: 80	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.85	
Intersection Signal Delay: 18.6	Intersection LOS: B
Intersection Capacity Utilization 63.9%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 25: Escondido Av. & Sultana St.





Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	23	183	776	23	352	1073
Future Volume (veh/h)	23	183	776	23	352	1073
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	1800	1900	1900	1900	1800	1900
Adj Flow Rate, veh/h	24	191	808	24	367	1118
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	235	221	1770	53	398	2770
Arrive On Green	0.14	0.14	0.49	0.49	0.23	0.77
Sat Flow, veh/h	1714	1610	3674	106	1714	3705
Grp Volume(v), veh/h	24	191	407	425	367	1118
Grp Sat Flow(s),veh/h/ln	1714	1610	1805	1880	1714	1805
Q Serve(g_s), s	1.4	13.1	16.7	16.7	23.7	11.8
Cycle Q Clear(g_c), s	1.4	13.1	16.7	16.7	23.7	11.8
Prop In Lane	1.00	1.00		0.06	1.00	
Lane Grp Cap(c), veh/h	235	221	893	930	398	2770
V/C Ratio(X)	0.10	0.86	0.46	0.46	0.92	0.40
Avail Cap(c_a), veh/h	339	319	893	930	612	2770
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	42.7	47.8	18.7	18.7	42.5	4.4
Incr Delay (d2), s/veh	0.2	15.3	1.7	1.6	10.8	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	6.2	7.4	7.7	11.2	3.9
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	42.9	63.1	20.4	20.3	53.3	4.9
LnGrp LOS	D	E	C	C	D	A
Approach Vol, veh/h	215		832			1485
Approach Delay, s/veh	60.8		20.3			16.8
Approach LOS	E		C			B

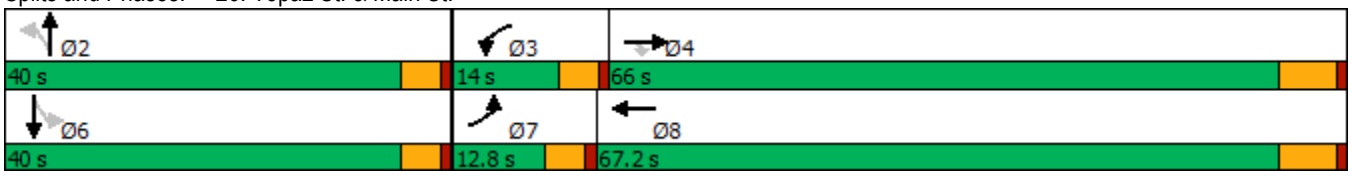
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	30.9	62.1			93.0	20.1
Change Period (Y+Rc), s	4.6	6.2			6.2	4.6
Max Green Setting (Gmax), s	40.4	41.8			86.8	22.4
Max Q Clear Time (g_c+I1), s	25.7	18.7			13.8	15.1
Green Ext Time (p_c), s	0.6	6.2			13.2	0.4

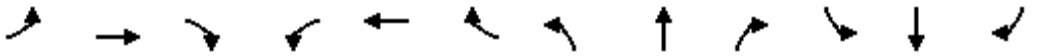
Intersection Summary		
HCM 6th Ctrl Delay		21.7
HCM 6th LOS		C

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	96	1983	322	144	1629	298	45	86	49
Future Volume (vph)	96	1983	322	144	1629	298	45	86	49
Turn Type	Prot	NA	Perm	Prot	NA	Perm	NA	Perm	NA
Protected Phases	7	4		3	8		2		6
Permitted Phases			4			2		6	
Detector Phase	7	4	4	3	8	2	2	6	6
Switch Phase									
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	25.2	25.2	9.6	23.2	32.6	32.6	38.6	38.6
Total Split (s)	12.8	66.0	66.0	14.0	67.2	40.0	40.0	40.0	40.0
Total Split (%)	10.7%	55.0%	55.0%	11.7%	56.0%	33.3%	33.3%	33.3%	33.3%
Yellow Time (s)	3.6	5.2	5.2	3.6	5.2	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	6.2	4.6	6.2	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes				
Recall Mode	None	None	None	Max	None	None	None	None	None
Act Effct Green (s)	8.2	57.6	57.6	9.5	58.9	32.6	32.6	32.6	32.6
Actuated g/C Ratio	0.07	0.50	0.50	0.08	0.51	0.28	0.28	0.28	0.28
v/c Ratio	0.82	0.85	0.36	1.06	0.67	0.91	0.32	0.32	0.22
Control Delay	99.2	29.4	4.7	144.6	22.7	72.7	12.9	36.7	19.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	99.2	29.4	4.7	144.6	22.7	72.7	12.9	36.7	19.0
LOS	F	C	A	F	C	E	B	D	B
Approach Delay		29.2			32.0		50.4		26.7
Approach LOS		C			C		D		C

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 115.1	
Natural Cycle: 100	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.06	
Intersection Signal Delay: 32.2	Intersection LOS: C
Intersection Capacity Utilization 96.7%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 26: Topaz St. & Main St.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	96	1983	322	144	1629	95	298	45	132	86	49	63
Future Volume (veh/h)	96	1983	322	144	1629	95	298	45	132	86	49	63
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	0.99		1.00	1.00		0.99
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	1800	1900	1900	1800	1900	1900	1800	1900	1900	1800	1900	1900
Adj Flow Rate, veh/h	99	2044	260	148	1679	91	307	46	105	89	51	34
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	123	2737	773	150	2497	135	402	149	340	343	307	204
Arrive On Green	0.07	0.48	0.48	0.09	0.50	0.50	0.29	0.29	0.29	0.29	0.29	0.29
Sat Flow, veh/h	1714	5700	1610	1714	5036	273	1323	514	1174	1256	1059	706
Grp Volume(v), veh/h	99	2044	260	148	1152	618	307	0	151	89	0	85
Grp Sat Flow(s),veh/h/ln	1714	1900	1610	1714	1729	1851	1323	0	1689	1256	0	1765
Q Serve(g_s), s	6.1	31.3	10.8	9.3	27.1	27.2	24.3	0.0	7.5	6.4	0.0	3.9
Cycle Q Clear(g_c), s	6.1	31.3	10.8	9.3	27.1	27.2	28.2	0.0	7.5	13.9	0.0	3.9
Prop In Lane	1.00		1.00	1.00		0.15	1.00		0.70	1.00		0.40
Lane Grp Cap(c), veh/h	123	2737	773	150	1715	918	402	0	489	343	0	511
V/C Ratio(X)	0.81	0.75	0.34	0.99	0.67	0.67	0.76	0.00	0.31	0.26	0.00	0.17
Avail Cap(c_a), veh/h	131	3165	894	150	1958	1048	454	0	555	392	0	580
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	49.3	22.7	17.4	49.1	20.5	20.5	39.1	0.0	29.8	35.3	0.0	28.6
Incr Delay (d2), s/veh	26.2	0.9	0.3	70.8	0.8	1.4	6.7	0.0	0.4	0.4	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.4	12.7	3.7	6.8	9.9	10.8	8.6	0.0	3.1	2.0	0.0	1.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	75.4	23.5	17.6	119.9	21.3	22.0	45.7	0.0	30.2	35.7	0.0	28.7
LnGrp LOS	E	C	B	F	C	C	D	A	C	D	A	C
Approach Vol, veh/h		2403			1918			458			174	
Approach Delay, s/veh		25.0			29.1			40.6			32.3	
Approach LOS		C			C			D			C	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		35.8	14.0	57.9		35.8	12.3	59.6				
Change Period (Y+Rc), s		4.6	4.6	6.2		4.6	4.6	6.2				
Max Green Setting (Gmax), s		35.4	9.4	59.8		35.4	8.2	61.0				
Max Q Clear Time (g_c+I1), s		30.2	11.3	33.3		15.9	8.1	29.2				
Green Ext Time (p_c), s		1.0	0.0	18.4		0.7	0.0	15.2				

Intersection Summary												
HCM 6th Ctrl Delay			28.3									
HCM 6th LOS			C									

Notes

User approved volume balancing among the lanes for turning movement.

APPENDIX 7.11:

HORIZON YEAR (2040) WITHOUT PROJECT CONDITIONS QUEUING ANALYSIS WORKSHEETS WITH IMPROVEMENTS

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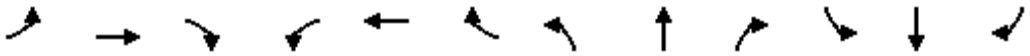
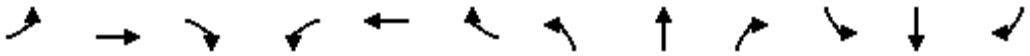


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	82	478	327	224	358	142	153	1075	138	320	1779	48
v/c Ratio	0.76	0.66	0.66	1.38	0.43	0.30	0.49	0.53	0.19	0.69	0.80	0.06
Control Delay	89.0	41.4	19.0	242.3	34.3	6.5	51.1	26.6	5.3	51.4	29.7	0.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	89.0	41.4	19.0	242.3	34.3	6.5	51.1	26.6	5.3	51.4	29.7	0.8
Queue Length 50th (ft)	52	149	61	~186	103	0	47	186	0	99	341	0
Queue Length 95th (ft)	#166	203	150	#412	145	44	94	312	46	173	#598	4
Internal Link Dist (ft)		876			804			5210			7898	
Turn Bay Length (ft)	225		225	1000		250	220		280	230		160
Base Capacity (vph)	108	1373	748	162	1481	746	385	2011	710	560	2234	747
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.76	0.35	0.44	1.38	0.24	0.19	0.40	0.53	0.19	0.57	0.80	0.06

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	107	959	211	24	468	433	157	1547	27	330	2363	85
v/c Ratio	0.96	0.76	0.40	0.30	0.48	0.66	0.60	0.69	0.03	0.68	0.92	0.10
Control Delay	130.0	44.9	9.5	65.3	42.0	28.7	62.3	29.8	0.1	54.5	34.6	2.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	130.0	44.9	9.5	65.3	42.0	28.7	62.3	29.8	0.1	54.5	34.6	2.8
Queue Length 50th (ft)	~86	251	13	18	112	220	61	365	0	127	640	0
Queue Length 95th (ft)	#205	303	76	48	147	304	97	456	0	169	#773	21
Internal Link Dist (ft)		1117			1265			3985			1763	
Turn Bay Length (ft)	340			250		200	280		200	250		200
Base Capacity (vph)	112	1378	567	80	1287	756	279	2245	776	713	2573	852
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.96	0.70	0.37	0.30	0.36	0.57	0.56	0.69	0.03	0.46	0.92	0.10

Intersection Summary

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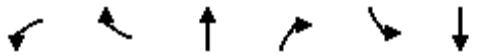

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	131	465	1323	73	608	2074
v/c Ratio	0.54	0.80	0.50	0.08	0.84	0.53
Control Delay	51.6	18.2	19.7	5.6	52.5	6.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	51.6	18.2	19.7	5.6	52.5	6.3
Queue Length 50th (ft)	86	30	203	2	206	160
Queue Length 95th (ft)	146	143	342	31	286	308
Internal Link Dist (ft)	2428		1974			3985
Turn Bay Length (ft)				200	375	
Base Capacity (vph)	437	707	2652	859	943	3948
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.30	0.66	0.50	0.08	0.64	0.53

Intersection Summary



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	76	298	252	2	63	268	1272	154	48	2037	145
v/c Ratio	0.18	0.44	1.16	0.00	0.12	0.79	0.46	0.17	0.48	1.04	0.21
Control Delay	33.9	6.0	148.9	31.0	0.5	62.0	18.4	2.8	71.6	68.8	8.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	33.9	6.0	148.9	31.0	0.5	62.0	18.4	2.8	71.6	68.8	8.4
Queue Length 50th (ft)	45	1	~235	1	0	200	223	0	37	~589	13
Queue Length 95th (ft)	86	67	#402	8	2	274	262	32	78	#805	62
Internal Link Dist (ft)		773		663			859			1974	
Turn Bay Length (ft)	50		400		400	190			225		225
Base Capacity (vph)	416	680	218	551	545	615	2742	908	107	1954	682
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.18	0.44	1.16	0.00	0.12	0.44	0.46	0.17	0.45	1.04	0.21

Intersection Summary

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Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	67	84	140	97	259	14	1370	90	296	2033	258
v/c Ratio	0.24	0.20	0.49	0.24	0.47	0.11	0.63	0.12	0.73	0.59	0.23
Control Delay	27.5	25.8	33.1	26.8	6.3	43.8	23.9	6.6	41.7	11.8	4.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	27.5	25.8	33.1	26.8	6.3	43.8	23.9	6.6	41.7	11.8	4.0
Queue Length 50th (ft)	27	32	59	38	0	6	166	0	125	129	8
Queue Length 95th (ft)	65	74	123	84	53	31	#475	39	284	541	79
Internal Link Dist (ft)		1110		807			892			859	
Turn Bay Length (ft)	100		65		65	190			195		230
Base Capacity (vph)	700	1003	708	1008	967	319	2166	727	865	3435	1132
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.10	0.08	0.20	0.10	0.27	0.04	0.63	0.12	0.34	0.59	0.23

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
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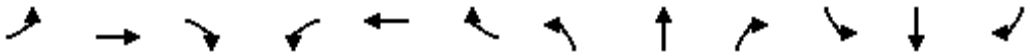

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	117	463	198	157	537	220	427	1843	300	241	1397	100
v/c Ratio	1.09	0.61	0.40	1.47	0.70	0.43	0.76	0.84	0.37	0.60	0.71	0.15
Control Delay	160.3	39.3	6.9	287.6	42.1	7.0	51.2	32.0	7.3	50.1	30.8	7.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	160.3	39.3	6.9	287.6	42.1	7.0	51.2	32.0	7.3	50.1	30.8	7.4
Queue Length 50th (ft)	~82	143	0	~135	170	0	132	363	23	75	268	3
Queue Length 95th (ft)	#238	196	53	#319	228	56	222	#661	105	133	432	44
Internal Link Dist (ft)		876			804			5210			7898	
Turn Bay Length (ft)	225		225	1000		250	220		280	230		160
Base Capacity (vph)	107	1367	734	107	1367	739	663	2197	820	558	1964	660
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.09	0.34	0.27	1.47	0.39	0.30	0.64	0.84	0.37	0.43	0.71	0.15

Intersection Summary

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95th percentile volume exceeds capacity, queue may be longer.
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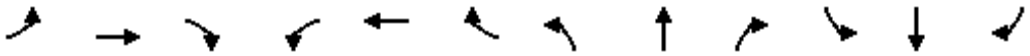

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	104	828	133	28	974	379	293	2494	445	402	1633	115
v/c Ratio	1.32	0.56	0.27	0.35	0.75	0.53	0.65	0.99	0.59	0.70	0.62	0.14
Control Delay	250.5	39.3	7.8	67.3	45.6	20.8	54.8	48.9	21.4	52.6	24.7	2.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	250.5	39.3	7.8	67.3	45.6	20.8	54.8	48.9	21.4	52.6	24.7	2.7
Queue Length 50th (ft)	~100	183	0	21	222	149	105	~608	173	143	297	0
Queue Length 95th (ft)	#223	237	50	54	283	239	149	#785	303	193	369	25
Internal Link Dist (ft)		1117			1265			3985			1763	
Turn Bay Length (ft)	340			250		200	280		200	250		200
Base Capacity (vph)	79	1480	489	79	1355	790	1113	2511	760	753	2643	795
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.32	0.56	0.27	0.35	0.72	0.48	0.26	0.99	0.59	0.53	0.62	0.14

Intersection Summary

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95th percentile volume exceeds capacity, queue may be longer.
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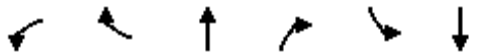

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	93	778	2355	192	522	1215
v/c Ratio	0.17	1.16	1.06	0.25	1.09	0.39
Control Delay	31.9	113.1	70.4	10.8	116.6	12.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	31.9	113.1	70.4	10.8	116.6	12.7
Queue Length 50th (ft)	53	~561	~733	40	~235	167
Queue Length 95th (ft)	96	#804	#826	90	#345	197
Internal Link Dist (ft)	2428		1974			3985
Turn Bay Length (ft)				200	375	
Base Capacity (vph)	546	672	2226	753	478	3133
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.17	1.16	1.06	0.25	1.09	0.39

Intersection Summary

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Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	90	291	234	8	179	236	2279	212	69	1126	113
v/c Ratio	0.29	0.50	1.84	0.02	0.40	0.81	0.73	0.21	0.92	0.45	0.14
Control Delay	42.4	7.8	436.7	37.2	17.8	69.4	18.9	1.9	141.0	22.0	3.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	42.4	7.8	436.7	37.2	17.8	69.4	18.9	1.9	141.0	22.0	3.6
Queue Length 50th (ft)	59	1	~274	5	39	177	434	1	54	208	0
Queue Length 95th (ft)	109	74	#437	19	106	259	491	31	#149	264	31
Internal Link Dist (ft)		773		663			859			1974	
Turn Bay Length (ft)	50		400		400	190			225		225
Base Capacity (vph)	309	577	127	411	442	361	3112	1032	75	2491	837
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.29	0.50	1.84	0.02	0.40	0.65	0.73	0.21	0.92	0.45	0.14

Intersection Summary

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Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	418	173	118	78	488	36	1849	126	206	1391	68
v/c Ratio	0.92	0.27	0.32	0.12	0.59	0.44	0.90	0.18	0.72	0.49	0.07
Control Delay	62.7	27.2	30.3	26.2	7.1	72.5	40.9	10.0	60.1	18.0	4.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	62.7	27.2	30.3	26.2	7.1	72.5	40.9	10.0	60.1	18.0	4.0
Queue Length 50th (ft)	299	90	65	40	22	28	493	17	154	260	0
Queue Length 95th (ft)	#486	147	116	76	110	#70	#678	63	224	305	23
Internal Link Dist (ft)		1110		807			892			859	
Turn Bay Length (ft)	100		65		65	190			195		230
Base Capacity (vph)	522	731	428	739	892	81	2044	691	457	2818	908
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.80	0.24	0.28	0.11	0.55	0.44	0.90	0.18	0.45	0.49	0.07

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

APPENDIX 7.12:

HORIZON YEAR (2040) WITH PROJECT CONDITIONS QUEUING ANALYSIS WORKSHEETS WITH IMPROVEMENTS

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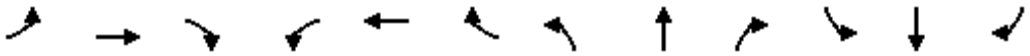

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	82	478	327	259	358	142	153	1085	144	320	1832	48
v/c Ratio	0.76	0.66	0.66	1.60	0.43	0.30	0.49	0.54	0.20	0.69	0.82	0.06
Control Delay	89.0	41.4	19.1	328.6	34.3	6.5	51.1	26.7	5.2	51.4	30.5	0.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	89.0	41.4	19.1	328.6	34.3	6.5	51.1	26.7	5.2	51.4	30.5	0.8
Queue Length 50th (ft)	52	149	62	~232	103	0	47	188	0	99	357	0
Queue Length 95th (ft)	#166	203	151	#478	145	44	94	316	46	173	#629	4
Internal Link Dist (ft)		876			804			5210			7898	
Turn Bay Length (ft)	225		225	1000		250	220		280	230		160
Base Capacity (vph)	108	1373	748	162	1481	746	385	2011	714	560	2234	747
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.76	0.35	0.44	1.60	0.24	0.19	0.40	0.54	0.20	0.57	0.82	0.06

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

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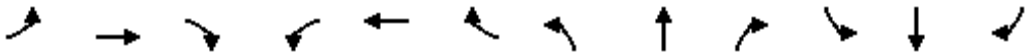

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	107	1073	227	24	1253	678	247	1636	27	391	2378	85
v/c Ratio	1.02	0.74	0.39	0.32	1.04	0.89	0.94	0.84	0.04	0.66	0.98	0.11
Control Delay	148.9	43.6	10.4	67.3	80.5	42.0	98.1	40.0	0.1	52.2	46.4	2.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	148.9	43.6	10.4	67.3	80.5	42.0	98.1	40.0	0.1	52.2	46.4	2.8
Queue Length 50th (ft)	~86	289	23	18	~382	414	100	438	0	143	648	0
Queue Length 95th (ft)	#205	345	91	48	#478	#652	#181	504	0	195	#782	21
Internal Link Dist (ft)		1117			1265			3985			1763	
Turn Bay Length (ft)	340			250		200	280		200	250		200
Base Capacity (vph)	105	1452	588	75	1210	800	262	1938	688	671	2420	807
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.02	0.74	0.39	0.32	1.04	0.85	0.94	0.84	0.04	0.58	0.98	0.11

Intersection Summary

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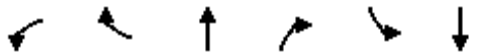

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	131	465	1506	73	608	2105
v/c Ratio	0.53	0.81	0.57	0.09	0.84	0.53
Control Delay	51.3	18.6	21.0	6.7	52.7	6.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	51.3	18.6	21.0	6.7	52.7	6.4
Queue Length 50th (ft)	86	33	243	4	206	164
Queue Length 95th (ft)	146	147	407	36	287	319
Internal Link Dist (ft)	2428		1974			3985
Turn Bay Length (ft)				200	375	
Base Capacity (vph)	437	704	2650	854	942	3943
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.30	0.66	0.57	0.09	0.65	0.53

Intersection Summary



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	76	298	252	2	63	268	1458	154	48	2068	145
v/c Ratio	0.18	0.44	1.16	0.00	0.12	0.79	0.53	0.17	0.48	1.06	0.21
Control Delay	33.9	6.0	148.9	31.0	0.5	62.0	19.4	2.8	71.6	73.9	8.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	33.9	6.0	148.9	31.0	0.5	62.0	19.4	2.8	71.6	73.9	8.4
Queue Length 50th (ft)	45	1	~235	1	0	200	268	0	37	~627	13
Queue Length 95th (ft)	86	67	#402	8	2	274	312	32	78	#822	62
Internal Link Dist (ft)		773		663			859			1974	
Turn Bay Length (ft)	50		400		400	190			225		225
Base Capacity (vph)	416	680	218	551	545	615	2742	908	107	1954	682
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.18	0.44	1.16	0.00	0.12	0.44	0.53	0.17	0.45	1.06	0.21

Intersection Summary

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Queue shown is maximum after two cycles.

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Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	67	84	140	97	296	14	1518	90	302	2059	258
v/c Ratio	0.24	0.21	0.49	0.24	0.51	0.11	0.71	0.12	0.73	0.60	0.23
Control Delay	27.6	26.0	33.2	26.9	6.5	43.9	25.4	6.6	41.6	11.9	4.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	27.6	26.0	33.2	26.9	6.5	43.9	25.4	6.6	41.6	11.9	4.0
Queue Length 50th (ft)	27	32	59	38	0	6	193	0	127	133	8
Queue Length 95th (ft)	65	75	123	85	56	31	#562	39	289	552	80
Internal Link Dist (ft)		1110		807			892			859	
Turn Bay Length (ft)	100		65		65	190			195		230
Base Capacity (vph)	699	1001	707	1007	984	318	2152	723	863	3437	1132
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.10	0.08	0.20	0.10	0.30	0.04	0.71	0.12	0.35	0.60	0.23

Intersection Summary

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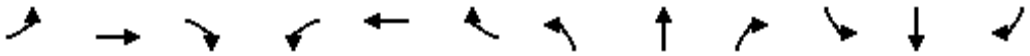

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	117	463	198	164	537	220	427	1894	336	241	1407	100
v/c Ratio	1.09	0.61	0.40	1.53	0.70	0.43	0.76	0.86	0.41	0.60	0.72	0.15
Control Delay	160.3	39.3	6.9	313.0	42.1	7.0	51.2	33.0	9.0	50.1	30.9	7.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	160.3	39.3	6.9	313.0	42.1	7.0	51.2	33.0	9.0	50.1	30.9	7.4
Queue Length 50th (ft)	~82	143	0	~145	170	0	132	379	37	75	270	3
Queue Length 95th (ft)	#238	196	53	#332	228	56	222	#691	137	133	435	44
Internal Link Dist (ft)		876			804			5210			7898	
Turn Bay Length (ft)	225		225	1000		250	220		280	230		160
Base Capacity (vph)	107	1367	734	107	1367	739	663	2197	820	558	1964	660
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.09	0.34	0.27	1.53	0.39	0.30	0.64	0.86	0.41	0.43	0.72	0.15

Intersection Summary

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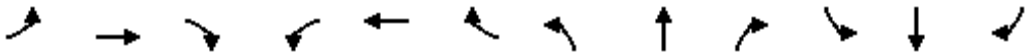

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	104	1473	221	28	1134	425	312	2513	445	744	1721	115
v/c Ratio	1.39	1.01	0.42	0.37	0.88	0.55	0.68	1.06	0.63	1.04	0.64	0.14
Control Delay	279.2	71.7	11.5	70.2	54.4	21.6	57.5	70.6	26.0	93.3	25.7	2.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	279.2	71.7	11.5	70.2	54.4	21.6	57.5	70.6	26.0	93.3	25.7	2.7
Queue Length 50th (ft)	~107	~447	21	22	285	181	117	~712	208	~312	327	0
Queue Length 95th (ft)	#223	#535	92	54	#340	283	158	#796	323	#431	401	25
Internal Link Dist (ft)		1117			1265			3985			1763	
Turn Bay Length (ft)	340			250		200	280		200	250		200
Base Capacity (vph)	75	1453	522	75	1282	769	1052	2375	710	712	2694	810
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.39	1.01	0.42	0.37	0.88	0.55	0.30	1.06	0.63	1.04	0.64	0.14

Intersection Summary

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Queue shown is maximum after two cycles.

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Queue shown is maximum after two cycles.



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	93	778	2393	192	522	1387
v/c Ratio	0.17	1.16	1.08	0.26	1.09	0.44
Control Delay	31.9	113.1	76.4	10.9	116.6	13.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	31.9	113.1	76.4	10.9	116.6	13.4
Queue Length 50th (ft)	53	~561	~755	40	~235	200
Queue Length 95th (ft)	96	#804	#849	90	#345	233
Internal Link Dist (ft)	2428		1974			3985
Turn Bay Length (ft)				200	375	
Base Capacity (vph)	546	672	2226	752	478	3133
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.17	1.16	1.08	0.26	1.09	0.44

Intersection Summary

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Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	90	291	234	8	179	236	2316	212	69	1297	113
v/c Ratio	0.30	0.51	2.02	0.02	0.42	0.81	0.73	0.20	0.92	0.51	0.13
Control Delay	43.5	8.1	513.4	38.1	18.3	69.4	18.4	1.8	141.0	22.4	3.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	43.5	8.1	513.4	38.1	18.3	69.4	18.4	1.8	141.0	22.4	3.5
Queue Length 50th (ft)	59	1	~283	5	39	177	436	0	54	246	0
Queue Length 95th (ft)	110	75	#446	19	107	259	493	30	#149	310	31
Internal Link Dist (ft)		773		663			859			1974	
Turn Bay Length (ft)	50		400		400	190			225		225
Base Capacity (vph)	297	566	116	395	429	361	3155	1044	75	2534	849
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.30	0.51	2.02	0.02	0.42	0.65	0.73	0.20	0.92	0.51	0.13

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	418	173	118	78	495	36	1879	126	241	1530	68
v/c Ratio	0.92	0.27	0.32	0.12	0.59	0.44	0.97	0.19	0.76	0.54	0.07
Control Delay	62.7	27.2	30.3	26.2	7.5	72.5	49.6	10.7	59.4	18.8	4.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	62.7	27.2	30.3	26.2	7.5	72.5	49.6	10.7	59.4	18.8	4.0
Queue Length 50th (ft)	299	90	65	40	26	28	523	17	180	298	0
Queue Length 95th (ft)	#486	147	116	76	118	#70	#731	65	254	345	23
Internal Link Dist (ft)		1110		807			892			859	
Turn Bay Length (ft)	100		65		65	190			195		230
Base Capacity (vph)	522	731	428	739	892	81	1946	662	457	2818	908
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.80	0.24	0.28	0.11	0.55	0.44	0.97	0.19	0.53	0.54	0.07

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

APPENDIX 7.13:

HORIZON YEAR (2040) WITH PROJECT CONDITIONS FREEWAY FACILITY ANALYSIS WORKSHEETS WITH IMPROVEMENTS

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HCS7 Freeway Facilities Report

Project Information

Analyst	JB	Date	6/30/2020
Agency	Urban Crossroads, Inc.	Analysis Year	Horizon Year (2040) With Project With Improvements
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	Hesperia Commerce Center II (JN 12778) - I-15 SB at Main		

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	7
Total Time Periods	1	Time Period Duration, min	15

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	I-15 SB, North of Main St.	16360	3
2	Diverge	Diverge	I-15 SB, Off-Ramp at Main St.	1500	3
3	Basic	Basic	I-15 SB, Between Off and Loop On-Ramp	975	3
4	Merge	Merge	I-15 SB, Loop On-Ramp at Main St.	1500	3
5	Basic	Basic	I-15 SB, Between Loop On-Ramp and On-Ramp	1415	3
6	Merge	Merge	I-15 SB, On-Ramp at Main St.	1500	3
7	Basic	Basic	I-15 SB, South of Main St.	5900	3

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.943	5908	7146	0.83	62.2	31.7	D

Segment 2: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.943	0.855	5908	1216	7200	2100	0.82	0.58	62.9	58.6	31.3	36.2	E

Segment 3: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.971	4666	7146	0.65	67.2	23.1	C

Segment 4: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.971	0.971	5421	755	7200	1900	0.75	0.40	60.2	57.9	30.0	30.3	D

Segment 5: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.971	5421	7146	0.76	64.7	27.9	D

Segment 6: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.971	0.943	5932	511	7200	2100	0.82	0.24	59.9	57.8	33.0	31.2	D

Segment 7: Basic

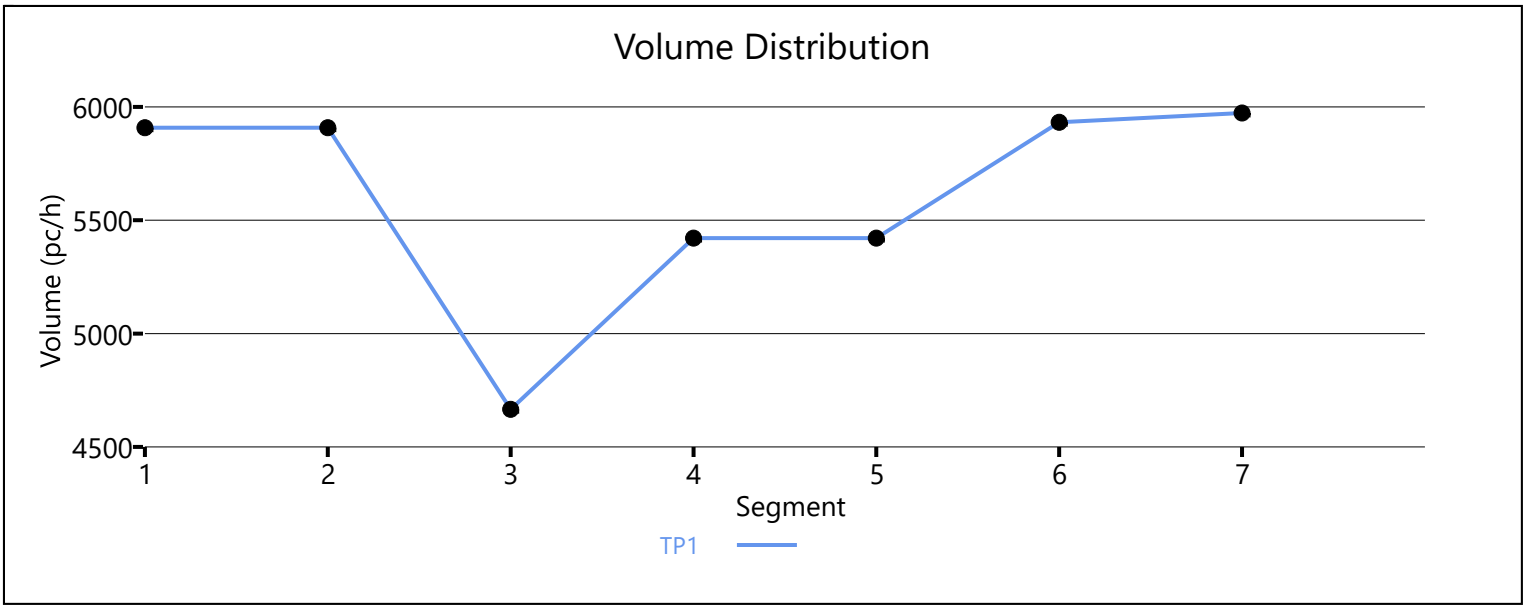
Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.962	5973	7146	0.84	61.8	32.2	D

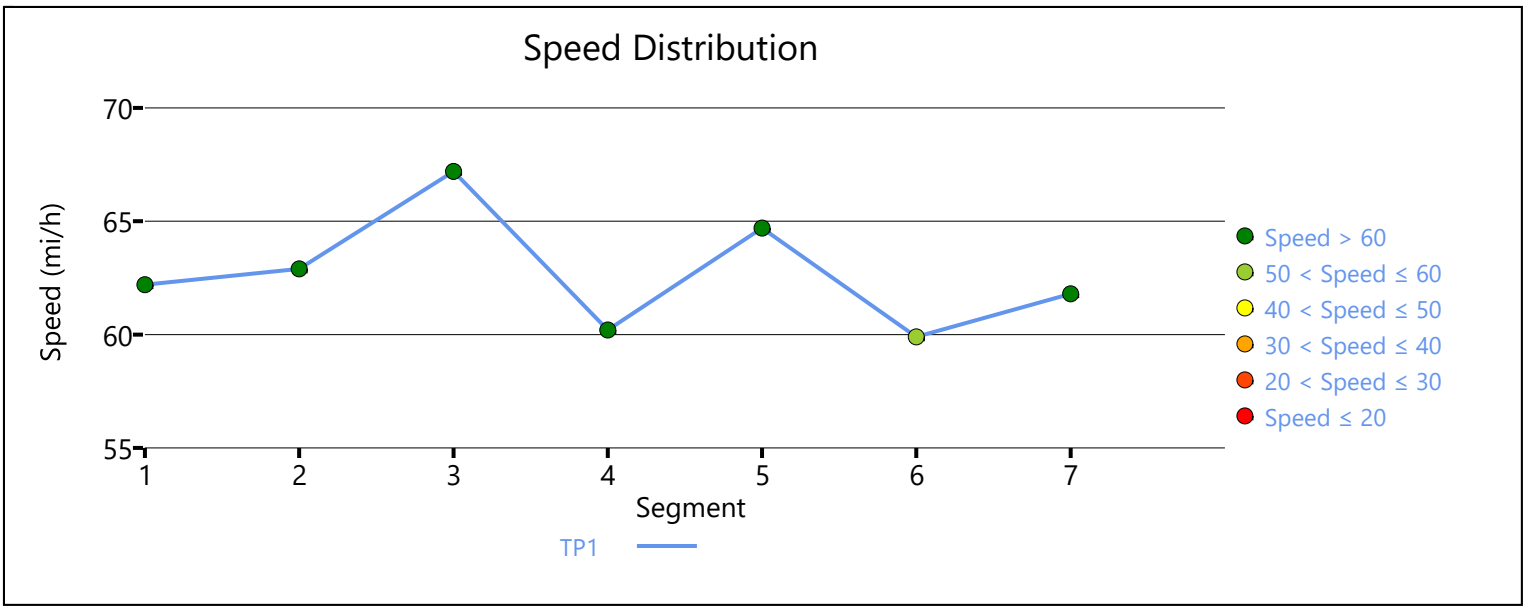
Facility Time Period Results

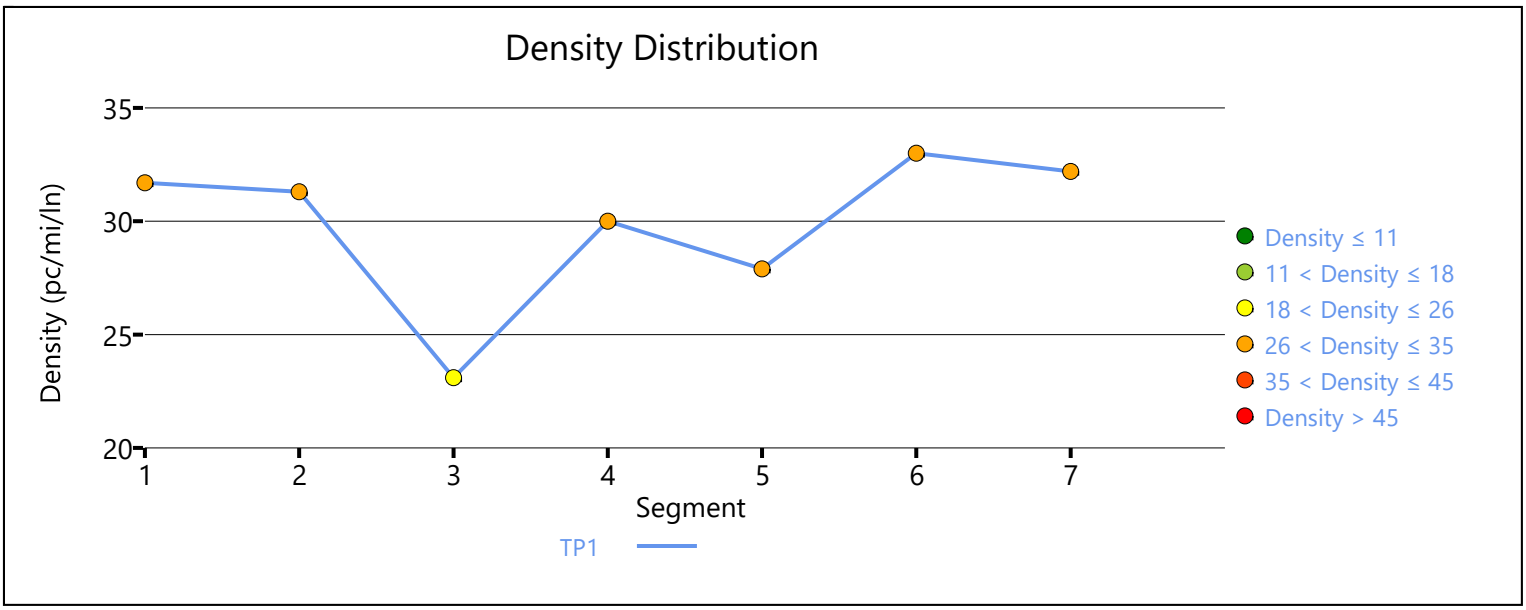
T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	62.2	31.3	29.8	5.3	D

Facility Overall Results

Space Mean Speed, mi/h	62.2	Density, veh/mi/ln	29.8
Average Travel Time, min	5.3	Density, pc/mi/ln	31.3







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HCS7 Freeway Facilities Report

Project Information

Analyst	JB	Date	6/30/2020
Agency	Urban Crossroads, Inc.	Analysis Year	Horizon Year (2040) With Project With Improvements
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	Hesperia Commerce Center II (JN:12778) - I-15 Southbound at US Highway 395		

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	3
Total Time Periods	1	Time Period Duration, min	15

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	North of US 395	4200	3
2	Merge	Basic	On-Ramp at US 395	1500	4
3	Basic	Basic	South of US 395	4200	4

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.971	6970	7179	0.97	55.1	42.2	E

Segment 2: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.971	0.893	9437	2467	9600	2100	0.73	1.17	66.6	-	26.2	-	D

Segment 3: Basic

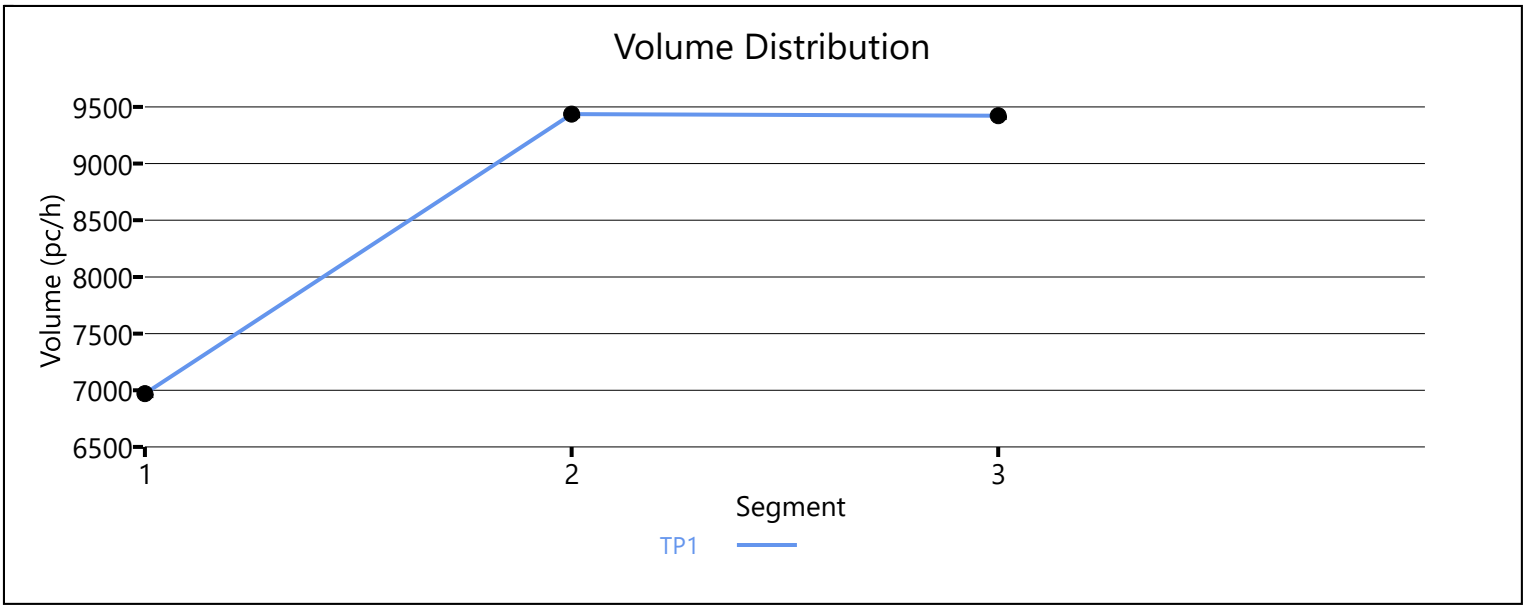
Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.952	9423	9572	0.98	54.2	43.5	E

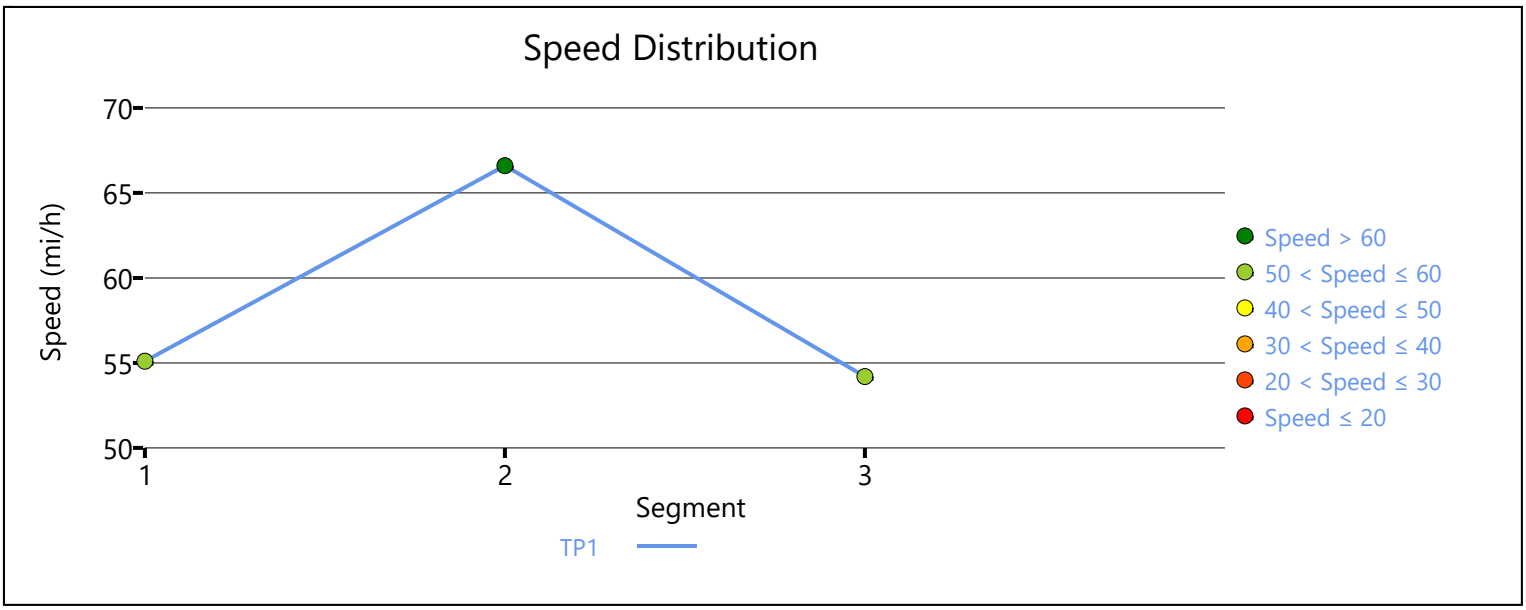
Facility Time Period Results

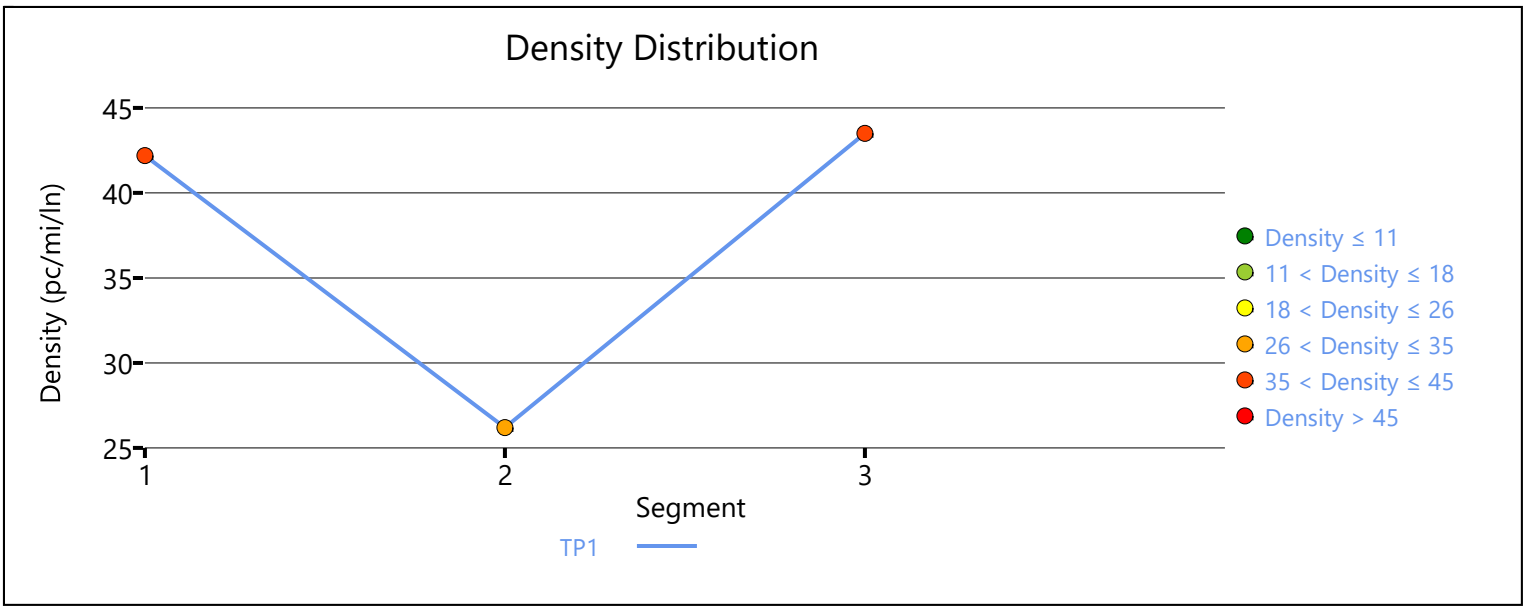
T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	56.3	40.1	38.6	2.0	E

Facility Overall Results

Space Mean Speed, mi/h	56.3	Density, veh/mi/ln	38.6
Average Travel Time, min	2.0	Density, pc/mi/ln	40.1







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HCS7 Freeway Facilities Report

Project Information

Analyst	JB	Date	6/30/2020
Agency	Urban Crossroads, Inc.	Analysis Year	Horizon Year (2040) With Project With Improvements
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	Hesperia Commerce Center II (JN 12778) - I-15 NB at Main		

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	7
Total Time Periods	1	Time Period Duration, min	15

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	I-15 NB, South of Main St.	6140	3
2	Diverge	Diverge	I-15 NB, Off-Ramp at Main St.	1500	3
3	Basic	Basic	I-15 NB, Between Off-Ramp and Loop On-Ramp	1125	3
4	Merge	Merge	I-15 NB, Loop On-Ramp at Main St.	1500	3
5	Basic	Basic	I-15 NB, Between Loop On-Ramp and On-Ramp	1215	3
6	Merge	Merge	I-15 NB, On-Ramp at Main St.	1500	3
7	Basic	Basic	I-15 NB, North of Main St.	16370	3

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.935	4584	7146	0.64	67.4	22.7	C

Segment 2: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.935	0.862	4584	1311	7200	2100	0.64	0.62	62.6	58.4	24.4	30.7	D

Segment 3: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.971	3250	7146	0.45	68.2	15.9	B

Segment 4: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.971	0.935	3789	539	7200	1900	0.53	0.28	62.6	60.4	20.2	21.4	C

Segment 5: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.962	3804	7146	0.53	68.2	18.6	C

Segment 6: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.962	0.971	4563	759	7200	2100	0.63	0.36	61.8	59.8	24.6	26.1	C

Segment 7: Basic

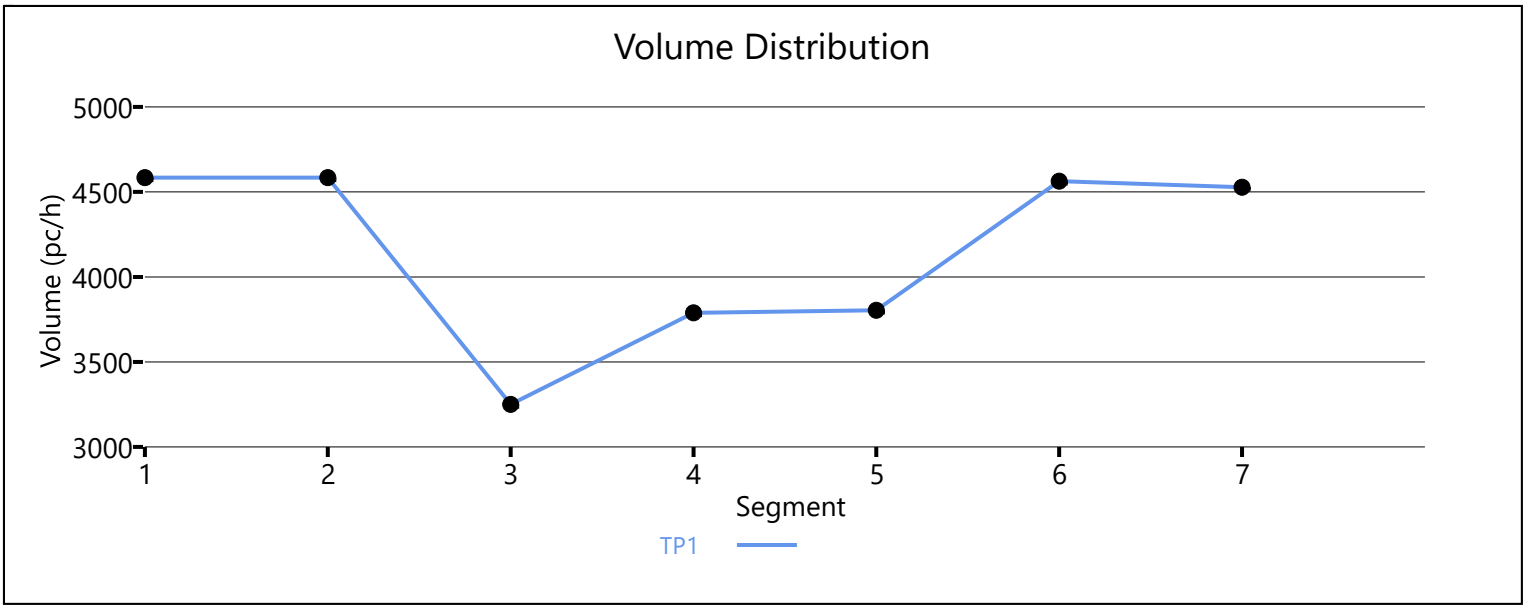
Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.971	4528	7146	0.63	67.5	22.4	C

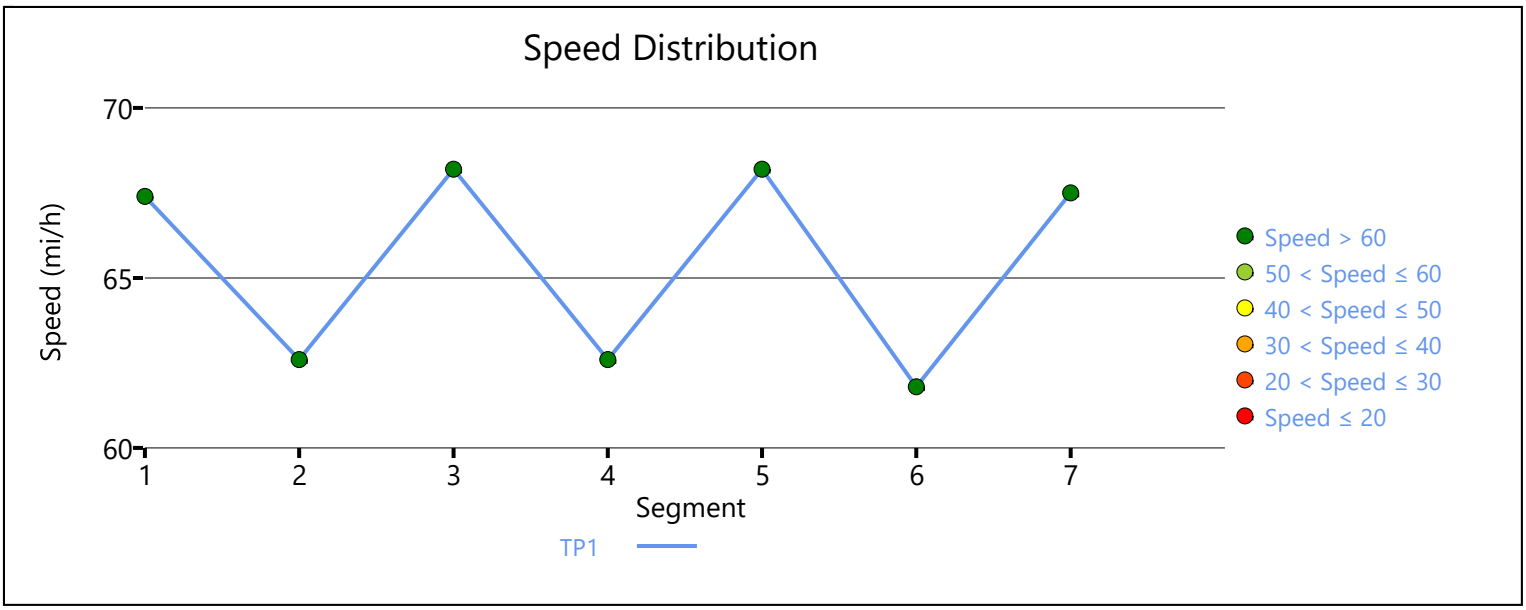
Facility Time Period Results

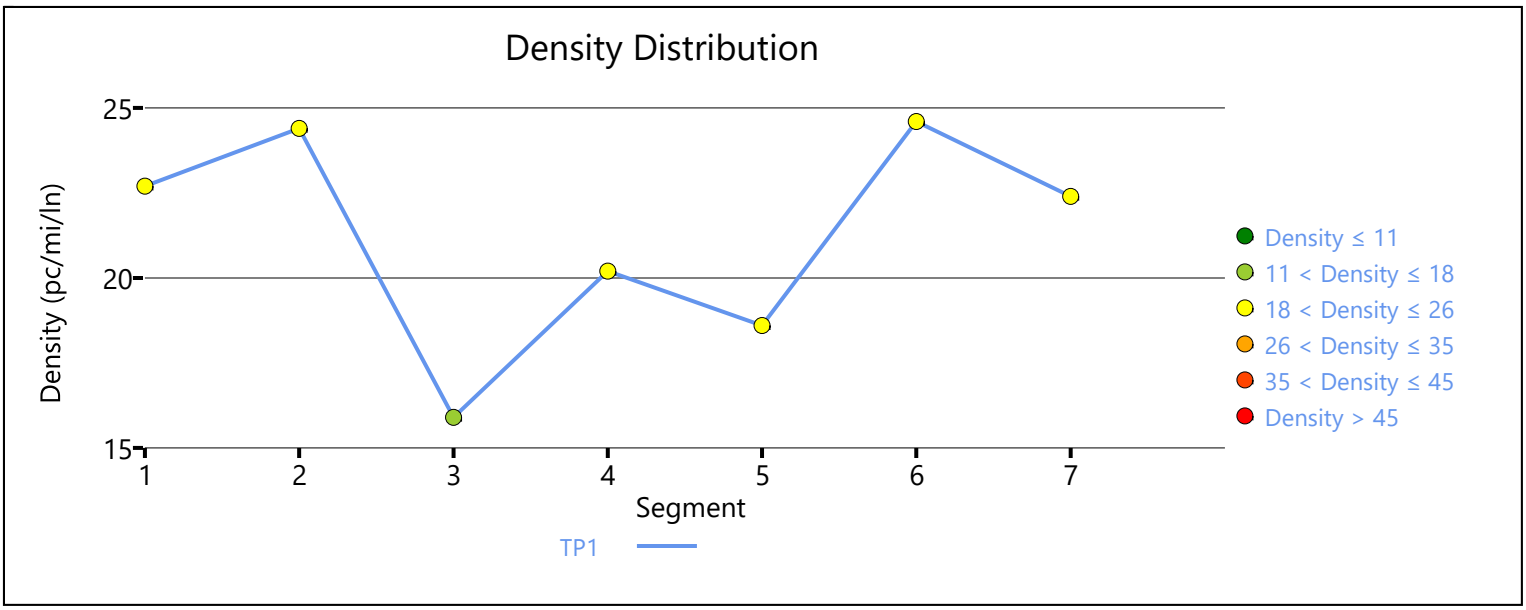
T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	66.7	22.2	21.3	5.0	C

Facility Overall Results

Space Mean Speed, mi/h	66.7	Density, veh/mi/ln	21.3
Average Travel Time, min	5.0	Density, pc/mi/ln	22.2







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HCS7 Freeway Facilities Report

Project Information

Analyst	JB	Date	6/30/2020
Agency	Urban Crossroads, Inc.	Analysis Year	Horizon Year (2040) With Project With Improvements
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	Hesperia Commerce Center II (JN:12778) - I-15 NB at US 395		

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	3
Total Time Periods	1	Time Period Duration, min	15

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	South of US 395	2000	4
2	Diverge	Diverge	Off-Ramp at US 395	1500	4
3	Basic	Basic	North of US 395	6350	4

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.926	6884	9572	0.72	66.4	25.9	C

Segment 2: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.926	0.877	6884	1850	9600	2100	0.72	0.88	63.3	57.0	27.2	33.8	D

Segment 3: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.943	5039	9572	0.53	69.3	18.2	C

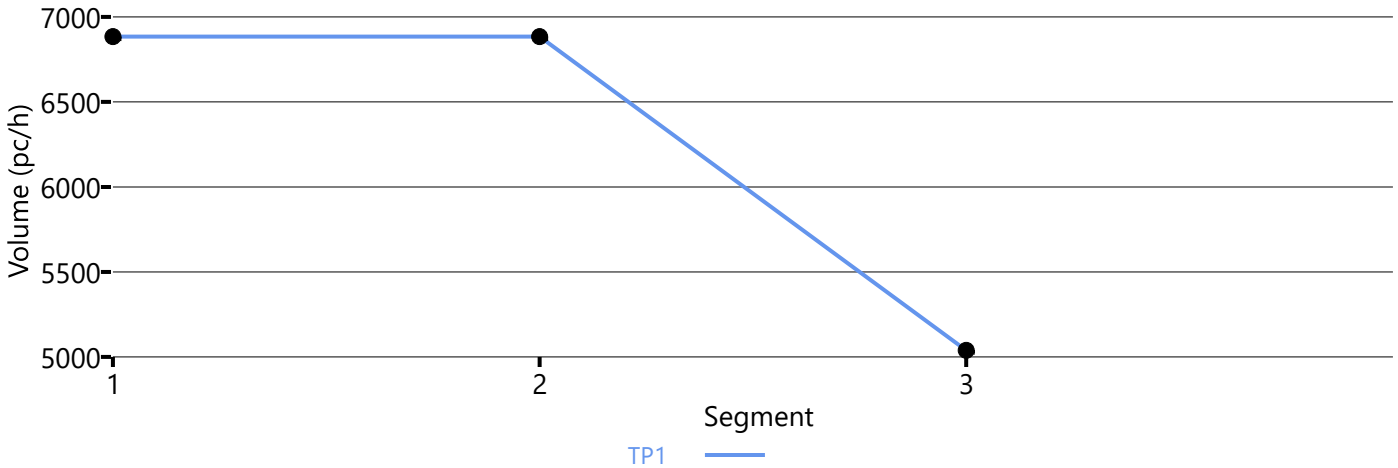
Facility Time Period Results

T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	67.4	21.1	19.8	1.7	C

Facility Overall Results

Space Mean Speed, mi/h	67.4	Density, veh/mi/ln	19.8
Average Travel Time, min	1.7	Density, pc/mi/ln	21.1

Volume Distribution



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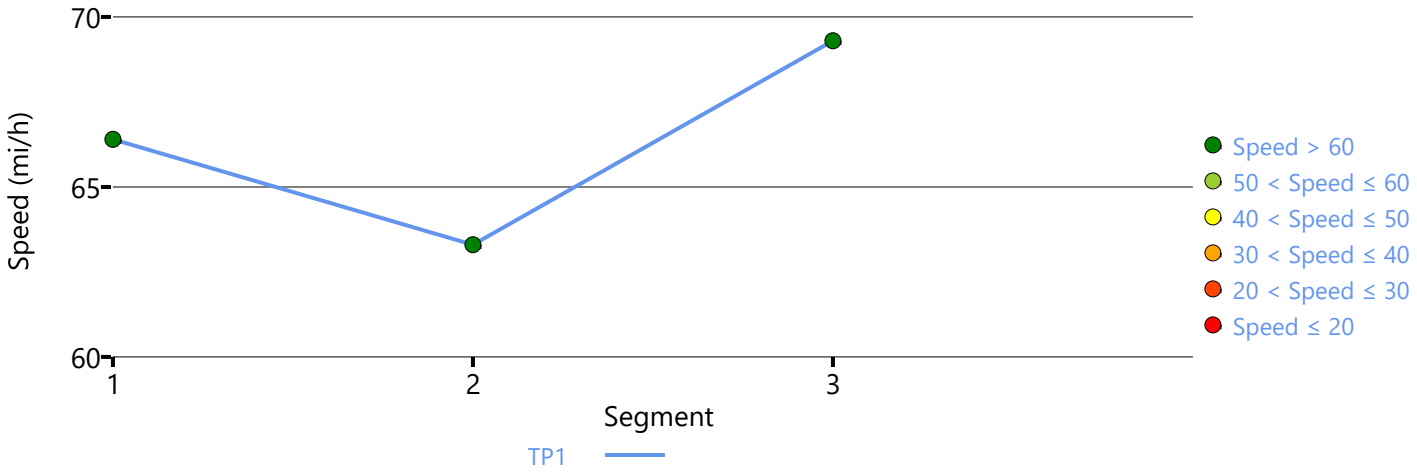

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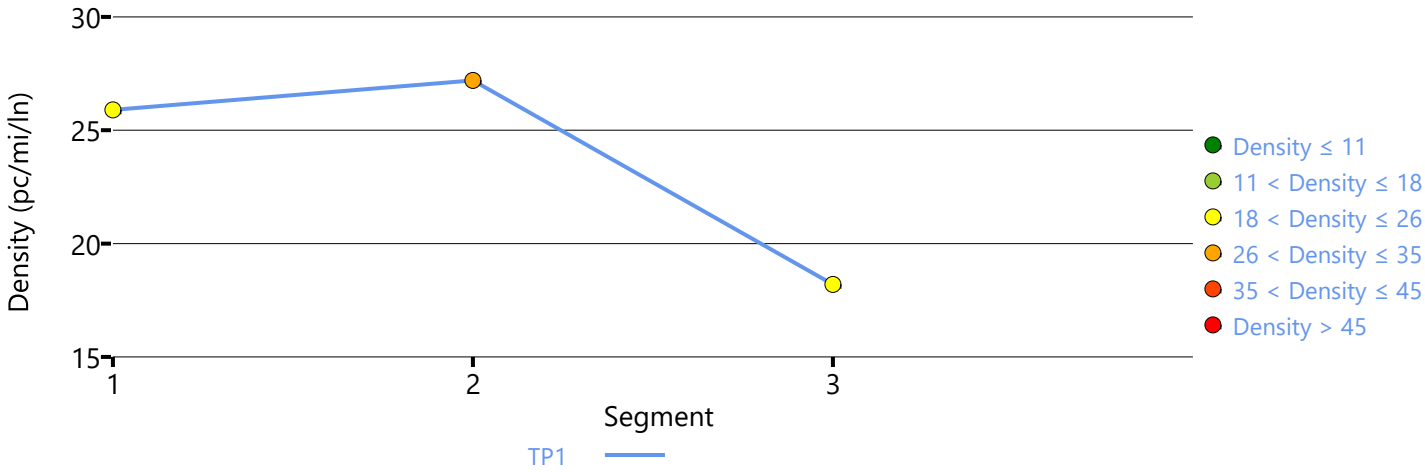

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HCS7 Freeway Facilities Report

Project Information

Analyst	JB	Date	6/30/2020
Agency	Urban Crossroads, Inc.	Analysis Year	Horizon Year (2040) With Project With Improvements
Jurisdiction	Caltrans	Time Period Analyzed	PM Peak Hour
Project Description	Hesperia Commerce Center II (JN 12778) - I-15 SB at Main		

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	7
Total Time Periods	1	Time Period Duration, min	15

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	I-15 SB, North of Main St.	16360	3
2	Diverge	Diverge	I-15 SB, Off-Ramp at Main St.	1500	3
3	Basic	Basic	I-15 SB, Between Off and Loop On-Ramp	975	3
4	Merge	Merge	I-15 SB, Loop On-Ramp at Main St.	1500	3
5	Basic	Basic	I-15 SB, Between Loop On-Ramp and On-Ramp	1415	3
6	Merge	Merge	I-15 SB, On-Ramp at Main St.	1500	3
7	Basic	Basic	I-15 SB, South of Main St.	5900	3

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.952	5867	7146	0.82	62.4	31.3	D

Segment 2: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.952	0.962	5867	1436	7200	2100	0.81	0.68	62.4	58.0	31.3	36.5	E

Segment 3: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.952	4416	7146	0.62	67.7	21.7	C

Segment 4: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.952	0.917	4695	279	7200	1900	0.65	0.15	61.7	59.6	25.4	25.6	C

Segment 5: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.952	4685	7146	0.66	67.2	23.2	C

Segment 6: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.952	0.775	5214	529	7200	2100	0.72	0.25	61.2	59.3	28.4	27.9	C

Segment 7: Basic

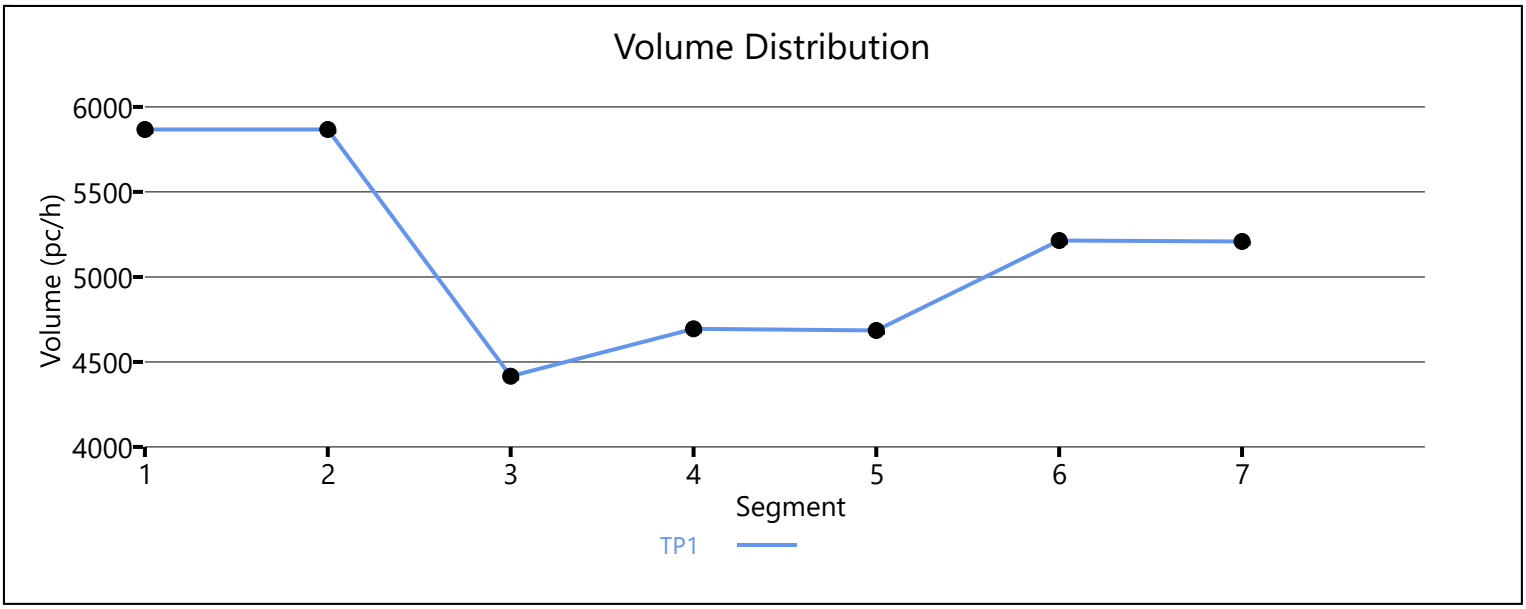
Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	1.00	0.935	5209	7146	0.73	65.5	26.5	D

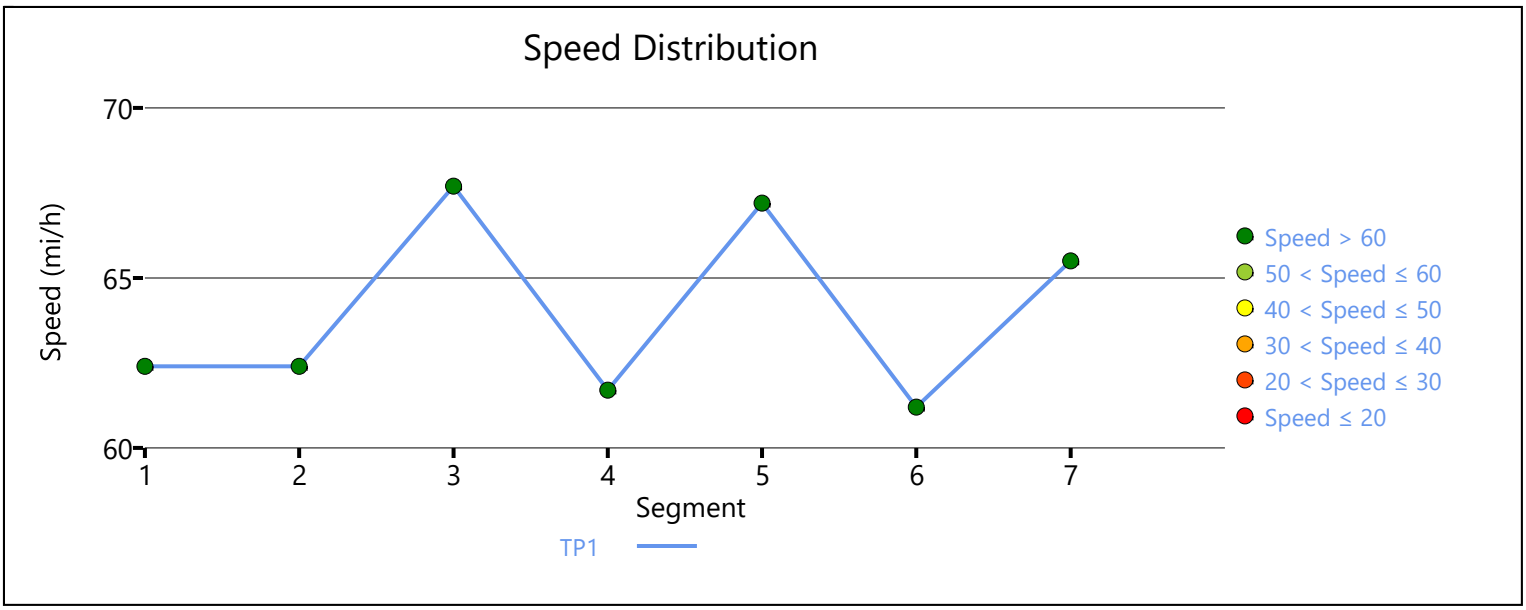
Facility Time Period Results

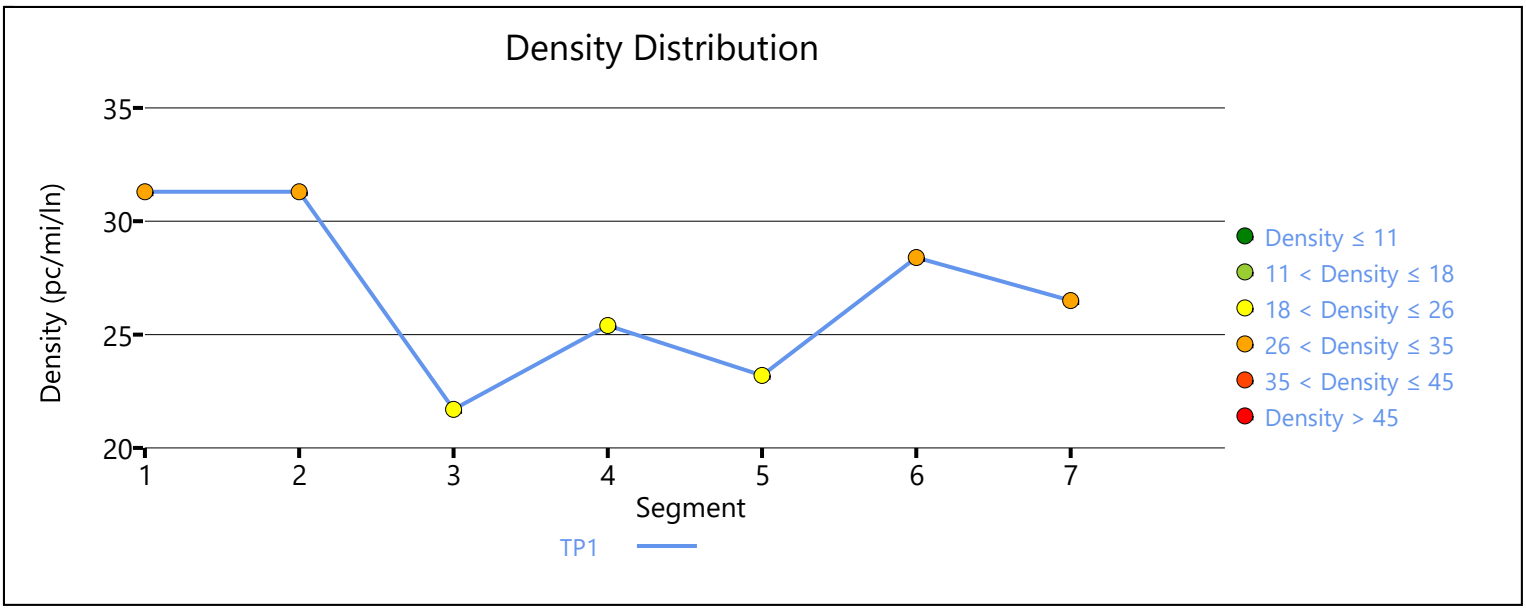
T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	63.2	29.2	27.7	5.2	D

Facility Overall Results

Space Mean Speed, mi/h	63.2	Density, veh/mi/ln	27.7
Average Travel Time, min	5.2	Density, pc/mi/ln	29.2







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HCS7 Freeway Facilities Report

Project Information

Analyst	JB	Date	6/30/2020
Agency	Urban Crossroads, Inc.	Analysis Year	Horizon Year (2040) Without Project With Improvements
Jurisdiction	Caltrans	Time Period Analyzed	PM Peak Hour
Project Description	Hesperia Commerce Center II (JN:12778) - I-15 Southbound at US Highway 395		

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	3
Total Time Periods	1	Time Period Duration, min	15

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	North of US 395	4200	3
2	Merge	Basic	On-Ramp at US 395	1500	4
3	Basic	Basic	South of US 395	4200	4

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.943	6462	7179	0.90	59.1	36.4	E

Segment 2: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.943	0.885	8447	1985	9600	2100	0.67	0.95	68.0	-	23.8	-	C

Segment 3: Basic

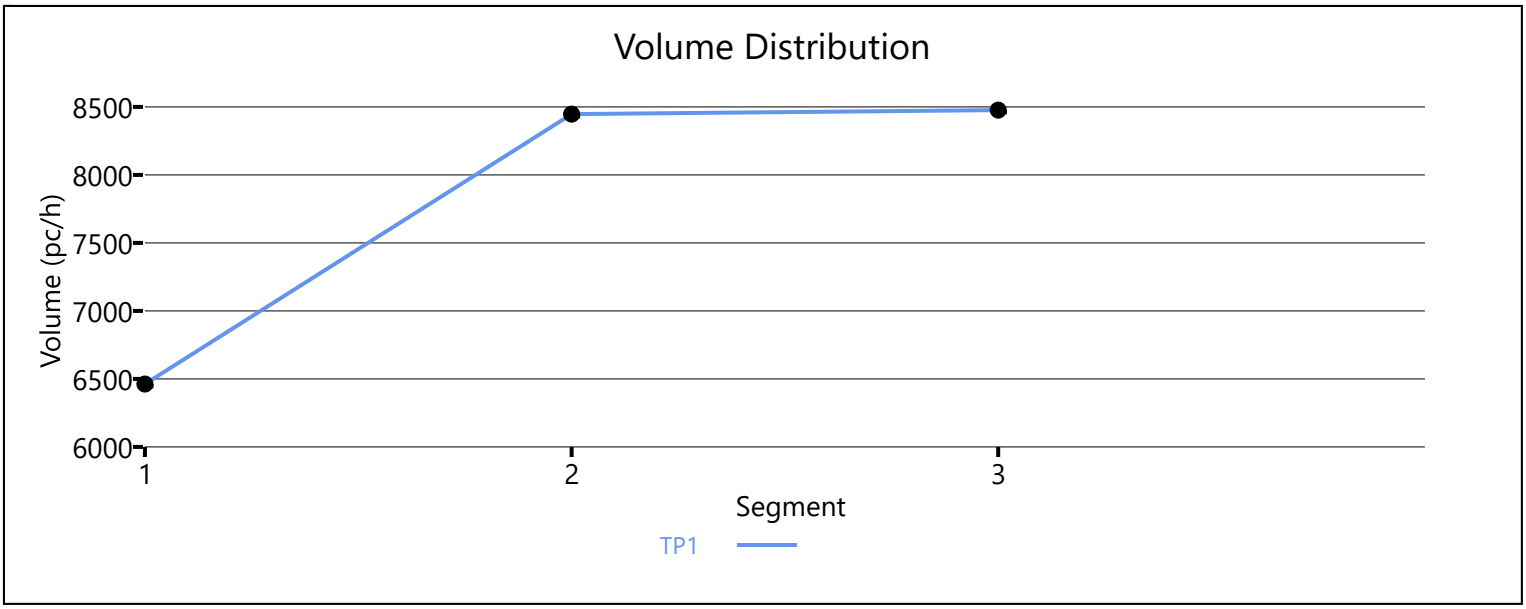
Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.926	8477	9572	0.89	59.9	35.4	E

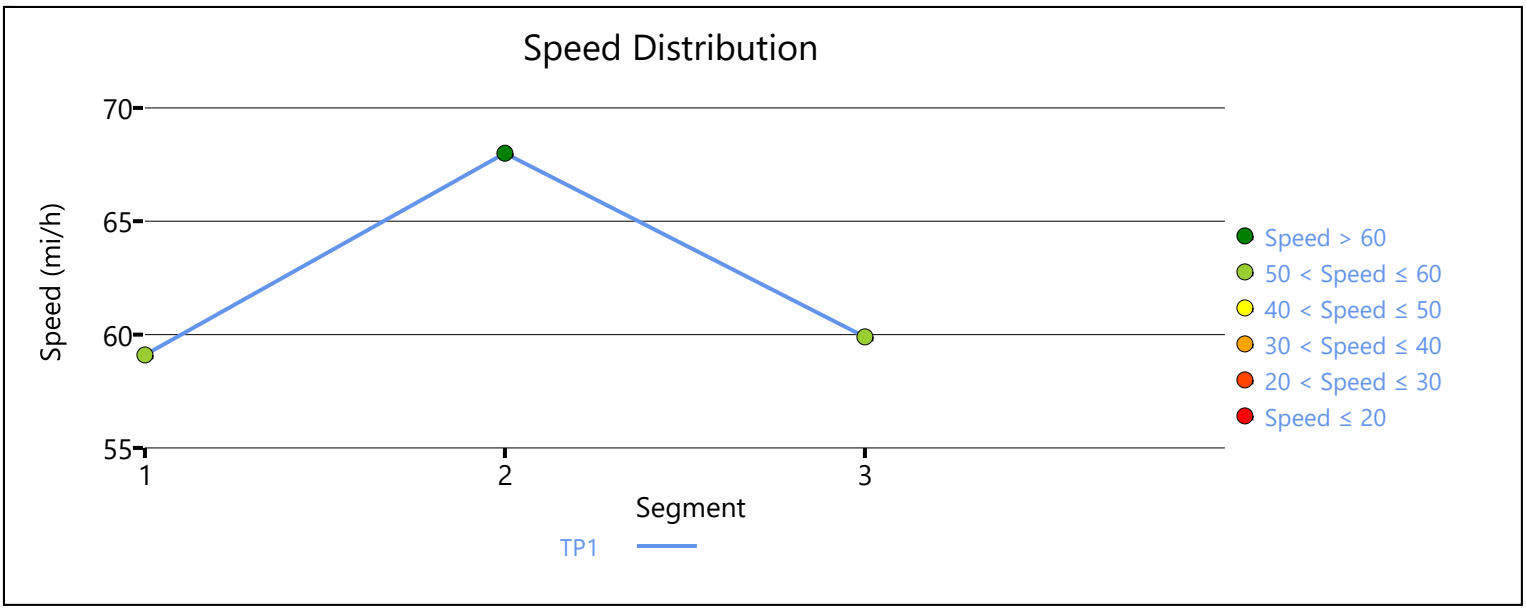
Facility Time Period Results

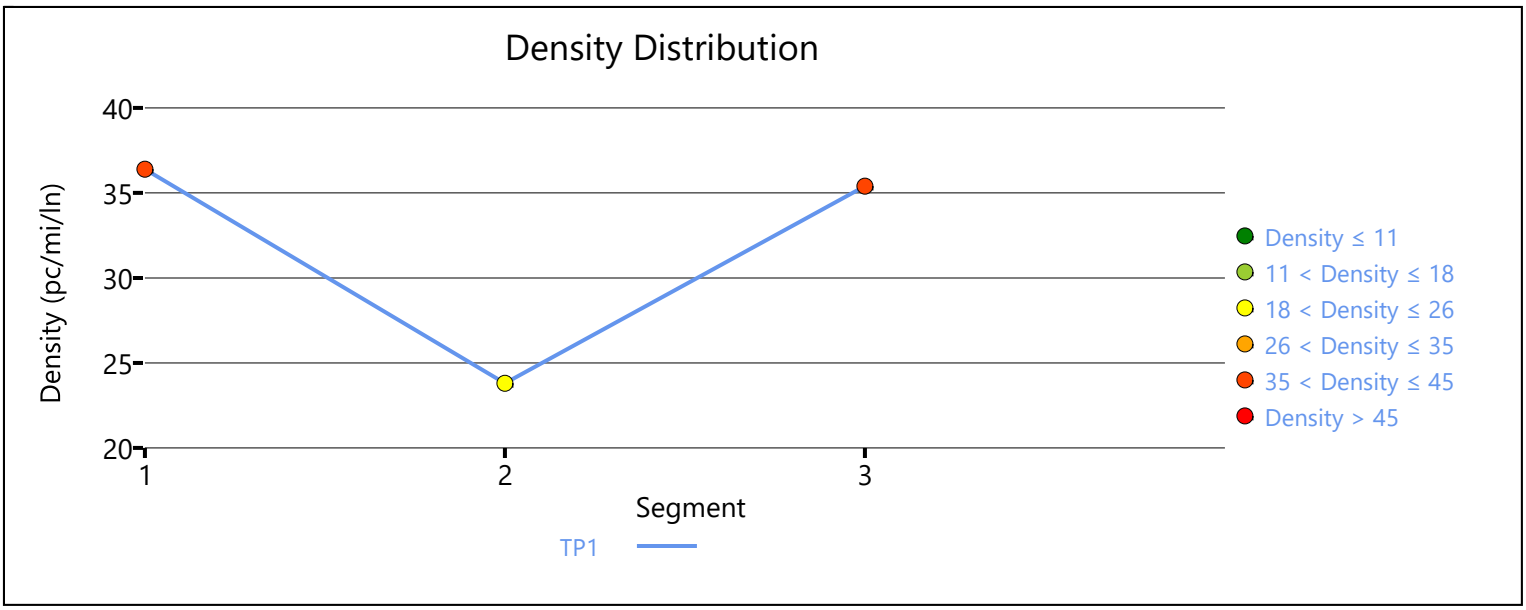
T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	60.8	33.8	31.6	1.8	D

Facility Overall Results

Space Mean Speed, mi/h	60.8	Density, veh/mi/ln	31.6
Average Travel Time, min	1.8	Density, pc/mi/ln	33.8







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HCS7 Freeway Facilities Report

Project Information

Analyst	JB	Date	6/30/2020
Agency	Urban Crossroads, Inc.	Analysis Year	Horizon Year (2040) Without Project With Improvements
Jurisdiction	Caltrans	Time Period Analyzed	PM Peak Hour
Project Description	Hesperia Commerce Center II (JN 12778) - I-15 NB at Main		

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	7
Total Time Periods	1	Time Period Duration, min	15

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	I-15 NB, South of Main St.	6140	3
2	Diverge	Diverge	I-15 NB, Off-Ramp at Main St.	1500	3
3	Basic	Basic	I-15 NB, Between Off-Ramp and Loop On-Ramp	1125	3
4	Merge	Merge	I-15 NB, Loop On-Ramp at Main St.	1500	3
5	Basic	Basic	I-15 NB, Between Loop On-Ramp and On-Ramp	1215	3
6	Merge	Merge	I-15 NB, On-Ramp at Main St.	1500	3
7	Basic	Basic	I-15 NB, North of Main St.	16370	3

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.962	7222	7146	1.01	52.9	45.0	F

Segment 2: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.962	0.926	7146	1751	7200	2100	1.00	0.83	61.5	57.2	38.7	41.3	F

Segment 3: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.971	5395	7146	0.77	65.9	27.3	D

Segment 4: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.971	0.862	6165	770	7200	1900	0.87	0.41	58.6	56.0	35.1	33.0	D

Segment 5: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.962	6165	7146	0.87	61.5	33.4	D

Segment 6: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.962	0.962	6798	633	7200	2100	0.95	0.30	57.0	54.3	39.8	36.0	E

Segment 7: Basic

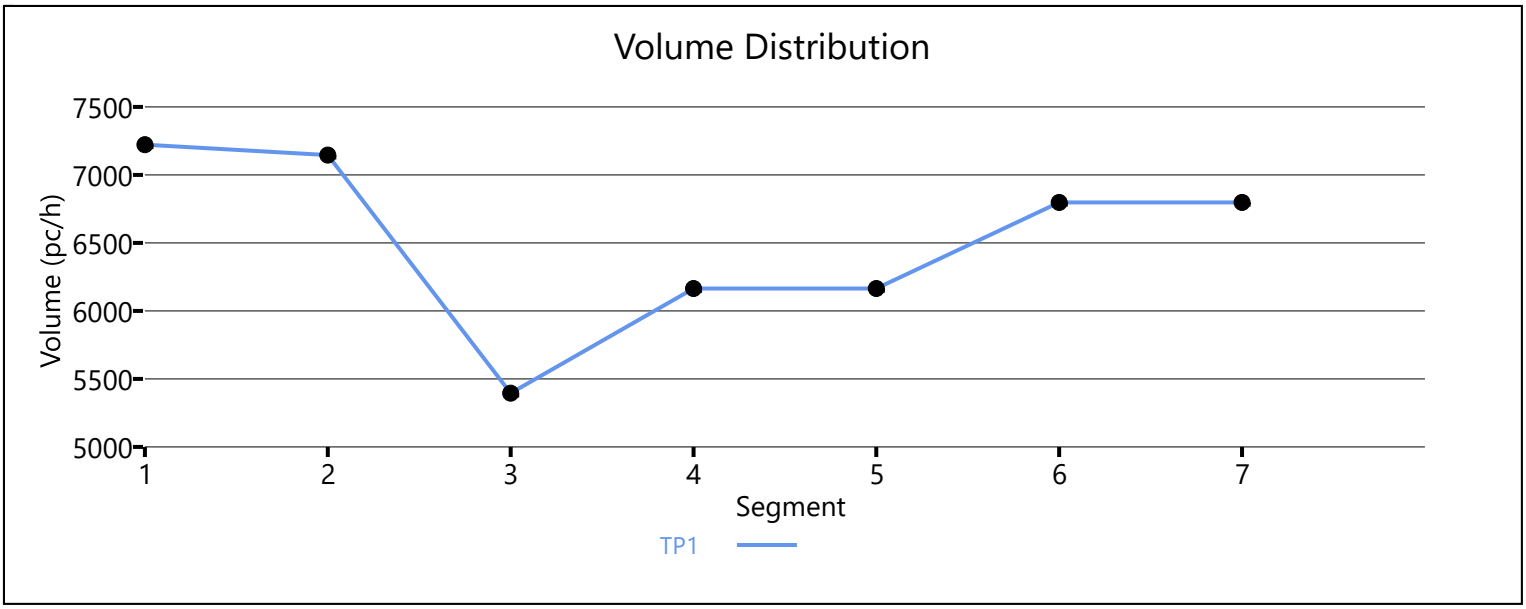
Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.962	6798	7146	0.96	56.8	39.9	E

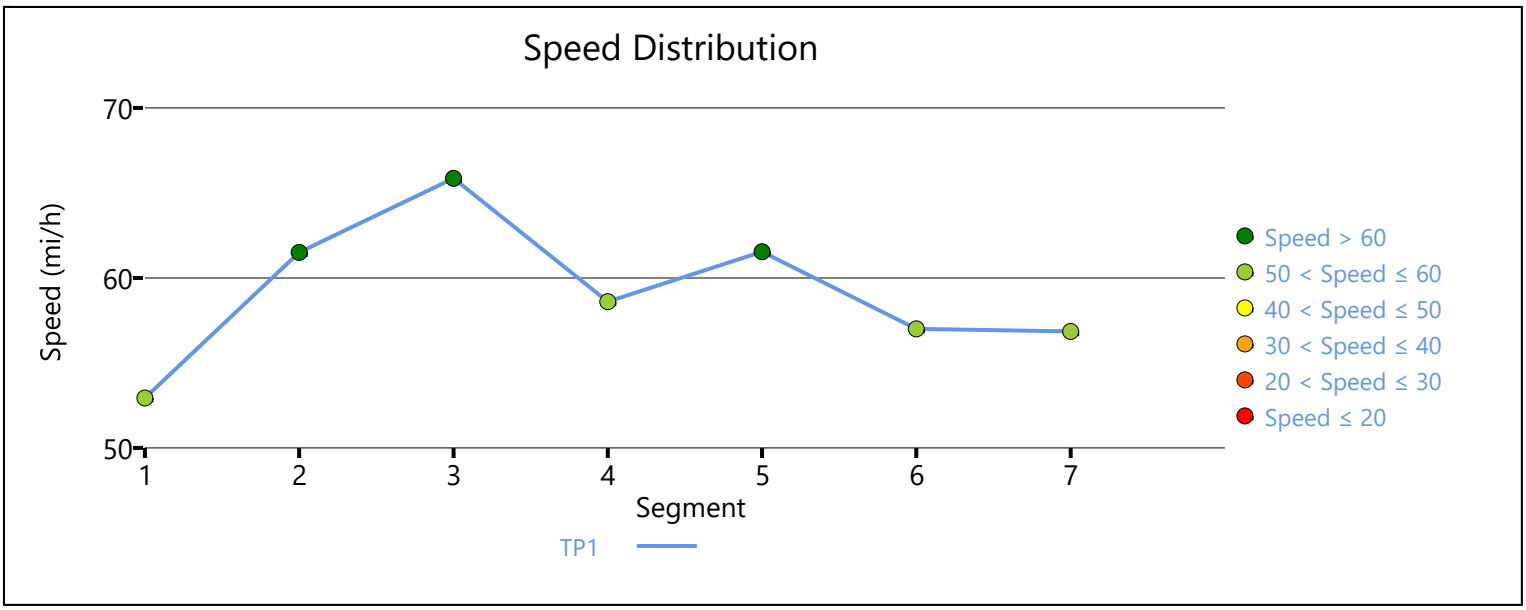
Facility Time Period Results

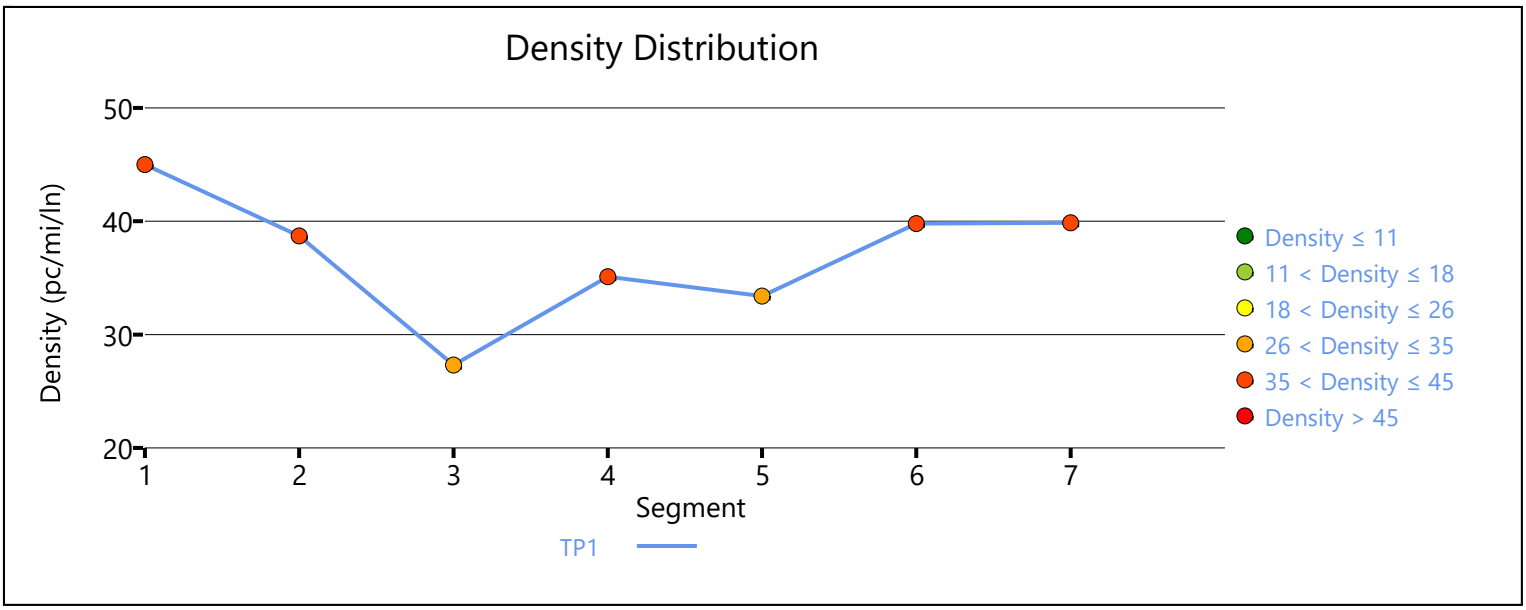
T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	56.9	39.7	38.2	5.9	F

Facility Overall Results

Space Mean Speed, mi/h	56.9	Density, veh/mi/ln	38.2
Average Travel Time, min	5.9	Density, pc/mi/ln	39.7







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HCS7 Freeway Facilities Report

Project Information

Analyst	JB	Date	6/30/2020
Agency	Urban Crossroads, Inc.	Analysis Year	Horizon Year (2040) With Project With Improvements
Jurisdiction	Caltrans	Time Period Analyzed	PM Peak Hour
Project Description	Hesperia Commerce Center II (JN:12778) - I-15 NB at US 395		

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	3
Total Time Periods	1	Time Period Duration, min	15

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	South of US 395	2000	4
2	Diverge	Diverge	Off-Ramp at US 395	1500	4
3	Basic	Basic	North of US 395	6350	4

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.952	10240	9572	1.07	53.2	45.0	F

Segment 2: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.92	0.92	0.952	0.901	9572	2389	9600	2100	1.07	1.14	53.3	55.6	45.0	46.5	F

Segment 3: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.92	0.962	7183	9572	0.83	65.9	27.3	D

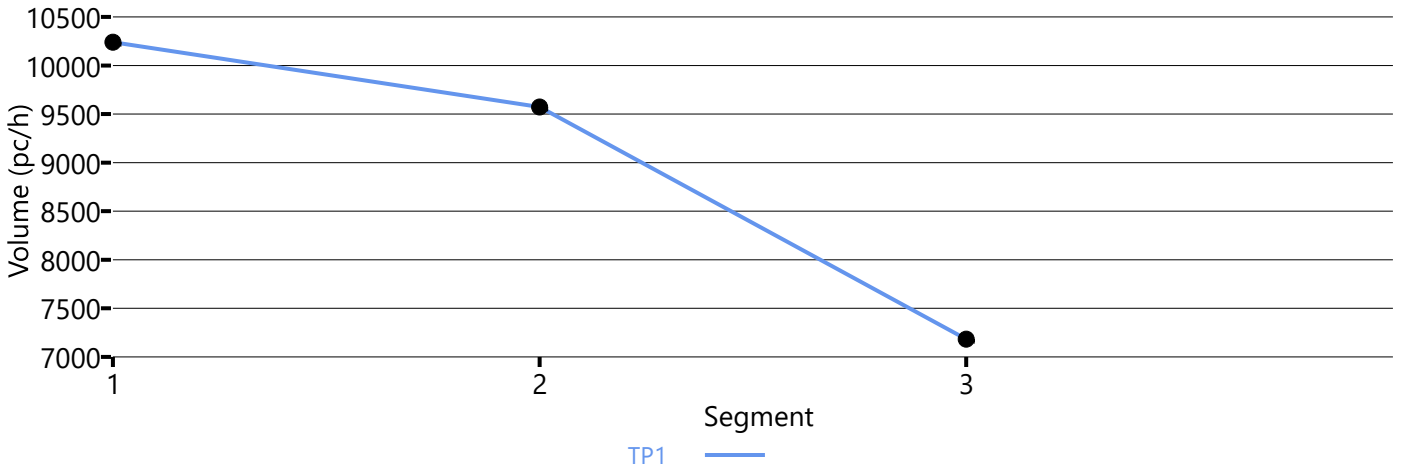
Facility Time Period Results

T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	60.0	33.5	32.1	1.9	F

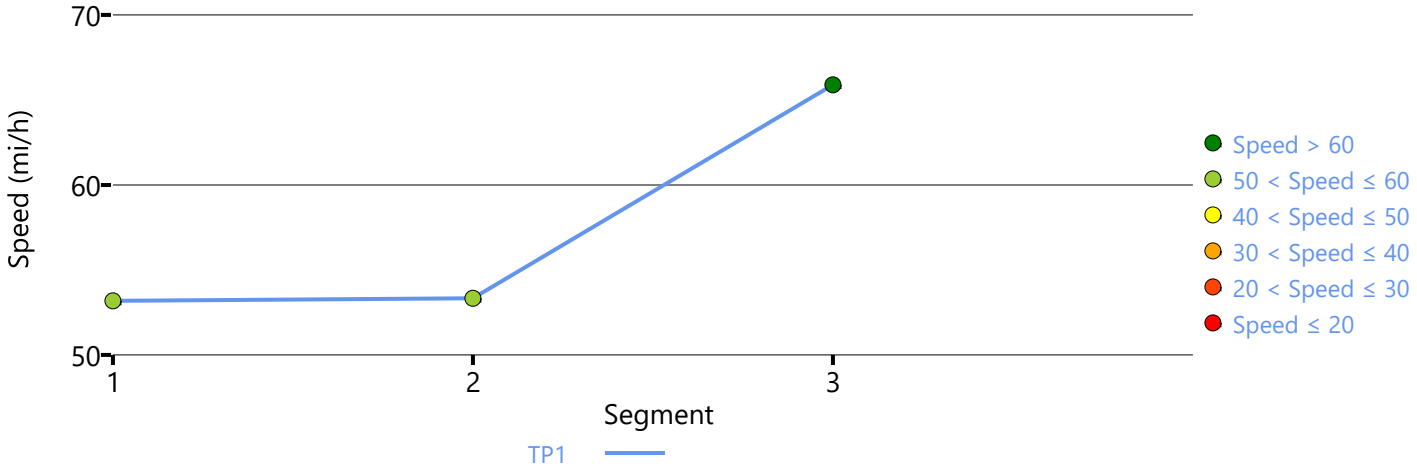
Facility Overall Results

Space Mean Speed, mi/h	60.0	Density, veh/mi/ln	32.1
Average Travel Time, min	1.9	Density, pc/mi/ln	33.5

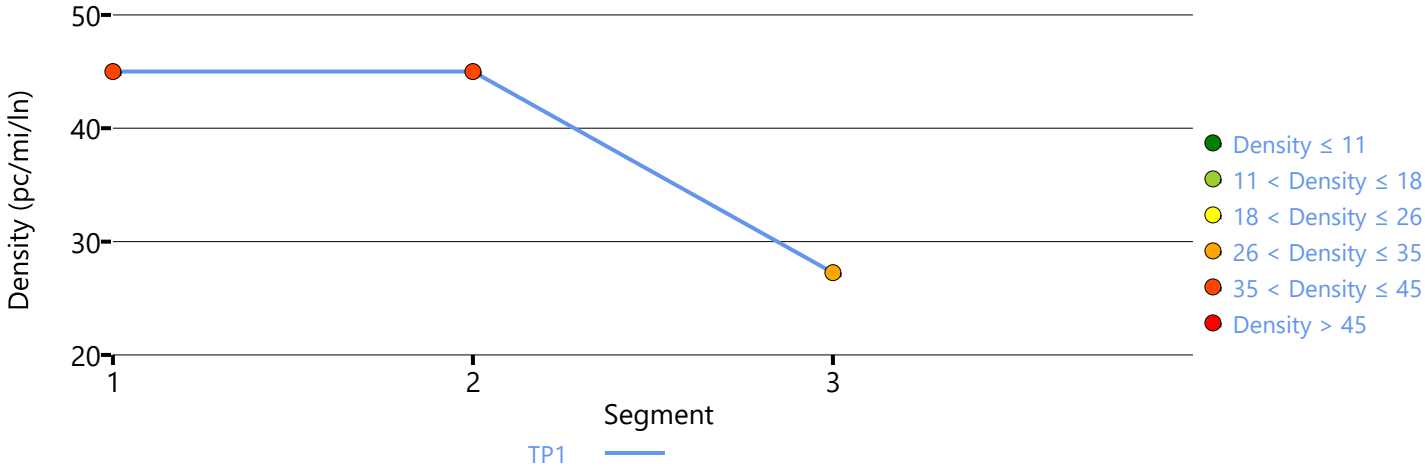
Volume Distribution



Speed Distribution



Density Distribution



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